

Источники питания Compact

Технические характеристики

По вопросам продаж и поддержки обращайтесь:

Алматы (727)345-47-04
Ангарск (3955)60-70-56
Архангельск (8182)63-90-72
Астрахань (8512)99-46-04
Барнаул (3852)73-04-60
Белгород (4722)40-23-64
Благовещенск (4162)22-76-07
Брянск (4832)59-03-52
Владивосток (423)249-28-31
Владикавказ (8672)28-90-48
Владимир (4922)49-43-18
Волгоград (844)278-03-48
Вологда (8172)26-41-59
Воронеж (473)204-51-73
Екатеринбург (343)384-55-89

Иваново (4932)77-34-06
Ижевск (3412)26-03-58
Иркутск (395)279-98-46
Казань (843)206-01-48
Калининград (4012)72-03-81
Калуга (4842)92-23-67
Кемерово (3842)65-04-62
Киров (8332)68-02-04
Коломна (4966)23-41-49
Кострома (4942)77-07-48
Краснодар (861)203-40-90
Красноярск (391)204-63-61
Курск (4712)77-13-04
Курган (3522)50-90-47
Липецк (4742)52-20-81

Магнитогорск (3519)55-03-13
Москва (495)268-04-70
Мурманск (8152)59-64-93
Набережные Челны (8552)20-53-41
Новокузнецк (3843)20-46-81
Ноябрьск (3496)41-32-12
Новосибирск (383)227-86-73
Омск (3812)21-46-40
Орел (4862)44-53-42
Оренбург (3532)37-68-04
Пенза (8412)22-31-16
Петрозаводск (8142)55-98-37
Псков (8112)59-10-37
Пермь (342)205-81-47

Ростов-на-Дону (863)308-18-15
Рязань (4912)46-61-64
Самара (846)206-03-16
Санкт-Петербург (812)309-46-40
Саратов (845)249-38-78
Севастополь (8692)22-31-93
Саранск (8342)22-96-24
Симферополь (3652)67-13-56
Смоленск (4812)29-41-54
Сочи (862)225-72-31
Ставрополь (8652)20-65-13
Сургут (3462)77-98-35
Сыктывкар (8212)25-95-17
Тамбов (4752)50-40-97
Тверь (4822)63-31-35

Тольятти (8482)63-91-07
Томск (3822)98-41-53
Тула (4872)33-79-87
Тюмень (3452)66-21-18
Ульяновск (8422)24-23-59
Улан-Удэ (3012)59-97-51
Уфа (347)229-48-12
Хабаровск (4212)92-98-04
Чебоксары (8352)28-53-07
Челябинск (351)202-03-61
Череповец (8202)49-02-64
Чита (3022)38-34-83
Якутск (4112)23-90-97
Ярославль (4852)69-52-93

Россия +7(495)268-04-70

Казахстан +7(727)345-47-04

Беларусь +(375)257-127-884

Узбекистан +998(71)205-18-59

Киргизия +996(312)96-26-47

эл.почта: ezd@nt-rt.ru || сайт: <https://lutze.nt-rt.ru/>

Industrial power supplies for all requirements

With its 1, 2 or 3-phase power supplies from the Compact series, LÜTZE offers outputs ranging from 30 W to 2,400 W, and output voltages of DC 12 V, DC 24 V, DC 48 V and DC 72 V. The devices are therefore suitable for a variety of industrial applications.

There are additional benefits of the LÜTZE Compact power supplies series. Their dimensions are reduced by 50 % despite high efficiency of up to 95 % with minimal power loss and heating.

The Compact series from LÜTZE provides power supplies with very high reserves on the output side. For 5 seconds, the power supplies can deliver up to 150 % output power boost. For further power increases, up to four devices can operate in parallel. Redundant operation is possible with redundancy management devices across all output voltages and up to 50 A.





LCOS PS

LCOS PS is a ultra-compact switching power supply unit in the successful LCOS housing system. The new LÜTZE power supply is one of the smallest 120 W power supply worldwide. With improved over-voltage protection, the PFC 'Power Factor Correction' and the fault message output are some of the highlights of the LCOS switching power supply.

Technical data sheet

Power supply · LCOS-PS, 30 Watt

Primary switchmode power supply, PFC, Single-phase

Input: Wide range input AC 100 V – 240 V

Output: 24 V, adjustable



Identification

Type	LCOS-PS-1-30-24
Part No.	779101.0213

Product version

Hardware revision	1.1
Datasheet version	04

Input

Number of phases	1
Rated voltage U_N	AC 100–240 V
Rated frequency f_N	50 Hz / 60 Hz
Rated current I_N	0.35 A @ AC 230 V
Inrush current	<10 A @ AC 230 V
Internal fuse	2 A Typ-T AC 250 V
External protection	6 A Typ-B (IEC 60947-2 / UL 1077) The external fuse must be installed close to the LCOS-PS and must be easily accessible for the user.
Power factor correction P.F.C.	0.59

Output

Output voltage/current	DC 24 V/1.25 A
Rated voltage U_N	24 V (SELV)
Rated current I_N	1.25 A
Max. output current	1.4 A
Setting range $U_{out\ min.}/U_{out\ max.}$	DC 23–27.5 V

Technical data sheet

Power supply · LCOS-PS, 30 Watt

Load regulation	<0.5 %
Line regulation	<0.5 %
Ripple and noise	≤100 mV pp
Hold up time	>20 ms
Parallel / redundant mode	Max. 2 devices
Efficiency	89 %
Protection device	Over voltage protection
Over voltage protection	<32 V
Short circuit	Hiccup

Status indication

Status display output	DC ON, green ≥21.6 V
-----------------------	----------------------

Monitoring

Monitoring	DC ON, open collector
Switching voltage	DC 30 V
Switching current	Max. 0.100 A

General

Insulation voltage input / output	AC 2.5 kV _{eff}
Insulation voltage input / ground	AC 1.5 kV _{eff}
Insulation voltage output / ground	DC 0.5 kV _{eff}
Derating	>50 °C: -1 W/°C
Cooling	Air convection
Housing material	PA 6.6 (UL 94 V-0, NFF I2, F2)
Color of the housing	pebble grey
Mounting	DIN rail mountable TS35 (EN 60715)
Max. altitude operation	2000 m max.
Installation position	Vertical
MTBF	>500000 h: SN29500 / >150000 h: MIL-HDBK-217F
Degree of protection	IP20 (EN 60529)
Weight/unit	0.18 kg
Connection type	Push-In 0.08 mm ² – 2.5 mm ² AWG 28 – AWG 12 input: 3-pin output: 8-pole
Dimensions (w × h × d)	22.5 mm × 100.0 mm × 110.0 mm
PU (units)	1

applications: ambient temperature max. +55 °C)

Technical data sheet

Power supply · LCOS-PS, 30 Watt

Degree of pollution	2
Relative air humidity	10 % – 95 %, without condensation

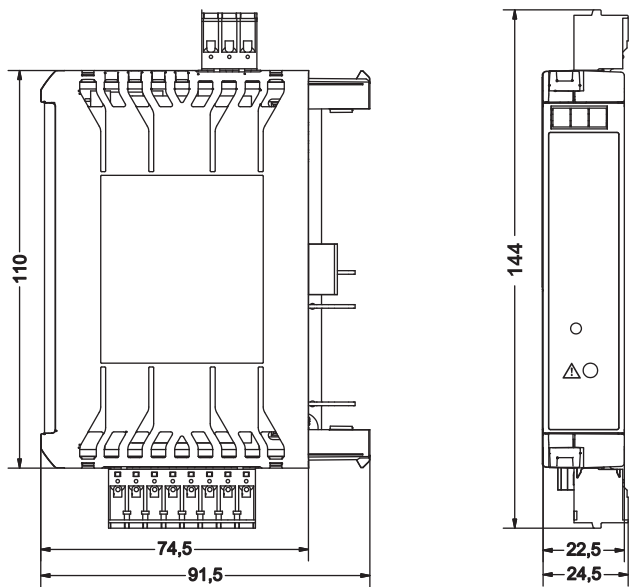
Certifications/Standards

Conformity	CE UKCA
Certifications	cULus (E249179)
Standards	EN 61000-6-2 EN 61000-6-4 EN 61204-3 EN 61000-3-2 EN 61000-3-3 IEC/EN 61010-1 IEC/EN 61010-2-201 UL 61010-1 UL 61010-2-201

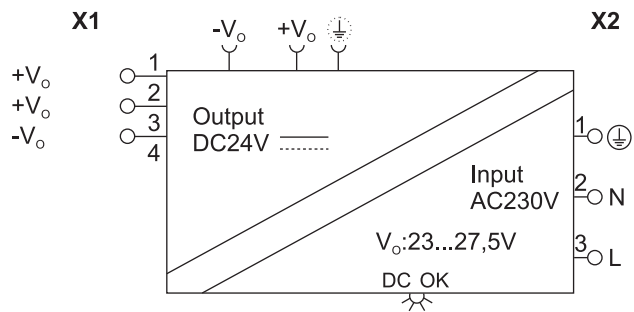
Notes and Comments

Included in the delivery	Plug-in terminals : CS 5.08 and CS 3.50
Not included in the delivery	Function carrier and other accessories

Dimensions



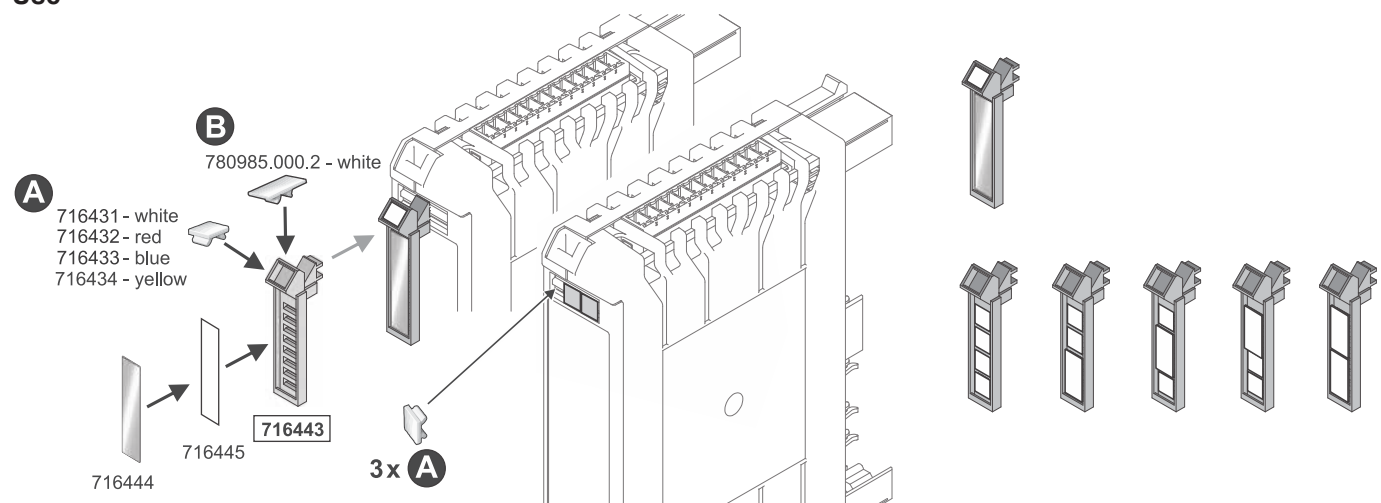
PIN assignment



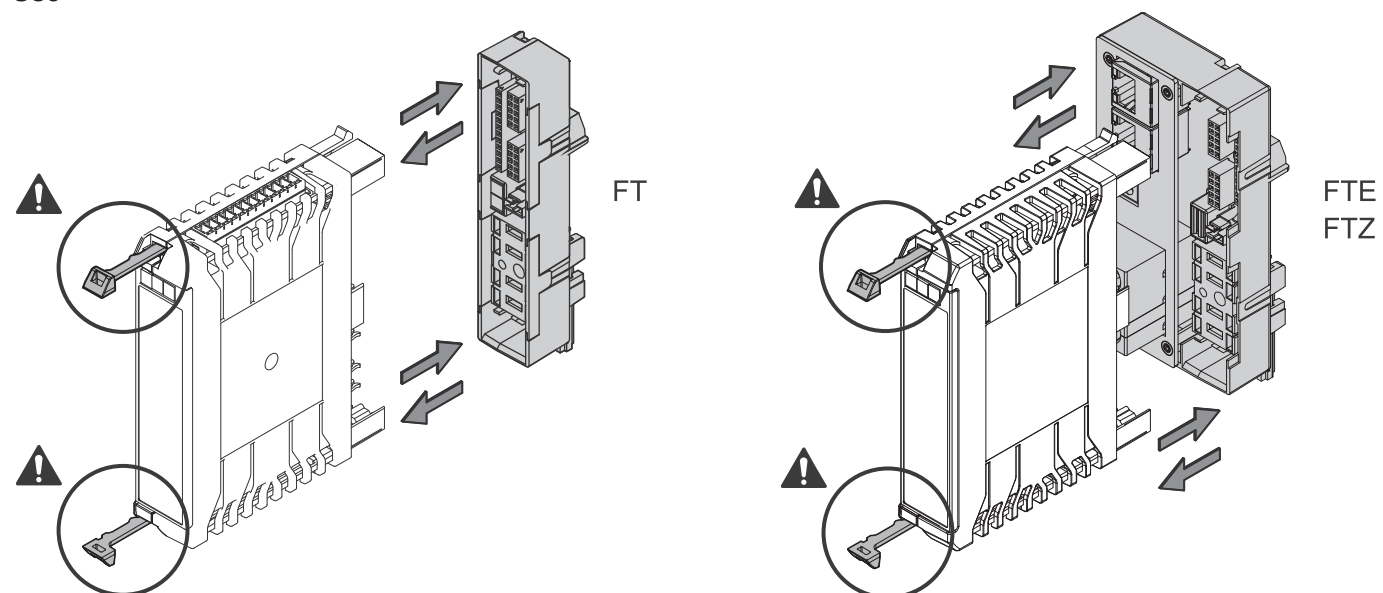
Power supply · LCOS-PS, 30 Watt

Power supply · LCOS-PS, 30 Watt

Use



Use



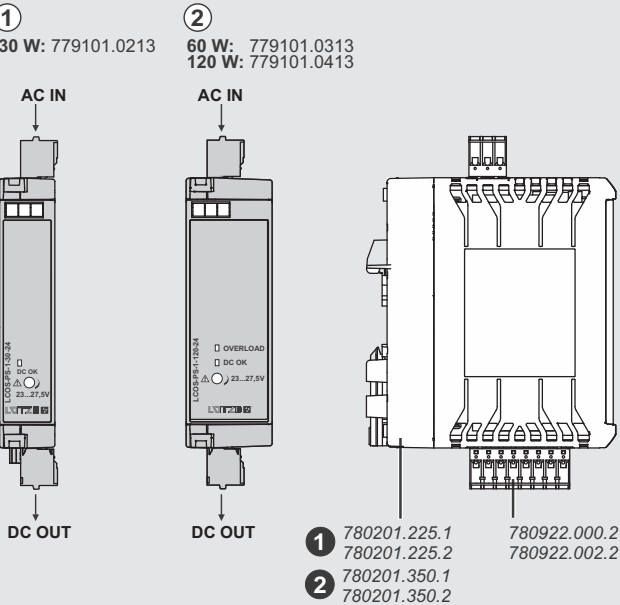
Technical data sheet

Power supply · LCOS-PS, 30 Watt

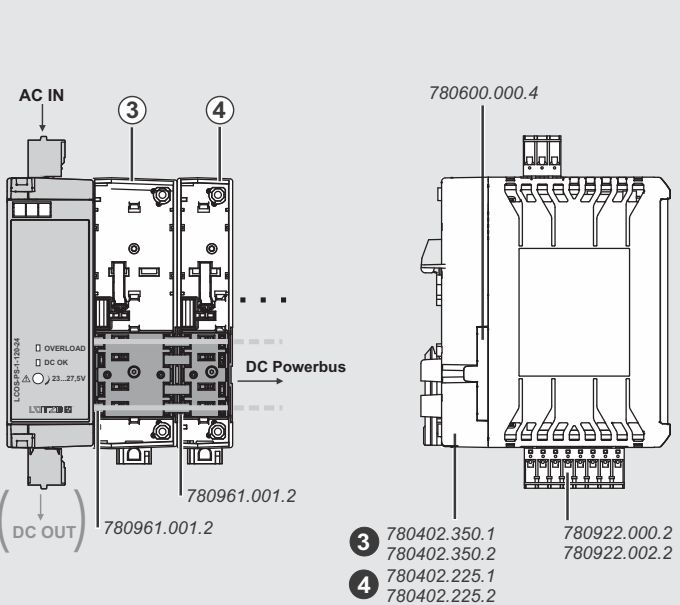
Use

DE Systemaufbau EN System Structure R Structure du système

DE Standalone
EN Standalone
FR Autonome



DE System mit Powerbus
EN System with Powerbus
FR Système avec Powerbus



Technical data sheet

Power supply · LCOS-PS, 60 Watt

Primary switchmode power supply, PFC, Single-phase

Input: Wide range input AC 100 V – 240 V

Output: 24 V, adjustable



Identification

Type	LCOS-PS-1-60-24
Part No.	779101.0313

Product version

Hardware revision	1.1
Datasheet version	04

Input

Number of phases	1
Rated voltage U_N	AC 100–240 V
Rated frequency f_N	50 Hz / 60 Hz
Rated current I_N	0.60 A @ AC 230 V
Inrush current	<10 A @ AC 230 V
Internal fuse	4 A Typ-T AC 250 V
External protection	6 A Typ-B (IEC 60947-2) The external fuse must be installed close to the LCOS-PS and must be easily accessible for the user.
Power factor correction P.F.C.	0.6

Output

Output voltage/current	DC 24 V/2.5 A
Rated voltage U_N	24 V (SELV)
Rated current I_N	2.5 A
Max. output current	2.8 A
Setting range $U_{out\ min.}/U_{out\ max.}$	DC 23–27.5 V

Technical data sheet

Power supply · LCOS-PS, 60 Watt

Load regulation	<0.5 %
Line regulation	<0.5 %
Ripple and noise	≤100 mV pp
Hold up time	>20 ms
Parallel / redundant mode	Max. 2 devices
Efficiency	90 %
Protection device	Over voltage protection
Over voltage protection	<32 V
Short circuit	Hiccup

Status indication

Status display output	DC ON, green ≥21.6 V
-----------------------	----------------------

Monitoring

Monitoring	DC ON, open collector
Switching voltage	DC 30 V
Switching current	Max. 0.100 A

General

Insulation voltage input / output	AC 2.5 kV _{eff}
Insulation voltage input / ground	AC 1.5 kV _{eff}
Insulation voltage output / ground	DC 0.5 kV _{eff}
Derating	>50 °C: -2 W/°C
Cooling	Air convection
Housing material	PA 6.6 (UL 94 V-0, NFF I2, F2)
Color of the housing	pebble grey
Mounting	DIN rail mountable TS35 (EN 60715)
Max. altitude operation	2000 m max.
Installation position	Vertical
MTBF	>500000 h: SN29500 / >150000 h: MIL-HDBK-217F
Degree of protection	IP20 (EN 60529)
Weight/unit	0.25 kg
Connection type	Push-In 0.08 mm ² – 2.5 mm ² AWG 28 – AWG 12 input: 3-pin output: 8-pole
Dimensions (w × h × d)	35.0 mm × 100.0 mm × 110.0 mm
PU (units)	1

Technical data sheet

Power supply · LCOS-PS, 60 Watt

Degree of pollution	2
Relative air humidity	10 % – 95 %, without condensation

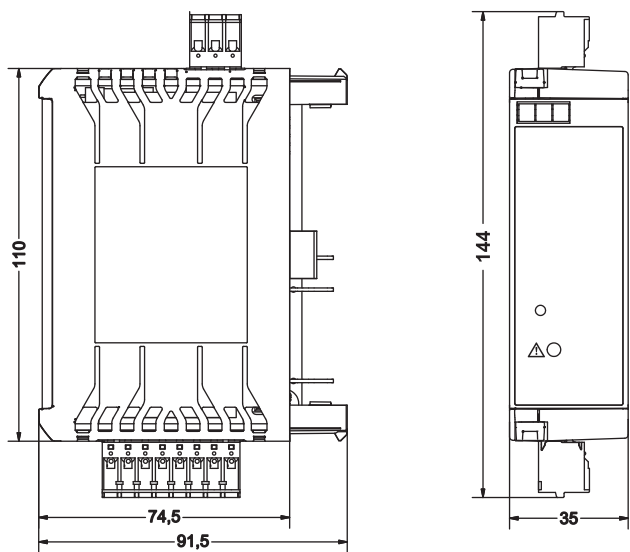
Certifications/Standards

Conformity	CE UKCA
Standards	EN 61204-3 EN 60950-1

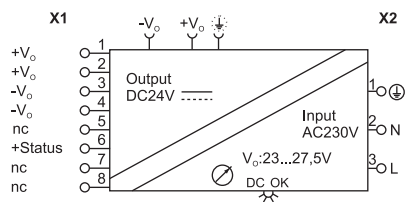
Notes and Comments

Included in the delivery	Plug-in terminals : CS 5.08 and CS 3.50
Not included in the delivery	Function carrier and other accessories

Dimensions



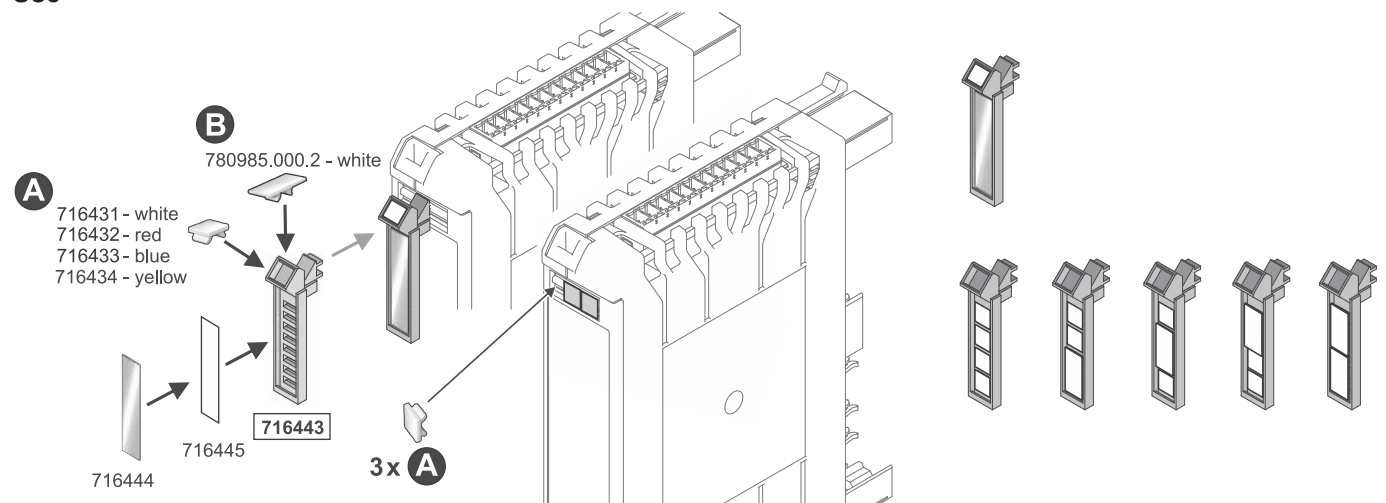
PIN assignment



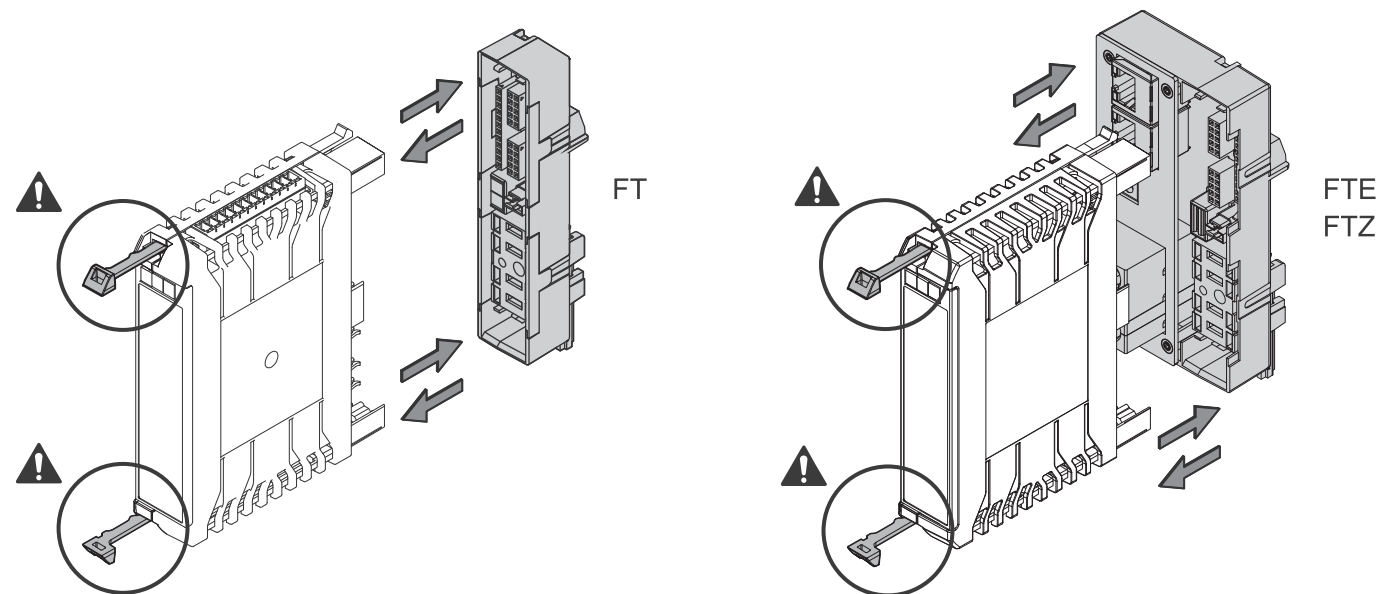
Power supply · LCOS-PS, 60 Watt

Power supply · LCOS-PS, 60 Watt

Use



Use



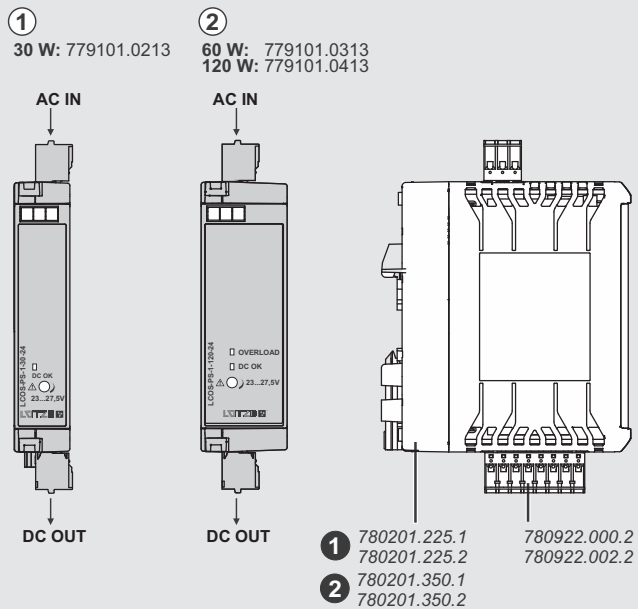
Technical data sheet

Power supply · LCOS-PS, 60 Watt

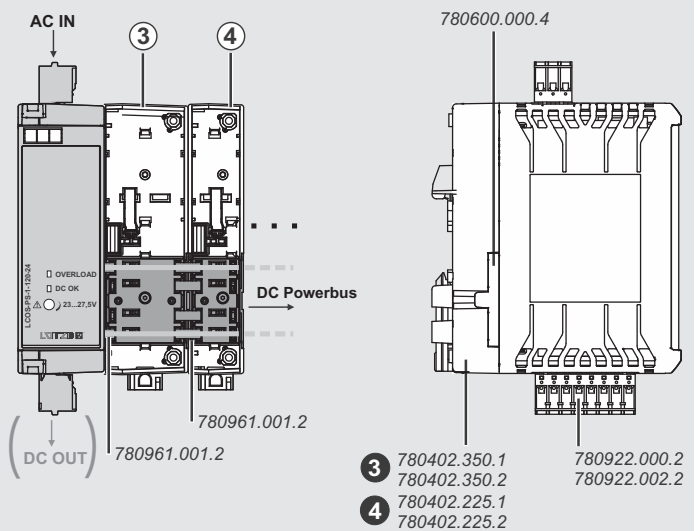
Use

DE Systemaufbau **EN** System Structure **R** Structure du système

DE Standalone
EN Standalone
FR Autonome



DE System mit Powerbus
EN System with Powerbus
FR Système avec Powerbus



Technical data sheet

Power supply · LCOS-PS, 120 Watt

Primary switchmode power supply, PFC, Single-phase

Input: Wide range input AC 100 V – 240 V

Output: 24 V, adjustable



Identification

Type	LCOS-PS-1-120-24
Part No.	779101.0413

Product version

Hardware revision	1.1
Software version	1.0
Datasheet version	04

Input

Number of phases	1
Rated voltage U_N	AC 100–240 V
Rated frequency f_N	50 Hz / 60 Hz
Rated current I_N	0.70 A @ AC 230 V
Inrush current	<20 A @ AC 230 V
Internal fuse	4 A Typ-T AC 250 V
External protection	6 A Typ-B (IEC 60947-2) The external fuse must be installed close to the LCOS-PS and must be easily accessible for the user.
Power factor correction P.F.C.	>0.96

Output

Output voltage/current	DC 24 V/5 A
Rated voltage U_N	24 V (SELV)
Rated current I_N	5 A
Max. output current	>7.5 A, 5 s @ $U_{out} > 90 \%$

Technical data sheet

Power supply · LCOS-PS, 120 Watt

Setting range $U_{\text{out min.}}/U_{\text{out max.}}$	DC 23–27.5 V
Load regulation	downslope -2 % @ 5 A
Line regulation	0.5 %
Rise time	< 1 s
Ripple and noise	≤100 mV pp
Hold up time	>20 ms
Parallel / redundant mode	Max. 4 devices / redundancy via decoupling diode
Efficiency	>93 %
Protection device	Over voltage protection
Over voltage protection	35 V
Power Dissipation (nominal operations) max.	9 W @ 230 V
Rated over load protection	Yes
Short circuit	Current limit (overload), Hiccup (short-circuit)

Status indication

Status display output	DC ON, green ≥21.6 V $I_{\text{out}} > 110 \% I_N$
Status indication DC ON LED green	≥21.6 V
Status indication DC LOW LED red	$I_{\text{out}} > 110 \% I_N$

Monitoring

DC ON Control (Rdy)	Open Collector
Monitoring	DC ON, open collector
Switching voltage	DC 30 V
Switching current	Max. 0.100 A

Remote input

control voltage	DC 24 V
Control current	DC 5 mA
ON/OFF	11 V – 30 V: OFF, DC 5 V: ON

General

Insulation voltage input / output	AC 3.0 kV _{eff}
Insulation voltage input / ground	AC 1.5 kV _{eff}
Insulation voltage output / ground	DC 0.5 kV _{eff}
Derating	>50 °C: -4 W/°C
Cooling	Air convection
Housing material	PA 6.6 (UL 94 V-0, NFF I2, F2)
Color of the housing	pebble grey

>150000 h: MIL-HDBK-217F

Technical data sheet

Power supply · LCOS-PS, 120 Watt

Degree of protection	IP20 (EN 60529)
Weight/unit	0.35 kg
Connection type	Push-In 0.08 mm ² – 2.5 mm ² AWG 28 – AWG 12 input: 3-pin output: 8-pole
Dimensions (w × h × d)	35.0 mm × 100.0 mm × 110.0 mm
PU (units)	1

General ambient conditions

Operation temperature range	-25 °C ... +70 °C (for UL applications: ambient temperature max. +55 °C)
Storage temperature range	-25 °C ... +85 °C
Over voltage category	II (IEC 664-1)
Degree of pollution	2
Relative air humidity	10 % – 95 %, without condensation

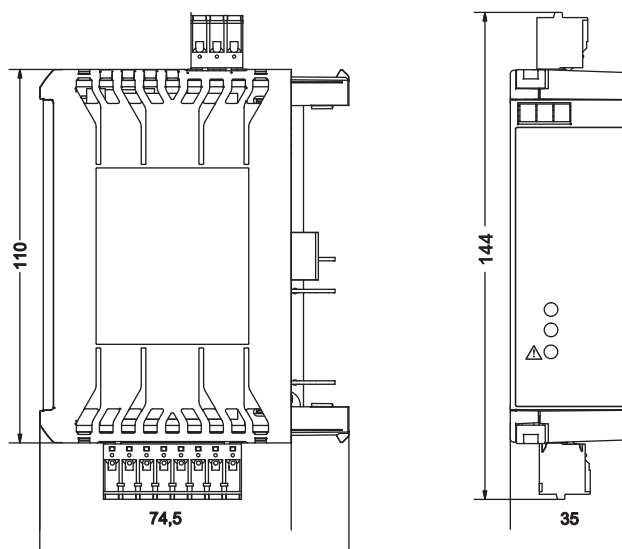
Certifications/Standards

Conformity	CE UKCA
Standards	EN 61204-3 EN 60950-1

Notes and Comments

Included in the delivery	Plug-in terminals : CS 5.08 and CS 3.50
Not included in the delivery	Function carrier and other accessories

Dimensions



Power supply · LCOS-PS, 120 Watt

A

- 716431 - white
- 716432 - red
- 716433 - blue
- 716434 - yellow

B

780985.000.2 - white

716443

716444

716445

3x **A**

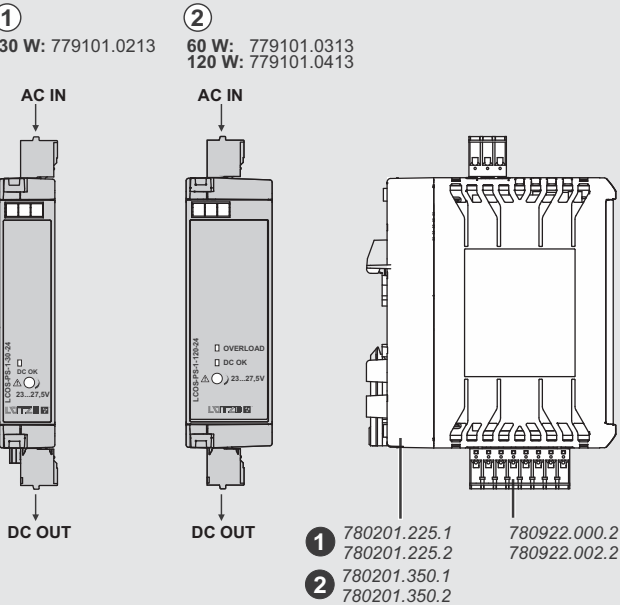
Technical data sheet

Power supply · LCOS-PS, 120 Watt

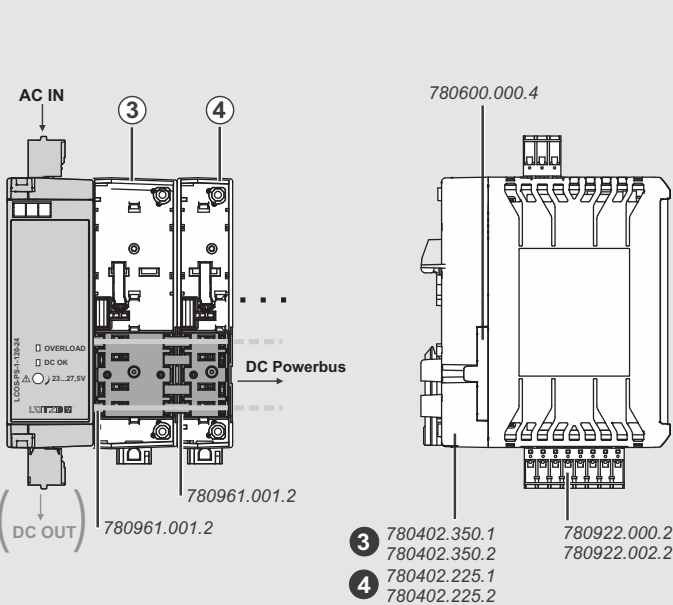
Use

DE Systemaufbau EN System Structure R Structure du système

DE Standalone
EN Standalone
FR Autonome



DE System mit Powerbus
EN System with Powerbus
FR Système avec Powerbus



Technical data sheet

Power supply · regulated, 20 W

Primary switchmode power supply, Single-phase
Input: wide-range input AC 85–264 V, DC 120–375 V
Output: DC 5 V, adjustable



Identification

Type DRS1-05A
Part No. [722702](#)

Product version

Datasheet version 00

Input

Number of phases 1
Rated voltage U_N AC 100–240 V
Operation voltage range AC 85–264 V / DC 120–375 V
Frequency range 47 Hz – 63 Hz
Rated current I_N 335 mA @ AC 115 V / 210 mA @ AC 230 V
Inrush current 20 A @ AC 115 V / 40 A @ AC 230 V
Internal fuse T2A / AC 250 V
External protection Mini-circuit breaker: C 4 A

Output

Output voltage/current DC 5 V/4 A
Rated voltage U_N DC 5 V
Rated current I_N 4 A
Power Dissipation 5 W @ AC 230 V
Setting range $U_{out\ min.}/U_{out\ max.}$ 4.75–5.5 V
Accuracy $\pm 1\%$
Load regulation $\pm 1\%$
Line regulation $\pm 1\%$

Technical data sheet

Power supply · regulated, 20 W

Rise time	150 ms
Temperature coefficient	±0.03 % / °C
Ripple and noise	100 mV
Hold up time	20 ms @ 115 V / 50 ms @ 230 V
Efficiency	82 %
Over voltage protection	DC 6.5–8.5 V
Rated over load protection	140 %
Short circuit	Hiccup Mode

Status indication

Status indication DC ON LED green	DC 4–4.5 V
-----------------------------------	------------

General

Switching frequency	65 kHz
Insulation voltage input / output	AC 3 kV / DC 4.2 kV
Insulation voltage input / ground	AC 1.5 kV / DC 2.1 kV
Insulation voltage output / ground	AC 500 V / DC 710 V
Insulation resistance at DC 500 V	100 MΩ
Derating	2.5 %/°C starting 51 °C
Cooling	Air convection, 25 mm clearance all-round
Housing material	Plastic
Mounting	DIN rail mountable TS35 (EN 60715)
Max. altitude operation	5000 m (EN 62368-1)
Installation position	Vertical
MTBF	704000 h
Degree of protection	IP20
Protection class	I
Weight/unit	0.14 kg
Connection type	Screw terminal 0.20 mm ² – 2.5 mm ² AWG 26 – AWG 12
Dimensions (w × h × d)	22.5 mm × 90.0 mm × 100.0 mm
PU (units)	1

General ambient conditions

Operation temperature range	-25 °C ... +71 °C (Derating)
Storage temperature range	-40 °C ... +85 °C
Over voltage category	II
Degree of pollution	2

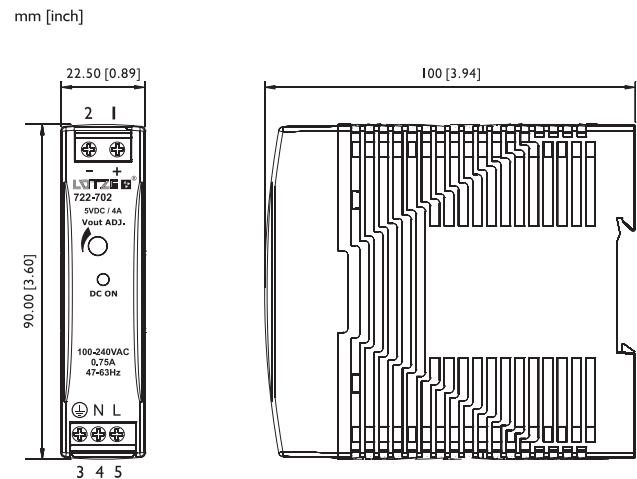
Technical data sheet

Power supply · regulated, 20 W

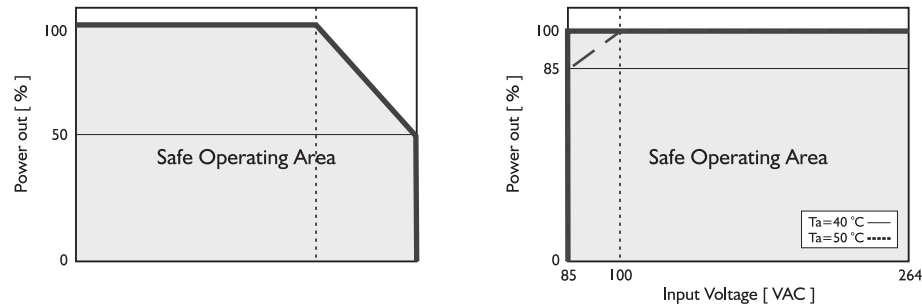
Certifications/Standards

Certifications	UL 508 Listed (E249179)
	UL 1310 Class 2 (E320708)
Standards	UL 62368-1
	CE
	UKCA
	EN 62368-1
	EN 61000-6-3
	EN 55032 Class B
	EN 61000-3-2
	EN 61000-3-3
	EN 61000-6-2
	EN 55024
	EN 61000-4-2 Level 4
	EN 61000-4-3 Level 3
	EN 61000-4-4 Level 4
	EN 61000-4-5 L-N Level 3
	L/N-FG Level 4
	EN 61000-4-6 Level 3
	EN 61000-4-8 Level 4
	EN 61000-4-11 ENV 50204 Level 2
	EN 61204-3

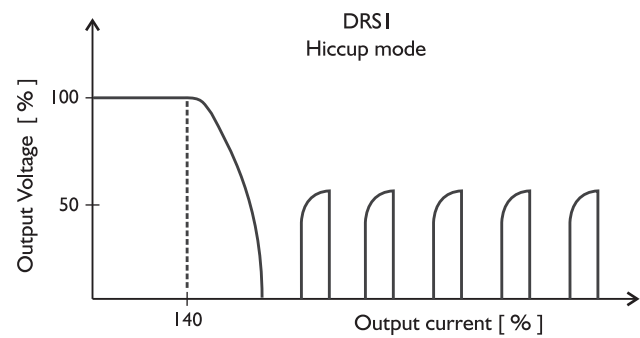
Dimensions



Derating



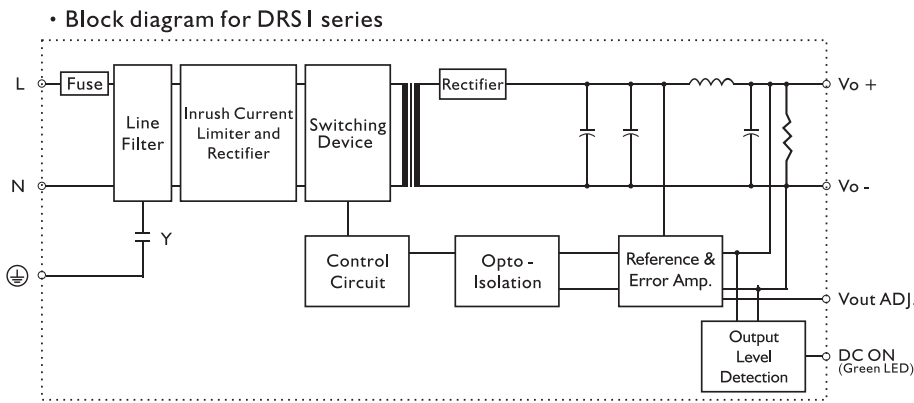
Short circuit characteristics



Pin assignment

PIN NO.		Designation	Description
1	OUT	V +	Positive output terminal
2		V -	Negative output terminal
3	IN	⊕	Ground this terminal to minimize high-frequency emissions
4		N	Input terminals (neutral conductor, no polarity at DC input)
5		L	Input terminals (phase conductor, no polarity at DC input)
	OTHER	DC ON	Operation indicator LED
		Vout ADJ.	Trimmer-potentiometer for Vout adjustment

Circuit diagram



Technical data sheet

Power supply · regulated, 66 W

Primary switchmode power supply, Single-phase
Input: wide-range input AC 85–264 V, DC 120–375 V
Output: DC 12 V, adjustable



Identification

Type	DRS3-12A
Part No.	722703

Product version

Datasheet version	00
-------------------	----

Input

Number of phases	1
Rated voltage U_N	AC 100–240 V
Operation voltage range	AC 85–264 V / DC 120–375 V
Frequency range	47 Hz – 63 Hz
Rated current I_N	1.45 A @ AC 115 V / 750 mA @ AC 230 V
Inrush current	30 A @ AC 115 V / 60 A @ AC 230 V
Internal fuse	T3.15A / AC 250 V
External protection	Mini-circuit breaker: C 6 A

Output

Output voltage/current	DC 12 V/5.5 A
Rated voltage U_N	DC 12 V
Rated current I_N	5.5 A
Power Dissipation	10.5 W @ AC 230 V
Setting range $U_{out\ min.}/U_{out\ max.}$	11.4–15.6 V
Accuracy	±1 %
Load regulation	±1 %
Line regulation	±1 %

Technical data sheet

Power supply · regulated, 66 W

Rise time	150 ms
Temperature coefficient	±0.03 % / °C
Ripple and noise	100 mV
Hold up time	15 ms @ 115 V / 50 ms @ 230 V
Efficiency	88 %
Over voltage protection	DC 16.2–18 V
Rated over load protection	140 %
Short circuit	Hiccup Mode

Status indication

Status indication DC ON LED green	DC 9.6–10.8 V
-----------------------------------	---------------

General

Switching frequency	40 – 100 kHz
Insulation voltage input / output	AC 3 kV / DC 4.2 kV
Insulation voltage input / ground	AC 1.5 kV / DC 2.1 kV
Insulation voltage output / ground	AC 500 V / DC 710 V
Insulation resistance at DC 500 V	100 MΩ
Derating	2.5 %/°C starting 51 °C
Cooling	Air convection, 25 mm clearance all-round
Housing material	Plastic
Mounting	DIN rail mountable TS35 (EN 60715)
Max. altitude operation	5000 m (EN 62368-1)
Installation position	Vertical
MTBF	556000 h
Degree of protection	IP20
Protection class	I
Weight/unit	0.41 kg
Connection type	Screw terminal 0.20 mm ² – 2.5 mm ² AWG 26 – AWG 12
Dimensions (w × h × d)	40.5 mm × 90.0 mm × 100.0 mm
PU (units)	1

General ambient conditions

Operation temperature range	-25 °C ... +71 °C (Derating)
Storage temperature range	-40 °C ... +85 °C
Over voltage category	II
Degree of pollution	2

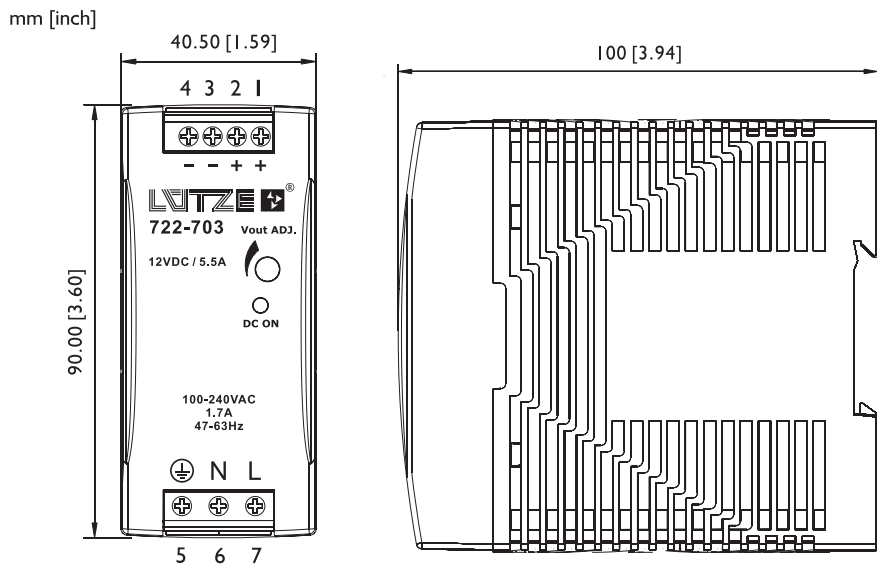
Technical data sheet

Power supply · regulated, 66 W

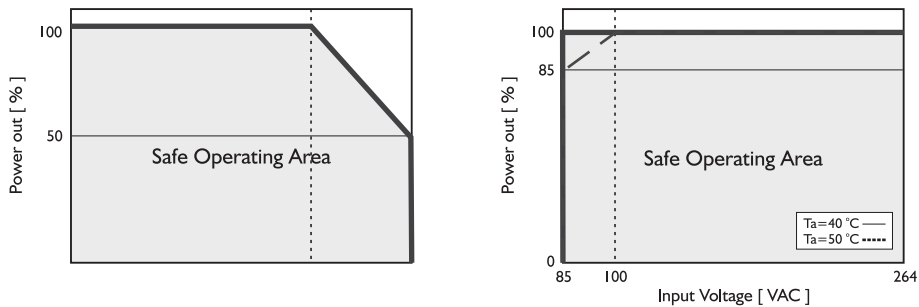
Certifications/Standards

Certifications	UL 508 Listed (E249179)
	UL 62368-1
	CE
	UKCA
Standards	EN 62368-1
	EN 61000-6-3
	EN 55032 Class B
	EN 61000-3-2
	EN 61000-3-3
	EN 61000-6-2
	EN 55024
	EN 61000-4-2 Level 4
	EN 61000-4-3 Level 3
	EN 61000-4-4 Level 4
	EN 61000-4-5 L-N Level 3
	L/N-FG Level 4
	EN 61000-4-6 Level 3
	EN 61000-4-8 Level 4
	EN 61000-4-11 ENV 50204 Level 2
	EN 61204-3

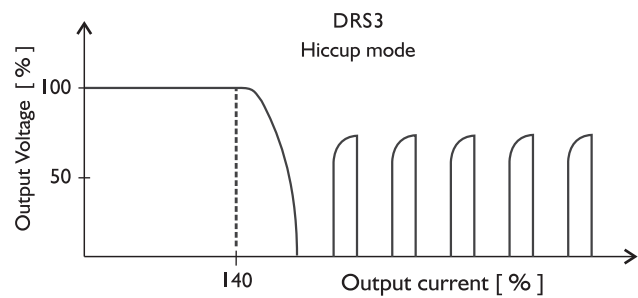
Dimensions



Derating



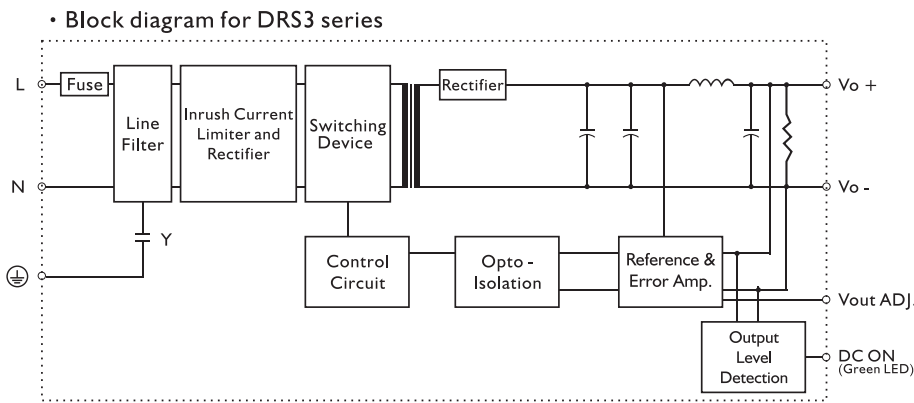
Short circuit characteristics



Pin assignment

PIN NO.		Designation	Description
1, 2	OUT	V +	Positive output terminal
3, 4		V -	Negative output terminal
5	IN	⊕	Ground this terminal to minimize high-frequency emissions
6		N	Input terminals (neutral conductor; no polarity at DC input)
7		L	Input terminals (phase conductor; no polarity at DC input)
	OTHER	Vout ADJ.	Trimmer-potentiometer for Vout adjustment
		DC ON	Operation indicator LED

Circuit diagram



Technical data sheet

Power supply · regulated, 30 W

Primary switchmode power supply, Single-phase
Input: wide-range input AC 85–264 V, DC 120–375 V
Output: DC 24 V, adjustable



Identification

Type	DRS1-24A
Part No.	722704

Product version

Datasheet version	00
-------------------	----

Input

Number of phases	1
Rated voltage U_N	AC 100–240 V
Operation voltage range	AC 85–264 V / DC 120–375 V
Frequency range	47 Hz – 63 Hz
Rated current I_N	335 mA @ AC 115 V / 210 mA @ AC 230 V
Inrush current	20 A @ AC 115 V / 40 A @ AC 230 V
Internal fuse	T2A / AC 250 V
External protection	Mini-circuit breaker: C 4 A

Output

Output voltage/current	DC 24 V/1.25 A
Rated voltage U_N	DC 24 V
Rated current I_N	1.25 A
Power Dissipation	5.7 W @ AC 230 V
Setting range $U_{out\ min.}/U_{out\ max.}$	22.5–28.5 V
Accuracy	±1 %
Load regulation	±1 %
Line regulation	±1 %

Technical data sheet

Power supply · regulated, 30 W

Rise time	150 ms
Temperature coefficient	±0.03 % / °C
Ripple and noise	100 mV
Hold up time	20 ms @ 115 V / 50 ms @ 230 V
Efficiency	86 %
Over voltage protection	DC 28.8–32.4 V
Rated over load protection	140 %
Short circuit	Hiccup Mode

Status indication

Status indication DC ON LED green	DC 19.2–21.6 V
-----------------------------------	----------------

General

Switching frequency	65 kHz
Insulation voltage input / output	AC 3 kV / DC 4.2 kV
Insulation voltage input / ground	AC 1.5 kV / DC 2.1 kV
Insulation voltage output / ground	AC 500 V / DC 710 V
Insulation resistance at DC 500 V	100 MΩ
Derating	2.5 %/°C starting 51 °C
Cooling	Air convection, 25 mm clearance all-round
Housing material	Plastic
Mounting	DIN rail mountable TS35 (EN 60715)
Max. altitude operation	5000 m (EN 62368-1)
Installation position	Vertical
MTBF	764000 h
Degree of protection	IP20
Protection class	I
Weight/unit	0.14 kg
Connection type	Screw terminal 0.20 mm ² – 2.5 mm ² AWG 26 – AWG 12
Dimensions (w × h × d)	22.5 mm × 90.0 mm × 100.0 mm
PU (units)	1

General ambient conditions

Operation temperature range	-25 °C ... +71 °C (Derating)
Storage temperature range	-40 °C ... +85 °C
Over voltage category	II
Degree of pollution	2

Technical data sheet

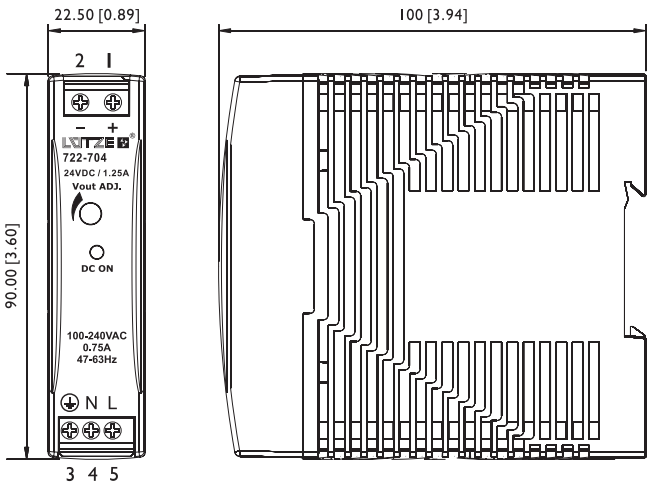
Power supply · regulated, 30 W

Certifications/Standards

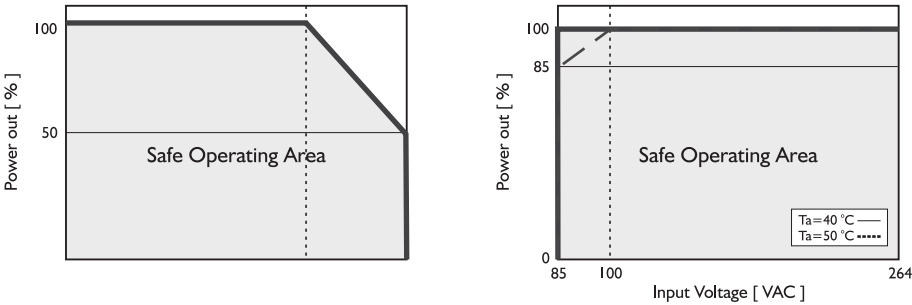
Certifications	UL 508 Listed (E249179) UL 1310 Class 2 (E320708) UL 62368-1 CE UKCA
Standards	EN 62368-1 EN 61000-6-3 EN 55032 Class B EN 61000-3-2 EN 61000-3-3 EN 61000-6-2 EN 55024 EN 61000-4-2 Level 4 EN 61000-4-3 Level 3 EN 61000-4-4 Level 4 EN 61000-4-5 L-N Level 3 L/N-FG Level 4 EN 61000-4-6 Level 3 EN 61000-4-8 Level 4 EN 61000-4-11 ENV 50204 Level 2 EN 61204-3

Dimensions

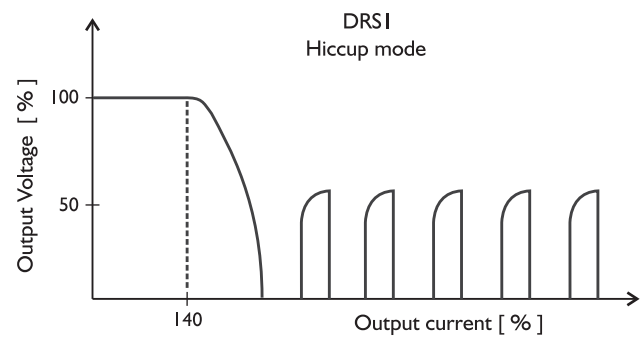
mm [inch]



Derating



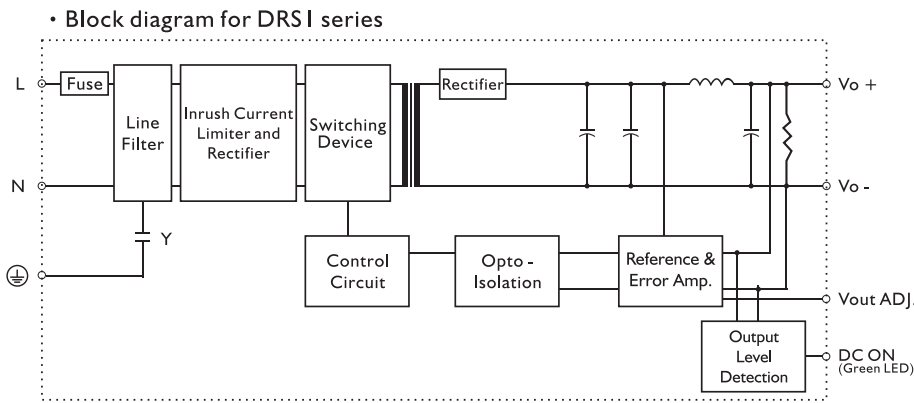
Short circuit characteristics



Pin assignment

PIN NO.		Designation	Description
1	OUT	V +	Positive output terminal
2		V -	Negative output terminal
3		⊕	Ground this terminal to minimize high-frequency emissions
4	IN	N	Input terminals (neutral conductor, no polarity at DC input)
5		L	Input terminals (phase conductor, no polarity at DC input)
	OTHER	DC ON	Operation indicator LED
		Vout ADJ.	Trimmer-potentiometer for Vout adjustment

Circuit diagram



Technical data sheet

Power supply · regulated, 72 W

Primary switchmode power supply, Single-phase
Input: wide-range input AC 85–264 V, DC 120–375 V
Output: DC 24 V, adjustable



Identification

Type	DRS3-24A
Part No.	722705

Product version

Datasheet version	00
-------------------	----

Input

Number of phases	1
Rated voltage U_N	AC 100–240 V
Operation voltage range	AC 85–264 V / DC 120–375 V
Frequency range	47 Hz – 63 Hz
Rated current I_N	1.45 A @ AC 115 V / 750 mA @ AC 230 V
Inrush current	30 A @ AC 115 V / 60 A @ AC 230 V
Internal fuse	T3.15A / AC 250 V
External protection	Mini-circuit breaker: C 6 A

Output

Output voltage/current	DC 24 V/3 A
Rated voltage U_N	DC 24 V
Rated current I_N	3 A
Power Dissipation	10.5 W @ AC 230 V
Setting range $U_{out\ min.}/U_{out\ max.}$	22.5–28.5 V
Accuracy	±1 %
Load regulation	±1 %
Line regulation	±1 %

Technical data sheet

Power supply · regulated, 72 W

Rise time	150 ms
Temperature coefficient	±0.03 % / °C
Ripple and noise	100 mV
Hold up time	15 ms @ 115 V / 50 ms @ 230 V
Efficiency	89 %
Over voltage protection	DC 28.8–32.4 V
Rated over load protection	140 %
Short circuit	Hiccup Mode

Status indication

Status indication DC ON LED green	DC 19.2–21.6 V
-----------------------------------	----------------

General

Switching frequency	40 – 100 kHz
Insulation voltage input / output	AC 3 kV / DC 4.2 kV
Insulation voltage input / ground	AC 1.5 kV / DC 2.1 kV
Insulation voltage output / ground	AC 500 V / DC 710 V
Insulation resistance at DC 500 V	100 MΩ
Derating	2.5 %/°C starting 51 °C
Cooling	Air convection, 25 mm clearance all-round
Housing material	Plastic
Mounting	DIN rail mountable TS35 (EN 60715)
Max. altitude operation	5000 m (EN 62368-1)
Installation position	Vertical
MTBF	580000 h
Degree of protection	IP20
Protection class	I
Weight/unit	0.25 kg
Connection type	Screw terminal 0.20 mm ² – 2.5 mm ² AWG 26 – AWG 12
Dimensions (w × h × d)	40.5 mm × 90.0 mm × 100.0 mm
PU (units)	1

General ambient conditions

Operation temperature range	-25 °C ... +71 °C (Derating)
Storage temperature range	-40 °C ... +85 °C
Over voltage category	II
Degree of pollution	2

Technical data sheet

Power supply · regulated, 72 W

Certifications/Standards

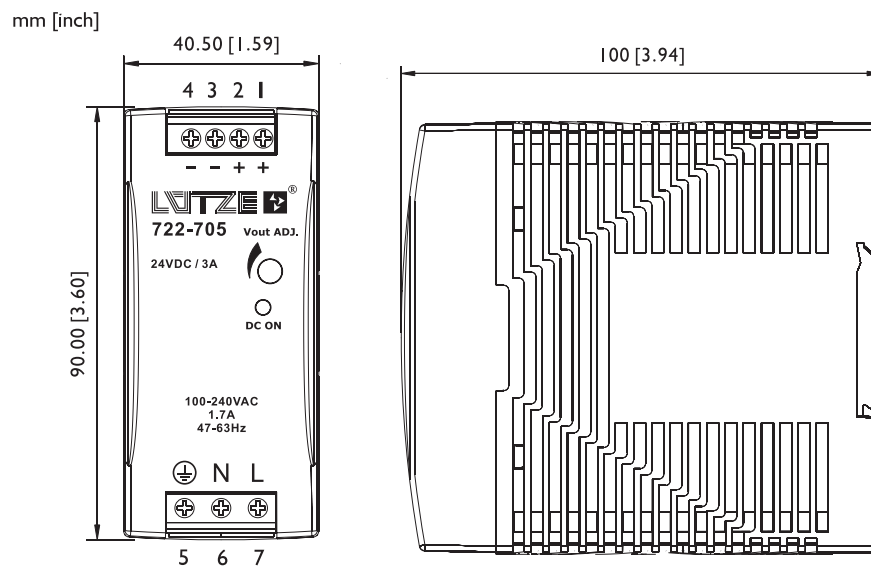
Certifications

UL 508 Listed (E249179)
UL 1310 Class 2 (E320708)
UL 62368-1
CE
UKCA

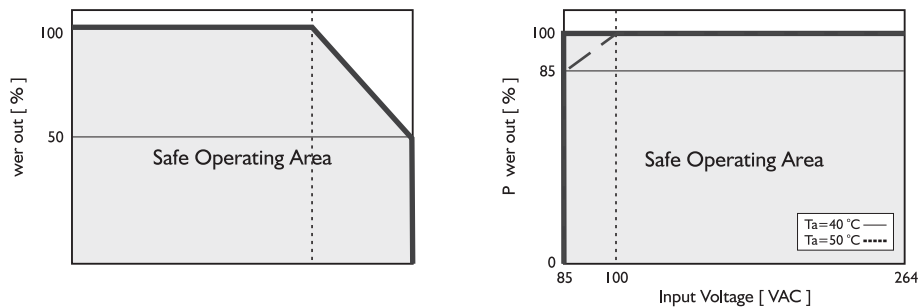
Standards

EN 62368-1
EN 61000-6-3
EN 55032 Class B
EN 61000-3-2
EN 61000-3-3
EN 61000-6-2
EN 55024
EN 61000-4-2 Level 4
EN 61000-4-3 Level 3
EN 61000-4-4 Level 4
EN 61000-4-5 L-N Level 3
L/N-FG Level 4
EN 61000-4-6 Level 3
EN 61000-4-8 Level 4
EN 61000-4-11 ENV 50204 Level 2
EN 61204-3

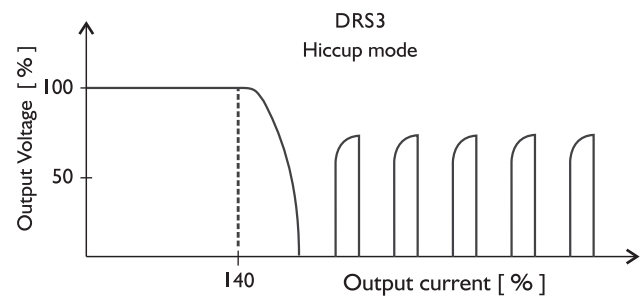
Dimensions



Derating



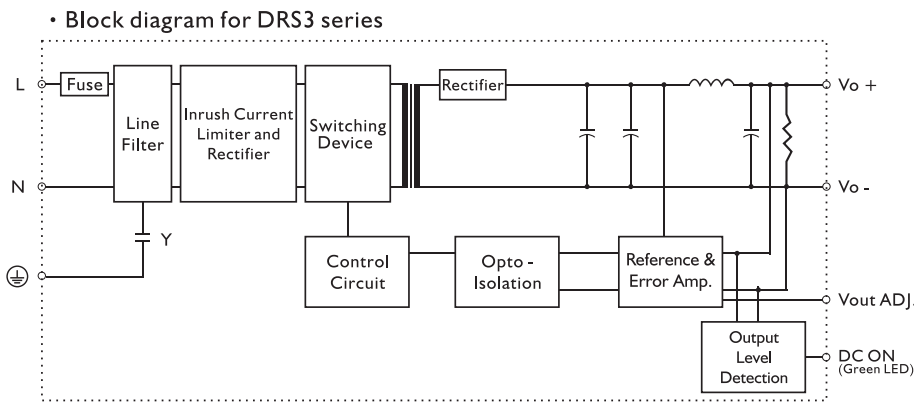
Short circuit characteristics



Pin assignment

PIN NO.		Designation	Description
1, 2	OUT	V +	Positive output terminal
3, 4		V -	Negative output terminal
5	IN	⊕	Ground this terminal to minimize high-frequency emissions
6		N	Input terminals (neutral conductor; no polarity at DC input)
7		L	Input terminals (phase conductor; no polarity at DC input)
	OTHER	Vout ADJ.	Trimmer-potentiometer for Vout adjustment
		DC ON	Operation indicator LED

Circuit diagram



Technical data sheet

Power supply · regulated, 72 W

Primary switchmode power supply, Single-phase
Input: wide-range input AC 85–264 V, DC 120–375 V
Output: DC 24 V, adjustable



Identification

Type	DRS3-24
Part No.	722706

Product version

Datasheet version	00
-------------------	----

Input

Number of phases	1
Rated voltage U_N	AC 100–240 V
Operation voltage range	AC 85–264 V / DC 120–375 V
Frequency range	47 Hz – 63 Hz
Rated current I_N	1.45 A @ AC 115 V / 750 mA @ AC 230 V
Inrush current	30 A @ AC 115 V / 60 A @ AC 230 V
Internal fuse	T3.15A / AC 250 V
External protection	Mini-circuit breaker: C 6 A

Output

Output voltage/current	DC 24 V/3 A
Rated voltage U_N	DC 24 V
Rated current I_N	3 A
Power Dissipation	10.5 W @ AC 230 V
Setting range $U_{out\ min.}/U_{out\ max.}$	22.5–28.5 V
Accuracy	±1 %
Load regulation	±1 %
Line regulation	±1 %

Technical data sheet

Power supply · regulated, 72 W

Rise time	150 ms
Temperature coefficient	±0.03 % / °C
Ripple and noise	100 mV
Hold up time	15 ms @ 115 V / 50 ms @ 230 V
Efficiency	89 %
Over voltage protection	DC 28.8–32.4 V
Rated over load protection	140 %
Short circuit	Hiccup Mode

Status indication

Status indication DC ON LED green	DC 19.2–21.6 V
-----------------------------------	----------------

General

Switching frequency	40 – 100 kHz
Insulation voltage input / output	AC 3 kV / DC 4.2 kV
Insulation voltage input / ground	AC 1.5 kV / DC 2.1 kV
Insulation voltage output / ground	AC 500 V / DC 710 V
Insulation resistance at DC 500 V	100 MΩ
Derating	2.5 %/°C starting 51 °C
Cooling	Air convection, 25 mm clearance all-round
Housing material	Plastic
Mounting	DIN rail mountable TS35 (EN 60715)
Max. altitude operation	5000 m (EN 62368-1)
Installation position	Vertical
MTBF	580000 h
Degree of protection	IP20
Protection class	I
Weight/unit	0.25 kg
Connection type	Spring terminal 0.20 mm ² – 2.0 mm ² AWG 24 – AWG 14
Dimensions (w × h × d)	40.5 mm × 90.0 mm × 100.0 mm
PU (units)	1

General ambient conditions

Operation temperature range	-25 °C ... +71 °C (Derating)
Storage temperature range	-40 °C ... +85 °C
Over voltage category	II
Degree of pollution	2

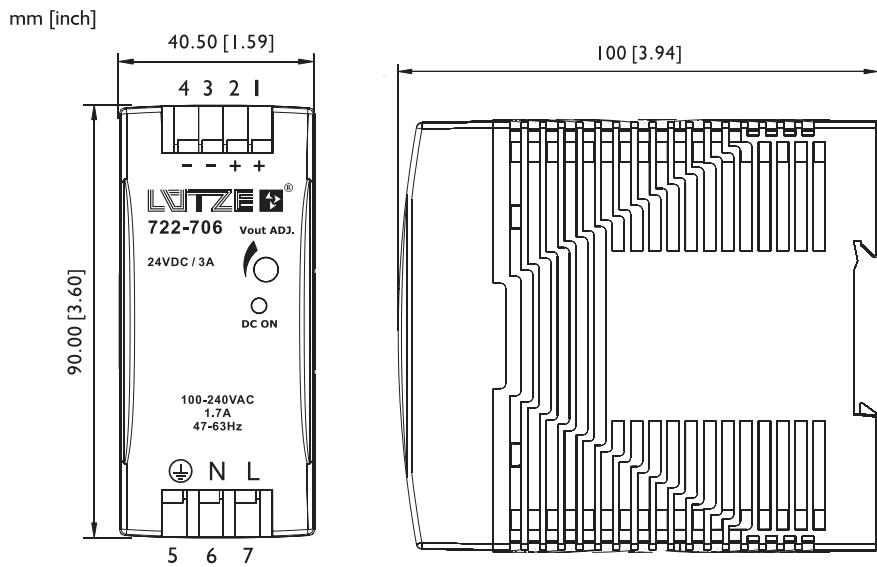
Technical data sheet

Power supply · regulated, 72 W

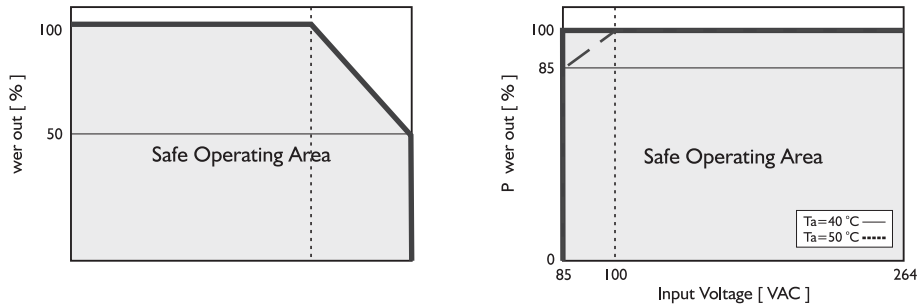
Certifications/Standards

Certifications	UL 508 Listed (E249179)
	UL 1310 Class 2 (E320708)
Standards	UL 62368-1
	CE
Standards	UKCA
	EN 62368-1
Standards	EN 61000-6-3
	EN 55032 Class B
Standards	EN 61000-3-2
	EN 61000-3-3
Standards	EN 61000-6-2
	EN 55024
Standards	EN 61000-4-2 Level 4
	EN 61000-4-3 Level 3
Standards	EN 61000-4-4 Level 4
	EN 61000-4-5 L-N Level 3
Standards	L/N-FG Level 4
	EN 61000-4-6 Level 3
Standards	EN 61000-4-8 Level 4
	EN 61000-4-11 ENV 50204 Level 2
Standards	EN 61204-3

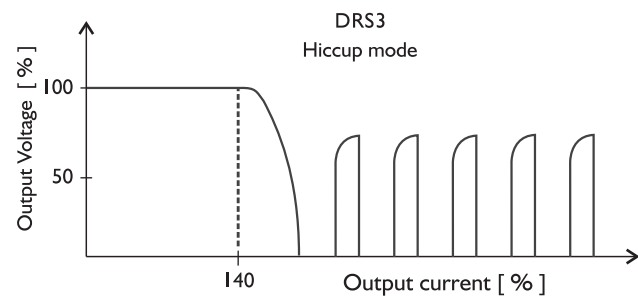
Dimensions



Derating



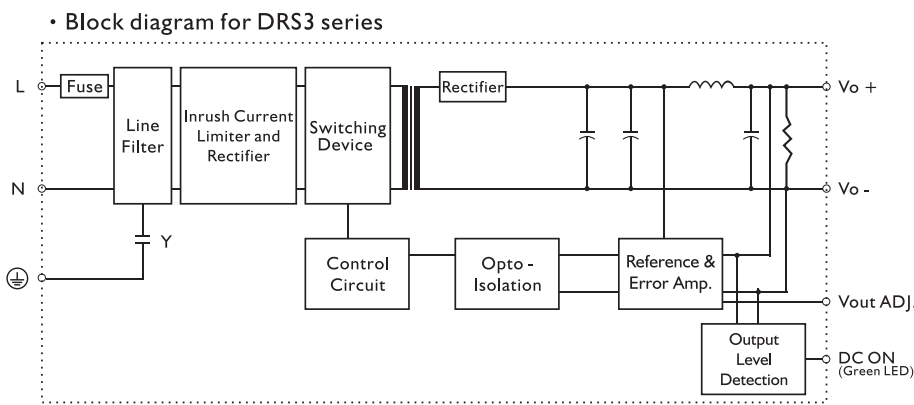
Short circuit characteristics



Pin assignment

PIN NO.		Designation	Description
1, 2	OUT	V +	Positive output terminal
3, 4		V -	Negative output terminal
5	IN	⊕	Ground this terminal to minimize high-frequency emissions
6		N	Input terminals (neutral conductor; no polarity at DC input)
7		L	Input terminals (phase conductor; no polarity at DC input)
	OTHER	Vout ADJ.	Trimmer-potentiometer for Vout adjustment
		DC ON	Operation indicator LED

Circuit diagram



Technical data sheet

Power supply · LEPOS Performance, 1-phase, regulated, 120 W

Primary switchmode power supply, Single-phase
Input: wide-range input AC 90–264 V, DC 127–370 V
Output: DC 24 V / 5 A, adjustable



Identification

Type	LEPOS-HP-120-24
Part No.	722715

Product version

Datasheet version	02
-------------------	----

Input

Number of phases	1
Rated voltage U_N	AC 115/230 V
Operation voltage range	AC 90–264 V / DC 127–370 V
Frequency range	47 Hz – 63 Hz
Rated current I_N	1.4 A @ AC 115 V / 700 mA @ AC 230 V
Inrush current	35 A @ AC 115 V / 70 A @ AC 230 V
Internal fuse	T3,15 A / AC 250 V
External protection	Mini-circuit breaker: C 16 A
Power factor correction P.F.C.	>0.96 @ AC 115 V / >0.93 @ AC 230 V

Output

Output voltage/current	DC 24 V/5 A
Rated voltage U_N	DC 24 V
Rated current I_N	5 A
Max. output current	7.5 A, 3 s
Power Dissipation	10.5 W @ AC 230 V
Setting range $U_{out\ min.}/U_{out\ max.}$	24–28 V
Accuracy	±2 %

Technical data sheet

Power supply · LEPOS Performance, 1-phase, regulated, 120 W

Load regulation	±1 %
Line regulation	±0.5 %
Rise time	1500 ms @ 230 V / 3000 ms @ 115 V
Temperature coefficient	±0.03 % / °C
Ripple and noise	100 mV
Hold up time	20 ms @ 115 V / 20 ms @ 230 V
Parallel / redundant mode	Yes/via external decoupling diode e.g. 722999
Efficiency	91 %
Overtemperature protection	95 °C +/- 5 °C, switch-off with auto reset
Over voltage protection	29-33 V, switch-off in case of overvoltage, switch-on again after input voltage reset
Rated over load protection	150 % for 3 s, then shutdown with auto-reset
Short circuit	Current limit

Status indication

Status indication DC ON LED green DC 22-28 V

Monitoring

DC ON Control (Rdy)	N/O contact
Switching voltage	AC/DC 30 V
Switching current	AC/DC 1 A
Switching capacity	30 VA / 30 W
Isolation voltage	AC 500 V

General

Insulation voltage input / output	AC 3.0 kV _{eff}
Insulation voltage input / ground	AC 2.0 kV _{eff}
Insulation voltage output / ground	AC 500 V / DC 500 V
Insulation resistance at DC 500 V	100 MΩ
Derating	>60 °C: -3 %/°C
Cooling	Air convection, 15 mm distance right/left, 40 mm top, 20 mm bottom
Housing material	Metal
Mounting	DIN rail mountable TS35 (EN 60715)
Max. altitude operation	2000 m
Installation position	Vertical
MTBF	>292100 h: MIL HDBK 217F
Degree of protection	IP20
Protection class	I
Weight/unit	0.67 kg
Connection type	Screw terminal

113.0 mm

Technical data sheet

Power supply · LEPOS Performance, 1-phase, regulated, 120 W

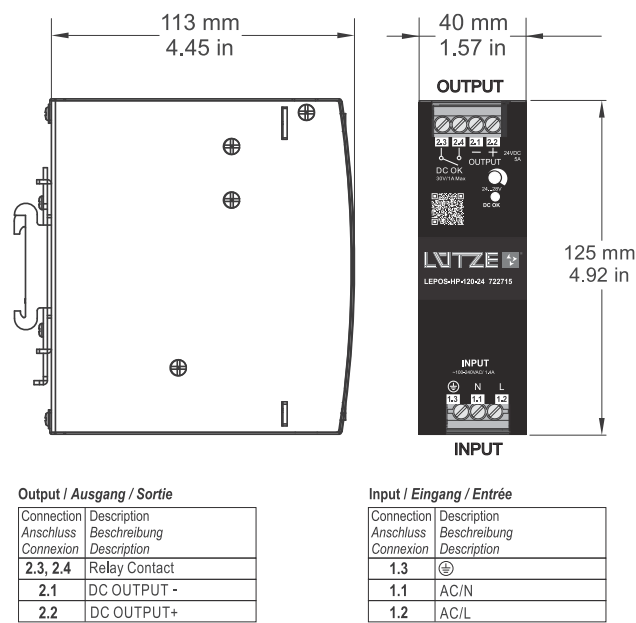
General ambient conditions

Operation temperature range	-25 °C ... +70 °C (Derating)
Storage temperature range	-40 °C ... +85 °C
Over voltage category	III
Degree of pollution	2
Relative air humidity	20 – 95 % RH, not condensing

Certifications/Standards

Certifications	CE UKCA cULus (E249179)
----------------	-------------------------------

Dimensions



Use

DC OK Relay Contact

Contact Close	PSU turns on / DC OK.
Contact Open	PSU turns off / DC Fail.
Contact Ratings (max.)	30V/1A resistive load.

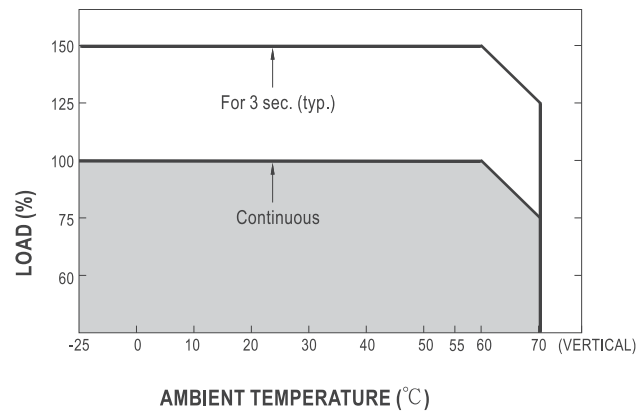
Peak Loading



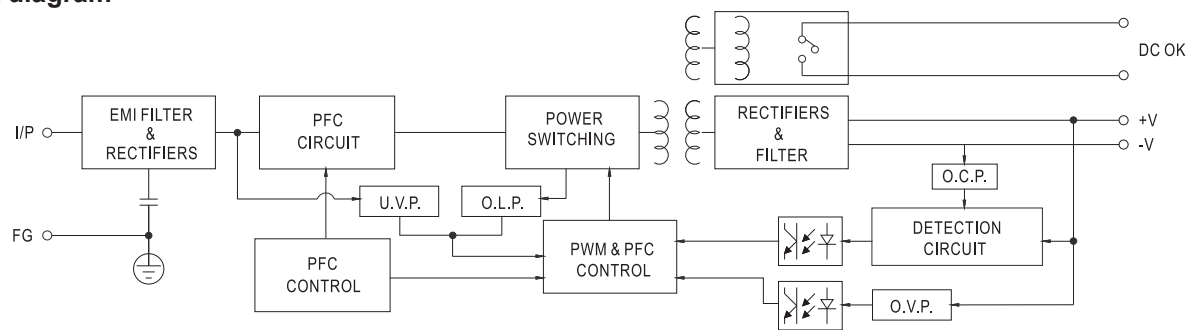
Technical data sheet

Power supply · LEPOS Performance, 1-phase, regulated, 120 W

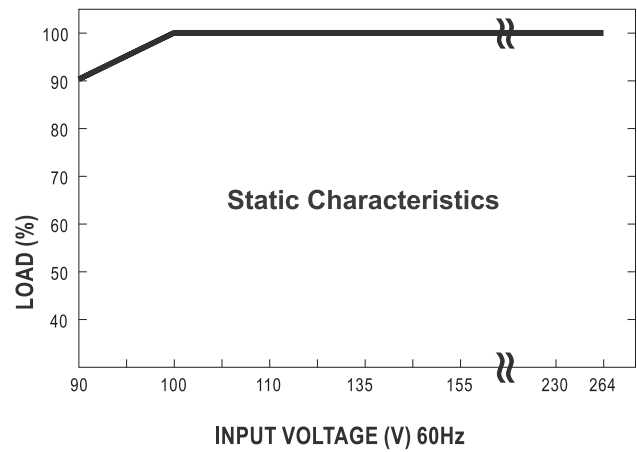
Derating



Circuit diagram



Characteristic



Technical data sheet

Power supply · LEPOS Performance, 1-phase, regulated, 240 W

Primary switchmode power supply, Single-phase

Input: wide-range input AC 90–264 V, DC 127–370 V

Output: DC 24 V / 10 A, adjustable



Identification

Type	LEPOS-HP-240-24
Part No.	722716

Product version

Datasheet version	02
-------------------	----

Input

Number of phases	1
Rated voltage U_N	AC 115/230 V
Operation voltage range	AC 90–264 V / DC 127–370 V
Frequency range	47 Hz – 63 Hz
Rated current I_N	2.6 A @ AC 115 V / 2.6 A @ AC 230 V
Inrush current	33 A @ AC 115 V / 55 A @ AC 230 V
Internal fuse	T5,0 A / AC 250 V
External protection	Mini-circuit breaker: C 16 A
Power factor correction P.F.C.	>0.99 @ AC 115V / >0.94 @ AC 230V

Output

Output voltage/current	DC 24 V/10 A
Rated voltage U_N	DC 24 V
Rated current I_N	10 A
Max. output current	>15 A, >3 s
Power Dissipation	19 W @ AC 230 V
Setting range $U_{out\ min.}/U_{out\ max.}$	24–28 V
Accuracy	±2 %

Technical data sheet

Power supply · LEPOS Performance, 1-phase, regulated, 240 W

Load regulation	±1 %
Line regulation	±0.5 %
Rise time	650 ms @ 230 V / 1300 ms @ 115 V
Temperature coefficient	±0.03 % / °C
Ripple and noise	100 mV
Hold up time	20 ms @ 115 V / 20 ms @ 230 V
Parallel / redundant mode	Yes/via external decoupling diode e.g. 722999
Efficiency	93 %
Overtemperature protection	95 °C +/- 5 °C, switch-off with auto reset
Over voltage protection	29-33 V, switch-off in case of overvoltage, switch-on again after input voltage reset
Rated over load protection	150 % for 3 s, then shutdown with auto-reset
Short circuit	Current limit

Status indication

Status indication DC ON LED green DC 22-28 V

Monitoring

DC ON Control (Rdy)	N/O contact
Switching voltage	AC/DC 30 V
Switching current	AC/DC 1 A
Switching capacity	30 VA / 30 W
Isolation voltage	AC 500 V

General

Insulation voltage input / output	AC 3.0 kV _{eff}
Insulation voltage input / ground	AC 2.0 kV _{eff}
Insulation voltage output / ground	AC 500 V / DC 500 V
Insulation resistance at DC 500 V	100 MΩ
Derating	>60 °C: -6 W/°C
Cooling	Air convection, 15 mm distance right/left, 40 mm top, 20 mm bottom
Housing material	Metal
Mounting	DIN rail mountable TS35 (EN 60715)
Max. altitude operation	2000 m
Installation position	Vertical
MTBF	>169300 h: MIL-HDBK-217F
Degree of protection	IP20
Protection class	I
Weight/unit	1 kg
Connection type	Screw terminal

113.5 mm

Technical data sheet

Power supply · LEPOS Performance, 1-phase, regulated, 240 W

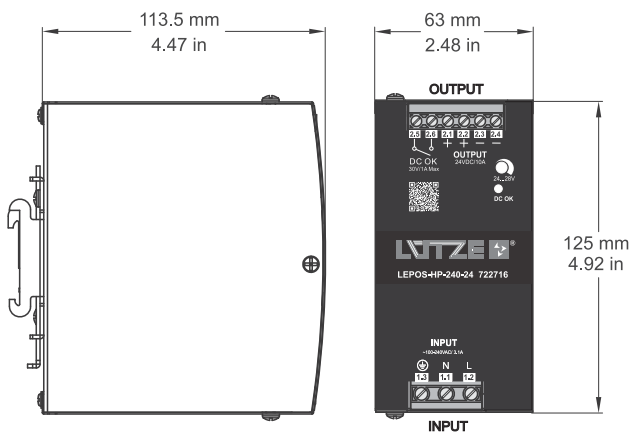
General ambient conditions

Operation temperature range	-25 °C ... +70 °C (Derating)
Storage temperature range	-40 °C ... +85 °C
Over voltage category	III
Degree of pollution	2
Relative air humidity	20 – 95 % RH, not condensing

Certifications/Standards

Certifications	CE UKCA cULus (E249179)
----------------	-------------------------------

Dimensions



Output / Ausgang / Sortie

Connection Anschluss Connexion	Description Beschreibung Description
2.5, 2.6	Relay Contact
2.1, 2.2	DC OUTPUT +
2.3, 2.4	DC OUTPUT -

Input / Eingang / Entrée

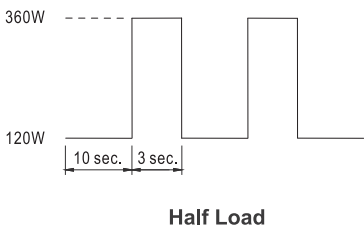
Connection Anschluss Connexion	Description Beschreibung Description
1.3	⊕
1.1	AC/N
1.2	AC/L

Use

DC OK Relay Contact

Contact Close	PSU turns on / DC OK.
Contact Open	PSU turns off / DC Fail.
Contact Ratings (max.)	30V/1A resistive load.

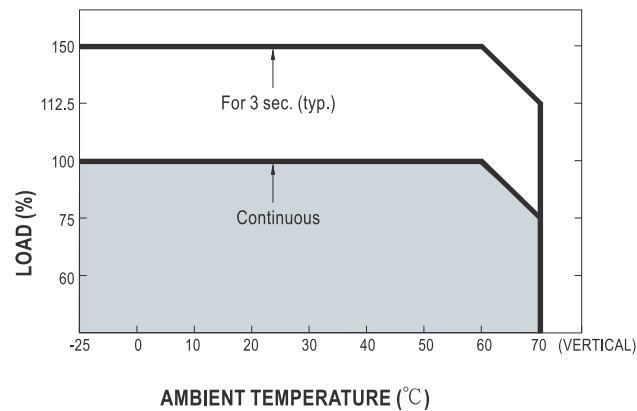
Peak Loading



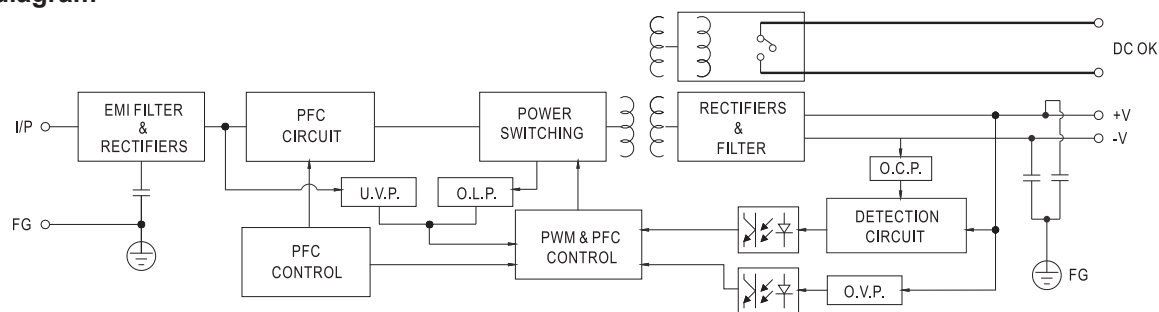
Technical data sheet

Power supply · LEPOS Performance, 1-phase, regulated, 240 W

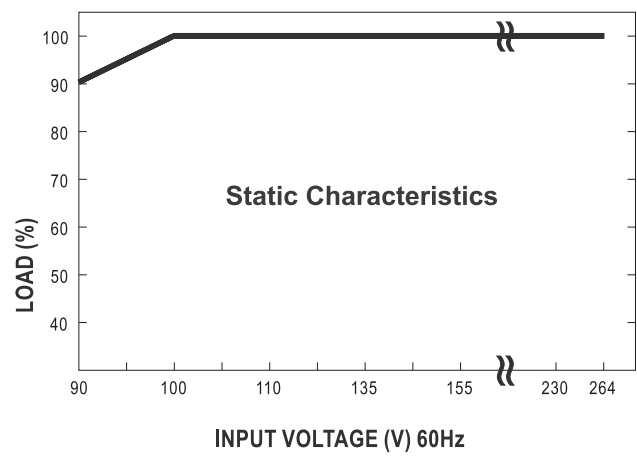
Derating



Circuit diagram



Characteristic



Technical data sheet

Power supply · LEPOS Performance, 1-phase, regulated, 480 W

Primary switchmode power supply, Single-phase
Input: wide-range input AC 90–264 V, DC 127–370 V
Output: DC 24 V / 20 A, adjustable



Identification

Type	LEPOS-HP-480-24
Part No.	722717

Product version

Datasheet version	02
-------------------	----

Input

Number of phases	1
Rated voltage U_N	AC 115/230 V
Operation voltage range	AC 90–264 V / DC 127–370 V
Frequency range	47 Hz – 63 Hz
Rated current I_N	5.0 A @ AC 115 V / 2.5 A @ AC 230 V
Inrush current	40 A @ AC 115 V / 80 A @ AC 230 V
Internal fuse	T8,0A / AC 250 V
External protection	Mini-circuit breaker: C 16 A
Power factor correction P.F.C.	>0.99 @ AC 115V / >0.94 @ AC 230V

Output

Output voltage/current	DC 24 V/20 A
Rated voltage U_N	DC 24 V
Rated current I_N	20 A
Max. output current	>30 A, >3 s
Power Dissipation	36 W @ AC 230 V
Setting range $U_{out\ min.}/U_{out\ max.}$	24–28 V
Accuracy	±2 %

Technical data sheet

Power supply · LEPOS Performance, 1-phase, regulated, 480 W

Load regulation	±1 %
Line regulation	±0.5 %
Rise time	1500 ms @ 230 V / 3000 ms @ 115 V
Temperature coefficient	±0.03 % / °C
Ripple and noise	100 mV
Hold up time	14 ms @ 230 V
Parallel / redundant mode	Yes/via external decoupling diode e.g. 722999
Efficiency	94 %
Overtemperature protection	105 °C +/- 5 °C, switch-off with auto reset
Over voltage protection	29-33 V, switch-off in case of overvoltage, switch-on again after input voltage reset
Rated over load protection	150 % for 3 s, then shutdown with auto-reset
Short circuit	Current limit

Status indication

Status indication DC ON LED green DC 22-28 V

Monitoring

DC ON Control (Rdy)	N/O contact
Switching voltage	AC/DC 30 V
Switching current	AC/DC 1 A
Switching capacity	30 VA / 30 W
Isolation voltage	AC 500 V

General

Insulation voltage input / output	AC 3.0 kV _{eff}
Insulation voltage input / ground	AC 2.0 kV _{eff}
Insulation voltage output / ground	AC 500 V / DC 500 V
Insulation resistance at DC 500 V	100 MΩ
Derating	>60 °C: -9.6 W/°C
Cooling	Air convection, 15 mm distance right/left, 40 mm top, 20 mm bottom
Housing material	Metal
Mounting	DIN rail mountable TS35 (EN 60715)
Max. altitude operation	2000 m
Installation position	Vertical
MTBF	>118600 h: MIL-HDBK-217F
Degree of protection	IP20
Protection class	I
Weight/unit	1.6 kg
Connection type	Screw terminal

129.0 mm

Technical data sheet

Power supply · LEPOS Performance, 1-phase, regulated, 480 W

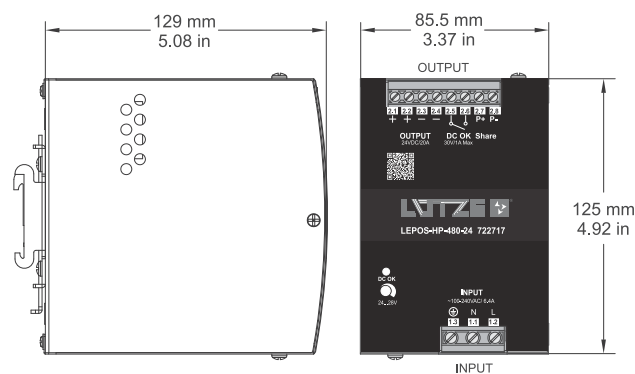
General ambient conditions

Operation temperature range	-25 °C ... +70 °C (Derating)
Storage temperature range	-40 °C ... +85 °C
Over voltage category	III
Degree of pollution	2
Relative air humidity	20 – 95 % RH, not condensing

Certifications/Standards

Certifications	CE UKCA cULus (E249179)
----------------	-------------------------------

Dimensions



Output / Ausgang / Sortie

Connection Anschluss Connexion	Description Beschreibung Description
2.1, 2.2	DC OUTPUT +
2.3, 2.4	DC OUTPUT -
2.5, 2.6	Relay Contact
2.7	P+ (currene share)
2.8	P- (currene share)

Input / Eingang / Entrée

Connection Anschluss Connexion	Description Beschreibung Description
1.3	⊕
1.1	AC/N
1.2	AC/L

Technical data sheet

Power supply · LEPOS Performance, 1-phase, regulated, 480 W

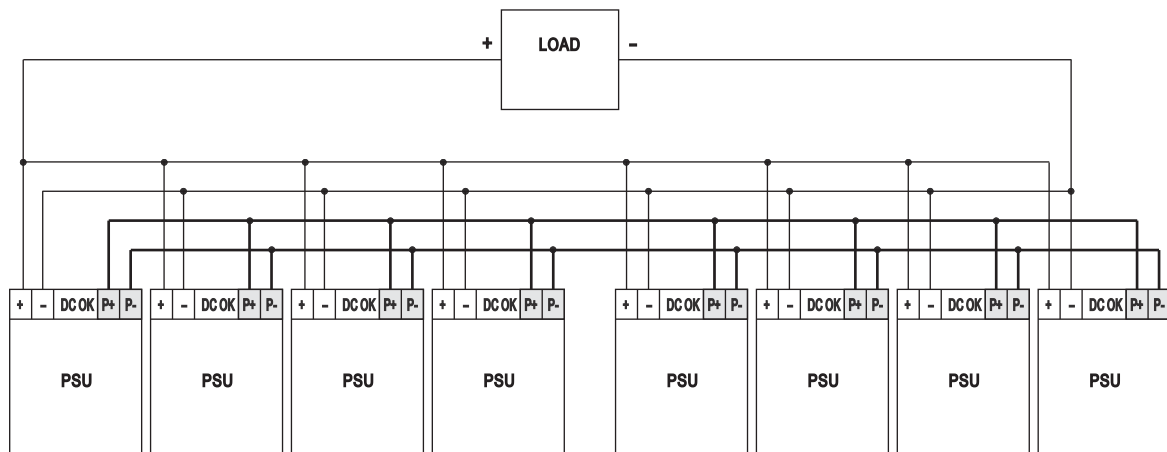
PIN assignment

DE Gemeinsame Nutzung des Stroms

1. Die Anschlussart des Parallelbetriebs ist wie folgt (P+, P-: Parallelanschluss)
2. Die Ausgangsspannungsdifferenz zwischen den parallelen Einheiten sollte weniger als 0,2 V betragen
3. Der Gesamtstrom darf den nach der folgenden Gleichung berechneten Wert nicht überschreiten:
(Ausgangsstrom bei Parallelbetrieb) = (Nennstrom pro Gerät) x (Anzahl der Geräte) x 0,9
4. Die maximale Anzahl der parallel geschalteten Geräte beträgt acht Stück. Wenn Sie mehr Geräte parallel betreiben möchten, wenden Sie sich bitte an den Hersteller.
5. Bei Parallelschaltung sollte die Mindestausgangslast mehr als 3% der Gesamtausgangslast betragen (Min. Last > 3% Nennstrom pro Gerät x Anzahl der Geräte)

EN Current sharing

1. Connection type of parallel operation is as follows (P+, P-: parallel connection)
2. The output voltage difference between the parallel units should be less than 0.2 V
3. The total output current must not exceed the value calculated of the following equation:
(Output current at parallel operation) = (The rated current per unit) x (Number of unit) x 0.9
4. The maximum quantity of parallel operation is eight units. If need more quantity of parallel operation, please contact the manufacture.
5. In parallel connection, the minimum output load should be more than 3% of total output load (Min. load > 3% rated current per unit x number of unit)



FR Partage du courant électrique

1. Le type de connexion du fonctionnement en parallèle est le suivant (P+, P- : connexion en parallèle)
2. La différence de tension de sortie entre les unités parallèles doit être inférieure à 0,2 V.
3. Le courant de sortie total ne doit pas dépasser la valeur calculée par l'équation suivante :
(Courant de sortie en fonctionnement parallèle) = (Courant nominal par unité) x (Nombre d'unités) x 0,9
4. La quantité maximale de fonctionnement en parallèle est de huit unités. Si vous avez besoin d'une plus grande quantité de fonctionnement en parallèle, veuillez contacter le fabricant.
5. En cas de connexion en parallèle, la charge de sortie minimale doit être supérieure à 3 % de la charge de sortie totale (charge minimale > 3 % du courant nominal par unité x nombre d'unités).

ES Compartir la corriente eléctrica

1. El tipo de conexión para el funcionamiento en paralelo es el siguiente (P+, P-: conexión en paralelo)
2. La diferencia de tensión de salida entre las unidades en paralelo debe ser inferior a 0,2 V.
3. La corriente de salida total no debe superar el valor calculado mediante la siguiente ecuación:
(Corriente de salida en funcionamiento en paralelo) = (Corriente nominal por unidad) x (Número de unidades) x 0,9
4. La cantidad máxima de funcionamiento en paralelo es de ocho unidades. Si se requiere más funcionamiento en paralelo, póngase en contacto con el fabricante.
5. Cuando se conecta en paralelo, la carga de salida mínima debe ser superior al 3% de la carga de salida total (carga mínima > 3% de la corriente nominal por unidad x número de unidades).

Technical data sheet

Power supply · LEPOS Performance, 1-phase, regulated, 480 W

Use

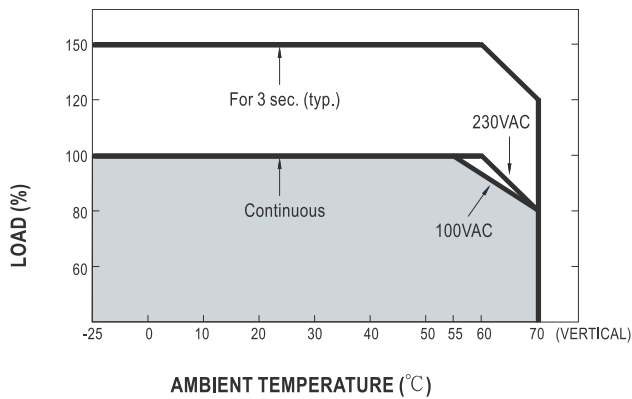
DC OK Relay Contact

Contact Close	PSU turns on / DC OK.
Contact Open	PSU turns off / DC Fail.
Contact Ratings (max.)	30V/1A resistive load.

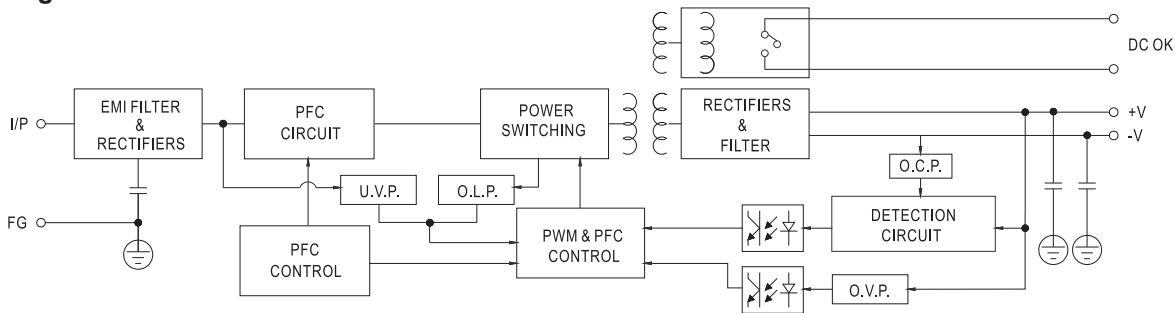
Peak Loading



Derating



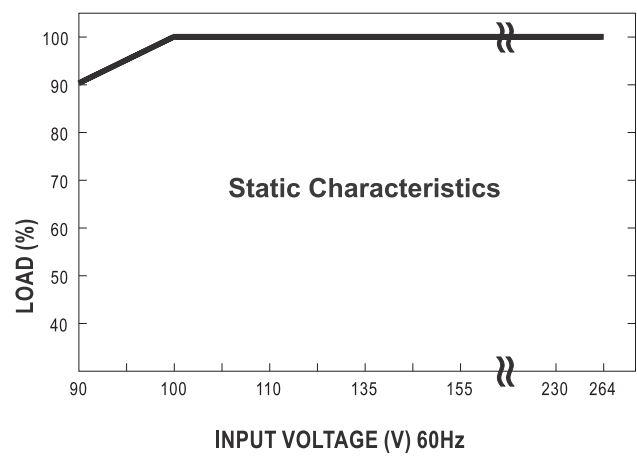
Circuit diagram



Technical data sheet

Power supply · LEPOS Performance, 1-phase, regulated, 480 W

Characteristic



Technical data sheet

Power supply · LEPOS Power, 3-phase, regulated, 240 W

Primary switchmode power supply, three-phase

Input: wide-range input AC 340-550 V

Output: DC 24 V / 10 A, adjustable



Identification

Type	LEPOS-PWR-240-24
Part No.	722725

Product version

Datasheet version	01
-------------------	----

Input

Number of phases	3
Rated voltage U_N	3 × AC 380–480 V
Operation voltage range	3 x AC 340-550 V / 3 x DC 480-780 V Two-phase operation possible with connection L1, L3, FG or L2, L3, FG - Two-phase operation is permitted under certain output current restrictions. For details, please refer to the derating curves). / DC 480 - 780 V
Frequency range	47 Hz – 63 Hz
Rated current I_N	typ. 0,69 A @ AC 400 V / 0,6 A @ AC 500 V
Inrush current	Cold start 50 A
Leak current	<2 mA / AC 530 V
Internal fuse	T4,0 A / AC 500 V
External protection	Mini-circuit breaker: C 16 A
Power factor correction P.F.C.	typ. PF ≥0.53 @ AC 400 V (at full load) / typ. PF ≥0.52 @ AC 500 V (at full load)

Output

Output voltage/current	DC 24 V/10 A
Rated voltage U_N	DC 24 V

Technical data sheet

Power supply · LEPOS Power, 3-phase, regulated, 240 W

Rated current I_N	10 A
Max. output current	13 A, 3 s
Power Dissipation	<20 W @ AC 400 V
Setting range $U_{out\ min.}/U_{out\ max.}$	24-28 V
Accuracy	±1 %
Load regulation	±1 %
Line regulation	±0.5 %
Rise time	2000 ms (setup), 60 ms (switch-on time) @ AC 400 V (at full load) / 1500 ms (setup), 60 ms (switch-on time) @ AC 500 V (at full load)
Temperature coefficient	±0.05 % / °C (0-60 °C)
Ripple and noise	≤100 mV pp Ripple and noise are measured with 20 MHz bandwidth, the probe is terminated with a 0.1 µF MKP parallel capacitor.
Hold up time	>20 ms @ AC 400 V >40 ms @ AC 500 V (at full load)
Parallel / redundant mode	Yes/via external decoupling diode e.g. 722999
Efficiency	92 %
Overtemperature protection	105 °C +/- 5 °C, switch-off with auto reset
Over voltage protection	30–36 V, protection: hiccup mode, autoreset after fault rectification
Rated over load protection	105-130 % nominal output power, protection: constant current limitation, device switches to hiccup mode after 3 seconds
Short circuit	Constant current limitation, device switches to hiccup mode after 3 seconds

Status indication

Status indication DC ON LED green DC 22-28 V

Monitoring

DC ON Control (Rdy)	N/O contact
Switching voltage	AC/DC 30 V
Switching current	AC/DC 1 A
Switching capacity	30 VA / 30 W
Isolation voltage	AC 500 V

General

Insulation voltage input / output	AC 3.0 kV _{eff}
Insulation voltage input / ground	AC 2.0 kV _{eff}
Insulation voltage output / ground	AC 500 V / DC 500 V
Insulation resistance at DC 500 V	100 MΩ
Derating	>60 °C: -12 W/°C
Cooling	Air convection, 15 mm distance right/left, 40 mm top, 20 mm bottom

(EN 60715)

temperature is reduced by 3.5 °C/1000 m if the device of more than 2000 m (6500 ft)).

Technical data sheet

Power supply · LEPOS Power, 3-phase, regulated, 240 W

MTBF	215.600 h - MIL-HDBK-217F (25°C) / >1.534.900 h - Telcordia SR-332 (Bellcore)
Degree of protection	IP20
Protection class	I
Weight/unit	1 kg
Connection type	Screw terminal 0.20 mm ² – 2.5 mm ² AWG 24 – AWG 12
Dimensions (w × h × d)	63.0 mm × 125.0 mm × 113.0 mm
PU (units)	1

General ambient conditions

Operation temperature range	-30 °C ... +70 °C Derating >60 °C See also the illustration: Derating curve.
Storage temperature range	-40 °C ... +85 °C
Over voltage category	III, in accordance with EN61558, EN50178, EN60664-1, EN62477-1, EN60204-1; altitude up to 2000 meters
Degree of pollution	2
Relative air humidity	20 – 95 % RH, not condensing
Vibration resistance	2 g / 10 - 500 Hz, 1 hour/direction X,Y,Z non-operating, mounted on DIN-Rail (IEC 60068-2-6)

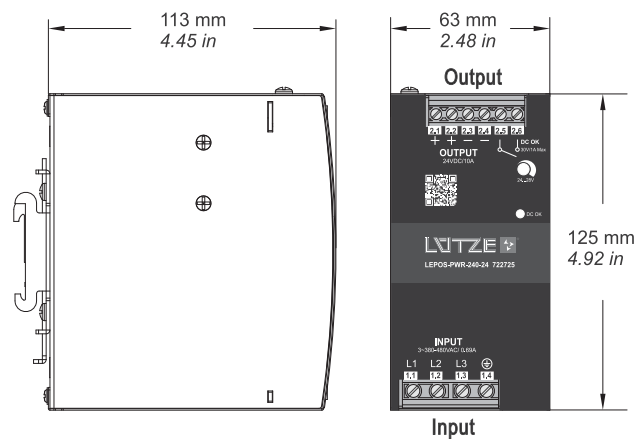
Certifications/Standards

Certifications	CE UKCA cULus (E249179)
Standards	EN 61010-1 IEC/EN 61010-2-201 EN 61558-1 EN 61558-2-16 EN 61204-3 EN 61000-4-2/3/4/5/6/8

Notes and Comments

Note	All parameters are NOT specifically mentioned for AC 400 V input, rated load and 25 °C ambient temperature. The power supply unit is regarded as a component that is installed in a terminal device. The end device must be reconfirmed that it still complies with the EMC directives. Instructions for carrying out these EMC tests can be found under "EMI testing of power supply components".
------	---

Dimensions



Output / Ausgang / Sortie

Connection Anschluss Connexion	Description Beschreibung Description
2.1, 2.2	DC OUTPUT +
2.3, 2.4	DC OUTPUT -
2.5, 2.6	DC OK Relay Contact

Input / Eingang / Entrée

Connection Anschluss Connexion	Description Beschreibung Description
1.1	AC/L1
1.2	AC/L2 or DC -
1.3	AC/L3 or DC +
1.4	PE

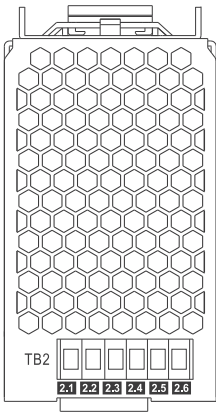
Use

DC OK Relay Contact

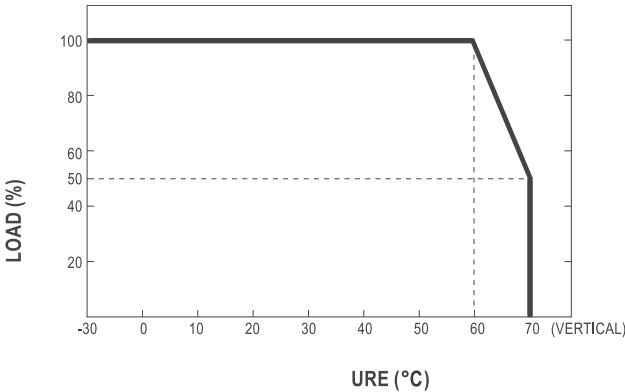
Contact Close	PSU turns on / DC OK.
Contact Open	PSU turns off / DC Fail.
Contact Ratings (max.)	30VDC/1A, 30VAC/0.5A resistive load.

Output / Ausgang / Sortie

Connection Anschluss Connexion	Description Beschreibung Description
2.1, 2.2	DC OUTPUT +V
2.3, 2.4	DC OUTPUT-V
2.5, 2.6	DC OK Relay Contact



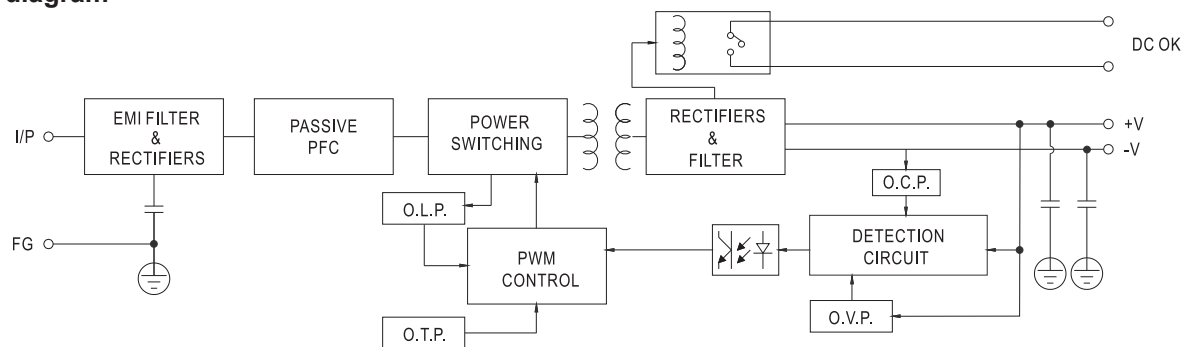
Derating



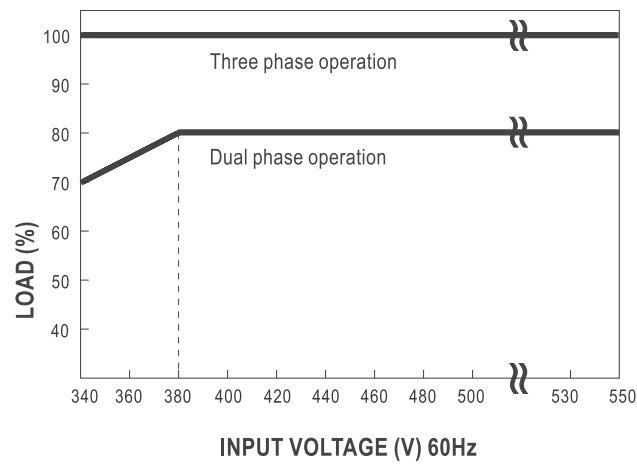
Technical data sheet

Power supply · LEPOS Power, 3-phase, regulated, 240 W

Circuit diagram



Characteristic



Technical data sheet

Power supply · LEPOS Power, 3-phase, regulated, 480 W

Primary switchmode power supply, three-phase

Input: wide-range input AC 340-550 V

Output: DC 24 V / 20 A, adjustable



Identification

Type	LEPOS-PWR-480-24
Part No.	722726

Product version

Datasheet version	01
-------------------	----

Input

Number of phases	3
Rated voltage U_N	3 × AC 380–480 V
Operation voltage range	3 x AC 340-550 V / 3 x DC 480-780 V Two-phase operation possible with connection L1, L3, FG or L2, L3, FG - Two-phase operation is permitted under certain output current restrictions. For details, please refer to the derating curves). / DC 480 - 780 V
Frequency range	47 Hz – 63 Hz
Rated current I_N	typ. 0.85 A @ AC 400 V / 0.7 A @ AC 500 V
Inrush current	Cold start 50 A
Leak current	<3.5 mA / AC 530 V
Internal fuse	T4,0 A / AC 500 V
External protection	Mini-circuit breaker: C 16 A
Power factor correction P.F.C.	typ. PF ≥0.9 @ AC 400 V (at full load) / typ. PF ≥0.88 @ AC 500 V (at full load)

Output

Output voltage/current	DC 24 V/20 A
Rated voltage U_N	DC 24 V

Technical data sheet

Power supply · LEPOS Power, 3-phase, regulated, 480 W

Rated current I_N	20 A
Max. output current	26 A, 3s
Power Dissipation	<36 W @ AC 400 V
Setting range $U_{out\ min.}/U_{out\ max.}$	24-28 V
Accuracy	$\pm 1\ \%$
Load regulation	$\pm 1\ \%$
Line regulation	$\pm 0.5\ \%$
Rise time	1200 ms (setup), 60 ms (switch-on time) @ AC 400 V (at full load) / 800 ms (setup), 60 ms (switch-on time) @ AC 500 V (at full load)
Temperature coefficient	$\pm 0.03\ \%$ / °C (0-50 °C)
Ripple and noise	<150 mV pp Ripple and noise are measured with 20 MHz bandwidth, the probe is terminated with a 0.1 μ F MKP parallel capacitor.
Hold up time	>20 ms @ AC 400 V >20 ms @ AC 500 V (at full load)
Parallel / redundant mode	Yes/via external decoupling diode e.g. 722999
Efficiency	92.5 %
Overtemperature protection	105 °C +/- 5 °C, switch-off with auto reset
Over voltage protection	29–33 V, protection: hiccup mode, autoreset after fault rectification
Rated over load protection	105-130 % nominal output power, protection: constant current limitation, device switches to hiccup mode after 3 seconds
Short circuit	Constant current limitation, device switches to hiccup mode after 3 seconds

Status indication

Status indication DC ON LED green DC 22-28 V

Monitoring

DC ON Control (Rdy)	N/O contact
Switching voltage	AC/DC 30 V
Switching current	AC/DC 1 A
Switching capacity	30 VA / 30 W
Isolation voltage	AC 500 V

General

Insulation voltage input / output	AC 3.0 kV _{eff}
Insulation voltage input / ground	AC 2.0 kV _{eff}
Insulation voltage output / ground	AC 500 V / DC 500 V
Insulation resistance at DC 500 V	100 M Ω
Derating	>50 °C: -12 W/°C
Cooling	Air convection, 15 mm distance right/left, 40 mm top, 20 mm bottom

(EN 60715)

Technical data sheet

Power supply · LEPOS Power, 3-phase, regulated, 480 W

MTBF	108.300 h - MIL-HDBK-217F (25°C) / >1.174.000 h - Telcordia SR-332 (Bellcore)
Degree of protection	IP20
Protection class	I
Weight/unit	1.6 kg
Connection type	Screw terminal 0.20 mm ² – 2.5 mm ² AWG 24 – AWG 12
Dimensions (w × h × d)	85.5 mm × 125.0 mm × 129.0 mm
PU (units)	1

General ambient conditions

Operation temperature range	-30 °C ... +70 °C Derating >50°C See also the illustration: Derating curve.
Storage temperature range	-40 °C ... +85 °C
Over voltage category	III, in accordance with EN61558, EN50178, EN60664-1, EN62477-1, EN60204-1; altitude up to 2000 meters
Degree of pollution	2
Relative air humidity	20 – 95 % RH, not condensing
Vibration resistance	2 g / 10 - 500 Hz, 1 hour/direction X,Y,Z non-operating, mounted on DIN-Rail (IEC 60068-2-6)

Certifications/Standards

Certifications	CE UKCA cULus (E249179)
Standards	EN 61010-1 IEC/EN 61010-2-201 EN 61558-1 EN 61558-2-16 EN 61204-3 EN 61000-4-2/3/4/5/6/8

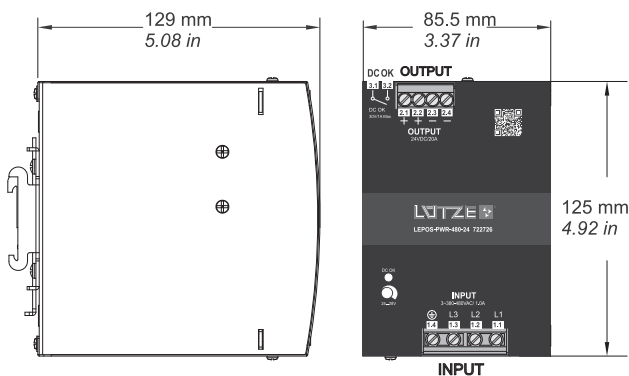
Notes and Comments

Note	All parameters are NOT specifically mentioned for AC 400 V input, rated load and 25 °C ambient temperature. The power supply unit is regarded as a component that is installed in a terminal device. The end device must be reconfirmed that it still complies with the EMC directives. Instructions for carrying out these EMC tests can be found under "EMI testing of power supply components".
------	---

Technical data sheet

Power supply · LEPOS Power, 3-phase, regulated, 480 W

Dimensions



Output / Ausgang / Sortie

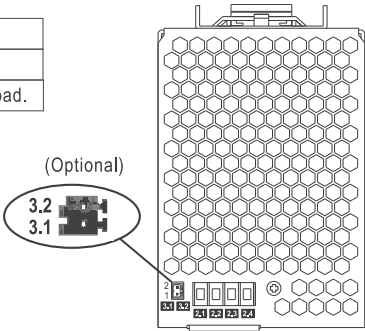
Connection Anschluss Connexion	Description Beschreibung Description
3.1, 3.2	DC OK Relay Contact
2.1, 2.2	DC OUTPUT +
2.3, 2.4	DC OUTPUT -

Input / Eingang / Entrée

Connection Anschluss Connexion	Description Beschreibung Description
1.1	AC/L1
1.2	AC/L2
1.3	AC/L3
1.4	⊕

Use

Contact Close	PSU turns on / DC OK.
Contact Open	PSU turns off / DC Fail.
Contact Ratings (max.)	60VDC/0.3A, 30VDC/1A, 30VAC/0.5A resistive load.



Control pin (Optional):

DINKLE ECH250R-02P or equivalent (CN25)

3.1, 3.2	DC OK Relay Contact
Mating housing DINKLE ESC250V-02P Plug, Push in design or equivalent (Including in the package)	
Wire diameter 0.081 - 0.517 [mm²] 20 - 28 [AWG]	

Kontrollstecker (optional):

DINKLE ECH250R-02P oder vergleichbar (CN25)

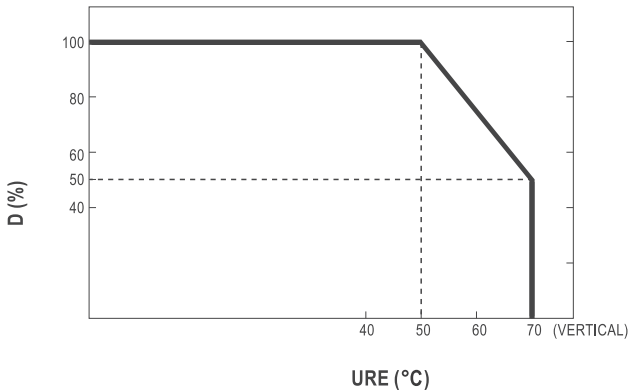
3.1, 3.2	DC OK Relay Contact
Passendes Gehäuse DINKLE ESC250V-02P Stecker, Push-in-Design oder gleichwertig (in der Lieferung enthalten)	
Drahtdurchmesser 0.081 - 0.517 [mm²] 20 - 28 [AWG]	

Broche de contrôle (en option) :

DINKLE ECH250R-02P ou équivalent (CN25)

3.1, 3.2	DC OK Relay Contact
Boîtier d'accouplement DINKLE ESC250V-02P Bouchon, conception Push in ou équivalent (inclus dans l'emballage)	
Diamètre du fil 0.081 - 0.517 [mm²] 20 - 28 [AWG]	

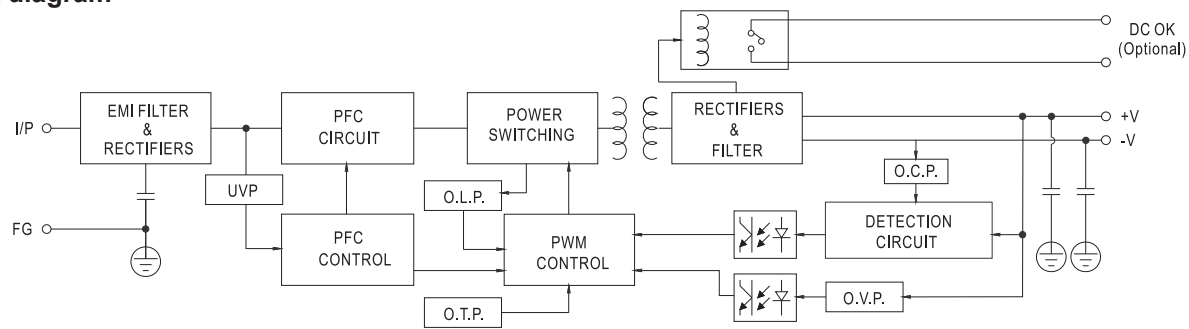
Derating



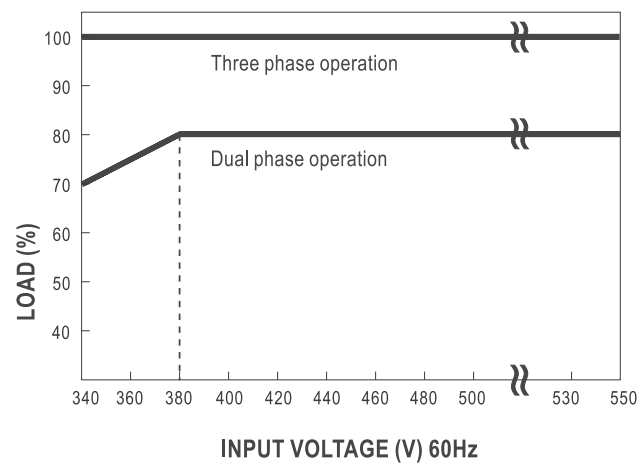
Technical data sheet

Power supply · LEPOS Power, 3-phase, regulated, 480 W

Circuit diagram



Characteristic



Technical data sheet

Power supply · 18 W

Primary switchmode power supply, Single-phase, NEC Class 2 compliant

Input: AC 90–264 V, DC 120–375 V

Output: DC 24 V, 0.75 A



Identification

Type	DRA18-24
Part No.	722752

Product version

Datasheet version	01
-------------------	----

Input

Number of phases	1
Rated voltage U_N	AC 100–240 V
Operation voltage range	AC 90–264 V / DC 120–375 V
Frequency range	47 Hz – 63 Hz
Rated current I_N	335 mA @ AC 115 V / 210 mA @ AC 230 V
Inrush current	15 A @ AC 115 V / 30 A @ AC 230 V
Internal fuse	T2A / AC 250 V
External protection	Mini-circuit breaker: B 4 A

Output

Output voltage/current	DC 24 V/0.75 A
Rated voltage U_N	DC 24 V
Rated current I_N	0.75 A
Power Dissipation	4.45 W @ AC 230 V
Setting range $U_{out\ min.}/U_{out\ max.}$	21.6-28.8 V
Accuracy	±1 %
Load regulation	±2 %
Line regulation	±1 %

Technical data sheet

Power supply · 18 W

Rise time	1 s
Temperature coefficient	±0.03 % / °C
Ripple and noise	<50 mV
Hold up time	20 ms @ 115 V / 75 ms @ 230 V
Parallel / redundant mode	Max. 2 devices / via external decoupling diodes
Efficiency	77 %
Over voltage protection	125–145 %
Rated over load protection	110–135 %
Short circuit	Hiccup Mode

Status indication

Status indication DC ON LED green	≥21.6 V
Status indication DC LOW LED red	<18–21.6 V

Monitoring

DC ON Control (Rdy)	LED green/red
---------------------	---------------

General

Switching frequency	Approx. 100 kHz
Insulation voltage input / output	AC 3.0 kV _{eff}
Insulation voltage input / ground	AC 1.5 kV _{eff}
Insulation resistance at DC 500 V	100 MΩ
Derating	Capacity: -3 %/°C starting at +60 °C
Cooling	Air convection, 25 mm clearance all-round
Housing material	Plastic
Mounting	DIN rail mountable TS35 (EN 60715)
Max. altitude operation	5000 m (EN 62368-1)
Installation position	Vertical
MTBF	800000 h
Degree of protection	IP20
Protection class	II (SELV, PELV)
Weight/unit	0.15 kg
Connection type	Spring terminal 0.20 mm ² – 2.0 mm ² AWG 24 – AWG 14
Dimensions (w × h × d)	22.5 mm × 90.0 mm × 115.0 mm
PU (units)	1

General ambient conditions

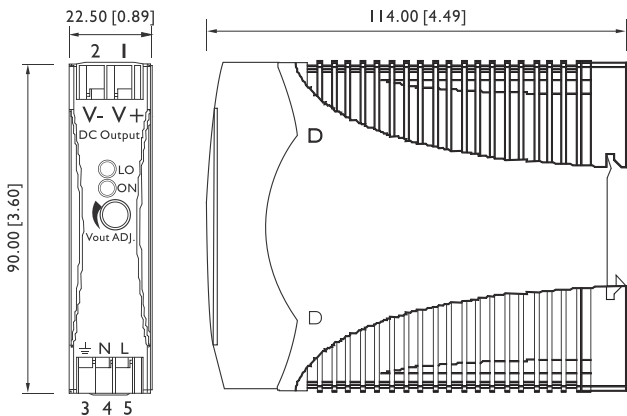
Technical data sheet

Power supply · 18 W

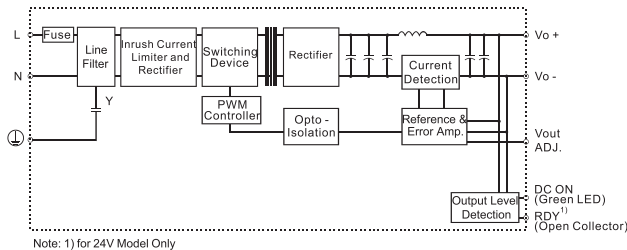
Certifications/Standards

Certifications	UL 508 Listed (E249179) UL 1310 Class 2 (E320708), (Class 1, Division 2, Groups A, B, C and D) (E350538) CE UKCA
Standards	IEC/EN 62368-1 EN 61558-1 EN 61558-2-16 EN 61000-6-3 EN 55032 Class B EN 61000-3-2 Class D EN 61000-3-3 EN 61000-6-2 EN 55024 EN 61000-4-2 Level 4 EN 61000-4-3 Level 3 EN 61000-4-4 Level 4 EN 61000-4-5 L-N Level 3 L/N-FG Level 4 EN 61000-4-6 Level 3 EN 61000-4-8 Level 4 EN 61000-4-11 ENV 50204 Level 2 EN 61204-3

Dimensions



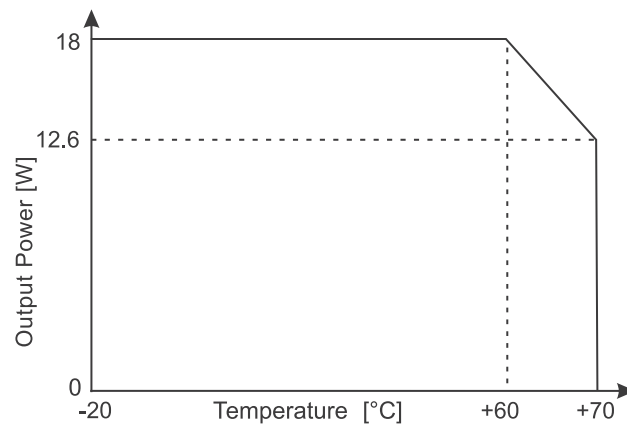
PIN assignment



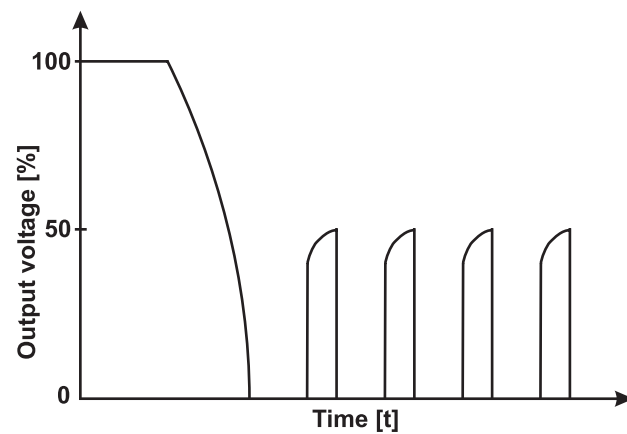
Technical data sheet

Power supply · 18 W

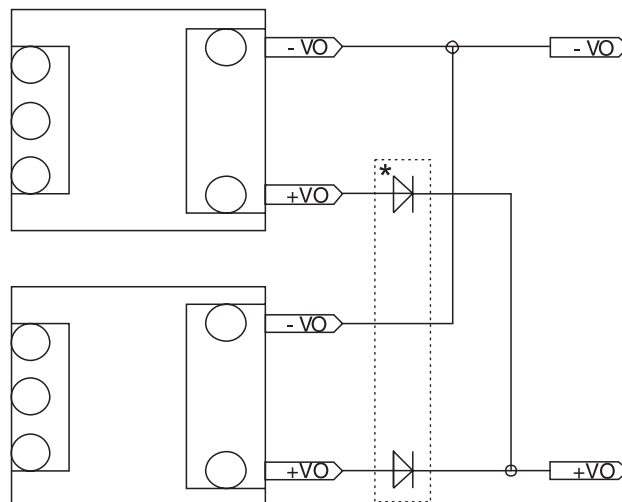
Derating



Short circuit characteristics



Redundant operation



* Redundant Module 722987
Only use together with 24 V version!

Technical data sheet

Power supply · 30 W

Primary switchmode power supply, Single-phase, NEC Class 2 compliant

Input: AC 90–264 V, DC 120–375 V

Output: DC 24 V, 1.25 A



Identification

Type	DRAN30-24A
Part No.	722753

Product version

Datasheet version	01
-------------------	----

Input

Number of phases	1
Rated voltage U_N	AC 100–240 V
Operation voltage range	AC 90–264 V / DC 120–375 V
Frequency range	47 Hz – 63 Hz
Rated current I_N	560 mA @ AC 115 V / 330 mA @ AC 230 V
Inrush current	20 A @ AC 115 V / 40 A @ AC 230 V
Internal fuse	T2A / AC 250 V
External protection	Mini-circuit breaker: B 4 A

Output

Output voltage/current	DC 24 V/1.25 A
Rated voltage U_N	DC 24 V
Rated current I_N	1.25 A
Power Dissipation	5.5 W @ AC 230 V
Setting range $U_{out\ min.}/U_{out\ max.}$	24-28 V
Accuracy	±1 %
Load regulation	±0.5 %
Line regulation	±0.5 %

Technical data sheet

Power supply · 30 W

Rise time	2 s
Temperature coefficient	±0.03 % / °C
Ripple and noise	<50 mV
Hold up time	20 ms @ 115 V / 30 ms @ 230 V
Parallel / redundant mode	Max. 2 devices / via external decoupling diodes e.g. 722987
Efficiency	86 %
Over voltage protection	125–137 %
Rated over load protection	110–150 %
Short circuit	Fold Forward

Status indication

Status indication DC ON LED green 18 V

Monitoring

DC ON Control (Rdy)	Open Collector
Switching voltage	DC 24 V
Switching current	≤35 mA
Isolation voltage	None

General

Switching frequency	55 – 135 kHz
Insulation voltage input / output	DC 4.2 kV
Insulation voltage input / ground	DC 2.1 kV
Insulation voltage output / ground	DC 710 V
Insulation resistance at DC 500 V	100 MΩ
Derating	2.5 %/°C starting 61 °C
Cooling	Air convection, 25 mm clearance all-round
Housing material	Plastic
Mounting	DIN rail mountable TS35 (EN 60715)
Max. altitude operation	5000 m (EN 62368-1)
Installation position	Vertical
MTBF	665000 h
Degree of protection	IP20
Protection class	I
Weight/unit	0.29 kg
Connection type	Screw terminal 0.20 mm ² – 2.5 mm ² AWG 26 – AWG 12
Dimensions (w × h × d)	40.5 mm × 90.0 mm × 115.0 mm

Technical data sheet

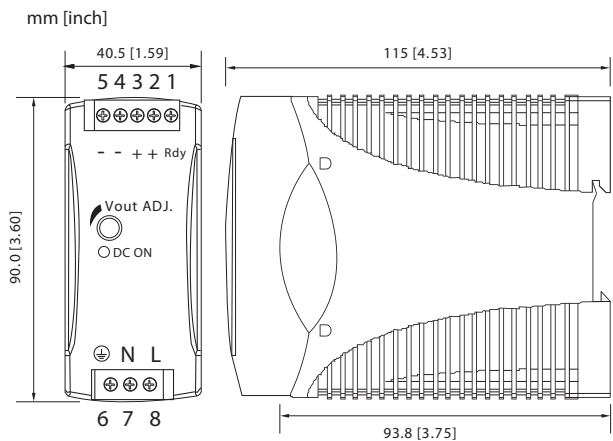
Power supply · 30 W

Over voltage category	II
Degree of pollution	2
Relative air humidity	20 – 95 % RH, not condensing

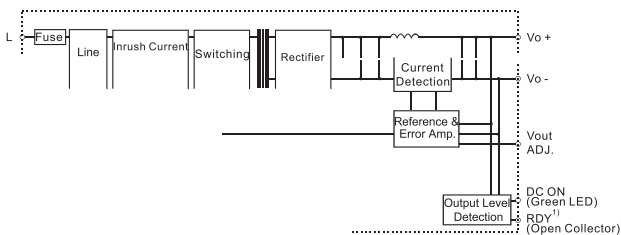
Certifications/Standards

Certifications	UL 508 Listed (E249179) UL 1310 Class 2 (E320708), (Class 1, Division 2, Groups A, B, C and D) (E350538) UL 60950-1 CE UKCA
Standards	IEC/EN 62368-1 EN 61558-1 EN 61558-2-16 EN 61000-6-3 EN 55032 Class B EN 61000-3-2 Class D EN 61000-3-3 EN 61000-6-2 EN 55024 EN 61000-4-2 Level 4 EN 61000-4-3 Level 3 EN 61000-4-4 Level 4 EN 61000-4-5 L-N Level 3 L/N-FG Level 4 EN 61000-4-6 Level 3 EN 61000-4-8 Level 4 EN 61000-4-11 ENV 50204 Level 2 EN 61204-3

Dimensions

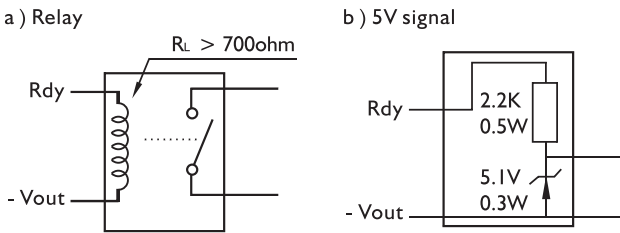


PIN assignment



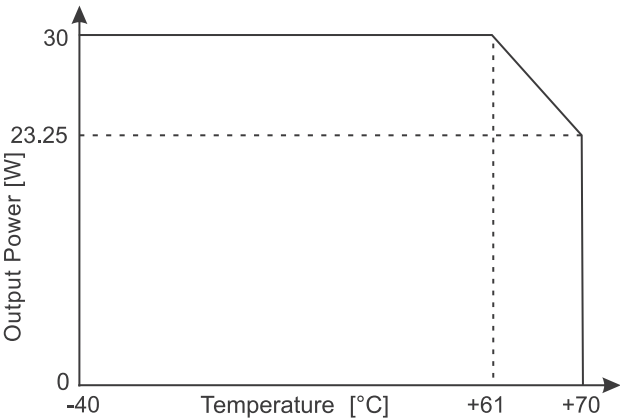
Use

Rdy connection

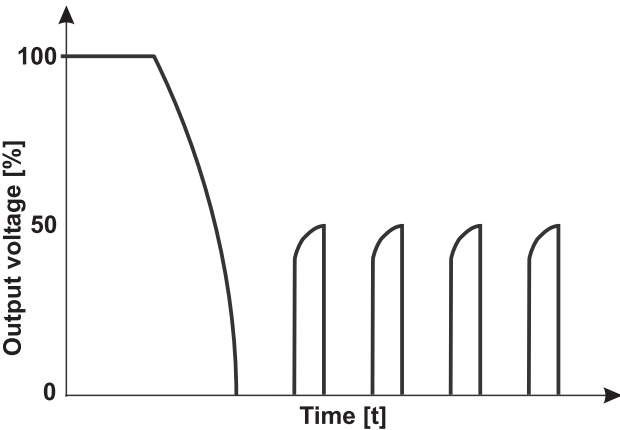


Note: for 24V Model only

Derating



Short circuit characteristics



Technical data sheet

Power supply · 60 W

Primary switchmode power supply, Single-phase, NEC Class 2 compliant

Input: wide-range input AC 85–264 V, DC 90–375 V

Output: DC 24 V, 2.5 A



Identification

Type	DRAN60-24A
Part No.	722754

Product version

Datasheet version	01
-------------------	----

Input

Number of phases	1
Rated voltage U_N	AC 100–240 V
Operation voltage range	AC 85–264 V / DC 90–375 V
Frequency range	47 Hz – 63 Hz
Rated current I_N	1.06 A @ AC 115 V / 590 mA @ AC 230 V
Inrush current	30 A @ AC 115 V / 60 A @ AC 230 V
Internal fuse	T2A / AC 250 V
External protection	Mini-circuit breaker: B 6 A

Output

Output voltage/current	DC 24 V/2.5 A
Rated voltage U_N	DC 24 V
Rated current I_N	2.5 A
Power Dissipation	8.8 W @ AC 230 V
Setting range $U_{out\ min.}/U_{out\ max.}$	24-28 V
Accuracy	±1 %
Load regulation	±0.5 %
Line regulation	±0.5 %

Technical data sheet

Power supply · 60 W

Rise time	2 s
Temperature coefficient	±0.03 % / °C
Ripple and noise	50 mV
Hold up time	20 ms @ 115 V / 30 ms @ 230 V
Parallel / redundant mode	Max. 2 devices / via external decoupling diodes e.g. 722987
Efficiency	89 %
Over voltage protection	125–138 %
Rated over load protection	110–150 %
Short circuit	Fold Forward

Status indication

Status indication DC ON LED green 18 V

Monitoring

DC ON Control (Rdy)	Normally open
Switching voltage	DC 24 V
Switching current	≤35 mA
Isolation voltage	None

General

Switching frequency	55 – 135 kHz
Insulation voltage input / output	DC 4.2 kV
Insulation voltage input / ground	DC 2.1 kV
Insulation voltage output / ground	DC 710 V
Insulation resistance at DC 500 V	100 MΩ
Derating	2.5 %/°C starting 61 °C
Cooling	Air convection, 25 mm clearance all-round
Housing material	Plastic
Mounting	DIN rail mountable TS35 (EN 60715)
Max. altitude operation	5000 m (EN 62368-1)
Installation position	Vertical
MTBF	580000 h
Degree of protection	IP20
Protection class	I
Weight/unit	0.41 kg
Connection type	Screw terminal 0.20 mm ² – 2.5 mm ² AWG 26 – AWG 12
Dimensions (w × h × d)	40.5 mm × 90.0 mm × 115.0 mm

Technical data sheet

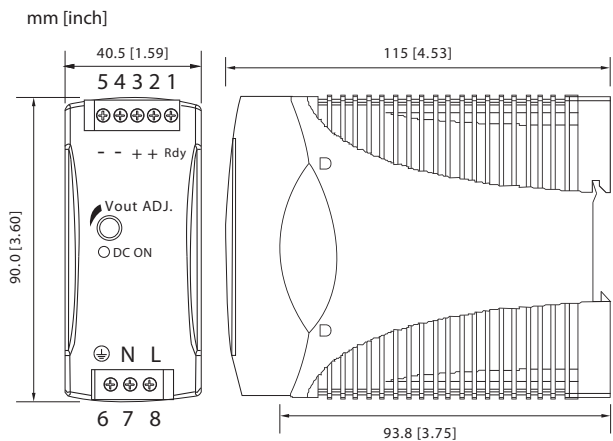
Power supply · 60 W

Over voltage category	II
Degree of pollution	2
Relative air humidity	20 – 90 % RH, not condensing

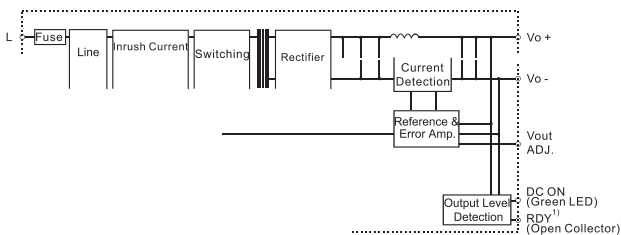
Certifications/Standards

Certifications	UL 508 Listed (E249179) UL 1310 Class 2 (E320708), (Class 1, Division 2, Groups A, B, C and D) (E350538) UL 60950-1 CE UKCA
Standards	IEC/EN 62368-1 EN 61558-1 EN 61558-2-16 EN 61000-6-3 EN 55032 Class B EN 61000-3-2 Class D EN 61000-3-3 EN 61000-6-2 EN 55024 EN 61000-4-2 Level 4 EN 61000-4-3 Level 3 EN 61000-4-4 Level 4 EN 61000-4-5 L-N Level 3 L/N-FG Level 4 EN 61000-4-6 Level 3 EN 61000-4-8 Level 4 EN 61000-4-11 ENV 50204 Level 2 EN 61204-3

Dimensions

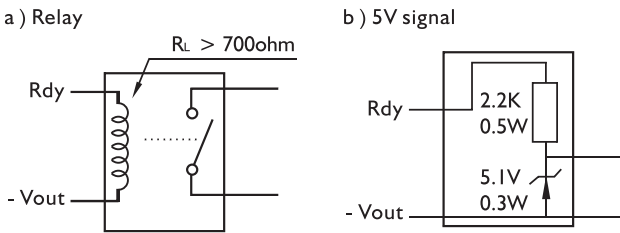


PIN assignment



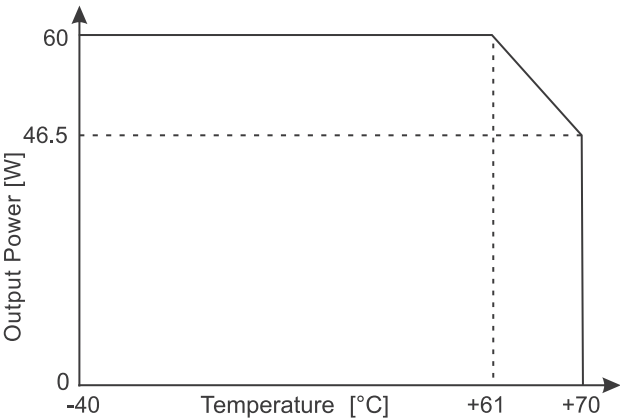
Use

Rdy connection

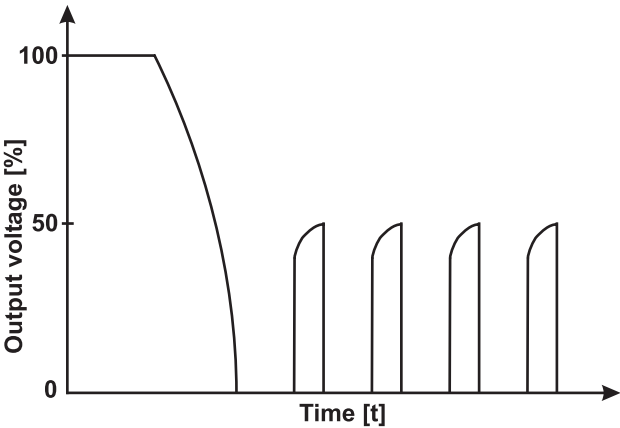


Note: for 24V Model only

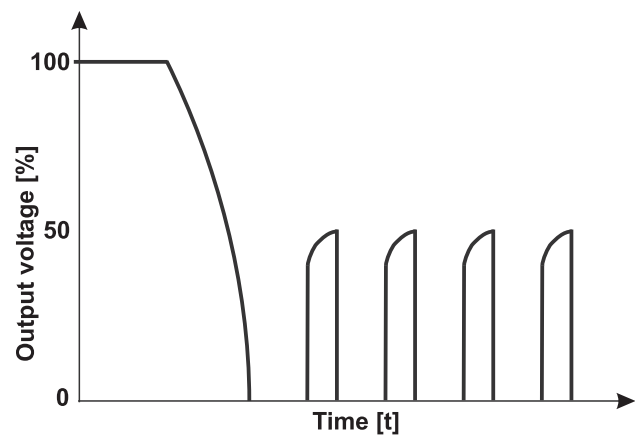
Derating



Short circuit characteristics



Short circuit characteristics



Technical data sheet

Power supply · 93 W

Primary switched power supplies, PFC, Single-phase, NEC Class 2 compliant

Input: wide-range input AC 90–132 V, AC 180–264 V, DC 210–375 V

Output: DC 24 V, 3.8 A



Identification

Type	DRAN120-24AL
Part No.	722757

Product version

Datasheet version	02
-------------------	----

Input

Number of phases	1
Rated voltage U_N	AC 115 / 230 V (auto select)
Operation voltage range	AC 90–132 V / AC 180–264 V / DC 210–375 V
Frequency range	47 Hz – 63 Hz
Rated current I_N	1.65 A @ AC 115 V / 0.65 A @ AC 230 V
Inrush current	24 A @ AC 115 V / 48 A @ AC 230 V
Internal fuse	T3, 15 A/AC 250 V
External protection	Mini-circuit breaker: B 6 A
Power factor correction P.F.C.	0.7

Output

Output voltage/current	DC 24 V/3.8 A
Rated voltage U_N	DC 24 V
Rated current I_N	3.8 A
Power Dissipation	16 W @ AC 230 V
Setting range $U_{out\ min.}/U_{out\ max.}$	22.5–28.5 V
Accuracy	±1 %
Load regulation	Single ±1 %, Parallel ±5 %

Technical data sheet

Power supply · 93 W

Line regulation	±0.5 %
Rise time	1 s
Temperature coefficient	±0.03 % / °C
Ripple and noise	50 mV
Hold up time	20 ms @ 115 V / 75 ms @ 230 V
Parallel / redundant mode	Max. 2 devices each with 90 % load current / via external decoupling diodes
Efficiency	87 %
Over voltage protection	125–145 %
Rated over load protection	105–125 %
Short circuit	Current limit

Status indication

Status indication DC ON LED green	≥17.6–19.4 V
Status indication DC LOW LED red	≤17.6–19.4 V

Monitoring

DC ON Control (Rdy)	Normally open
Switching voltage	DC 60 V
Switching current	Max. 300 mA
Isolation voltage	DC 500 V

General

Switching frequency	Approx. 80 kHz
Insulation voltage input / output	AC 3.0 kV _{eff}
Insulation voltage input / ground	AC 1.5 kV _{eff}
Insulation resistance at DC 500 V	100 MΩ
Derating	Capacity: -2.5 %/°C starting at 60 °C
Cooling	Air convection, 25 mm clearance all-round
Housing material	Metal
Mounting	DIN rail mountable TS35 (EN 60715)
Max. altitude operation	5000 m (EN 62368-1)
Installation position	Vertical
MTBF	530000 h
Degree of protection	IP20
Protection class	I (SELV, PELV)
Weight/unit	0.92 kg
Connection type	Screw terminal 0.20 mm ² – 4.0 mm ² AWG 24 – AWG 10

116.6 mm

Technical data sheet

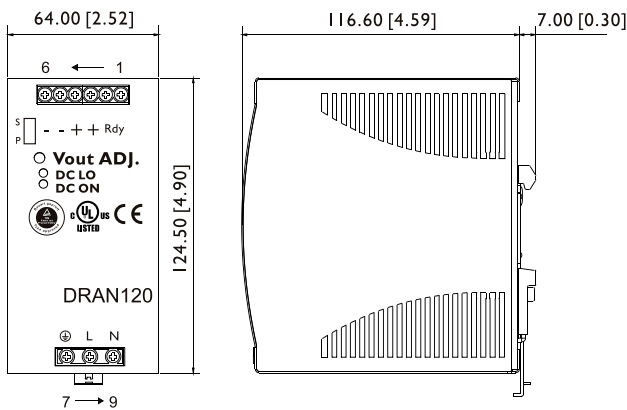
Power supply · 93 W

Storage temperature range	-40 °C ... +85 °C
Over voltage category	II
Degree of pollution	2
Relative air humidity	20 – 90 % RH, not condensing

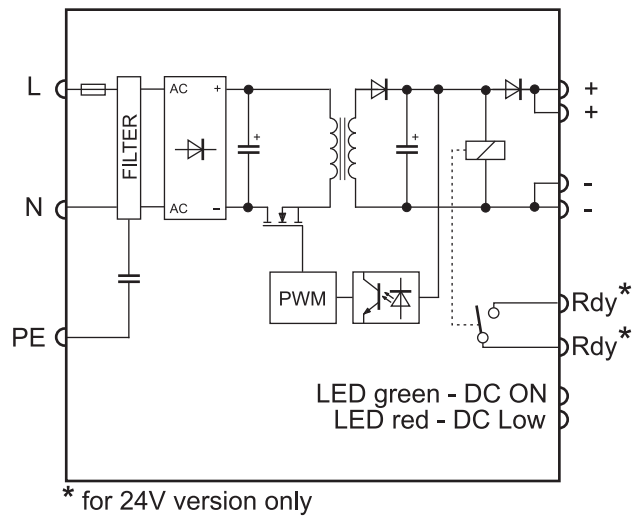
Certifications/Standards

Certifications	UL 508 Listed (E249179) UL 1310 Class 2 (E320708), (Class 1, Division 2, Groups A, B, C and D) (E350538) UL 60950-1 CE UKCA
Standards	IEC/EN 62368-1 EN 61558-1 EN 61558-2-16 EN 61000-6-3 EN 55032 Class B EN 61000-3-2 Class D EN 61000-3-3 EN 61000-6-2 EN 55024 EN 61000-4-2 Level 4 EN 61000-4-3 Level 3 EN 61000-4-4 Level 4 EN 61000-4-5 L-N Level 3 L/N-FG Level 4 EN 61000-4-6 Level 3 EN 61000-4-8 Level 4 EN 61000-4-11 ENV 50204 Level 2 EN 61204-3

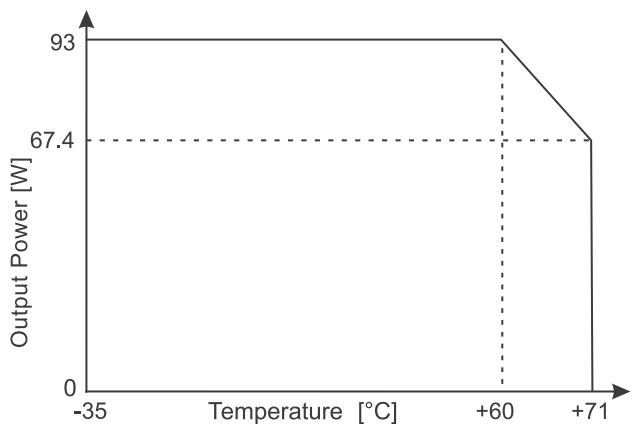
Dimensions



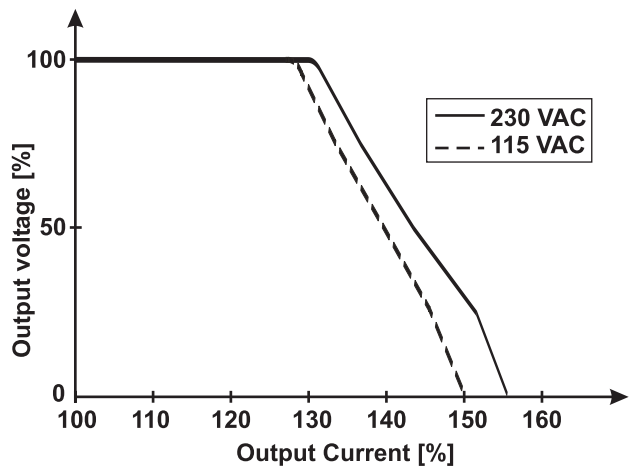
PIN assignment



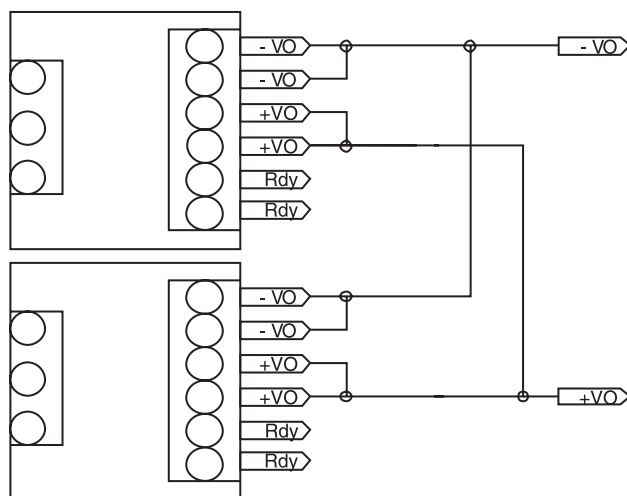
Derating



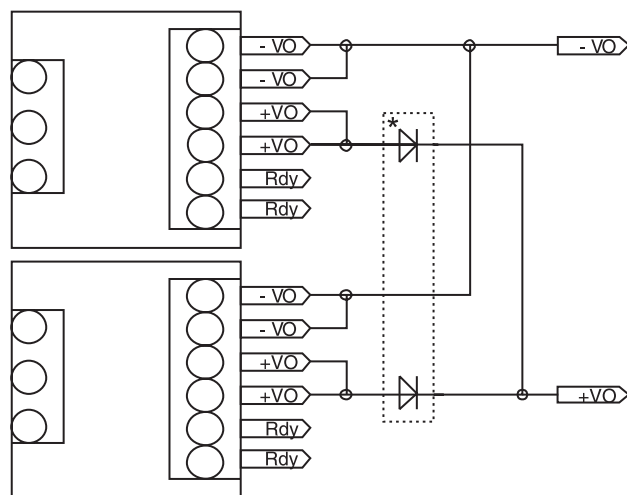
Short circuit characteristics



Parallel mode



Redundant operation



* Redundant Module 722987

Technical data sheet

Power supply · 120 W

Primary switchmode power supply, PFC, Single-phase

Input: AC 90–132 V, AC 180–264 V, DC 210–375 V

Output: DC 24 V, 5 A



Identification

Type	DRAN120-24B
Part No.	722758

Product version

Datasheet version	01
-------------------	----

Input

Number of phases	1
Rated voltage U_N	AC 115 / 230 V (auto select)
Operation voltage range	AC 90–132 V / AC 180–264 V / DC 210–375 V
Frequency range	47 Hz – 63 Hz
Rated current I_N	2.2 A @ AC 115 V / 0.83 A @ AC 230 V
Inrush current	24 A @ AC 115 V / 48 A @ AC 230 V
Internal fuse	T3, 15 A/AC 250 V
External protection	Mini-circuit breaker: B 6 A
Power factor correction P.F.C.	0.7

Output

Output voltage/current	DC 24 V/5 A
Rated voltage U_N	DC 24 V
Rated current I_N	5 A
Power Dissipation	20 W @ AC 230 V
Setting range $U_{out\ min.}/U_{out\ max.}$	22.5–28.5 V
Accuracy	±1 %
Load regulation	Single ±1 %, Parallel ±5 %

Technical data sheet

Power supply · 120 W

Line regulation	±0.5 %
Rise time	1 s
Temperature coefficient	±0.03 % / °C
Ripple and noise	50 mV
Hold up time	25 ms @ 115 V / 30 ms @ 230 V
Parallel / redundant mode	Max. 3 units at 90% load current, manual switch S/P
Efficiency	87 %
Over voltage protection	125–145 %
Rated over load protection	105–125 %
Short circuit	Current limit

Status indication

Status indication DC ON LED green	≥17.6–19.4 V
Status indication DC LOW LED red	≤17.6–19.4 V

Monitoring

DC ON Control (Rdy)	N/O contact
Switching voltage	DC 60 V
Switching current	Max. 300 mA
Isolation voltage	DC 500 V

General

Switching frequency	Approx. 80 kHz
Insulation voltage input / output	DC 4.2 kV
Insulation voltage input / ground	DC 2.1 kV
Insulation voltage output / ground	DC 700 V
Insulation resistance at DC 500 V	100 MΩ
Derating	Capacity: -2.5 %/°C starting at +61 °C
Cooling	Air convection, 25 mm clearance all-round
Housing material	Metal
Mounting	DIN rail mountable TS35 (EN 60715)
Max. altitude operation	5000 m (EN 62368-1)
Installation position	Vertical
MTBF	530000 h
Degree of protection	IP20
Protection class	I
Weight/unit	0.92 kg
Connection type	Pluggable screw terminal 0.20 mm ² – 2.5 mm ²

116.6 mm

Technical data sheet

Power supply · 120 W

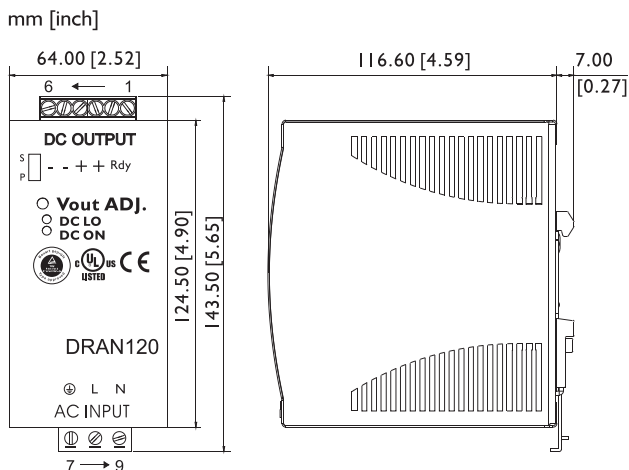
General ambient conditions

Operation temperature range	-35 °C ... +71 °C (Derating)
Storage temperature range	-40 °C ... +85 °C
Over voltage category	II
Degree of pollution	2
Relative air humidity	20 – 90 % RH, not condensing

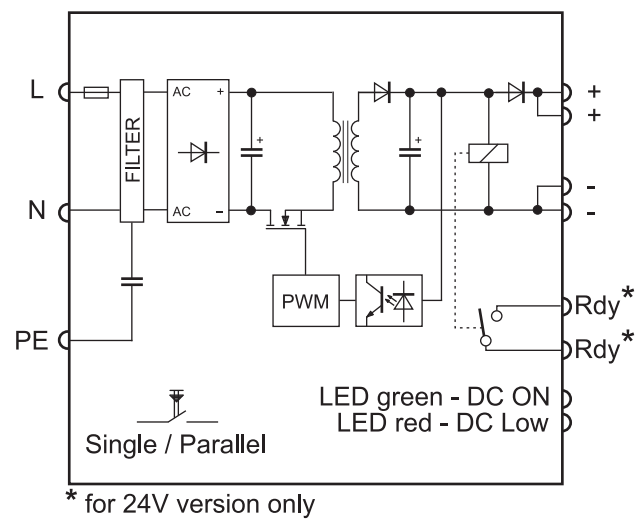
Certifications/Standards

Certifications	UL 508 Listed (E249179) UL 60950-1, (Class 1, Division 2, Groups A, B, C and D) (E350538) CE UKCA
Standards	IEC/EN 62368-1 EN 61558-1 EN 61558-2-16 EN 61000-6-3 EN 55032 Class B EN 61000-3-2 Class D EN 61000-3-3 EN 61000-6-2 EN 55024 EN 61000-4-2 Level 4 EN 61000-4-3 Level 3 EN 61000-4-4 Level 4 EN 61000-4-5 L-N Level 3 L/N-FG Level 4 EN 61000-4-6 Level 3 EN 61000-4-8 Level 4 EN 61000-4-11 ENV 50204 Level 2 EN 61204-3

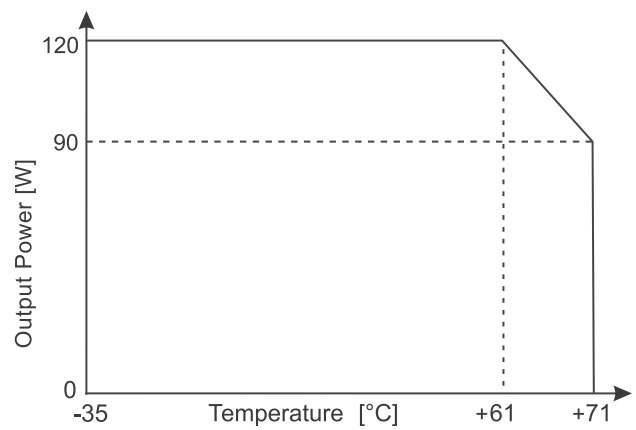
Dimensions



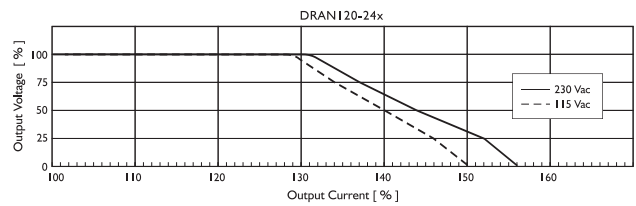
PIN assignment



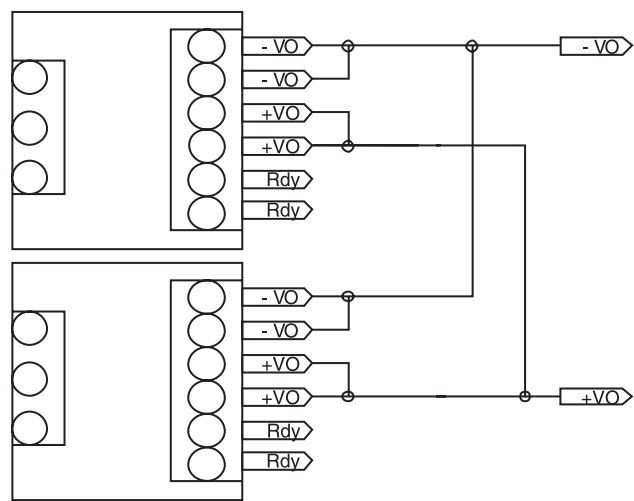
Derating



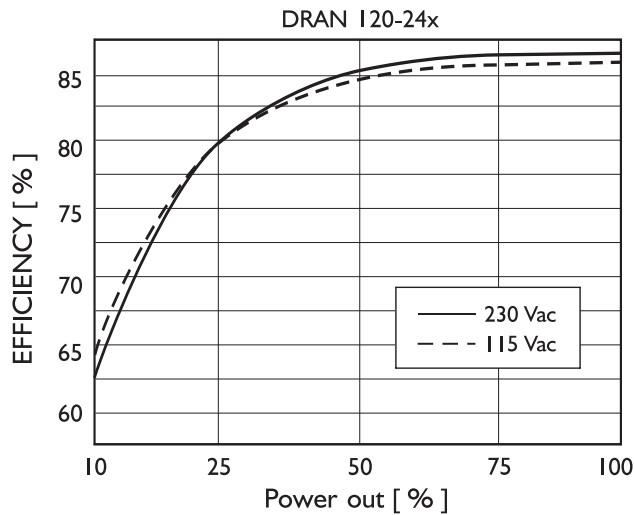
Short circuit characteristics



Parallel/redundant mode



Efficiency



Technical data sheet

Power supply · 240 W

Primary switchmode power supply, PFC, Single-phase

Input: AC 90–132 V, AC 180–264 V, DC 210–375 V

Output: DC 24 V, 10 A



Identification

Type	DRA240-24B
Part No.	722759

Product version

Datasheet version	02
-------------------	----

Input

Number of phases	1
Rated voltage U_N	AC 115/230 V
Operation voltage range	AC 90–132 V / AC 180–264 V / DC 210–375 V
Frequency range	47 Hz – 63 Hz
Rated current I_N	4.0 A @ AC 115 V / 1.55 A @ AC 230 V
Inrush current	30 A @ AC 115 V / 60 A @ AC 230 V
Internal fuse	T6, 3 A/AC 250 V
External protection	Mini-circuit breaker: B 10 A, C 6 A
Power factor correction P.F.C.	0.7

Output

Output voltage/current	DC 24 V/10 A
Rated voltage U_N	DC 24 V
Rated current I_N	10 A
Power Dissipation	35 W @ AC 230 V
Setting range $U_{out\ min.}/U_{out\ max.}$	22.5–28.5 V
Accuracy	±1 %
Load regulation	Single ±1 %, Parallel ±5 %

Technical data sheet

Power supply · 240 W

Line regulation	±0.5 %
Rise time	1 s
Temperature coefficient	±0.03 % / °C
Ripple and noise	100 mV
Hold up time	25 ms @ 115 V / 30 ms @ 230 V
Parallel / redundant mode	Max. 3 units at 90% load current, manual switch S/P
Efficiency	89 %
Over voltage protection	120–145 %
Rated over load protection	105–145 %
Short circuit	Current limit

Status indication

Status indication DC ON LED green	≥17.6–19.4 V
Status indication DC LOW LED red	≤17.6–19.4 V

Monitoring

DC ON Control (Rdy)	N/O contact
Switching voltage	DC 60 V
Switching current	Max. 300 mA
Isolation voltage	DC 500 V

General

Switching frequency	Approx. 40 kHz
Insulation voltage input / output	DC 4.2 kV
Insulation voltage input / ground	DC 2.1 kV
Insulation voltage output / ground	DC 700 V
Insulation resistance at DC 500 V	100 MΩ
Derating	Capacity: -2.5 %/°C starting at +61 °C
Cooling	Air convection, 25 mm clearance all-round
Housing material	Metal
Mounting	DIN rail mountable TS35 (EN 60715)
Max. altitude operation	5000 m (EN 62368-1)
Installation position	Vertical
MTBF	423000 h
Degree of protection	IP20
Protection class	I
Weight/unit	1.38 kg
Connection type	Pluggable screw terminal 0.20 mm ² – 2.5 mm ²

116.6 mm

Technical data sheet

Power supply · 240 W

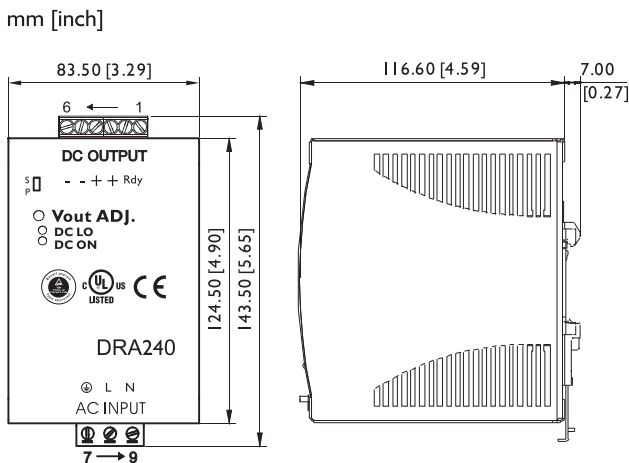
General ambient conditions

Operation temperature range	-40 °C ... +71 °C (Derating)
Storage temperature range	-40 °C ... +85 °C
Over voltage category	II
Degree of pollution	2
Relative air humidity	20 – 90 % RH, not condensing

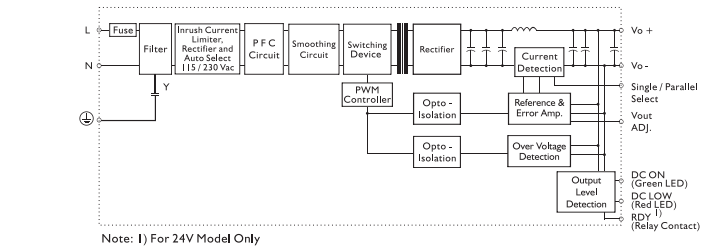
Certifications/Standards

Certifications	UL 508 Listed (E249179) UL 60950-1, (Class 1, Division 2, Groups A, B, C and D) (E350538) CE UKCA
Standards	IEC/EN 62368-1 EN 61558-1 EN 61558-2-16 EN 61000-6-3 EN 55032 Class B EN 61000-3-2 Class D EN 61000-3-3 EN 61000-6-2 EN 55024 EN 61000-4-2 Level 4 EN 61000-4-3 Level 3 EN 61000-4-4 Level 4 EN 61000-4-5 L-N Level 3 L/N-FG Level 4 EN 61000-4-6 Level 3 EN 61000-4-8 Level 4 EN 61000-4-11 ENV 50204 Level 2 EN 61204-3

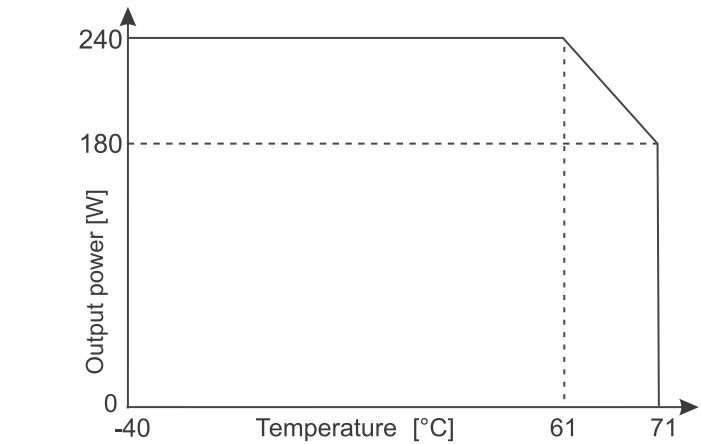
Dimensions



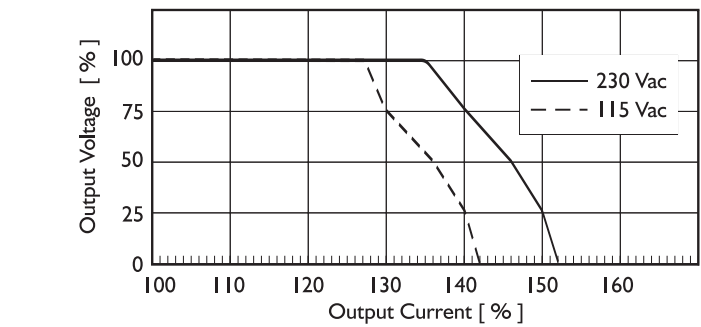
PIN assignment



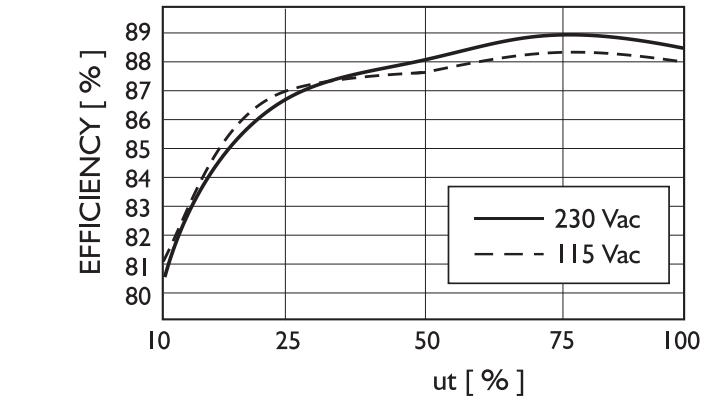
Derating



Short circuit characteristics



Efficiency



Technical data sheet

Power supply · 10 W

Primary switched power supplies, Single-phase, NEC Class 2 compliant

Input: AC 90–264 V, DC 120–375 V

Output: DC 5 V, 2 A



Identification

Type	DRA10-05
Part No.	722761

Product version

Datasheet version	01
-------------------	----

Input

Number of phases	1
Rated voltage U_N	AC 100–240 V
Operation voltage range	AC 90–264 V / DC 120–375 V
Frequency range	47 Hz – 63 Hz
Rated current I_N	200 mA @ AC 115 V / 130 mA @ AC 230 V
Inrush current	15 A @ AC 115 V / 30 A @ AC 230 V
Internal fuse	T2A / AC 250 V
External protection	Mini-circuit breaker: B 4 A

Output

Output voltage/current	DC 5 V/2 A
Rated voltage U_N	DC 5 V
Rated current I_N	2 A
Power Dissipation	4 W @ AC 230 V
Setting range $U_{out\ min.}/U_{out\ max.}$	4.5-5.75 V
Accuracy	±1 %
Load regulation	±2 %
Line regulation	±1 %

Technical data sheet

Power supply · 10 W

Rise time	1 s
Temperature coefficient	±0.03 % / °C
Ripple and noise	<50 mV
Hold up time	25 ms @ 115 V / 100 ms @ 230 V
Parallel / redundant mode	Max. 2 devices / via external decoupling diodes
Efficiency	73 %
Over voltage protection	125–145 %
Rated over load protection	110–135 %
Short circuit	Hiccup Mode

Status indication

Status indication DC ON LED green	≥4.5 V
Status indication DC LOW LED red	<3.5–4.50 V

Monitoring

DC ON Control (Rdy)	LED green/red
---------------------	---------------

General

Switching frequency	Approx. 100 kHz
Insulation voltage input / output	AC 3.0 kV _{eff}
Insulation voltage input / ground	AC 1.5 kV _{eff}
Insulation resistance at DC 500 V	100 MΩ
Derating	Capacity: -3 %/°C starting at +60 °C
Cooling	Air convection, 25 mm clearance all-round
Housing material	Plastic
Mounting	DIN rail mountable TS35 (EN 60715)
Max. altitude operation	5000 m (EN 62368-1)
Installation position	Vertical
MTBF	704000 h
Degree of protection	IP20
Protection class	II (SELV, PELV)
Weight/unit	0.12 kg
Connection type	Spring clamp 0.20 mm ² – 2.0 mm ² AWG 24 – AWG 14
Dimensions (w × h × d)	22.5 mm × 90.0 mm × 115.0 mm
PU (units)	1

General ambient conditions

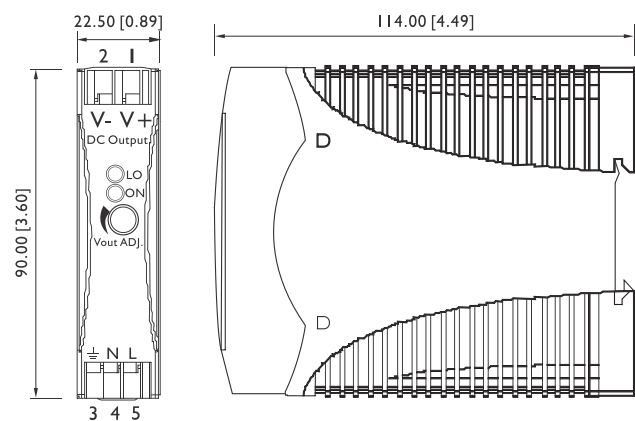
Technical data sheet

Power supply · 10 W

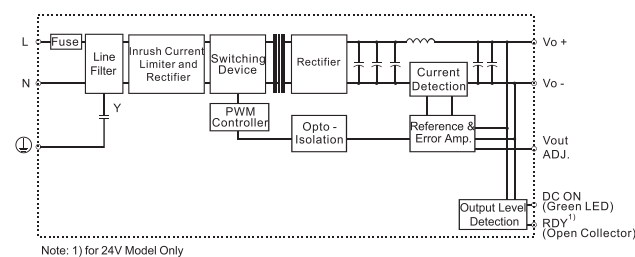
Certifications/Standards

Certifications	UL 508 Listed (E249179) UL 1310 Class 2 (E320708), (Class 1, Division 2, Groups A, B, C and D) (E350538) CE UKCA
Standards	IEC/EN 62368-1 EN 61558-1 EN 61558-2-16 EN 61000-6-3 EN 55032 Class B EN 61000-3-2 Class D EN 61000-3-3 EN 61000-6-2 EN 55024 EN 61000-4-2 Level 4 EN 61000-4-3 Level 3 EN 61000-4-4 Level 4 EN 61000-4-5 L-N Level 3 L/N-FG Level 4 EN 61000-4-6 Level 3 EN 61000-4-8 Level 4 EN 61000-4-11 ENV 50204 Level 2 EN 61204-3

Dimensions



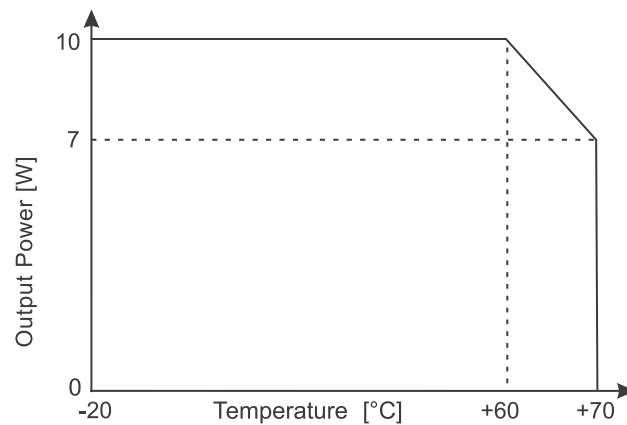
PIN assignment



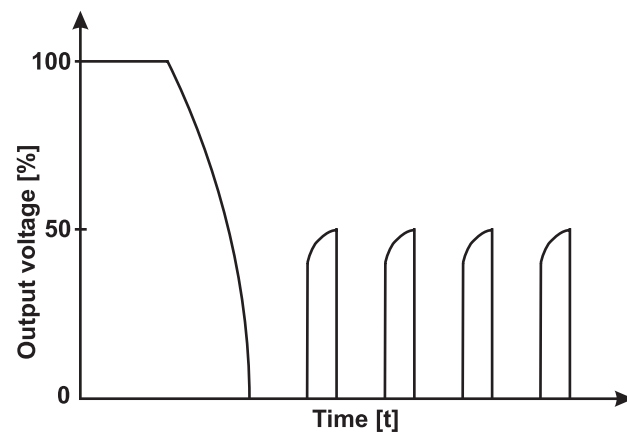
Technical data sheet

Power supply · 10 W

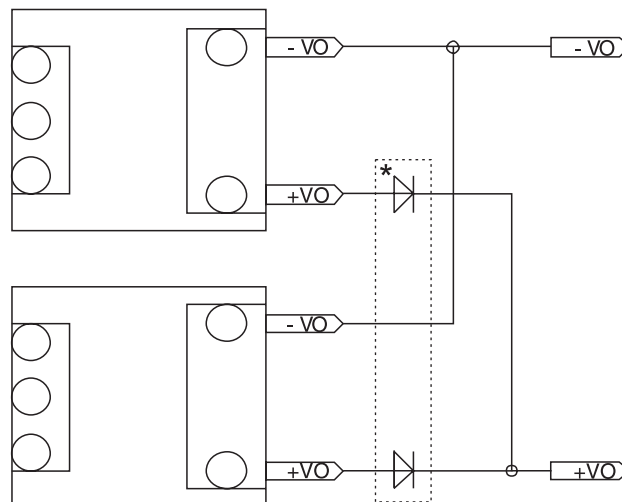
Derating



Short circuit characteristics



Redundant operation



* Redundant Module 722987
Only use together with 24 V version!

Technical data sheet

Power supply · 30 W

Primary switched power supplies, Single-phase
Input: wide-range input AC 85–264 V, DC 90–375 V
Output: DC 5 V, 6 A



Identification

Type	DRAN30-05A
Part No.	722763

Product version

Datasheet version	01
-------------------	----

Input

Number of phases	1
Rated voltage U_N	AC 100–240 V
Operation voltage range	AC 85–264 V / DC 90–375 V
Frequency range	47 Hz – 63 Hz
Rated current I_N	560 mA @ AC 115 V / 330 mA @ AC 230 V
Inrush current	20 A @ AC 115 V / 40 A @ AC 230 V
Internal fuse	T2A / AC 250 V
External protection	Mini-circuit breaker: B 4 A

Output

Output voltage/current	DC 5 V/6 A
Rated voltage U_N	DC 5 V
Rated current I_N	6 A
Power Dissipation	8.5 W @ AC 230 V
Setting range $U_{out\ min.}/U_{out\ max.}$	5.0-5.5 V
Accuracy	±1 %
Load regulation	±0.5 %
Line regulation	±0.5 %

Technical data sheet

Power supply · 30 W

Rise time	2 s
Temperature coefficient	±0.03 % / °C
Ripple and noise	<50 mV
Hold up time	20 ms @ 115 V / 30 ms @ 230 V
Parallel / redundant mode	Max. 2 devices / via external decoupling diodes e.g. 722987
Efficiency	79 %
Over voltage protection	125–137 %
Rated over load protection	110–150 %
Short circuit	Fold Forward

Status indication

Status indication DC ON LED green	<3.5 V
-----------------------------------	--------

General

Switching frequency	55 – 135 kHz
Insulation voltage input / output	DC 4.2 kV
Insulation voltage input / ground	DC 2.1 kV
Insulation voltage output / ground	DC 710 V
Insulation resistance at DC 500 V	100 MΩ
Derating	2.5 %/°C starting 61 °C
Cooling	Air convection, 25 mm clearance all-round
Housing material	Plastic
Mounting	DIN rail mountable TS35 (EN 60715)
Max. altitude operation	5000 m (EN 62368-1)
Installation position	Vertical
MTBF	612000 h
Degree of protection	IP20
Protection class	I
Weight/unit	0.35 kg
Connection type	Screw terminal 0.20 mm ² – 2.5 mm ² AWG 26 – AWG 12
Dimensions (w × h × d)	40.5 mm × 90.0 mm × 115.0 mm
PU (units)	1

General ambient conditions

Operation temperature range	-40 °C ... +70 °C (Derating)
Storage temperature range	-40 °C ... +85 °C
Over voltage category	II

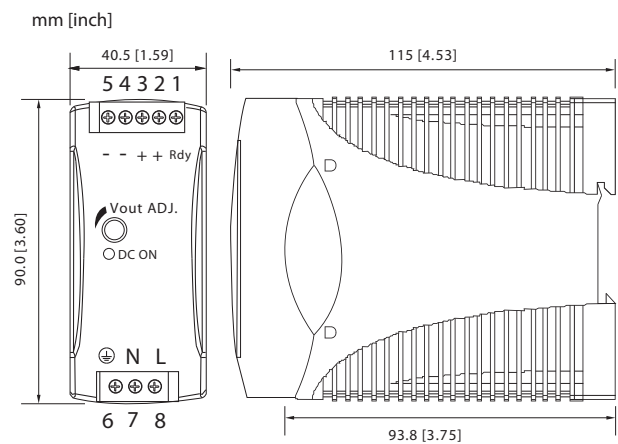
Technical data sheet

Power supply · 30 W

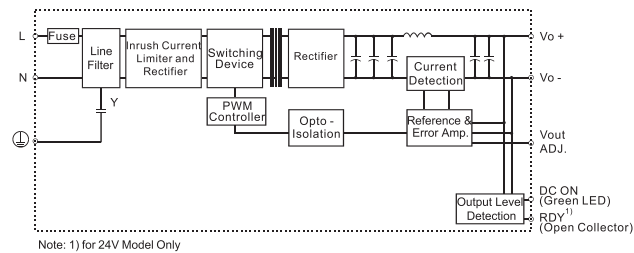
Certifications/Standards

Certifications	UL 508 Listed (E249179)
	UL 60950-1
	CE
	UKCA
Standards	IEC/EN 62368-1
	EN 61000-6-3
	EN 55032 Class B
	EN 61000-3-2 Class D
	EN 61000-3-3
	EN 61000-6-2
	EN 55024
	EN 61000-4-2 Level 4
	EN 61000-4-3 Level 3
	EN 61000-4-4 Level 4
	EN 61000-4-5 L-N Level 3
	L/N-FG Level 4
	EN 61000-4-6 Level 3
	EN 61000-4-8 Level 4
	EN 61000-4-11 ENV 50204 Level 2
	EN 61204-3

Dimensions

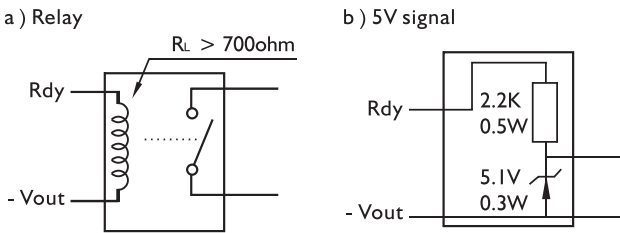


PIN assignment



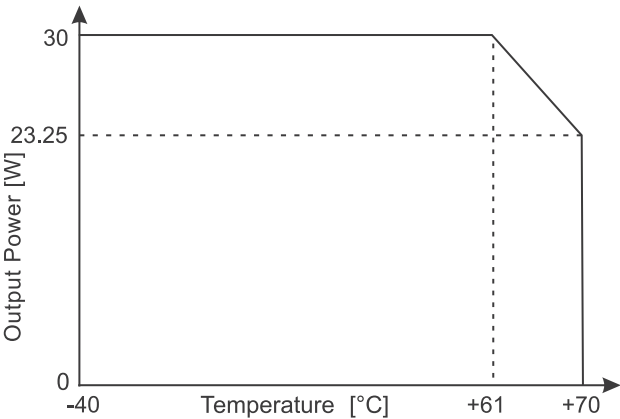
Use

Rdy connection

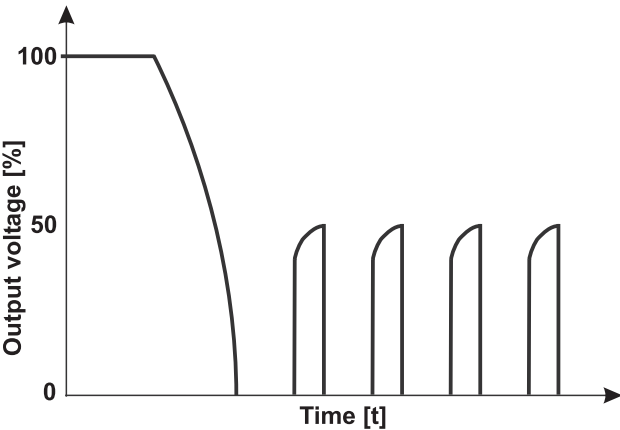


Note: for 24V Model only

Derating



Short circuit characteristics



Technical data sheet

Power supply · 60 W

Primary switchmode power supply, Single-phase
Input: wide-range input AC 85–264 V, DC 90–375 V
Output: DC 12 V, 5 A



Identification

Type	DRAN60-12A
Part No.	722769

Product version

Datasheet version	01
-------------------	----

Input

Number of phases	1
Rated voltage U_N	AC 100–240 V
Operation voltage range	AC 85–264 V / DC 90–375 V
Frequency range	47 Hz – 63 Hz
Rated current I_N	1.06 A @ AC 115 V / 590 mA @ AC 230 V
Inrush current	30 A @ AC 115 V / 60 A @ AC 230 V
Internal fuse	T2A / AC 250 V
External protection	Mini-circuit breaker: B 6 A

Output

Output voltage/current	DC 12 V/5 A
Rated voltage U_N	DC 12 V
Rated current I_N	5 A
Power Dissipation	9 W @ AC 230 V
Setting range $U_{out\ min.}/U_{out\ max.}$	12-14 V
Accuracy	±1 %
Load regulation	±0.5 %
Line regulation	±0.5 %

Technical data sheet

Power supply · 60 W

Rise time	2 s
Temperature coefficient	±0.03 % / °C
Ripple and noise	50 mV
Hold up time	20 ms @ 115 V / 30 ms @ 230 V
Parallel / redundant mode	Max. 2 devices / via external decoupling diodes e.g. 722987
Efficiency	86 %
Over voltage protection	125–138 %
Rated over load protection	110–150 %
Short circuit	Fold Forward

Status indication

Status indication DC ON LED green	<9.0 V
-----------------------------------	--------

General

Switching frequency	55 – 135 kHz
Insulation voltage input / output	DC 4.2 kV
Insulation voltage input / ground	DC 2.1 kV
Insulation voltage output / ground	DC 710 V
Insulation resistance at DC 500 V	100 MΩ
Derating	2.5 %/°C starting 61 °C
Cooling	Air convection, 25 mm clearance all-round
Housing material	Plastic
Mounting	DIN rail mountable TS35 (EN 60715)
Max. altitude operation	5000 m (EN 62368-1)
Installation position	Vertical
MTBF	556000 h
Degree of protection	IP20
Protection class	I
Weight/unit	0.41 kg
Connection type	Screw terminal 0,20 mm ² – 2,5 mm ² AWG 26 – AWG 12
Dimensions (w × h × d)	40.5 mm × 90.0 mm × 115.0 mm
PU (units)	1

General ambient conditions

Operation temperature range	-40 °C ... +70 °C (Derating)
Storage temperature range	-40 °C ... +85 °C
Over voltage category	II

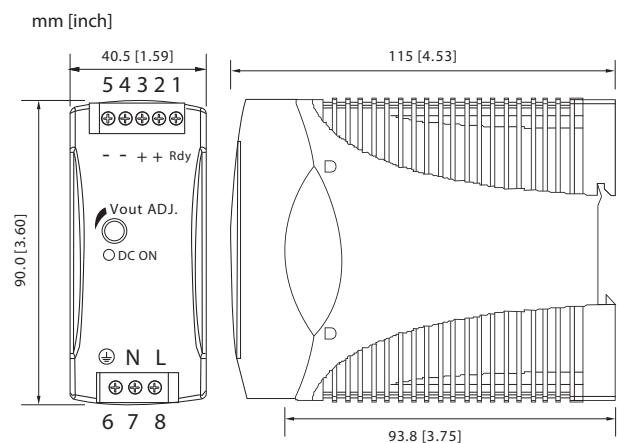
Technical data sheet

Power supply · 60 W

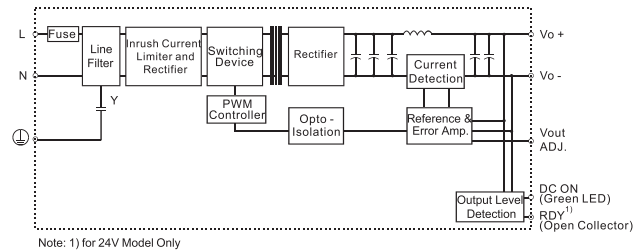
Certifications/Standards

Certifications	UL 508 Listed (E249179) UL 60950-1 CE UKCA
Standards	IEC/EN 62368-1 EN 61558-1 EN 61558-2-16 EN 61000-6-3 EN 55032 Class B EN 61000-3-2 Class D EN 61000-3-3 EN 61000-6-2 EN 55024 EN 61000-4-2 Level 4 EN 61000-4-3 Level 3 EN 61000-4-4 Level 4 EN 61000-4-5 L-N Level 3 L/N-FG Level 4 EN 61000-4-6 Level 3 EN 61000-4-8 Level 4 EN 61000-4-11 ENV 50204 Level 2 EN 61204-3

Dimensions

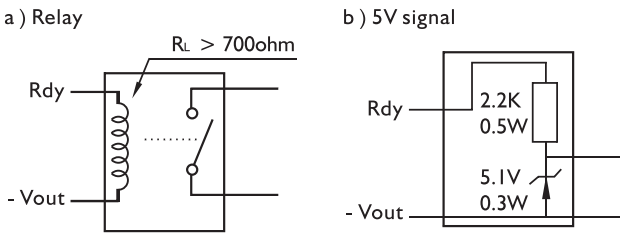


PIN assignment



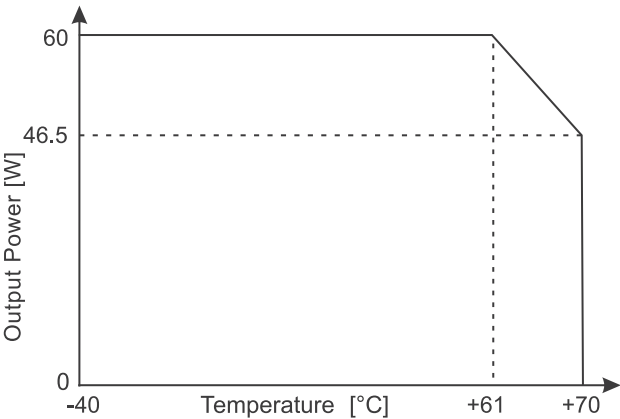
Use

Rdy connection

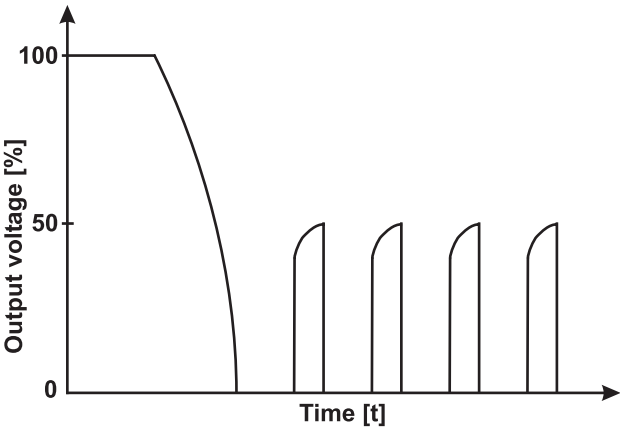


Note: for 24V Model only

Derating



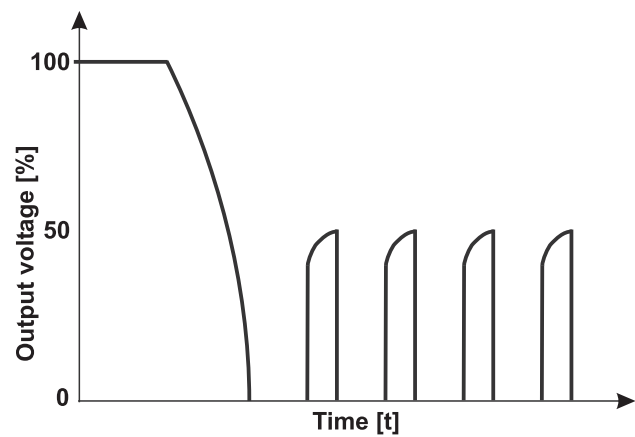
Short circuit characteristics



Technical data sheet

Power supply · 60 W

Short circuit characteristics



Technical data sheet

Power supply · 120 W

Primary switchmode power supply, PFC, Single-phase

Input: AC 90–132 V, AC 180–264 V, DC 210–375 V

Output: DC 12 V, 10 A



Identification

Type	DRAN120-12B
Part No.	722770

Product version

Datasheet version	01
-------------------	----

Input

Number of phases	1
Rated voltage U_N	AC 115 / 230 V (auto select)
Operation voltage range	AC 90–132 V / AC 180–264 V / DC 210–375 V
Frequency range	47 Hz – 63 Hz
Rated current I_N	2.2 A @ AC 115 V / 0.83 A @ AC 230 V
Inrush current	24 A @ AC 115 V / 48 A @ AC 230 V
Internal fuse	T3, 15 A/AC 250 V
External protection	Mini-circuit breaker: B 6 A
Power factor correction P.F.C.	0.7

Output

Output voltage/current	DC 12 V/10 A
Rated voltage U_N	DC 12 V
Rated current I_N	10 A
Power Dissipation	24 W @ AC 230 V
Setting range $U_{out\ min.}/U_{out\ max.}$	11.4-14.5 V
Accuracy	±1 %
Load regulation	Single ±1 %, Parallel ±5 %

Technical data sheet

Power supply · 120 W

Line regulation	±0.5 %
Rise time	1 s
Temperature coefficient	±0.03 % / °C
Ripple and noise	50 mV
Hold up time	25 ms @ 115 V / 30 ms @ 230 V
Parallel / redundant mode	Max. 3 units at 90% load current, manual switch S/P
Efficiency	84 %
Over voltage protection	125–145 %
Rated over load protection	105–125 %
Short circuit	Current limit

Status indication

Status indication DC ON LED green	≥10–11.2 V
Status indication DC LOW LED red	≤10–11.2 V

General

Switching frequency	Approx. 80 kHz
Insulation voltage input / output	DC 4.2 kV
Insulation voltage input / ground	DC 2.1 kV
Insulation voltage output / ground	DC 700 V
Insulation resistance at DC 500 V	100 MΩ
Derating	Capacity: -2.5 %/°C starting at +61 °C
Cooling	Air convection, 25 mm clearance all-round
Housing material	Metal
Mounting	DIN rail mountable TS35 (EN 60715)
Max. altitude operation	5000 m (EN 62368-1)
Installation position	Vertical
MTBF	530000 h
Degree of protection	IP20
Protection class	I
Weight/unit	0.92 kg
Connection type	Pluggable screw terminal 0.20 mm ² – 2.5 mm ² AWG 24 – AWG 12
Dimensions (w × h × d)	64.0 mm × 143.5 mm × 116.6 mm
PU (units)	1

General ambient conditions

Operation temperature range	-35 °C ... +71 °C (Derating)
-----------------------------	------------------------------

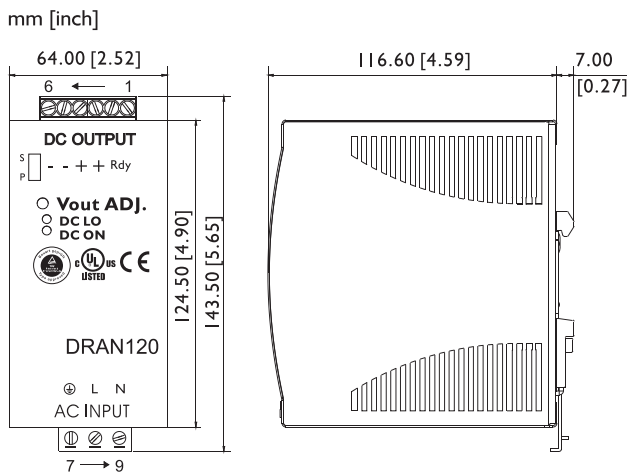
Technical data sheet

Power supply · 120 W

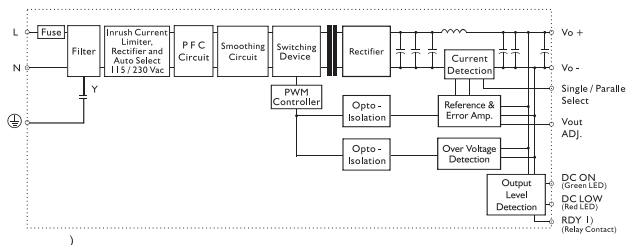
Certifications/Standards

Certifications	UL 508 Listed (E249179) UL 60950-1, (Class 1, Division 2, Groups A, B, C and D) (E350538) CE UKCA
Standards	IEC/EN 62368-1 EN 61558-1 EN 61558-2-16 EN 61000-6-3 EN 55032 Class B EN 61000-3-2 Class D EN 61000-3-3 EN 61000-6-2 EN 55024 EN 61000-4-2 Level 4 EN 61000-4-3 Level 3 EN 61000-4-4 Level 4 EN 61000-4-5 L-N Level 3 L/N-FG Level 4 EN 61000-4-6 Level 3 EN 61000-4-8 Level 4 EN 61000-4-11 ENV 50204 Level 2 EN 61204-3

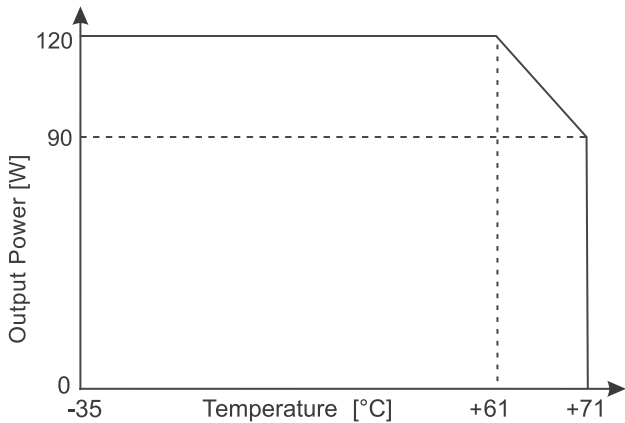
Dimensions



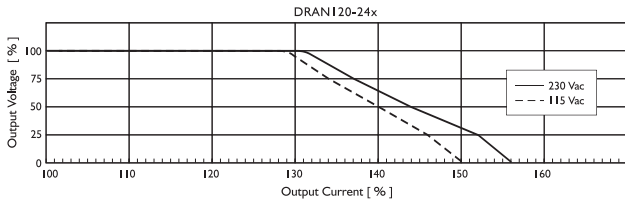
PIN assignment



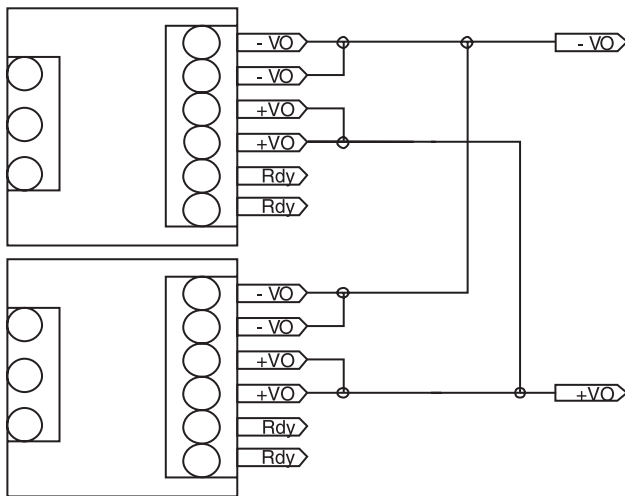
Derating



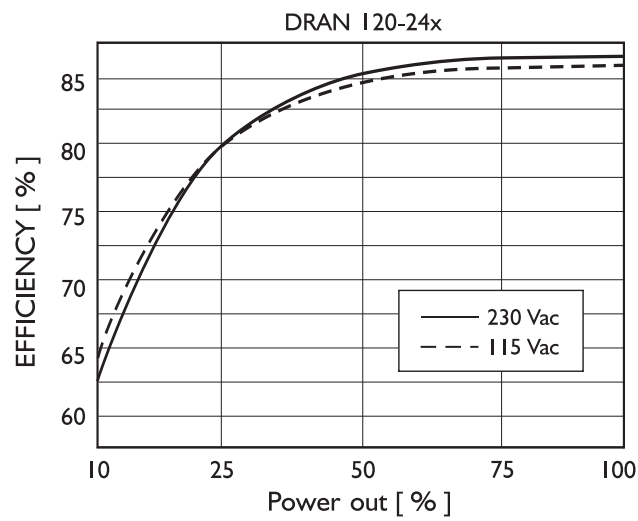
Short circuit characteristics



Parallel/redundant mode



Efficiency



Technical data sheet · Power supply

regulated, 10 W



Identification	Type	DRA10-15
	Part-No.	722773
Description		
Primary switchmode power supply, Single-phase, Class 2		
Input: wide-range input AC 90–265 V, DC 120–370 V		
Output: DC 15 V, adjustable		

Technical data sheet · Power supply

Input

Number of phases	1
Rated voltage U_N	AC 100–240 V
Operation voltage range	AC 90–265 V / DC 120–370 V
Line frequency	47 – 63 Hz
Rated current I_N	120 mA @ AC 115 V / 70 mA @ AC 230 V
Inrush current	10 A @ AC 115 V / 18 A @ AC 230 V
Internal fuse	2 A Typ-T AC 250 V
External fuse	Mini-circuit breaker: B 4 A

Output

Rated voltage U_N	DC 15 V
Rated current I_N	0.67 A
Heat dissipation	3.3 A @ AC 230 V
Setting range $U_{out\ min.}/U_{out\ max.}$	13.5–17.25 V
Accuracy	±1 %
Load regulation	±2 %
Line regulation	±1 %
Rise time	1 s
Temperature coefficient	±0.03 % / °C
Ripple and Noise	<50 mV
Hold up time	25 ms @ 115 V / 100 ms @ 230 V
Status indication DC ON LED green	≥13.5 V
Status indication DC LOW LED red	<11.25–13.5 V
Parallel / redundant mode	max. 2 devices / via external decoupling diodes
Efficiency	76 %
Over voltage protection	125–145 %
Rated over load protection	110–135 %
Short circuit	Hiccup Mode

Monitoring

DC ON Control (Rdy)	LED green/red
---------------------	---------------

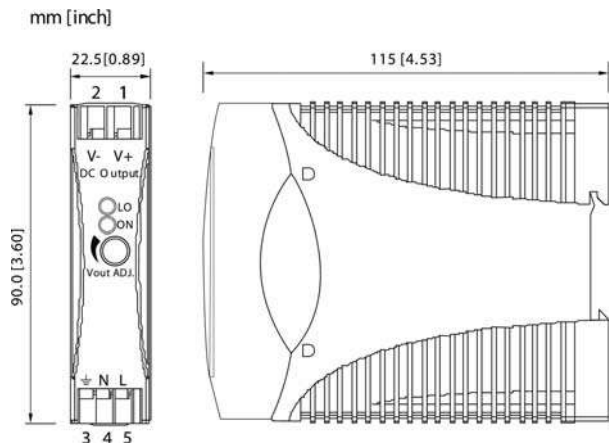
General

Switching frequency	approx. 100 kHz
Insulation voltage input / output	AC 3.0 kV _{eff}
Insulation voltage input / ground	AC 1.5 kV _{eff}
Insulation resistance at DC 500 V	100 MΩ
Derating	Capacity: -3 %/°C starting at +60 °C
Operation temperature range	-20 °C ... +70 °C (Derating)
Storage temperature range	-25 °C ... +85 °C
Relative air humidity	20 – 95 % RH, not condensing

Technical data sheet · Power supply

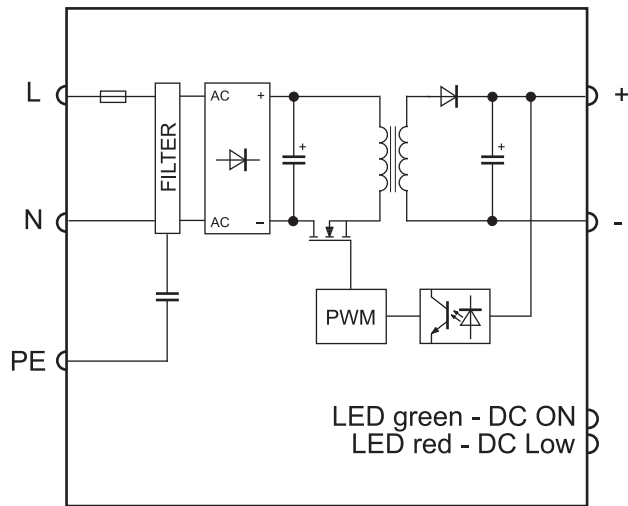
Cooling	Air convection, 25 mm clearance all-round
Housing material	Plastic
Mounting	DIN rail mountable TS35 (EN 60715)
Application height	2000 m
Installation position	vertical
Protection class	IP20
Protection class	II (SELV, PELV)
Over voltage category	II
Degree of pollution	2
Weight	0.120 kg/piece
Connection type	Spring terminal 0.20 mm ² – 2.0 mm ²
Dimensions (w × h × d)	22.5 × 90.0 × 115.0 mm
Certifications	UL 508 listed UL 60950-1 UL 1310 Class 2 EN 60950-1 EN 50081-1 EN 55022 Class B EN 61000-3-2 EN 61000-3-3 EN 50082-1 EN 55024 Class I Division 2, Groups A, B, C, D
MTBF	805000 h
PU	1 piece

Dimensions

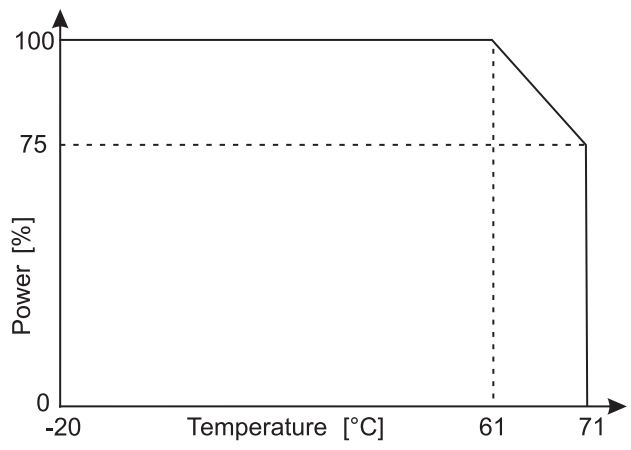


Technical data sheet · Power supply

PIN assignment

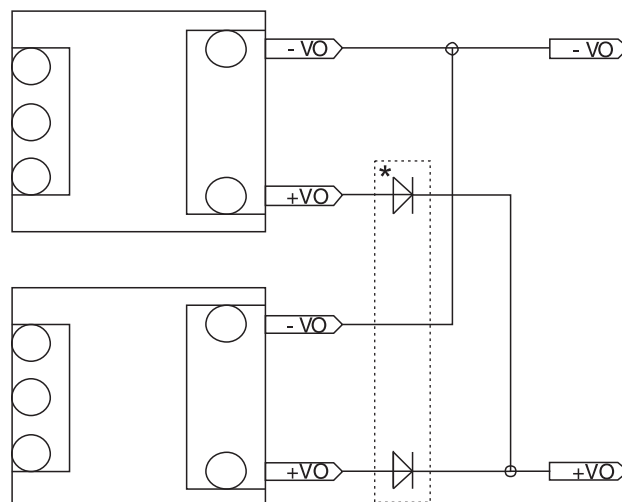


Derating



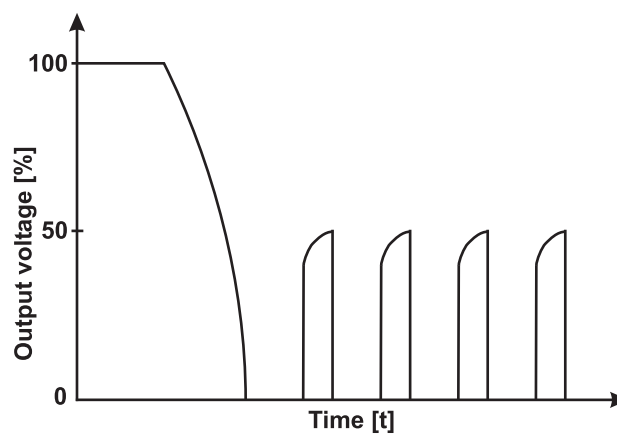
Technical data sheet · Power supply

Redundant operation



* Redundant Module 722987
Only use together with 24 V version!

Short circuit characteristics



Technical data sheet · Power supply

regulated, 18 W



Identification	Type	DRA18-15
	Part-No.	722774
Description		
Primary switchmode power supply, Single-phase, Class 2		
Input: wide-range input AC 90–265 V, DC 120–370 V		
Output: DC 12 V, adjustable		

Technical data sheet · Power supply

Input

Number of phases	1
Rated voltage U_N	AC 100–240 V
Operation voltage range	AC 90–265 V / DC 120–370 V
Line frequency	47 – 63 Hz
Rated current I_N	200 mA @ AC 115 V / 110 mA @ AC 230 V
Inrush current	10 A @ AC 115 V / 18 A @ AC 230 V
Internal fuse	2 A Typ-T AC 250 V
External fuse	Mini-circuit breaker: B 4 A

Output

Rated voltage U_N	DC 15 V
Rated current I_N	1.2 A
Heat dissipation	4.25 A @ AC 230 V
Setting range $U_{out\ min.}/U_{out\ max.}$	13.5–17.25 V
Accuracy	±1 %
Load regulation	±2 %
Line regulation	±1 %
Rise time	1 s
Temperature coefficient	±0.03 % / °C
Ripple and Noise	<50 mV
Hold up time	20 ms @ 115 V / 75 ms @ 230 V
Status indication DC ON LED green	≥13.5 V
Status indication DC LOW LED red	<11.25–13.5 V
Parallel / redundant mode	max. 2 devices / via external decoupling diodes
Efficiency	77 %
Over voltage protection	125–145 %
Rated over load protection	110–135 %
Short circuit	Hiccup Mode

Monitoring

DC ON Control (Rdy)	LED green/red
---------------------	---------------

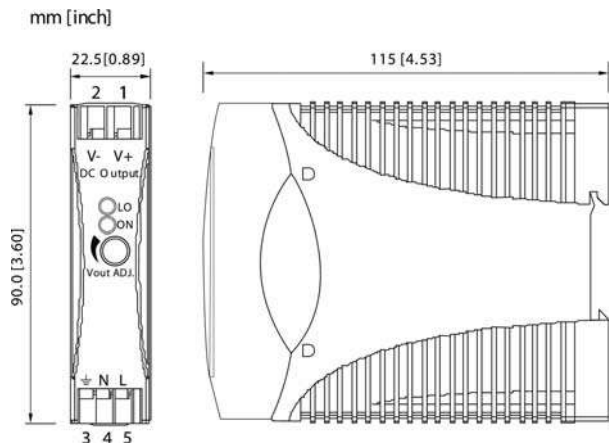
General

Switching frequency	approx. 100 kHz
Insulation voltage input / output	AC 3.0 kV _{eff}
Insulation voltage input / ground	AC 1.5 kV _{eff}
Insulation resistance at DC 500 V	100 MΩ
Derating	Capacity: -3 %/°C starting at +60 °C
Operation temperature range	-20 °C ... +70 °C (Derating)
Storage temperature range	-25 °C ... +85 °C
Relative air humidity	20 – 95 % RH, not condensing

Technical data sheet · Power supply

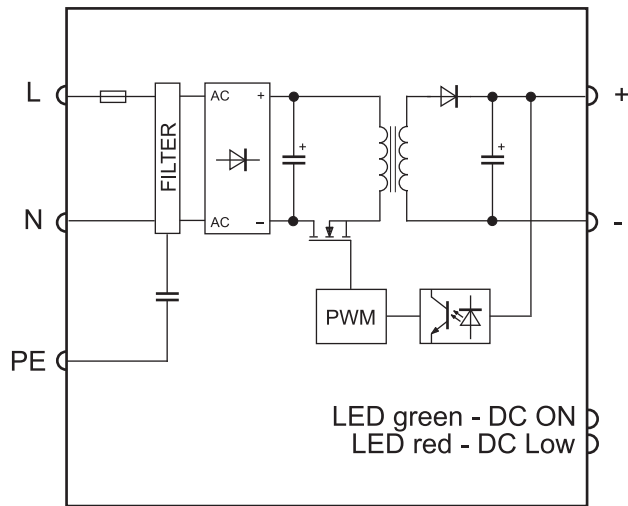
Cooling	Air convection, 25 mm clearance all-round
Housing material	Plastic
Mounting	DIN rail mountable TS35 (EN 60715)
Application height	2000 m
Installation position	vertical
Protection class	IP20
Protection class	II (SELV, PELV)
Over voltage category	II
Degree of pollution	2
Weight	0.150 kg/piece
Connection type	Spring terminal 0.20 mm ² – 2.0 mm ²
Dimensions (w × h × d)	22.5 × 90.0 × 115.0 mm
Certifications	UL 508 listed UL 60950-1 UL 1310 Class 2 EN 60950-1 EN 50081-1 EN 55022 Class B EN 61000-3-2 EN 61000-3-3 EN 50082-1 EN 55024 Class I Division 2, Groups A, B, C, D
MTBF	796000 h
PU	1 piece

Dimensions

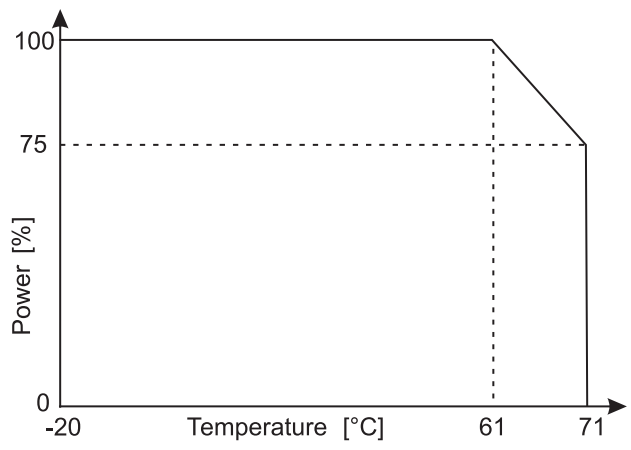


Technical data sheet · Power supply

PIN assignment

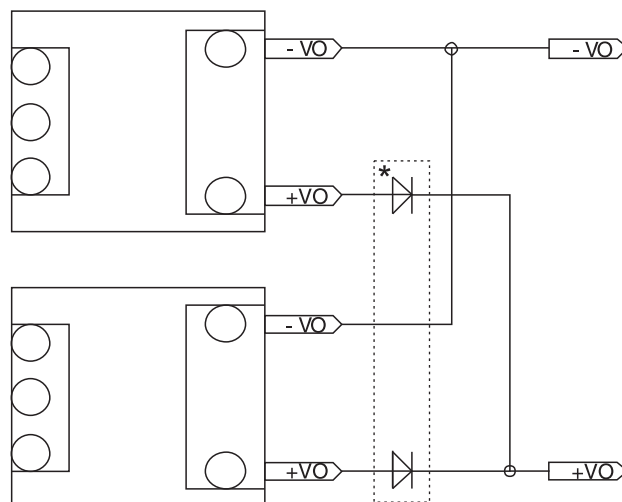


Derating



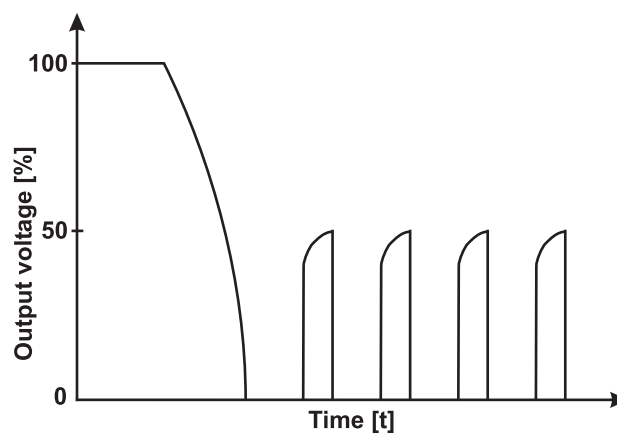
Technical data sheet · Power supply

Redundant operation



* Redundant Module 722987
Only use together with 24 V version!

Short circuit characteristics



Technical data sheet

Power supply · 240 W

Primary switchmode power supply, PFC, Single-phase

Input: AC 90–132 V, AC 180–264 V, DC 210–375 V

Output: DC 24 V, 10 A



Identification

Type	DRA240-24A
Part No.	722781

Product version

Datasheet version	02
-------------------	----

Input

Number of phases	1
Rated voltage U_N	AC 115/230 V
Operation voltage range	AC 90–132 V / AC 180–264 V / DC 210–375 V
Frequency range	47 Hz – 63 Hz
Rated current I_N	4.0 A @ AC 115 V / 1.55 A @ AC 230 V
Inrush current	30 A @ AC 115 V / 60 A @ AC 230 V
Internal fuse	T6, 3 A/AC 250 V
External protection	Mini-circuit breaker: B 10 A, C 6 A
Power factor correction P.F.C.	0.7

Output

Output voltage/current	DC 24 V/10 A
Rated voltage U_N	DC 24 V
Rated current I_N	10 A
Power Dissipation	35 W @ AC 230 V
Setting range $U_{out\ min.}/U_{out\ max.}$	22.5/28.5 V
Accuracy	±1 %
Load regulation	Single ±1 %, Parallel ±5 %

Technical data sheet

Power supply · 240 W

Line regulation	±0.5 %
Rise time	1 s
Temperature coefficient	±0.03 % / °C
Ripple and noise	100 mV
Hold up time	25 ms @ 115 V / 30 ms @ 230 V
Parallel / redundant mode	Max. 3 units at 90% load current, manual switch S/P
Efficiency	89 %
Over voltage protection	120–145 %
Rated over load protection	105–145 %
Short circuit	Current limit

Status indication

Status indication DC ON LED green	≥17.6–19.4 V
Status indication DC LOW LED red	≤17.6–19.4 V

Monitoring

DC ON Control (Rdy)	N/O contact
Switching voltage	DC 60 V
Switching current	Max. 300 mA
Isolation voltage	DC 500 V

General

Switching frequency	Approx. 40 kHz
Insulation voltage input / output	DC 4.2 kV
Insulation voltage input / ground	DC 2.1 kV
Insulation voltage output / ground	DC 700 V
Insulation resistance at DC 500 V	100 MΩ
Derating	Capacity: -2.5 %/°C starting at +61 °C
Cooling	Air convection, 25 mm clearance all-round
Housing material	Metal
Mounting	DIN rail mountable TS35 (EN 60715)
Max. altitude operation	5000 m (EN 62368-1)
Installation position	Vertical
MTBF	481000 h
Degree of protection	IP20
Protection class	I
Weight/unit	1.38 kg
Connection type	Screw terminal 0.20 mm ² – 4.0 mm ²

116.6 mm

Technical data sheet

Power supply · 240 W

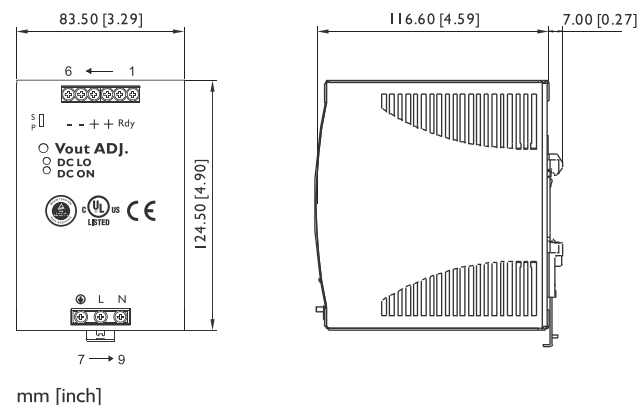
General ambient conditions

Operation temperature range	-40 °C ... +71 °C (Derating)
Storage temperature range	-40 °C ... +85 °C
Over voltage category	II
Degree of pollution	2
Relative air humidity	20 – 90 % RH, not condensing

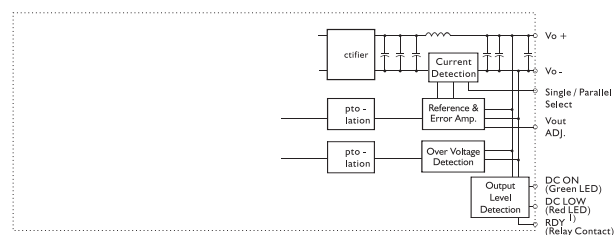
Certifications/Standards

Certifications	UL 508 Listed (E249179) UL 60950-1, (Class 1, Division 2, Groups A, B, C and D) (E350538) CE UKCA
Standards	IEC/EN 62368-1 EN 61558-1 EN 61558-2-16 EN 61000-6-3 EN 55032 Class B EN 61000-3-2 Class D EN 61000-3-3 EN 61000-6-2 EN 55024 EN 61000-4-2 Level 4 EN 61000-4-3 Level 3 EN 61000-4-4 Level 4 EN 61000-4-5 L-N Level 3 L/N-FG Level 4 EN 61000-4-6 Level 3 EN 61000-4-8 Level 4 EN 61000-4-11 ENV 50204 Level 2 EN 61204-3

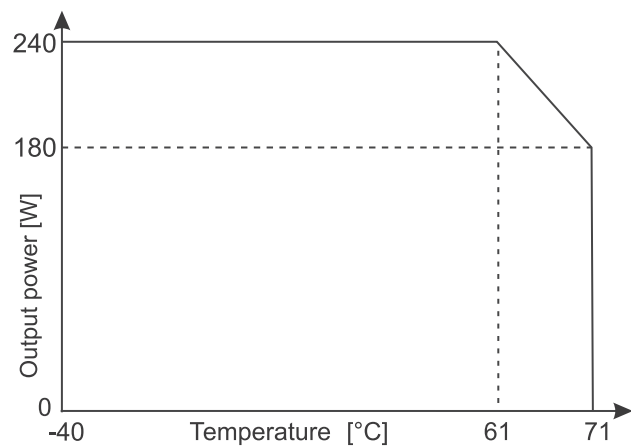
Dimensions



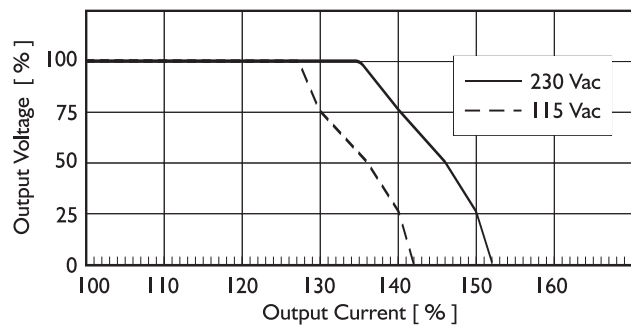
PIN assignment



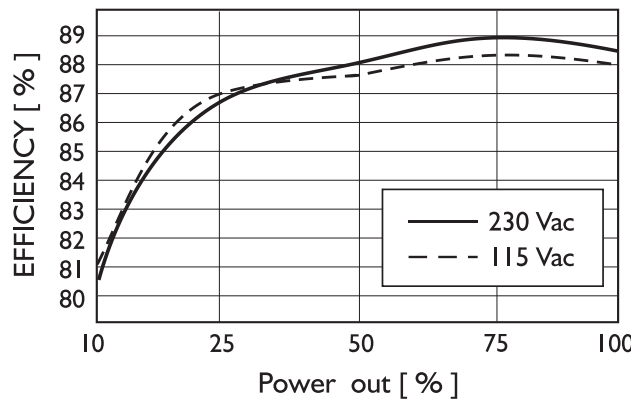
Derating



Short circuit characteristics



Efficiency



Technical data sheet

Power supply · 480 W

Primary switchmode power supply, PFC, Single-phase

Input: AC 90–264 V, DC 120–375 V

Output: DC 24 V, 20 A



Identification

Type	DRA480-24A
Part No.	722782

Product version

Datasheet version	01
-------------------	----

Input

Number of phases	1
Rated voltage U_N	AC 115 / 230 V (auto select)
Operation voltage range	AC 90–264 V / DC 120–375 V
Frequency range	47 Hz – 63 Hz
Rated current I_N	4.9 A @ AC 115 V / 2.5 A @ 230 V
Inrush current	25 A @ AC 115 V / 50 A @ AC 230 V
Internal fuse	T10 A/AC 250 V
External protection	Mini-circuit breaker: B 16 A
Power factor correction P.F.C.	0.99

Output

Output voltage/current	DC 24 V/20 A
Rated voltage U_N	DC 24 V
Rated current I_N	20 A
Power Dissipation	63 W @ AC 230 V
Setting range $U_{out\ min.}/U_{out\ max.}$	22.5/28.5 V
Accuracy	±1 %
Load regulation	Single ±0.5 %, Parallel ±5 %

Technical data sheet

Power supply · 480 W

Line regulation	±0.5 %
Rise time	1 s
Temperature coefficient	±0.03 % / °C
Ripple and noise	100 mV
Hold up time	Min. 30 ms
Parallel / redundant mode	Max. 3 units at 90% load current, manual switch S/P
Efficiency	89 %
Over voltage protection	125–137 %
Rated over load protection	120–140 %
Short circuit	Current limit

Status indication

Status indication DC ON LED green	≥17.6–19.4 V
Status indication DC LOW LED red	≤17.6–19.4 V

Monitoring

DC ON Control (Rdy)	N/O contact
Switching voltage	DC 60 V
Switching current	Max. 300 mA
Isolation voltage	DC 500 V

General

Switching frequency	Approx. 80 kHz
Insulation voltage input / output	DC 4.2 kV
Insulation voltage input / ground	DC 2.1 kV
Insulation voltage output / ground	DC 700 V
Insulation resistance at DC 500 V	100 MΩ
Derating	Capacity: -2,5 %/°C starting at +56 °C
Cooling	Air convection, 25 mm clearance all-round
Housing material	Metal
Mounting	DIN rail mountable TS35 (EN 60715)
Max. altitude operation	5000 m (EN 62368-1)
Installation position	Vertical
MTBF	469000 h
Degree of protection	IP20
Protection class	I
Weight/unit	1.92 kg
Connection type	Screw terminal 0.20 mm ² – 4.0 mm ²

× 116.6 mm

Technical data sheet

Power supply · 480 W

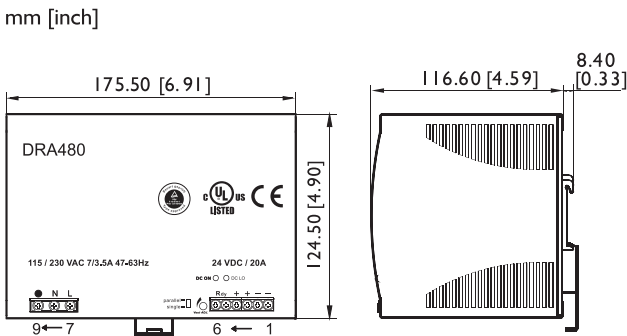
General ambient conditions

Operation temperature range	-40 °C ... +71 °C (Derating)
Storage temperature range	-40 °C ... +85 °C
Over voltage category	II
Degree of pollution	2
Relative air humidity	20 – 90 % RH, not condensing

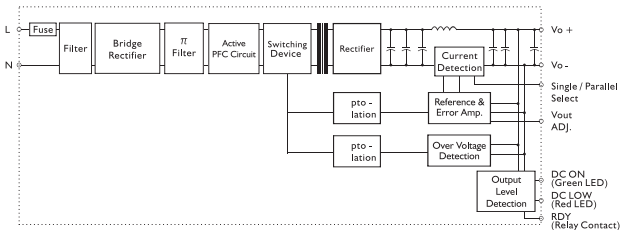
Certifications/Standards

Certifications	UL 508 Listed (E249179) UL 60950-1, (Class 1, Division 2, Groups A, B, C and D) (E350538) CE UKCA
Standards	IEC/EN 62368-1 EN 61558-1 EN 61558-2-16 EN 61000-6-3 EN 55032 Class B EN 61000-3-2 Class D EN 61000-3-3 EN 61000-6-2 EN 55024 EN 61000-4-2 Level 4 EN 61000-4-3 Level 3 EN 61000-4-4 Level 4 EN 61000-4-5 L-N Level 3 L/N-FG Level 4 EN 61000-4-6 Level 3 EN 61000-4-8 Level 4 EN 61000-4-11 ENV 50204 Level 2 EN 61204-3

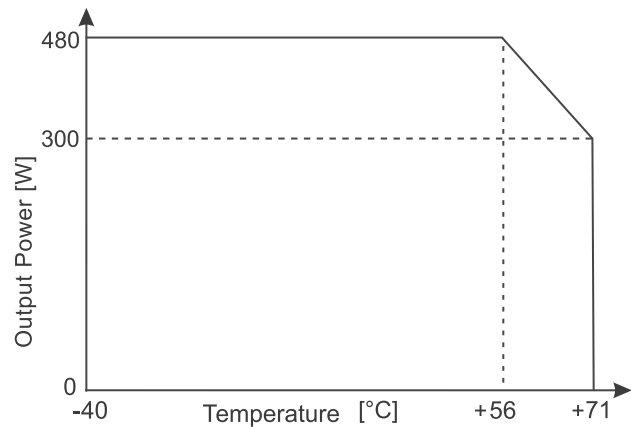
Dimensions



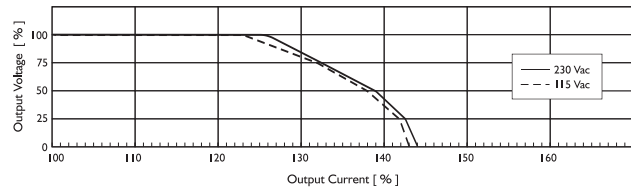
PIN assignment



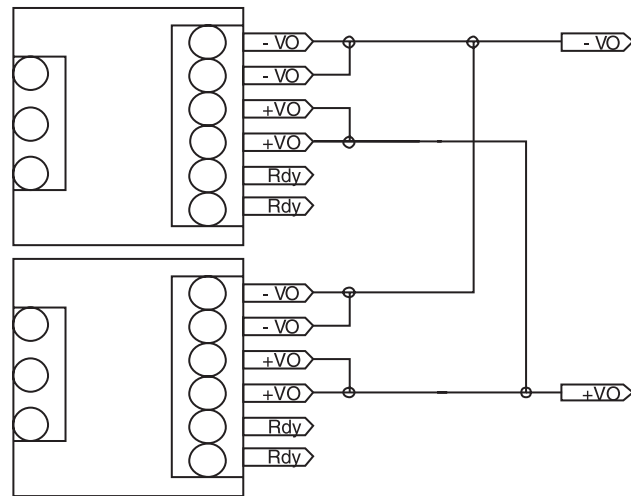
Derating



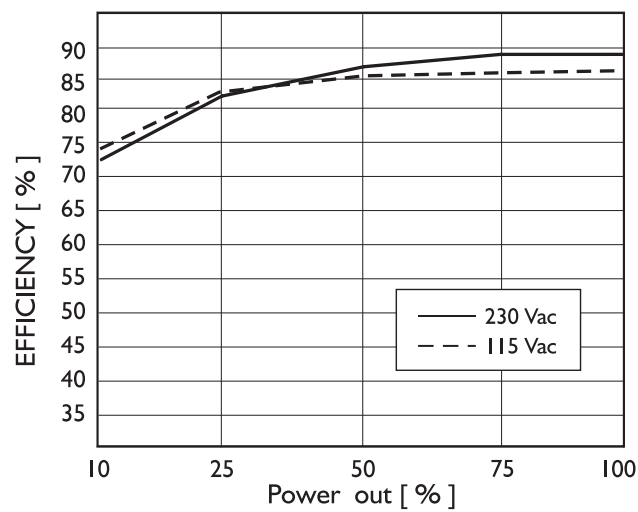
Short circuit characteristics



Parallel/redundant mode



Efficiency



Technical data sheet

Power supply · Compact Universal, 480 W

Primary switched power supply, PFC, 1/2/3-phase

Input: wide-range input AC 187–550 V, DC 250–725 V

Output: DC 24 V, 20 A



Identification

Type	CPSB-123-480-24
Part No.	722801

Product version

Datasheet version	01
-------------------	----

Input

Number of phases	3
Rated voltage U_N	One-, two- and three-phase AC 200-500 V
Operation voltage range	AC 187–550 V / DC 250–725 V (UL: DC 300–500 V)
Frequency range	47 Hz – 63 Hz
Rated current I_N	1-/2-phase: 2.9 A @ AC 200 V / 1.3 A @ AC 500 V, 3-phase: 1.8 A @ AC 200 V / 0.8 A @ AC 500 V
Inrush current	≤ 55 A / 2.16 A ² s
External protection	Mini-circuit breaker: C 6 A, or D 4 A (required)
Power factor correction P.F.C.	>0.9

Output

Output voltage/current	DC 24 V/20 A
Rated voltage U_N	DC 24 V
Rated current I_N	20 A
Max. output current	28 A, 5 s
Short-circuit current	50 A
Power Dissipation	<42 W
Setting range $U_{out\ min.}/U_{out\ max.}$	23-28 V

Technical data sheet

Power supply · Compact Universal, 480 W

Load regulation	<1 %
Ripple and noise	<50 mV pp
Hold up time	>50 ms
Parallel / redundant mode	Yes/via external decoupling diode
Efficiency	>92 %
Overtemperature protection	Yes
Over voltage protection	≥DC 33 V
Short circuit	Hiccup Mode

Status indication

Status indication DC ON LED green	≥21.6 V
Status indication DC LOW LED red	$I_{out} > 1.1 I_N$

Monitoring

DC ON Control (Rdy)	N/O contact
Switching voltage	AC/DC 30 V
Switching current	AC/DC 1 A
Switching capacity	30 VA / 30 W
Isolation voltage	AC 500 V

General

Insulation voltage input / output	DC 4.2 kV
Insulation voltage input / ground	DC 2.2 kV
Insulation voltage output / ground	DC 750 V
Derating	>45 °C: -10 W/°C
Cooling	Air convection, 50 mm distance top/bottom, 20 mm side
Housing material	Aluminum
Mounting	DIN rail mountable TS35 (EN 60715)
Installation position	Vertical
MTBF	>500000 h: SN29500 / >500000 h: MIL-HDBK-217F
Degree of protection	IP20 (IEC 529 / EN 60529)
Protection class	I
Weight/unit	1 kg
Connection type	Screw terminal 0.20 mm ² – 2.5 mm ² AWG 24 – AWG 14 Plug-in
Strip length	6.0 mm / 0.24 in
Screwdriver	3,0 × 0,5 mm
Tightening torque	0.5 – 0.6 Nm / 4.42 – 5.30 lbf in 125.0 mm

Technical data sheet

Power supply · Compact Universal, 480 W

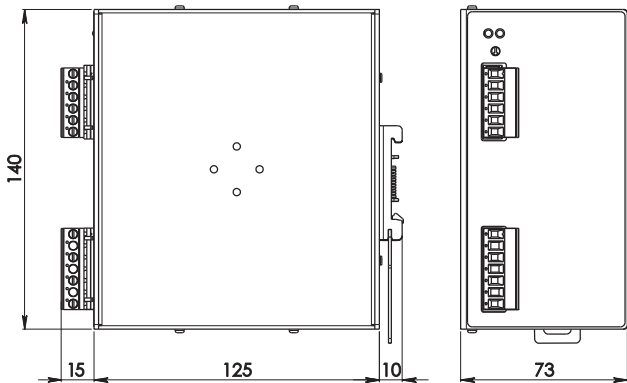
General ambient conditions

Operation temperature range	-40 °C ... +70 °C (UL approved up to +45 °C)
Storage temperature range	-40 °C ... +80 °C
Over voltage category	III
Degree of pollution	2
Relative air humidity	5 – 95 % RH, non-condensing
Vibration resistance	5 – 17.8 Hz: ±1.6 mm, 17.8 – 500 Hz: 2 g 2 hours/axes X,Y,Z, IEC 60068-2-6
Shock resistance	30 g 6 ms, 20 g 11 ms, 3 shocks/direction, 18 shocks in total, IEC60068-2-27

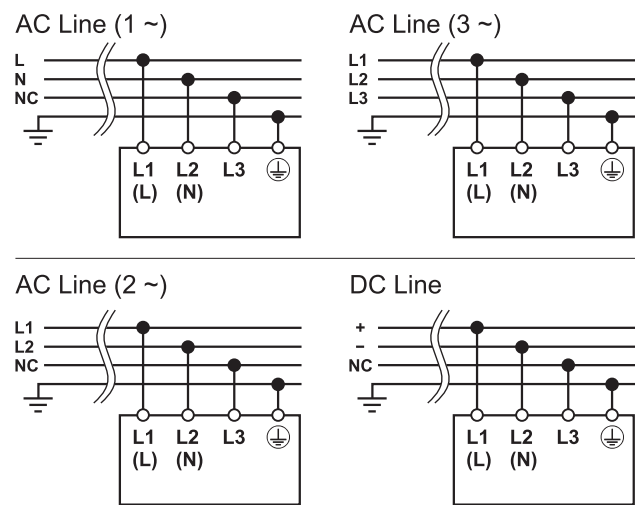
Certifications/Standards

Certifications	CE UKCA cULus (E249179)
Standards	UL 508 IEC/EN 61010-1 IEC/EN 61010-2-201 IEC/EN 60950 EN 55011 (CISPR11) Class A EN 61000-3-2 Class A EN 61000-4-2 Level 3 EN 61000-4-3 Level 3 EN 61000-4-4 Level 4 EN 61000-4-5 Level 3 EN 61000-4-11 Level 2 IEC 60068-2-27 (Shock), 30 g 6 ms, 20 g 11 ms, 3 bumps / direction, 18 bumps total IEC 60068-2-6 (Vibration sinusoidal), 5-17.8 Hz: ±1.6 mm, 17.8-500 Hz: 2 g 2 hours / axis (X,Y,Z)

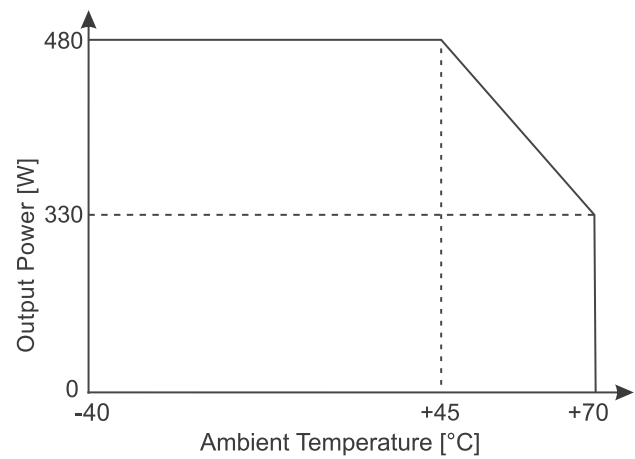
Dimensions



PIN assignment

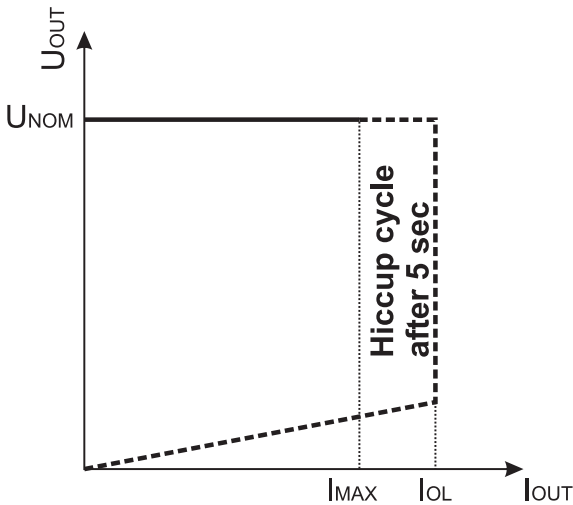


Derating

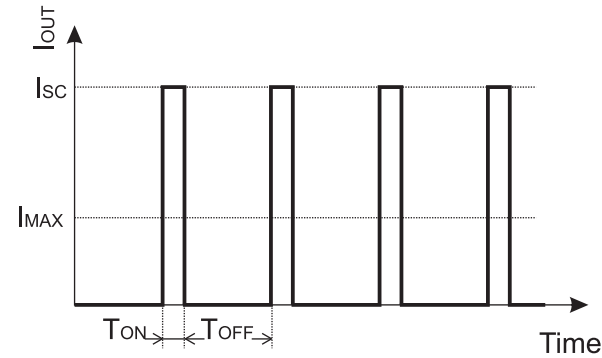


Short circuit characteristics

Hiccup limitation output characteristic



Short circuit conditions



Technical data sheet

Power supply · 120 W, 3-phase

Primary switchmode power supply, PFC, 3-phase

Input: AC 340–575 V, DC 480–820 V

Output: DC 24 V, 5 A



Identification

Type	WRA120-24
Part No.	722803

Product version

Datasheet version	00
-------------------	----

Input

Number of phases	3
Rated voltage U_N	3 × AC 400–500 V
Operation voltage range	3 × AC 340–575 V / 3 × DC 480–820 V
Frequency range	47 Hz – 63 Hz
Rated current I_N	0.36 A @ AC 400 V / 0.3 A @ AC 500 V
Inrush current	10 A
Internal fuse	3 × T2, 0 A/AC 600 V
External protection	Mini-circuit breaker: 3 × B 6 A
Power factor correction P.F.C.	0.6

Output

Output voltage/current	DC 24 V/5 A
Rated voltage U_N	DC 24 V
Rated current I_N	5 A
Power Dissipation	16 W @ AC 380 V
Setting range $U_{out\ min.}/U_{out\ max.}$	22.5/28.5 V
Accuracy	1 %
Load regulation	±1 %

Technical data sheet

Power supply · 120 W, 3-phase

Line regulation	±1 %
Rise time	1 s
Temperature coefficient	±0.03 % / °C
Ripple and noise	100 mV
Hold up time	Min. 20 ms
Parallel / redundant mode	Max. 2 devices / via external decoupling diodes e.g. 722987
Efficiency	89 %
Over voltage protection	125–137 %
Rated over load protection	115–135 % Temperature: Deactivation at 100–110°C and automatic activation after cooling off
Short circuit	Hiccup Mode

Status indication

Status indication DC ON LED green	≥17.6–19.4 V
Status indication DC LOW LED red	≤17.6–19.4 V

Monitoring

DC ON Control (Rdy)	N/O contact
Switching voltage	DC 60 V
Switching current	Max. 300 mA
Isolation voltage	DC 500 V

General

Switching frequency	Approx. 70 kHz
Insulation voltage input / output	DC 4.2 kV
Insulation voltage input / ground	DC 2.1 kV
Insulation voltage output / ground	DC 700 V
Insulation resistance at DC 500 V	100 MΩ
Derating	Capacity: -2.5 %/°C starting at +61 °C
Cooling	Air convection, 25 mm clearance all-round
Housing material	Metal
Mounting	DIN rail mountable TS35 (EN 60715)
Max. altitude operation	5000 m (EN 62368-1)
Installation position	Vertical
MTBF	572000 h
Degree of protection	IP20
Protection class	I
Weight/unit	0.8 kg

111.9 mm

Technical data sheet

Power supply · 120 W, 3-phase

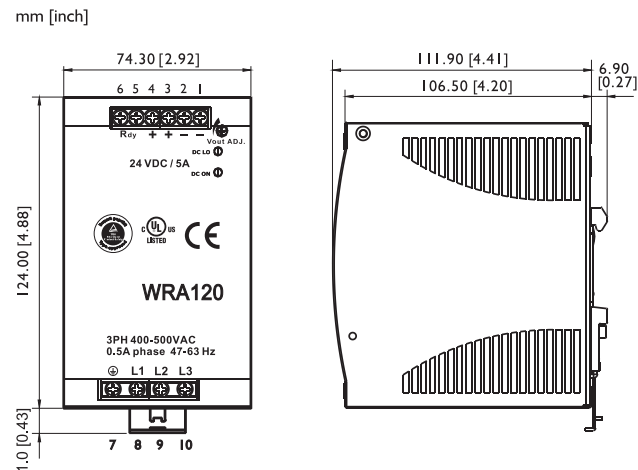
General ambient conditions

Operation temperature range	-40 °C ... +71 °C (Derating)
Storage temperature range	-40 °C ... +85 °C
Over voltage category	II
Degree of pollution	2
Relative air humidity	20 – 90 % RH, not condensing

Certifications/Standards

Certifications	UL 508 Listed (E249179) UL 60950-1, (Class 1, Division 2, Groups A, B, C and D) (E350538) CE UKCA
Standards	IEC/EN 62368-1 EN 61558-1 EN 61558-2-16 EN 61000-6-3 EN 55032 Class B EN 61000-3-2 Class D EN 61000-3-3 EN 61000-6-2 EN 55024 EN 61000-4-2 Level 4 EN 61000-4-3 Level 3 EN 61000-4-4 Level 4 EN 61000-4-5 L-N Level 3 L/N-FG Level 4 EN 61000-4-6 Level 3 EN 61000-4-8 Level 4 EN 61000-4-11 ENV 50204 Level 2 EN 61204-3

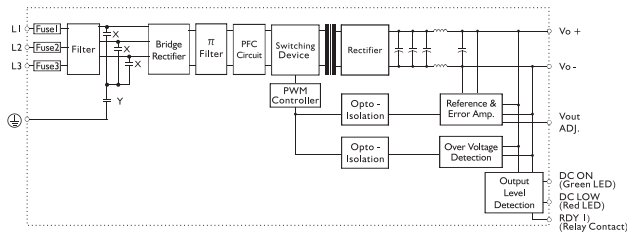
Dimensions



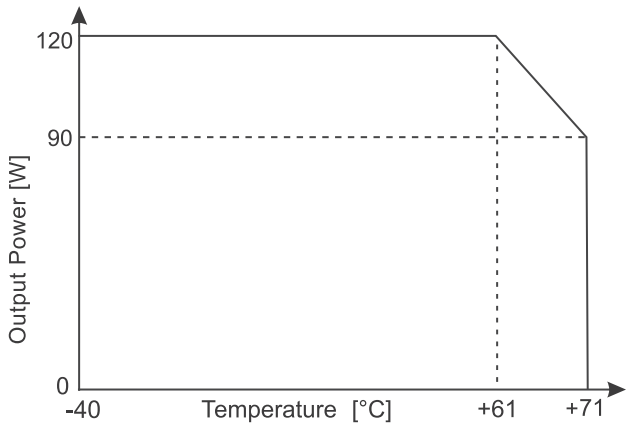
Technical data sheet

Power supply · 120 W, 3-phase

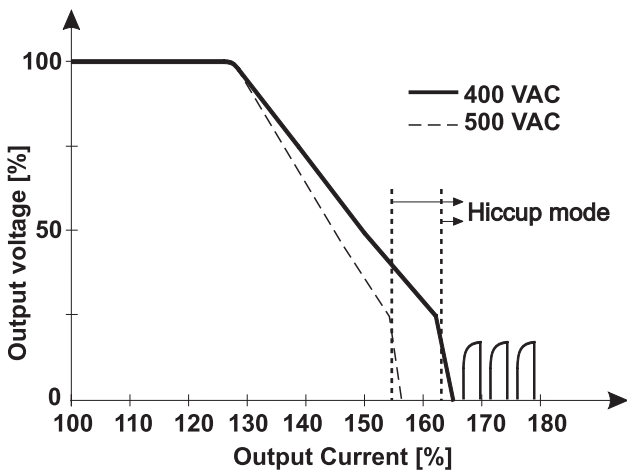
PIN assignment



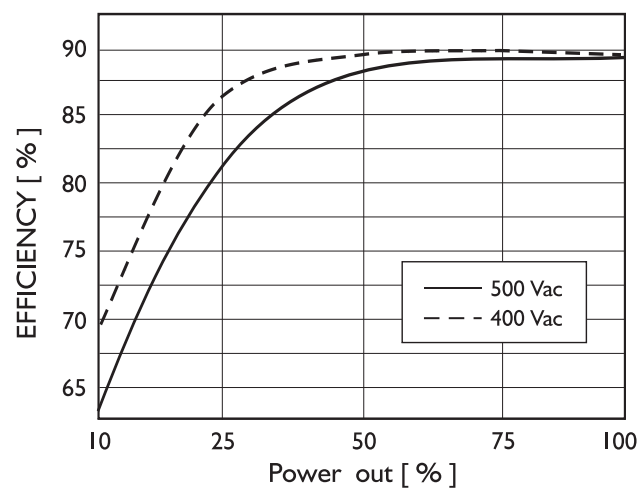
Derating



Short circuit characteristics



Efficiency



Technical data sheet

Power supply · 240 W, 3-phase

Primary switchmode power supply, PFC, 3-phase

Input: AC 340–575 V, DC 480–820 V

Output: DC 24 V, 10 A



Identification

Type	WRA240-24
Part No.	722804

Product version

Datasheet version	00
-------------------	----

Input

Number of phases	3
Rated voltage U_N	3 × AC 400–500 V
Operation voltage range	3 × AC 340–575 V / 3 × DC 480–820 V
Frequency range	47 Hz – 63 Hz
Rated current I_N	0.65 A @ AC 400 V / 0.55 A @ AC 500 V
Inrush current	20 A
Internal fuse	3 × T2, 0 A/AC 600 V
External protection	Mini-circuit breaker: 3 × B 6 A
Power factor correction P.F.C.	0.6

Output

Output voltage/current	DC 24 V/10 A
Rated voltage U_N	DC 24 V
Rated current I_N	10 A
Power Dissipation	30 W @ AC 380 V
Setting range $U_{out\ min.}/U_{out\ max.}$	22.5/28.5 V
Accuracy	1 %
Load regulation	Single ±1 %, Parallel ±5 %

Technical data sheet

Power supply · 240 W, 3-phase

Line regulation	±1 %
Rise time	1 s
Temperature coefficient	±0.03 % / °C
Ripple and noise	100 mV
Hold up time	Min. 20 ms
Parallel / redundant mode	Max. 2 units at 90% load current, manual switch S/P
Efficiency	90 %
Over voltage protection	125–137 %
Rated over load protection	Temperature: Deactivation at 100–110°C and automatic activation after cooling off
Short circuit	Hiccup Mode

Status indication

Status indication DC ON LED green	≥17.6–19.4 V
Status indication DC LOW LED red	≤17.6–19.4 V

Monitoring

DC ON Control (Rdy)	N/O contact
Switching voltage	DC 60 V
Switching current	Max. 300 mA
Isolation voltage	DC 500 V

General

Switching frequency	Approx. 25 kHz
Insulation voltage input / output	DC 4.2 kV
Insulation voltage input / ground	DC 2.1 kV
Insulation voltage output / ground	DC 700 V
Insulation resistance at DC 500 V	100 MΩ
Derating	Capacity: -2.5 %/°C starting at +61 °C
Cooling	Air convection, 25 mm clearance all-round
Housing material	Metal
Mounting	DIN rail mountable TS35 (EN 60715)
Max. altitude operation	3000 m
Installation position	Vertical
MTBF	520000 h
Degree of protection	IP20
Protection class	I
Weight/unit	1.1 kg
Connection type	Screw terminal

111.9 mm

Technical data sheet

Power supply · 240 W, 3-phase

General ambient conditions

Operation temperature range	-40 °C ... +71 °C (Derating)
Storage temperature range	-40 °C ... +85 °C
Over voltage category	II
Degree of pollution	2
Relative air humidity	20 – 90 % RH, not condensing

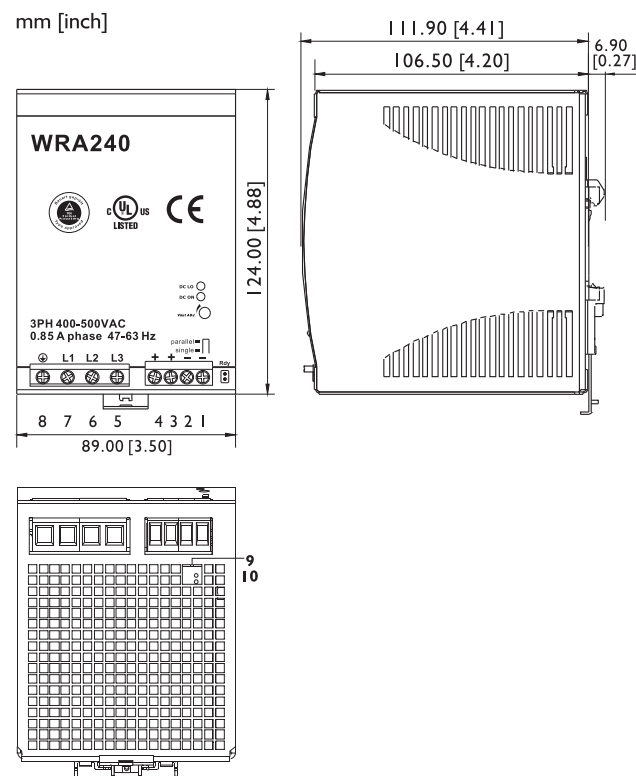
Certifications/Standards

Certifications	UL 508 Listed (E249179) UL 60950-1, (Class 1, Division 2, Groups A, B, C and D) (E350538) CE UKCA
Standards	IEC/EN 62368-1 EN 61558-1 EN 61558-2-16 EN 61000-6-3 EN 55032 Class B EN 61000-3-2 Class D EN 61000-3-3 EN 61000-6-2 EN 55024 EN 61000-4-2 Level 4 EN 61000-4-3 Level 3 EN 61000-4-4 Level 4 EN 61000-4-5 L-N Level 3 L/N-FG Level 4 EN 61000-4-6 Level 3 EN 61000-4-8 Level 4 EN 61000-4-11 ENV 50204 Level 2 EN 61204-3

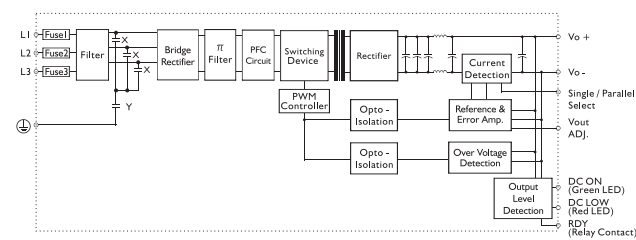
Technical data sheet

Power supply · 240 W, 3-phase

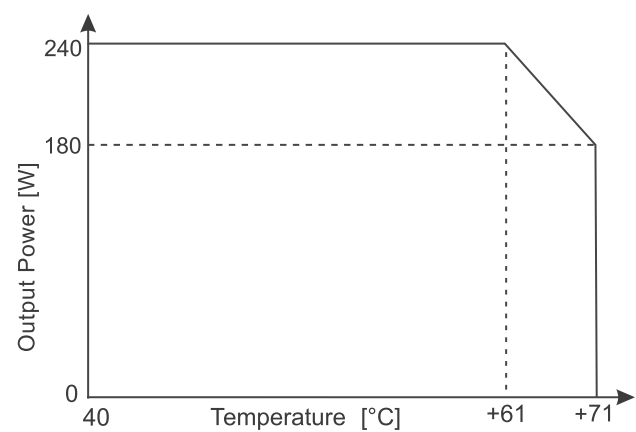
Dimensions



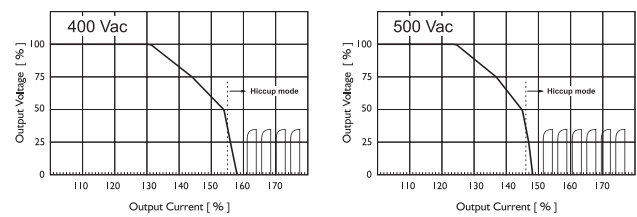
PIN assignment



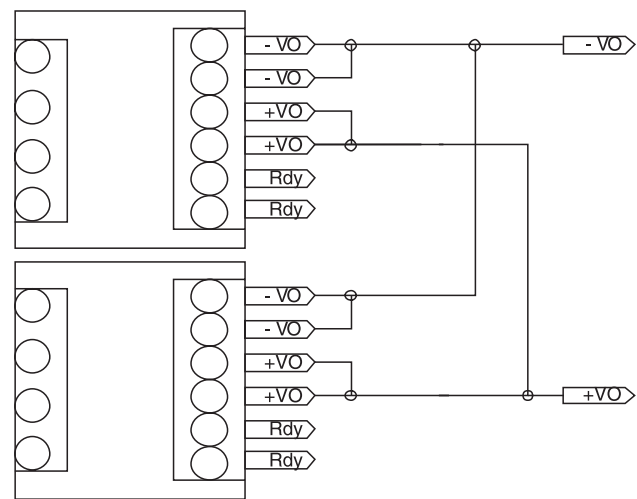
Derating



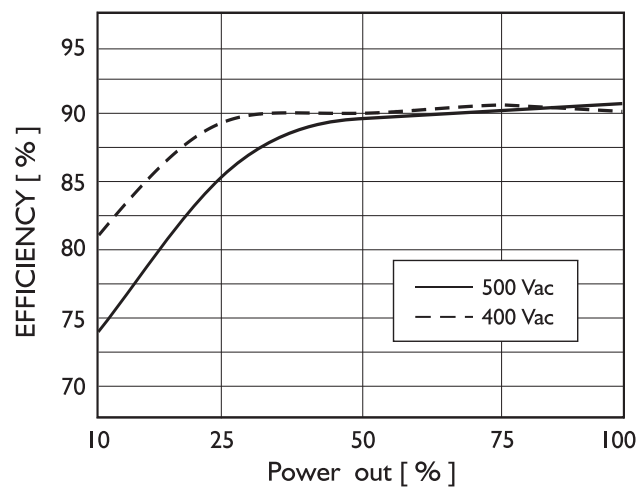
Short circuit characteristics



Parallel/redundant mode



Efficiency



Technical data sheet

Power supply · Compact 3-phase, 960 W

Primary switchmode power supply, PFC, 3-phase

Input: Wide range input AC 340 - 550 V

Output: DC 24 V, 40 A



Identification

Type	CPSB3-960-24
Part No.	722811

Product version

Datasheet version	01
-------------------	----

Input

Number of phases	3
Rated voltage U_N	AC 400–500 V
Operation voltage range	AC 340–550 V / DC 520–725 V
Frequency range	47 Hz – 63 Hz
Rated current I_N	2.4 A @ AC 400 V / 2.1 A @ AC 500 V
Inrush current	≤ 50 A / 1.86 A ² s
External protection	Mini-circuit breaker: 3 × C 10 A / safety fuse: 3 × T 10 A (required)
Power factor correction P.F.C.	>0.7

Output

Output voltage/current	DC 24 V/40 A
Rated voltage U_N	DC 24 V
Rated current I_N	40 A
Max. output current (limited current)	44 A
Max. output current (HICCUP, 5 sec)	60 A
Power Dissipation	<78 W
Setting range $U_{out\ min.}/U_{out\ max.}$	23-28 V
Load regulation	<1 %

Technical data sheet

Power supply · Compact 3-phase, 960 W

Ripple and noise	<150 mV pp
Hold up time	>15 ms
Parallel / redundant mode	Max. 2 devices / via external decoupling diodes e.g. 722999
Efficiency	>92.5 %
Over voltage protection	≥DC 33 V
Rated over load protection	> 90°C, auto-reset
Short circuit	Adjustable: Hiccup, current limiting

Status indication

Status indication DC ON LED green	≥21.6 V
Status indication DC LOW LED red	≤21.6 V

Monitoring

DC ON Control (Rdy)	N/O contact
Switching voltage	AC 300 V / DC 150 V
Switching current	AC/DC 1 A
Switching capacity	300 VA / 30 W
Isolation voltage	AC 500 V

General

Switching frequency	Approx. 70 - 110 kHz
Insulation voltage input / output	DC 4.2 kV
Insulation voltage input / ground	DC 2.2 kV
Insulation voltage output / ground	DC 750 V
Derating	>45 °C: -15 W/°C
Cooling	Air convection, forced cooling >50°C, 50 mm distance top/bottom, 20 mm side
Housing material	Aluminum
Mounting	DIN rail mountable TS35 (EN 60715)
Installation position	Vertical
MTBF	>500000 h: SN29500 / >500000 h: MIL-HDBK-217F
Degree of protection	IP20 (IEC 529 / EN 60529)
Protection class	I
Weight/unit	1.3 kg
Connection type	Screw terminal 0.20 mm ² – 10.0 mm ² max. 0.62 Nm
Dimensions (w × h × d)	80.0 mm × 127.0 mm × 137.5 mm
PU (units)	1

up to +45 °C)

Technical data sheet

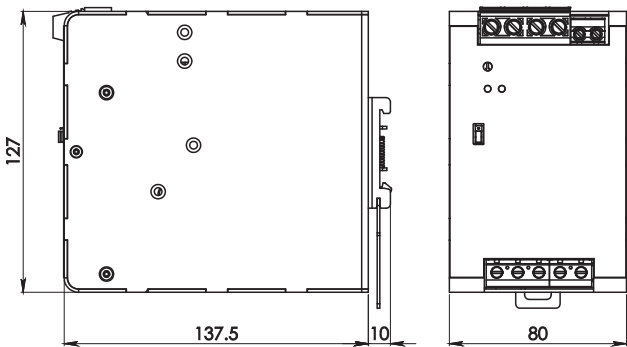
Power supply · Compact 3-phase, 960 W

Degree of pollution	2
Relative air humidity	5 – 95 % RH, non-condensing
Vibration resistance	5 – 17.8 Hz: ±1.6 mm, 17.8 – 500 Hz: 2 g 2 hours/axes X,Y,Z, IEC 60068-2-6
Shock resistance	30 g 6 ms, 20 g 11 ms, 3 shocks/direction, 18 shocks in total, IEC60068-2-27

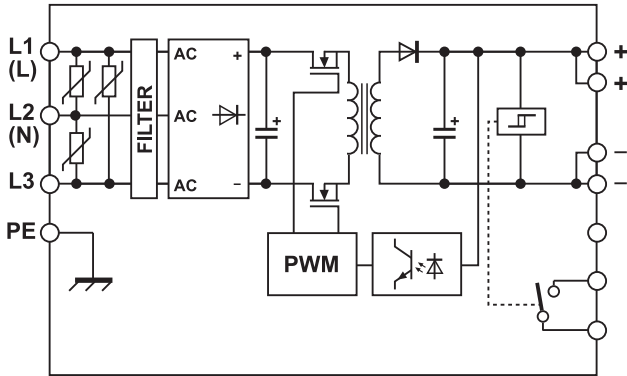
Certifications/Standards

Certifications	CE UKCA cULus (E249179)
Standards	UL 508 IEC/EN 61010-1 IEC/EN 61010-2-201 IEC/EN 60950 EN 55011 (CISPR11) Class A EN 55022 (CISPR22) Class A EN 61000-4-2 Level 3 EN 61000-4-3 Level 3 EN 61000-4-4 Level 3 EN 61000-4-5 Level 4 EN 61000-4-11 Level 2 IEC 60068-2-6 (Vibration sinusoidal), 5-17.8 Hz: ±1.6 mm, 17.8-500 Hz: 2 g 2 hours / axis (X,Y,Z) IEC 60068-2-27 (Shock), 30 g 6 ms, 20 g 11 ms, 3 bumps / direction, 18 bumps total

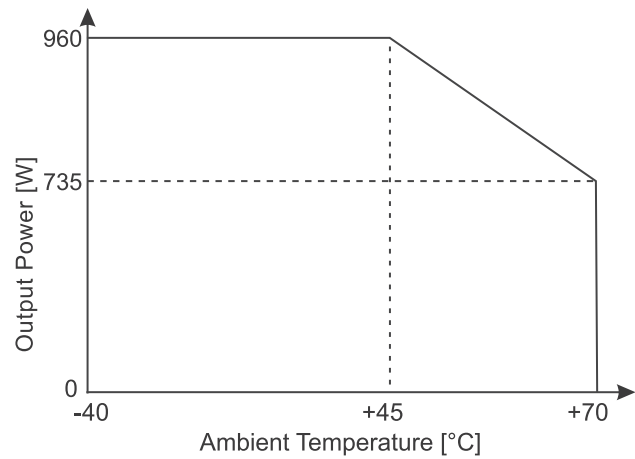
Dimensions



PIN assignment

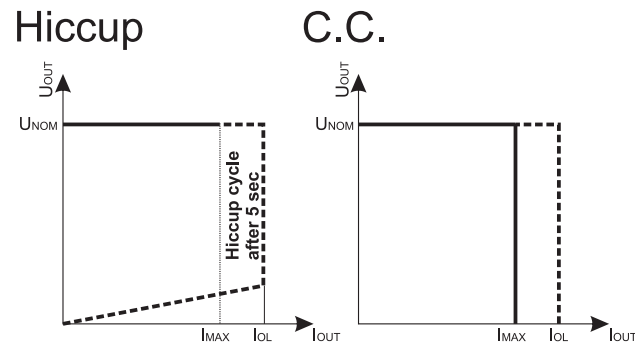


Derating

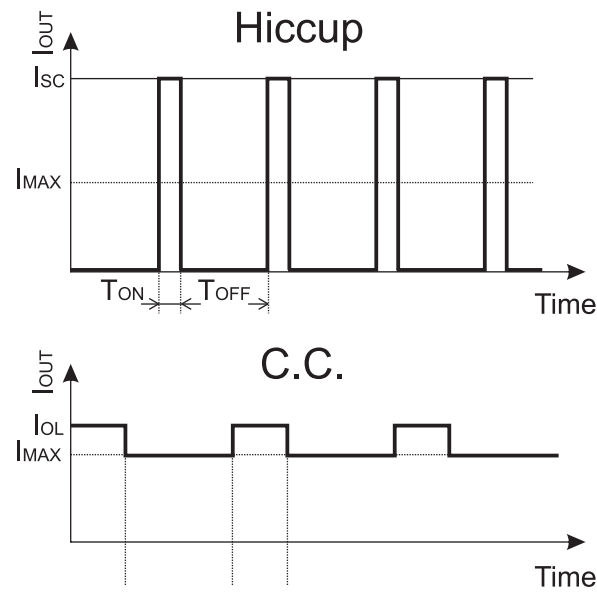


Short circuit characteristics

Limitation output characteristic



Short circuit conditions



Technical data sheet

Power supply · Compact 3-phase, 960 W

Primary switchmode power supply, PFC, 3-phase

Input: Wide range input AC 340 - 550 V

Output: DC 48 V, 20 A



Identification

Type	CPSB3-960-48
Part No.	722812

Product version

Datasheet version	00
-------------------	----

Input

Number of phases	3
Rated voltage U_N	3 × AC 400–500 V
Operation voltage range	AC 340–550 V / DC 520–725 V
Frequency range	47 Hz – 63 Hz
Rated current I_N	2.4 A @ AC 400 V / 2.1 A @ AC 500 V
Inrush current	≤50 A / 1.86 A ² s
External protection	Mini-circuit breaker: 3 × C 10 A / safety fuse: 3 × T 10 A (required)
Power factor correction P.F.C.	>0.7

Output

Output voltage/current	DC 48 V/20 A
Rated voltage U_N	DC 48 V
Rated current I_N	20 A
Max. output current (limited current)	22 A
Max. output current (HICCUP, 5 sec)	30 A
Power Dissipation	<78 W
Setting range $U_{out\ min.}/U_{out\ max.}$	45-55 V
Load regulation	≤0.5 %

Technical data sheet

Power supply · Compact 3-phase, 960 W

Ripple and noise	<150 mV pp
Hold up time	>15 ms
Parallel / redundant mode	Max. 2 devices / via external decoupling diodes e.g. 722999
Efficiency	>92.5 %
Over voltage protection	≥DC 68 V
Rated over load protection	> 90°C, auto-reset
Short circuit	Adjustable: Hiccup, current limiting (C.C. Modus)

Status indication

Status indication DC ON LED green	≥43.2 V
Status indication DC LOW LED red	≤43.2 V

Monitoring

DC ON Control (Rdy)	N/O contact
Switching voltage	AC 300 V / DC 150 V
Switching current	AC/DC 1 A
Switching capacity	300 VA / 30 W
Isolation voltage	AC 500 V

General

Switching frequency	Approx. 70 - 110 kHz
Insulation voltage input / output	DC 4.2 kV
Insulation voltage input / ground	DC 2.2 kV
Insulation voltage output / ground	DC 750 V
Derating	>45 °C: -15 W/°C
Cooling	Air convection, forced cooling >50°C, 50 mm distance top/bottom
Housing material	Aluminum
Mounting	DIN rail mountable TS35 (EN 60715)
Installation position	Vertical
MTBF	>500000 h: SN29500 / >500000 h: MIL HDBK 217F
Degree of protection	IP20 (IEC 529 / EN 60529)
Protection class	I
Weight/unit	1.3 kg
Connection type	Screw terminal 0.20 mm ² – 6.0 mm ² max. 0.62 Nm
Dimensions (w × h × d)	80.0 mm × 127.0 mm × 137.5 mm
PU (units)	1

General ambient conditions

up to +45 °C)

Technical data sheet

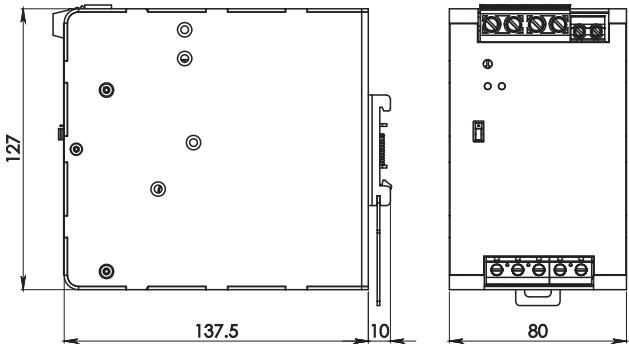
Power supply · Compact 3-phase, 960 W

Relative air humidity	5 – 95 % RH, non-condensing
Vibration resistance	5 – 17.8 Hz: ±1.6 mm, 17.8 – 500 Hz: 2 g 2 hours/axes X,Y,Z, IEC 60068-2-6
Shock resistance	30 g 6 ms, 20 g 11 ms, 3 shocks/direction, 18 shocks in total, IEC60068-2-27

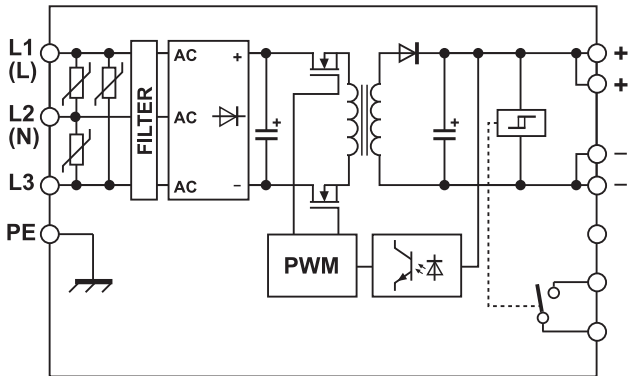
Certifications/Standards

Certifications	CE UKCA cULus (E249179)
Standards	UL 508 IEC/EN 61010-1 IEC/EN 61010-2-201 IEC/EN 60950 EN 55011 (CISPR11) Class A EN 55022 (CISPR22) Class A EN 61000-4-2 Level 3 EN 61000-4-3 Level 3 EN 61000-4-4 Level 4 EN 61000-4-11 Level 2 IEC 60068-2-6 (Vibration sinuosoidal), 5-17.8 Hz: ±1.6 mm, 17.8-500 Hz: 2 g 2 hours / axis (X,Y,Z) IEC 60068-2-27 (Shock), 30 g 6 ms, 20 g 11 ms, 3 bumps / direction, 18 bumps total

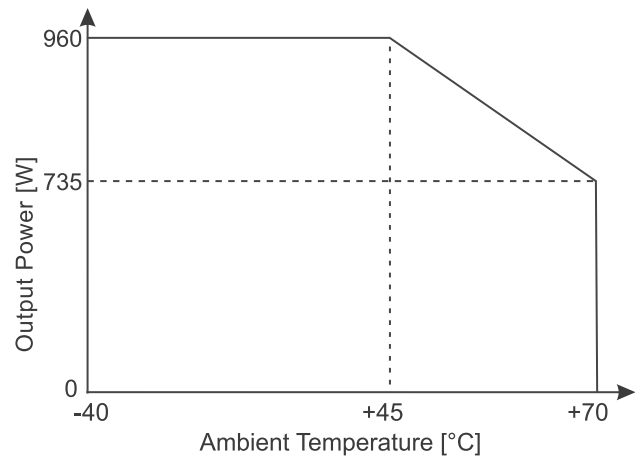
Dimensions



PIN assignment

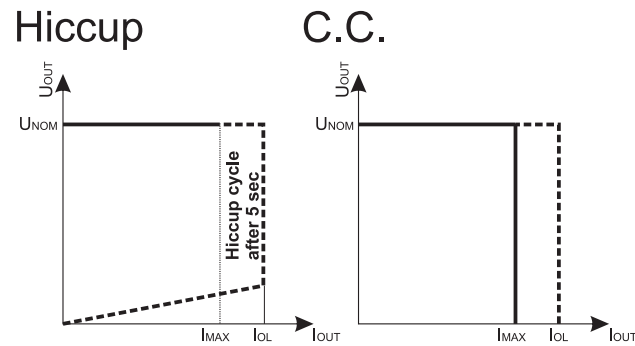


Derating

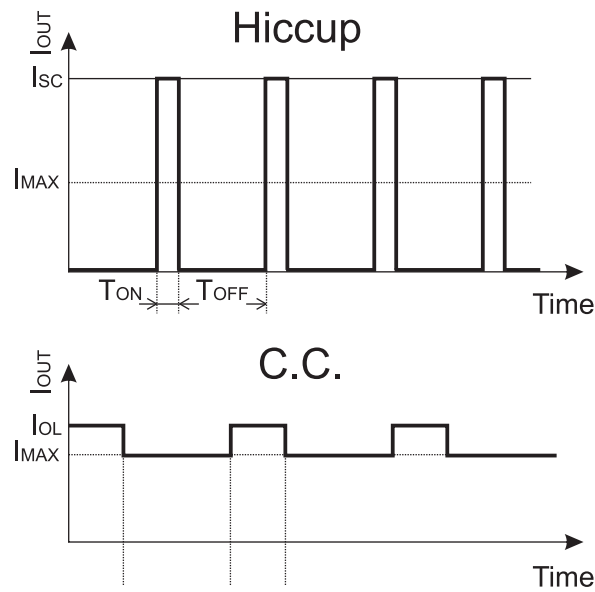


Short circuit characteristics

Limitation output characteristic



Short circuit conditions



Technical data sheet

Power supply · Compact 3-phase, 960 W

Primary switchmode power supply, PFC, 3-phase

Input: Wide range input AC 340 - 550 V

Output: DC 72 V, 13.3 A



Identification

Type	CPSB3-960-72
Part No.	722813

Product version

Datasheet version	00
-------------------	----

Input

Number of phases	3
Rated voltage U_N	AC 400–500 V
Operation voltage range	AC 340–550 V / DC 520–725 V
Frequency range	47 Hz – 63 Hz
Rated current I_N	2.4 A @ AC 400 V / 2.1 A @ AC 500 V
Inrush current	≤50 A / 1.86 A ² s
External protection	Mini-circuit breaker: 3 × C 10 A / safety fuse: 3 × T 10 A (required)
Power factor correction P.F.C.	>0.7

Output

Output voltage/current	DC 72 V/13.3 A
Rated voltage U_N	DC 72 V
Rated current I_N	13.3 A
Max. output current (limited current)	15 A
Max. output current (HICCUP, 5 sec)	20 A
Power Dissipation	<73 W
Setting range $U_{out\ min.}/U_{out\ max.}$	72–85 V
Load regulation	≤0.5 %

Technical data sheet

Power supply · Compact 3-phase, 960 W

Ripple and noise	<150 mV pp
Hold up time	>15 ms
Parallel / redundant mode	Max. 2 devices / via external decoupling diodes e.g. 722999
Efficiency	>93 %
Over voltage protection	<100 V
Rated over load protection	> 90°C, auto-reset
Short circuit	Adjustable: Hiccup, current limiting (C.C. Modus)

Status indication

Status indication DC ON LED green	≥64.8 V
Status indication DC LOW LED red	≤64.8 V

Monitoring

DC ON Control (Rdy)	N/O contact
Switching voltage	AC 300 V / DC 150 V
Switching current	AC/DC 1 A
Switching capacity	300 VA / 30 W
Isolation voltage	AC 500 V

General

Switching frequency	Approx. 70 - 110 kHz
Insulation voltage input / output	DC 4.2 kV
Insulation voltage input / ground	DC 2.2 kV
Insulation voltage output / ground	DC 750 V
Derating	>45 °C: -15 W/°C
Cooling	Air convection, forced cooling >50°C, 50 mm distance top/bottom
Housing material	Aluminum
Mounting	DIN rail mountable TS35 (EN 60715)
Installation position	Vertical
MTBF	>500000 h: SN29500 / >500000 h: MIL HDBK 217F
Degree of protection	IP20 (IEC 529 / EN 60529)
Protection class	I
Weight/unit	1.3 kg
Connection type	Screw terminal 0.20 mm ² – 6.0 mm ² max. 0.62 Nm
Dimensions (w × h × d)	80.0 mm × 127.0 mm × 137.5 mm
PU (units)	1

General ambient conditions

up to +45 °C)

Technical data sheet

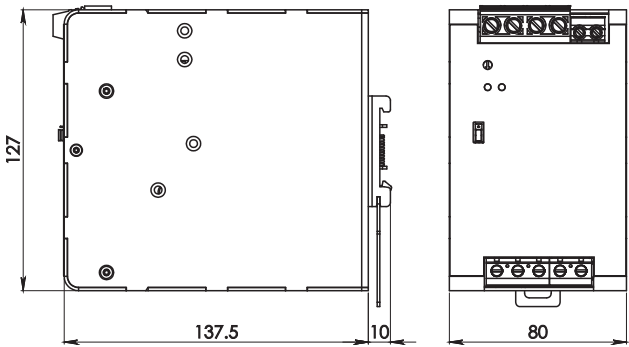
Power supply · Compact 3-phase, 960 W

Relative air humidity	5 – 95 % RH, non-condensing
Vibration resistance	5 – 17.8 Hz: ±1.6 mm, 17.8 – 500 Hz: 2 g 2 hours/axes X,Y,Z, IEC 60068-2-6
Shock resistance	30 g 6 ms, 20 g 11 ms, 3 shocks/direction, 18 shocks in total, IEC60068-2-27

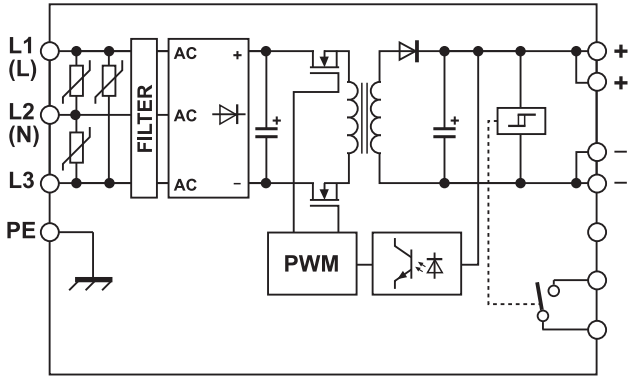
Certifications/Standards

Certifications	CE UKCA cULus (E249179)
Standards	UL 508 IEC/EN 61010-1 IEC/EN 61010-2-201 IEC/EN 60950 EN 55011 (CISPR11) Class A EN 55022 (CISPR22) Class A EN 61000-4-2 Level 3 EN 61000-4-3 Level 3 EN 61000-4-4 Level 3 EN 61000-4-4 Level 4 EN 61000-4-11 Level 2 IEC 60068-2-6 (Vibration sinuosoidal), 5-17.8 Hz: ±1.6 mm, 17.8-500 Hz: 2 g 2 hours / axis (X,Y,Z) IEC 60068-2-27 (Shock), 30 g 6 ms, 20 g 11 ms, 3 bumps / direction, 18 bumps total

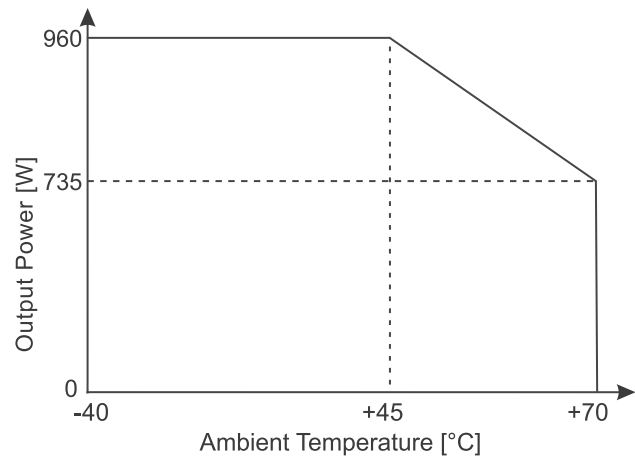
Dimensions



PIN assignment

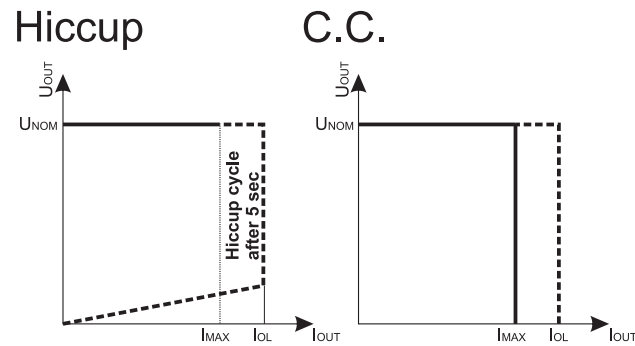


Derating

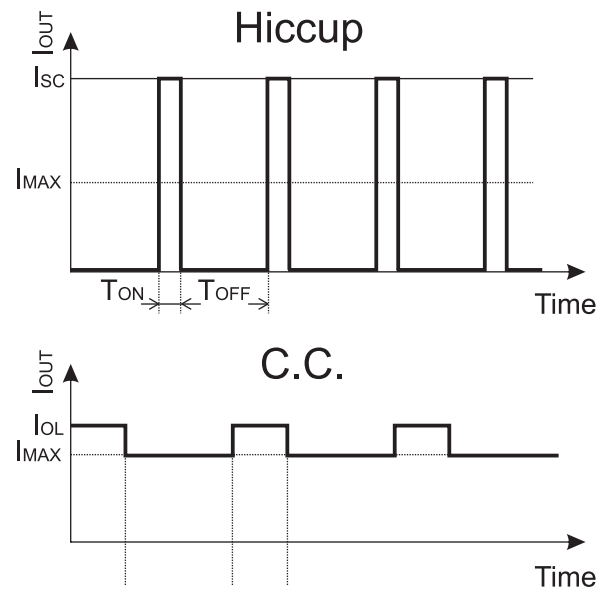


Short circuit characteristics

Limitation output characteristic



Short circuit conditions



Technical data sheet

Power supply · Compact 3-phase, 2400 W

Primary switchmode power supply, PFC, 3-phase

Input: Wide range input AC 340 - 550 V

Output: DC 24 V, 100 A



Identification

Type	CPSB3-2400-24
Part No.	722814

Product version

Datasheet version	01
-------------------	----

Input

Input protection	Surge protection according to VDE 0160, over/undervoltage (auto restart) Phase monitoring (reduced output power): PFC error
Number of phases	3
Rated voltage U_N	3 × AC 400–500 V
Operation voltage range	AC 340–550 V / DC 520–750 V
Frequency range	47 Hz – 63 Hz
Rated current I_N	4.5 A @ AC 400 V / 3.5 A @ AC 500 V
Inrush current	<12.5 A (active inrush current limitation)
External protection	Mini-circuit breaker: 3 × C 10 A / safety fuse: 3 × T 10 A (required)
Power factor correction P.F.C.	>0.92

Output

Output voltage/current	DC 24 V/100 A
Rated voltage U_N	DC 24 V
Rated current I_N	100 A
Max. output current (limited current)	>100 A
Max. output current (HICCUP, 5 sec)	150 A
Power Dissipation	<200 W

Technical data sheet

Power supply · Compact 3-phase, 2400 W

Setting range $U_{out\ min.}/U_{out\ max.}$	DC 11.9–29 V
Load regulation	<1 %
Rise time	< 4.5 s
Ripple and noise	<200 mV pp
Hold up time	>10 ms @ AC 400 V / >10 ms @ AC 500 V
Parallel / redundant mode	Max. 4 devices
Efficiency	>92 %
Over voltage protection	>DC 33 V
Short circuit	Adjustable: Hiccup, current limiting (C.C. Modus)

Status indication

Status indication DC ON LED green	Alphanumeric display
Status indication DC LOW LED red	Alphanumeric display

Monitoring

DC ON Control (Rdy)	Relay, N/O contact active, adjustable, DCok: 90–110 % Uset, ACok: acc. input voltage range, overload Overtemperature range, charging complete
Switching capacity	AC/DC 30 V, 1 A, 30 W
Isolation voltage	AC 500 V
Output current	Galvanically isolated: 0–10 V and 4–20 mA

General

Insulation voltage input / output	DC 4.2 kV
Insulation voltage input / ground	DC 2.2 kV
Insulation voltage output / ground	DC 750 V
Derating	>50 °C: -60 W/°C Automatic power derating (1200 W) for 2 phases operation
Cooling	Air convection, forced cooling >45°C, 80 mm distance top/bottom, 10 mm side
Housing material	Aluminum
Mounting	DIN rail mountable TS35 (EN 60715)
Installation position	Vertical
MTBF	>500000 h: SN29500 / >700000 h: MIL-HDBK-217F
Degree of protection	IP20 (IEC 529 / EN 60529)
Protection class	I
Weight/unit	2.8 kg
Connection type	Screw terminal Input 0.20 mm ² – 4.0 mm ²

× 101.0 mm

Technical data sheet

Power supply · Compact 3-phase, 2400 W

General ambient conditions

Operation temperature range	-40 °C ... +70 °C (UL approved up to +50 °C)
Storage temperature range	-40 °C ... +80 °C
Over voltage category	III
Degree of pollution	2
Relative air humidity	5 – 95 % RH, non-condensing
Vibration resistance	5 – 17.8 Hz: ±1.6 mm, 17.8 – 500 Hz: 2 g 2 hours/axes X,Y,Z, IEC 60068-2-6
Shock resistance	30 g 6 ms, 20 g 11 ms, 3 shocks/direction, 18 shocks in total, IEC60068-2-27

Interface

User Interface	LCD display 16 × 2 character, multi language, 4 keys (command and navigation)
Auxiliary voltage output	galvanically isolated DC 12 V, 100 mA
NTC	Temperature-controlled battery charging (mandatory)

Certifications/Standards

Certifications	CE UKCA cULus (E249179)
Standards	UL 508 IEC/EN 61010-1 IEC/EN 61010-2-201 IEC/EN 60950 EN 55011 (CISPR11) Class A EN 55022 (CISPR22) Class A EN 61000-3-2 Class A EN 61000-4-2 Level 3 EN 61000-4-3 Level 3 EN 61000-4-4 Level 4 EN 61000-4-5 Level 4 EN 61000-4-11 Level 2 IEC 60068-2-6 (Vibration sinusoidal), 5-17.8 Hz: ±1.6 mm, 17.8-500 Hz: 2 g 2 hours / axis (X,Y,Z) IEC 60068-2-27 (Shock), 30 g 6 ms, 20 g 11 ms, 3 bumps / direction, 18 bumps total

Technical data sheet

Power supply · Compact 3-phase, 2400 W

Notes and Comments

Range of functions

The new power compact series provides a number of additional adjustment options via function keys. The selected functions are shown on a display. In addition, the current output voltage and current are displayed for normal operation.

Input protection

- Active Surge suppressor and inrush limiter (ASSIL) as protection against overvoltages according to VDE 0160
- PFC error monitoring
- Phase monitoring with automatic reduction of the output power
- Automatic start/restart system for over- and undervoltages

Output protection

- Adjustable current limiting between $0.1 I_N$ and I_N
- Hiccup autoreset based on current limiting or maximum output voltage (150%)

Status display and signal

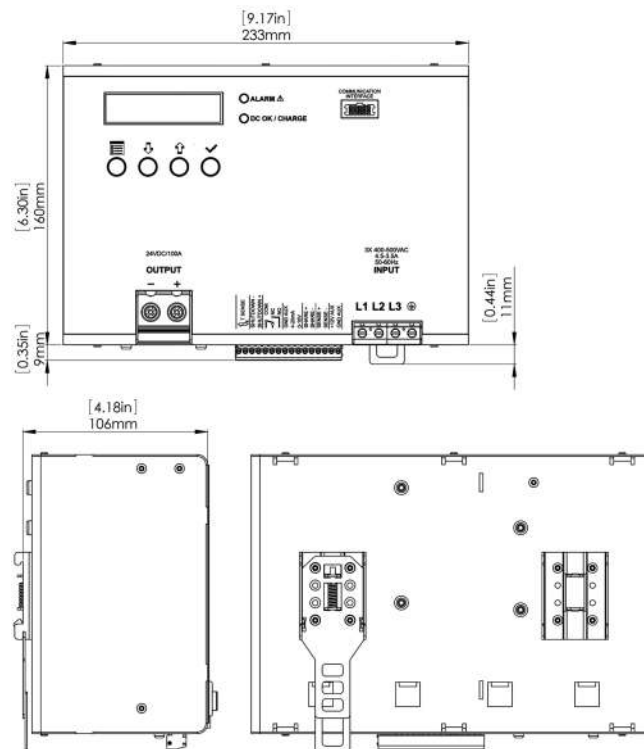
- In addition to an LED for “DC OK” and error displays, the devices have the following analog outputs 0–10 V and 4–20 mA as direct function of the load current

- Programmable relay contact with the functions
Output voltage/current, Overload, Overtemperature

Additional functions

- Temperature-compensated battery charging function
- Display and compensation of the voltage drop for long cables
- Remote On/Off of the output voltage
- DC 12 V auxiliary voltage
- Monitoring and control interface based on RS232 (optional)
- Integrierte O-Ring-Diode
- Load sharing in parallel operation
- Load current sharing

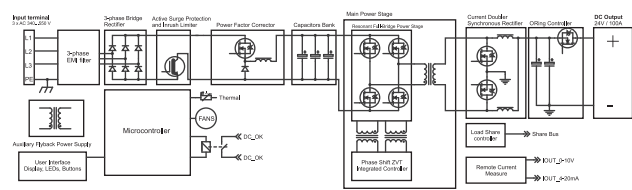
Dimensions



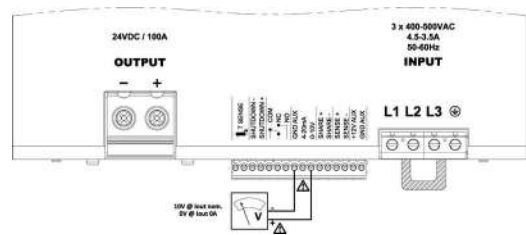
Technical data sheet

Power supply · Compact 3-phase, 2400 W

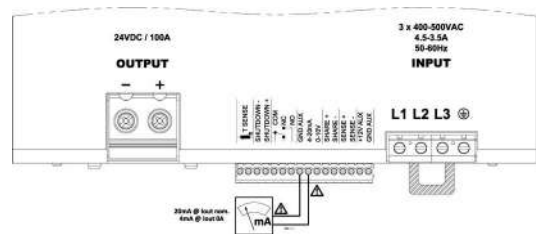
PIN assignment



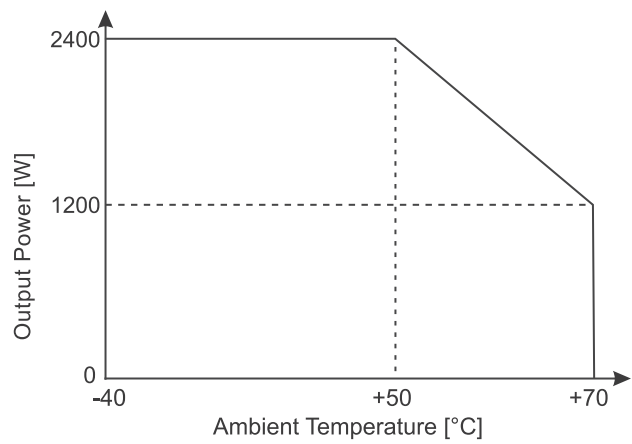
Output voltage in 0–10 V



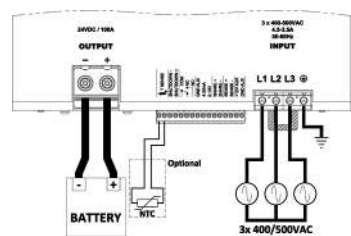
Output voltage in 4–20 mA



Derating



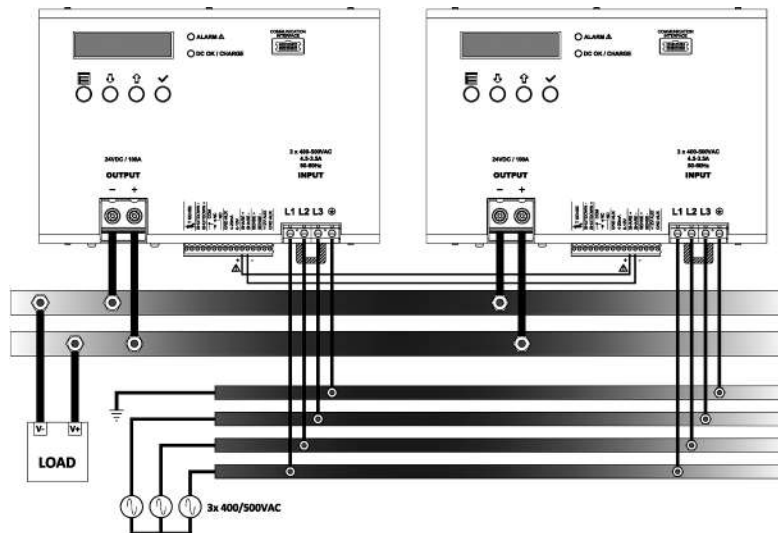
Charging operation



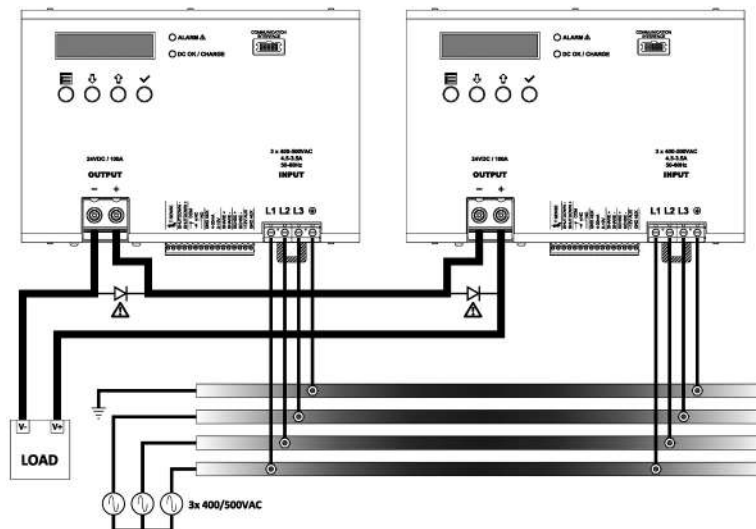
Technical data sheet

Power supply · Compact 3-phase, 2400 W

Parallel/redundant mode



Serial operation



Technical data sheet

Power supply · Compact 3-phase, 2400 W

Primary switchmode power supply, PFC, 3-phase

Input: Wide range input AC 340 - 550 V

Output: DC 48 V, 50 A



Identification

Type	CPSB3-2400-48
Part No.	722816

Product version

Datasheet version	01
-------------------	----

Input

Input protection	Surge protection according to VDE 0160, over/undervoltage (auto restart) Phase monitoring (reduced output power): PFC error
Number of phases	3
Rated voltage U_N	3 × AC 400–500 V
Operation voltage range	AC 340–550 V / DC 520–750 V
Frequency range	47 Hz – 63 Hz
Rated current I_N	4.5 A @ AC 400 V / 3.5 A @ AC 500 V
Inrush current	< 10 A (active inrush current limitation)
External protection	Mini-circuit breaker: 3 × C 10 A / safety fuse: 3 × T 10 A (required)
Power factor correction P.F.C.	>0.92

Output

Output voltage/current	DC 48 V/50 A
Rated voltage U_N	DC 48 V
Rated current I_N	50 A
Max. output current (limited current)	50 A
Max. output current (HICCUP, 5 sec)	75 A
Power Dissipation	<200 W

Technical data sheet

Power supply · Compact 3-phase, 2400 W

Setting range $U_{out\ min.}/U_{out\ max.}$	DC 23–56 V
Load regulation	<1 %
Rise time	< 4.5 s
Ripple and noise	<200 mV pp
Hold up time	>10 ms @ AC 400 V / >10 ms @ AC 500 V
Parallel / redundant mode	Max. 4 devices
Efficiency	>92 %
Over voltage protection	≥DC 68 V
Short circuit	Adjustable: Hiccup, current limiting (C.C. Modus)

Status indication

Status indication DC ON LED green	Alphanumeric display
Status indication DC LOW LED red	Alphanumeric display

Monitoring

DC ON Control (Rdy)	Relay, N/O contact active, adjustable, DCok: 90–110 % Uset, ACok: acc. input voltage range, overload Overtemperature range, charging complete
Switching capacity	AC/DC 30 V, 1 A, 30 W
Isolation voltage	AC 500 V
Output current	Galvanically isolated: 0–10 V and 4–20 mA

General

Insulation voltage input / output	DC 4.2 kV
Insulation voltage input / ground	DC 2.2 kV
Insulation voltage output / ground	DC 750 V
Derating	>50 °C: -60 W/°C Automatic power derating (1200 W) for 2 phases operation
Cooling	Air convection, forced cooling >45°C, 80 mm distance top/bottom, 10 mm side
Housing material	Aluminum
Mounting	DIN rail mountable TS35 (EN 60715)
Installation position	Vertical
MTBF	>500000 h: SN29500 / >700000 h: MIL-HDBK-217F
Degree of protection	IP20 (IEC 529 / EN 60529)
Protection class	I
Weight/unit	2.8 kg
Connection type	Screw terminal Input 0.20 mm ² – 4.0 mm ²

× 101.0 mm

Technical data sheet

Power supply · Compact 3-phase, 2400 W

General ambient conditions

Operation temperature range	-40 °C ... +70 °C (UL approved up to +50 °C)
Storage temperature range	-40 °C ... +80 °C
Over voltage category	III
Degree of pollution	2
Relative air humidity	5 – 95 % RH, non-condensing
Vibration resistance	5 – 17.8 Hz: ±1.6 mm, 17.8 – 500 Hz: 2 g 2 hours/axes X,Y,Z, IEC 60068-2-6
Shock resistance	30 g 6 ms, 20 g 11 ms, 3 shocks/direction, 18 shocks in total, IEC60068-2-27

Interface

User Interface	LCD display 16 × 2 character, multi language, 4 keys (command and navigation)
Auxiliary voltage output	galvanically isolated DC 12 V, 100 mA
NTC	Temperature-controlled battery charging (mandatory)

Certifications/Standards

Certifications	CE UKCA cULus (E249179)
Standards	UL 508 IEC/EN 61010-1 IEC/EN 61010-2-201 IEC/EN 60950 EN 55011 (CISPR11) Class A EN 55022 (CISPR22) Class A EN 61000-3-2 Class A EN 61000-4-2 Level 3 EN 61000-4-3 Level 3 EN 61000-4-4 Level 4 EN 61000-4-5 Level 4 EN 61000-4-11 Level 2 IEC 60068-2-6 (Vibration sinusoidal), 5-17.8 Hz: ±1.6 mm, 17.8-500 Hz: 2 g 2 hours / axis (X,Y,Z) IEC 60068-2-27 (Shock), 30 g 6 ms, 20 g 11 ms, 3 bumps / direction, 18 bumps total

Technical data sheet

Power supply · Compact 3-phase, 2400 W

Notes and Comments

Range of functions

The new power compact series provides a number of additional adjustment options via function keys. The selected functions are shown on a display. In addition, the current output voltage and current are displayed for normal operation.

Input protection

- Active Surge suppressor and inrush limiter (ASSIL) as protection against overvoltages according to VDE 0160
- PFC error monitoring
- Phase monitoring with automatic reduction of the output power
- Automatic start/restart system for over- and undervoltages

Output protection

- Adjustable current limiting between $0.1 I_N$ and I_N
- Hiccup autoreset based on current limiting or maximum output voltage (150%)

Status display and signal

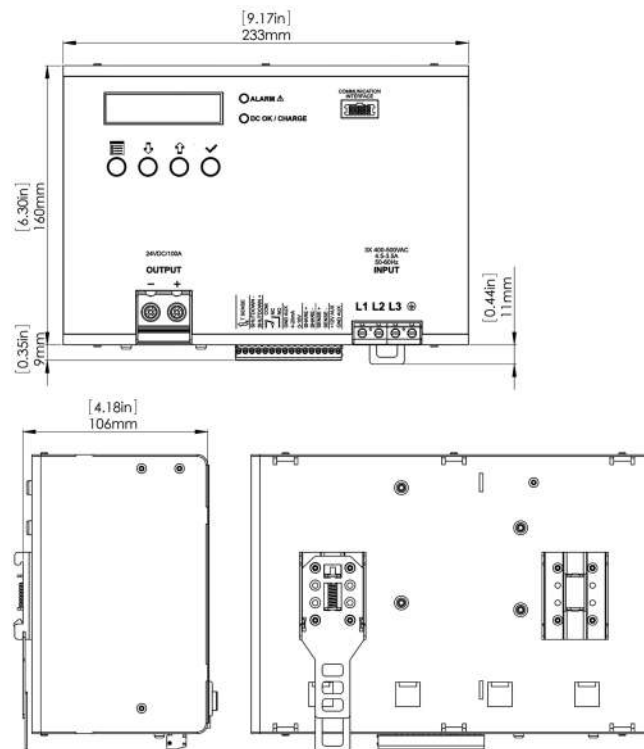
- In addition to an LED for “DC OK” and error displays, the devices have the following analog outputs 0–10 V and 4–20 mA as direct function of the load current

- Programmable relay contact with the functions
Output voltage/current, Overload, Overtemperature

Additional functions

- Temperature-compensated battery charging function
- Display and compensation of the voltage drop for long cables
- Remote On/Off of the output voltage
- DC 12 V auxiliary voltage
- Monitoring and control interface based on RS232 (optional)
- Integrierte O-Ring-Diode
- Load sharing in parallel operation
- Load current sharing

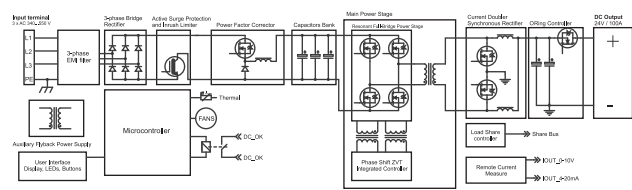
Dimensions



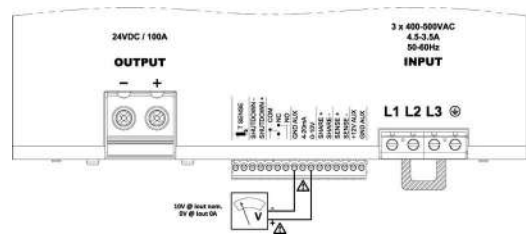
Technical data sheet

Power supply · Compact 3-phase, 2400 W

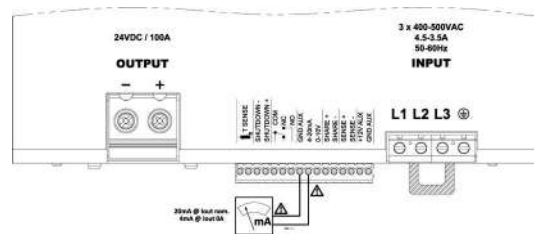
PIN assignment



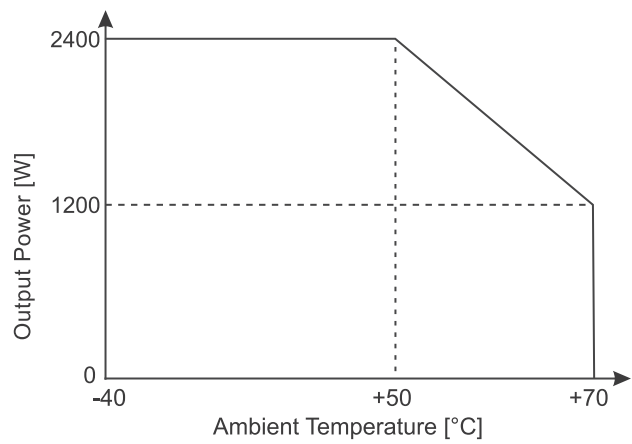
Output voltage in 0–10 V



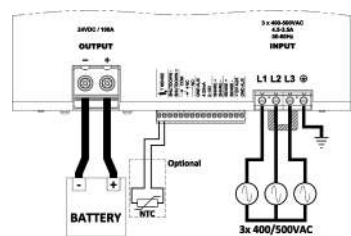
Output voltage in 4–20 mA



Derating



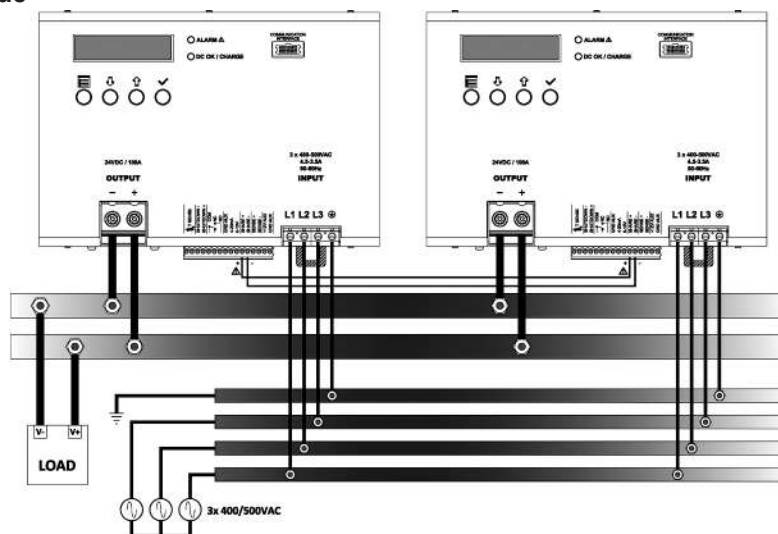
Charging operation



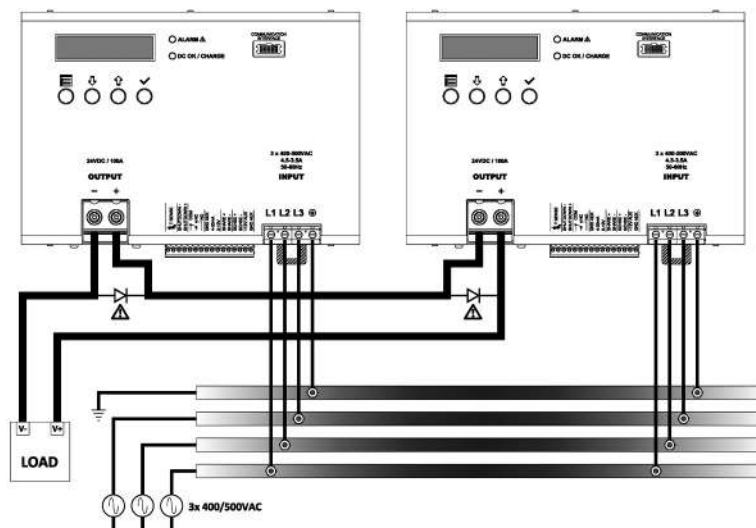
Technical data sheet

Power supply · Compact 3-phase, 2400 W

Parallel/redundant mode



Serial operation



Technical data sheet

Power supply · Compact 3-phase, 2400 W

Primary switchmode power supply, PFC, 3-phase

Input: Wide range input AC 340 - 550 V

Output: DC 72 V, 33 A



Identification

Type	CPSB3-2400-72
Part No.	722817

Product version

Datasheet version	01
-------------------	----

Input

Input protection	Surge protection according to VDE 0160, over/undervoltage (auto restart) Phase monitoring (reduced output power): PFC error
Number of phases	3
Rated voltage U_N	3 × AC 400–500 V
Operation voltage range	AC 340–550 V / DC 520–750 V
Frequency range	47 Hz – 63 Hz
Rated current I_N	4.5 A @ AC 400 V / 3.5 A @ AC 500 V
Inrush current	< 10 A (active inrush current limitation)
External protection	Mini-circuit breaker: 3 × C 10 A / safety fuse: 3 × T 10 A (required)
Power factor correction P.F.C.	>0.92

Output

Output voltage/current	DC 72 V/30 A
Rated voltage U_N	DC 72 V
Rated current I_N	33 A
Max. output current (limited current)	33 A
Max. output current (HICCUP, 5 sec)	50 A
Power Dissipation	<180 W

Technical data sheet

Power supply · Compact 3-phase, 2400 W

Setting range $U_{out\ min.}/U_{out\ max.}$	DC 50–87 V
Load regulation	<1 %
Rise time	< 4.5 s
Ripple and noise	<200 mV pp
Hold up time	>10 ms @ AC 400 V / >10 ms @ AC 500 V
Parallel / redundant mode	Max. 4 devices
Efficiency	>93 %
Over voltage protection	>DC 100 V
Short circuit	Adjustable: Hiccup, current limiting (C.C. Modus)

Status indication

Status indication DC ON LED green	Alphanumeric display
Status indication DC LOW LED red	Alphanumeric display

Monitoring

DC ON Control (Rdy)	Relay, N/O contact active, adjustable, DCok: 90–110 % Uset, ACok: acc. input voltage range, overload Overtemperature range, charging complete
Switching capacity	AC/DC 30 V, 1 A, 30 W
Isolation voltage	AC 500 V
Output current	Galvanically isolated: 0–10 V and 4–20 mA

General

Insulation voltage input / output	DC 4.2 kV
Insulation voltage input / ground	DC 2.2 kV
Insulation voltage output / ground	DC 750 V
Derating	>50 °C: -60 W/°C Automatic power derating (1200 W) for 2 phases operation
Cooling	Air convection, forced cooling >45°C, 80 mm distance top/bottom, 10 mm side
Housing material	Aluminum
Mounting	DIN rail mountable TS35 (EN 60715)
Installation position	Vertical
MTBF	>500000 h: SN29500 / >150000 h: MIL-HDBK-217F
Degree of protection	IP20 (IEC 529 / EN 60529)
Protection class	I
Weight/unit	2.8 kg
Connection type	Screw terminal Input 0.20 mm ² – 4.0 mm ²

× 101.0 mm

Technical data sheet

Power supply · Compact 3-phase, 2400 W

General ambient conditions

Operation temperature range	-40 °C ... +70 °C (UL approved up to +50 °C)
Storage temperature range	-40 °C ... +80 °C
Over voltage category	III
Degree of pollution	2
Relative air humidity	5 – 95 % RH, non-condensing
Vibration resistance	5 – 17.8 Hz: ±1.6 mm, 17.8 – 500 Hz: 2 g 2 hours/axes X,Y,Z, IEC 60068-2-6
Shock resistance	30 g 6 ms, 20 g 11 ms, 3 shocks/direction, 18 shocks in total, IEC60068-2-27

Interface

User Interface	LCD display 16 × 2 character, multi language, 4 keys (command and navigation)
Auxiliary voltage output	galvanically isolated DC 12 V, 100 mA
NTC	Temperature-controlled battery charging (mandatory)

Certifications/Standards

Certifications	CE UKCA cULus (E249179)
Standards	UL 508 IEC/EN 61010-1 IEC/EN 61010-2-201 IEC/EN 60950 EN 55011 (CISPR11) Class A EN 55022 (CISPR22) Class A EN 61000-3-2 Class A EN 61000-4-2 Level 3 EN 61000-4-3 Level 3 EN 61000-4-4 Level 4 EN 61000-4-5 Level 4 EN 61000-4-11 Level 2 IEC 60068-2-6 (Vibration sinusoidal), 5-17.8 Hz: ±1.6 mm, 17.8-500 Hz: 2 g 2 hours / axis (X,Y,Z) IEC 60068-2-27 (Shock), 30 g 6 ms, 20 g 11 ms, 3 bumps / direction, 18 bumps total

Technical data sheet

Power supply · Compact 3-phase, 2400 W

Notes and Comments

Range of functions

The new power compact series provides a number of additional adjustment options via function keys. The selected functions are shown on a display. In addition, the current output voltage and current are displayed for normal operation.

Input protection

- Active Surge suppressor and inrush limiter (ASSIL) as protection against overvoltages according to VDE 0160
- PFC error monitoring
- Phase monitoring with automatic reduction of the output power
- Automatic start/restart system for over- and undervoltages

Output protection

- Adjustable current limiting between $0.1 I_N$ and I_N
- Hiccup autoreset based on current limiting or maximum output voltage (150%)

Status display and signal

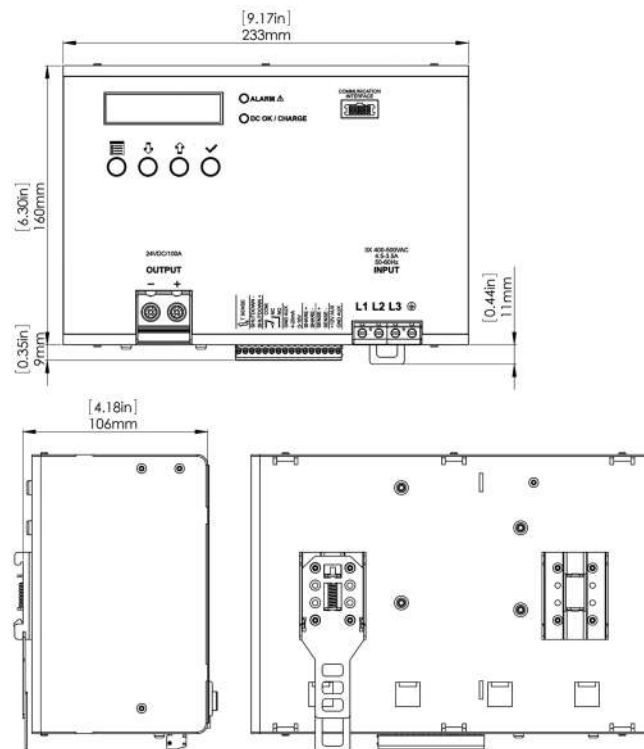
- In addition to an LED for “DC OK” and error displays, the devices have the following analog outputs 0–10 V and 4–20 mA as direct function of the load current

- Programmable relay contact with the functions
Output voltage/current, Overload, Overtemperature

Additional functions

- Temperature-compensated battery charging function
- Display and compensation of the voltage drop for long cables
- Remote On/Off of the output voltage
- DC 12 V auxiliary voltage
- Monitoring and control interface based on RS232 (optional)
- Integrierte O-Ring-Diode
- Load sharing in parallel operation
- Load current sharing

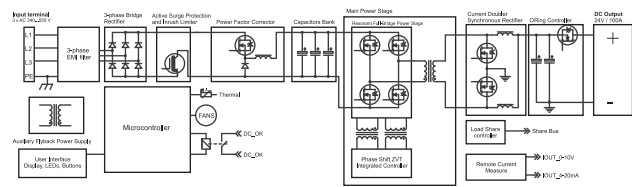
Dimensions



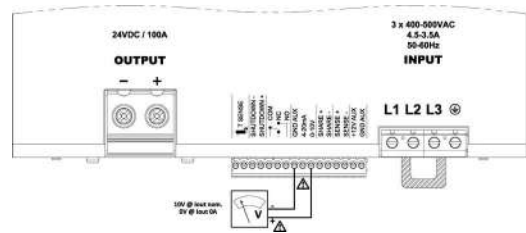
Technical data sheet

Power supply · Compact 3-phase, 2400 W

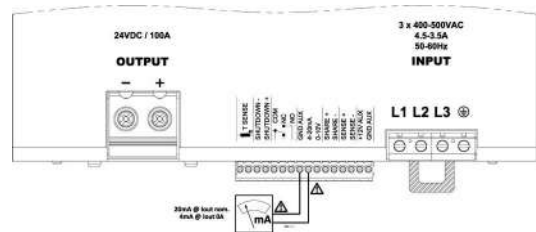
PIN assignment



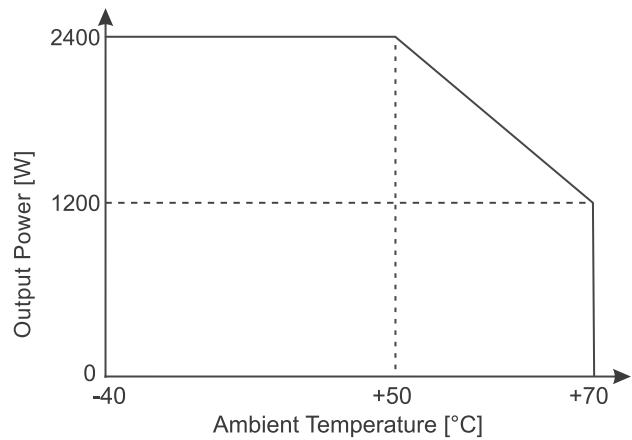
Output voltage in 0–10 V



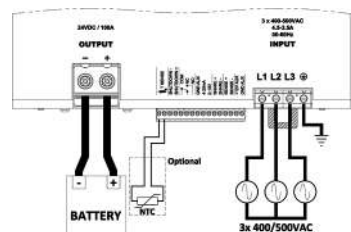
Output voltage in 4–20 mA



Derating



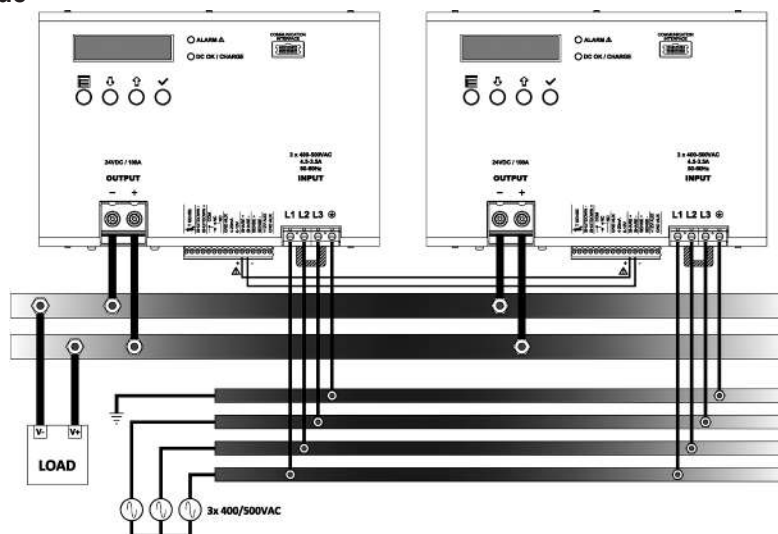
Charging operation



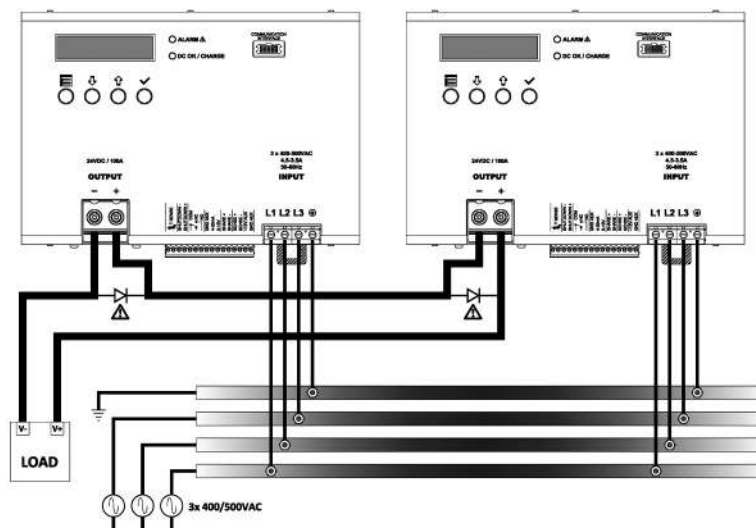
Technical data sheet

Power supply · Compact 3-phase, 2400 W

Parallel/redundant mode



Serial operation



Technical data sheet

Power supply · Compact, 3-phase, 120 W

Power supply unit, primary switched 3-phase

Input: wide range input AC 350–575 V

Output: DC 24 V, 5 A



Identification

Type	CPSB3-120-24
Part No.	722818

Product version

Datasheet version	04
-------------------	----

Description

Description	Parallel operation with active load balancing, Push-in technology, status output, remote input On/Off (Inhibit)
-------------	---

Input

Number of phases	3
Rated voltage U_N	3 × AC 400–500 V
Operation voltage range	max. 3 × AC 350–575 V
Frequency range	47 Hz – 63 Hz
Rated current I_N	0.35 A @ AC 400 V / 0.3 A @ AC 500 V
Inrush current	30 A @ AC 400 V / 39 A @ AC 500 V
External protection	3 × B 6 A
Power factor correction P.F.C.	> 0.5

Output

Output voltage/current	DC 24 V/5 A
Rated voltage U_N	DC 24 V
Rated current I_N	5 A

Technical data sheet

Power supply · Compact, 3-phase, 120 W

Max. output current (limited current)	7,5 A
Max. output current (HICCUP, 2 sec)	6 A
Power Dissipation	<11.5 W, < 2.1 W stand-by
Setting range $U_{out\ min.}/U_{out\ max.}$	DC 22.5–29 V
Load regulation	Max. 0.4 % AC 350 ... 550 V Max. 2.9 % AC 350 ... 550 V, parallel mode
Ripple and noise	<30 mV pp
Hold up time	>23 ms @ AC 400 V / >43 ms @ AC 500 V
Parallel / redundant mode	Max. 3 devices / via external decoupling diodes e.g. 722999
Efficiency	Max. 91.3 % @ AC 400 V / max. 91.2 % @ AC 500 V
Over voltage protection	<32 V
Rated over load protection	> 80°C, autoreset
Short circuit	Current limit Hiccup

Status indication

Status indication DC OK LED green	ON: $U_{out} > 95\ \% U_{set}$ OFF: $U_{out} < 90\ \% U_{set}$
-----------------------------------	---

Monitoring

DC ON Control (DC OK)	N/O contact Open: $U_{out} < 90\ \% U_{set}$ Closed: $U_{out} > 95\ \% U_{set}$
Switching voltage	AC 300 V / DC 150 V
Switching current	AC/DC 1 A
Switching capacity	300 VA / 30 W
Isolation voltage	AC 1.39 kV
Remote input (inhibit) ON/OFF	ON threshold typ. 6 V, OFF threshold typ. 4 V, Restart delay max. 5 s

General

Insulation voltage input / output	AC 3.51 kV
Insulation voltage input / ground	AC 2.21 kV
Insulation voltage output / ground	AC 1.39 kV
Derating	0.8 W/°C
Cooling	Air convection, 15 mm distance right/left, 40 mm top, 30 mm bottom
Housing material	Aluminum
Mounting	DIN rail mountable TS35 (EN 60715)
Installation position	Vertical
MTBF	min. 5.7 Mio. h, Service lifetime: >184 000 h @ AC 400 V / >162 000 h @ AC 500 V
Degree of protection	IP20 (IEC 529 / EN 60529)

Technical data sheet

Power supply · Compact, 3-phase, 120 W

Connection type	Push-In 0.20 mm ² – 6.0 mm ² Max. 0.62 Nm Input: 0,2 – 10 mm ² Output/Signalisation 0.2 – 2.5 mm ² Wiring table
Strip length	6.0 - 7.5 mm / 0.24 - 0.30 in
Screwdriver	3,0 × 0,5 mm
Dimensions (w × h × d)	55.0 mm × 129.0 mm × 133.0 mm

General ambient conditions

Operation temperature range	-25 °C ... +70 °C (Derating > 55 °C)
Storage temperature range	-40 °C ... +85 °C
Over voltage category	III (IEC 61010-1)
Degree of pollution	2 (IEC 60664-1, IEC 62477-1)
Relative air humidity	5 – 95 % RH, non-condensing
Vibration resistance	2 g / 10 - 500 Hz, 1 hour/direction X,Y,Z non-operating, mounted on DIN-Rail (IEC 60068-2-6)
Shock resistance	30 g / 11 ms ± 5 ms, 3 bumps/direction, 9 bumps total non-operating, mounted on DIN-Rail (IEC 60068-2-27)

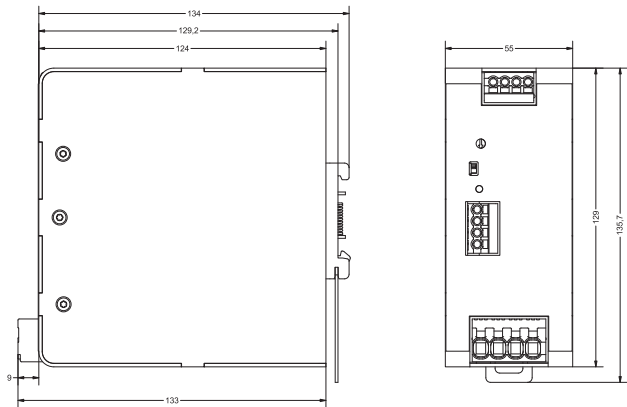
Certifications/Standards

Certifications	CE UKCA cULus (E249179)
Standards	IEC/EN 61010-1 IEC/EN 61010-2-201 IEC EN 62368-1 (Ed.2) IEC/EN 60950 UL 61010-1 UL 61010-2-201 EN 55011 (CISPR11) Class A EN 61000-4-2 Level 3 (Air), Level 2 (Contact) EN 61000-4-3 Level 3 (80–1000 MHz), Level 2 (1.4 – 6 GHz) EN 61000-4-4 Level 3 EN 61000-4-5 Level 3 EN 61000-4-6 Level 3 EN 61000-4-8 Level 4 EN 61000-4-11 Level 2

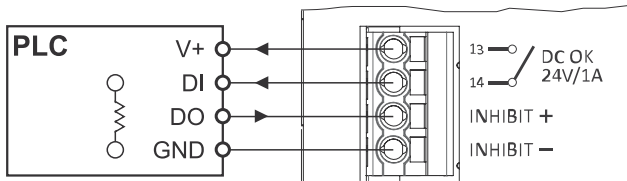
Technical data sheet

Power supply · Compact, 3-phase, 120 W

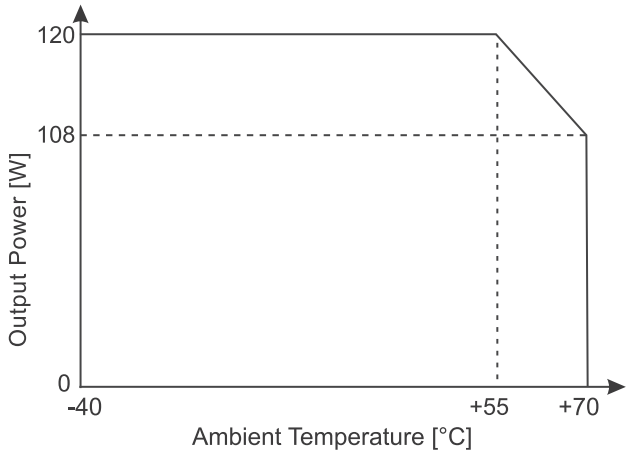
Dimensions



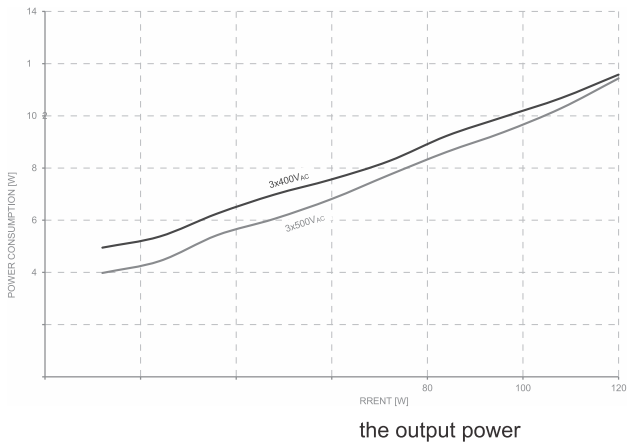
PIN assignment



Derating



Load limit curve



Mounting diagram

	Input	Output	Signaling
	Push-in	Push-in	Push-in
	SL 0.6x3.5mm (SL 1/32 x 9/64in)	SL 0.5x3.0mm (SL 1/64 x 1/8in)	SL 0.5x3.0mm (SL 1/64 x 1/8in)
	15mm (19/32in)	9-10mm (23/64 - 25/64in)	9-10mm (23/64 - 25/64in)
	0.2-10.0mm² (24-8AWG)	0.2-2.5mm² (24-14AWG)	0.2-2.5mm² (24-14AWG)
	0.2-6.0mm² (24-10AWG)	0.2-2.5mm² (24-14AWG)	0.2-2.5mm² (24-14AWG)
	0.25-4.0mm² (24-12AWG)	0.2-1.5mm² (24-16AWG)	0.2-1.5mm² (24-16AWG)
	0.25-6.0mm² (24-10AWG)	0.2-2.5mm² (24-14AWG)	0.2-2.5mm² (24-14AWG)

 In compliance to IEC/EN/UL 62368-1 (Ed.2) ferrules are required if flexible wires are used. In compliance with IEC/EN/UL 61010-1, 61010-2-201 appropriate copper wires must be used that withstand operating temperatures of at least 75°C (167°F) in ambients NOT exceeding 40°C (104°F), and 90°C (194°F) in ambients exceeding 40°C (104°F).

Signal connection

Signaling & Control 1/2

DC OK		
Type	Relay contact	
Characteristic	N/O	
Closing	U _{out} > 95% U _{set}	duration min. 100ms
Opening	U _{out} < 90% U _{set}	duration min. 100ms
Resistive load	max. 1A	24V _{DC}
Trigger hysteresis	typ. 1.2V	

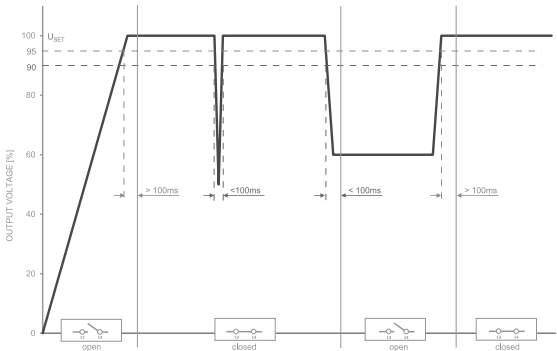
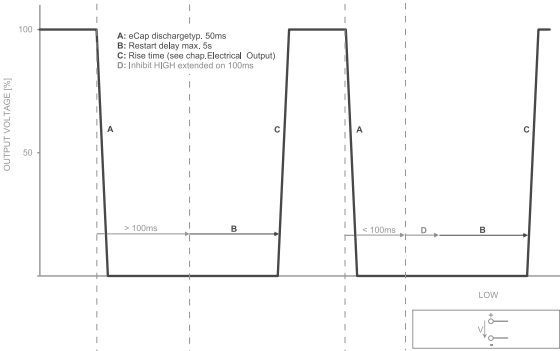


Fig.: DC-OK relay characteristic in dependence of output voltage changes

Signal connection

Signaling & Control 2/2

Remote ON/OFF		
Type	Electrical contact	
Characteristic	Inhibit	
ON threshold	typ. 6V	
OFF threshold	typ. 4V	
Restart delay	max. 5s	
Open circuit voltage	max. 30V	OFF mode
Current	max. 10mA	ON mode
Reference potential	DC-	
Parallel connection	yes	
Active discharging	no	OFF mode



bit relay status.

Technical data sheet

Power supply · Compact, 3-phase, 240 W

Power supply unit, primary switched 3-phase

Input: wide range input AC 350–575 V

Output: DC 24 V, 10 A



Identification

Type	CPSB3-240-24
Part No.	722820

Product version

Datasheet version	03
-------------------	----

Description

Description	Parallel operation with active load balancing, Push-in technology, status output, remote input On/Off (Inhibit)
-------------	---

Input

Number of phases	3
Rated voltage U_N	3 × AC 400–500 V
Operation voltage range	max. 3 × AC 350–575 V
Frequency range	47 Hz – 63 Hz
Rated current I_N	0.59 A @ AC 400 V / 0.50 A @ AC 500 V
Inrush current	36 A @ AC 400 V / 40 A @ AC 500 V
External protection	3 × B 6 A
Power factor correction P.F.C.	>0.6

Output

Output voltage/current	DC 24 V/10 A
Rated voltage U_N	DC 24 V
Rated current I_N	10 A

Technical data sheet

Power supply · Compact, 3-phase, 240 W

Max. output current (limited current)	15 A
Max. output current (HICCUP, 2 sec)	12 A
Power Dissipation	<18 W, <2.0 W stand-by
Setting range $U_{out\ min.}/U_{out\ max.}$	DC 22.5–29 V
Load regulation	Max. 0.6 % AC 350 ... 550 V Max. 3.1 % AC 350 ... 550 V, parallel mode
Ripple and noise	<40 mV pp
Hold up time	>22 ms @ AC 400 V / 44 ms @ AC 500 V
Parallel / redundant mode	Max. 3 devices / via external decoupling diodes e.g. 722999
Efficiency	Max. 93.1 % @ AC 400 V / max. 93.2 % @ AC 500 V
Over voltage protection	<32 V
Rated over load protection	> 80°C, autoreset
Short circuit	Current limit Hiccup

Status indication

Status indication DC OK LED green	ON: $U_{out} > 95\ \% U_{set}$ OFF: $U_{out} < 90\ \% U_{set}$
-----------------------------------	---

Monitoring

DC ON Control (DC OK)	N/O contact Open: $U_{out} < 90\ \% U_{set}$ Closed: $U_{out} > 95\ \% U_{set}$
Switching voltage	AC 300 V / DC 150 V
Switching current	AC/DC 1 A
Switching capacity	300 VA / 30 W
Isolation voltage	AC 1.39 kV
Remote input (inhibit) ON/OFF	ON threshold typ. 6 V, OFF threshold typ. 4 V, Restart delay max. 5 s

General

Insulation voltage input / output	AC 3.51 kV
Insulation voltage input / ground	AC 2.21 kV
Insulation voltage output / ground	AC 1.39 kV
Derating	2.4 W/°C
Cooling	Air convection, 15 mm distance right/left, 40 mm top, 30 mm bottom
Housing material	Aluminum
Mounting	DIN rail mountable TS35 (EN 60715)
Installation position	Vertical
MTBF	min. 5.7 Mio. h, Service lifetime: >184 000 h @ AC 400 V / >162 000 h @ AC 500 V
Degree of protection	IP20 (IEC 529 / EN 60529)

Technical data sheet

Power supply · Compact, 3-phase, 240 W

Connection type	Push-In 0.20 mm² – 6.0 mm² Max. 0.62 Nm Input: 0,2 – 10 mm² Output/Signalisation 0.2 – 2.5 mm²
Dimensions (w × h × d)	55.0 mm × 129.0 mm × 133.0 mm

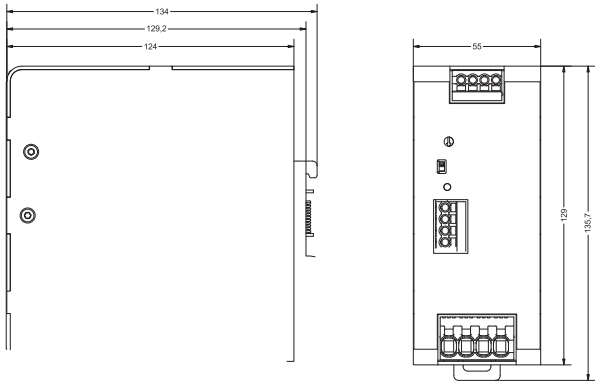
General ambient conditions

Operation temperature range	-25 °C ... +70 °C (Derating > 55 °C)
Storage temperature range	-40 °C ... +85 °C
Over voltage category	III (IEC 61010-1)
Degree of pollution	2 (IEC 60664-1, IEC 62477-1)
Relative air humidity	20 – 95 % RH, not condensing
Vibration resistance	2 g / 10 - 500 Hz, 1 hour/direction X,Y,Z non-operating, mounted on DIN-Rail (IEC 60068-2-6)
Shock resistance	30 g / 11 ms ± 5 ms, 3 bumps/direction, 9 bumps total non-operating, mounted on DIN-Rail (IEC 60068-2-27)

Certifications/Standards

Certifications	CE UKCA cULus (E249179)
Standards	IEC/EN 61010-1 IEC/EN 61010-2-201 IEC EN 62368-1 (Ed.2) IEC/EN 60950 UL 61010-1 UL 61010-2-201 EN 55011 (CISPR11) Class A EN 61000-4-2 Level 3 (Air), Level 2 (Contact) EN 61000-4-3 Level 3 (80–1000 MHz), Level 2 (1.4 – 6 GHz) EN 61000-4-4 Level 3 EN 61000-4-5 Level 3 EN 61000-4-6 Level 3 EN 61000-4-8 Level 4 EN 61000-4-11 Level 2

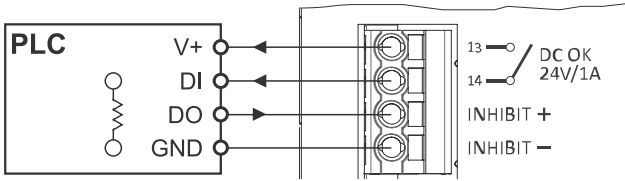
Dimensions



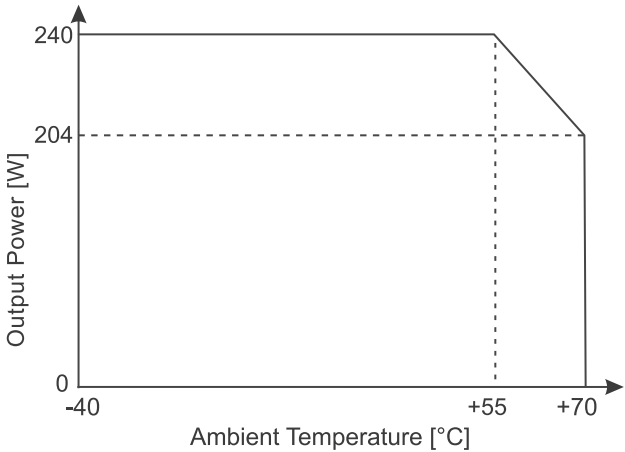
Technical data sheet

Power supply · Compact, 3-phase, 240 W

PIN assignment



Derating



Load limit curve



Power losses in dependence of the output power

Mounting diagram

Input		Output	Signaling
Push-in		Push-in	Push-in
    	SL 0.6x3.5mm (SL 1/32 x 9/64in)	SL 0.5x3.0mm (SL 1/64 x 1/8in)	SL 0.5x3.0mm (SL 1/64 x 1/8in)
	15mm (19/32in)	9-10mm (23/64 - 25/64in)	9-10mm (23/64 - 25/64in)
	0.2-10.0mm ² (24-8AWG)	0.2-2.5mm ² (24-14AWG)	0.2-2.5mm ² (24-14AWG)
	0.2-6.0mm ² (24-10AWG)	0.2-2.5mm ² (24-14AWG)	0.2-2.5mm ² (24-14AWG)
	0.25-4.0mm ² (24-12AWG)	0.2-1.5mm ² (24-16AWG)	0.2-1.5mm ² (24-16AWG)
	0.25-6.0mm ² (24-10AWG)	0.2-2.5mm ² (24-14AWG)	0.2-2.5mm ² (24-14AWG)

 In compliance to IEC/EN/UL 62368-1 (Ed.2) ferrules are required if flexible wires are used. In compliance with IEC/EN/UL 61010-1, 61010-2-201 appropriate copper wires must be used that withstand operating temperatures of at least 75°C (167°F) in ambients NOT exceeding 40°C (104°F), and 90°C (194°F) in ambients exceeding

Signal connection

Signaling & Control 1/2

DC OK		
Type	Relay contact	
Characteristic	N/O	
Closing	$U_{out} > 95\% U_{set}$	duration min. 100ms
Opening	$U_{out} < 90\% U_{set}$	duration min. 100ms
Resistive load	max. 1A	24V _{dc}
Trigger hysteresis	typ. 1.2V	

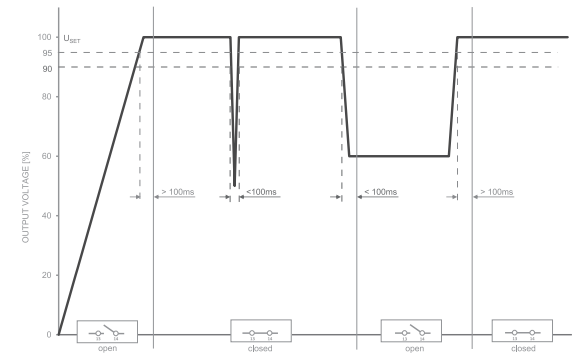


Fig.: DC-OK relay characteristic in dependence of output voltage changes

Signal connection

Signaling & Control 2/2

Remote ON/OFF		
Type	Electrical contact	
Characteristic	Inhibit	
ON threshold	typ. 6V	
OFF threshold	typ. 4V	
Restart delay	max. 5s	
Open circuit voltage	max. 30V	OFF mode
Current	max. 10mA	ON mode
Reference potential	DC-	
Parallel connection	yes	
Active discharging	no	OFF mode

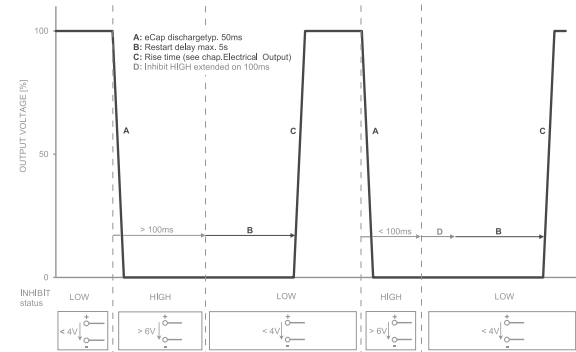


Fig.: Control of the output voltage in dependence of the inhibit relay status.

Technical data sheet

Power supply · Compact Universal, 480 W

Primary switched power supply, PFC, 1/2/3-phase

Input: wide-range input AC 187–550 V, DC 250–725 V

Output: DC 48 V, 10 A



Identification

Type	CPSB-123-480-48
Part No.	722821

Product version

Datasheet version	01
-------------------	----

Input

Number of phases	3
Rated voltage U_N	One-, two- and three-phase AC 200-500 V
Operation voltage range	AC 187–550 V / DC 250–725 V (UL: DC 300–500 V)
Frequency range	47 Hz – 63 Hz
Rated current I_N	1-/2-phase: 2.9 A @ AC 200 V / 1.3 A @ AC 500 V, 3-phase: 1.8 A @ AC 200 V / 0.8 A @ AC 500 V
Inrush current	≤ 55 A / 2.16 A ² s
External protection	Mini-circuit breaker: C 6 A, or D 4 A (required)
Power factor correction P.F.C.	>0.9

Output

Output voltage/current	DC 48 V/10 A
Rated voltage U_N	DC 48 V
Rated current I_N	10 A
Max. output current	14 A, 5 s
Short-circuit current	25 A
Power Dissipation	<42 W
Setting range $U_{out\ min.}/U_{out\ max.}$	45-55 V

Technical data sheet

Power supply · Compact Universal, 480 W

Load regulation	<1 %
Ripple and noise	<100 mV pp
Hold up time	>50 ms
Parallel / redundant mode	Yes/via external decoupling diode
Efficiency	>92 %
Overtemperature protection	Yes
Over voltage protection	≥DC 68 V
Short circuit	Hiccup Mode

Status indication

Status indication DC ON LED green	≥43.2 V
Status indication DC LOW LED red	$I_{out} > 1.1 I_N$

Monitoring

DC ON Control (Rdy)	N/O contact
Switching voltage	AC/DC 30 V
Switching current	AC/DC 1 A
Switching capacity	30 VA / 30 W
Isolation voltage	AC 500 V

General

Insulation voltage input / output	DC 4.2 kV
Insulation voltage input / ground	DC 2.2 kV
Insulation voltage output / ground	DC 750 V
Derating	>45 °C: -10 W/°C
Cooling	Air convection, 50 mm distance top/bottom, 20 mm side
Housing material	Aluminum
Mounting	DIN rail mountable TS35 (EN 60715)
Installation position	Vertical
MTBF	>500000 h: SN29500 / >500000 h: MIL-HDBK-217F
Degree of protection	IP20 (IEC 529 / EN 60529)
Protection class	I
Weight/unit	1 kg
Connection type	Screw terminal 0.20 mm ² – 2.5 mm ² AWG 24 – AWG 14 Plug-in
Strip length	6.0 - 7.5 mm / 0.24 - 0.30 in
Screwdriver	3,0 × 0,5 mm
Tightening torque	0.5 – 0.6 Nm / 4.42 – 5.30 lbf in 125.0 mm

Technical data sheet

Power supply · Compact Universal, 480 W

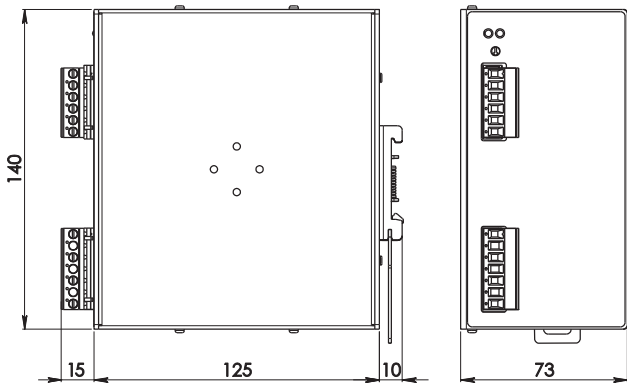
General ambient conditions

Operation temperature range	-40 °C ... +70 °C (UL approved up to +45 °C)
Storage temperature range	-40 °C ... +80 °C
Over voltage category	III
Degree of pollution	2
Relative air humidity	5 – 95 % RH, non-condensing
Vibration resistance	5 – 17.8 Hz: ±1.6 mm, 17.8 – 500 Hz: 2 g 2 hours/axes X,Y,Z, IEC 60068-2-6
Shock resistance	30 g 6 ms, 20 g 11 ms, 3 shocks/direction, 18 shocks in total, IEC60068-2-27

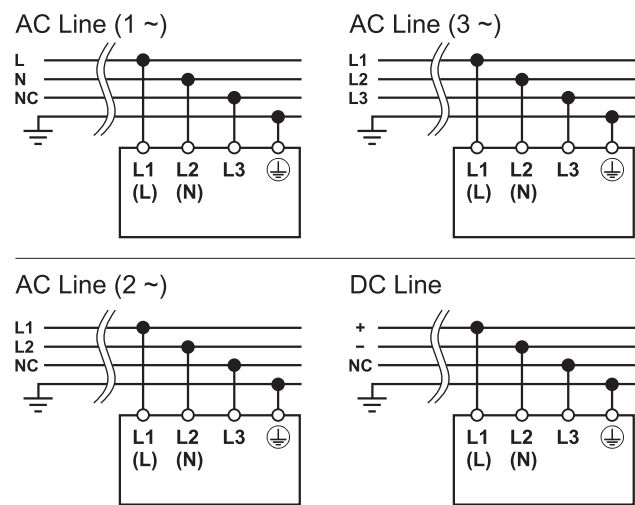
Certifications/Standards

Certifications	CE UKCA cULus (E249179)
Standards	UL 508 IEC/EN 61010-1 IEC/EN 61010-2-201 IEC/EN 60950 EN 55011 (CISPR11) Class A EN 61000-3-2 Class A EN 61000-4-2 Level 3 EN 61000-4-3 Level 3 EN 61000-4-4 Level 4 EN 61000-4-5 Level 3 EN 61000-4-11 Level 2 IEC 60068-2-27 (Shock), 30 g 6 ms, 20 g 11 ms, 3 bumps / direction, 18 bumps total IEC 60068-2-6 (Vibration sinusoidal), 5-17.8 Hz: ±1.6 mm, 17.8-500 Hz: 2 g 2 hours / axis (X,Y,Z)

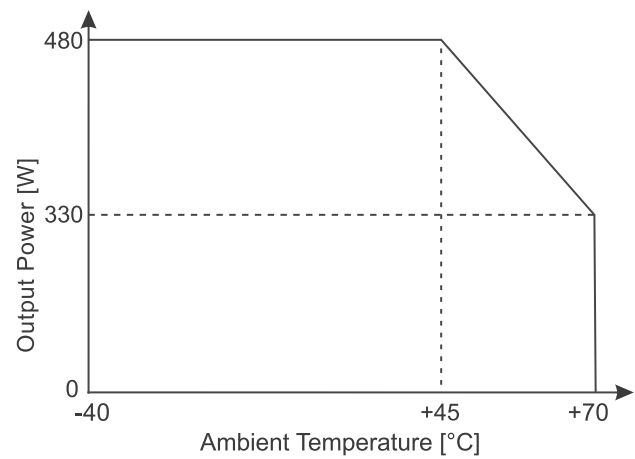
Dimensions



PIN assignment

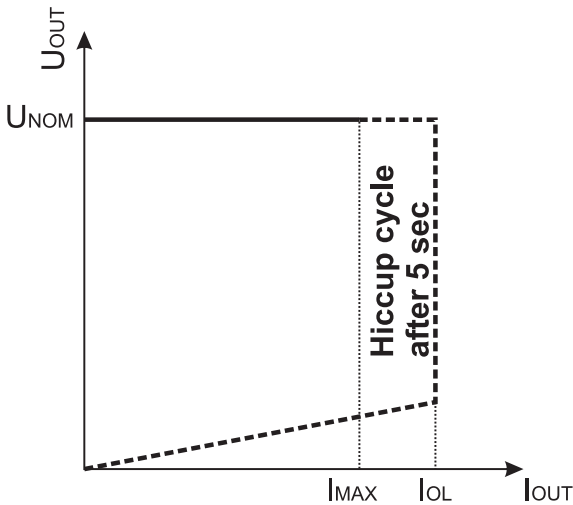


Derating

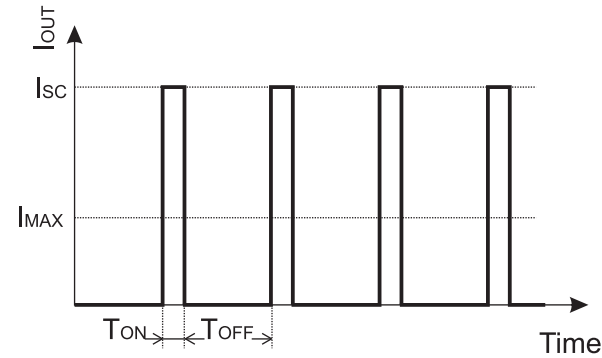


Short circuit characteristics

Hiccup limitation output characteristic



Short circuit conditions



Technical data sheet

Power supply · Compact, 3-phase, 240 W

Power supply unit, primary switched 3-phase

Input: wide range input AC 350–575 V

Output: DC 48 V, 5 A



Identification

Type	CPSB3-240-48
Part No.	722822

Product version

Datasheet version	00
-------------------	----

Description

Description	Parallel operation with active load balancing, Push-in technology, status output, remote input On/Off (Inhibit)
-------------	---

Input

Number of phases	3
Rated voltage U_N	3 × AC 400–500 V
Operation voltage range	max. 3 × AC 350–575 V
Frequency range	47 Hz – 63 Hz
Rated current I_N	0.58 A @ AC 400 V 0,49 A @ AC 500 V
Inrush current	25 A @ AC 400 V 30 A @ AC 500 V
External protection	3 × B 6 A
Power factor correction P.F.C.	>0.6

Output

Output voltage/current	DC 48 V/5 A
Rated voltage U_N	DC 48 V

Technical data sheet

Power supply · Compact, 3-phase, 240 W

Rated current I_N	5 A
Courant de sortie max. (boost1)	6 A / 300 s
Max. output current (boost2)	7.5 A / 60 s
Power Dissipation	<15.3 W, < 2.3 W stand-by
Setting range $U_{out\ min.}/U_{out\ max.}$	DC 45–56 V
Load regulation	max. 0.2 % AC 350 ... 550 V max. 2.8 % AC 350 ... 550 V, parallel mode
Ripple and noise	<20 mV pp
Hold up time	>20 ms @ AC 400 V >40 ms @ AC 500 V
Parallel / redundant mode	Max. 3 devices / via external decoupling diodes e.g. 722999
Efficiency	max. 93.8 % @ AC 400 V / max. 94 % @ AC 500 V
Over voltage protection	<59.2 V
Rated over load protection	> 80°C, autoreset
Short circuit	Current limit Hiccup

Status indication

Status indication DC OK LED green	ON: $U_{out} > 95\% U_{set}$ OFF: $U_{out} < 85\% U_{set}$
-----------------------------------	---

Monitoring

DC ON Control (DC OK)	N/O contact closed: $U_{out} > 95\% U_{set}$ open: $U_{out} < 85\% U_{set}$
Switching voltage	AC 300 V / DC 150 V
Switching current	AC/DC 1 A
Switching capacity	300 VA / 30 W
Isolation voltage	AC 1.39 kV
Remote input (inhibit) ON/OFF	ON threshold typ. 6 V, OFF threshold typ. 3 V, Restart delay max. 6 s

General

Insulation voltage input / output	AC 3.51 kV
Insulation voltage input / ground	AC 2.21 kV
Insulation voltage output / ground	AC 1.39 kV
Derating	>55 °C: -2.6 W/°C
Cooling	Air convection, 15 mm distance right/left, 40 mm top, 20 mm bottom
Housing material	Aluminum
Mounting	DIN rail mountable TS35 (EN 60715)
Installation position	Vertical
MTBF	min. 5,7 Mio. h, Service lifetime: >149 000 h @ AC 400 V / >164 000 h @ AC

Technical data sheet

Power supply · Compact, 3-phase, 240 W

Connection type	Push-In 0.20 mm² – 6.0 mm² Input: 0,2 – 10 mm² Output/Signalisation 0.2 – 2.5 mm² Wiring table
Dimensions (w × h × d)	55.0 mm × 129.0 mm × 138.2 mm

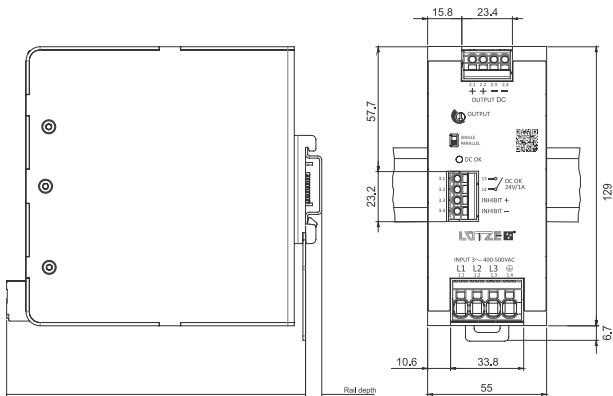
General ambient conditions

Operation temperature range	-25 °C ... +70 °C (Derating > 55 °C)
Storage temperature range	-40 °C ... +85 °C
Over voltage category	III (IEC 61010-1)
Degree of pollution	2 (IEC 60664-1, IEC 62477-1)
Relative air humidity	5 – 95 % RH, non-condensing
Vibration resistance	2 g / 10 - 500 Hz, 1 hour/direction X,Y,Z non-operating, mounted on DIN-Rail (IEC 60068-2-6)
Shock resistance	30 g / 11 ms ± 5 ms, 3 bumps/direction, 9 bumps total non-operating, mounted on DIN-Rail (IEC 60068-2-27)

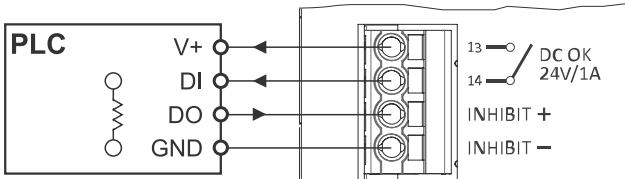
Certifications/Standards

Certifications	CE UKCA cULus (E249179)
Standards	IEC/EN 61010-1 IEC/EN 61010-2-201 IEC EN 62368-1 (Ed.2) IEC/EN 60950 UL 61010-1 UL 61010-2-201 EN 55011 (CISPR11) Class A EN 61000-4-2 Level 3 (Air), Level 2 (Contact) EN 61000-4-3 Level 3 (80–1000 MHz), Level 2 (1.4 – 6 GHz) EN 61000-4-4 Level 3 EN 61000-4-5 Level 3 EN 61000-4-6 Level 3 EN 61000-4-8 Level 4 EN 61000-4-11 Level 2

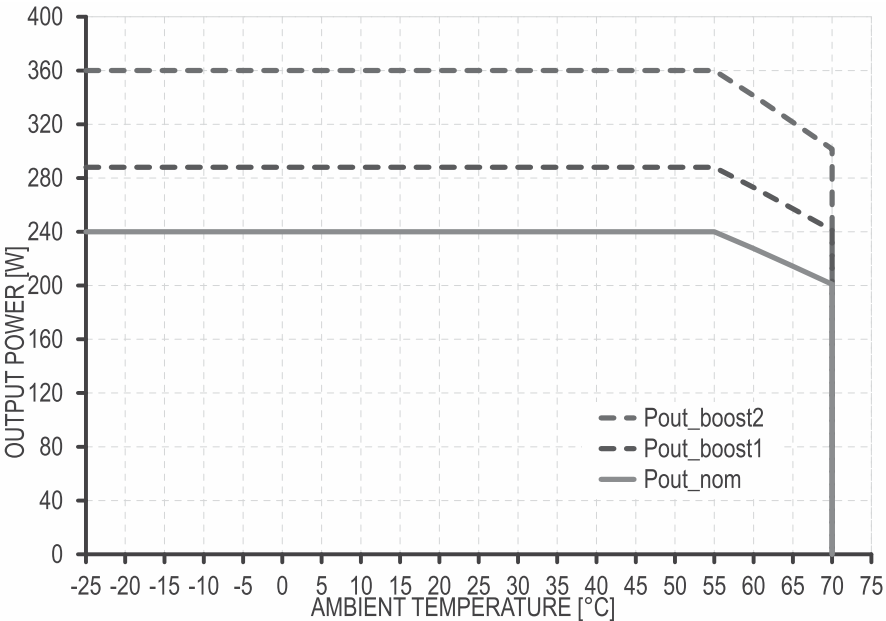
Dimensions



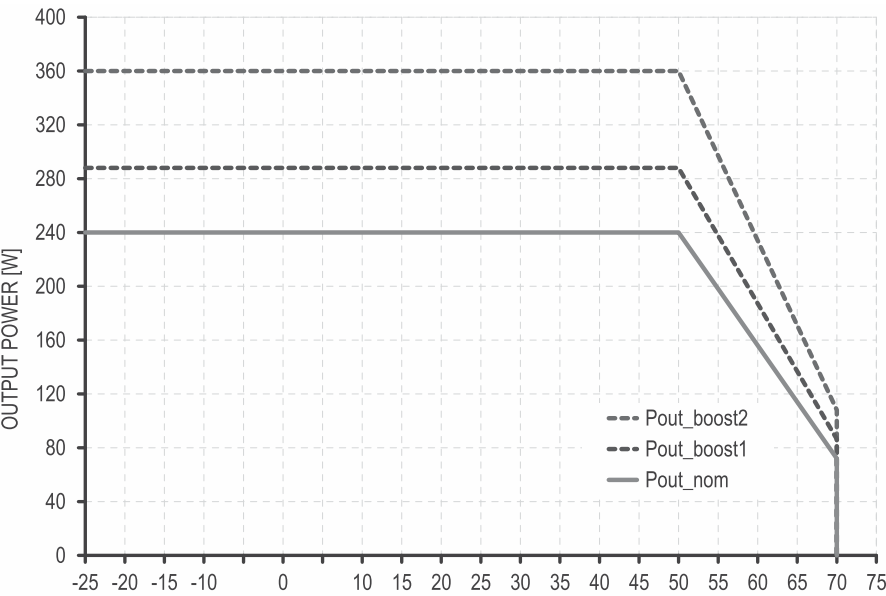
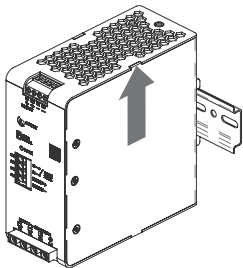
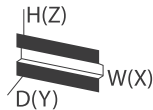
PIN assignment



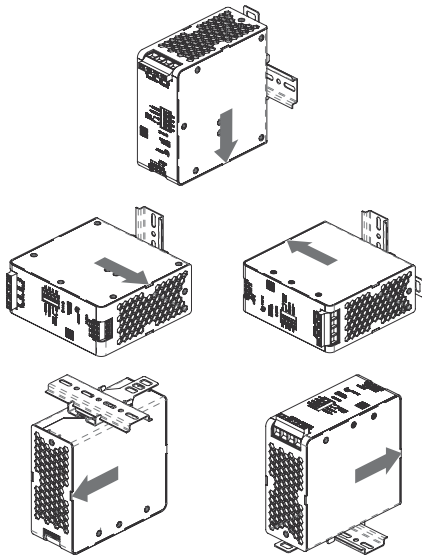
Derating



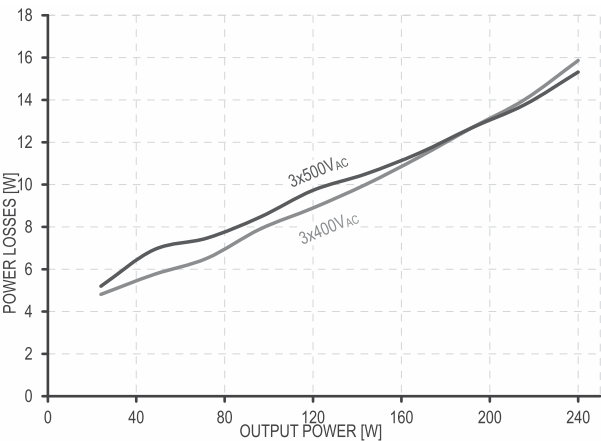
Available output power in dependence of the ambient temperature for normal mounting position



Available output power in dependence of the ambient temperature for rotated mounting positions



Load limit curve



Power losses in dependence of the output power

Signal connection

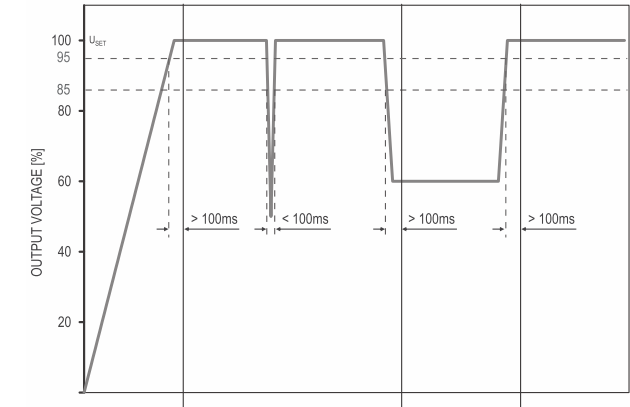
Signaling & Control

DC OK

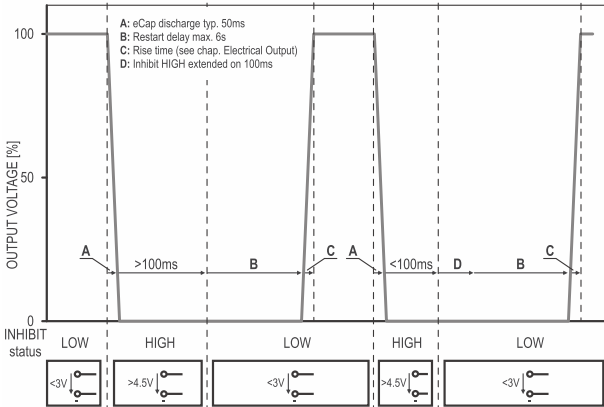
Type	Relay contact	
Characteristic	N/O	
Closing	$U_{out} > 95\% U_{set}$	duration min. 100ms
Opening	$U_{out} < 85\% U_{set}$	duration min. 100ms
Resistive load	<i>nom.</i> 1A	24V _{DC}
	<i>max.</i> 0.5A	60V _{DC}
Trigger hysteresis	<i>typ.</i> 0.6V	

Remote ON/OFF

Type	Electrical contact
Characteristic	Inhibit
ON threshold	<i>max.</i> 3V
OFF threshold	<i>min.</i> 4.5V
Restart delay	<i>max.</i> 6s
Input voltage	<i>max.</i> 30V
Input current	<i>max.</i> 10mA
Reference potential	Isolated
Parallel connection	yes
Active discharging	no



OFF mode



Control of the output voltage in dependence of the inhibit relay status.

Technical data sheet

Power supply · Compact, 3-phase, 480 W

Power supply unit, primary switched 3-phase

Input: wide range input AC 350–575 V

Output: DC 24 V, 20 A



Identification

Type	CPSB3-480-24
Part No.	722823

Product version

Datasheet version	00
-------------------	----

Description

Description	Parallel operation with active load balancing, Push-in technology, status output, remote input On/Off (Inhibit)
-------------	---

Input

Number of phases	3
Rated voltage U_N	3 × AC 400–500 V
Operation voltage range	max. 3 × AC 350–575 V
Frequency range	47 Hz – 63 Hz
Rated current I_N	0.80 A @ AC 400 V 0.65 A @ AC 500 V
Inrush current	17 A @ AC 400 V 22 A @ AC 500 V <200 μs
External protection	3 × B 6 A
Power factor correction P.F.C.	>0.92

Output

Output voltage/current	DC 24 V/20 A
------------------------	--------------

Technical data sheet

Power supply · Compact, 3-phase, 480 W

Rated voltage U_N	DC 24 V
Rated current I_N	20 A
Courant de sortie max. (boost1)	30 A / 5 s
Max. output current (boost2)	30 A / 7 s
Power Dissipation	<25.8 W, <3.2 W stand-by
Setting range $U_{out\ min.}/U_{out\ max.}$	DC 22.5–29 V
Load regulation	max. 0.4 % AC 350 ... 550 V max. 2.9 % AC 350 ... 550 V, parallel mode
Ripple and noise	<30 mV pp
Hold up time	min. 24 ms
Parallel / redundant mode	Max. 3 devices / via external decoupling diodes e.g. 722999
Efficiency	95.1 % @ AC 400 V / 94.9 % @ AC 500 V
Over voltage protection	<DC 32.9 V
Rated over load protection	> 80°C, autoreset
Short circuit	Current limit Hiccup

Status indication

Status indication DC OK LED green	ON: $U_{out} > 95\% U_{set}$ OFF: $U_{out} < 85\% U_{set}$
-----------------------------------	---

Monitoring

DC ON Control (DC OK)	N/O contact closed: $U_{out} > 95\% U_{set}$ open: $U_{out} < 85\% U_{set}$
Switching voltage	AC 300 V / DC 150 V
Switching current	AC/DC 1 A
Switching capacity	300 VA / 30 W
Isolation voltage	AC 1.39 kV
Remote input (inhibit) ON/OFF	ON threshold typ. 6 V, OFF threshold typ. 4 V, Restart delay max. 5 s

General

Insulation voltage input / output	AC 3.51 kV
Insulation voltage input / ground	AC 2.21 kV
Insulation voltage output / ground	AC 1.39 kV
Derating	>55 °C: -12 W/°C
Cooling	Air convection, 15 mm distance right/left, 40 mm top, 20 mm bottom
Housing material	Aluminum
Mounting	DIN rail mountable TS35 (EN 60715)
Installation position	Vertical
4.4 Mio. h @ AC 400 V / min. 0.86 Mio. h @ AC >148 000 h @ AC 400 V / >124 000 h @ AC 500 V	

Technical data sheet

Power supply · Compact, 3-phase, 480 W

Connection type	Push-In 0.20 mm ² – 6.0 mm ² max. 0.62 Nm Input: 0,2 – 10 mm ² Output/Signalisation 0.2 – 2.5 mm ²
Dimensions (w × h × d)	65.0 mm × 129.0 mm × 159.3 mm

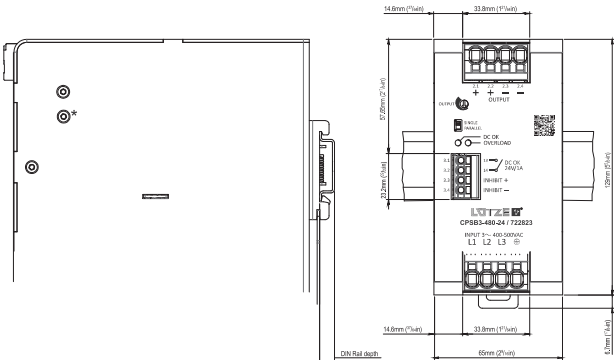
General ambient conditions

Operation temperature range	-25 °C ... +70 °C (Derating > 55 °C)
Storage temperature range	-40 °C ... +85 °C
Over voltage category	III (IEC 61010-1)
Degree of pollution	2 (IEC 60664-1, IEC 62477-1)
Relative air humidity	20 – 95 % RH, not condensing
Vibration resistance	2 g / 10 - 500 Hz, 1 hour/direction X,Y,Z non-operating, mounted on DIN-Rail (IEC 60068-2-6)
Shock resistance	30 g / 11 ms ± 5 ms, 3 bumps/direction, 9 bumps total non-operating, mounted on DIN-Rail (IEC 60068-2-27)

Certifications/Standards

Certifications	CE UKCA cULus (E249179)
Standards	IEC/EN 61010-1 IEC/EN 61010-2-201 IEC EN 62368-1 (Ed.2) IEC/EN 60950 UL 61010-1 UL 61010-2-201 EN 55011 (CISPR11) Class A EN 61000-4-2 Level 3 (Air), Level 2 (Contact) EN 61000-4-3 Level 3 (80–1000 MHz), Level 2 (1.4 – 6 GHz) EN 61000-4-4 Level 3 EN 61000-4-5 Level 3 EN 61000-4-6 Level 3 EN 61000-4-8 Level 4 EN 61000-4-11 Level 2

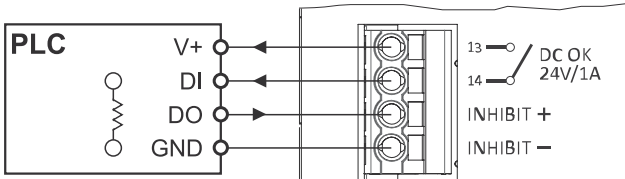
Dimensions



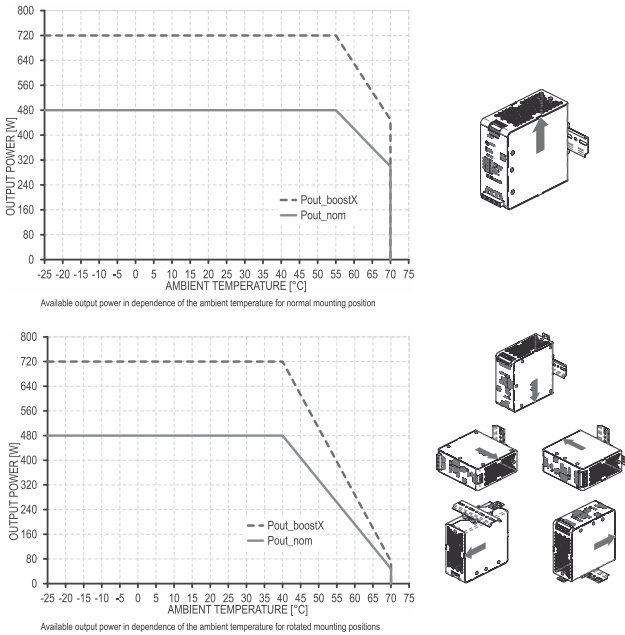
Technical data sheet

Power supply · Compact, 3-phase, 480 W

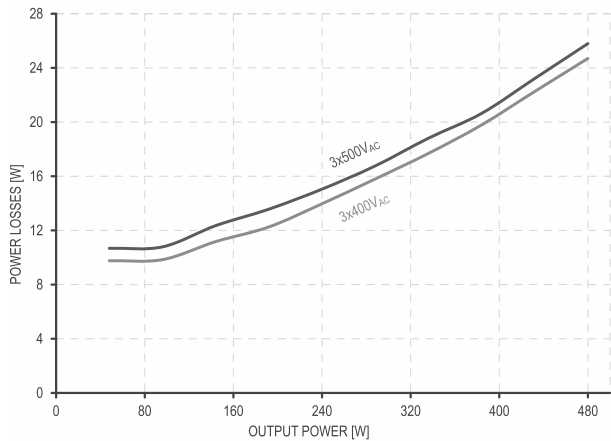
PIN assignment



Derating



Load limit curve

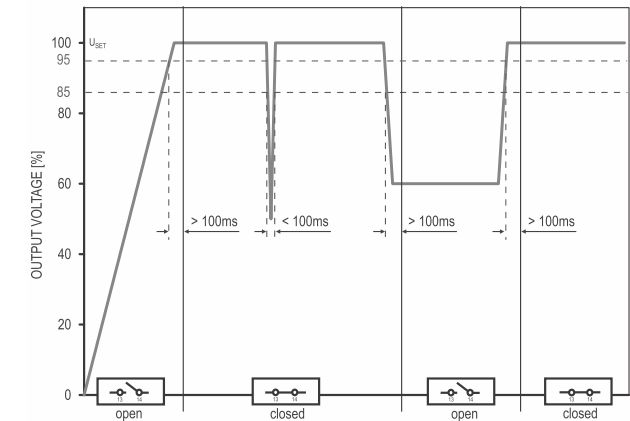


Signal connection

Signaling & Control

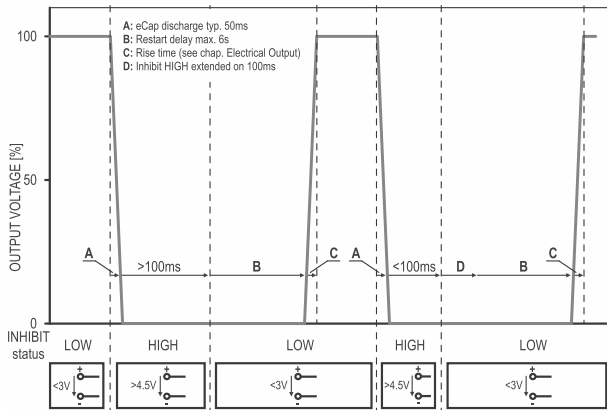
DC OK		
Type	Relay contact	
Characteristic	N/O	
Closing	$U_{out} > 95\% U_{set}$	duration min. 100ms
Opening	$U_{out} < 85\% U_{set}$	duration min. 100ms
Resistive load	<i>nom.</i> 1A	24V _{DC}
	<i>max.</i> 0.5A	60V _{DC}
Trigger hysteresis	<i>typ.</i> 0.6V	

Remote ON/OFF		
Type	Electrical contact	
Characteristic	Inhibit	
ON threshold	<i>max.</i> 3V	
OFF threshold	<i>min.</i> 4.5V	
Restart delay	<i>max.</i> 6s	
Input voltage	<i>max.</i> 30V	
Input current	<i>max.</i> 10mA	
Reference potential	Isolated	
Parallel connection	yes	
Active discharging	no	



DC-OK relay characteristic in dependence of output voltage changes

OFF mode



Control of the output voltage in dependence of the inhibit relay status.

Technical data sheet

Power supply · Compact, 3-phase, 480 W

Power supply unit, primary switched 3-phase

Input: wide range input AC 350–575 V

Output: DC 48 V, 10 A



Identification

Type	CPSB3-480-48
Part No.	722824

Product version

Datasheet version	00
-------------------	----

Description

Description	Parallel operation with active load balancing, Push-in technology, status output, remote input On/Off (Inhibit)
-------------	---

Input

Number of phases	3
Rated voltage U_N	3 × AC 400–500 V
Operation voltage range	max. 3 × AC 350–575 V
Frequency range	47 Hz – 63 Hz
Rated current I_N	0.80 A @ AC 400 V 0.65 A @ AC 500 V
Inrush current	17 A @ AC 400 V 22 A @ AC 500 V <200 μs
External protection	3 × B 6 A
Power factor correction P.F.C.	>0.92

Output

Output voltage/current	DC 48 V/10 A
------------------------	--------------

Technical data sheet

Power supply · Compact, 3-phase, 480 W

Rated voltage U_N	DC 48 V
Rated current I_N	10 A
Courant de sortie max. (boost1)	15 A / 5 s
Max. output current (boost2)	15 A / 7 s
Power Dissipation	<24.7 W, <3.3 W stand-by
Setting range $U_{out\ min.}/U_{out\ max.}$	DC 45–56 V
Load regulation	max. 0.2 % AC 350 ... 550 V max. 2.9 % AC 350 ... 550 V, parallel mode
Ripple and noise	<40 mV pp
Hold up time	min. 24 ms
Parallel / redundant mode	Max. 3 devices / via external decoupling diodes e.g. 722999
Efficiency	95.3 % @ AC 400 V / 95.1 % @ AC 500 V
Over voltage protection	<DC 59.3 V
Rated over load protection	> 80°C, autoreset
Short circuit	Current limit Hiccup

Status indication

Status indication DC OK LED green	ON: $U_{out} > 95\ %\ U_{set}$ OFF: $U_{out} < 85\ %\ U_{set}$
-----------------------------------	---

Monitoring

DC ON Control (DC OK)	N/O contact closed: $U_{out} > 95\ %\ U_{set}$ open: $U_{out} < 85\ %\ U_{set}$
Switching voltage	AC 300 V / DC 150 V
Switching current	AC/DC 1 A
Switching capacity	300 VA / 30 W
Isolation voltage	AC 1.39 kV
Remote input (inhibit) ON/OFF	ON threshold typ. 6 V, OFF threshold typ. 4 V, Restart delay max. 5 s

General

Insulation voltage input / output	AC 3.51 kV
Insulation voltage input / ground	AC 2.21 kV
Insulation voltage output / ground	AC 1.39 kV
Derating	>55 °C: -9.6 W/°C
Cooling	Air convection, 15 mm distance right/left, 40 mm top, 30 mm bottom
Housing material	Aluminum
Mounting	DIN rail mountable TS35 (EN 60715)
Installation position	Vertical
4.4 Mio. h @ AC 400 V / min. 0.86 Mio. h @ AC >157 000 h @ AC 400 V / >119 000 h @ AC 500 V	

Technical data sheet

Power supply · Compact, 3-phase, 480 W

Connection type	Push-In 0.20 mm ² – 6.0 mm ² max. 0.62 Nm Input: 0,2 – 10 mm ² Output/Signalisation 0.2 – 2.5 mm ²
Dimensions (w × h × d)	65.0 mm × 129.0 mm × 159.3 mm

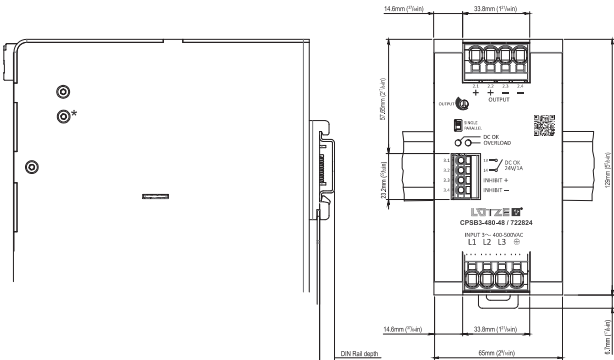
General ambient conditions

Operation temperature range	-25 °C ... +70 °C (Derating > 55 °C)
Storage temperature range	-40 °C ... +85 °C
Over voltage category	III (IEC 61010-1)
Degree of pollution	2 (IEC 60664-1, IEC 62477-1)
Relative air humidity	20 – 95 % RH, not condensing
Vibration resistance	2 g / 10 - 500 Hz, 1 hour/direction X,Y,Z non-operating, mounted on DIN-Rail (IEC 60068-2-6)
Shock resistance	30 g / 11 ms ± 5 ms, 3 bumps/direction, 9 bumps total non-operating, mounted on DIN-Rail (IEC 60068-2-27)

Certifications/Standards

Certifications	CE UKCA cULus (E249179)
Standards	IEC/EN 61010-1 IEC/EN 61010-2-201 IEC EN 62368-1 (Ed.2) IEC/EN 60950 UL 61010-1 UL 61010-2-201 EN 55011 (CISPR11) Class A EN 61000-4-2 Level 3 (Air), Level 2 (Contact) EN 61000-4-3 Level 3 (80–1000 MHz), Level 2 (1.4 – 6 GHz) EN 61000-4-4 Level 3 EN 61000-4-5 Level 3 EN 61000-4-6 Level 3 EN 61000-4-8 Level 4 EN 61000-4-11 Level 2

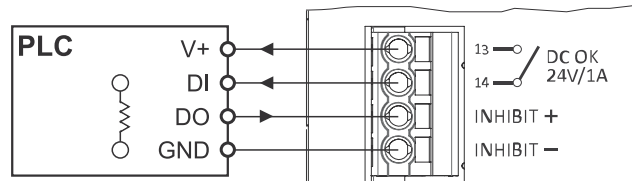
Dimensions



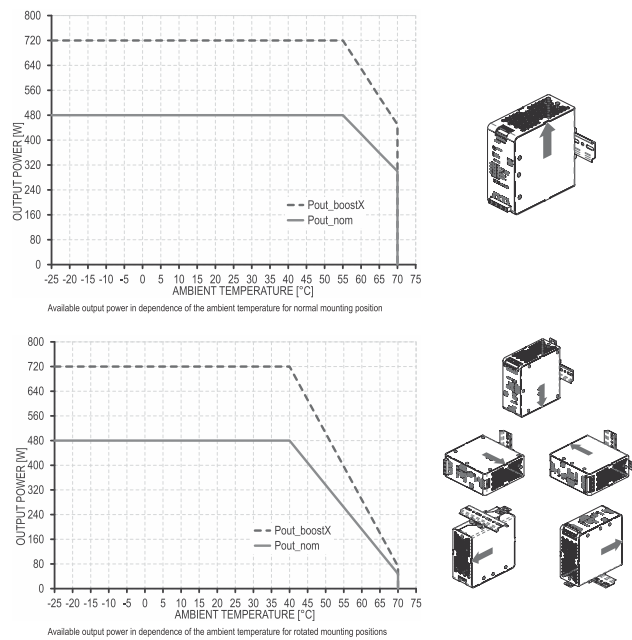
Technical data sheet

Power supply · Compact, 3-phase, 480 W

PIN assignment



Derating

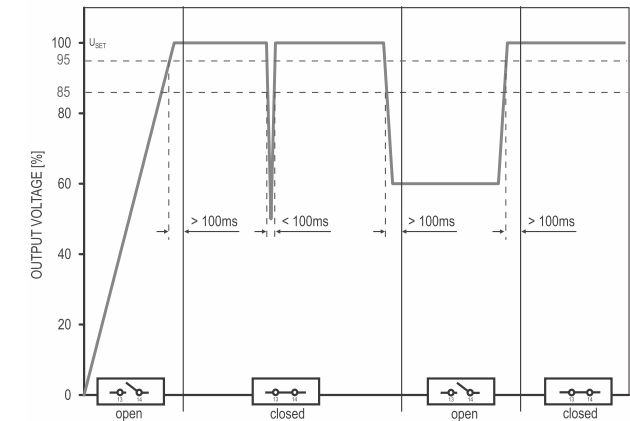


Signal connection

Signaling & Control

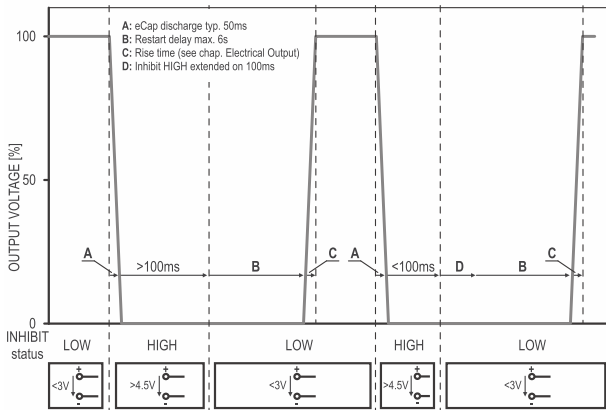
DC OK		
Type	Relay contact	
Characteristic	N/O	
Closing	$U_{out} > 95\% U_{set}$	duration min. 100ms
Opening	$U_{out} < 85\% U_{set}$	duration min. 100ms
Resistive load	<i>nom.</i> 1A	24V _{DC}
	<i>max.</i> 0.5A	60V _{DC}
Trigger hysteresis	<i>typ.</i> 0.6V	

Remote ON/OFF		
Type	Electrical contact	
Characteristic	Inhibit	
ON threshold	<i>max.</i> 3V	
OFF threshold	<i>min.</i> 4.5V	
Restart delay	<i>max.</i> 6s	
Input voltage	<i>max.</i> 30V	
Input current	<i>max.</i> 10mA	
Reference potential	Isolated	
Parallel connection	yes	
Active discharging	no	



DC-OK relay characteristic in dependence of output voltage changes

OFF mode



Control of the output voltage in dependence of the inhibit relay status.

Technical data sheet

Power supply · Compact, 3-phase, 960 W

Power supply unit, primary switched 3-phase

Input: wide range input 3x AC 350–575 V

Output: DC 24 V, 40 A



Identification

Type	CPSB3-960-24-1
Part No.	722825

Product version

Datasheet version	00
-------------------	----

Description

Description	Parallel operation with active load balancing, Push-in technology, status output, remote input On/Off (Inhibit)
-------------	---

Input

Number of phases	3
Rated voltage U_N	3 × AC 400–500 V
Operation voltage range	max. 3 × AC 350–575 V
Frequency range	47 Hz – 63 Hz
Rated current I_N	3 x 1.6 A @ AC 400 V 3 x 1.3 A @ AC 500 V
Inrush current	17 A @ AC 400 V 20 A @ AC 500 V <200 µs
Internal fuse	3 x T5A at L pins (not DC-capable, not replaceable)
External protection	MCB type B or C, 6/8/10 A
Power factor correction P.F.C.	>0.94

Technical data sheet

Power supply · Compact, 3-phase, 960 W

Output

Output voltage/current	DC 24 V/40 A
Rated voltage U_N	DC 24 V
Rated current I_N	40 A
Courant de sortie max. (boost1)	60 A / 7 s (<55 °C _{amb} , 100 % I_{out_nom} , AC 280 - 575 V)
Max. output current (boost2)	60 A / 5 s (<55 °C _{amb} , 100 % I_{out_nom} , AC 280 - 575 V)
Max. output current (HICCUP, 5 sec)	60 A
Power Dissipation	<49.5 W, <6.1 W stand-by
Setting range $U_{out\ min.}/U_{out\ max.}$	DC 22.5–29 V
Load regulation	max. 0.65 % AC 350 ... 550 V max. 3.05 % AC 350 ... 550 V, parallel mode
Ripple and noise	<50 mV pp
Hold up time	>20 ms
Parallel / redundant mode	Max. 3 devices / via external decoupling diodes e.g. 722999
Efficiency	95.2 % @ AC 400 V / 95.1 % @ AC 500 V
Over voltage protection	<DC 32.9 V, with auto-recovery
Rated over load protection	>147 %, with auto-recovery
Short circuit	Current limit Hiccup

Status indication

Status indication DC OK LED green	ON: $U_{out} > 95\ %\ U_{set}$ OFF: $U_{out} < 85\ %\ U_{set}$
-----------------------------------	---

Monitoring

DC ON Control (DC OK)	N/O contact open: $U_{out} < 85\ %\ U_{set}$ closed: $U_{out} > 95\ %\ U_{set}$
Switching voltage	AC 300 V / DC 150 V
Switching current	AC/DC 1 A
Switching capacity	300 VA / 30 W
Isolation voltage	AC 1.39 kV
Remote input (inhibit) ON/OFF	ON threshold typ. 6 V, OFF threshold typ. 4 V, Restart delay max. 5 s

General

Insulation voltage input / output	AC 3.51 kV
Insulation voltage input / ground	AC 2.21 kV
Insulation voltage output / ground	AC 1.39 kV
Derating	>55 °C: -16 W/°C

right/left, 40 mm top, 20 mm bottom

(EN 60715)

3,82 Mio. h @ AC 400 V / min. 0,97 Mio. h @ AC
>117 000 h @ AC 400 V / >113 000 h @ AC 500 V

Technical data sheet

Power supply · Compact, 3-phase, 960 W

Degree of protection	IP20 (IEC 529 / EN 60529)
Protection class	I (IEC 61140)
Weight/unit	1.75 kg
Connection type	Push-In 0.20 mm² – 6.0 mm² max. 0.62 Nm Input: 0,2 – 10 mm² Output/Signalisation 0.2 – 2.5 mm²
Dimensions (w × h × d)	100.0 mm × 129.0 mm × 171.9 mm

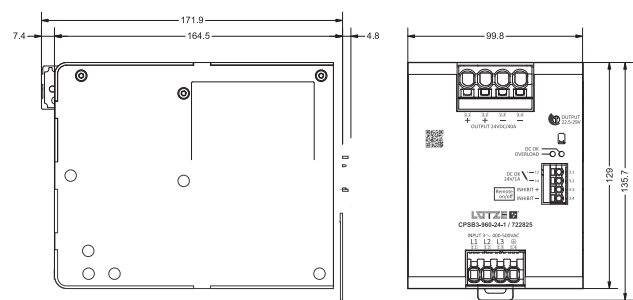
General ambient conditions

Operation temperature range	-25 °C ... +70 °C (Derating > 55 °C)
Storage temperature range	-40 °C ... +85 °C
Over voltage category	II (IEC 61010-1, IEC 62368-1 Ed.2), < 3000mASL (< 9842ftASL)
Degree of pollution	2 (IEC 60664-1, IEC 62477-1)
Relative air humidity	20 – 95 % RH, not condensing
Vibration resistance	2 g / 10 - 500 Hz, 1 hour/direction X,Y,Z non-operating, mounted on DIN-Rail (IEC 60068-2-6)
Shock resistance	30 g / 11 ms ± 5 ms, 3 bumps/direction, 9 bumps total non-operating, mounted on DIN-Rail (IEC 60068-2-27)

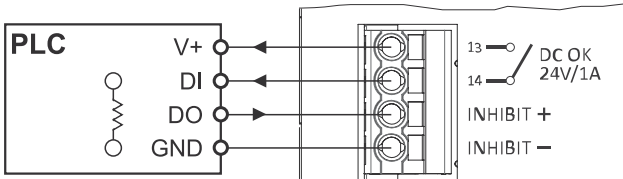
Certifications/Standards

Certifications	CE UKCA cULus (E249179)
Standards	IEC/EN 61010-1 IEC/EN 61010-2-201 IEC EN 62368-1 (Ed.2) IEC/EN 60950 UL 61010-1 UL 61010-2-201 EN 55011 (CISPR11) Class A EN 61000-4-2 Level 3 (Air), Level 2 (Contact) EN 61000-4-3 Level 3 (80–1000 MHz), Level 2 (1.4 – 6 GHz) EN 61000-4-4 Level 3 EN 61000-4-5 Level 3 EN 61000-4-6 Level 3 EN 61000-4-8 Level 4 EN 61000-4-11 Level 2

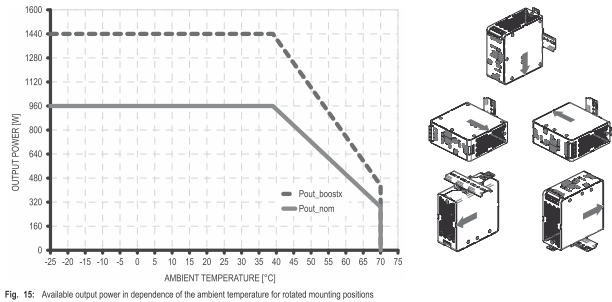
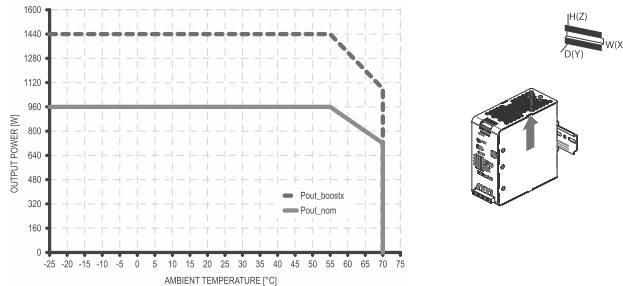
Dimensions



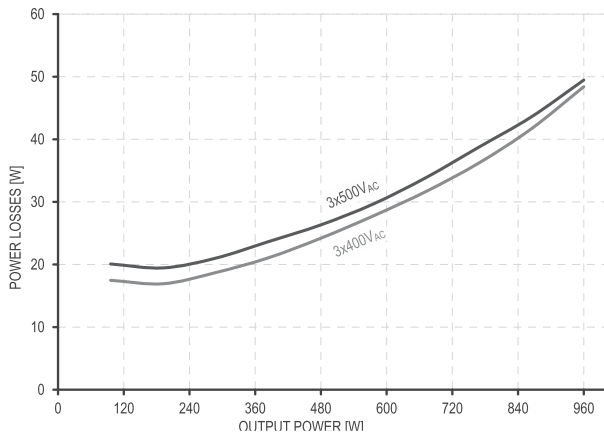
PIN assignment



Derating



Load limit curve



Power losses in dependence of the output power

Signal connection

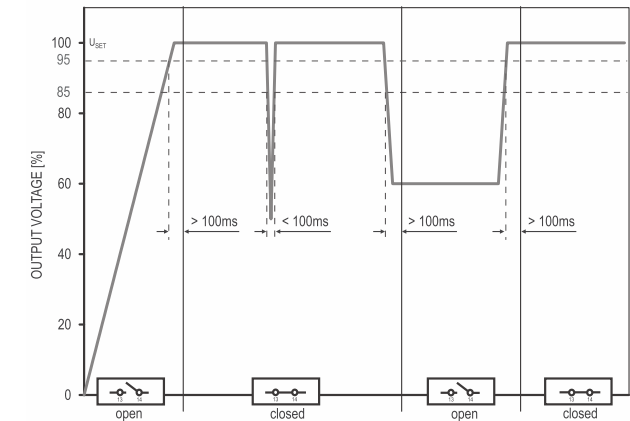
Signaling & Control

DC OK

Type		Relay contact	
Characteristic		N/O	
Closing		$U_{out} > 95\% U_{set}$	duration min. 100ms
Opening		$U_{out} < 85\% U_{set}$	duration min. 100ms
Resistive load	<i>nom.</i>	1A	24V _{DC}
	<i>max.</i>	0.5A	60V _{DC}
Trigger hysteresis	<i>typ.</i>	0.6V	

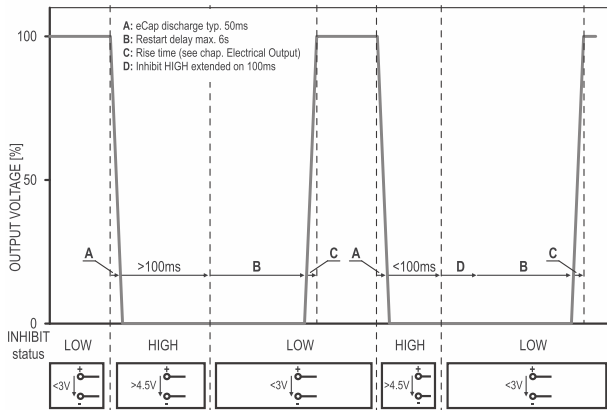
Remote ON/OFF

Type		Electrical contact	
Characteristic		Inhibit	
ON threshold	<i>max.</i>	3V	
OFF threshold	<i>min.</i>	4.5V	
Restart delay	<i>max.</i>	6s	
Input voltage	<i>max.</i>	30V	
Input current	<i>max.</i>	10mA	
Reference potential		Isolated	
Parallel connection		yes	
Active discharging		no	



DC-OK relay characteristic in dependence of output voltage changes

OFF mode



Control of the output voltage in dependence of the inhibit relay status.

Technical data sheet

Power supply · Compact, 3-phase, 960 W

Power supply unit, primary switched 3-phase

Input: wide range input 3 x AC 350–575 V

Output: DC 48 V, 20 A



Identification

Type	CPSB3-960-48-1
Part No.	722826

Product version

Datasheet version	00
-------------------	----

Description

Description	Parallel operation with active load balancing, Push-in technology, status output, remote input On/Off (Inhibit)
-------------	---

Input

Number of phases	3
Rated voltage U_N	3 × AC 400–500 V
Operation voltage range	max. 3 × AC 350–575 V
Frequency range	47 Hz – 63 Hz
Rated current I_N	3 x 1.6 A @ AC 400 V 3 x 1.3 A @ AC 500 V
Inrush current	17 A @ AC 400 V 20 A @ AC 500 V <200 µs
Internal fuse	3 x T5A at L pins (not DC-capable, not replaceable)
External protection	MCB type B or C, 6/8/10 A
Power factor correction P.F.C.	>0.94

Technical data sheet

Power supply · Compact, 3-phase, 960 W

Output

Output voltage/current	DC 48 V/20 A
Rated voltage U_N	DC 48 V
Rated current I_N	20 A
Courant de sortie max. (boost1)	30 A / 7 s (<55 °C _{amb} , 100 % I_{out_nom} , AC 280 - 575 V)
Max. output current (boost2)	30 A / 5 s (<55 °C _{amb} , 100 % I_{out_nom} , AC 280 - 575 V)
Max. output current (HICCUP, 5 sec)	30 A
Power Dissipation	<42.1 W, <6.0 W stand-by
Setting range $U_{out\ min.}/U_{out\ max.}$	DC 45–56 V
Load regulation	max. 0.2 % AC 350 ... 550 V max. 2.7 % AC 350 ... 550 V, parallel mode
Ripple and noise	<40 mV pp
Hold up time	>20 ms
Parallel / redundant mode	Max. 3 devices / via external decoupling diodes e.g. 722999
Efficiency	95.9 % @ AC 400 V / 95.8 % @ AC 500 V
Over voltage protection	<DC 58.2 V, with auto-recovery
Rated over load protection	>150 %, with auto-recovery
Short circuit	Current limit Hiccup

Status indication

Status indication DC OK LED green	ON: $U_{out} > 95\% U_{set}$ OFF: $U_{out} < 85\% U_{set}$
-----------------------------------	---

Monitoring

DC ON Control (DC OK)	N/O contact open: $U_{out} < 85\% U_{set}$ closed: $U_{out} > 95\% U_{set}$
Switching voltage	AC 300 V / DC 150 V
Switching current	AC/DC 1 A
Switching capacity	300 VA / 30 W
Isolation voltage	AC 1.39 kV
Remote input (inhibit) ON/OFF	ON threshold typ. 6 V, OFF threshold typ. 4 V, Restart delay max. 5 s

General

Insulation voltage input / output	AC 3.51 kV
Insulation voltage input / ground	AC 2.21 kV
Insulation voltage output / ground	AC 1.39 kV
Derating	>55 °C: -16 W/°C

right/left, 40 mm top, 20 mm bottom

(EN 60715)

3,80 Mio. h @ AC 400 V / min. 0,67 Mio. h @ AC
>130 000 h @ AC 400 V / >128 000 h @ AC 500 V

Technical data sheet

Power supply · Compact, 3-phase, 960 W

Degree of protection	IP20 (IEC 529 / EN 60529)
Protection class	I (IEC 61140)
Weight/unit	1.75 kg
Connection type	Push-In 0.20 mm² – 6.0 mm² max. 0.62 Nm Input: 0,2 – 10 mm² Output/Signalisation 0.2 – 2.5 mm²
Dimensions (w × h × d)	100.0 mm × 129.0 mm × 171.9 mm

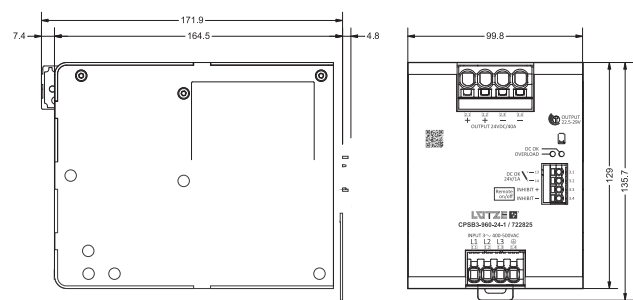
General ambient conditions

Operation temperature range	-25 °C ... +70 °C (Derating > 55 °C)
Storage temperature range	-40 °C ... +85 °C
Over voltage category	II (IEC 61010-1, IEC 62368-1 Ed.2), < 3000mASL (< 9842ftASL)
Degree of pollution	2 (IEC 60664-1, IEC 62477-1)
Relative air humidity	20 – 95 % RH, not condensing
Vibration resistance	2 g / 10 - 500 Hz, 1 hour/direction X,Y,Z non-operating, mounted on DIN-Rail (IEC 60068-2-6)
Shock resistance	30 g / 11 ms ± 5 ms, 3 bumps/direction, 9 bumps total non-operating, mounted on DIN-Rail (IEC 60068-2-27)

Certifications/Standards

Certifications	CE UKCA cULus (E249179)
Standards	IEC/EN 61010-1 IEC/EN 61010-2-201 IEC EN 62368-1 (Ed.2) IEC/EN 60950 UL 61010-1 UL 61010-2-201 EN 55011 (CISPR11) Class A EN 61000-4-2 Level 3 (Air), Level 2 (Contact) EN 61000-4-3 Level 3 (80–1000 MHz), Level 2 (1.4 – 6 GHz) EN 61000-4-4 Level 3 EN 61000-4-5 Level 3 EN 61000-4-6 Level 3 EN 61000-4-8 Level 4 EN 61000-4-11 Level 2

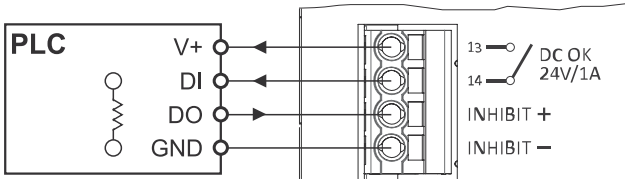
Dimensions



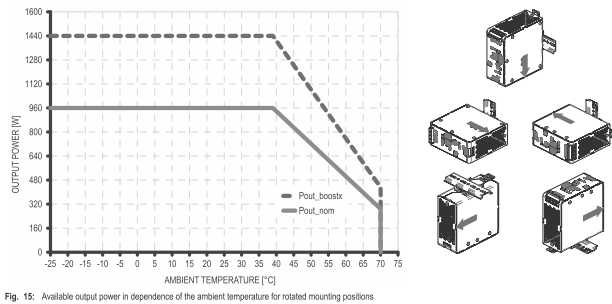
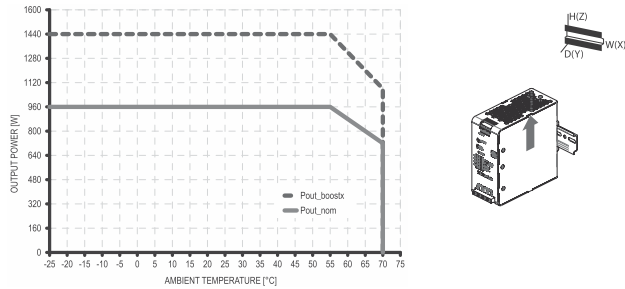
Technical data sheet

Power supply · Compact, 3-phase, 960 W

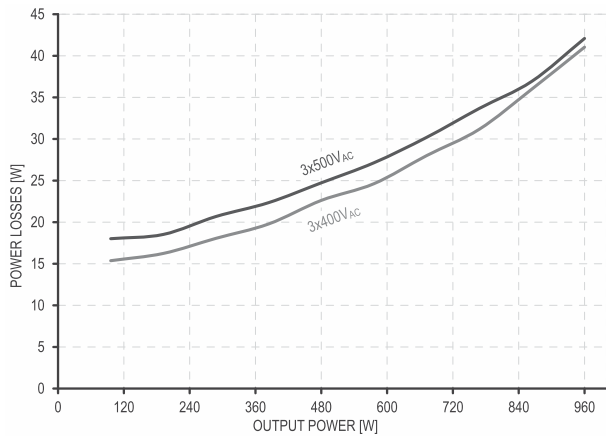
PIN assignment



Derating



Load limit curve



Power losses in dependence of the output power

Signal connection

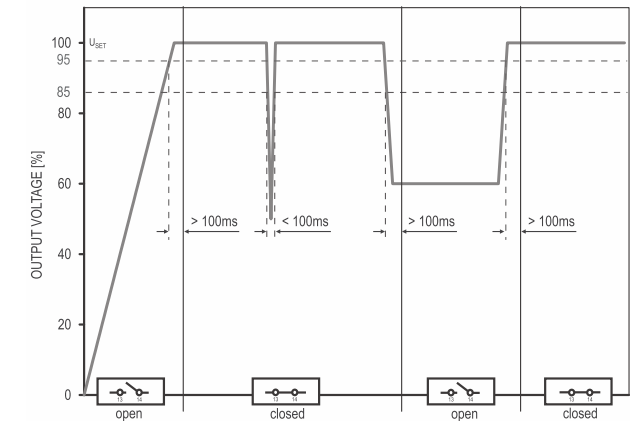
Signaling & Control

DC OK

Type		Relay contact	
Characteristic		N/O	
Closing		$U_{out} > 95\% U_{set}$	duration min. 100ms
Opening		$U_{out} < 85\% U_{set}$	duration min. 100ms
Resistive load	<i>nom.</i>	1A	24V _{DC}
	<i>max.</i>	0.5A	60V _{DC}
Trigger hysteresis	<i>typ.</i>	0.6V	

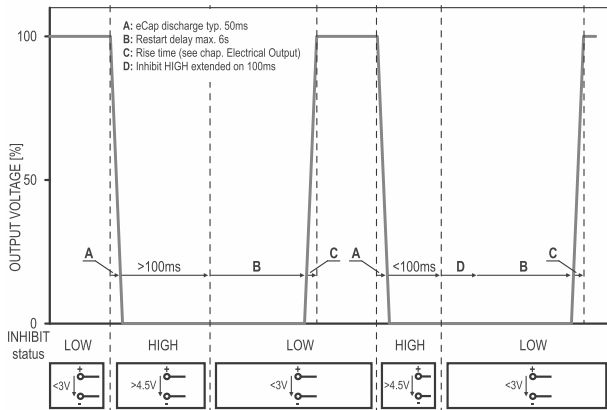
Remote ON/OFF

Type		Electrical contact	
Characteristic		Inhibit	
ON threshold	<i>max.</i>	3V	
OFF threshold	<i>min.</i>	4.5V	
Restart delay	<i>max.</i>	6s	
Input voltage	<i>max.</i>	30V	
Input current	<i>max.</i>	10mA	
Reference potential		Isolated	
Parallel connection		yes	
Active discharging		no	



DC-OK relay characteristic in dependence of output voltage changes

OFF mode



Control of the output voltage in dependence of the inhibit relay status.

Technical data sheet

Power supply · Redundant module

Redundant module 20 A with 2 inputs

Potential-free signalling contact and Status LED per input

Over- and undervoltage control



Identification

Type	DRP20
Part No.	722987

Product version

Datasheet version	00
-------------------	----

Input

Rated voltage U_N	DC 24 V
No. of inputs	2
Operation voltage range	DC 21–28 V
Rated current I_N	max. 20 A in total

Output

Output voltage/current	DC 24 V/20 A
Rated voltage U_N	24 V
Rated current I_N	20 A
Voltage drop	0.5 V
Max. output current	30 A, 5 s @ 24 V
Inverse voltage	30 V
Power Dissipation	max. 10 W
Over voltage protection	No
Rated over load protection	No

Technical data sheet

Power supply · Redundant module

Status indication

Status indication DC ON LED green ON: DC input A or B OK / OFF: Error

Monitoring

DC ON Control (Rdy)	Changeover contact per input No error: input voltage >20 V or <30 V, connection 2(5) - 3(6) closed Error: input voltage <20 V or >30 V, connection 2(5) - 1(4) closed
Switching voltage	AC 300 V / DC 150 V
Switching current	AC/DC 1 A
Switching capacity	300 VA / 30 W
Isolation voltage	AC 100 V

General

Cooling	Air convection
Housing material	Plastic
Mounting	DIN rail mountable TS35 (EN 60715)
Max. altitude operation	5000 m (EN 62368-1)
Installation position	Vertical
MTBF	659000 h
Degree of protection	IP20 (IEC 529 / EN 60529)
Weight/unit	0.21 kg
Connection type	Screw terminal 0.20 mm ² – 4.0 mm ² AWG 24 – AWG 10
Dimensions (w × h × d)	54.0 mm × 90.0 mm × 114.0 mm
PU (units)	1

General ambient conditions

Operation temperature range	-40 °C ... +71 °C (Derating)
Storage temperature range	-40 °C ... +85 °C
Over voltage category	II
Degree of pollution	2

Certifications/Standards

Certifications	UL 508 Listed (E249179) UL 60950-1 CE UKCA
----------------	---

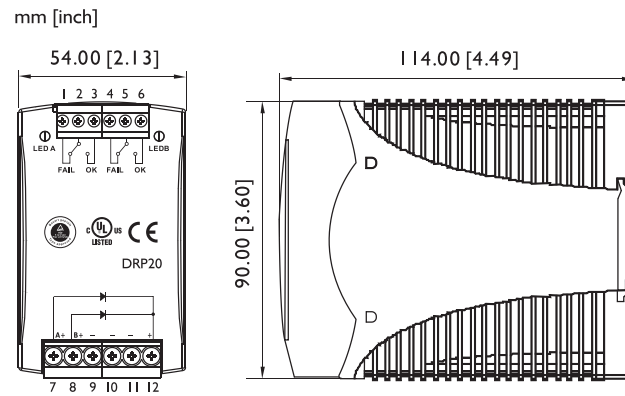
Technical data sheet

Power supply · Redundant module

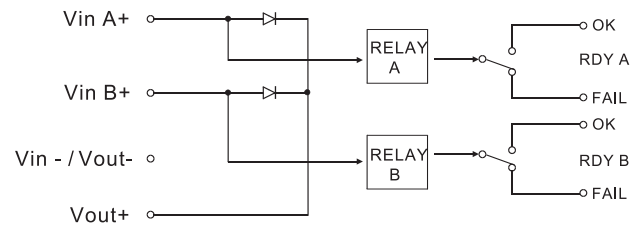
Standards

IEC/EN 62368-1
EN 55032 Class B
EN 61000-4-2
EN 61000-4-4
EN 61000-4-5
EN 61000-4-6
EN 61000-4-8
ENV 50204
EN 61204-3

Dimensions

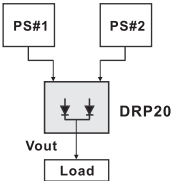


PIN assignment

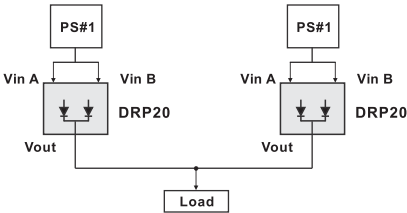


Use

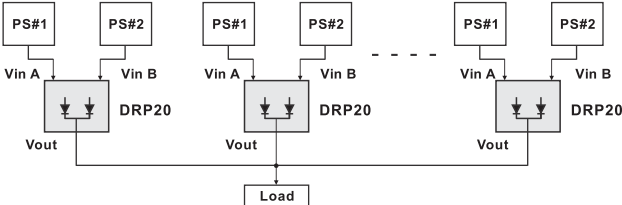
1. 1 + 1 Redundancy



2. Single Use



3. 1 + N Redundancy



Technical data sheet

Power supply · Compact Universal, 120 W

Primary switched power supplies, PFC, 1/2-phase

Input: wide-range input AC 187–550 V, DC 270–725 V

Output: DC 24 V, 5 A



Identification

Type	CPSB2-120-24
Part No.	722995

Product version

Datasheet version	02
-------------------	----

Input

Number of phases	2
Rated voltage U_N	AC 200–500 V
Operation voltage range	AC 187–550 V / DC 270–725 V
Frequency range	47 Hz – 63 Hz
Rated current I_N	1.4 A @ AC 200 V / 0.7 A @ AC 500 V
Inrush current	<21 A
External protection	Mini-circuit breaker: D 6 A, C 6 A / safety fuse: T 4 A (required)
Power factor correction P.F.C.	>0.55

Output

Output voltage/current	DC 24 V/5 A
Rated voltage U_N	DC 24 V
Rated current I_N	5 A
Max. output current	7.5 A, 30 s
Short-circuit current	14 A
Power Dissipation	<17 W
Setting range $U_{out\ min.}/U_{out\ max.}$	23-28 V
Load regulation	<1 %

Technical data sheet

Power supply · Compact Universal, 120 W

Ripple and noise	<110 mV pp
Hold up time	>17 ms @ AC 120 V / >60 ms @ AC 230 V
Parallel / redundant mode	Yes/via external decoupling diode e.g. 722999
Efficiency	88 %
Over voltage protection	>DC 33 V
Rated over load protection	Yes
Short circuit	Hiccup Mode

Status indication

Status indication DC ON LED green	≥21.6 V
Status indication DC LOW LED red	$I_{out} > 110 \% I_N$

Monitoring

DC ON Control (Rdy)	N/O contact
Switching voltage	AC/DC 300 V / DC 150 V
Switching current	AC/DC 1 A
Switching capacity	300 VA / 30 W
Isolation voltage	AC 500 V

General

Insulation voltage input / output	DC 4.2 kV
Insulation voltage input / ground	DC 2.2 kV
Insulation voltage output / ground	DC 750 V
Derating	>60 °C: -1.2 W/°C
Cooling	Air convection, 50 mm distance top/bottom, 20 mm side
Housing material	Aluminum
Mounting	DIN rail mountable TS35 (EN 60715)
Installation position	Vertical
MTBF	>500000 h: SN29500 / >500000 h: MIL-HDBK-217F
Degree of protection	IP20 (IEC 529 / EN 60529)
Protection class	I
Weight/unit	0.5 kg
Connection type	Screw terminal 0.20 mm ² – 2.5 mm ² AWG 24 – AWG 14 Plug-in
Strip length	6.0 mm / 0.24 in
Screwdriver	3,0 × 0,5 mm
Tightening torque	0.5 – 0.6 Nm / 4.42 – 5.30 lbf in
Dimensions (w × h × d)	40.0 mm × 115.0 mm × 110.0 mm

protection)

Technical data sheet

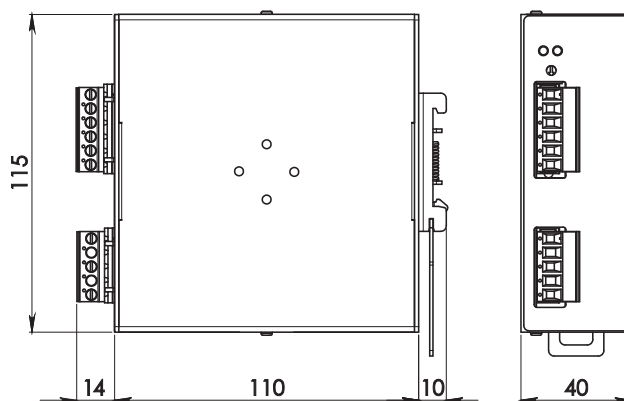
Power supply · Compact Universal, 120 W

Storage temperature range	-40 °C ... +80 °C
Over voltage category	III
Degree of pollution	2
Relative air humidity	5 – 95 % RH, non-condensing
Vibration resistance	5 – 17.8 Hz: ± 1.6 mm, 17.8 – 500 Hz: 2 g 2 hours/axes X,Y,Z, IEC 60068-2-6
Shock resistance	30 g 6 ms, 20 g 11 ms, 3 shocks/direction, 18 shocks in total, IEC60068-2-27

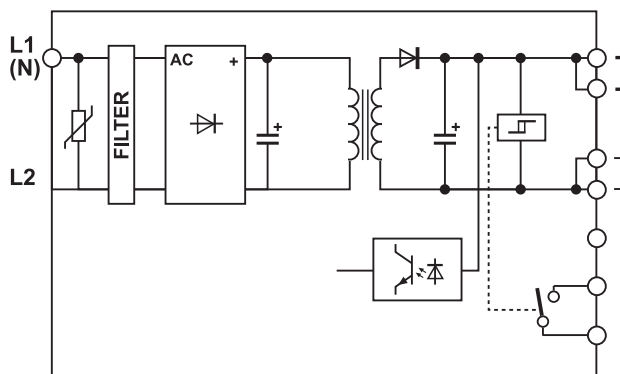
Certifications/Standards

Certifications	CE UKCA cULus (E249179)
Standards	UL 508 IEC/EN 61010-1 IEC/EN 61010-2-201 IEC/EN 60950 EN 55011 (CISPR11) Class A EN 55022 (CISPR22) Class A EN 61000-4-2 Level 3 EN 61000-4-3 Level 3 EN 61000-4-4 Level 3 EN 61000-4-5 Level 4 EN 61000-4-11 Level 2 IEC 60068-2-6 (Vibration sinusoidal), 5-17.8 Hz: ± 1.6 mm, 17.8-500 Hz: 2 g 2 hours / axis (X,Y,Z) IEC 60068-2-27 (Shock), 30 g 6 ms, 20 g 11 ms, 3 bumps / direction, 18 bumps total

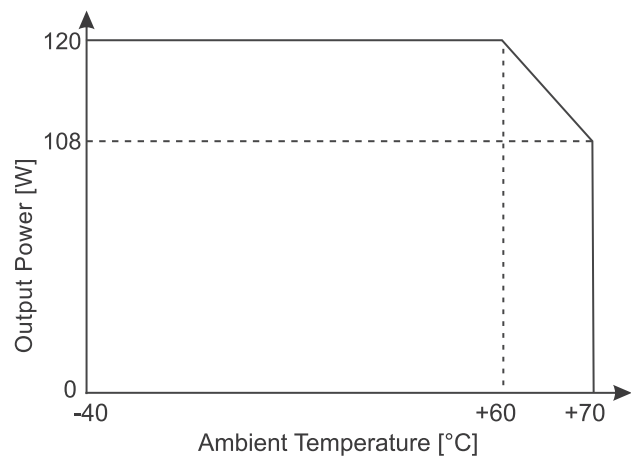
Dimensions



PIN assignment

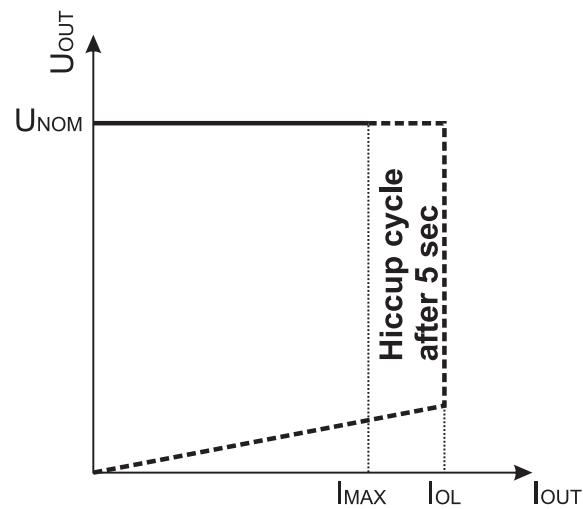


Derating

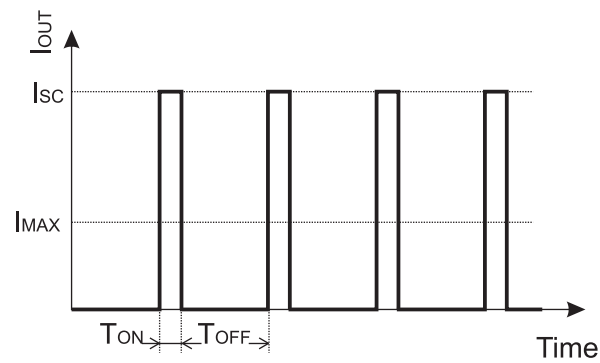


Short circuit characteristics

Hiccup limitation output characteristic



Short circuit conditions



Technical data sheet

Power supply · Compact Universal, 240 W

Primary switched power supply, PFC, 1/2/3-phase

Input: wide-range input AC 187–550 V, DC 250–725 V

Output: DC 24 V, 10 A



Identification

Type	CPSB-123-240-24
Part No.	722996

Product version

Datasheet version	02
-------------------	----

Input

Number of phases	3
Rated voltage U_N	AC 200–500 V
Operation voltage range	AC 187–550 V / DC 250–725 V (UL: DC 300–500 V)
Frequency range	47 Hz – 63 Hz
Rated current I_N	1-/2-phase: 2.2 A @ AC 220 V / 1.1 A @ AC 500 V, 3-phase: 1.5 A @ AC 220 V / 0.8 A @ AC 500 V
Inrush current	≤ 45 A / 1.31 A ² s
External protection	Mini-circuit breaker: D 4 A, C 6 A / safety fuse: T 6.3 A (required)
Power factor correction P.F.C.	>0.6 @ 230 V, >0.5 @ 400 V

Output

Output voltage/current	DC 24 V/10 A
Rated voltage U_N	DC 24 V
Rated current I_N	10 A
Max. output current	15 A, 6 A
Short-circuit current	38 A
Power Dissipation	<18 W
Setting range $U_{out\ min.}/U_{out\ max.}$	23-28 V

Technical data sheet

Power supply · Compact Universal, 240 W

Load regulation	<1 %
Ripple and noise	<100 mV pp
Hold up time	>15 ms @ AC 230 V / >100 ms @ AC 500 V
Parallel / redundant mode	Yes/via external decoupling diode e.g. 722999
Efficiency	>93 %
Over voltage protection	>DC 33 V
Rated over load protection	Yes
Short circuit	Hiccup Mode

Status indication

Status indication DC ON LED green	≥21.6 V
Status indication DC LOW LED red	≤21.6 V

Monitoring

DC ON Control (Rdy)	N/O contact
Switching voltage	DC 30 V
Switching current	DC 1 A
Switching capacity	30 W
Isolation voltage	AC 500 V

General

Insulation voltage input / output	DC 4.2 kV
Insulation voltage input / ground	DC 2.2 kV
Insulation voltage output / ground	DC 750 V
Derating	>50 °C: -4.2 W/°C
Cooling	Air convection, 50 mm distance top/bottom, 20 mm side
Housing material	Aluminum
Mounting	DIN rail mountable TS35 (EN 60715)
Installation position	Vertical
MTBF	>500000 h: SN29500 / >500000 h: MIL-HDBK-217F
Degree of protection	IP20 (IEC 529 / EN 60529)
Protection class	I
Weight/unit	0.65 kg
Connection type	Screw terminal 0.20 mm ² – 2.5 mm ² AWG 24 – AWG 14 Plug-in
Strip length	6.0 mm / 0.24 in
Screwdriver	3,0 × 0,5 mm
Tightening torque	0.5 – 0.6 Nm / 4.42 – 5.30 lbf in 110.0 mm

Technical data sheet

Power supply · Compact Universal, 240 W

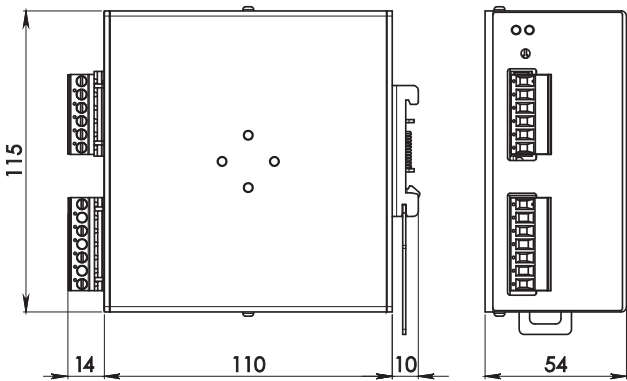
General ambient conditions

Operation temperature range	-40 °C ... +70 °C (UL approved up to +50 °C)
Storage temperature range	-40 °C ... +80 °C
Over voltage category	III
Degree of pollution	2
Relative air humidity	5 – 95 % RH, non-condensing
Vibration resistance	5 – 17.8 Hz: ±1.6 mm, 17.8 – 500 Hz: 2 g 2 hours/axes X,Y,Z, IEC 60068-2-6
Shock resistance	30 g 6 ms, 20 g 11 ms, 3 shocks/direction, 18 shocks in total, IEC60068-2-27

Certifications/Standards

Certifications	CE UKCA cULus (E249179)
Standards	UL 508 IEC/EN 61010-1 IEC/EN 61010-2-201 IEC/EN 60950 EN 55011 (CISPR11) Class A EN 55022 (CISPR22) Class A EN 61000-4-2 Level 3 EN 61000-4-3 Level 3 EN 61000-4-4 Level 3 EN 61000-4-5 Level 1 EN 61000-4-11 Level 2 IEC 60068-2-6 (Vibration sinuosoidal), 5-17.8 Hz: ±1.6 mm, 17.8-500 Hz: 2 g 2 hours / axis (X,Y,Z) IEC 60068-2-27 (Shock), 30 g 6 ms, 20 g 11 ms, 3 bumps / direction, 18 bumps total

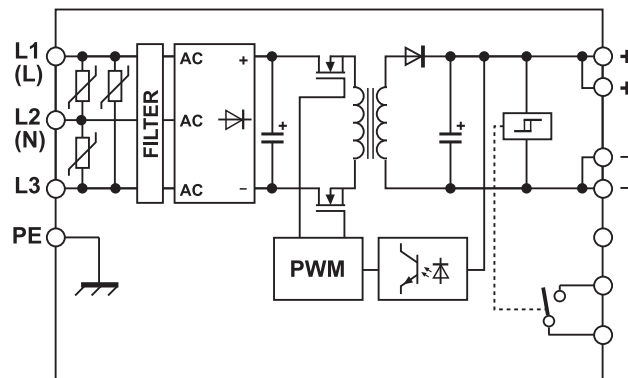
Dimensions



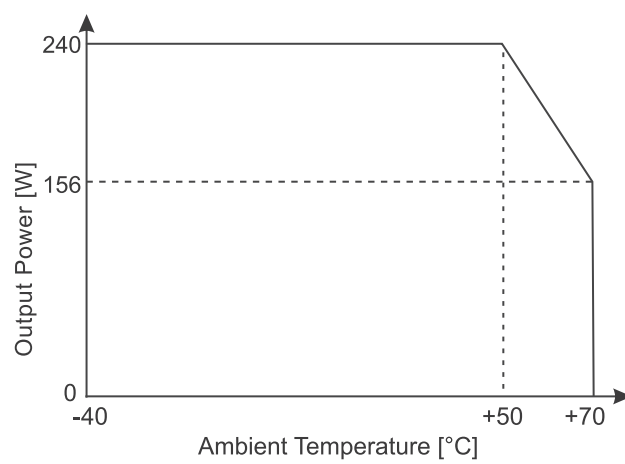
Technical data sheet

Power supply · Compact Universal, 240 W

PIN assignment

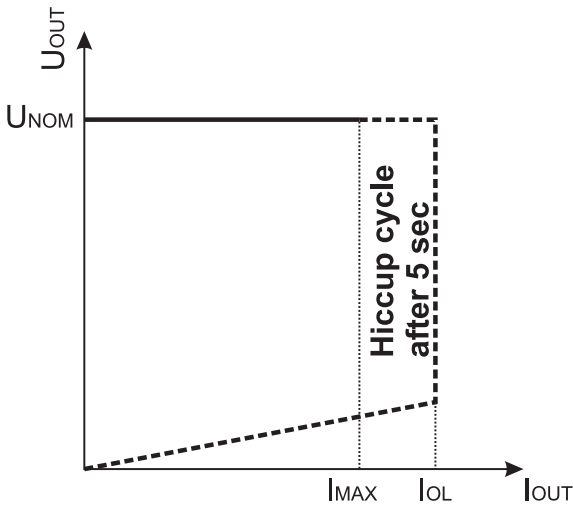


Derating

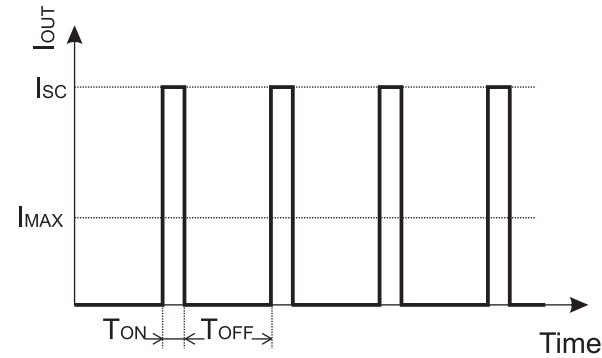


Short circuit characteristics

Hiccup limitation output characteristic



Short circuit conditions



Technical data sheet

Power supply · Compact serie, Redundant module

Redundant module 12 to 85 V, 50 A

Potential-free signalling contact

Status LED per input



Identification

Type	CPSRM50
Part No.	722999

Product version

Datasheet version	00
-------------------	----

Input

No. of inputs	2
Operation voltage range	DC 12–85 V
Rated current I_N	max. 50 A per input

Output

Output voltage/current	DC 12 V–85 V/50 A
Voltage drop	<0.2 V
Max. output current	300 A
Power Dissipation	max. 10 W
Overtemperature protection	No
Over voltage protection	No

Status indication

Status indication DC ON LED green	IN1, IN2 OK
Status indication DC ON LED red	Redundancy error

Technical data sheet

Power supply · Compact serie, Redundant module

Monitoring

DC ON Control (Rdy)	N/O contact
Switching voltage	AC 300 V / DC 24 V
Switching current	AC/DC 1 A
Switching capacity	300 VA / 30 W
Isolation voltage	DC 100 V

General

Cooling	Air convection
Housing material	Aluminum
Mounting	DIN rail mountable TS35 (EN 60715)
Installation position	Vertical
Degree of protection	IP20 (IEC 529 / EN 60529)
Weight/unit	0.35 kg
Connection type	Input Screw terminal plug-in 0.20 mm ² – 16.0 mm ² Output Screw terminal plug-in 0.20 mm ² – 16.0 mm ² Relays Screw terminal plug-in 0.20 mm ² – 1.5 mm ²
Dimensions (w × h × d)	40.0 mm × 115.0 mm × 110.0 mm
PU (units)	1

General ambient conditions

Operation temperature range	-40 °C ... +75 °C (UL approved up to +75 °C)
Storage temperature range	-40 °C ... +80 °C
Over voltage category	II
Degree of pollution	2
Relative air humidity	5 – 95 % RH, non-condensing
Vibration resistance	5 – 17.8 Hz: ±1.6 mm, 17.8 – 500 Hz: 2 g 2 hours/axes X,Y,Z, IEC 60068-2-6
Shock resistance	30 g 6 ms, 20 g 11 ms, 3 shocks/direction, 18 shocks in total, IEC60068-2-27

Certifications/Standards

Certifications	CE UKCA
----------------	------------

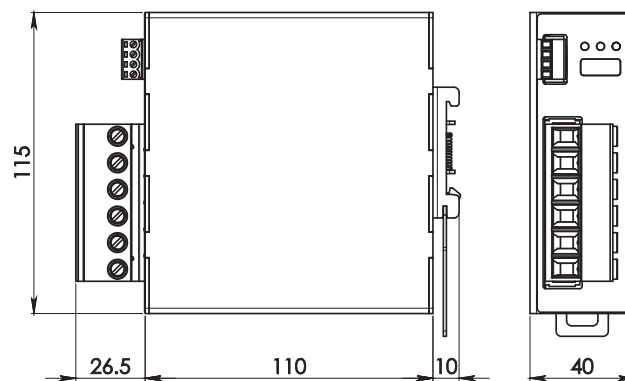
Technical data sheet

Power supply · Compact serie, Redundant module

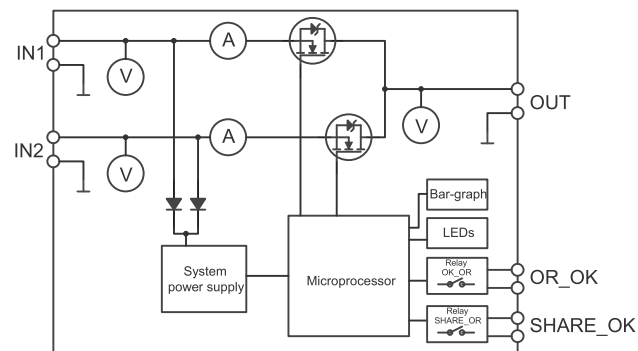
Standards

UL 508
IEC/EN 61010-1
IEC/EN 61010-2-201
IEC/EN 60950
EN 55011 (CISPR11) Class A
EN 55022 (CISPR22) Class A
EN 61000-4-2 Level 3
EN 61000-4-3 Level 3
EN 61000-4-4 Level 3
EN 61000-4-5 Level 3
EN 61000-4-11 Level 2
IEC 60068-2-6 (Vibration sinusoidal), 5-17.8 Hz: ± 1.6 mm, 17.8-500 Hz: 2 g
2 hours / axis (X,Y,Z)
IEC 60068-2-27 (Shock), 30 g 6 ms, 20 g 11 ms, 3 bumps / direction,
18 bumps total

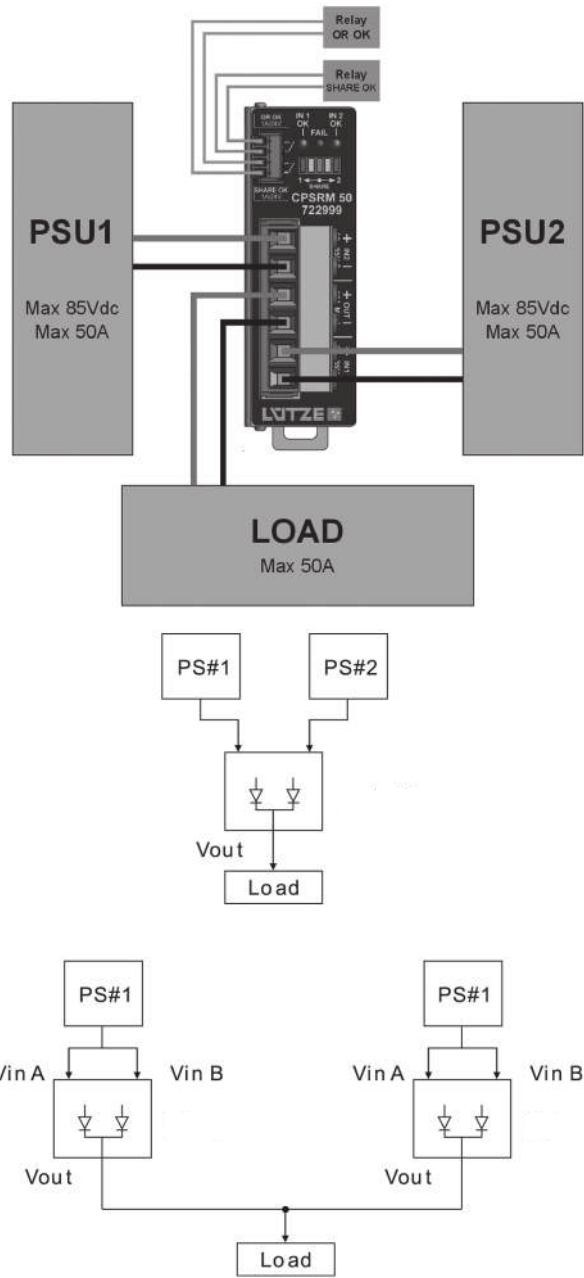
Dimensions



PIN assignment



Use



Technical data sheet

Power supply · Compact DC UPS, 240 W

Uninterrupted DC power supply

DC UPS for lead batteries

Input: DC 24 V, Output: max. DC 10 A



Identification

Type	CNUPS24
Part No.	723110

Product version

Datasheet version	01
-------------------	----

Input

Input voltage	DC 26 – 28.5 V
Input current	DC 3 – 10 A
Status display input	LED green: PS OK, LED red: Reverse polarity LED green: Battery OK, LED red: Battery low
Parameterisation	Charging current adjustable by jumper
Protection device Input	None

Energy storage

Memory type	Chemical (lead based)
Nominal battery voltage	DC 24 V
Max. charging current	DC 2 A or DC 4 A
Max. battery capacity	75 % @ 26 V, 85 % @ 27 V, 100 % @ 28 V
Max. output current	10 A
Backup time	Depends on battery and charging current
Fuse for memory medium	Vehicle fuse 15 A / 32 V, Mini Type
Deep discharge protection	18.5 V ± 0.5 V

Technical data sheet

Power supply · Compact DC UPS, 240 W

Output

Output voltage/current	max. DC 10 A
Rated voltage U_N	DC 24 V
Output voltage	DC 20 - 28 V
Max. output current	DC 10 A

Status indication

Status display output	LED yellow: Load OK
-----------------------	---------------------

Monitoring

Number of channels	1
Monitored functions	Battery mode
Switching voltage	DC 24 V
Switching current	DC 1 A
Isolation voltage	0.5 kV, 1 min.
Contact type	Change over contact

General

Derating	>60 °C: -0.25 A/°C
Cooling	Free convection
Housing material	Aluminum
Mounting	DIN rail mountable TS35 (EN 60715)
Installation position	Vertical, with 20 mm distance to other devices
Degree of protection	IP20 (EN 60529)
Weight/unit	0.3 kg
Connection type	Connector with screws: 2.5 mm ² (AWG 24–12)
Dimensions (w × h × d)	54.0 mm × 115.0 mm × 110.0 mm
PU (units)	1

General ambient conditions

Operation temperature range	-40 °C ... +70 °C (UL approved up to +60 °C)
Storage temperature range	-40 °C ... +80 °C
Over voltage category	II
Degree of pollution	2 (IEC 664-1)
Relative air humidity	5 – 95 % RH, non-condensing

Certifications/Standards

Technical data sheet

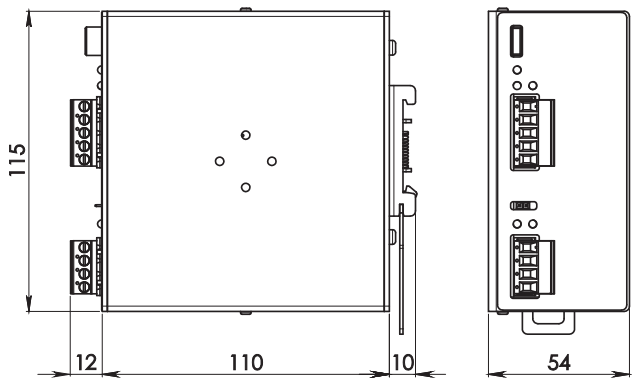
Power supply · Compact DC UPS, 240 W

Standards	UL 508 IEC/EN 61010-1 IEC/EN 61010-2-201 IEC/EN 60950 EN 55011 (CISPR11) Class A EN 55022 (CISPR22) Class A EN 61000-4-2 Level 3 EN 61000-4-3 Level 3 EN 61000-4-4 Level 3 EN 61000-4-5 Level 1 EN 61000-4-11 Level 2 IEC 60068-2-6 (Vibration sinuosoidal), 5-17.8 Hz: ±1.6 mm, 17.8-500 Hz: 2 g 2 hours / axis (X,Y,Z) IEC 60068-2-27 (Shock), 30 g 6 ms, 20 g 11 ms, 3 bumps / direction, 18 bumps total
-----------	---

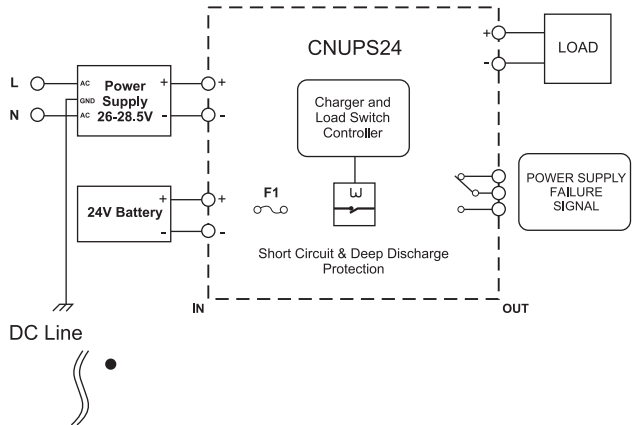
Notes and Comments

Comments	Suitable for power supply with applicable output voltage Load mode with simultaneous charging Integrated battery fuse Deep discharging protection Battery not included
----------	--

Dimensions



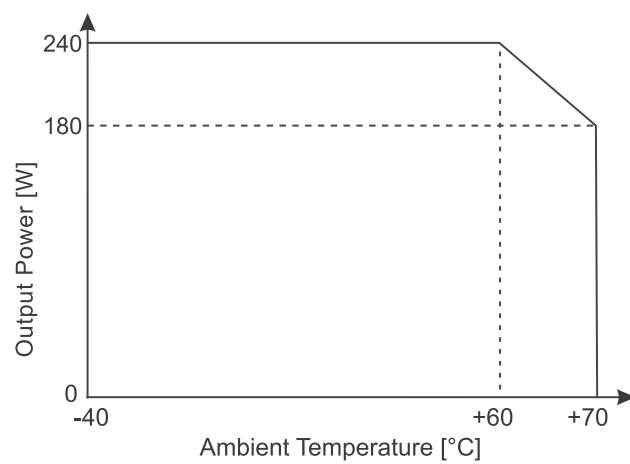
PIN assignment



Technical data sheet

Power supply · Compact DC UPS, 240 W

Derating



Technical data sheet

Power supply · Compact DC UPS, housing

Battery housing for two lead batteries 12 V / 1.2 Ah



Identification

Type	CNBP30
Part No.	723115

Product version

Datasheet version	00
-------------------	----

Energy storage

Memory type	2× lead batteries DC 12 V / 1.2 Ah
Max. charging current	600 mA @ DC 12 V, 300 mA @ DC 24 V
Fuse for memory medium	15 A, automatic resetting

Output

Max. output current	5 A @ DC 2 V, 3 A @ DC 24 V
---------------------	-----------------------------

General

Insulation voltage input / ground	0.5 kV, 1 min.
Cooling	Free convection
Housing material	Aluminum
Mounting	DIN rail mountable TS35 (EN 60715)
Installation position	Vertical, with 20 mm distance to other devices
Degree of protection	IP20 (EN 60529)
Configured weight max./unit	1.2 kg
Connection type	Connector with screws: 2.5 mm ² (AWG 24–12)
Dimensions (w × h × d)	54.0 mm × 115.0 mm × 135.0 mm
PU (units)	1

Technical data sheet

Power supply · Compact DC UPS, housing

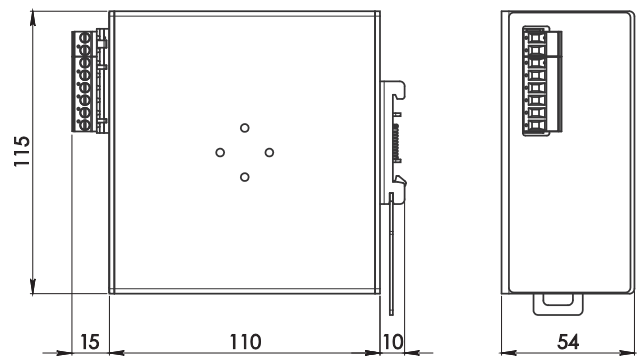
General ambient conditions

Operation temperature range	-20 °C ... +40 °C (or equivalent battery limit values)
Storage temperature range	-20 °C ... +40 °C
Over voltage category	II
Degree of pollution	2 (IEC 664-1)
Relative air humidity	5 – 95 % RH, non-condensing

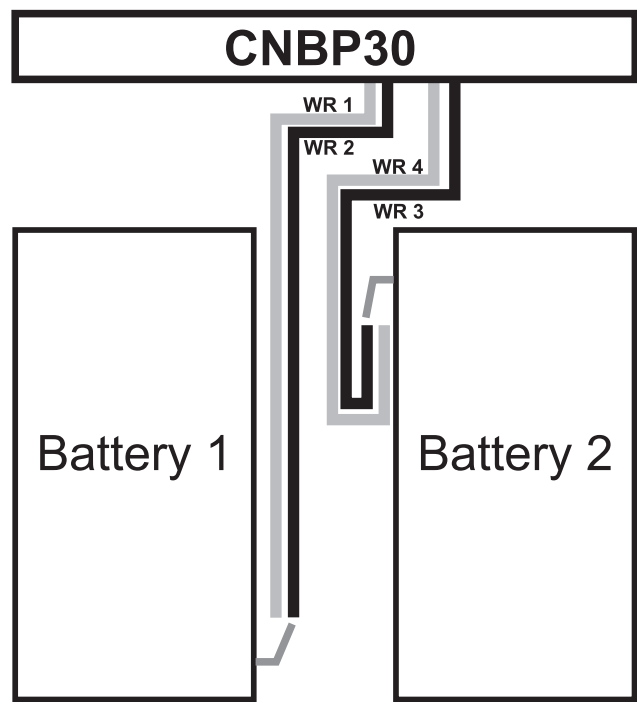
Notes and Comments

Comments	Suitable for DC 12 V and DC 24 V applications, integrated self-healing fuse Batteries not included
----------	---

Dimensions

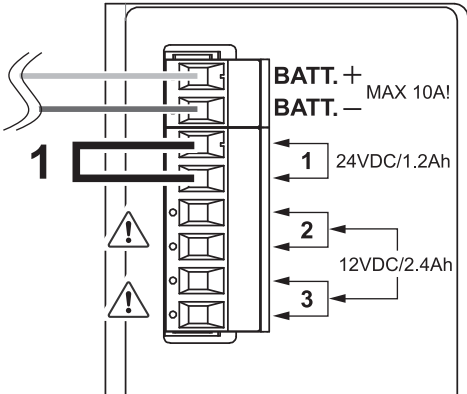


PIN assignment

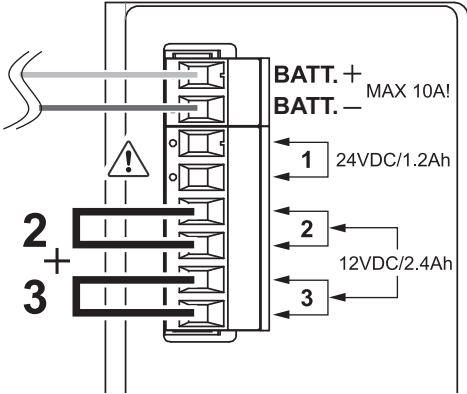


Use

1. DC 24 V / 1.2 Ah



2. DC 12 V / 2.4 Ah



Technical data sheet

Power supply · Compact DC/DC–Converter, 240 W

Programmable DC/DC–Converter

Input: wide-range input DC 12–48 V

Output: DC 5–55 V



Identification

Type	CUDC-240-55
Part No.	723300

Product version

Datasheet version	00
-------------------	----

Description

Description	Up to 240 W output power (voltage dependent) Converts any voltage between 11V and 55 V to any voltage between 5 V and 55 V High efficiency and compact size Overload protection by current limitation or hiccup mode, adjustable Digital Power regulation Isolated topology (DC 4.2kV) USB interface for control and monitoring Multiple integrated protections Suitable for parallel or for redundancy operation (integrated ORing circuitry) Free POWERMASTER software
-------------	---

Input

Rated voltage U_N	DC 12–48 V
Operation voltage range	DC 11–55 V
Rated current I_N	max. 12 A
Inrush current	<40 A
Internal fuse	20 A (not user replaceable)
External fuse	Mini-circuit breaker: C 20 A

Technical data sheet

Power supply · Compact DC/DC–Converter, 240 W

Power factor correction P.F.C.	>0.6
Protection device Input	Overvoltage protection, > 60 V Cut-off
Reverse voltage protection	Yes

Output

Rated voltage U_N	DC 5–55 V
Rated current I_N	10 A
Max. output current (limited current)	11 A (264 W)
Max. output current (HICCUP, 5 sec)	15 A (360 W)
Heat dissipation	<28 W
Setting range $U_{out\ min.}/U_{out\ max.}$	DC 5–55 V
Load regulation	$\leq 4\%$ @ DC 5 V $\leq 2\%$ @ DC 12 V $\leq 1.5\%$ @ $\geq$ DC 24 V
Ripple and noise	<200 mV
Hold up time	≥ 5 ms
Parallel / redundant mode	yes
Efficiency	77 % – 92 %, depending on the input/output voltage
Overtemperature protection	Yes
Over voltage protection	120% of the output voltage
Short circuit	Current limit Hiccup Mode
Communication	Mini USB-B Type
Measurement accuracy	Output voltage: $\pm 1\%$, ± 1 digit Output current: $\pm 3\%$, ± 1 digit Input voltage: $\pm 3\%$, ± 1 digit

Monitoring

DC ON Control (Rdy)	N/O contact
Switching voltage	AC/DC 24 V
Switching current	AC/DC 1 A
Switching capacity	24 W
Isolation voltage	AC 500 V

General

Insulation voltage input / output	DC 4.2 kV
Insulation voltage input / ground	DC 2.2 kV
Insulation voltage output / ground	DC 750 V
Derating	>60 °C: -2.4 W/°C
Operation temperature range	-40 °C ... +70 °C (UL approved up to +60 °C)
Storage temperature range	-40 °C ... +80 °C

distance top/bottom, 20 mm side

Technical data sheet

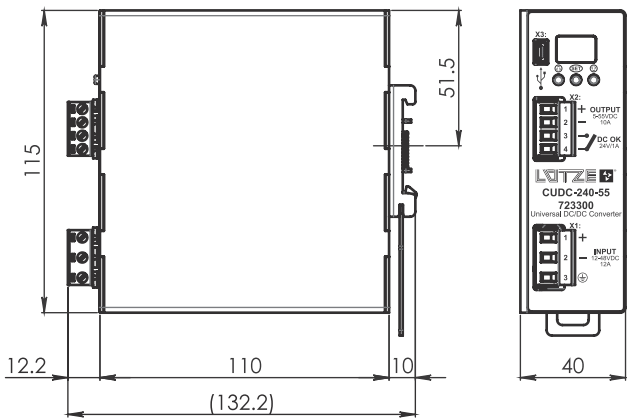
Power supply · Compact DC/DC–Converter, 240 W

Installation position	Vertical
MTBF	>600000 h: MIL-HDBK-217F
Shock resistance	30 g 6 ms, 20 g 11 ms, 3 shocks/direction, 18 shocks in total, IEC60068-2-27: 2008
Vibration resistance	5 – 17.8 Hz: ±1.6 mm, 17.8 – 500 Hz: 2 g 2 hours/axes X,Y,Z, IEC 60068-2-6: 2007
Protection class	IP20 (EN 60529)
Protection class	I
Over voltage category	I (EN 70178)
Degree of pollution	2 (IEC 60664-1)
Status indication	7 segment display, 2 digits 3 keys for parameterization
Weight/unit	0.4 kg
Connection type	Screw terminal 0,20 mm² – 2,5 mm² AWG 24 – AWG 12 plug-in
Dimensions (w × h × d)	40.0 mm × 115.0 mm × 132.2 mm
PU (units)	1

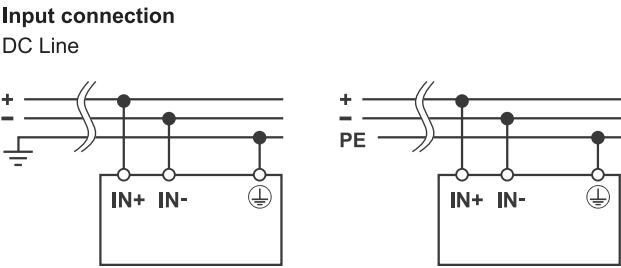
Certifications/Standards

Certifications	cULus (E249179) UL 508
Standards	IEC/EN 61010-1:2010 IEC/EN 61010-2-201:2018 EN 55011 Class B EN 55022 Class B EN 61000-4-2 Level 3 EN 61000-4-3 Level 3 EN 61000-4-4 Level 2 EN 61000-4-5 Level 1 EN 61000-6-3:2007 EN 61000-6-2:2005

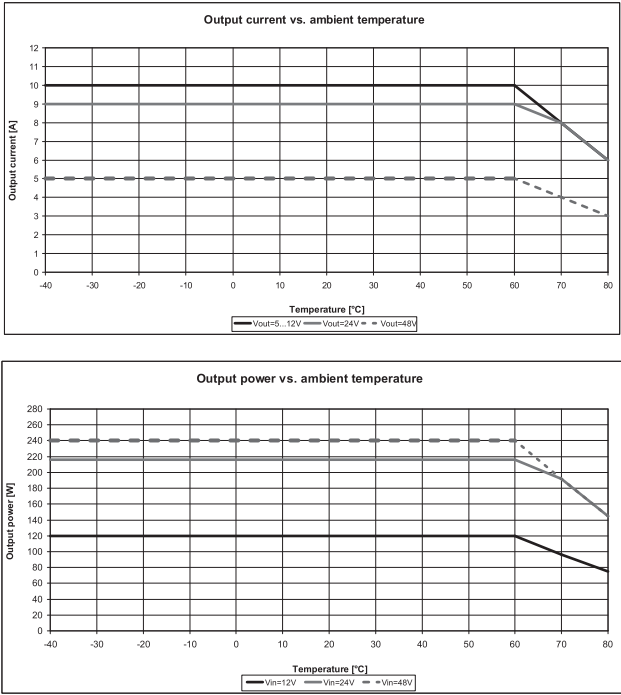
Dimensions



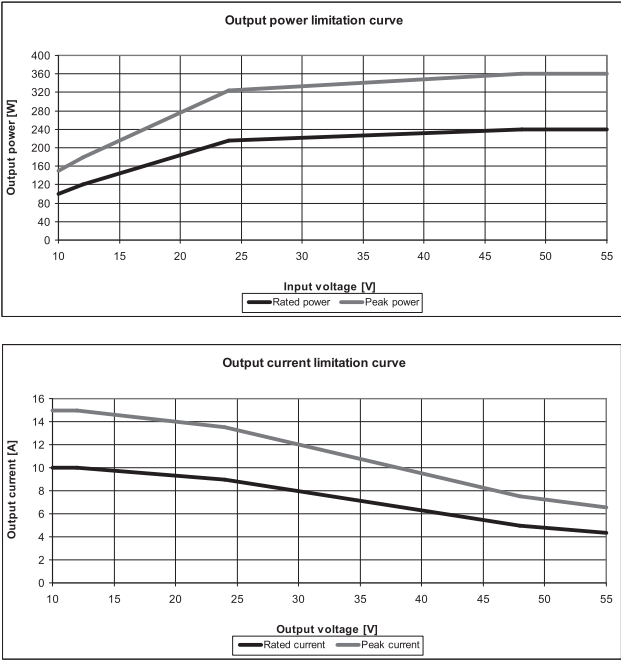
PIN assignment



Derating



Short circuit characteristics



Technical data sheet

Power supply · Compact Economy, 120 W

Primary switchmode power supply, PFC, Single-phase

Input: wide-range input AC 85–264 V, DC 110–345 V

Output: DC 24 V, 5 A



Identification

Type	CPSB1-120-24E
Part No.	723500

Product version

Datasheet version	01
-------------------	----

Input

Number of phases	1
Rated voltage U_N	AC 120/240 V
Operation voltage range	AC 85–264 V / DC 110–345 V
Frequency range	47 Hz – 63 Hz
Rated current I_N	2.1 A @ AC 120 V / 1.2 A @ AC 240 V
Inrush current	≤ 30 A / 0.72 A ² s
Internal fuse	T3,15 A / AC 250 V
External protection	Mini-circuit breaker: C 6 A / Fusible link: T 10 A
Power factor correction P.F.C.	>0.6

Output

Output voltage/current	DC 24 V/5 A
Rated voltage U_N	DC 24 V
Rated current I_N	5 A
Max. output current	7 A, 5 s
Power Dissipation	<18 W
Setting range $U_{out\ min.}/U_{out\ max.}$	DC 23–28 V
Load regulation	<1 %

Technical data sheet

Power supply · Compact Economy, 120 W

Ripple and noise	<60 mV
Hold up time	>20 ms @ AC 120 V / 50 ms @ AC 230 V
Parallel / redundant mode	Yes/via external decoupling diode e.g. 722999
Efficiency	>87 %
Overtemperature protection	Yes
Over voltage protection	≥DC 33 V
Short circuit	Hiccup Mode

Status indication

Status indication DC ON LED green	≥21.6 V
Status indication DC LOW LED red	≤21.6 V

Monitoring

DC ON Control (Rdy)	N/O contact
Switching voltage	AC 300 V / DC 150 V
Switching current	AC/DC 1 A
Switching capacity	300 VA / 30 W
Isolation voltage	AC 500 V

General

Insulation voltage input / output	DC 4.2 kV
Insulation voltage input / ground	DC 2.2 kV
Insulation voltage output / ground	DC 750 V
Derating	>60 °C: -2.4 W/°C
Cooling	Air convection, 50 mm distance top/bottom, 20 mm side
Housing material	Aluminum
Mounting	DIN rail mountable TS35 (EN 60715)
Installation position	Vertical
Degree of protection	IP20 (IEC 529 / EN 60529)
Protection class	I
Weight/unit	0.45 kg
Connection type	Screw terminal Plug-in 0.20 mm ² – 2.5 mm ² AWG 24 – AWG 14
Strip length	6.0 mm / 0.24 in
Screwdriver	3,0 × 0,5 mm
Tightening torque	0.5 – 0.6 Nm / 4.42 – 5.30 lbf in
Connection type	Connector with screws: 2.5 mm ² (AWG 24–12)
Dimensions (w × h × d)	40.0 mm × 115.0 mm × 110.0 mm

up to +60 °C)

Technical data sheet

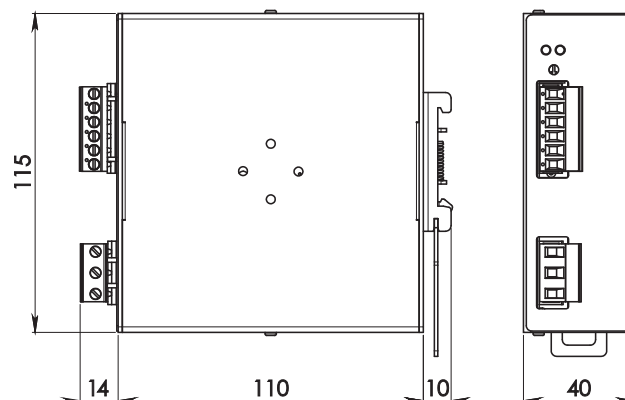
Power supply · Compact Economy, 120 W

Storage temperature range	-40 °C ... +80 °C
Over voltage category	III
Degree of pollution	2
Relative air humidity	5 – 95 % RH, non-condensing

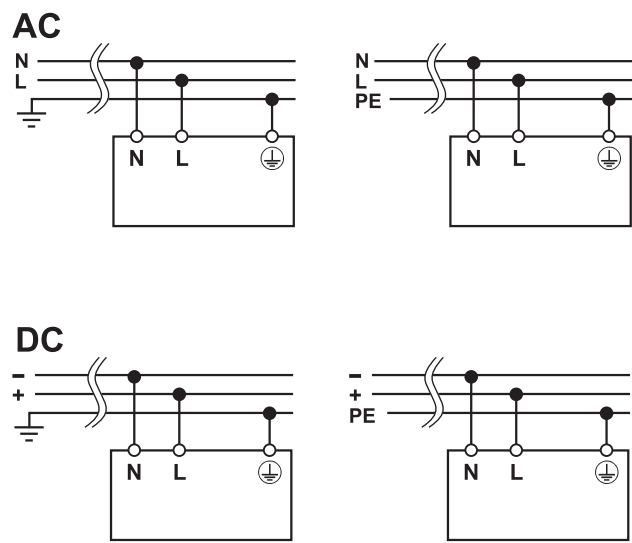
Certifications/Standards

Certifications	CE UKCA cULus (E249179)
Standards	UL 508 IEC/EN 61010-1 IEC/EN 61010-2-201 IEC/EN 60950 EN 55011 (CISPR11) Class A EN 55022 (CISPR22) Class A EN 61000-4-2 Level 3 EN 61000-4-3 Level 3 EN 61000-4-4 Level 3 EN 61000-4-5 Level 3 EN 61000-4-11 Level 2 IEC 60068-2-6 (Vibration sinusoidal), 5-17.8 Hz: ± 1.6 mm, 17.8-500 Hz: 2 g 2 hours / axis (X,Y,Z) IEC 60068-2-27 (Shock), 30 g 6 ms, 20 g 11 ms, 3 bumps / direction, 18 bumps total

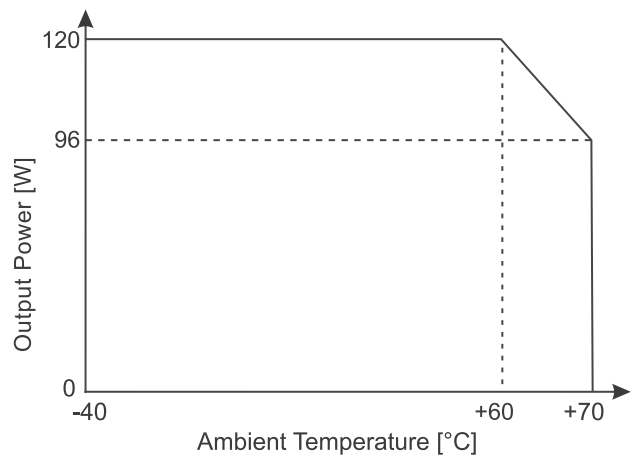
Dimensions



PIN assignment

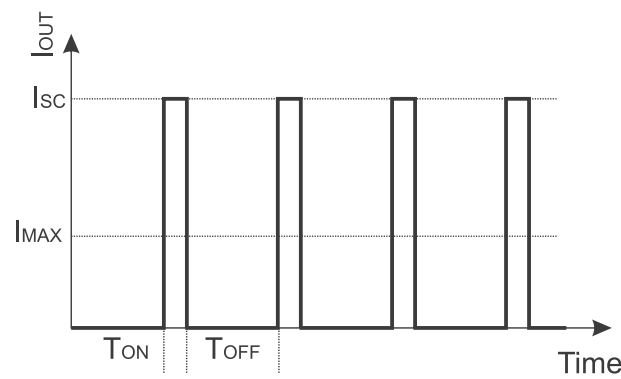


Derating



Short circuit characteristics

Hiccup



Technical data sheet

Power supply · Compact Ultra, 120 W

Primary switchmode power supply, PFC

Input: AC 90–264 V, DC 110–345 V

Output: DC 24 V, 5 A



Identification

Type	CPS2B1-120-24
Part No.	723501

Product version

Datasheet version	01
-------------------	----

Use/Application/Properties

Properties	• High efficiency and extremely compact dimensions • Only 35 mm wide aluminium housing • Active PFC (Power factor correction) • Overload 150 % • Constant current or hiccup mode, user definable • Wide output voltage range • Easy to connect in parallel to increase performance • Up to 60 °C operating temperature without derating
------------	---

Input

Number of phases	1
Rated voltage U_N	AC 120/240 V (UL certified)
Operation voltage range	AC 90–264 V / DC 110–345 V
Frequency range	47 Hz – 63 Hz
Rated current I_N	1.4 A @ AC 120 V / 0.7 A @ AC 240 V
Inrush peak current	≤32 A / 0.49 A²s
Internal fuse	T3,15 A (non-replaceable)
External protection	Mini-circuit breaker: C 4 A / Fusible link: T 4 A
Power factor correction P.F.C.	>0,90, enabled

Technical data sheet

Power supply · Compact Ultra, 120 W

Output

Output voltage/current	DC 24 V/5 A
Rated voltage U_N	DC 24 V
Rated current I_N	5 A
Overload limit in constant current mode	7.5 A
Max. output current	7.5 A, 5 s @ Hiccup Mode
Power Dissipation	<13.5 W
Setting range $U_{out\ min.}/U_{out\ max.}$	DC 11.5–29 V
Load regulation	$\leq 1\%$
Ripple and noise	$\leq 60\text{ mV pp}$
Hold up time	$\geq 20\text{ ms @ AC }120\text{ V} / \geq 30\text{ ms @ AC }240\text{ V}$
Parallel / redundant mode	Yes/via external decoupling diode e.g. Part-No. 722999 NOTE: Be sure to set the current limiting mode jumper when connecting multiple devices in parallel.
Efficiency	>90 % @ AC 240 V
Overtemperature protection	Yes
Over voltage protection	$\geq \text{DC }33\text{ V } (U_A=24\text{ V})$
Short circuit	Hiccup Mode / Current limit

Status indication

Status indication DC ON LED green	$\geq 21.6\text{ V}$
Status indication DC LOW LED red	$\leq 21.6\text{ V}$

Monitoring

DC ON Control (Rdy)	N/O contact
Switching voltage	AC/DC 300 V / DC 150 V
Switching current	AC/DC 1 A
Switching capacity	300 VA / 30 W
Isolation voltage	AC 500 V

General

Insulation voltage input / output	DC 4.2 kV, 1 min.
Insulation voltage input / ground	DC 2.2 kV, 1 min.
Insulation voltage output / ground	DC 750 V, 1 min.
Derating	>60 °C: -1.2 W/°C
Cooling	Air convection, 50 mm distance top/bottom, 20 mm side
Housing material	Aluminum
Mounting	DIN rail mountable TS35 (EN 60715)

h at 25 °C ambient full load

Technical data sheet

Power supply · Compact Ultra, 120 W

Connection type	Screw terminal 0,20 mm ² – 2,5 mm ² / AWG 24–14
Strip length	6.0 - 7.5 mm / 0.24 - 0.30 in
Screwdriver	3,0 × 0,5 mm
Tightening torque	0.5 – 0.6 Nm / 4.42 – 5.30 lbf in
Dimensions (w × h × d)	35.0 mm × 103.0 mm × 126.0 mm
PU (units)	1

General ambient conditions

Operation temperature range	-35 °C ... +70 °C UL approved up to 60 °C
Storage temperature range	-40 °C ... +80 °C
Over voltage category	III (EN 50178)
Degree of pollution	2 (IEC 60664-1)
Relative air humidity	5 – 95 % RH, non-condensing

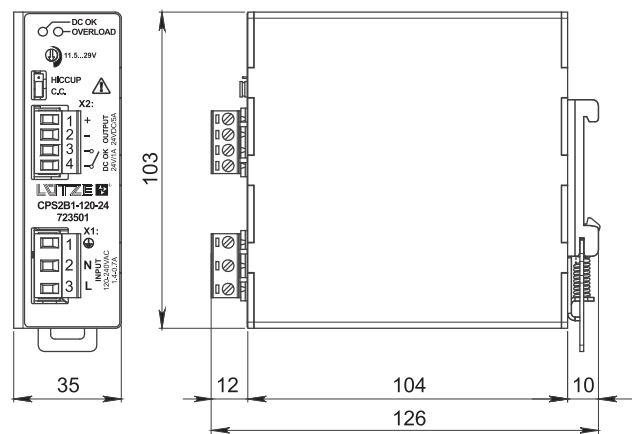
Interface

Life-cycle expectancy	74'640 h (8.5 years) at 25 °C ambient full load
-----------------------	---

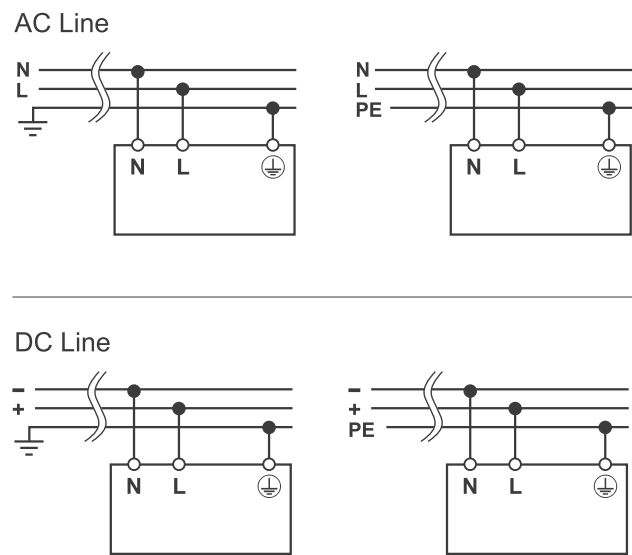
Certifications/Standards

Certifications	CE UKCA cULus (E249179)
Standards	UL 508 IEC/EN 61010-1 IEC/EN 61010-2-201 IEC/EN 60950 EN 55011 (CISPR11) Class B (EMC Emission) EN 61000-3-2 Class A EN 61000-4-2 Level 3 EN 61000-4-3 Level 3 EN 61000-4-4 Level 4 EN 61000-4-5 Level 4 EN 61000-4-11 Level 2 IEC 60068-2-6 (Vibration sinusoidal), 5-17.8 Hz: ±1.6 mm, 17.8-500 Hz: 2 g 2 hours / axis (X,Y,Z) IEC 60068-2-27 (Shock), 30 g 6 ms, 20 g 11 ms, 3 bumps / direction, 18 bumps total

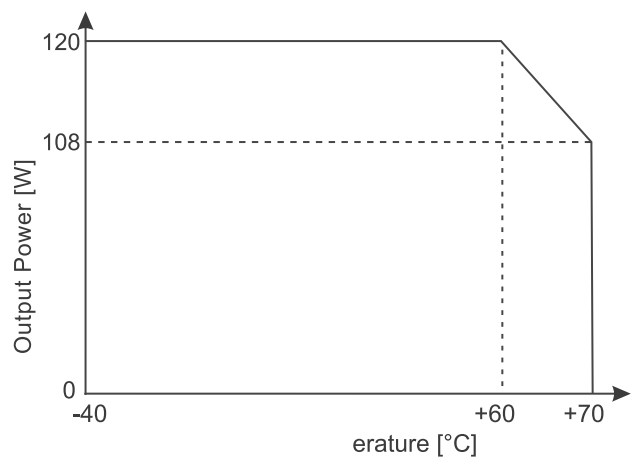
Dimensions



PIN assignment

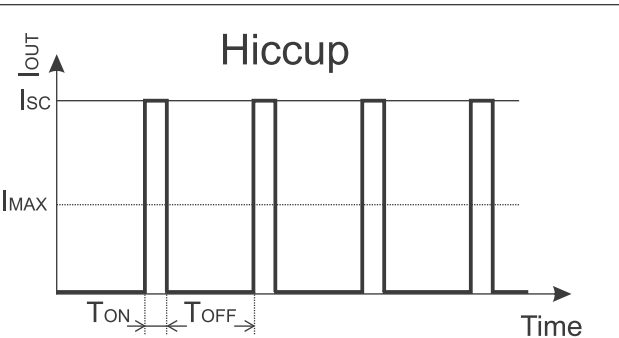
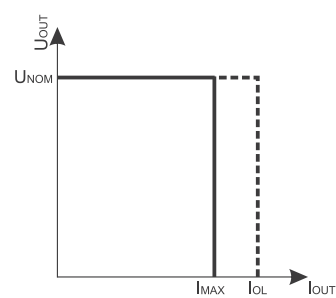


Derating



Short circuit characteristics

C.C.



Technical data sheet

Power supply · Compact Economy, 120 W

Primary switchmode power supply, PFC, Single-phase

Input: wide-range input AC 85–264 V, DC 110–345 V

Output: DC 12 V, 7 A



Identification

Type	CPSB1-120-12E
Part No.	723510

Product version

Datasheet version	00
-------------------	----

Input

Number of phases	1
Rated voltage U_N	AC 120/240 V
Operation voltage range	AC 90–264 V / DC 110–345 V
Frequency range	47 Hz – 63 Hz
Rated current I_N	1.9 A @ AC 120 V / 1.1 A @ AC 240 V
Inrush current	≤ 30 A / 0.72 A ² s
Internal fuse	T3,15 A / AC 250 V
External protection	Mini-circuit breaker: C 6 A
Power factor correction P.F.C.	>0.6

Output

Output voltage/current	DC 12 V/7 A
Rated voltage U_N	DC 12 V
Rated current I_N	7 A
Voltage drop	Max. 215 mV (5 A)
Max. output current	11–9.5 A, 5 s
Power Dissipation	<20 W
Setting range $U_{out\ min.}/U_{out\ max.}$	DC 12–15 V

Technical data sheet

Power supply · Compact Economy, 120 W

Load regulation	<2 %
Ripple and noise	≤120 mV pp
Hold up time	>10 ms @ AC 120 V / >60 ms @ AC 230 V
Parallel / redundant mode	Yes/via external decoupling diode e.g. 722999
Efficiency	>84 %
Overtemperature protection	Yes
Over voltage protection	≥DC 18 V
Short circuit	Hiccup Mode

Status indication

Status indication DC ON LED green	≥10.8 V
Status indication DC LOW LED red	≤10.8 V

Monitoring

DC ON Control (Rdy)	N/O contact
Switching voltage	AC 300 V / DC 150 V
Switching current	AC/DC 1 A
Switching capacity	300 VA / 30 W
Isolation voltage	AC 500 V

General

Insulation voltage input / output	DC 4.2 kV
Insulation voltage input / ground	DC 2.2 kV
Insulation voltage output / ground	DC 750 V
Derating	>60 °C: -2.4 W/°C
Cooling	Air convection, 50 mm distance top/bottom, 20 mm side
Housing material	Aluminum
Mounting	DIN rail mountable TS35 (EN 60715)
Installation position	Vertical
Degree of protection	IP20 (IEC 529 / EN 60529)
Protection class	I
Weight/unit	0.4 kg
Connection type	Screw terminal Plug-in 0.20 mm ² – 2.5 mm ² AWG 24 – AWG 14
Strip length	6.0 mm / 0.24 in
Screwdriver	3,0 × 0,5 mm
Tightening torque	0.5 – 0.6 Nm / 4.42 – 5.30 lbf in
Connection type	Connector with screws: 2.5 mm ² (AWG 24–12) 134.0 mm

Technical data sheet

Power supply · Compact Economy, 120 W

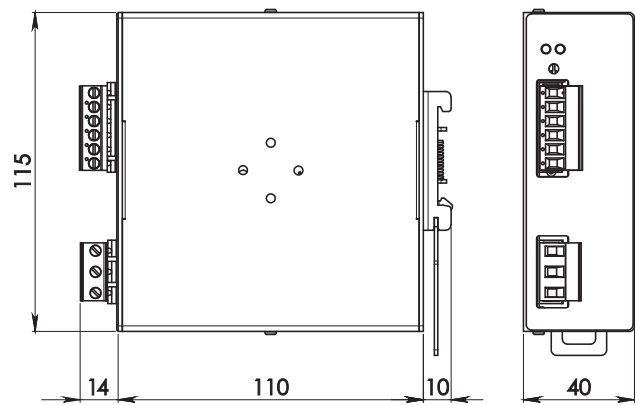
General ambient conditions

Operation temperature range	-40 °C ... +70 °C (UL approved up to +60 °C)
Storage temperature range	-40 °C ... +80 °C
Over voltage category	III
Degree of pollution	2

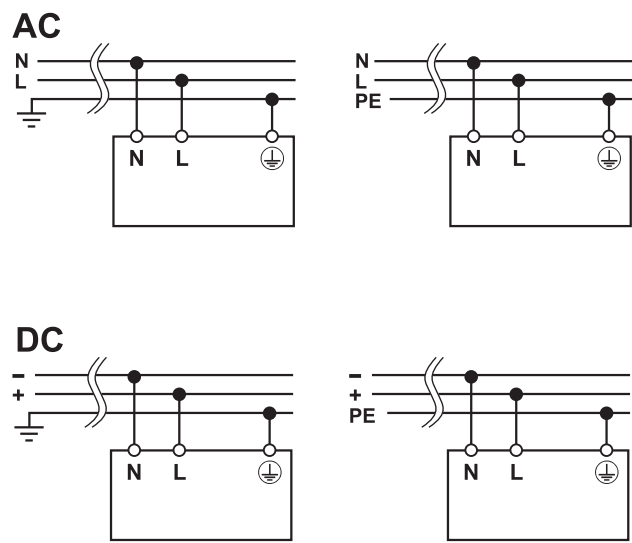
Certifications/Standards

Certifications	CE UKCA cULus (E249179)
Standards	UL 508 IEC/EN 61010-1 IEC/EN 61010-2-201 IEC/EN 60950 EN 55011 (CISPR11) Class A EN 55022 (CISPR22) Class A EN 61000-4-2 Level 3 EN 61000-4-3 Level 3 EN 61000-4-4 Level 3 EN 61000-4-5 Level 3 EN 61000-4-11 Level 2 IEC 60068-2-6 (Vibration sinuosoidal), 5-17.8 Hz: ±1.6 mm, 17.8-500 Hz: 2 g 2 hours / axis (X,Y,Z) IEC 60068-2-27 (Shock), 30 g 6 ms, 20 g 11 ms, 3 bumps / direction, 18 bumps total

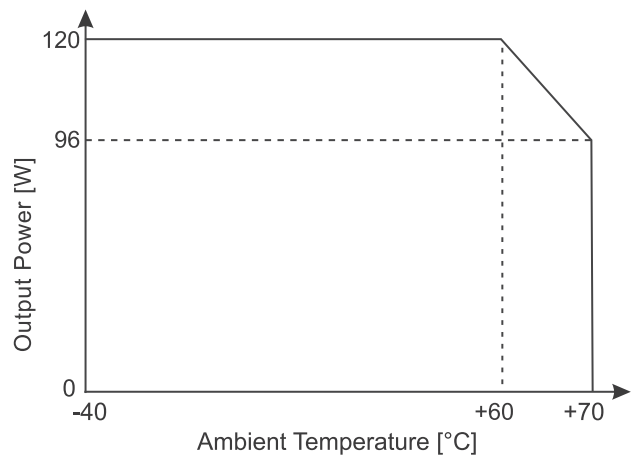
Dimensions



PIN assignment

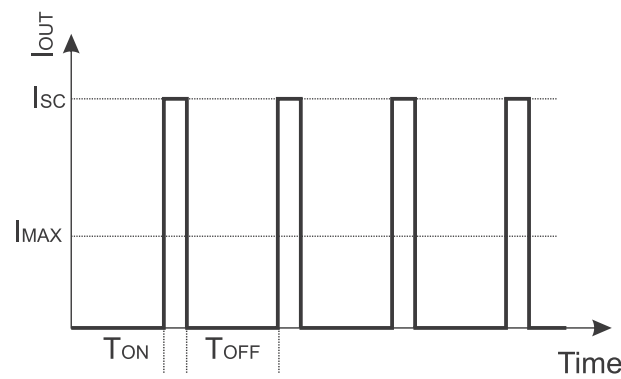


Derating



Short circuit characteristics

Hiccup



Technical data sheet

Power supply · Compact Ultra, 120 W

Primary switchmode power supply, PFC

Input: AC 90–264 V, DC 110–345 V

Output: DC 48 V, 2.5 A



Identification

Type	CPS2B1-120-48
Part No.	723521

Product version

Datasheet version	01
-------------------	----

Use/Application/Properties

Properties	• High efficiency and extremely compact dimensions • Only 35 mm wide aluminium housing • Active PFC (Power factor correction) • Overload 150 % • Constant current or hiccup mode, user definable • Wide output voltage range • Easy to connect in parallel to increase performance • Up to 60 °C operating temperature without derating
------------	---

Input

Number of phases	1
Rated voltage U_N	AC 120/240 V (UL certified)
Operation voltage range	AC 90–264 V / DC 110–345 V
Frequency range	47 Hz – 63 Hz
Rated current I_N	1.4 A @ AC 120 V / 0.7 A @ AC 240 V
Inrush peak current	≤32 A / 0.49 A ² s
Internal fuse	T3,15 A (non-replaceable)
External protection	Mini-circuit breaker: C 4 A / Fusible link: T 4 A
Power factor correction P.F.C.	>0,90, enabled

Technical data sheet

Power supply · Compact Ultra, 120 W

Output

Output voltage/current	DC 48 V/2.5 A
Rated voltage U_N	DC 48 V
Rated current I_N	2.5 A
Overload limit in constant current mode	3.75 A
Max. output current	3.75 A, 5 s @ Hiccup Mode
Power Dissipation	<13.5 W
Setting range $U_{out\ min.}/U_{out\ max.}$	DC 23–56 V
Load regulation	≤0.5 %
Ripple and noise	≤60 mV pp
Hold up time	≥20 ms @ AC 120 V / ≥30 ms @ AC 240 V
Parallel / redundant mode	Yes/via external decoupling diode e.g. Part-No. 722999 NOTE: Be sure to set the current limiting mode jumper when connecting multiple devices in parallel.
Efficiency	>90 % @ AC 240 V
Overtemperature protection	Yes
Over voltage protection	≥DC 68 V
Short circuit	Adjustable: Hiccup, C.C. Mode

Status indication

Status indication DC ON LED green	≥43.2 V
Status indication DC LOW LED red	≤43.2 V
Status indication DC ON LED red	Redundancy error

Monitoring

DC ON Control (Rdy)	N/O contact
Switching voltage	AC/DC 300 V / DC 150 V
Switching current	AC/DC 1 A
Switching capacity	300 VA / 30 W
Isolation voltage	AC 500 V

General

Insulation voltage input / output	DC 4.2 kV, 1 min.
Insulation voltage input / ground	DC 2.2 kV, 1 min.
Insulation voltage output / ground	DC 750 V, 1 min.
Derating	>60 °C: -1.2 W/°C
Cooling	Air convection, 50 mm distance top/bottom, 20 mm side
Housing material	Aluminum

h at 25 °C ambient full load

Technical data sheet

Power supply · Compact Ultra, 120 W

Weight/unit	0.45 kg
Connection type	Screw terminal 0,20 mm ² – 2,5 mm ² / AWG 24–14
Strip length	6.0 - 7.5 mm / 0.24 - 0.30 in
Screwdriver	3,0 × 0,5 mm
Tightening torque	0.5 – 0.6 Nm / 4.42 – 5.30 lbf in
Dimensions (w × h × d)	35.0 mm × 103.0 mm × 126.0 mm
PU (units)	1

General ambient conditions

Operation temperature range	-35 °C ... +70 °C UL approved up to 60 °C
Storage temperature range	-40 °C ... +80 °C
Over voltage category	III (EN 50178)
Degree of pollution	2 (IEC 60664-1)
Relative air humidity	5 – 95 % RH, non-condensing

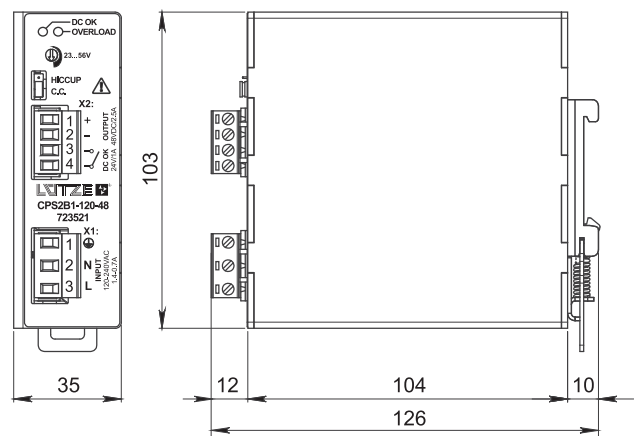
Interface

Life-cycle expectancy	74'640 h (8.5 years) at 25 °C ambient full load
-----------------------	---

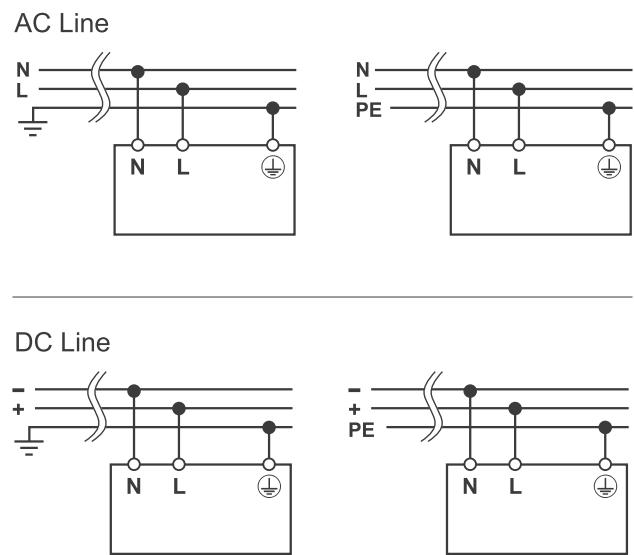
Certifications/Standards

Certifications	CE UKCA cULus (E249179)
Standards	UL 508 IEC/EN 61010-1 IEC/EN 61010-2-201 IEC/EN 60950 EN 55011 (CISPR11) Class B (EMC Emission) EN 61000-3-2 Class A EN 61000-4-2 Level 3 EN 61000-4-3 Level 3 EN 61000-4-4 Level 4 EN 61000-4-5 Level 4 EN 61000-4-11 Level 2 IEC 60068-2-6 (Vibration sinusoidal), 5-17.8 Hz: ±1.6 mm, 17.8-500 Hz: 2 g 2 hours / axis (X,Y,Z) IEC 60068-2-27 (Shock), 30 g 6 ms, 20 g 11 ms, 3 bumps / direction, 18 bumps total

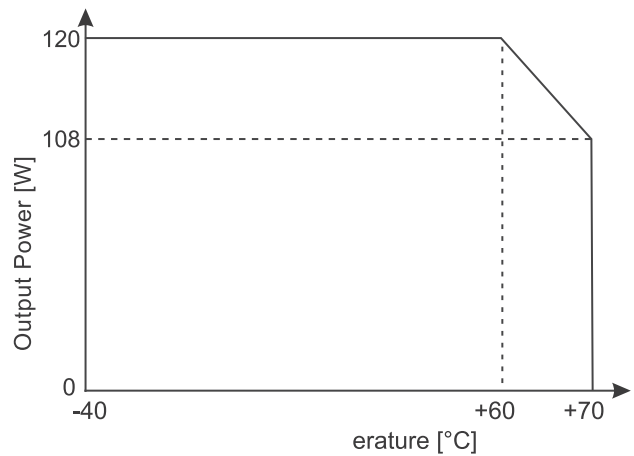
Dimensions



PIN assignment



Derating



Technical data sheet

Power supply · Compact Economy, 240 W

Primary switchmode power supply, PFC, Single-phase

Input: AC 90–132 V, AC 187–264 V, DC 270–345 V

Output: DC 24 V, 10 A



Identification

Type	CPSB1-240-24E
Part No.	723600

Product version

Datasheet version	01
-------------------	----

Input

Number of phases	1
Rated voltage U_N	AC 120/240 V (manual)
Operation voltage range	AC 90–132 V / AC 187–264 V / DC 270–345 V
Frequency range	47 Hz – 63 Hz
Rated current I_N	4 A @ AC 120 V / 2 A @ AC 240 V
Inrush current	<40 A
Internal fuse	T6,3 A / AC 250 V
External protection	Mini-circuit breaker: C 10 A / Safety fuse: T 10 A
Power factor correction P.F.C.	>0.6

Output

Output voltage/current	DC 24 V/10 A
Rated voltage U_N	DC 24 V
Rated current I_N	10 A
Max. output current	13.5 A, 30 s
Power Dissipation	<35 W
Setting range $U_{out\ min.}/U_{out\ max.}$	DC 23–27.5 V
Load regulation	<1 %

Technical data sheet

Power supply · Compact Economy, 240 W

Ripple and noise	<100 mV pp
Hold up time	>60 ms @ AC 120 V / >70 ms @ AC 240 V
Parallel / redundant mode	Yes/via external decoupling diode e.g. 722999
Efficiency	>87 %
Overtemperature protection	Yes
Over voltage protection	>DC 33 V ($U_A=24$ V)
Short circuit	Hiccup Mode

Status indication

Status indication DC ON LED green	≥ 21.6 V
Status indication DC LOW LED red	≤ 21.6 V

Monitoring

DC ON Control (Rdy)	N/O contact
Switching voltage	AC 300 V / DC 150 V
Switching current	AC/DC 1 A
Switching capacity	300 VA / 30 W
Isolation voltage	AC 500 V

General

Insulation voltage input / output	DC 4.2 kV
Insulation voltage input / ground	DC 2.2 kV
Insulation voltage output / ground	DC 750 V
Derating	>60 °C: -5 W/°C
Cooling	Air convection, 50 mm distance top/bottom, 20 mm side
Housing material	Aluminum
Mounting	DIN rail mountable TS35 (EN 60715)
Installation position	Vertical
Degree of protection	IP20 (IEC 529 / EN 60529)
Weight/unit	0.75 kg
Connection type	Screw terminal Plug-in 0.20 mm ² – 2.5 mm ² AWG 24 – AWG 14
Strip length	6.0 mm / 0.24 in
Screwdriver	3,0 × 0,5 mm
Tightening torque	0.5 – 0.6 Nm / 4.42 – 5.30 lbf in
Connection type	Connector with screws: 2.5 mm ² (AWG 24–12)
Dimensions (w × h × d)	63.0 mm × 140.0 mm × 139.0 mm
PU (units)	1

up to +50 °C)

Technical data sheet

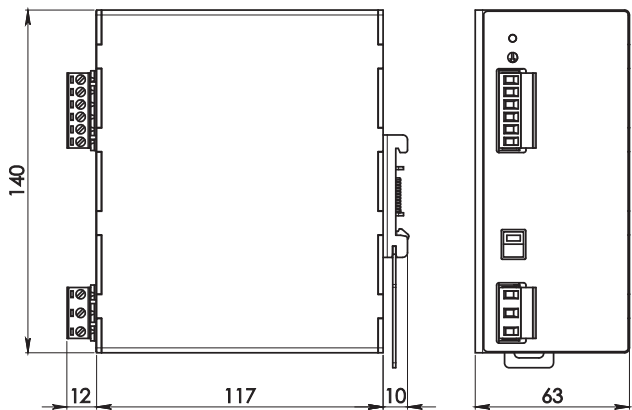
Power supply · Compact Economy, 240 W

Over voltage category	III
Degree of pollution	2

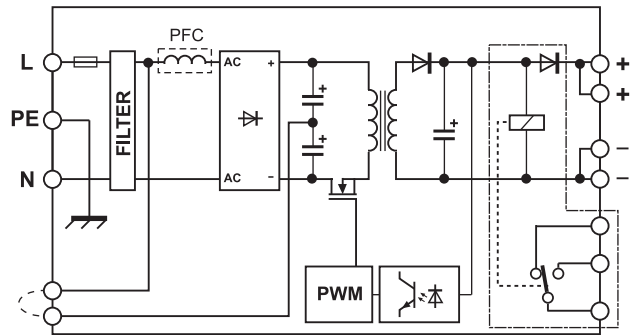
Certifications/Standards

Certifications	CE UKCA cULus (E249179)
Standards	UL 508 IEC/EN 61010-1 IEC/EN 61010-2-201 IEC/EN 60950 EN 55011 (CISPR11) Class A EN 55022 (CISPR22) Class A EN 61000-4-3 Level 3 EN 61000-4-2 Level 3 EN 61000-4-4 Level 3 EN 61000-4-5 Level 3 EN 61000-4-11 Level 2 IEC 60068-2-6 (Vibration sinuosoidal), 5-17.8 Hz: ±1.6 mm, 17.8-500 Hz: 2 g 2 hours / axis (X,Y,Z) IEC 60068-2-27 (Shock), 30 g 6 ms, 20 g 11 ms, 3 bumps / direction, 18 bumps total

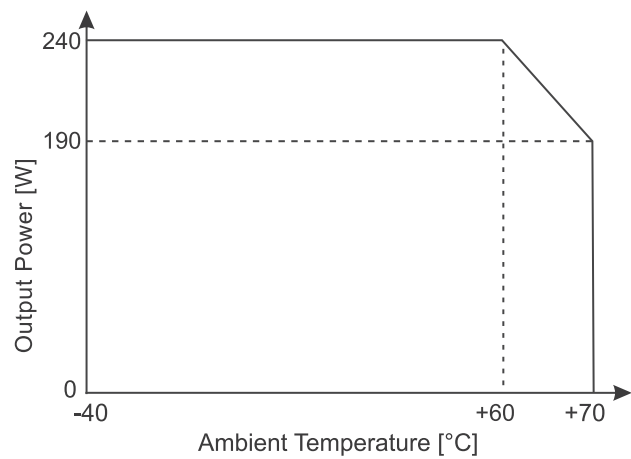
Dimensions



PIN assignment

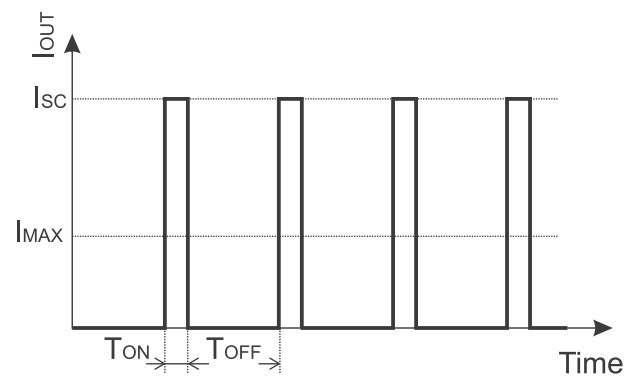


Derating



Short circuit characteristics

Hiccup



Technical data sheet

Power supply · Compact Ultra, 240 W

Primary switchmode power supply, PFC

Input: AC 90–264 V, DC 110–345 V

Output: DC 24 V, 10 A



Identification

Type	CPS2B1-240-24
Part No.	723601

Product version

Datasheet version	01
-------------------	----

Use/Application/Properties

Properties	• High efficiency and extremely compact dimensions • Only 40 mm wide aluminium housing • Active PFC (Power factor correction) • Overload 150 % • Constant current or hiccup mode, user definable • Wide output voltage range • Easy to connect in parallel to increase performance • Up to 70 °C operating temperature without derating
------------	---

Input

Number of phases	1
Rated voltage U_N	AC 120/240 V (UL certified)
Operation voltage range	AC 90–264 V / DC 110–345 V
Frequency range	47 Hz – 63 Hz
Rated current I_N	2.4 A @ AC 120 V / 1.2 A @ AC 240 V
Inrush peak current	≤34 A / 0.66 A ² s
Internal fuse	T6,3 A (non-replaceable)
External protection	Mini-circuit breaker: C 10 A / Safety fuse: T 10 A
Power factor correction P.F.C.	>0,90, enabled

Technical data sheet

Power supply · Compact Ultra, 240 W

Output

Output voltage/current	DC 24 V/10 A
Rated voltage U_N	DC 24 V
Rated current I_N	10 A
Overload limit in constant current mode	11 A
Max. output current	15 A, 5 s @ Hiccup Mode
Power Dissipation	<19 W
Setting range $U_{out\ min.}/U_{out\ max.}$	DC 22–29 V
Load regulation	$\leq 1\%$
Ripple and noise	$\leq 260\text{ mV pp}$
Hold up time	$\geq 20\text{ ms}$ @ AC 240 V
Parallel / redundant mode	Yes/via external decoupling diode e.g. Part-No. 722999 NOTE: Be sure to set the current limiting mode jumper when connecting multiple devices in parallel.
Efficiency	>93 % @ AC 240 V
Overtemperature protection	Yes
Over voltage protection	$\geq$ DC 33 V
Short circuit	Hiccup Mode, Constant current (C.C.)

Status indication

Status indication DC ON LED green	$\geq 21.6\text{ V}$
Status indication DC LOW LED red	$\leq 21.6\text{ V}$

Monitoring

DC ON Control (Rdy)	N/O contact
Switching voltage	AC/DC 300 V / DC 150 V
Switching current	AC/DC 1 A
Switching capacity	300 VA / 30 W
Isolation voltage	AC 500 V

General

Insulation voltage input / output	DC 4.2 kV, 1 min.
Insulation voltage input / ground	DC 2.2 kV, 1 min.
Insulation voltage output / ground	DC 750 V, 1 min.
Derating	No derating
Cooling	Air convection, 100 mm distance top/bottom, 20 mm side
Housing material	Aluminum
Mounting	DIN rail mountable TS35 (EN 60715)

h at 25 °C ambient full load

Technical data sheet

Power supply · Compact Ultra, 240 W

Connection type	Screw terminal 0,20 mm ² – 2,5 mm ² / AWG 24–14
Strip length	6.0 - 7.5 mm / 0.24 - 0.30 in
Screwdriver	3,0 × 0,5 mm
Tightening torque	0.5 – 0.6 Nm / 4.42 – 5.30 lbf in
Dimensions (w × h × d)	40.0 mm × 115.0 mm × 133.0 mm
PU (units)	1

General ambient conditions

Operation temperature range	-40 °C ... +70 °C UL approved up to 70 °C
Storage temperature range	-40 °C ... +80 °C
Over voltage category	III (EN 50178)
Degree of pollution	2 (IEC 60664-1)
Relative air humidity	5 – 95 %, non-condensing

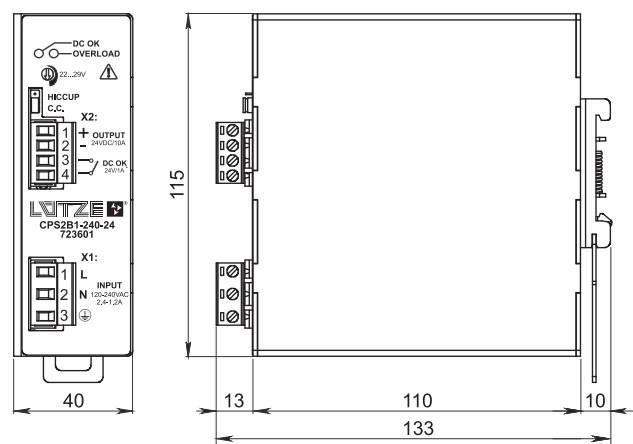
Interface

Life-cycle expectancy	221'288 h (25.2 years) at 25 °C ambient full load
-----------------------	---

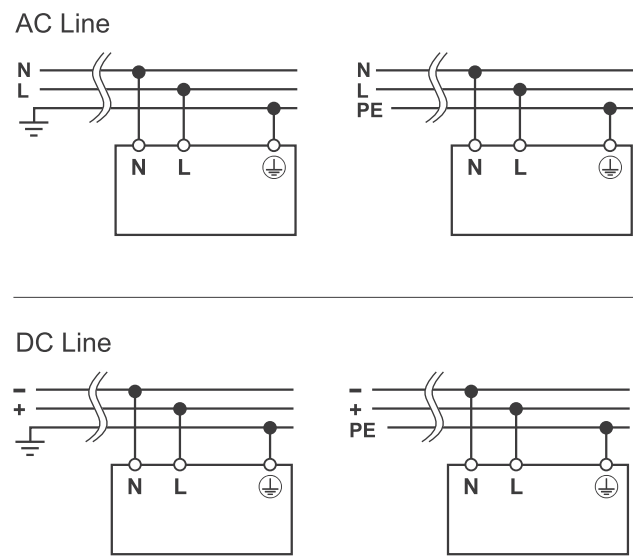
Certifications/Standards

Certifications	CE UKCA cULus (E249179)
Standards	UL 508 IEC/EN 61010-1 IEC/EN 61010-2-201 IEC/EN 60950 EN 55011 (CISPR11) Class B (EMC Emission) EN 61000-3-2 Class A EN 61000-4-2 Level 3 EN 61000-4-3 Level 3 EN 61000-4-4 Level 4 EN 61000-4-5 Level 4 EN 61000-4-11 Level 2 IEC 60068-2-6 (Vibration sinusoidal), 5-17.8 Hz: ±1.6 mm, 17.8-500 Hz: 2 g 2 hours / axis (X,Y,Z) IEC 60068-2-27 (Shock), 30 g 6 ms, 20 g 11 ms, 3 bumps / direction, 18 bumps total

Dimensions

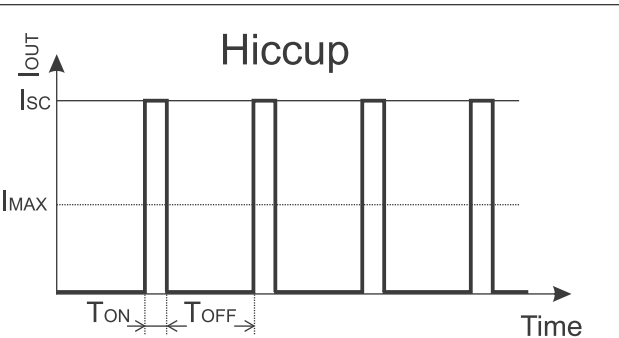
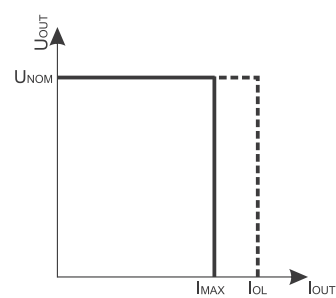


PIN assignment



Short circuit characteristics

C.C.



Technical data sheet

Power supply · Compact Economy, 240 W

Primary switchmode power supply, PFC, Single-phase

Input: AC 90–132 V, AC 187–264 V, DC 270–345 V

Output: 12 V, 16 A



Identification

Type	CPSB1-240-12E
Part No.	723610

Product version

Datasheet version	00
-------------------	----

Input

Number of phases	1
Rated voltage U_N	AC 120/240 V (manual)
Operation voltage range	AC 90–132 V / AC 187–264 V / DC 270–345 V
Frequency range	47 Hz – 63 Hz
Rated current I_N	4 A @ AC 120 V / 2 A @ AC 240 V
Inrush current	≤ 32 A / 1.18 A ² s
Internal fuse	T6,3 A / AC 250 V
External protection	Mini-circuit breaker: C 10 A / Safety fuse: T 10 A
Power factor correction P.F.C.	>0.6

Output

Output voltage/current	DC 12 V/16 A
Rated voltage U_N	DC 12 V
Rated current I_N	DC 16 ... 14 A
Max. output current	DC 19 ... 16 A, 30 s
Power Dissipation	<36.5 W ... <34.5 W
Setting range $U_{out\ min.}/U_{out\ max.}$	DC 12–15 V
Load regulation	<1.5 %

Technical data sheet

Power supply · Compact Economy, 240 W

Ripple and noise	<150 mV pp
Hold up time	≥60 ms @ AC 120 V / ≥70 ms @ AC 240 V
Parallel / redundant mode	Yes/via external decoupling diode e.g. 722999
Efficiency	>84 % ... >86 %
Overtemperature protection	Yes
Over voltage protection	≥DC 18 V (U _A =12 V)
Short circuit	Hiccup Mode

Status indication

Status indication DC ON LED green	≥10.8 V
Status indication DC LOW LED red	≤10.8 V

Monitoring

DC ON Control (Rdy)	N/O contact
Switching voltage	AC 300 V / DC 150 V
Switching current	AC/DC 1 A
Switching capacity	300 VA / 30 W
Isolation voltage	AC 500 V

General

Insulation voltage input / output	DC 4.2 kV
Insulation voltage input / ground	DC 2.2 kV
Insulation voltage output / ground	DC 750 V
Derating	>60 °C: -5 W/°C
Cooling	Air convection, 50 mm distance top/bottom, 20 mm side
Housing material	Aluminum
Mounting	DIN rail mountable TS35 (EN 60715)
Installation position	Vertical
Degree of protection	IP20 (IEC 529 / EN 60529)
Weight/unit	0.75 kg
Connection type	Screw terminal Plug-in 0.20 mm ² – 2.5 mm ² AWG 24 – AWG 14
Strip length	6.0 mm / 0.24 in
Screwdriver	3,0 × 0,5 mm
Tightening torque	0.5 – 0.6 Nm / 4.42 – 5.30 lbf in
Connection type	Connector with screws: 2.5 mm ² (AWG 24–12)
Dimensions (w × h × d)	63.0 mm × 140.0 mm × 139.0 mm
PU (units)	1

up to +50 °C)

Technical data sheet

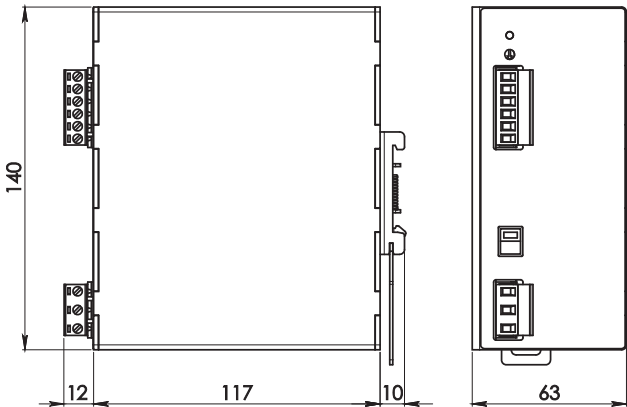
Power supply · Compact Economy, 240 W

Over voltage category	III
Degree of pollution	2

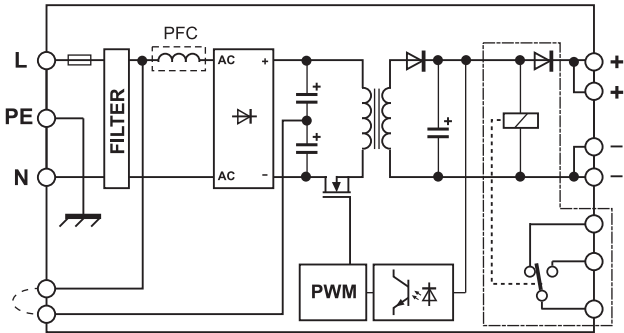
Certifications/Standards

Certifications	CE UKCA cULus (E249179)
Standards	UL 508 IEC/EN 61010-1 IEC/EN 61010-2-201 IEC/EN 60950 EN 55011 (CISPR11) Class A EN 55022 (CISPR22) Class A EN 61000-4-3 Level 3 EN 61000-4-2 Level 3 EN 61000-4-4 Level 3 EN 61000-4-5 Level 3 EN 61000-4-11 Level 2 IEC 60068-2-6 (Vibration sinuosoidal), 5-17.8 Hz: ±1.6 mm, 17.8-500 Hz: 2 g 2 hours / axis (X,Y,Z) IEC 60068-2-27 (Shock), 30 g 6 ms, 20 g 11 ms, 3 bumps / direction, 18 bumps total

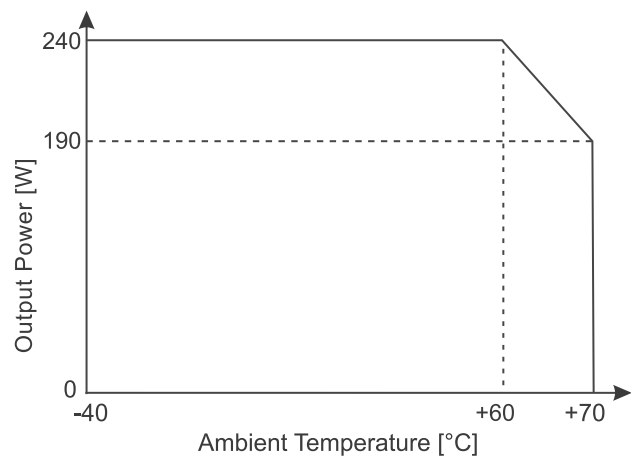
Dimensions



PIN assignment

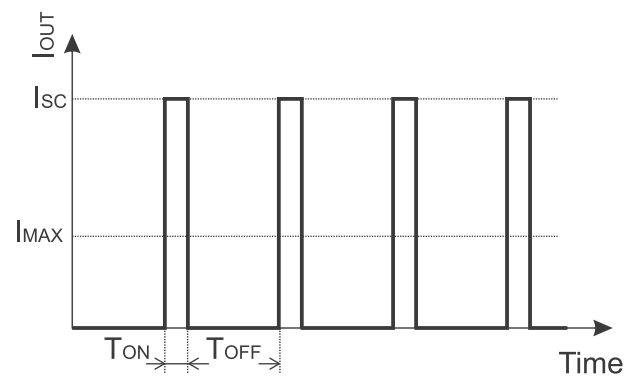


Derating



Short circuit characteristics

Hiccup



Technical data sheet

Power supply · Compact Ultra, 240 W

Primary switchmode power supply, PFC

Input: AC 90–264 V, DC 110–345 V

Output: DC 48 V, 5 A



Identification

Type	CPS2B1-240-48
Part No.	723621

Product version

Datasheet version	01
-------------------	----

Use/Application/Properties

Properties	• High efficiency and extremely compact dimensions • Only 40 mm wide aluminium housing • Active PFC (Power factor correction) • Overload 150 % • Constant current or hiccup mode, user definable • Wide output voltage range • Easy to connect in parallel to increase performance • Up to 70 °C operating temperature without derating
------------	---

Input

Number of phases	1
Rated voltage U_N	AC 120/240 V (UL certified)
Operation voltage range	AC 90–264 V / DC 110–345 V
Frequency range	47 Hz – 63 Hz
Rated current I_N	2.4 A @ AC 120 V / 1.2 A @ AC 240 V
Inrush peak current	≤34 A / 0.66 A ² s
Touch current (leakage current)	≤0.6 mA
Internal fuse	T6,3 A (non-replaceable)
External protection	10AT or MCB 10A C-curve

Technical data sheet

Power supply · Compact Ultra, 240 W

Power factor correction P.F.C. >0,90, enabled

Output

Output voltage/current	DC 48 V/5 A
Rated voltage U_N	DC 48 V
Rated current I_N	5 A
Overload limit in constant current mode	7 A
Max. output current	8.5 A, 5 s @ Hiccup Mode
Power Dissipation	<17 W
Setting range $U_{out\ min.}/U_{out\ max.}$	DC 45–55 V
Load regulation	≤1 %
Ripple and noise	≤400 mV pp
Hold up time	≥20 ms @ AC 240 V
Parallel / redundant mode	Yes/via external decoupling diode e.g. Part-No. 722999 NOTE: Be sure to set the current limiting mode jumper when connecting multiple devices in parallel.
Efficiency	>93.5 % @ AC 240 V
Overtemperature protection	Yes
Over voltage protection	≥DC 68 V
Short circuit	Adjustable: Hiccup, C.C. Mode

Status indication

Status indication DC ON LED green	≥43.2 V
Status indication DC LOW LED red	≤43.2 V

Monitoring

DC ON Control (Rdy)	N/O contact
Switching voltage	AC/DC 300 V / DC 150 V
Switching current	AC/DC 1 A
Switching capacity	300 VA / 30 W
Isolation voltage	AC 500 V

General

Insulation voltage input / output	DC 4.2 kV, 1 min.
Insulation voltage input / ground	DC 2.2 kV, 1 min.
Insulation voltage output / ground	DC 750 V, 1 min.
Derating	No derating
Cooling	Air convection, 100 mm distance top/bottom, 20 mm side
Housing material	Aluminum

h at 25 °C ambient full load

Technical data sheet

Power supply · Compact Ultra, 240 W

Protection class	I
Weight/unit	0.75 kg
Connection type	Screw terminal 0,20 mm ² – 2,5 mm ² / AWG 24–14
Strip length	6.0 - 7.5 mm / 0.24 - 0.30 in
Screwdriver	3,0 × 0,5 mm
Tightening torque	0.5 – 0.6 Nm / 4.42 – 5.30 lbf in
Dimensions (w × h × d)	40.0 mm × 115.0 mm × 133.0 mm
PU (units)	1

General ambient conditions

Operation temperature range	-40 °C ... +70 °C UL approved up to 70 °C
Storage temperature range	-40 °C ... +80 °C
Over voltage category	III (EN 50178)
Degree of pollution	2 (IEC 60664-1)
Relative air humidity	5 – 95 %, non-condensing

Interface

Life-cycle expectancy	221'288 h (25.2 years) at 25 °C ambient full load
-----------------------	---

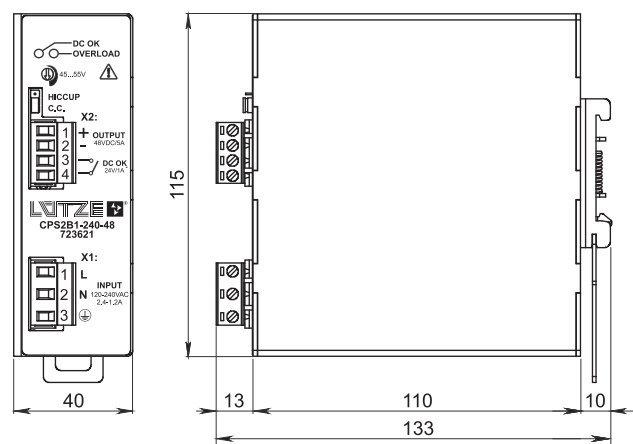
Certifications/Standards

Certifications	CE UKCA cULus (E249179)
Standards	UL 508 IEC/EN 61010-1 IEC/EN 60950 IEC/EN 61010-2-201 EN 55011 (CISPR11) Class B (EMC Emission) EN 61000-3-2 Class A EN 55022 (CISPR22) Class B (EMC Emission) EN 61000-4-2 Level 3 EN 61000-4-3 Level 3 EN 61000-4-4 Level 4 EN 61000-4-5 Level 4 EN 61000-4-11 Level 2 IEC 60068-2-6 (Vibration sinusoidal), 5-17.8 Hz: ±1.6 mm, 17.8-500 Hz: 2 g 2 hours / axis (X,Y,Z) IEC 60068-2-27 (Shock), 30 g 6 ms, 20 g 11 ms, 3 bumps / direction, 18 bumps total

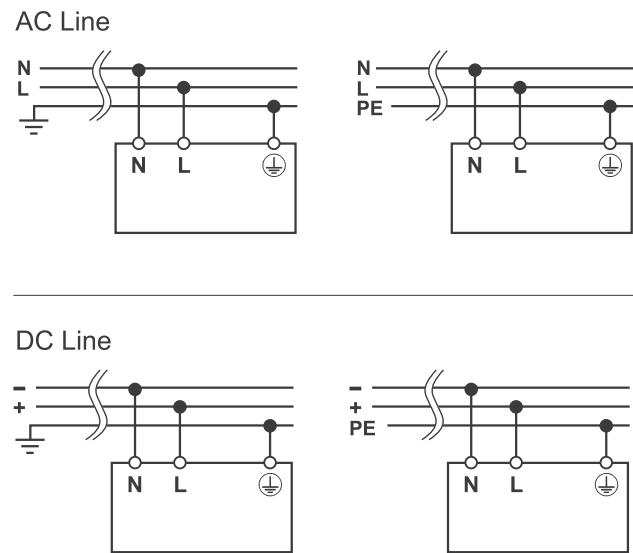
Technical data sheet

Power supply · Compact Ultra, 240 W

Dimensions

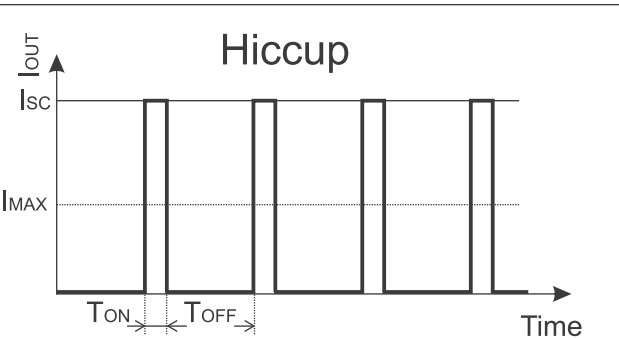
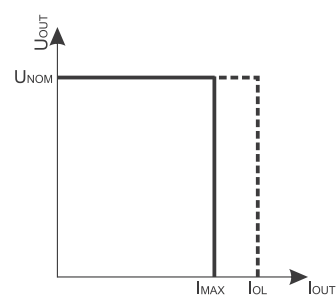


PIN assignment



Short circuit characteristics

C.C.



Technical data sheet

Power supply · Compact Ultra, 480 W

Primary switchmode power supply, PFC

Input: AC 90–264 V, DC 110–345 V

Output: DC 24 V, 20 A



Identification

Type	CPS2B1-480-24
Part No.	723700

Product version

Datasheet version	03
-------------------	----

Use/Application/Properties

Properties	• High efficiency and extremely compact dimensions • Only 56 mm wide aluminium housing • Active PFC (Power factor correction) • Overload 150 % • Constant current or hiccup mode, user definable • Wide output voltage range • Easy to connect in parallel to increase performance • Up to 60 °C operating temperature without derating
------------	---

Input

Number of phases	1
Rated voltage U_N	AC 120/240 V (UL certified)
Operation voltage range	AC 90 - 264 V / DC 110 - 345 V (UL not evaluated)
Frequency range	47 Hz – 63 Hz
Rated current I_N	4.8 A @ AC 120 V / 2.4 A @ AC 240 V
Inrush peak current	≤ 23 A / 0.56 A ² s
Internal fuse	8 AT (non-replaceable)
External protection	Mini-circuit breaker: C 10 A / Safety fuse: T 10 A
Power factor correction P.F.C.	>0,90, enabled

Technical data sheet

Power supply · Compact Ultra, 480 W

Output

Output voltage/current	DC 24 V/20 A
Rated voltage U_N	DC 24 V
Rated current I_N	20 A
Overload limit in constant current mode	21 A
Max. output current	30 A, max. 5 s @ Hiccup Mode 21 A @ CC Mode
Power Dissipation	<36.5 W
Setting range $U_{out\ min.}/U_{out\ max.}$	DC 22–29 V
Load regulation	<1.5 %
Ripple and noise	<150 mV pp
Hold up time	>25 ms @ AC 240 V
Parallel / redundant mode	Yes/via external decoupling diode e.g. Part-No. 722999 NOTE: Be sure to set the current limiting mode jumper when connecting multiple devices in parallel.
Efficiency	>93 % @ AC 240 V
Overtemperature protection	Yes
Over voltage protection	≥DC 33 V
Short circuit	Adjustable: Hiccup, C.C. Mode

Status indication

Status indication DC ON LED green	≥21.6 V
Status indication DC LOW LED red	≤21.6 V

Monitoring

DC ON Control (Rdy)	N/O contact
Switching voltage	AC/DC 300 V / DC 150 V
Switching current	AC/DC 1 A
Switching capacity	300 VA / 30 W
Isolation voltage	AC 500 V

General

Insulation voltage input / output	DC 4.2 kV, 1 min.
Insulation voltage input / ground	DC 2.2 kV, 1 min.
Insulation voltage output / ground	DC 750 V, 1 min.
Derating	>50 °C: -10 W/°C @ AC 100 V >50 °C: -7.6 W/°C @ AC 120 V >60 °C: -7.2 W/°C @ AC 240 V (UL not evaluated)

distance top/bottom, 20 mm side

h at 25 °C ambient full load

Technical data sheet

Power supply · Compact Ultra, 480 W

Degree of protection	IP20 (IEC 529 / EN 60529)
Protection class	I
Weight/unit	1.1 kg
Connection type	Screw terminal 0,20 mm ² – 2,5 mm ² / AWG 24–14
Strip length	6.0 - 7.5 mm / 0.24 - 0.30 in
Screwdriver	3,0 × 0,5 mm
Tightening torque	0.5 – 0.6 Nm / 4.42 – 5.30 lbf in
Dimensions (w × h × d)	56.0 mm × 140.0 mm × 139.0 mm
PU (units)	1

General ambient conditions

Operation temperature range	-40 °C ... +70 °C UL certified up to +50 °C @ AC 100 V UL certified up to +50 °C @ AC 120 V UL certified up to +60 °C @ AC 240 V UL certified up to 2000 m
Storage temperature range	-40 °C ... +80 °C
Over voltage category	III (EN 50178)
Degree of pollution	2 (IEC 60664-1)
Relative air humidity	5 – 95 %, non-condensing

Interface

Life-cycle expectancy	167'953 h (19.1 years) at 25 °C ambient full load
-----------------------	---

Certifications/Standards

Certifications	CE UKCA cULus (E249179)
----------------	-------------------------------

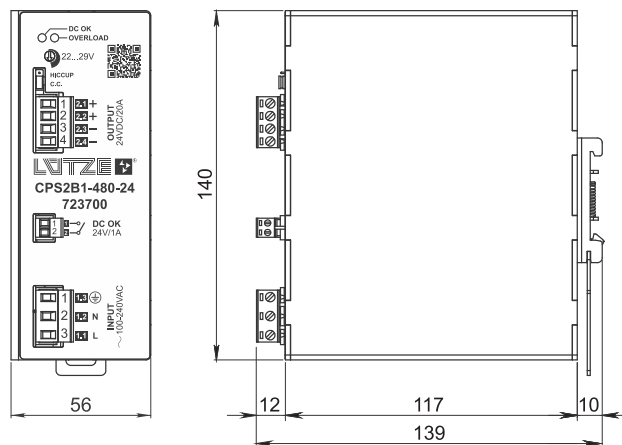
Technical data sheet

Power supply · Compact Ultra, 480 W

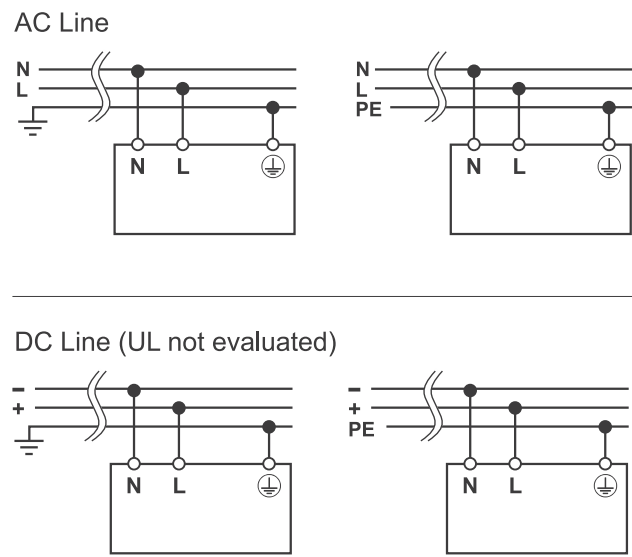
Standards

UL 508 (Certified - IND. CONT. EQ. 4WX9 file no. E356563)
2014/30/EU (EMC directive)
2014/35/EU (Low Voltage Directive)
EN61010-1 (Safety Standard)
EN61010-2-201 (Safety Standard)
UL 61010-1 (Certified - IND. CONT. EQ. 4WX9 file no. E356563)
UL 61010-2-201 (Certified - IND. CONT. EQ. 4WX9 file no. E356563)
EN61000-6-2 (Generic immunity standard for industrial environments)
- EN61000-4-2 (Electrostatic discharge immunity test)
- EN61000-4-3 (Radiated, radio-frequency, electromagnetic field immunity test)
- EN61000-4-4 (Electrical fast transient/burst immunity test)
- EN61000-4-5 (Surge immunity test)
- EN61000-4-6 (Immunity to conducted disturbances, induced by radio-frequency fields test)
- EN61000-4-8 (Power frequency magnetic field immunity test)
- EN61000-4-11 (Voltage dips, short interruptions and voltage immunity test)
EN61000-6-3 (Generic emission standard for residential environments)
- EN55011 (CISPR11 - EMC)
- EN61000-3-2 (Limits for harmonics current emissions)
- EN61000-3-3 (Limitation of voltage fluctuations and flicker in low-voltage supply systems for equipment with rated current $\leq 16A$)
IEC/EN 61010-1
IEC/EN 61010-2-201
IEC/EN 60950
EN 55011 (CISPR11) Class B (EMC Emission)
EN 61000-3-2 Class A
IEC 60068-2-6 (Vibration sinusoidal), 5-17.8 Hz: ± 1.6 mm, 17.8-500 Hz: 2 g
2 hours / axis (X,Y,Z)
IEC 60068-2-27 (Shock), 30 g 6 ms, 20 g 11 ms, 3 bumps / direction,
18 bumps total

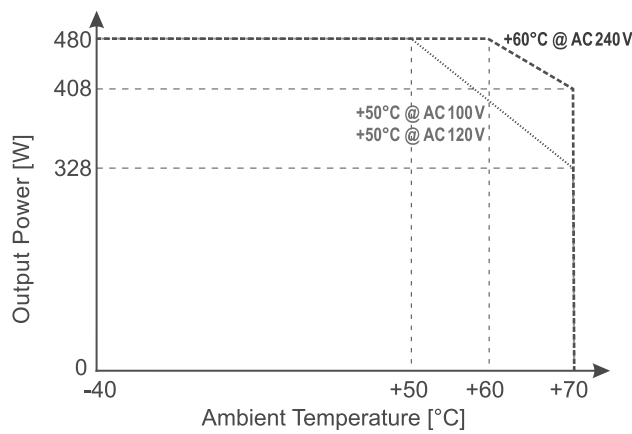
Dimensions



PIN assignment

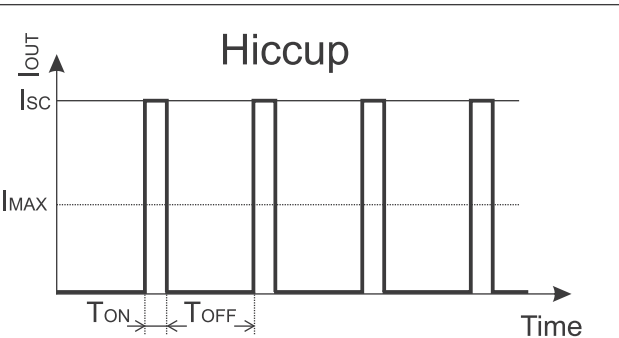
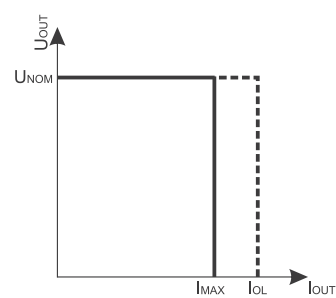


Derating



Short circuit characteristics

C.C.



Technical data sheet

Power supply · Compact Economy, 480 W

Primary switchmode power supply, PFC, Single-phase

Input: AC 187–264 V, DC 250–375 V

Output: DC 24 V, 20 A



Identification

Type	CPSB1-480-24E
Part No.	723701

Product version

Datasheet version	01
-------------------	----

Use/Application/Properties

Properties	• High efficiency and extremely compact dimensions • Only 73 mm wide aluminium housing • Active PFC (Power factor correction) • Overload 150 % • Constant current or hiccup mode, user definable • Easy to connect in parallel to increase performance • Up to 45 °C operating temperature without derating
------------	---

Input

Number of phases	1
Rated voltage U_N	AC 200–240 V (UL certified)
Operation voltage range	AC 187–264 V / DC 250–375 V
Frequency range	47 Hz – 63 Hz
Rated current I_N	2.9 A @ AC 200 V / 2.5 A @ AC 240 V
Inrush peak current	≤ 29 A / 0.61 A ² s
Touch current (leakage current)	≤ 0.5 mA
Internal fuse	No internal fuse, an external fuse must be provided.
External protection	6,3AT or MCB 6A C-curve or 4A D-curve
Power factor correction P.F.C.	>0,90, enabled

Technical data sheet

Power supply · Compact Economy, 480 W

Output

Output voltage/current	DC 24 V/20 A
Rated voltage U_N	DC 24 V
Rated current I_N	20 A
Overload limit in constant current mode	50 A
Max. output current	28 A, 5 s @ Hiccup Mode
Power Dissipation	<48 W
Setting range $U_{out\ min.}/U_{out\ max.}$	DC 23–28 V
Load regulation	$\leq 1\%$
Ripple and noise	$\leq 50\text{ mV pp}$
Hold up time	$\geq 50\text{ ms @ AC 240 V}$
Parallel / redundant mode	Yes/via external decoupling diode e.g. Part-No. 722999
Efficiency	>91 % @ AC 240 V
Overtemperature protection	Yes
Over voltage protection	$\geq \text{DC } 33\text{ V } (U_A=24\text{ V})$
Short circuit	Hiccup Mode

Status indication

Status indication DC ON LED green	$\geq 21.6\text{ V}$
Status indication DC LOW LED red	$\leq 21.6\text{ V}$

Monitoring

DC ON Control (Rdy)	N/O contact
Switching voltage	AC/DC 300 V / DC 150 V
Switching current	AC/DC 1 A
Switching capacity	300 VA / 30 W
Isolation voltage	AC 500 V

General

Insulation voltage input / output	DC 4.2 kV, 1 min.
Insulation voltage input / ground	DC 2.2 kV, 1 min.
Insulation voltage output / ground	DC 750 V, 1 min.
Derating	>45 °C: -10 W/°C @ AC 240 V
Cooling	Air convection, 100 mm distance top/bottom, 20 mm side
Housing material	Aluminum
Mounting	DIN rail mountable TS35 (EN 60715)
Installation position	Vertical

h at 25 °C ambient full load

Technical data sheet

Power supply · Compact Economy, 480 W

Strip length	6.0 - 7.5 mm / 0.24 - 0.30 in
Screwdriver	3,0 × 0,5 mm
Tightening torque	0.5 – 0.6 Nm / 4.42 – 5.30 lbf in
Dimensions (w × h × d)	73.0 mm × 140.0 mm × 149.0 mm
PU (units)	1

General ambient conditions

Operation temperature range	-40 °C ... +70 °C UL approved up to 45 °C
Storage temperature range	-40 °C ... +80 °C
Over voltage category	III (EN 50178)
Degree of pollution	2 (IEC 60664-1)
Relative air humidity	5 – 95 %, non-condensing

Interface

Life-cycle expectancy	65'496 h (7.4 years) at 25 °C ambient full load
-----------------------	---

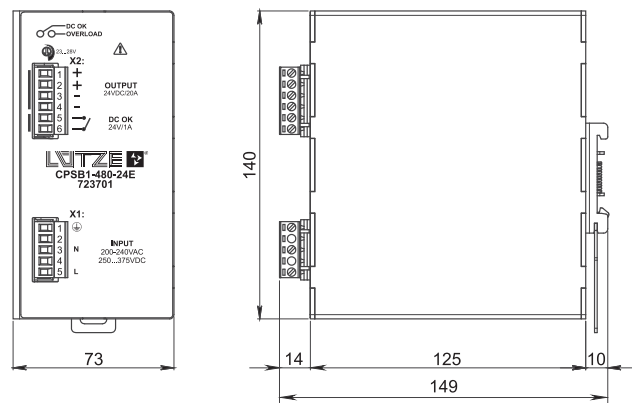
Certifications/Standards

Certifications	CE UKCA cULus (E249179)
Standards	UL 508 IEC/EN 61010-1 IEC/EN 61010-2-201 IEC/EN 60950 EN 55011 (CISPR11) Class A EN 55022 (CISPR22) Class A EN 61000-3-2 Class A EN 61000-4-2 Level 3 EN 61000-4-3 Level 3 EN 61000-4-4 Level 4 EN 61000-4-5 Level 3 EN 61000-4-11 Level 2 IEC 60068-2-6 (Vibration sinusoidal), 5-17.8 Hz: ±1.6 mm, 17.8-500 Hz: 2 g 2 hours / axis (X,Y,Z) IEC 60068-2-27 (Shock), 30 g 6 ms, 20 g 11 ms, 3 bumps / direction, 18 bumps total

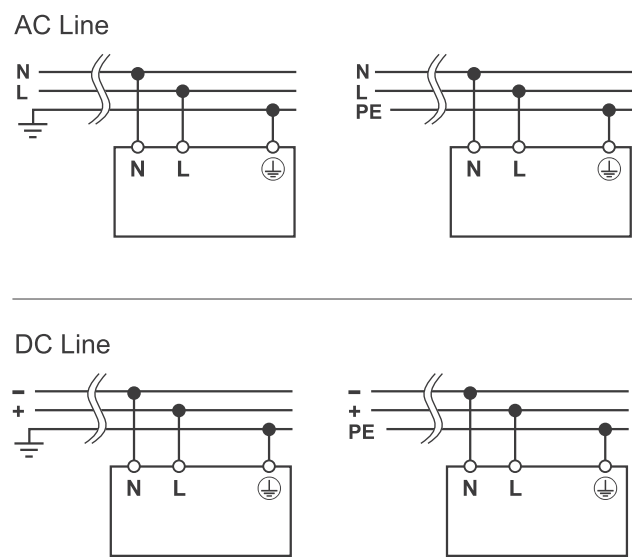
Technical data sheet

Power supply · Compact Economy, 480 W

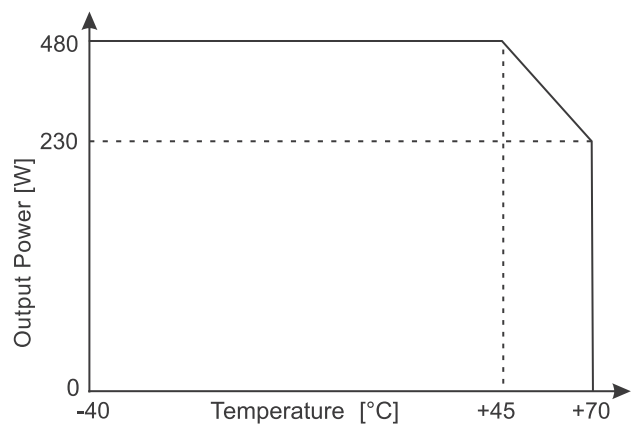
Dimensions



PIN assignment



Derating



Technical data sheet

Power supply · Compact Ultra, 480 W

Primary switchmode power supply, PFC

Input: AC 90–264 V, DC 110–345 V

Output: DC 48 V, 10 A



Identification

Type	CPS2B1-480-48
Part No.	723721

Product version

Datasheet version	03
-------------------	----

Use/Application/Properties

Properties	• High efficiency and extremely compact dimensions • Only 56 mm wide aluminium housing • Active PFC (Power factor correction) • Overload 150 % • Constant current or hiccup mode, user definable • Wide output voltage range • Easy to connect in parallel to increase performance • Up to 60 °C operating temperature without derating
------------	---

Input

Number of phases	1
Rated voltage U_N	AC 120/240 V (UL certified)
Operation voltage range	AC 90 - 264 V / DC 110 - 345 V (UL not evaluated)
Frequency range	47 Hz – 63 Hz
Rated current I_N	4.8 A @ AC 120 V / 2.4 A @ AC 240 V
Inrush peak current	≤ 23 A / 0.56 A ² s
Internal fuse	8 AT (non-replaceable)
External protection	Mini-circuit breaker: C 10 A / Safety fuse: T 10 A
Power factor correction P.F.C.	>0,90, enabled

Technical data sheet

Power supply · Compact Ultra, 480 W

Output

Output voltage/current	DC 48 V/10 A
Rated voltage U_N	DC 48 V
Rated current I_N	10 A
Overload limit in constant current mode	12 A
Max. output current	17 A, 5 s @ Hiccup Mode
Power Dissipation	<31 W
Setting range $U_{out\ min.}/U_{out\ max.}$	DC 45–55 V
Load regulation	<0.5 %
Ripple and noise	<200 mV pp
Hold up time	>25 ms @ AC 240 V
Parallel / redundant mode	Yes/via external decoupling diode e.g. Part-No. 722999 NOTE: For parallel operation, set the jumper to current limit (C.C.).
Efficiency	>94 % @ AC 240 V
Overtemperature protection	Yes
Over voltage protection	≥DC 68 V
Short circuit	Hiccup Mode, Constant current (C.C.)

Status indication

Status indication DC ON LED green	≥43.2 V
Status indication DC LOW LED red	≤43.2 V

Monitoring

DC ON Control (Rdy)	N/O contact
Switching voltage	AC/DC 300 V / DC 150 V
Switching current	AC/DC 1 A
Switching capacity	300 VA / 30 W
Isolation voltage	AC 500 V

General

Insulation voltage input / output	DC 4.2 kV, 1 min.
Insulation voltage input / ground	DC 2.2 kV, 1 min.
Insulation voltage output / ground	DC 750 V, 1 min.
Derating	>50 °C: -7.6 W/°C @ AC 120 V >60 °C: -7.2 W/°C @ AC 240 V
Cooling	Air convection, 100 mm distance top/bottom, 20 mm side
Housing material	Aluminum
Mounting	DIN rail mountable TS35 (EN 60715)

h at 25 °C ambient full load

Technical data sheet

Power supply · Compact Ultra, 480 W

Connection type	Screw terminal 0,20 mm ² – 2,5 mm ² / AWG 24–14
Strip length	6.0 - 7.5 mm / 0.24 - 0.30 in
Screwdriver	3,0 × 0,5 mm
Tightening torque	0.5 – 0.6 Nm / 4.42 – 5.30 lbf in
Dimensions (w × h × d)	56.0 mm × 140.0 mm × 139.0 mm
PU (units)	1

General ambient conditions

Operation temperature range	-40 °C ... +70 °C UL certified up to +50 °C @ AC 100 V UL certified up to +50 °C @ AC 120 V UL certified up to +60 °C @ AC 240 V UL certified up to 2000 m
Storage temperature range	-40 °C ... +80 °C
Over voltage category	III (EN 50178)
Degree of pollution	2 (IEC 60664-1)
Relative air humidity	5 – 95 %, non-condensing

Interface

Life-cycle expectancy	167'953 h (19.1 years) at 25 °C ambient full load
-----------------------	---

Certifications/Standards

Certifications	CE UKCA cULus (E249179)
----------------	-------------------------------

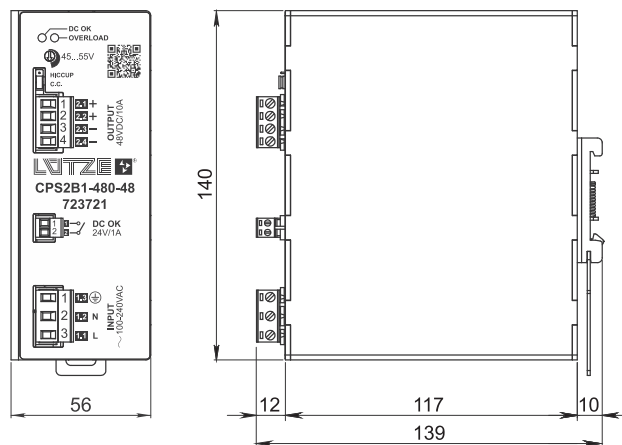
Technical data sheet

Power supply · Compact Ultra, 480 W

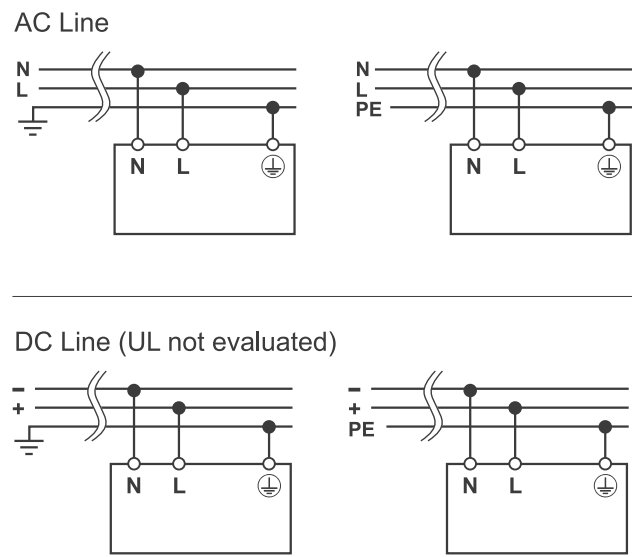
Standards

UL 508 (Certified - IND. CONT. EQ. 4WX9 file no. E356563)
2014/30/EU (EMC directive)
2014/35/EU (Low Voltage Directive)
EN61010-1 (Safety Standard)
EN61010-2-201 (Safety Standard)
UL 61010-1 (Certified - IND. CONT. EQ. 4WX9 file no. E356563)
UL 61010-2-201 (Certified - IND. CONT. EQ. 4WX9 file no. E356563)
EN61000-6-2 (Generic immunity standard for industrial environments)
- EN61000-4-2 (Electrostatic discharge immunity test)
- EN61000-4-3 (Radiated, radio-frequency, electromagnetic field immunity test)
- EN61000-4-4 (Electrical fast transient/burst immunity test)
- EN61000-4-5 (Surge immunity test)
- EN61000-4-6 (Immunity to conducted disturbances, induced by radio-frequency fields test)
- EN61000-4-8 (Power frequency magnetic field immunity test)
- EN61000-4-11 (Voltage dips, short interruptions and voltage immunity test)
EN61000-6-3 (Generic emission standard for residential environments)
- EN55011 (CISPR11 - EMC)
- EN61000-3-2 (Limits for harmonics current emissions)
- EN61000-3-3 (Limitation of voltage fluctuations and flicker in low-voltage supply systems for equipment with rated current $\leq 16A$)
IEC/EN 61010-1
IEC/EN 61010-2-201
IEC/EN 60950
EN 55011 (CISPR11) Class B (EMC Emission)
EN 61000-3-2 Class A
IEC 60068-2-6 (Vibration sinusoidal), 5-17.8 Hz: ± 1.6 mm, 17.8-500 Hz: 2 g
2 hours / axis (X,Y,Z)
IEC 60068-2-27 (Shock), 30 g 6 ms, 20 g 11 ms, 3 bumps / direction,
18 bumps total

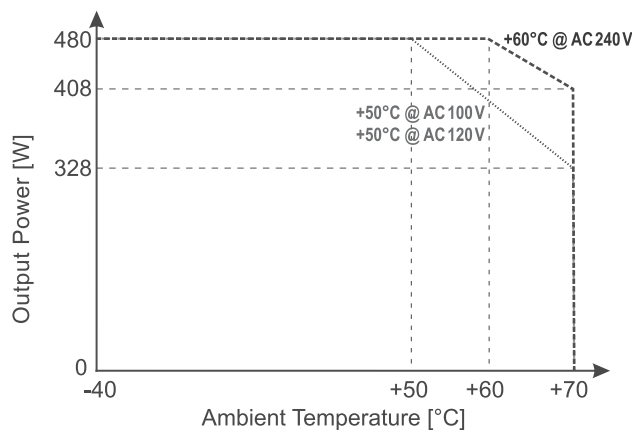
Dimensions



PIN assignment

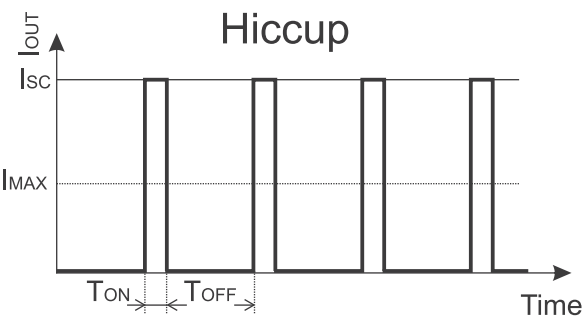
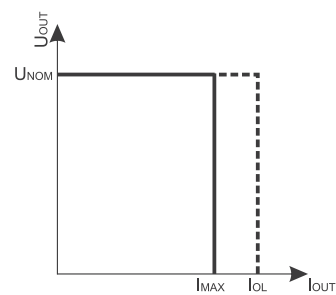


Derating



Short circuit characteristics

C.C.



Technical data sheet

Power supply · 60 W

Primary switchmode power supply, Single-phase, NEC Class 2 compliant

Input: wide-range input AC 85–264 V, DC 90–375 V

Output: DC 24 V, 2.5 A



Identification

Type	DRAN60-24
Part No.	728754

Product version

Datasheet version	00
-------------------	----

Input

Number of phases	1
Rated voltage U_N	AC 100–240 V
Operation voltage range	AC 85–264 V / DC 90–375 V
Frequency range	47 Hz – 63 Hz
Rated current I_N	1.06 A @ AC 115 V / 590 mA @ AC 230 V
Inrush current	30 A @ AC 115 V / 60 A @ AC 230 V
Internal fuse	T2A / AC 250 V
External protection	Mini-circuit breaker: B 6 A

Output

Output voltage/current	DC 24 V/2.5 A
Rated voltage U_N	DC 24 V
Rated current I_N	2.5 A
Power Dissipation	8.8 W @ AC 230 V
Setting range $U_{out\ min.}/U_{out\ max.}$	24-28 V
Accuracy	±1 %
Load regulation	±0.5 %
Line regulation	±0.5 %

Technical data sheet

Power supply · 60 W

Rise time	2 s
Temperature coefficient	±0.03 % / °C
Ripple and noise	50 mV
Hold up time	20 ms @ 115 V / 30 ms @ 230 V
Parallel / redundant mode	Max. 2 devices / via external decoupling diodes
Efficiency	89 %
Over voltage protection	125–138 %
Rated over load protection	110–150 %
Short circuit	Fold Forward

Status indication

Status indication DC ON LED green >18 V

Monitoring

DC ON Control (Rdy)	Normally open
Switching voltage	DC 24 V
Switching current	≤35 mA
Isolation voltage	None

General

Switching frequency	55 – 135 kHz
Insulation voltage input / output	DC 4.2 kV
Insulation voltage input / ground	DC 2.1 kV
Insulation voltage output / ground	DC 710 V
Insulation resistance at DC 500 V	100 MΩ
Derating	2.5 %/°C starting 61 °C
Cooling	Air convection, 25 mm clearance all-round
Housing material	Plastic
Mounting	DIN rail mountable TS35 (EN 60715)
Max. altitude operation	5000 m (EN 62368-1)
Installation position	Vertical
MTBF	520000 h
Degree of protection	IP20
Protection class	I (SELV, PELV)
Weight/unit	0.41 kg
Connection type	Spring terminal 0.20 mm ² – 2.0 mm ² AWG 24 – AWG 14
Dimensions (w × h × d)	40.5 mm × 90.0 mm × 115.0 mm

Technical data sheet

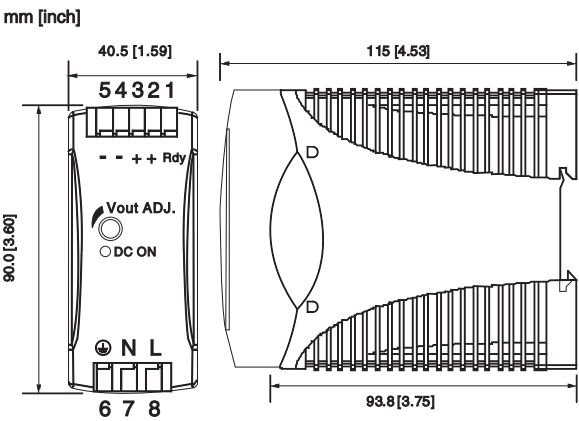
Power supply · 60 W

Over voltage category	II
Degree of pollution	2
Relative air humidity	20 – 90 % RH, not condensing

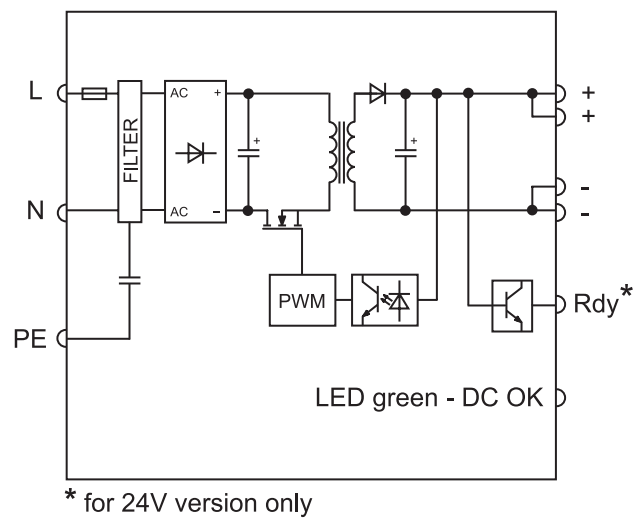
Certifications/Standards

Certifications	UL 508 Listed (E249179) UL 1310 Class 2 (E320708), (Class 1, Division 2, Groups A, B, C and D) (E350538) UL 60950-1 CE UKCA
Standards	IEC/EN 62368-1 EN 61558-1 EN 61558-2-16 EN 61000-6-3 EN 55032 Class B EN 61000-3-2 Class D EN 61000-3-3 EN 61000-6-2 EN 55024 EN 61000-4-2 Level 4 EN 61000-4-3 Level 3 EN 61000-4-4 Level 4 EN 61000-4-5 L-N Level 3 L/N-FG Level 4 EN 61000-4-6 Level 3 EN 61000-4-8 Level 4 EN 61000-4-11 ENV 50204 Level 2 EN 61204-3

Dimensions

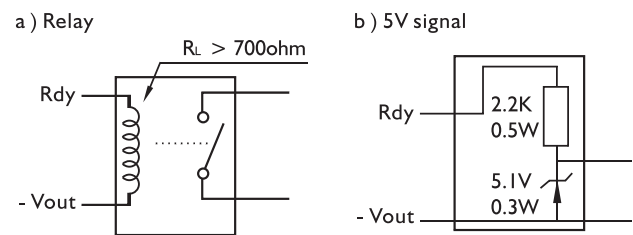


PIN assignment



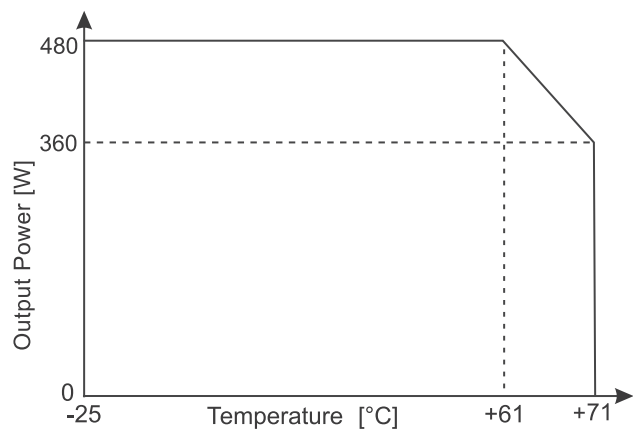
Use

Rdy connection



Note: for 24V Model only

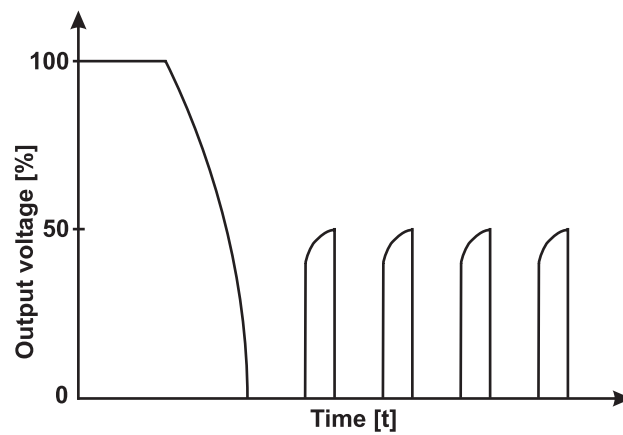
Derating



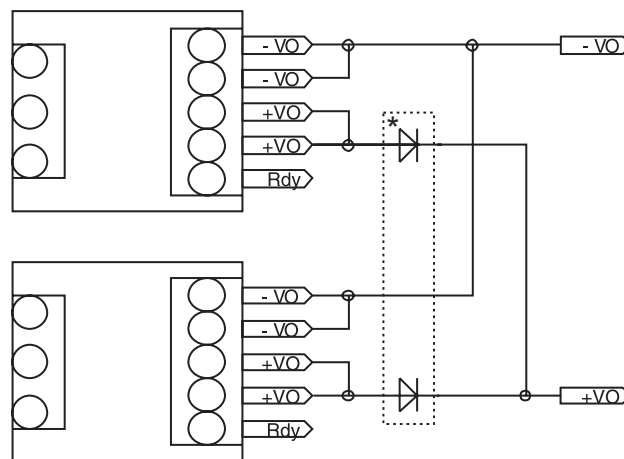
Technical data sheet

Power supply · 60 W

Short circuit characteristics



Redundant operation



* Redundant Module 722987
Only use together with 24 V version!

Technical data sheet

Power supply · 120 W

Primary switchmode power supply, PFC, Single-phase

Input: AC 90–132 V, AC 180–264 V, DC 210–375 V

Output: DC 24 V, 5 A



Identification

Type	DRAN120-24A
Part No.	728758

Product version

Datasheet version	01
-------------------	----

Input

Number of phases	1
Rated voltage U_N	AC 115 / 230 V (auto select)
Operation voltage range	AC 90–132 V / AC 180–264 V / DC 210–375 V
Frequency range	47 Hz – 63 Hz
Rated current I_N	2.2 A @ AC 115 V / 0.83 A @ AC 230 V
Inrush current	24 A @ AC 115 V / 48 A @ AC 230 V
Internal fuse	T3, 15 A/AC 250 V
External protection	Mini-circuit breaker: B 6 A
Power factor correction P.F.C.	0.7

Output

Output voltage/current	DC 24 V/5 A
Rated voltage U_N	DC 24 V
Rated current I_N	5 A
Power Dissipation	20 W @ AC 230 V
Setting range $U_{out\ min.}/U_{out\ max.}$	22.5–28.5 V
Accuracy	±1 %
Load regulation	Single ±1 %, Parallel ±5 %

Technical data sheet

Power supply · 120 W

Line regulation	±0.5 %
Rise time	500 ms
Temperature coefficient	±0.03 % / °C
Ripple and noise	50 mV
Hold up time	25 ms @ 115 V / 30 ms @ 230 V
Parallel / redundant mode	Max. 3 units at 90% load current, manual switch S/P
Efficiency	87 %
Over voltage protection	125–145 %
Rated over load protection	110–145 %
Short circuit	Fold Forward

Status indication

Status indication DC ON LED green	≥17.6–19.4 V
Status indication DC LOW LED red	≤17.6–19.4 V

Monitoring

DC ON Control (Rdy)	N/O contact
Switching voltage	DC 60 V
Switching current	Max. 300 mA
Isolation voltage	DC 500 V

General

Switching frequency	Approx. 80 kHz
Insulation voltage input / output	DC 4.2 kV
Insulation voltage input / ground	DC 2.1 kV
Insulation voltage output / ground	DC 700 V
Insulation resistance at DC 500 V	100 MΩ
Derating	Capacity: -2.5 %/°C starting at 60 °C
Cooling	Air convection, 25 mm clearance all-round
Housing material	Metal
Mounting	DIN rail mountable TS35 (EN 60715)
Max. altitude operation	5000 m (EN 62368-1)
Installation position	Vertical
MTBF	530000 h
Degree of protection	IP20
Protection class	I
Weight/unit	0.92 kg
Connection type	Screw terminal 0.20 mm ² – 4.0 mm ²

116.6 mm

Technical data sheet

Power supply · 120 W

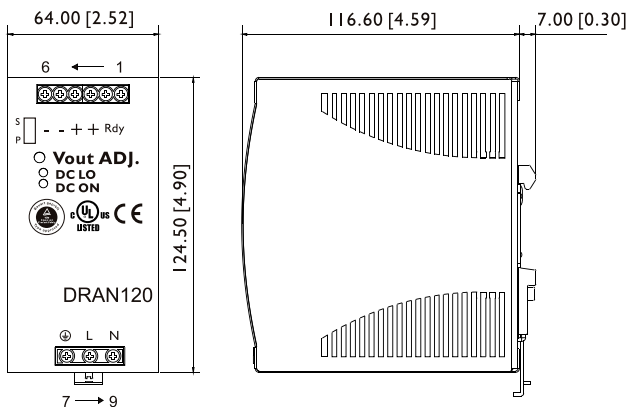
General ambient conditions

Operation temperature range	-35 °C ... +71 °C (Derating)
Storage temperature range	-40 °C ... +85 °C
Over voltage category	II
Degree of pollution	2
Relative air humidity	20 – 90 % RH, not condensing

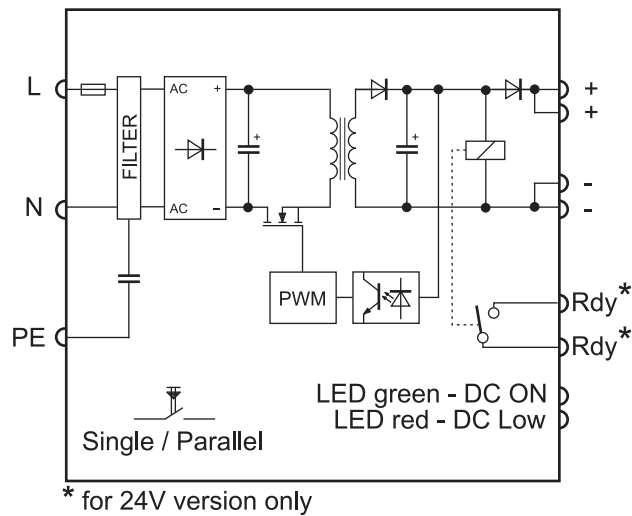
Certifications/Standards

Certifications	UL 508 Listed (E249179) UL 60950-1, (Class 1, Division 2, Groups A, B, C and D) (E350538) CE UKCA
Standards	IEC/EN 62368-1 EN 61558-1 EN 61558-2-16 EN 61000-6-3 EN 55032 Class B EN 61000-3-2 Class D EN 61000-3-3 EN 61000-6-2 EN 55024 EN 61000-4-2 Level 4 EN 61000-4-3 Level 3 EN 61000-4-4 Level 4 EN 61000-4-5 L-N Level 3 L/N-FG Level 4 EN 61000-4-6 Level 3 EN 61000-4-8 Level 4 EN 61000-4-11 ENV 50204 Level 2 EN 61204-3

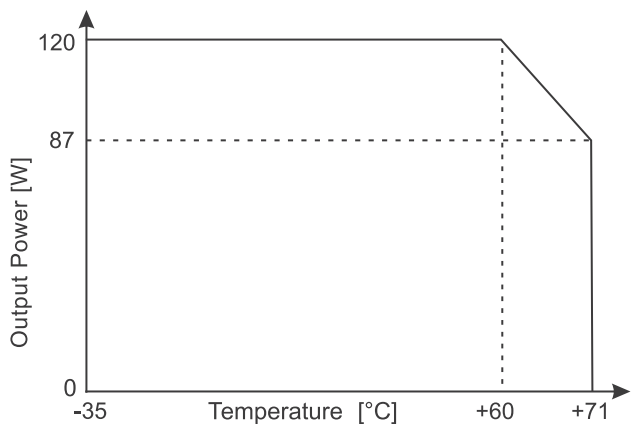
Dimensions



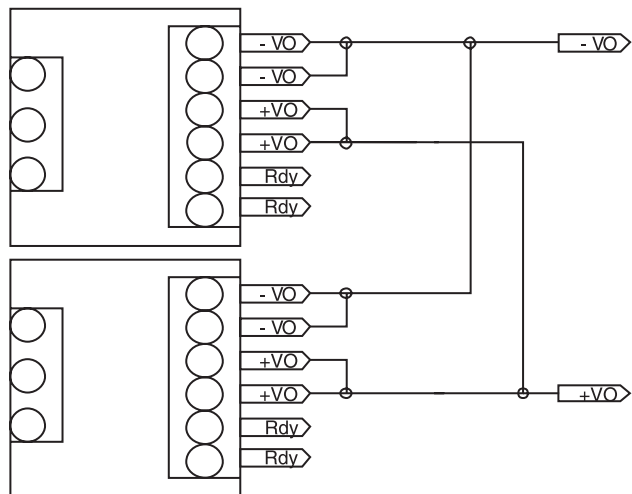
PIN assignment



Derating



Parallel/redundant mode



regulated, 50 W



Identification	Type	DRA60-05
	Part-No.	728764
Description		
Primary switchmode power supply, Single-phase, Class 2		
Input: wide-range input AC 85–264 V, DC 90–375 V		
Output: 5 V, adjustable		

Technical data sheet • Power supply

Input

Number of phases	1
Rated voltage U_N	AC 100–240 V
Operation voltage range	AC 85–264 V / DC 90–375 V
Line frequency	47 – 63 Hz
Rated current I_N	550 mA @ AC 115 V / 280 mA @ AC 230 V
Inrush current	20 A @ AC 115 V / 40 A @ AC 230 V
Internal fuse	T 2 A/AC 250 V
External fuse	Mini-circuit breaker: B 4 A, C 2 A

Output

Rated voltage U_N	DC 5.00 V
Rated current I_N	10.00 A
Heat dissipation	12.5 W @ AC 230 V
Setting range $U_{out\ min.}/U_{out\ max.}$	5.0-5.5 V
Accuracy	±1 %
Load regulation	±0.5 %
Line regulation	±0.5 %
Rise time	1 s
Temperature coefficient	±0.03 % / °C
Ripple and Noise	50 mV
Hold up time	20 ms @ 115 V / 30 ms @ 230 V
Status indication DC ON LED green	≥4 V
Parallel / redundant mode	max. 2 devices / via external decoupling diodes
Efficiency	79 %
Over voltage protection	120–136 %
Rated over load protection	110–150 %
Short circuit	Hiccup Mode

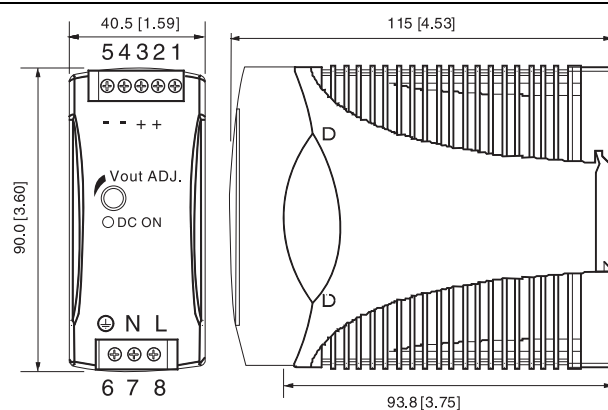
General

Switching frequency	approx. 80 kHz
Insulation voltage input / output	AC 3.0 kV _{eff}
Insulation voltage input / ground	AC 1.5 kV _{eff}
Insulation resistance at DC 500 V	100 MΩ
Derating	Capacity: -2.5 %/°C starting at 60 °C
Operation temperature range	-25 °C ... +70 °C (Derating)
Storage temperature range	-25 °C ... +85 °C
MTBF	498000 h
Relative air humidity	20 – 90 % RH, not condensing
Cooling	Air convection, 25 mm clearance all-round
Housing material	Plastic

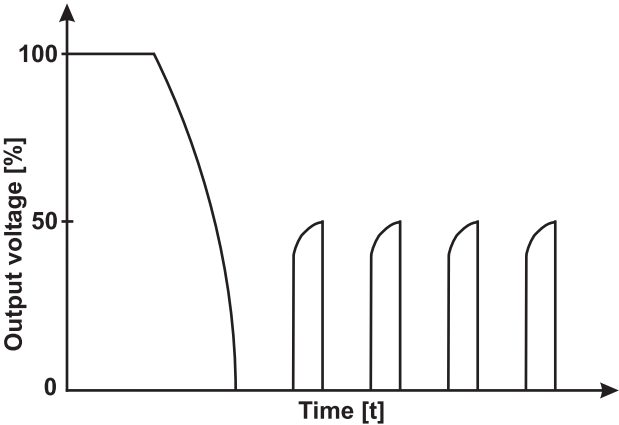
Technical data sheet • Power supply

Mounting	Can be snapped onto hat profile TS35 (EN 60715)
Application height	2000 m
Installation position	vertical
Protection class	IP20
Protection class	II (SELV, PELV)
Over voltage category	II
Degree of pollution	2
Weight	0.340 kg/piece
Connection device	Spring terminal 0.20 mm ² – 2.0 mm ²
Dimensions (w × h × d)	40.5 × 90.0 × 115.0 mm
Approvals	cULus (E249179)
Standards	UL 60950-1 EN 60950-1 EN 61000-6-3 EN 55022 Class B EN 61000-3-2 EN 61000-3-3 EN 55024 EN 61000-6-2 EN 61000-4-2 EN 61000-4-3 EN 61000-4-4 EN 61000-4-5 EN 61000-4-6 EN 61000-4-8 EN 61000-4-11
PU	1 Quantity

Dimensions



Short circuit characteristics



Technical data sheet · Power supply

regulated, 30 W



Identification	Type	DRA30-12
	Part-No.	728768
Description		
Primary switchmode power supply, Single-phase, Class 2		
Input: wide-range input AC 85–264 V, DC 90–375 V		
Output: DC 12 V, adjustable		

Technical data sheet · Power supply

Input

Number of phases	1
Rated voltage U_N	AC 100–240 V
Operation voltage range	AC 85–264 V / DC 90–375 V
Line frequency	47 – 63 Hz
Rated current I_N	360 mA @ AC 115 V / 190 mA @ AC 230 V
Inrush current	20 A @ AC 115 V / 40 A @ AC 230 V
Internal fuse	2 A Typ-T AC 250 V
External fuse	Mini-circuit breaker: B 4 A

Output

Rated voltage U_N	DC 12 V
Rated current I_N	2.5 A
Heat dissipation	5.6 W @ AC 230 V
Setting range $U_{out\ min.}/U_{out\ max.}$	12-14 V
Accuracy	$\pm 1\ %$
Load regulation	$\pm 0.5\ %$
Line regulation	$\pm 0.5\ %$
Rise time	1 s
Temperature coefficient	$\pm 0.03\ % / ^\circ C$
Ripple and Noise	<50 mV
Hold up time	20 ms @ 115 V / 30 ms @ 230 V
Status indication DC ON LED green	$\geq 9.6\ V$
Parallel / redundant mode	max. 2 devices / via external decoupling diodes
Efficiency	84 %
Over voltage protection	125–137 %
Rated over load protection	110–140 %
Short circuit	Hiccup Mode

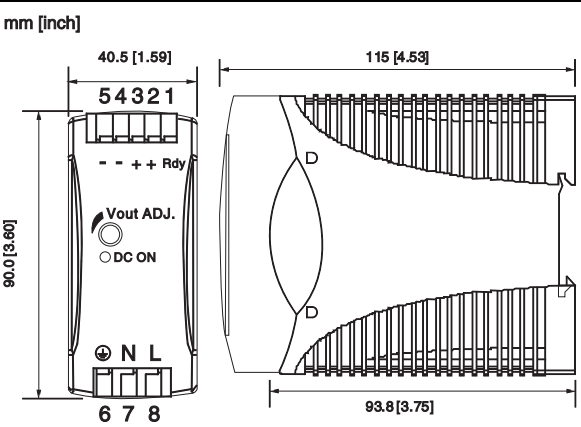
General

Switching frequency	approx. 80 kHz
Insulation voltage input / output	AC 3.0 kV _{eff}
Insulation voltage input / ground	AC 1.5 kV _{eff}
Insulation resistance at DC 500 V	100 M Ω
Derating	Capacity: -2.5 %/ $^\circ C$ starting at 60 $^\circ C$
Operation temperature range	-25 $^\circ C$... +70 $^\circ C$ (Derating)
Storage temperature range	-25 $^\circ C$... +85 $^\circ C$
Relative air humidity	20 – 90 % RH, not condensing
Cooling	Air convection, 25 mm clearance all-round
Housing material	Plastic
Mounting	DIN rail mountable TS35 (EN 60715)

Technical data sheet · Power supply

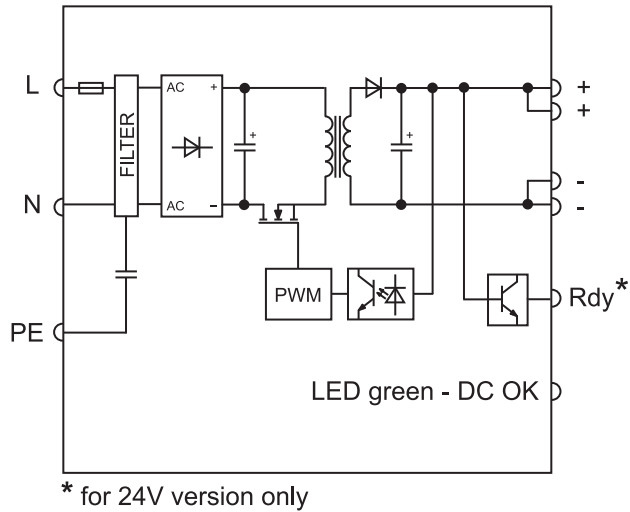
Application height	2000 m
Installation position	vertical
Protection class	IP20
Protection class	II (SELV, PELV)
Over voltage category	II
Degree of pollution	2
Weight	0.290 kg/piece
Connection type	Spring terminal 0.20 mm ² – 2.0 mm ²
Dimensions (w × h × d)	40.5 × 90.0 × 115.0 mm
Certifications	UL 508 listed UL 60950-1 EN 60950-1 EN 61000-6-3 EN 55022 Class B EN 61000-3-2 EN 61000-3-3 EN 55024 EN 61000-6-2 EN 61000-4-2 EN 61000-4-3 EN 61000-4-4 EN 61000-4-5 EN 61000-4-6 EN 61000-4-8 EN 61000-4-11
MTBF	582000 h
PU	1 piece

Dimensions

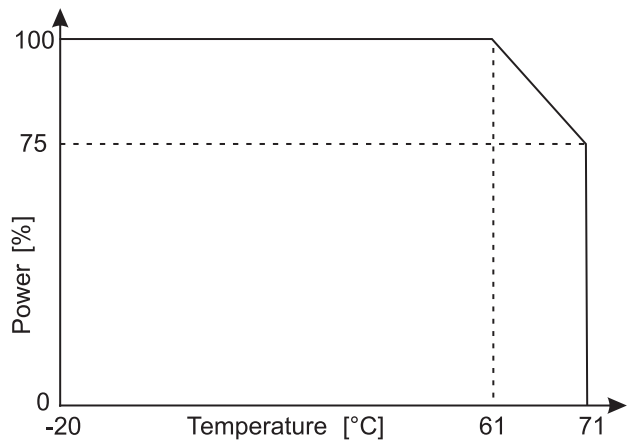


Technical data sheet · Power supply

PIN assignment

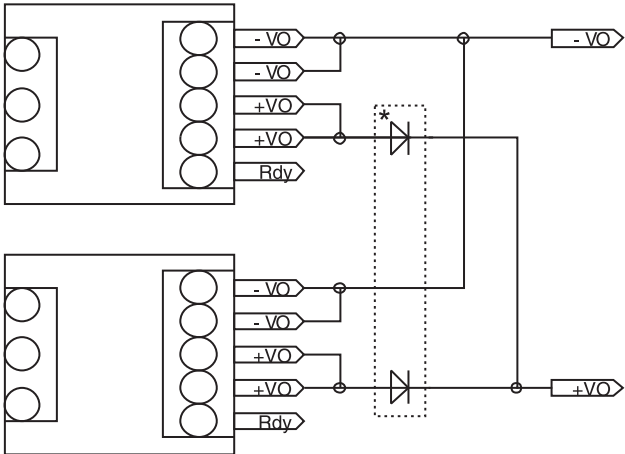


Derating



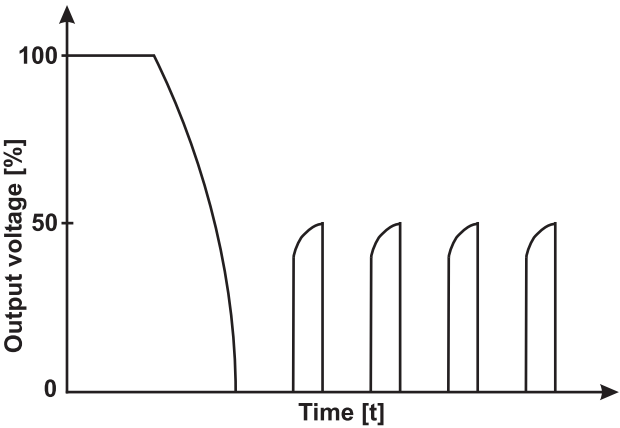
Technical data sheet · Power supply

Redundant operation



* Redundant Module 722987
Only use together with 24 V version!

Short circuit characteristics



Technical data sheet · Power supply

regulated, 30 W



Identification	Type	DRA30-48
	Part-No.	728775
Description		
Primary switchmode power supply, Single-phase, Class 2		
Input: wide-range input AC 85–264 V, DC 90–375 V		
Output: DC 48 V, adjustable		

Technical data sheet · Power supply

Input

Number of phases	1
Rated voltage U_N	AC 100–240 V
Operation voltage range	AC 85–264 V / DC 90–375 V
Line frequency	47 – 63 Hz
Rated current I_N	360 mA @ AC 115 V / 190 mA @ AC 230 V
Inrush current	20 A @ AC 115 V / 40 A @ AC 230 V
Internal fuse	2 A Typ-T AC 250 V
External fuse	Mini-circuit breaker: B 4 A

Output

Rated voltage U_N	DC 48 V
Rated current I_N	0.63 A
Heat dissipation	4.9 W @ AC 230 V
Setting range $U_{out\ min.}/U_{out\ max.}$	48-55 V
Accuracy	±1 %
Load regulation	±0.5 %
Line regulation	±0.5 %
Rise time	1 s
Temperature coefficient	±0.03 % / °C
Ripple and Noise	<50 mV
Hold up time	20 ms @ 115 V / 30 ms @ 230 V
Status indication DC ON LED green	≥37 V
Parallel / redundant mode	max. 2 devices / via external decoupling diodes
Efficiency	86 %
Over voltage protection	125–137 %
Rated over load protection	110–140 %
Short circuit	Hiccup Mode

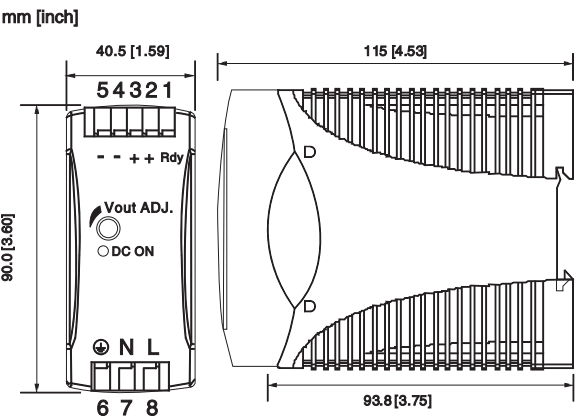
General

Switching frequency	approx. 80 kHz
Insulation voltage input / output	AC 3.0 kV _{eff}
Insulation voltage input / ground	AC 1.5 kV _{eff}
Insulation resistance at DC 500 V	100 MΩ
Derating	Capacity: -2.5 %/°C starting at 60 °C
Operation temperature range	-25 °C ... +70 °C (Derating)
Storage temperature range	-25 °C ... +85 °C
Relative air humidity	20 – 90 % RH, not condensing
Cooling	Air convection, 25 mm clearance all-round
Housing material	Plastic
Mounting	DIN rail mountable TS35 (EN 60715)

Technical data sheet · Power supply

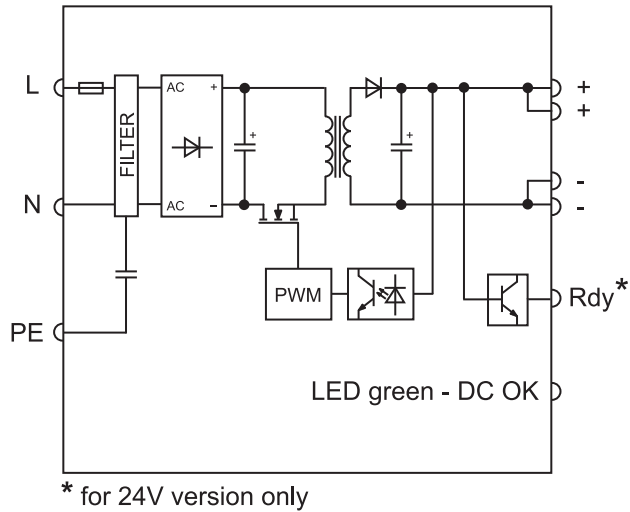
Application height	2000 m
Installation position	vertical
Protection class	IP20
Protection class	II (SELV, PELV)
Over voltage category	II
Degree of polution	2
Weight	0.290 kg/piece
Connection type	Spring terminal 0.20 mm ² – 2.0 mm ²
Dimensions (w × h × d)	40.5 × 90.0 × 115.0 mm
Certifications	UL 508 listed UL 60950-1 EN 60950-1 EN 61000-6-3 EN 55022 Class B EN 61000-3-2 EN 61000-3-3 EN 55024 EN 61000-6-2 EN 61000-4-2 EN 61000-4-3 EN 61000-4-4 EN 61000-4-5 EN 61000-4-6 EN 61000-4-8 EN 61000-4-11
MTBF	609000 h
PU	1 piece

Dimensions

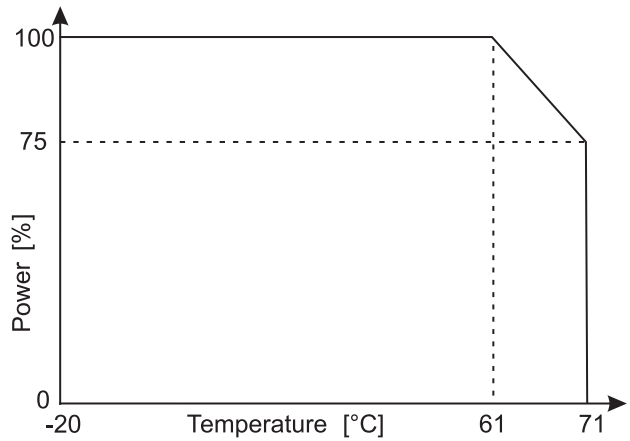


Technical data sheet · Power supply

PIN assignment

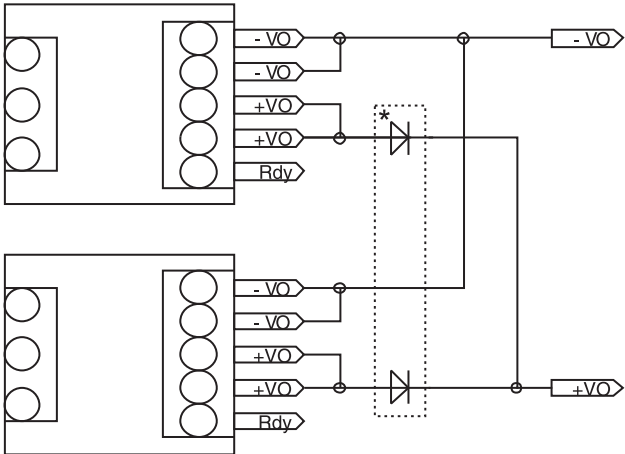


Derating



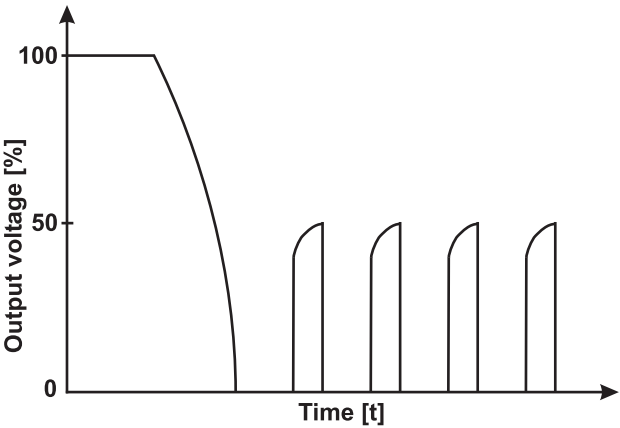
Technical data sheet · Power supply

Redundant operation



* Redundant Module 722987
Only use together with 24 V version!

Short circuit characteristics



Technical data sheet · Power supply

regulated, 60 W



Identification	Type	DRA60-48
	Part-No.	728776
Description		
Primary switchmode power supply, Single-phase, Class 2		
Input: wide-range input AC 85–264 V, DC 90–375 V		
Output: DC 48 V, adjustable		

Technical data sheet · Power supply

Input

Number of phases	1
Rated voltage U_N	AC 100–240 V
Operation voltage range	AC 85–264 V / DC 90–375 V
Line frequency	47 – 63 Hz
Rated current I_N	690 mA @ AC 115 V / 360 mA @ AC 230 V
Inrush current	20 A @ AC 115 V / 40 A @ AC 230 V
Internal fuse	2 A Typ-T AC 250 V
External fuse	Mini-circuit breaker: B 6 A

Output

Rated voltage U_N	DC 48 V
Rated current I_N	1.25 A
Heat dissipation	7.8 W @ AC 230 V
Setting range $U_{out\ min.}/U_{out\ max.}$	48-55 V
Accuracy	$\pm 1\ %$
Load regulation	$\pm 0.5\ %$
Line regulation	$\pm 0.5\ %$
Rise time	1 s
Temperature coefficient	$\pm 0.03\ % / ^\circ C$
Ripple and Noise	50 mV
Hold up time	20 ms @ 115 V / 30 ms @ 230 V
Status indication DC ON LED green	$\geq 37\ V$
Parallel / redundant mode	max. 2 devices / via external decoupling diodes
Efficiency	89 %
Over voltage protection	125–138 %
Rated over load protection	110–150 %
Short circuit	Hiccup Mode

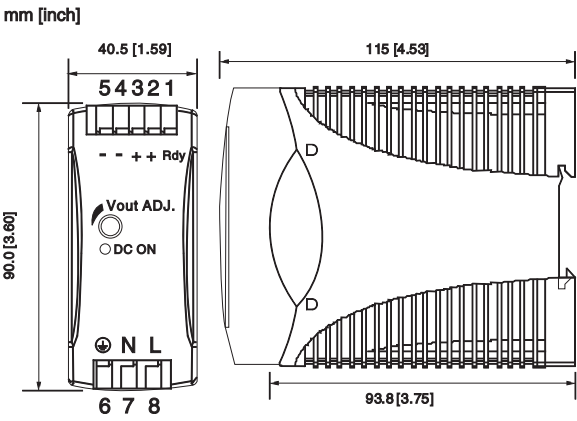
General

Switching frequency	approx. 80 kHz
Insulation voltage input / output	AC 3.0 kV _{eff}
Insulation voltage input / ground	AC 1.5 kV _{eff}
Insulation resistance at DC 500 V	100 M Ω
Derating	Capacity: -2.5 %/ $^\circ C$ starting at 60 $^\circ C$
Operation temperature range	-25 $^\circ C$... +70 $^\circ C$ (Derating)
Storage temperature range	-25 $^\circ C$... +85 $^\circ C$
Relative air humidity	20 – 90 % RH, not condensing
Cooling	Air convection, 25 mm clearance all-round
Housing material	Plastic
Mounting	DIN rail mountable TS35 (EN 60715)

Technical data sheet · Power supply

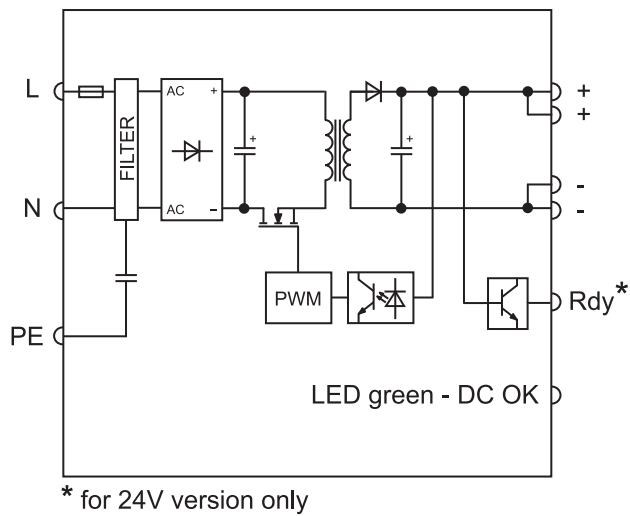
Application height	2000 m
Installation position	vertical
Protection class	IP20
Protection class	II (SELV, PELV)
Over voltage category	II
Degree of pollution	2
Weight	0.340 kg/piece
Connection type	Spring terminal 0.20 mm ² – 2.0 mm ²
Dimensions (w × h × d)	40.5 × 90.0 × 115.0 mm
Certifications	UL 508 listed UL 60950-1 UL 1310 Class 2 EN 60950-1 EN 61558-1 EN 61558-2-17 EN 61000-6-3 EN 55022 Class B EN 61000-3-2 EN 61000-3-3 EN 55024 EN 61000-6-2 EN 61000-4-2 EN 61000-4-3 EN 61000-4-4 EN 61000-4-5 EN 61000-4-6 EN 61000-4-8 EN 61000-4-11
MTBF	531000 h
PU	1 piece

Dimensions

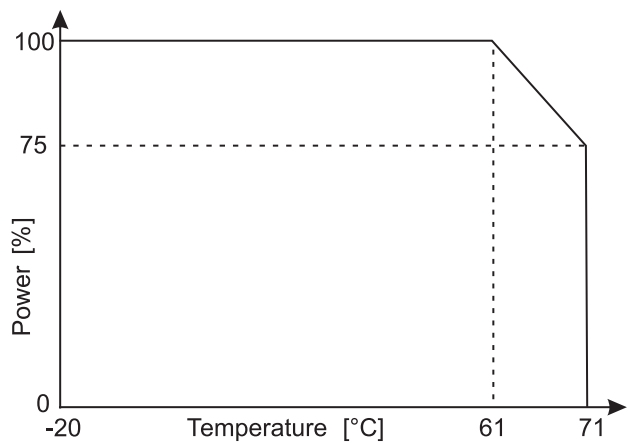


Technical data sheet · Power supply

PIN assignment

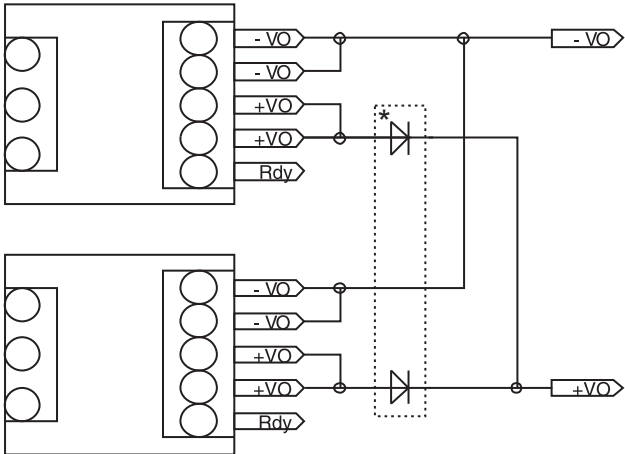


Derating



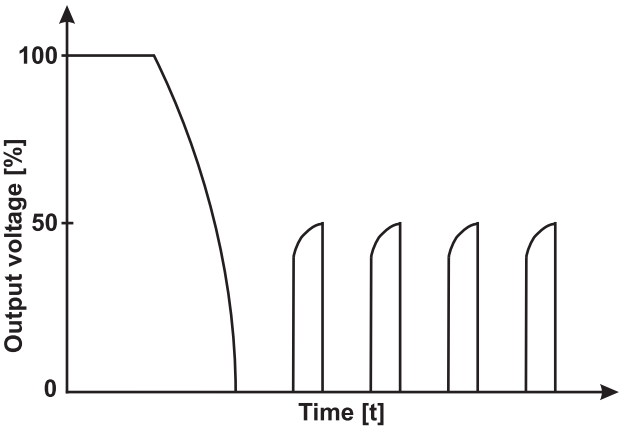
Technical data sheet · Power supply

Redundant operation



* Redundant Module 722987
Only use together with 24 V version!

Short circuit characteristics



Technical data sheet · Power supply

DC/DC converter



Identification	Type	CV 7-2084 DC24V/10V
	Part-No.	762084
Description		
DC/DC converter, 1-channel		
Input: DC 24 V		
Output: DC 10 V		

Technical data sheet · Power supply

Input

Rated voltage U_N	DC 24 V
Operation voltage range	DC 16.8–30 V
Rated current I_N	14 mA

Output

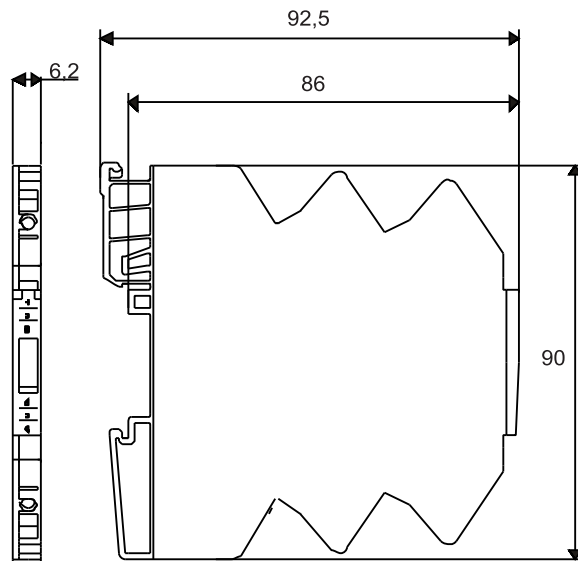
Rated voltage U_N	DC 10 V
Rated current I_N	0.1 A
Short-circuit current	<900 mA
Setting range $U_{out\ min.}/U_{out\ max.}$	$\pm 1.0\ V$ via potentiometer
Load regulation	<1 %
Rise time	<10 ms
Ripple and Noise	<10 mV $_{eff}$
Parallel / redundant mode	No
Short circuit	Current limit

General

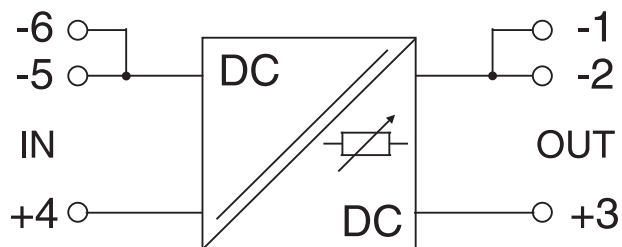
Insulation voltage input / output	0.5 kV $_{eff}$
Rated insulation voltage (EN 50178)	50 V
Operation temperature range	-25 °C ... +60 °C
Storage temperature range	-40 °C ... +85 °C
Cooling	Air convection
Housing material	PA
Mounting	DIN rail mountable TS35 (EN 60715)
Installation position	any
Protection class	IP20 (IEC 529 / EN 60529)
Over voltage category	I
Degree of pollution	2
Weight	0.040 kg/piece
Connection type	Spring terminal 0.14 mm ² – 1.5 mm ²
Dimensions (w × h × d)	6.2 × 90.0 × 92.5 mm
PU	1 piece

Technical data sheet · Power supply

Dimensions



PIN assignment



Accessories

Jumper comb 6 A, red: 2-pin: Part-No. 762802 | 3-pin: Part-No. 762805 | 4-pin: Part-No. 762812 | 8-pin: Part-No. 762822 | 16-pin: Part-No. 762832 | PU: 10 units

Jumper comb 6 A, white: 2-pin: Part-No. 762803 | 3-pin: Part-No. 762806 | 4-pin: Part-No. 762813 | 8-pin: Part-No. 762823 | 16-pin: Part-No. 762833 | PU: 10 units

Jumper comb 6 A, blue: 2-pin: Part-No. 762804 | 3-pin: Part-No. 762807 | 4-pin: Part-No. 762814 | 8-pin: Part-No. 762824 | 16-pin: Part-No. 762834 | PU: 10 units

Labelling sign 4x11 mm, white: Part-No. 681313 | BZT-0411 | PU: 100 units

Insulation plate, black RAL 9005: Part-No. 760809 | TP 7-0809 MIC/SNR | PU: 10 units

Laser label A4 not punched, black RAL 9005: Part-No. 681031 | LEB A4 PW | PU: 10 units

DC/DC converter



Identification	Type	CV 7-2185 DC24V/24V
	Part-No.	762185
Description	DC/DC converter, 1-channel	
	Input: DC 24 V	
	Output: DC 24 V	

Technical data sheet • Power supply

Input

Rated voltage U_N	DC 24 V
Operation voltage range	DC 16.8–30 V
Rated current I_N	21.5 mA

Output

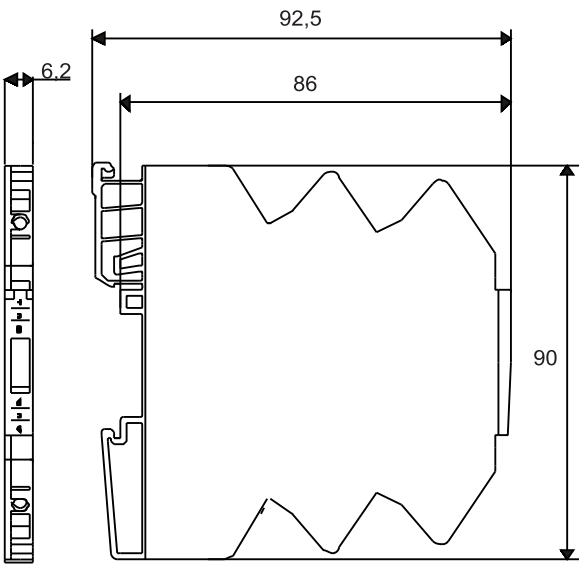
Rated voltage U_N	DC 24 V
Rated current I_N	0.03 A
Short-circuit current	<900 mA
Load regulation	<1 %
Rise time	<20 ms
Ripple and Noise	<20 mV _{eff}
Parallel / redundant mode	No
Short circuit	Current limit

General

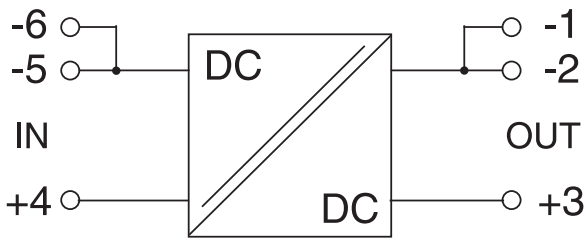
Insulation voltage input / output	1.5 kV _{eff}
Rated insulation voltage (EN 50178)	50 V
Operation temperature range	-25 °C ... +60 °C
Storage temperature range	-40 °C ... +85 °C
Cooling	Air convection
Housing material	PA
Mounting	DIN rail mountable TS35 (EN 60715)
Installation position	any
Protection class	IP20 (IEC 529, EN 60529)
Over voltage category	I
Degree of pollution	2
Weight	0.040 kg/piece
Connection device	Screw terminal 0.14 mm ² – 1.5 mm ²
Dimensions (w × h × d)	6.2 × 90.0 × 92.5 mm
PU	1 piece

Technical data sheet • Power supply

Dimensions



PIN assignment



Accessories

Accessories	Color	2-pin	3-pin	4-pin	8-pin	16-pin	PU
Jumper comb 6 A	red	762802	762805	762812	762822	762832	10
Jumper comb 6 A	white	762803	762806	762813	762823	762833	10
Jumper comb 6 A	blue	762804	762807	762814	762824	762834	10

Accessories

Accessories	Color	Part-No.	Type	PU
Labelling sign 4x11 mm	white	681313	BZT-0411	100
Insulation plate		760809	TP 7-0809 MIC/SNR	10
Laser label A4 not punched		681031	LEB A4 PW	1

Technical data sheet · Power supply

DC/DC converter



Identification	Type	CV 7-2186 DC24V/24V
	Part-No.	762186
Description		
DC/DC converter, 1-channel		
Input: DC 24 V		
Output: DC 24 V		

Technical data sheet · Power supply

Input

Rated voltage U_N	DC 24 V
Operation voltage range	DC 16.8–30 V
Rated current I_N	21.5 mA

Output

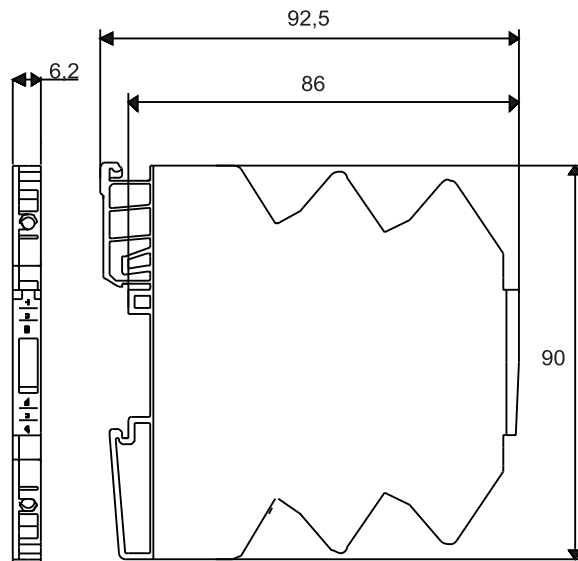
Rated voltage U_N	DC 24 V
Rated current I_N	0.03 A
Short-circuit current	<900 mA
Load regulation	<1 %
Rise time	<20 ms
Ripple and Noise	<20 mV _{eff}
Parallel / redundant mode	No
Short circuit	Current limit

General

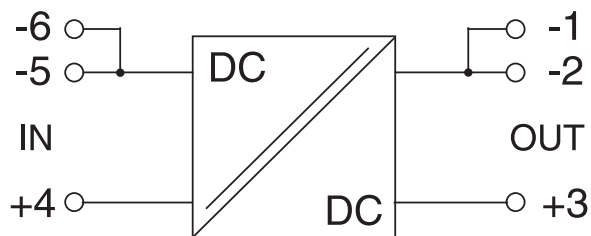
Insulation voltage input / output	1.5 kV _{eff}
Rated insulation voltage (EN 50178)	50 V
Operation temperature range	-25 °C ... +60 °C
Storage temperature range	-40 °C ... +85 °C
Cooling	Air convection
Housing material	PA
Mounting	DIN rail mountable TS35 (EN 60715)
Installation position	any
Protection class	IP20 (IEC 529 / EN 60529)
Over voltage category	I
Degree of pollution	2
Weight	0.040 kg/piece
Connection type	Spring terminal 0.14 mm ² – 1.5 mm ²
Dimensions (w × h × d)	6.2 × 90.0 × 92.5 mm
PU	1 piece

Technical data sheet · Power supply

Dimensions



PIN assignment



Accessories

Jumper comb 6 A, red: 2-pin: Part-No. 762802 | 3-pin: Part-No. 762805 | 4-pin: Part-No. 762812 | 8-pin: Part-No. 762822 | 16-pin: Part-No. 762832 | PU: 10 units
Jumper comb 6 A, white: 2-pin: Part-No. 762803 | 3-pin: Part-No. 762806 | 4-pin: Part-No. 762813 | 8-pin: Part-No. 762823 | 16-pin: Part-No. 762833 | PU: 10 units
Jumper comb 6 A, blue: 2-pin: Part-No. 762804 | 3-pin: Part-No. 762807 | 4-pin: Part-No. 762814 | 8-pin: Part-No. 762824 | 16-pin: Part-No. 762834 | PU: 10 units
Labelling sign 4×11 mm, white: Part-No. 681313 | BZT-0411 | PU: 100 units
Insulation plate, black RAL 9005: Part-No. 760809 | TP 7-0809 MIC/SNR | PU: 10 units
Laser label A4 not punched, black RAL 9005: Part-No. 681031 | LEB A4 PW | PU: 10 units

Technical data sheet

Power supply · LCOS DC/DC converter



Identification

Type	LCOS-PS-4-60-15-2
Part No.	779101.1346

Product version

Datasheet version	00
-------------------	----

Description

Description	The product is a DC/DC converter with a total power of 38 W. It has a +/- voltage at the output of DC 15 V. In addition, the device can be controlled externally via a remote input.
-------------	--

Input

Rated voltage U_N	DC 24 V
Operation voltage range	DC 18–36 V
Rated current I_N	1.8 A @ DC 24 V

Output

Rated voltage U_N	± DC 15 V
Max. output current	2 A @ +15 V (20 °C) / 1.3 A @ +15 V (55 °C) 533 mA @ -15 V
Power output	27 W
Ripple and noise	<60 mV pp
Efficiency	85 %
Protection device	Short-circuit protection

Technical data sheet

Power supply · LCOS DC/DC converter

Status indication

Status display output	DC ON, green
-----------------------	--------------

Remote input

ON/OFF	ON: 3.5 V – 10 V max OFF: 0 V – 0.8 V max
--------	--

General

Insulation voltage input / output	DC 1,5 kV
Cooling	Air convection
Housing material	PA 6.6 (UL 94 V-0, NFF I2, F2)
Color of the housing	pebble grey
Mounting	DIN rail mountable TS35 (EN 60715)
Max. altitude operation	2000 m max.
Installation position	Any
Degree of protection	IP20 (EN 60529)
Protection class	III
Weight/unit	0.18 kg
Connection type	Push-In 0.08 mm ² – 2.5 mm ² AWG 28 – AWG 12 8-pole
Dimensions (w × h × d)	22.5 mm × 124.0 mm × 102.0 mm
PU (units)	1

General ambient conditions

Operation temperature range	-25 °C ... +55 °C
Storage temperature range	-25 °C ... +85 °C
Over voltage category	II (IEC 664-1)
Degree of pollution	2
Relative air humidity	10 % – 95 %, without condensation
Vibration resistance	1 g acc. to EN 60068-2-6
Shock resistance	15 g acc. EN 60068-2-27

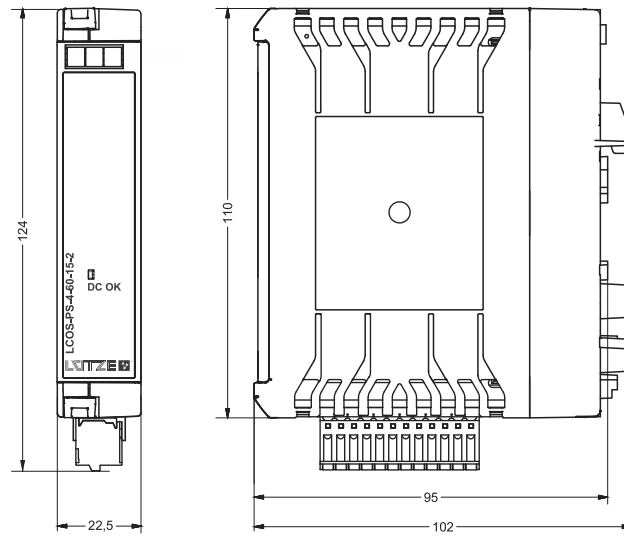
Certifications/Standards

Conformity	CE UKCA
------------	------------

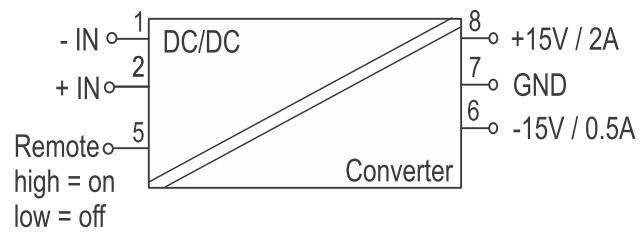
Technical data sheet

Power supply · LCOS DC/DC converter

Dimensions



PIN assignment



По вопросам продаж и поддержки обращайтесь:

Алматы (727)345-47-04
Ангарск (3955)60-70-56
Архангельск (8182)63-90-72
Астрахань (8512)99-46-04
Барнаул (3852)73-04-60
Белгород (4722)40-23-64
Благовещенск (4162)22-76-07
Брянск (4832)59-03-52
Владивосток (423)249-28-31
Владикавказ (8672)28-90-48
Владимир (4922)49-43-18
Волгоград (844)278-03-48
Вологда (8172)26-41-59
Воронеж (473)204-51-73
Екатеринбург (343)384-55-89

Иваново (4932)77-34-06
Ижевск (3412)26-03-58
Иркутск (395)279-98-46
Казань (843)206-01-48
Калининград (4012)72-03-81
Калуга (4842)92-23-67
Кемерово (3842)65-04-62
Киров (8332)68-02-04
Коломна (4966)23-41-49
Кострома (4942)77-07-48
Краснодар (861)203-40-90
Красноярск (391)204-63-61
Курск (4712)77-13-04
Курган (3522)50-90-47
Липецк (4742)52-20-81

Магнитогорск (3519)55-03-13
Москва (495)268-04-70
Мурманск (8152)59-64-93
Набережные Челны (8552)20-53-41
Новокузнецк (3843)20-46-81
Ноябрьск (3496)41-32-12
Новосибирск (383)227-86-73
Омск (3812)21-46-40
Орел (4862)44-53-42
Оренбург (3532)37-68-04
Пенза (8412)22-31-16
Петрозаводск (8142)55-98-37
Псков (8112)59-10-37
Пермь (342)205-81-47

Ростов-на-Дону (863)308-18-15
Рязань (4912)46-61-64
Самара (846)206-03-16
Санкт-Петербург (812)309-46-40
Саратов (845)249-38-78
Севастополь (8692)22-31-93
Саранск (8342)22-96-24
Симферополь (3652)67-13-56
Смоленск (4812)29-41-54
Сочи (862)225-72-31
Ставрополь (8652)20-65-13
Сургут (3462)77-98-35
Сыктывкар (8212)25-95-17
Тамбов (4752)50-40-97
Тверь (4822)63-31-35

Тольятти (8482)63-91-07
Томск (3822)98-41-53
Тула (4872)33-79-87
Тюмень (3452)66-21-18
Ульяновск (8422)24-23-59
Улан-Удэ (3012)59-97-51
Уфа (347)229-48-12
Хабаровск (4212)92-98-04
Чебоксары (8352)28-53-07
Челябинск (351)202-03-61
Череповец (8202)49-02-64
Чита (3022)38-34-83
Якутск (4112)23-90-97
Ярославль (4852)69-52-93

Россия +7(495)268-04-70

Казахстан +7(727)345-47-04

Беларусь +(375)257-127-884

Узбекистан +998(71)205-18-59

Киргизия +996(312)96-26-47

эл.почта: ezd@nt-rt.ru || сайт: <https://lutze.nt-rt.ru/>