Control Solutions

Industrial Power Supplies

Delta Series Power Supplies

Compact Series Power Supplies

Uninterruptable Power Supplies

LÜTZE®
SYSTEMATIC TECHNOLOGY


LÜTZE
CPSB1-481-24
723700
OUTPUT
24VDC/20A
DC OK
INPUT
LÜTZE
COCU20 12/24VDC UPS
723100
LÜTZE
CNBP30 723115
BATTERY PACK
WARNING !
DO NOT USE JUMPER 1
WHEN JUMPERS 2 AND 3
ARE CONNECTED
LÜTZE
ET-SWU/SET

Welcome to LUTZE

Cable Solutions

Connectivity Solutions

Cabinet Solutions

Control Solutions

Industrial Power Supplies

LUTZE provides reliable industrial power supplies through innovative design and engineering with 1-, 2- and 3-phase units. LUTZE Delta series power supplies are suitable for industrial applications for standard specifications, providing an economical and reliable solution. LUTZE Compact series power supplies are suitable for industrial applications especially where high inrush power is required, as well as when compact housing or extended reliability are desired.

Both Delta and Compact series offer DIN rail mountable power supplies suitable for a wide variety of different industrial applications. LUTZE's UPS units offer several product solutions when backup power is critical for the application.

LUTZE power supplies are developed with technical innovations in mind. As an example, our Compact power supplies are appr 50 % smaller in size than the industry standard, and yet offer more than 94 % efficiency and are suitable for temperature ranges between -25° C to +75° C.

In your most critical applications, you can rely on LUTZE power supplies to perform beyond your expectations worldwide.

For more information visit our website www.lutze.com

SYSTEMATIC TECHNOLOGY

Power Supplies from LUTZ

Energy efficient and space s

Comprehensive range of industrial power supplies

High efficiency
through advanced digital technology
Efficiency up to >94 %

Extremely compact

Power Boost

Power range from 10 W up to 2400 W

Output voltages from DC 5 V up to DC 72 V.

Control Solutions

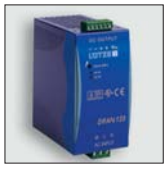
ZE:
saving


DC OK
OVERLOAD
23...28V
OUTPUT
24VDC/20A
DC OK
24V/1A
LUTZE
CPSB1-480-24E 723701
INPUT
200-240VAC
250...375VDC
IND.CONT.EQ.
4WX9
LISTED
E249179

Power Supply · Overview

1-phase, 10 W

1-phase, 30 W



1-phase, 120 W

1-phase, 240 W

1-phase, 480 W

3-phase, 480 W

DELTA Series Power Supplies

Part Number	Input		Output Voltage			Rated Output Power								Connection			Type	Page
	1-phase	3-phase	5 V	12 V	24 V	10 W	18 W	30 W	60 W	93 W	120 W	240 W	480 W	Spring	Screw	Plugable Screw		
722761	•		•			2A								•			DRA10-05	14
722752	•				•		0.75A							•			DRA18-24	15
722763	•		•					6A							•		DRAN30-05A	16
722753	•				•			1.25A							•		DRAN30-24A	17
722769	•			•					5A						•		DRAN60-12A	18
722754	•				•				2.5A						•		DRAN60-24A	19
728754	•				•				2.5A					•			DRAN60-24	20
722757	•				•					3.8A					•		DRAN120-24AL	21
722770	•			•							10A					•	DRAN120-12B	22
722758	•				•						5A					•	DRAN120-24B	23
728758	•				•						5A				•		DRAN120-24A	24
722803		•			•						5A				•		WRA120-24	25
722759	•				•							10A				•	DRA240-24B	26
722781	•				•							10A			•		DRA240-24A	27
722804		•			•							10A			•		WRA240-24	28
722782	•				•								20A		•		DRA480-24A	29
722805		•			•								20A		•		WRA480-24	30
722987	•				•								20A		•		DRP-20	31

Power Supply · Overview

1-phase, 120 W

1-phase, 240 W

1-phase, 480 W

3-phase, 960 W

3-phase, 2400 W

50 A Redundant Module

Compact Series Power Supplies

Part Number	Input			Output					Rated Output Power							Connection			Type	Page
	1-phase	2-phase	3-phase	12 V	15 V	24 V	48 V	72 V	80 W	120 W	240 W	480 W	960 W	2400 W	Redundant Module	Screw	Pluggable Screw	Subseries		
722995	•	•				•				5A							•	Uni	CPSB2-120-24	34
723500	•					•				5A							•	Eco	CPSB1-120-24E	35
723501	•					•				5A							•	Ultra	CPS2B1-120-24	36
722784	•						•			2.5A							•	Eco	CPSB1-120-48R	37
723521	•						•			2.5A							•	Ultra	CPS2B1-120-48	38
723600	•					•					10A						•	Eco	CPSB1-240-24E	40
723601	•					•					10A						•	Ultra	CPS2B1-240-24	41
722996	•	•	•			•					10A						•	Uni	CPSB-123-240-24	42
722786	•						•				5A						•	Eco	CPSB1-240-48R	43
723621	•						•				5A						•	Ultra	CPS2B1-240-48	44
723700	•					•						20A					•	Ultra	CPS2B1-480-24	45
723701	•					•						20A					•	Eco	CPSB1-480-24E	47
722801	•	•	•			•						20A					•	Uni	CPSB-123-480-24	49
723721	•						•					10A					•	Ultra	CPS2B1-480-48	50
722811			•			•							40A			•			CPSB3-960-24	51
722812			•				•						20A			•			CPSB3-960-48	52
722813			•					•					13.3A			•			CPSB3-960-72	53
722814			•			•								100A		•			CPSB3-2400-24	54
722816			•				•							50A		•			CPSB3-2400-48	56
722817			•					•						33A		•			CPSB3-2400-72	58
722999	•			•	•	•	•	•							50A		•		CPSRM50	60

Programmable DC/DC Converter

Part Number	Input		Output			Features						Type	Page
	DC 11 - 55 V	12 A	DC 5 - 55 V	10 A	240 Watts	Parallel/Redundant	Hiccup	Constant Current	Digital Display	Pluggable Screw		Description	
723300	•	•	•	•	•	•	•	•	•	•		CUDC-240-55	61

UPS Uninterruptable Power Supplies

Part Number	Internal Features									Output									Type	Page
	Lead Based	NI-MH	Li-ion	Capacitive (Buffer)	Adjustable Current	Int. fuse	Deep Discharging Protection	Signal Output	Software Configuration	DC 12 V	DC 24 V	DC 48 V	DC 72 V	DC 10 A	DC 20 A	Battery Housing	Display	Pluggable Screw	Description	
723110	•	•	•		•	•		•						•				•	CNUPS 24	62
723100	•	•	•		•		•	•	•	•	•				•		•	•	CDCU20 12/24DC UPS	63
723120				•						•	•	•	•		•			•	CBU150	65
723115																•		•	CNBP30	66

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LUTZE SYSTEMATIC TECHNOLOGY

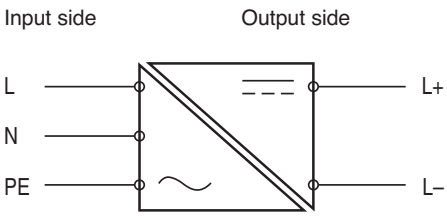
Power Supplies · Basics

A power supply has a decisive influence on the availability and operational reliability of electrical systems.

Consequently, the selection of the right power supply should be just as critically and carefully undertaken as that of the other system components.

1. General structure

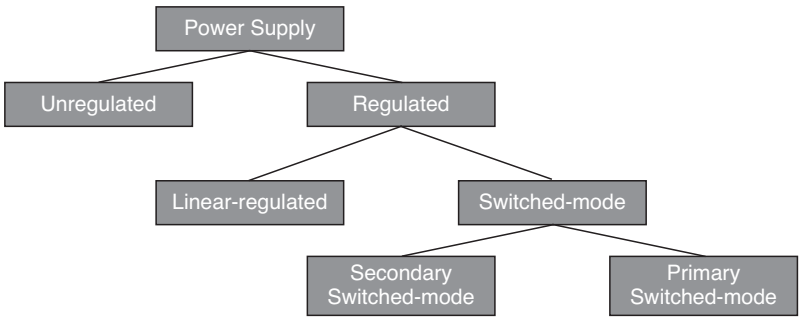
Regardless of the technology employed, power supplies are devices with an input side and an isolated output side.



In technology terms, however, there are two different basic designs:

Unregulated and regulated.

The regulated variants are subdivided into linear-regulated and switched-mode power supplies.



The key criteria in selection of a power supply are:

Input side:

Input voltage
Primary grounding
Current consumption
Inrush current
Input fuse
Frequency
DC supply
Power failure buffering
Power Factor Correction (PFC)

Output side:

Output voltage
Secondary grounding
Short-circuit current
Residual ripple
Output characteristics
Output current

2. Safety

The safety of people and equipment is always the priority. Accordingly, power supplies must comply with unified regulations and standards.

2.1 Galvanic isolation

Galvanic isolation generally refers to the isolation between two conductive objects, such as metal plates or electrical circuits. In the case of electrical circuits it is consequently not possible for charge carriers to flow from one circuit into another, as there is no electrically conductive connection between the two.

In the case of power supplies this means that there is no electrical connection between the input and output sides.

2.2 Insulation

The different kinds of insulation are specified in IEC/EN 60950:

- Functional insulation
  Insulation needed for the correct operation of the equipment.
- Basic insulation
  Insulation to provide basic protection against hazardous structure-borne currents.
- Supplementary insulation
  Protection against hazardous structure-borne currents if the basic insulation fails.
- Double insulation
  Insulation comprising both basic insulation and supplementary insulation.
- Reinforced insulation
  Unified insulation system. Provides equivalent protection to double insulation.

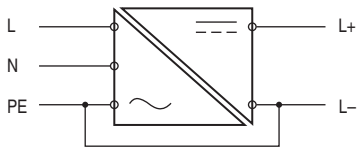
2.3 Safe isolation

Safe isolation according to EN 50178 is required for all interfaces between different electrical circuits, such as between a SELV circuit and a mains circuit.

Safe isolation means that no current flow can occur from one electrical circuit to another. This isolation has to be implemented either by double or reinforced insulation or by means of protective shielding.

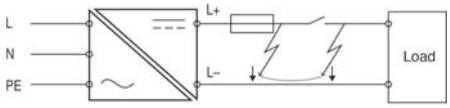
2.4 Secondary grounding

In case of secondary grounding, the output side of the power supply is connected to protective earth (PE) in order to prevent dangerous ground faults.



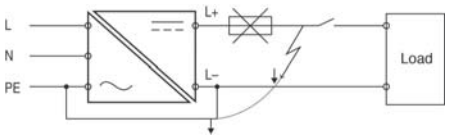
Secondary grounding

A ground fault occurs if a current-carrying line has contact to earth. In the worst case, two simultaneous ground faults can lead to a bridging of switches and thus can start equipment accidentally.



Ground fault

If secondary grounding is used, the occurrence of such a ground fault leads to a so-called short circuit to earth which causes the fuses in the secondary circuit to trip.



2.5 SELV

SELV according to IEC/EN 60950 is a safety extra low voltage which thanks to its low level and insulation offers better protection against electric shock than higher-tension circuits.

Power supplies generating SELV, for example, must be designed to prevent shorting between the primary and secondary windings and their connections. The windings can only be overlaid if double or reinforced insulation is placed between them. This isolation is termed galvanic isolation. Grounding of the secondary side is not required but permitted.

The peak value must not exceed 42.4 V in case of AC voltages and 60 V in case of DC voltages.

2.6 PELV

PELV according to IEC/EN 60950 is a protective extra low voltage with safe isolation. In case of PELV, the electrical circuits are grounded and (like SELV) safely isolated from circuits of higher voltages. The voltage limits are identical to SELV.

PELV is used where active low-voltage conductors or the equipment structures have to be grounded for operational reasons. That is the case, for example, where potential equalisation is required to prevent sparking inside vessels and explosive rooms.

Thanks to the housing earth, hazardous leakage currents can be discharged via the structure independently of the low voltage when interference occurs on other equipment whose touchable conductive parts receive mains voltage.

2.7 Protection class

The standard IEC/EN 61140 defines protection classes for electrical equipment. The devices are classified according to the safety measures taken to prevent electric shock. The protection classes are divided into the classes 0, I, II and III.

• Protection class 0

Apart from the basic insulation there is no protection against electric shock. These devices cannot be connected to electrical installations with PE. Equipment of class 0 is not allowed in Germany. Protection class 0 will no longer be considered in future versions of the standard.

• Protection class I 

In addition to the basic insulation, all electrically conductive parts of the housing are connected to PE. This guarantees that no electric shock can occur in the event of an insulation failure.

• Protection class II 

Protection against electric shock is not only based on the basic insulation. The housing is equipped with reinforced or double insulation. If the housing is made of electrically conductive material, no direct contact between the housing and current-carrying parts is possible. The housings of class II devices are not equipped with a PE connection. It is important to note that the PE connection is not only used for the grounding of housings but also to connect filters for EMC measures (electromagnetic compatibility) to ground. This is why even devices of which the housings are completely made of plastic material can be equipped with a PE connection.

• Protection class III 

The device is operated with safety extra-low voltage (SELV) and thus does not require any protection measures. Power supplies are usually class I or II equipment.

2.8 Degree of protection

According to DIN EN 60529, electrical equipment is classified using so-called IP codes. IP stands for "International Protection" or "Ingress Protection". The IP code consists of two figures: The first digit specifies the protection against accidental contact and against ingress of solid foreign bodies; the second digit specifies the protection against ingress of water.

Since power supplies are mostly installed inside cabinets, their typical degree of protection is IP 20.

3 Input voltage ranges

3.1 Wide-range input

Wide-range input means that the device can be operated with any voltage within the specified limits. LUTZE devices operate in the single-phase range from AC 90 V to AC 264 V or DC 110 V to DC 370 V and in the three-phase range from AC 340 V to AC 576 V or DC 480 V to DC 820 V. There is no loss of power, i.e. the device is able to deliver the specified rated power over the entire input voltage range.

3.2 Autorange

Power supplies that are equipped with autorange behaviour perform an internal measurement of the applied supply voltage and automatically switch between the available input voltage ranges.

3.3 Manual range selection

In case of manual range selection, the housing of the device is equipped with a selector switch for manual input voltage range selection. LUTZE offers devices permitting operation at AC 115V or 230V.
The operating voltage range is then
AC 90 V to AC 132 V; AC 185 V to AC 264 V or DC 300 V to DC 370 V.

4 Self-protection

If motors or other large loads have to be started with high inrush currents, secondary branches selectively switched off, systems moved to a safe state in case of overload or the power supply switched off as quickly as possible in case of fault for the sake of process safety, the output behaviour of the power supplies play a key role.

There are basically two types outside of nominal operation. Overload, which can occur sporadically or continuously, and short-circuit.

Overload means that the current required by the loads exceeds the nominal current of the power supply.

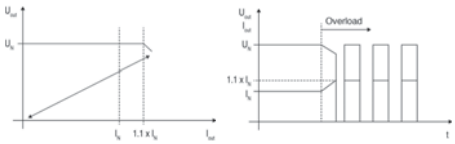
A short-circuit is a special form of overload. In this case, the outputs of the power supply are interconnected at very low resistance, as a result of which the output current may assume extremely high values.

State-of-the-art LUTZE power supplies offer the following protective functions:

Fold-back characteristic/Hiccup mode

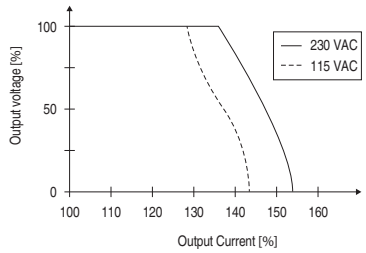
LUTZE power supplies supply a current typically up to 1.2 times the nominal output current. They automatically switch off if the current consumption of the connected loads exceeds this value or if a short-circuit occurs. After a defined period of time, the power supply tries to restart the load. If the overload or the short-circuit still exists, it switches off again. This procedure repeats until the fault is cleared. The power supply has "hiccups". In applications requiring high starting currents, it must be ensured that the overload current capacity is higher than 1.2 I_N. To do so, LUTZE also offers devices with overload capacity of 1.5 I_N featuring Hiccup mode. Another aspect is response to short-circuit. The output voltage is cut very rapidly. Whereas the use of conventional line protection equipment in the secondary circuit is very critical in any case, the function under Hiccup mode is not. Electronic overload protection units such as the LUTZE LOCC-Box should always be used in such cases. They provide safe protection in all circumstances.

Power Supplies · Basics



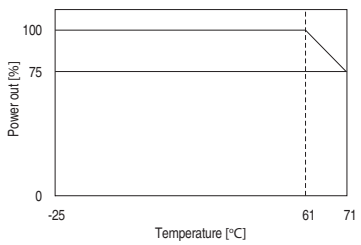
U/I characteristic

LUTZE power supplies with a U/I characteristic perform current limiting to typically 1.2 times the nominal current at constant output voltage. This current is still available in case of an overload or a short circuit. The voltage is slowly lowered, while the output current may rise further (triangular current limiting). Since the current does not sag in case of an overload, this method enables reliable starting of high loads.



5 Influence of ambient temperature

The ambient temperature has a direct influence on the maximum possible output power of a power supply and so on its response to short-circuit or overload. Temperatures inside cabinets may be over 60 °C as a result of internal or external influences. Power supplies still have to operate reliably even at such high temperatures. Due to the components used, however, there is a point as from which the output power has to be reduced. That point is described by so-called derating. The Delta series from Lütze is rated for ambient temperatures up to 70° C for example, with derating beginning at 60° C. The reduction in output power is 2.5 %/°C.



Example: Derating curve of Lütze of Delta series

6 Thermal protection

When operating a power supply under extreme conditions for a long duration, e.g. in case of permanent operation within the power limits or in case of very high ambient temperatures, the power supply can heat up to a degree where safe operation is no longer guaranteed. There are a number of techniques for protecting the power supply against destruction due to overheating.

- The maximum output power is reduced, allowing the power supply to cool down.
- The device is switched off completely and cannot resume operation until a manual reset is performed. Depending on the manufacturer, the reset is done either using a corresponding switch or by disconnecting the supply voltage.
- The device only switches off the output and does not switch it on until the temperature falls below a certain limit value. This is the most frequently used method nowadays, and is the one used by LUTZE.

7 General parameters

7.1 Open circuit resistance

Open circuit resistant power supplies require no minimum load in order to provide a stable output voltage. This is important, for example, in the case of time-critical applications in which a load is applied which has to be immediately supplied with voltage. Power supplies which are not open circuit resistant often require up to the seconds range until an actual supply takes place.

7.2 Resistance to reverse feed

The resistance to reverse feed specifies up to which voltage a power supply is immune against the feeding of voltages into the secondary side. Such a current flow can occur if power supplies are operated in parallel or inductive consumers are connected.

7.3 Overvoltage protection (secondary side)

In case of an internal error of the power supply, this protection mechanism prevents the occurrence of overvoltage on the secondary side that could possibly damage or even destroy a connected load or exceed the SELV voltage limit.

7.4 Power failure buffering

Power supplies must be able to maintain their output voltage for a certain time in case of supply voltage dips. Usually, a power failure buffering time of at least 20 ms is achieved in order to provide buffering for one complete cycle of the mains voltage. In the semiconductor industry longer times are required. The devices must then comply with the requirements of SEM F47. Most LUTZE devices do so.

8 Line cross-section and protection

8.1 Input-side protection

If power supplies have their own input protection, such as a safety fuse, no further protective measures are necessary. However, standards stipulate that a power supply must be capable of being disconnected from the supply mains by external means. Line protection equipment can then be used. For the relevant characteristics refer to the LUTZE data sheets.

8.2 Output-side protection

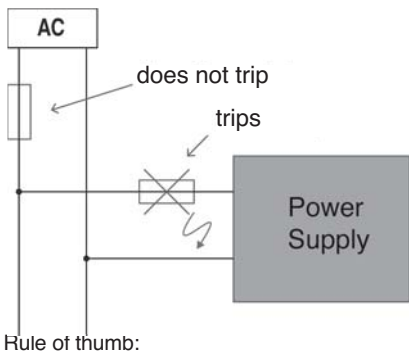
Alongside the output behaviour described in section 4, there is a U/I characteristic with an additional power reserve. However, all these output behaviour modes are ultimately not suitable for safe activation of standard line protection equipment. The reason lies in the technical design of the equipment. Only electronic protection devices capable of reacting fast enough to overload or short-circuit offer a solution. These devices also feature a high degree of repeat accuracy across the entire temperature range. With the LOCC-Box, LUTZE offers intelligent DC protection modules which can also be integrated into field bus communications systems.

8.3 Selectivity

Selectivity means the tripping configuration. In electrical systems, distinction can be made between "series selectivity", which means that individual fuses connected in series are selective against each other, and "parallel selectivity", which means that electrical circuits connected in parallel are selective against each other.

Series selectivity

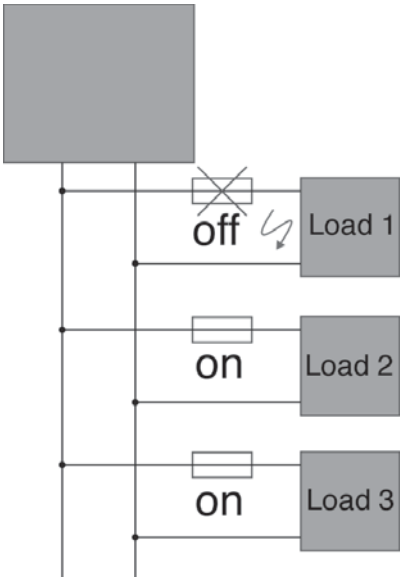
In case of series-connected fuses, the tripping coordination of fuses is considered as selective if only the fuse installed nearest to the fault trips. Fuses that are located nearer to the energy feeding point do not trip. This guarantees that as many system parts as possible remain operative in the event of one single fault, resulting in an increased availability of electrical systems.



Rule of thumb:
The fuses must differ by two nominal quantities

Parallel selectivity

Based on the self-protection, the output voltage is switched off or reduced in the event of a fault. If multiple loads are carried on one power supply, a voltage drop will occur throughout the entire application. To prevent this, protective devices are installed in the individual lines to the consumers. If a fault occurs, the protective device concerned must trip fast enough so as to disconnect the faulty consumer reliably from the rest of the system and such that the other consumers remain available.



8.4 Connection cross-sections

The line cross-sections are selected dependent on the maximum output current. The following table provides an overview of the current capacities of multi-core moveable copper cables with different conductor cross-sections at a temperature of 30 °C and up to a nominal voltage of 1000 V (to DIN 57100-523).

Cross-section in mm²	A
0.75	12
1	15
1.5	18
2.5	26
4	34
6	44
10	61

9 PFC (Power Factor Correction)

Since January 1st 2001, the European standard regarding the limits for harmonic current emissions (IEC/EN 61000-3-2) is in force. This standard defines the maximum allowed intensity of harmonic currents fed back into the supplying mains system. It is applicable for consuming devices with an active power input between 75 and 100 W that are directly connected to the public electricity supply. Power supplies for industrial applications often do not require PFC, since large installations are equipped with a central PFC, installed between the internal electrical system and the public electricity supply.

9.1 Passive PFC

For passive PFC, a reactance coil is connected to the input circuit. This reactance coil buffers energy from the mains and thus reduces the current pulses. The lower the pulses, the less harmonics are produced. The advantage of this solution is its easy implementation into existing circuitry. However, the drawback is that it is not able to reduce all harmonics.

9.2 Active PFC

Active PFC is able to deliver considerably better results. In a very simplified consideration, one could say that the actual power supply is preceded by another power supply that performs a regulation of the current consumption from the mains. This consumption is oriented towards the sinusoidal supply voltage. Using this technology, it is possible to avoid the production of almost every kind of harmonics. However, the circuitry is much more complex than for passive PFC. LUTZE power supplies are all equipped with active PFC.

10 Applications

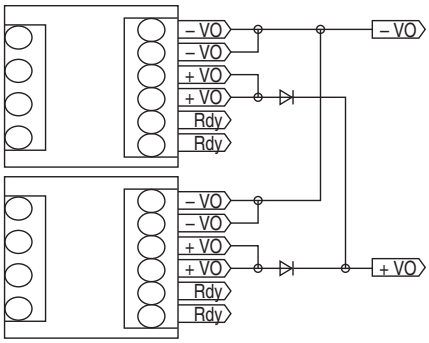
10.1 Parallel connection of power supplies for increased capacity operation

An increase of the output power can be obtained by connecting power supplies in parallel. This can be necessary if the current required by the load is higher than a single power supply can deliver, for example after the expansion of an existing installation. The following preconditions must be met when connecting power supplies in parallel for the purpose of increased capacity:

- Parallel connection is only allowed for identical power supplies.
- The power supplies have to be switched on simultaneously.
- The following points must be observed when connecting the power supplies in order to prevent different voltage drops on the supply lines or at the terminals which would lead to unbalanced load at the common connection point:
  - Identical lengths of the supply lines
  - Identical conductor cross-sections of the supply lines
  - Terminal screws have to be fastened with the same torque to guarantee equal contact resistances.
- The output voltages of the power supplies should not differ by more than 50 mV in the open circuit state. Otherwise safe operation cannot be guaranteed.

10.2 Redundancy

The term redundancy generally denotes the existence of several objects that are identical in functionality, content or nature.
In industrial automation, redundancy ensures that in the event of failure of a power supply another one takes over the supply, thereby maintaining operation of the system.
For this the individual power supplies must be isolated from each other, as one faulty power supply might impact the other one. In the worst case the failed power supply effects a secondary-side short-circuit, which would result in failure of the second power supply.
To isolate the power supplies from each other, isolating diodes (so-called O-ring diodes) must be looped into the secondary outputs of the power supplies. They then prevent reciprocal loading. This ensures uninterruptible power supply. In the LUTZE Delta series the isolating diodes are built-in to the output. In the Compact series the diodes must be installed externally as follows:



LUTZE offers isolating diodes up to a nominal current of DC20A.

Notes

DELTA Power Supplies

DELTA Series

- One and three phase
- 10 to 480 Watts
- Regulated
- Wide input voltage ranges: AC85 - 576 V
- Output voltage range: DC 5/12/24 V
- Output current range: 0.75 - 20 Amps
- Overload and short circuit protection
- High efficiency
- DIN rail mountable
- 5 year warranty
- Class 1, Div.2 units available
- NEC Class 2 compliant units available
- UL 508 Listed

Power supply · 10 W

Switchmode power supplies, Single-phase, NEC Class 2 compliant
Input: AC 90–264 V, DC 120–375 V
Output: DC 5 V, 2 A

Input

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
Number of phases	1

Output

Rated voltage U_N	DC 5 V
Rated current I_N	2 A
Setting range $U_{out\ min.}/U_{out\ max.}$	4.5-5.75 V
Ripple and noise	<50 mV
Hold up time	25 ms @ 115 V / 100 ms @ 230 V
Status indication DC ON LED green	≥4.5 V
Status indication DC LOW LED red	<3.5–4.50 V
Parallel / redundant mode	Max. 2 devices / via external decoupling diodes
Efficiency	73 %
Rated over load protection	110–135 %
Over voltage protection	125–145 %
Short circuit	Hiccup Mode

General

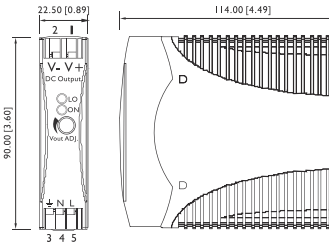
Switching frequency	Approx. 100 kHz
Insulation voltage input / output	AC 3.0 kV_{eff}
Insulation voltage input / ground	AC 1.5 kV_{eff}
Insulation resistance at DC 500 V	100 MΩ
Operation temperature range	-20 °C … +70 °C (Derating)
Derating	Capacity: -3 %/°C starting at +60 °C
MTBF	704000 h
Relative air humidity	20 – 95 % RH, not condensing
Dimensions (w × h × d)	22.5 mm × 90.0 mm × 115.0 mm
Cooling	Air convection, 25 mm clearance all-round
Housing material	Plastic
Mounting	DIN rail mountable TS35 (EN 60715)
Degree of protection	IP20
Protection class	II (SELV, PELV)
Over voltage category	II
Connection type	Screw terminal 0.20 mm² – 2.0 mm² AWG 24 – AWG 14
Approvals	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

Monitoring

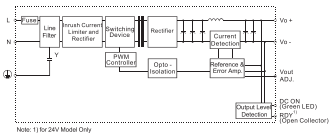
DC ON Control (Rdy)	LED green/red

Part No.	Type	Weight/unit kg	PU (units)
722761	DRA10-05	0.12	1

Dimensions



PIN assignment



Further product information at
www.lutze.com

Power supply · 18 W

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

Input

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
Number of phases	1

Output

Rated voltage U_N	DC 24 V
Rated current I_N	0.75 A
Setting range $U_{out\ min.}/U_{out\ max.}$	21.6-28.8 V
Ripple and noise	<50 mV
Hold up time	20 ms @ 115 V / 75 ms @ 230 V
Status indication DC ON LED green	≥21.6 V
Status indication DC LOW LED red	<18–21.6 V
Parallel / redundant mode	Max. 2 devices / via external decoupling diodes
Efficiency	77 %
Rated over load protection	110–135 %
Over voltage protection	125–145 %
Short circuit	Hiccup Mode

General

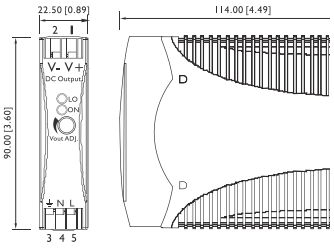
Switching frequency	Approx. 100 kHz
Insulation voltage input / output	AC 3.0 kV_{eff}
Insulation voltage input / ground	AC 1.5 kV_{eff}
Insulation resistance at DC 500 V	100 MΩ
Operation temperature range	-20 °C … +70 °C (Derating)
Derating	Capacity: -3 %/°C starting at +60 °C
MTBF	800000 h
Relative air humidity	20 – 95 % RH, not condensing
Dimensions (w × h × d)	22.5 mm × 90.0 mm × 115.0 mm
Cooling	Air convection, 25 mm clearance all-round
Housing material	Plastic
Mounting	DIN rail mountable TS35 (EN 60715)
Degree of protection	IP20
Protection class	II (SELV, PELV)
Over voltage category	II
Connection type	Spring terminal 0.20 mm² – 2.0 mm² AWG 24 – AWG 14
Approvals	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

Monitoring

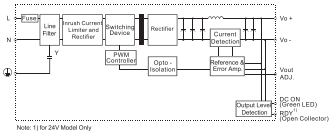
DC ON Control (Rdy)	LED green/red

Part No.	Type	Weight/unit kg	PU (units)
722752	DRA18-24	0.15	1

Dimensions



PIN assignment



Power supply · 30 W

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

Input

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
Number of phases	1

Output

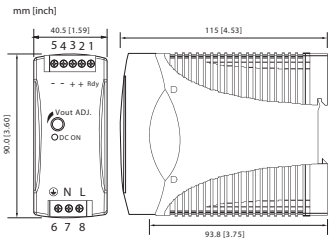
Rated voltage U_N	DC 5 V
Rated current I_N	6 A
Setting range $U_{out\ min.}/U_{out\ max.}$	5.0-5.5 V
Ripple and noise	<50 mV
Hold up time	20 ms @ 115 V / 30 ms @ 230 V
Status indication DC ON LED green	<3.5 V
Parallel / redundant mode	Max. 2 devices / via external decoupling diodes e.g. 722987
Efficiency	79 %
Rated over load protection	110–150 %
Over voltage protection	125–137 %
Short circuit	Fold Forward

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
Operation temperature range	-40 °C … +70 °C (Derating)
Derating	2.5 %/°C starting 61 °C
MTBF	612000 h
Relative air humidity	20 – 95 % RH, not condensing
Dimensions (w × h × d)	40.5 mm × 90.0 mm × 115.0 mm
Cooling	Air convection, 25 mm clearance all-round
Housing material	Plastic
Mounting	DIN rail mountable TS35 (EN 60715)
Degree of protection	IP20
Protection class	I
Over voltage category	II
Connection type	Screw terminal 0,20 mm² – 2,5 mm² AWG 24 – AWG 14
Approvals	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

Part No.	Type	Weight/unit kg	PU (units)
722763	DRA30-5A	0.35	1

Dimensions



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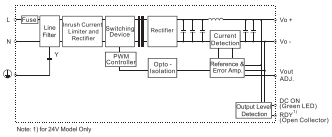


Further product information at
www.lutze.com

Power supply · 30 W

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

Input

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
Number of phases	1

Output

Rated voltage U_N	DC 24 V
Rated current I_N	1.25 A
Setting range $U_{out\ min.}/U_{out\ max.}$	24-28 V
Ripple and noise	<50 mV
Hold up time	20 ms @ 115 V / 30 ms @ 230 V
Status indication DC ON LED green	18 V
Parallel / redundant mode	Max. 2 devices / via external decoupling diodes e.g. 722987
Efficiency	86 %
Rated over load protection	110–150 %
Over voltage protection	125–137 %
Short circuit	Fold Forward

General

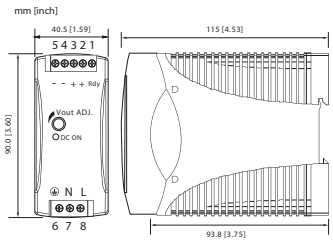
Switching frequency	55 – 135 kHz
Insulation voltage input / output	DC 4.2 kV
Insulation voltage input / ground	DC 2.1 kV
Insulation voltage output / ground	DC 710 V
Insulation resistance at DC 500 V	100 MΩ
Operation temperature range	-40 °C … +70 °C (Derating)
Derating	2.5 %/°C starting 61 °C
MTBF	665000 h
Relative air humidity	20 – 95 % RH, not condensing
Dimensions (w × h × d)	40.5 mm × 90.0 mm × 115.0 mm
Cooling	Air convection, 25 mm clearance all-round
Housing material	Plastic
Mounting	DIN rail mountable TS35 (EN 60715)
Degree of protection	IP20
Protection class	I
Over voltage category	II
Connection type	Screw terminal 0.20 mm² – 2.0 mm² AWG 24 – AWG 14
Approvals	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

Monitoring

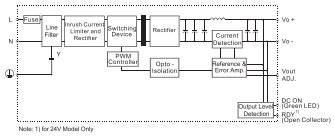
DC ON Control (Rdy)	Open Collector
Switching voltage	DC 24 V
Switching current	≤35 mA
Isolation voltage	None

Part No.	Type	Weight/unit kg	PU (units)
722753	DRA30-24A	0.29	1

Dimensions



PIN assignment



Power supply · 60 W

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

Input

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
Number of phases	1

Output

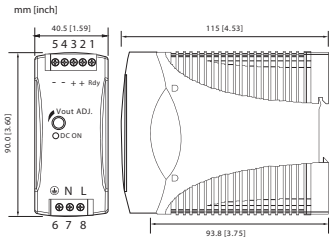
Rated voltage U_N	DC 12 V
Rated current I_N	5 A
Setting range $U_{out\ min.}/U_{out\ max.}$	12-14 V
Ripple and noise	50 mV
Hold up time	20 ms @ 115 V / 30 ms @ 230 V
Status indication DC ON LED green	<9.0 V
Parallel / redundant mode	Max. 2 devices / via external decoupling diodes e.g. 722987
Efficiency	86 %
Rated over load protection	110–150 %
Over voltage protection	125–138 %
Short circuit	Fold Forward

General

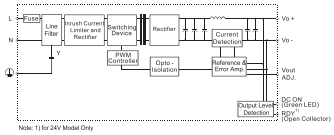
Switching frequency	55 – 135 kHz
Insulation voltage input / output	DC 4.2 kV
Insulation voltage input / ground	DC 2.1 kV
Insulation voltage output / ground	DC 710 V
Insulation resistance at DC 500 V	100 MΩ
Operation temperature range	-40 °C … +70 °C (Derating)
Derating	2.5 %/°C starting 61 °C
MTBF	556000 h
Relative air humidity	20 – 90 % RH, not condensing
Dimensions (w × h × d)	40.5 mm × 90.0 mm × 115.0 mm
Cooling	Air convection, 25 mm clearance all-round
Housing material	Plastic
Mounting	DIN rail mountable TS35 (EN 60715)
Degree of protection	IP20
Protection class	I
Over voltage category	II
Connection type	Screw terminal 0,20 mm² – 2,5 mm² AWG 26 – AWG 12
Approvals	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

Part No.	Type	Weight/unit kg	PU (units)
722769	DRA60-12A	0.41	1

Dimensions



PIN assignment



Further product information at
www.lutze.com

Power supply · 60 W

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

Input

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
Number of phases	1

Output

Rated voltage U_N	DC 24 V
Rated current I_N	2.5 A
Setting range $U_{out\ min.}/U_{out\ max.}$	24-28 V
Ripple and noise	50 mV
Hold up time	20 ms @ 115 V / 30 ms @ 230 V
Status indication DC ON LED green	18 V
Parallel / redundant mode	Max. 2 devices / via external decoupling diodes e.g. 722987
Efficiency	89 %
Rated over load protection	110–150 %
Over voltage protection	125–138 %
Short circuit	Fold Forward

General

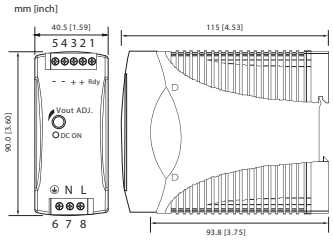
Switching frequency	55 – 135 kHz
Insulation voltage input / output	DC 4.2 kV
Insulation voltage input / ground	DC 2.1 kV
Insulation voltage output / ground	DC 710 V
Insulation resistance at DC 500 V	100 MΩ
Operation temperature range	-40 °C … +70 °C (Derating)
Derating	2.5 %/°C starting 61 °C
MTBF	580000 h
Relative air humidity	20 – 90 % RH, not condensing
Dimensions (w × h × d)	40.5 mm × 90.0 mm × 115.0 mm
Cooling	Air convection, 25 mm clearance all-round
Housing material	Plastic
Mounting	DIN rail mountable TS35 (EN 60715)
Degree of protection	IP20
Protection class	I
Over voltage category	II
Connection type	Screw terminal 0.20 mm² – 2.0 mm² AWG 24 – AWG 14
Approvals	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

Monitoring

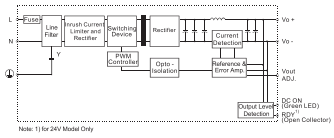
DC ON Control (Rdy)	Normally open
Switching voltage	DC 24 V
Switching current	≤35 mA
Isolation voltage	None

Part No.	Type	Weight/unit kg	PU (units)
722754	DRA60-24A	0.41	1

Dimensions



PIN assignment



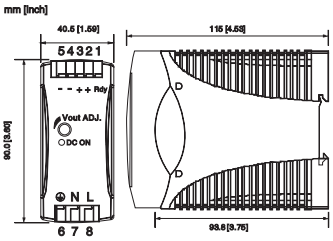
Power supply · 60 W

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

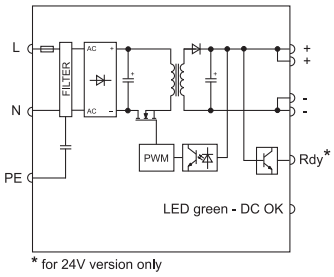
Input	
Rated voltage U_N	AC 100–240 V
Operation voltage range	AC 85–264 V / DC 90–375 V
Frequency range	47 Hz – 63 Hz
Rated current I_N	1.06 A @ AC 115 V / 590 mA @ AC 230 V
Inrush current	30 A @ AC 115 V / 60 A @ AC 230 V
Internal fuse	T2A / AC 250 V
External protection	Mini-circuit breaker: B 6 A
Number of phases	1
Output	
Rated voltage U_N	DC 24 V
Rated current I_N	2.5 A
Setting range $U_{out\ min.}/U_{out\ max.}$	24-28 V
Ripple and noise	50 mV
Hold up time	20 ms @ 115 V / 30 ms @ 230 V
Status indication DC ON LED green	>18 V
Parallel / redundant mode	Max. 2 devices / via external decoupling diodes
Efficiency	89 %
Rated over load protection	110–150 %
Over voltage protection	125–138 %
Short circuit	Fold Forward
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
Operation temperature range	-40 °C … +70 °C (Derating)
Derating	2.5 %/°C starting 61 °C
MTBF	520000 h
Relative air humidity	20 – 90 % RH, not condensing
Dimensions (w × h × d)	40.5 mm × 90.0 mm × 115.0 mm
Cooling	Air convection, 25 mm clearance all-round
Housing material	Plastic
Mounting	DIN rail mountable TS35 (EN 60715)
Degree of protection	IP20
Protection class	I (SELV, PELV)
Over voltage category	II
Connection type	Spring terminal 0.20 mm² – 2.0 mm² AWG 24 – AWG 14
Approvals	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
Monitoring	
DC ON Control (Rdy)	Normally open
Switching voltage	DC 24 V
Switching current	≤35 mA
Isolation voltage	None

Part No.	Type	Weight/unit kg	PU (units)
728754	DRA60-24	0.41	1

Dimensions



PIN assignment



* for 24V version only

Further product information at
www.lutze.com

Power supply · 93 W

Switchmode 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

Input

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
Number of phases	1

Output

Rated voltage U_N	DC 24 V
Rated current I_N	3.8 A
Setting range $U_{out\ min.}/U_{out\ max.}$	22.5/28.5 V
Ripple and noise	50 mV
Hold up time	20 ms @ 115 V / 75 ms @ 230 V
Status indication DC ON LED green	≥17.6–19.4 V
Status indication DC LOW LED red	≤17.6–19.4 V
Parallel / redundant mode	Max. 2 devices each with 90 % load current / via external decoupling diodes
Efficiency	87 %
Rated over load protection	105–125 %
Over voltage protection	125–145 %
Short circuit	Current limit

General

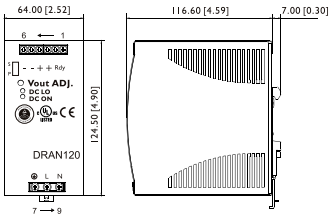
Switching frequency	Approx. 80 kHz
Insulation voltage input / output	AC 3.0 kV_{eff}
Insulation voltage input / ground	AC 1.5 kV_{eff}
Insulation resistance at DC 500 V	100 MΩ
Operation temperature range	-35 °C … +71 °C (Derating)
Derating	Capacity: -2.5 %/°C starting at 60 °C
MTBF	530000 h
Relative air humidity	20 – 90 % RH, not condensing
Dimensions (w × h × d)	64.0 mm × 124.5 mm × 116.6 mm
Cooling	Air convection, 25 mm clearance all-round
Housing material	Metal
Mounting	DIN rail mountable TS35 (EN 60715)
Degree of protection	IP20
Protection class	I (SELV, PELV)
Over voltage category	II
Connection type	Screw terminal 0,20 mm² – 2,5 mm² AWG 24 – AWG 10
Approvals	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

Monitoring

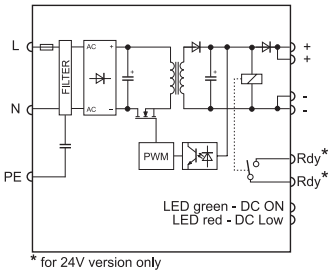
DC ON Control (Rdy)	Normally open
Switching voltage	DC 60 V
Switching current	Max. 300 mA
Isolation voltage	DC 500 V

Part No.	Type	Weight/unit kg	PU (units)
722757	DRAN 120-24AL	0.92	1

Dimensions



PIN assignment



* for 24V version only

Power supply · 120 W

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

Input

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
Number of phases	1

Output

Rated voltage U_N	DC 12 V
Rated current I_N	10 A
Setting range $U_{out\ min.}/U_{out\ max.}$	11.4-14.5 V
Ripple and noise	50 mV
Hold up time	25 ms @ 115 V / 30 ms @ 230 V
Status indication DC ON LED green	≥10–11.2 V
Status indication DC LOW LED red	≤10–11.2 V
Parallel / redundant mode	Max. 3 units at 90% load current, manual switch S/P
Efficiency	84 %
Rated over load protection	105–125 %
Over voltage protection	125–145 %
Short circuit	Current limit

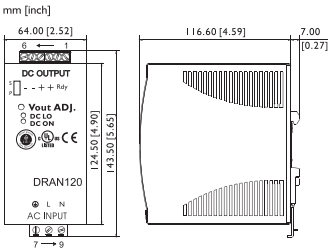
General

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
Operation temperature range	-35 °C … +71 °C (Derating)
Derating	Capacity: -2.5 %/°C starting at +61 °C
MTBF	530000 h
Relative air humidity	20 – 90 % RH, not condensing

Dimensions (w × h × d)	64.0 mm × 143.5 mm × 116.6 mm
Cooling	Air convection, 25 mm clearance all-round
Housing material	Metal
Mounting	DIN rail mountable TS35 (EN 60715)
Degree of protection	IP20
Protection class	I
Over voltage category	II
Connection type	Screw terminal 0,20 mm² – 2,5 mm² AWG 24 – AWG 10
Approvals	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

Part No.	Type	Weight/unit kg	PU (units)
722770	DRAN120-12B	0.92	1

Dimensions



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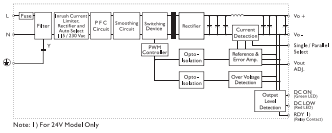


Further product information at
www.lutze.com

Power supply · 120 W

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

Input

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
Number of phases	1

Output

Rated voltage U_N	DC 24 V
Rated current I_N	5 A
Setting range $U_{out\ min.}/U_{out\ max.}$	22.5/28.5 V
Ripple and noise	50 mV
Hold up time	25 ms @ 115 V / 30 ms @ 230 V
Status indication DC ON LED green	≥17.6–19.4 V
Status indication DC LOW LED red	≤17.6–19.4 V
Parallel / redundant mode	Max. 3 units at 90% load current, manual switch S/P
Efficiency	87 %
Rated over load protection	105–125 %
Over voltage protection	125–145 %
Short circuit	Current limit

General

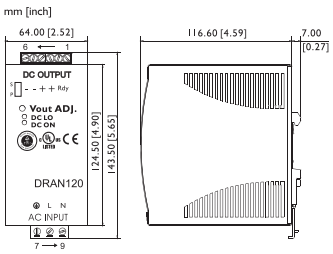
Switching frequency	Approx. 80 kHz
Insulation voltage input / output	DC 4.2 kV
Insulation voltage input / ground	DC 2.1 kV
Insulation voltage output / ground	DC 700 V
Insulation resistance at DC 500 V	100 MΩ
Operation temperature range	-35 °C … +71 °C (Derating)
Derating	Capacity: -2.5 %/°C starting at +61 °C
MTBF	530000 h
Relative air humidity	20 – 90 % RH, not condensing
Dimensions (w × h × d)	64.0 mm × 143.5 mm × 116.6 mm
Cooling	Air convection, 25 mm clearance all-round
Housing material	Metal
Mounting	DIN rail mountable TS35 (EN 60715)
Degree of protection	IP20
Protection class	I
Over voltage category	II
Connection type	Screw terminal 0,20 mm² – 2,5 mm² AWG 24 – AWG 10
Approvals	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

Monitoring

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

Part No.	Type	Weight/unit kg	PU (units)
722758	DRAN120-24B	0.92	1

Dimensions



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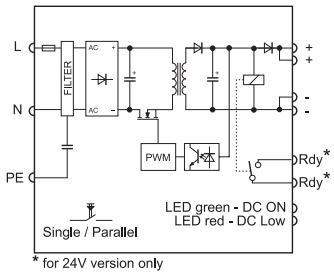


Power supply · 120 W

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

Input

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
Number of phases	1

Output

Rated voltage U_N	DC 24 V
Rated current I_N	5 A
Setting range $U_{out\ min.}/U_{out\ max.}$	22.5/28.5 V
Ripple and noise	50 mV
Hold up time	25 ms @ 115 V / 30 ms @ 230 V
Status indication DC ON LED green	≥17.6–19.4 V
Status indication DC LOW LED red	≤17.6–19.4 V
Parallel / redundant mode	Max. 3 units at 90% load current, manual switch S/P
Efficiency	87 %
Rated over load protection	110–145 %
Over voltage protection	125–145 %
Short circuit	Fold Forward

General

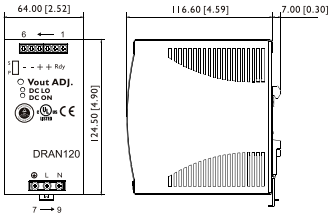
Switching frequency	Approx. 80 kHz
Insulation voltage input / output	DC 4.2 kV
Insulation voltage input / ground	DC 2.1 kV
Insulation voltage output / ground	DC 700 V
Insulation resistance at DC 500 V	100 MΩ
Operation temperature range	-35 °C … +71 °C (Derating)
Derating	Capacity: -2.5 %/°C starting at 60 °C
MTBF	530000 h
Relative air humidity	20 – 90 % RH, not condensing
Dimensions (w × h × d)	64.0 mm × 125.5 mm × 116.6 mm
Cooling	Air convection, 25 mm clearance all-round
Housing material	Metal
Mounting	DIN rail mountable TS35 (EN 60715)
Degree of protection	IP20
Protection class	I
Over voltage category	II
Connection type	Screw terminal 0,20 mm² – 2,5 mm² AWG 24 – AWG 10
Approvals	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

Monitoring

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

Part No.	Type	Weight/unit kg	PU (units)
728758	DRAN120-24A 120W 5A	0.92	1

Dimensions



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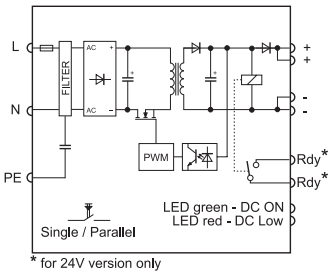


Further product information at
www.lutze.com

Power supply · 120 W, 3-phase

Switchmode power supply, PFC, 3-phase
Input: AC 340–575 V, DC 480–820 V
Output: DC 24 V, 5 A

Input

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
Number of phases	3

Output

Rated voltage U_N	DC 24 V
Rated current I_N	5 A
Setting range $U_{out\ min.}/U_{out\ max.}$	22.5/28.5 V
Ripple and noise	100 mV
Hold up time	Min. 20 ms
Status indication DC ON LED green	≥17.6–19.4 V
Status indication DC LOW LED red	≤17.6–19.4 V
Parallel / redundant mode	Max. 2 devices / via external decoupling diodes e.g. 722987
Efficiency	89 %
Rated over load protection	115–135 % Temperature: Deactivation at 100–110°C and automatic activation after cooling off
Over voltage protection	125–137 %
Short circuit	Hiccup Mode

General

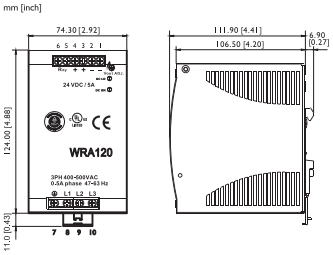
Switching frequency	Approx. 70 kHz
Insulation voltage input / output	DC 4.2 kV
Insulation voltage input / ground	DC 2.1 kV
Insulation voltage output / ground	DC 700 V
Insulation resistance at DC 500 V	100 MΩ
Operation temperature range	-40 °C … +71 °C (Derating)
Derating	Capacity: -2.5 %/°C starting at +61 °C
MTBF	572000 h
Relative air humidity	20 – 90 % RH, not condensing
Dimensions (w × h × d)	74.3 mm × 124.0 mm × 111.9 mm
Cooling	Air convection, 25 mm clearance all-round
Housing material	Metal
Mounting	DIN rail mountable TS35 (EN 60715)
Degree of protection	IP20
Protection class	I
Over voltage category	II
Connection type	Screw terminal 0.20 mm² – 4.0 mm² AWG 24 – AWG 10
Approvals	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

Monitoring

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

Part No.	Type	Weight/unit kg	PU (units)
722803	WRA120-24	0.8	1

Dimensions



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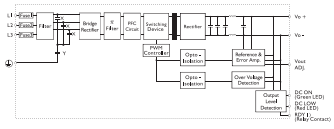


Power supply · 240 W

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

Input

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
Number of phases	1

Output

Rated voltage U_N	DC 24 V
Rated current I_N	10 A
Setting range $U_{out\ min.}/U_{out\ max.}$	22.5/28.5 V
Ripple and noise	100 mV
Hold up time	25 ms @ 115 V / 30 ms @ 230 V
Status indication DC ON LED green	≥17.6–19.4 V
Status indication DC LOW LED red	≤17.6–19.4 V
Parallel / redundant mode	Max. 3 units at 90% load current, manual switch S/P
Efficiency	89 %
Rated over load protection	105–145 %
Over voltage protection	120–145 %
Short circuit	Current limit

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
Operation temperature range	-40 °C … +71 °C (Derating)
Derating	Capacity: -2.5 %/°C starting at +61 °C
MTBF	423000 h
Relative air humidity	20 – 90 % RH, not condensing
Dimensions (w × h × d)	83.5 mm × 143.5 mm × 116.6 mm
Cooling	Air convection, 25 mm clearance all-round
Housing material	Metal
Mounting	DIN rail mountable TS35 (EN 60715)
Degree of protection	IP20
Protection class	I
Over voltage category	II
Connection type	Screw terminal AWG 24 – AWG 10 0.20 mm² – 4.0 mm²
Approvals	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

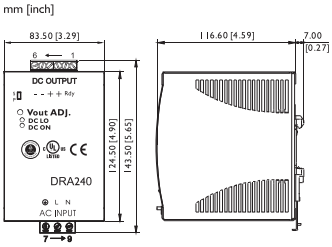
Monitoring

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

Part No.	Type	Weight/unit kg	PU (units)
722759	DRA240-24B	1.38	1

Dimensions

mm [inch]



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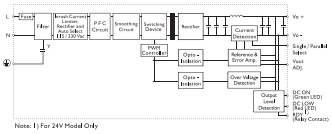


Further product information at
www.lutze.com

Power supply · 240 W

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

Input

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
Number of phases	1

Output

Rated voltage U_N	DC 24 V
Rated current I_N	10 A
Setting range $U_{out\ min.}/U_{out\ max.}$	22.5/28.5 V
Ripple and noise	100 mV
Hold up time	25 ms @ 115 V / 30 ms @ 230 V
Status indication DC ON LED green	≥17.6–19.4 V
Status indication DC LOW LED red	≤17.6–19.4 V
Parallel / redundant mode	Max. 3 units at 90% load current, manual switch S/P
Efficiency	89 %
Rated over load protection	105–145 %
Over voltage protection	120–145 %
Short circuit	Current limit

General

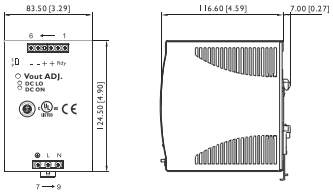
Switching frequency	Approx. 40 kHz
Insulation voltage input / output	DC 4.2 kV
Insulation voltage input / ground	DC 2.1 kV
Insulation voltage output / ground	DC 700 V
Insulation resistance at DC 500 V	100 MΩ
Operation temperature range	-40 °C … +71 °C (Derating)
Derating	Capacity: -2.5 %/°C starting at +61 °C
MTBF	481000 h
Relative air humidity	20 – 90 % RH, not condensing
Dimensions (w × h × d)	83.5 mm × 124.5 mm × 116.6 mm
Cooling	Air convection, 25 mm clearance all-round
Housing material	Metal
Mounting	DIN rail mountable TS35 (EN 60715)
Degree of protection	IP20
Protection class	I
Over voltage category	II
Connection type	Screw terminal 0.20 mm² – 4.0 mm² AWG 24 – AWG 10
Approvals	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

Monitoring

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

Part No.	Type	Weight/unit kg	PU (units)
722781	DRA240-24A	1.38	1

Dimensions



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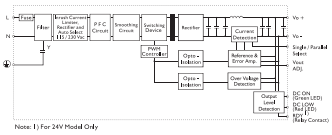


Power supply · 240 W, 3-phase

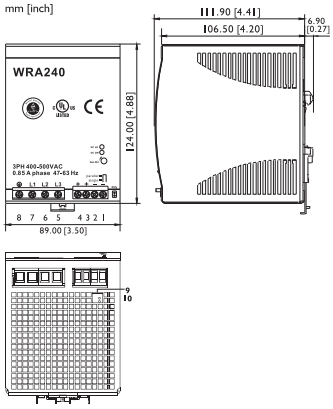
Switchmode power supply, PFC, 3-phase
Input: AC 340–575 V, DC 480–820 V
Output: DC 24 V, 10 A

Input	
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
Number of phases	3
Output	
Rated voltage U_N	DC 24 V
Rated current I_N	10 A
Setting range $U_{out\ min.}/U_{out\ max.}$	22.5/28.5 V
Ripple and noise	100 mV
Hold up time	Min. 20 ms
Status indication DC ON LED green	≥17.6–19.4 V
Status indication DC LOW LED red	≤17.6–19.4 V
Parallel / redundant mode	Max. 2 units at 90% load current, manual switch S/P
Efficiency	90 %
Rated over load protection	Temperature: Deactivation at 100–110°C and automatic activation after cooling off
Over voltage protection	125–137 %
Short circuit	Hiccup Mode
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
Operation temperature range	-40 °C … +71 °C (Derating)
Derating	Capacity: -2.5 %/°C starting at +61 °C
MTBF	520000 h
Relative air humidity	20 – 90 % RH, not condensing
Dimensions (w × h × d)	89.0 mm × 124.0 mm × 111.9 mm
Cooling	Air convection, 25 mm clearance all-round
Housing material	Metal
Mounting	DIN rail mountable TS35 (EN 60715)
Degree of protection	IP20
Protection class	I
Over voltage category	II
Connection type	Screw terminal 0.20 mm² – 4.0 mm² AWG 24 – AWG 10
Approvals	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
Monitoring	
DC ON Control (Rdy)	N/O contact
Switching voltage	DC 60 V
Switching current	Max. 300 mA
Isolation voltage	DC 500 V

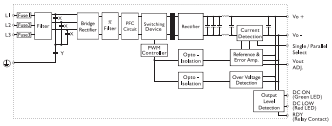
Part No.	Type	Weight/unit kg	PU (units)
722804	WRA240-24	1.1	1

Dimensions

mm [inch]



PIN assignment



Further product information at
www.lutze.com

Power supply · 480 W

Switchmode power supply, PFC, Single-phase
Input: AC 90–264 V, DC 120–375 V
Output: DC 24 V, 20 A

Input

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
Number of phases	1

Output

Rated voltage U_N	DC 24 V
Rated current I_N	20 A
Setting range $U_{out\ min.}/U_{out\ max.}$	22.5/28.5 V
Ripple and noise	100 mV
Hold up time	Min. 30 ms
Status indication DC ON LED green	≥17.6–19.4 V
Status indication DC LOW LED red	≤17.6–19.4 V
Parallel / redundant mode	Max. 3 units at 90% load current, manual switch S/P
Efficiency	89 %
Rated over load protection	120–140 %
Over voltage protection	125–137 %
Short circuit	Current limit

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
Operation temperature range	-40 °C … +71 °C (Derating)
Derating	Capacity: -2,5 %/°C starting at +56 °C
MTBF	469000 h
Relative air humidity	20 – 90 % RH, not condensing
Dimensions (w × h × d)	175.5 mm × 124.5 mm × 116.6 mm
Cooling	Air convection, 25 mm clearance all-round
Housing material	Metal
Mounting	DIN rail mountable TS35 (EN 60715)
Degree of protection	IP20
Protection class	I
Over voltage category	II
Connection type	Screw terminal 0.20 mm² – 4.0 mm² AWG 24 – AWG 10
Approvals	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

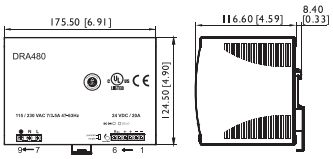
Monitoring

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

Part No.	Type	Weight/unit kg	PU (units)
722782	DRA480-24A	1.92	1

Dimensions

mm [inch]



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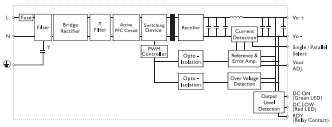


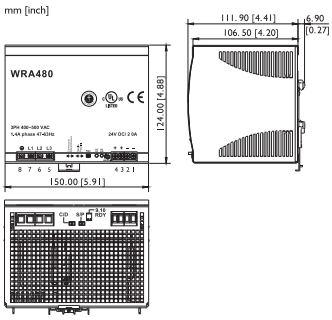
Power supply · 480 W, 3-phase

Switchmode power supply, PFC, 3-phase
Input: AC 340–575 V, DC 480–820 V
Output: DC 24 V, 20 A

Input	
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	1.1 A @ AC 400 V / 0.93 A @ AC 500 V
Inrush current	20 A
Internal fuse	T3, 15 A/per Phase
External protection	Mini-circuit breaker: 3 × B 10 A, C 6 A
Power factor correction P.F.C.	0.7
Number of phases	3
Output	
Rated voltage U_N	DC 24 V
Rated current I_N	20 A
Setting range $U_{out\ min.}/U_{out\ max.}$	22.5/28.5 V
Ripple and noise	100 mV
Hold up time	Min. 20 ms
Status indication DC ON LED green	≥17.6–19.4 V
Status indication DC LOW LED red	≤17.6–19.4 V
Parallel / redundant mode	Max. 3 units at 90% load current, manual switch S/P
Efficiency	90 %
Rated over load protection	115–135 %
Over voltage protection	125–137 %
Short circuit	Current limit (C) / Hiccup Mode (D), switching with switch C/D Hiccup Mode: deactivation within 3 s and restart after 30 s
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
Operation temperature range	-40 °C … +71 °C (Derating)
Derating	Capacity: -2.5 %/°C starting at +61 °C
MTBF	412000 h
Relative air humidity	20 – 90 % RH, not condensing
Dimensions (w × h × d)	150.0 mm × 124.0 mm × 118.8 mm
Cooling	Air convection, 25 mm clearance all-round
Housing material	Metal
Mounting	DIN rail mountable TS35 (EN 60715)
Degree of protection	IP20
Protection class	I
Over voltage category	II
Connection type	Screw terminal 0.20 mm² – 4.0 mm² AWG 24 – AWG 10
Approvals	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
Monitoring	
DC ON Control (Rdy)	N/O contact
Switching voltage	DC 60 V
Switching current	Max. 300 mA
Isolation voltage	DC 500 V

Part No.	Type	Weight/unit kg	PU (units)
722805	WRA480-24	1.75	1

Dimensions



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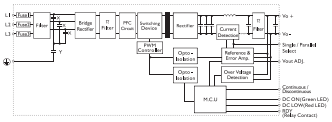


Further product information at
www.lutze.com

Redundant module 20 A with 2 inputs
Potential-free signalling contact and Status LED per input
Over- and undervoltage control

Input

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

Output

Rated voltage U_N	24 V
Rated current I_N	20 A
Max. output current	30 A, 5 s @ 24 V
Status indication DC ON LED green	ON: DC input A or B OK / OFF: Error
Rated over load protection	No
Over voltage protection	No
Voltage drop	0.5 V
Inverse voltage	30 V

General

Operation temperature range	-40 °C … +71 °C (Derating)
MTBF	659000 h
Dimensions (w × h × d)	54.0 mm × 90.0 mm × 114.0 mm
Cooling	Air convection
Housing material	Plastic
Mounting	DIN rail mountable TS35 (EN 60715)
Degree of protection	IP20 (IEC 529 / EN 60529)
Over voltage category	II
Connection type	Screw terminal
	0,20 mm² – 2,5 mm²
	AWG 24 – AWG 12

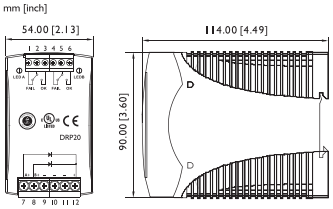
Approvals	UL 508 Listed (E249179)
	UL 60950-1
	CE
	UKCA
Standards	IEC/EN 62368-1
	EN 55032 Class B
	EN 61000-4-2
	EN 61000-4-4
	EN 61000-4-5
	EN 61000-4-6
	EN 61000-4-8
	ENV 50204
	EN 61204-3

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

Part No.	Type	Weight/unit kg	PU (units)
722987	DRP20	0.21	1

Dimensions



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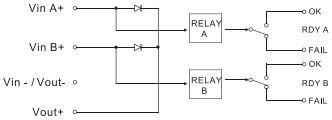


Notes

COMPACT Power Supplies

COMPACT Series

- One, two and three phase
- 80 to 2400 Watts
- Regulated
- Wide input voltage ranges: AC 90 - 550 V
- Output voltage range: DC 24/48/72 V
- Output current range: 5 - 100 Amps
- Overload and short circuit protection
- High efficiency
- DIN rail mountable
- Compact footprint
- Subseries: Eco, Universal, Ultra
- 5 year warranty
- UL Listed

Power supply · Compact Universal, 120 W

Switchmode power supplies, PFC, 1/2-phase
Input: wide-range input AC 187–550 V, DC 270–725 V
Output: DC 24 V, 5 A

Input

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
Number of phases	2

Output

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
Setting range $U_{out\ min.}/U_{out\ max.}$	23-28 V
Ripple and noise	<110 mV pp
Hold up time	>17 ms @ AC 120 V / >60 ms @ AC 230 V
Status indication DC ON LED green	≥21.6 V
Status indication DC LOW LED red	I_{out} >110 % I_N
Parallel / redundant mode	Yes/via external decoupling diode e.g. 722999
Efficiency	88 %
Rated over load protection	Yes
Over voltage protection	>DC 33 V
Short circuit	Hiccup Mode

General

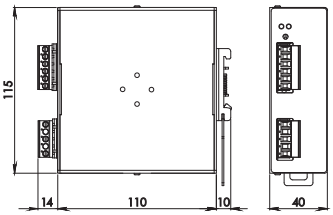
Insulation voltage input / output	DC 4.2 kV
Insulation voltage input / ground	DC 2.2 kV
Insulation voltage output / ground	DC 750 V
Operation temperature range	-20 °C … +70 °C (overtemperature protection)
Derating	>60 °C: -1.2 W/°C
MTBF	>500000 h: SN29500 / >500000 h: MIL HDBK 217F
Relative air humidity	5 – 95 % RH, non-condensing
Dimensions (w × h × d)	40.0 mm × 115.0 mm × 110.0 mm
Cooling	Air convection, 50 mm distance top/ bottom, 20 mm side
Housing material	Aluminum
Mounting	DIN rail mountable TS35 (EN 60715)
Degree of protection	IP20 (IEC 529 / EN 60529)
Protection class	I
Over voltage category	III
Connection type	Screw terminal 0,20 mm² – 2,5 mm² AWG 24 – AWG 12 plug-in
Approvals	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 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

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

Part No.	Type	Weight/unit kg	PU (units)
722995	CPSB2-120-24	0.5	1

Dimensions



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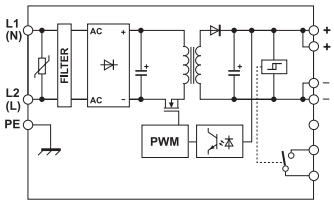


Power supply · Compact Economy, 120 W

Switchmode power supply, PFC, Single-phase
Input: wide-range input AC 85–264 V, DC 110–345 V
Output: DC 24 V, 5 A

Input

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 A²s
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
Number of phases	1

Output

Rated voltage U_N	DC 24 V
Rated current I_N	5 A
Max. output current	7 A, 5 s
Setting range $U_{out\ min.}/U_{out\ max.}$	DC 23–28 V
Ripple and noise	<60 mV
Hold up time	>20 ms @ AC 120 V / 50 ms @ AC 230 V
Status indication DC ON LED green	≥21.6 V
Status indication DC LOW LED red	≤21.6 V
Parallel / redundant mode	Yes/via external decoupling diode e.g. 722999
Efficiency	>87 %
Over voltage protection	≥DC 33 V
Short circuit	Hiccup Mode
Overtemperature protection	Yes

General

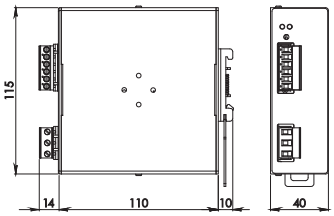
Insulation voltage input / output	DC 4.2 kV
Insulation voltage input / ground	DC 2.2 kV
Insulation voltage output / ground	DC 750 V
Operation temperature range	-40 °C … +70 °C (UL approved up to +60 °C)
Derating	>60 °C: -2.4 W/°C
Relative air humidity	5 – 95 % RH, non-condensing
Dimensions (w × h × d)	40.0 mm × 115.0 mm × 110.0 mm
Cooling	Air convection, 50 mm distance top/ bottom, 20 mm side
Housing material	Aluminum
Mounting	DIN rail mountable TS35 (EN 60715)
Degree of protection	IP20 (IEC 529 / EN 60529)
Protection class	I
Over voltage category	III
Connection type	Screw terminal 0,20 mm² – 2,5 mm² plug-in
Approvals	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

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

Part No.	Type	Weight/unit kg	PU (units)
723500	CPSB1-120-24E	0.45	1

Dimensions



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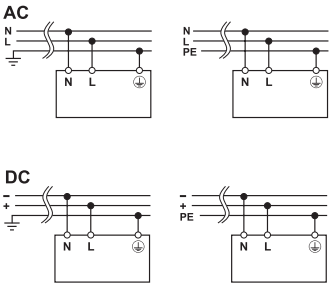


Power supply · Compact Ultra, 120 W

Primary switchmode power supply, PFC, Single-phase
Input: AC 90–264 V, DC 110–345 V
Output: DC 24 V, 5 A

Input

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 V1,4 A @ AC 120 V / 0,7 A @ AC 240 V
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
Number of phases	1
Inrush peak current	≤32 A / 0.49 A²s

Output

Rated voltage U_N	DC 24 V
Rated current I_N	5 A
Max. output current	7.5 A, 5 s @ Hiccup Mode7,5 A, 5 s @ Hiccup Mode
Setting range $U_{out\ min.}/U_{out\ max.}$	DC 11.5–29 V
Ripple and noise	≤60 mV pp
Hold up time	≥20 ms @ AC 120 V / ≥30 ms @ AC 240 V
Status indication DC ON LED green	≥21.6 V
Status indication DC LOW LED red	≤21.6 V
Parallel / redundant mode	Yes/via external decoupling diode e.g. Part-No. 722999
Efficiency	>90 % @ AC 240 V
Over voltage protection	≥DC 33 V (U_A=24 V)
Short circuit	Hiccup Mode / Current limit
Overload limit in constant current mode	7.5 A
Overtemperature protection	Yes

General

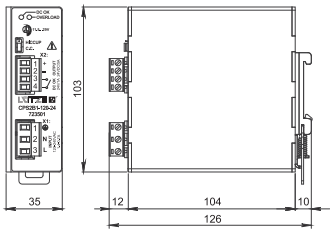
Insulation voltage input / output	DC 4.2 kV, 1 min.
Insulation voltage input / ground	DC 2.2 kV, 1 min.
Insulation voltage output / ground	DC 750 V, 1 min.
Operation temperature range	-35 °C … +70 °C
Derating	>60 °C: -1.2 W/°C
MTBF	MIL-HDBK-217F, >500000 h at 25 °C ambient full load
Relative air humidity	5 – 95 % RH, non-condensing
Dimensions (w × h × d)	35.0 mm × 103.0 mm × 126.0 mm
Cooling	Air convection, 50 mm distance top/ bottom, 20 mm side
Housing material	Aluminum
Mounting	DIN rail mountable TS35 (EN 60715)
Degree of protection	IP20 (IEC 529 / EN 60529)
Protection class	I
Over voltage category	III (EN 50178)
Connection type	Screw terminal
Strip length	0,20 mm² – 2,5 mm² / AWG 24 – 12 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
Approvals	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 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

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

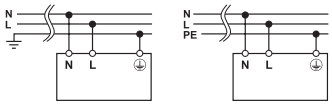
Part No.	Type	Weight/unit kg	PU (units)
723501	CPS2B1-120-24	0.45	1

Dimensions

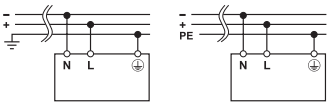


PIN assignment

AC



DC



Further product information at
www.lutze.com

Power supply · Compact Economy, 120 W

Switchmode power supply, PFC, Single-phase
Input: wide-range input AC 90–264 V, DC 110–345 V
Output: DC 48 V, 2.5 A

Input

Rated voltage U_N	AC 120/230 V
Operation voltage range	AC 90–264 V / DC 110–370 V
Frequency range	47 Hz – 63 Hz
Rated current I_N	2.1 A @ AC 115 V / 1.2 A @ AC 230 V
Inrush current	≤30 A / 0.72 A²s
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
Number of phases	1

Output

Rated voltage U_N	DC 48 V
Rated current I_N	2.5 A
Max. output current	3.7 A, 5 s
Short-circuit current	30 A
Setting range $U_{out\ min.}/U_{out\ max.}$	DC 45–55 V
Ripple and noise	60 mV
Hold up time	>10 ms @ AC 120 V / 50 ms @ AC 230 V
Status indication DC ON LED green	≥43.2 V
Status indication DC LOW LED red	≤43.2 V
Parallel / redundant mode	Yes / decoupling diode contained internally
Efficiency	>86 %
Rated over load protection	Yes
Over voltage protection	Yes
Short circuit	Hiccup Mode
Overtemperature protection	Yes

General

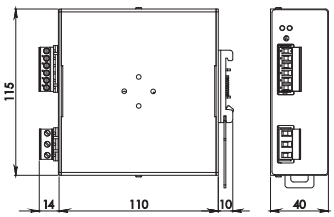
Switching frequency	Approx. 110 kHz
Insulation voltage input / output	DC 4.2 kV
Insulation voltage input / ground	DC 2.2 kV
Insulation voltage output / ground	DC 750 V
Operation temperature range	-40 °C … +70 °C (UL approved up to +60 °C)
Derating	>60 °C: -2.4 W/°C
MTBF	>500000 h: SN29500 / >600000 h: MIL HDBK 217F
Relative air humidity	5 – 95 % RH, non-condensing
Dimensions (w × h × d)	40.0 mm × 115.0 mm × 134.0 mm
Cooling	Air convection, 50 mm distance top/bottom, 20 mm side
Housing material	Aluminum
Mounting	DIN rail mountable TS35 (EN 60715)
Degree of protection	IP20 (IEC 529 / EN 60529)
Protection class	I
Over voltage category	III
Connection type	Screw terminal 0,20 mm² – 2,5 mm² plug-in
Approvals	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

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

Part No.	Type	Weight/unit kg	PU (units)
722784	CPSB1-120-48R	0.45	1

Dimensions



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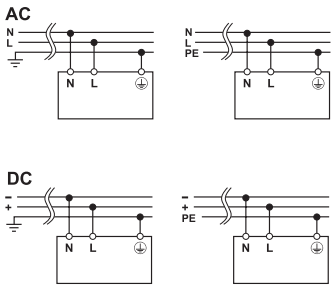


Power supply · Compact Ultra, 120 W

Primary switchmode power supply, PFC, Single-phase
Input: AC 90–264 V, DC 110–345 V
Output: DC 48 V, 2.5 A

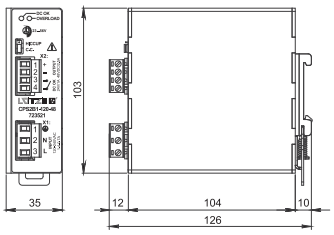
Input	
Rated voltage U_N	AC 120/240 V (UL certified)
Operation voltage range	AC 90–264 V / DC 110–345 V
Frequency range	47 Hz – 63 Hz
Rated current I_N	1.4 A @ AC 120 V / 0.7 A @ AC 240 V1,4 A @ AC 120 V / 0,7 A @ AC 240 V
Internal fuse	T3, 15 A (non-replaceable)
External protection	Mini-circuit breaker: C 4 A / Fusible link: T 4 A
Power factor correction P.F.C.	>0,90, enabled
Number of phases	1
Inrush peak current	≤32 A / 0.49 A²s
Output	
Rated voltage U_N	DC 48 V
Rated current I_N	2.5 A
Max. output current	3.75 A, 5 s @ Hiccup Mode
Setting range $U_{out\ min.}/U_{out\ max.}$	DC 23–56 V
Ripple and noise	≤60 mV pp
Hold up time	≥20 ms @ AC 120 V / ≥30 ms @ AC 240 V
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
Parallel / redundant mode	Yes/via external decoupling diode e.g. Part-No. 722999
Efficiency	>90 % @ AC 240 V
Over voltage protection	≥DC 68 V
Short circuit	Adjustable: Hiccup, C.C. Mode
Overload limit in constant current mode	3.75 A
Overtemperature protection	Yes
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.
Operation temperature range	-35 °C … +70 °C
Derating	>60 °C: -1.2 W/°C
MTBF	MIL-HDBK-217F, >500000 h at 25 °C ambient full load
Relative air humidity	5 – 95 % RH, non-condensing
Dimensions (w × h × d)	35.0 mm × 103.0 mm × 126.0 mm
Cooling	Air convection, 50 mm distance top/ bottom, 20 mm side
Housing material	Aluminum
Mounting	DIN rail mountable TS35 (EN 60715)
Degree of protection	IP20 (IEC 529 / EN 60529)
Protection class	I
Over voltage category	III (EN 50178)
Connection type	Screw terminal
Strip length	0,20 mm² – 2,5 mm² / AWG 24 – 12 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
Approvals	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 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
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

Power supply · Compact Ultra, 120 W

Primary switchmode power supply, PFC, Single-phase
Input: AC 90–264 V, DC 110–345 V
Output: DC 48 V, 2.5 A

Part No.	Type	Weight/unit kg	PU (units)
723521	CPS2B1-120-48	0.45	1

Dimensions



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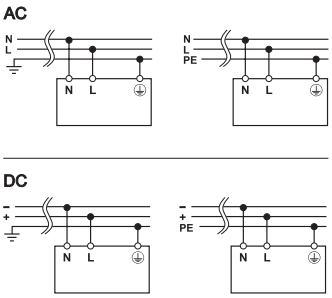


Power supply · Compact Economy, 240 W

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

Input

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
Number of phases	1

Output

Rated voltage U_N	DC 24 V
Rated current I_N	10 A
Max. output current	13.5 A, 30 s
Setting range $U_{out\ min.}/U_{out\ max.}$	DC 23–27.5 V
Ripple and noise	<100 mV pp
Hold up time	>60 ms @ AC 120 V / >70 ms @ AC 240 V
Status indication DC ON LED green	≥21.6 V
Status indication DC LOW LED red	≤21.6 V
Parallel / redundant mode	Yes/via external decoupling diode e.g. 722999
Efficiency	>87 %
Over voltage protection	>DC 33 V (U_A=24 V)
Short circuit	Hiccup Mode
Overtemperature protection	Yes

General

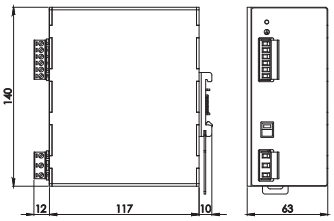
Insulation voltage input / output	DC 4.2 kV
Insulation voltage input / ground	DC 2.2 kV
Insulation voltage output / ground	DC 750 V
Operation temperature range	-40 °C … +70 °C (UL approved up to +50 °C)
Derating	>60 °C: -5 W/°C
Dimensions (w × h × d)	63.0 mm × 140.0 mm × 139.0 mm
Cooling	Air convection, 50 mm distance top/bottom, 20 mm side
Housing material	Aluminum
Mounting	DIN rail mountable TS35 (EN 60715)
Degree of protection	IP20 (IEC 529 / EN 60529)
Over voltage category	III
Connection type	Screw terminal 0,20 mm² – 2,5 mm² plug-in
Approvals	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

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

Part No.	Type	Weight/unit kg	PU (units)
723600	CPSB1-240-24E	0.75	1

Dimensions



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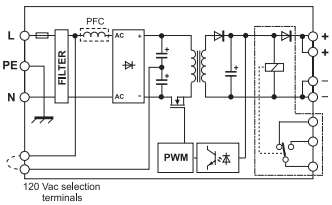


Further product information at
www.lutze.com

Power supply · Compact Ultra, 240 W

Primary switchmode power supply, PFC, Single-phase
Input: AC 90–264 V, DC 110–345 V
Output: DC 24 V, 10 A

Input

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
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
Number of phases	1
Inrush peak current	≤34 A / 0.66 A²s

Output

Rated voltage U_N	DC 24 V
Rated current I_N	10 A
Max. output current	15 A, 5 s @ Hiccup Mode
Setting range $U_{out\ min.}/U_{out\ max.}$	DC 22–29 V
Ripple and noise	≤260 mV pp
Hold up time	≥20 ms @ AC 240 V
Status indication DC ON LED green	≥21.6 V
Status indication DC LOW LED red	≤21.6 V
Parallel / redundant mode	Yes/via external decoupling diode e.g. Part-No. 722999
Efficiency	>93 % @ AC 240 V
Over voltage protection	≥DC 33 V
Short circuit	Hiccup Mode, Constant current (C.C.)
Overload limit in constant current mode	11 A
Overtemperature protection	Yes

General

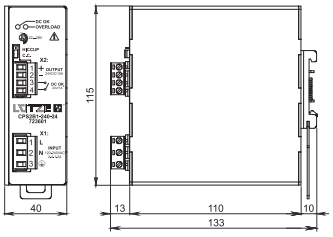
Insulation voltage input / output	DC 4.2 kV, 1 min.
Insulation voltage input / ground	DC 2.2 kV, 1 min.
Insulation voltage output / ground	DC 750 V, 1 min.
Operation temperature range	-40 °C … +70 °C
Derating	no derating
MTBF	MIL-HDBK-217F, >600000 h at 25 °C ambient full load
Relative air humidity	5 – 95 %, non-condensing
Dimensions (w × h × d)	40.0 mm × 115.0 mm × 133.0 mm
Cooling	Air convection, 100 mm distance top/ bottom, 20 mm side
Housing material	Aluminum
Mounting	DIN rail mountable TS35 (EN 60715)
Degree of protection	IP20 (IEC 529 / EN 60529)
Protection class	I
Over voltage category	III (EN 50178)
Connection type	Screw terminal
	0,20 mm² – 2,5 mm² / AWG 24 – 12
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
Approvals	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 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

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

Part No.	Type	Weight/unit kg	PU (units)
723601	CPS2B1-240-24	0.75	1

Dimensions



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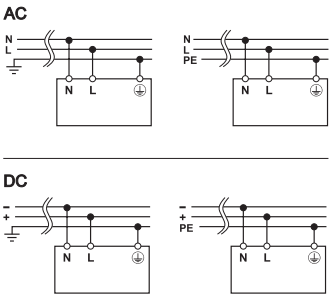


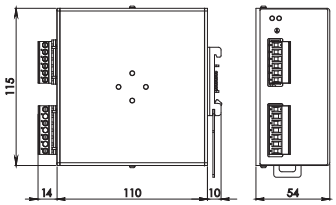
Power supply · Compact Universal, 240 W

Switchmode power supplies, PFC, 1/2/3-phase
Input: wide-range input AC 187–550 V, DC 250–725 V (UL: DC 300–500 V)
Output: DC 24 V, 10 A

Input	
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 A²s
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
Number of phases	3
Output	
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
Setting range $U_{out\ min.}/U_{out\ max.}$	23-28 V
Ripple and noise	<100 mV pp
Hold up time	>15 ms @ AC 230 V / >100 ms @ AC 500 V
Status indication DC ON LED green	≥21.6 V
Status indication DC LOW LED red	≤21.6 V
Parallel / redundant mode	Yes/via external decoupling diode e.g. 722999
Efficiency	>93 %
Rated over load protection	Yes
Over voltage protection	>DC 33 V
Short circuit	Hiccup Mode
General	
Insulation voltage input / output	DC 4.2 kV
Insulation voltage input / ground	DC 2.2 kV
Insulation voltage output / ground	DC 750 V
Operation temperature range	-40 °C … +70 °C (UL approved up to +50 °C)
Derating	>50 °C: -4.2 W/°C
MTBF	>500000 h: SN29500 / >500000 h: MIL HDBK 217F
Relative air humidity	5 – 95 % RH, non-condensing
Dimensions (w × h × d)	54.0 mm × 115.0 mm × 110.0 mm
Cooling	Air convection, 50 mm distance top/ bottom, 20 mm side
Housing material	Aluminum
Mounting	DIN rail mountable TS35 (EN 60715)
Degree of protection	IP20 (IEC 529 / EN 60529)
Protection class	I
Over voltage category	III
Connection type	Screw terminal 0,20 mm² – 2,5 mm² AWG 30 – AWG 12 plug-in
Approvals	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
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

Part No.	Type	Weight/unit kg	PU (units)
722996	CPSB-123-240-24	0.65	1

Dimensions



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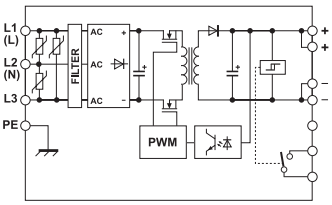


Further product information at
www.lutze.com

Power supply · Compact Economy, 240 W

Switchmode power supply, PFC, Single-phase
Input: AC 90–132 V, AC 187–264 V, DC 270–345 V
Output: DC 48 V, 5 A

Input

Rated voltage U_N	AC 120 / 230 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 115 V / 2 A @ AC 230 V
Inrush current	≤32 A / 1.18 A²s
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
Number of phases	1

Output

Rated voltage U_N	DC 48 V
Rated current I_N	5 A
Max. output current	6.8 A, 5 s
Short-circuit current	20 A
Setting range $U_{out\ min.}/U_{out\ max.}$	45-55 V
Ripple and noise	100 mV
Hold up time	>60 ms @ AC 120 V / >70 ms @ AC 230 V
Status indication DC ON LED green	≥43.2 V
Status indication DC LOW LED red	≤43.2 V
Parallel / redundant mode	Yes / decoupling diode contained internally
Efficiency	88 %
Rated over load protection	Yes
Over voltage protection	Yes
Short circuit	Hiccup Mode

General

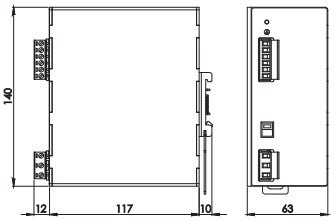
Switching frequency	Approx. 110 kHz
Insulation voltage input / output	DC 4.2 kV
Insulation voltage input / ground	DC 2.2 kV
Insulation voltage output / ground	DC 750 V
Operation temperature range	-40 °C … +70 °C (UL approved up to +50 °C)
Derating	>60 °C: -5 W/°C
MTBF	>500000 h: SN29500 / >500000 h: MIL HDBK 217F
Relative air humidity	5 – 95 % RH, non-condensing
Dimensions (w × h × d)	63.0 mm × 140.0 mm × 117.0 mm
Cooling	Air convection, 100 mm distance top/ bottom, 20 mm side
Housing material	Aluminum
Mounting	DIN rail mountable TS35 (EN 60715)
Degree of protection	IP20 (IEC 529 / EN 60529)
Protection class	I
Over voltage category	III
Connection type	Screw terminal 0,20 mm² – 2,5 mm² plug-in max. 0.56 Nm
Approvals	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

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

Part No.	Type	Weight/unit kg	PU (units)
722786	CPSB1-240-48R	0.75	1

Dimensions



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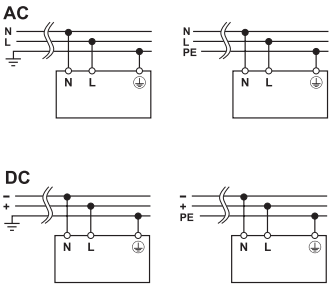


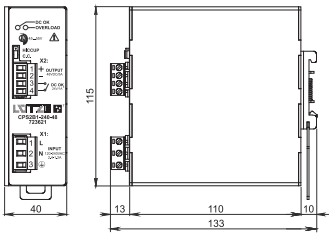
Power supply · Compact Ultra, 240 W

Primary switchmode power supply, PFC, Single-phase
Input: AC 90–264 V, DC 110–345 V
Output: DC 48 V, 5 A

Input	
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
Internal fuse	T6, 3 A (non-replaceable)
External protection	10AT or MCB 10A C-curve
Power factor correction P.F.C.	>0,90, enabled
Number of phases	1
Inrush peak current	≤34 A / 0.66 A²s
Touch current (leakage current)	≤0.6 mA
Output	
Rated voltage U_N	DC 48 V
Rated current I_N	5 A
Max. output current	8.5 A, 5 s @ Hiccup Mode
Setting range $U_{out\ min.}$/$U_{out\ max.}$	DC 45–55 V
Ripple and noise	≤400 mV pp
Hold up time	≥20 ms @ AC 240 V
Status indication DC ON LED green	≥43.2 V
Status indication DC LOW LED red	≤43.2 V
Parallel / redundant mode	Yes/via external decoupling diode e.g. Part-No. 722999
Efficiency	>93.5 % @ AC 240 V
Over voltage protection	≥DC 68 V
Short circuit	Adjustable: Hiccup, C.C. Mode
Overload limit in constant current mode	7 A
Overtemperature protection	Yes
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.
Operation temperature range	-40 °C … +70 °C
Derating	no derating
MTBF	MIL-HDBK-217F, >600000 h at 25 °C ambient full load
Relative air humidity	5 – 95 %, non-condensing
Dimensions (w × h × d)	40.0 mm × 115.0 mm × 133.0 mm
Cooling	Air convection, 100 mm distance top/ bottom, 20 mm side
Housing material	Aluminum
Mounting	DIN rail mountable TS35 (EN 60715)
Degree of protection	IP20 (IEC 529 / EN 60529)
Protection class	I
Over voltage category	III (EN 50178)
Connection type	Screw terminal 0,20 mm² – 2,5 mm² / AWG 24 – 12
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
Approvals	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 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
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

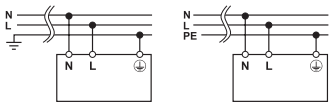
Part No.	Type	Weight/unit kg	PU (units)
723621	CPS2B1-240-48	0.75	1

Dimensions



PIN assignment

AC



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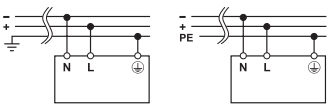


Further product information at
www.lutze.com

Power supply · Compact Ultra, 480 W

Primary switchmode power supply, PFC, Single-phase
Input: AC 90–264 V, DC 110–345 V
Output: DC 24 V, 20 A

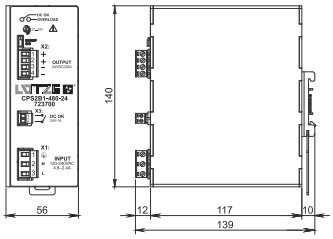
Input	
Rated voltage U_N	AC 120/240 V (UL certified)
Operation voltage range	AC 90–264 V / DC 110–345 V
Frequency range	47 Hz – 63 Hz
Rated current I_N	4.8 A @ AC 120 V / 2.4 A @ AC 240 V
Internal fuse	8 AT (non-replaceable)
External protection	Mini-circuit breaker: C 10 A / Safety fuse: T 10 A
Power factor correction P.F.C.	>0,90, enabled
Number of phases	1
Inrush peak current	≤23 A / 0.56 A²s
Output	
Rated voltage U_N	DC 24 V
Rated current I_N	20 A
Max. output current	30 A, max. 5 s @ Hiccup Mode 21 A @ CC Mode
Setting range $U_{out\ min.}/U_{out\ max.}$	DC 22–29 V
Ripple and noise	<150 mV pp
Hold up time	>25 ms @ AC 240 V
Status indication DC ON LED green	≥21.6 V
Status indication DC LOW LED red	≤21.6 V
Parallel / redundant mode	Yes/via external decoupling diode e.g. Part-No. 722999
Efficiency	>93 % @ AC 240 V
Over voltage protection	≥DC 33 V
Short circuit	Adjustable: Hiccup, C.C. Mode
Overload limit in constant current mode	21 A
Overtemperature protection	Yes
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.
Operation temperature range	-40 °C … +70 °C (UL approved up to +50 °C) @ AC 120 V or up to +60 °C @ AC 240 V
Derating	>50 °C: -7.6 W/°C @ AC 120 V >60 °C: -7.2 W/°C @ AC 240 V
MTBF	MIL-HDBK-217F, >600000 h at 25 °C ambient full load
Relative air humidity	5 – 95 %, non-condensing
Dimensions (w × h × d)	56.0 mm × 140.0 mm × 139.0 mm
Cooling	Air convection, 100 mm distance top/ bottom, 20 mm side
Housing material	Aluminum
Mounting	DIN rail mountable TS35 (EN 60715)
Degree of protection	IP20 (IEC 529 / EN 60529)
Protection class	I
Over voltage category	III (EN 50178)
Connection type	Screw terminal 0,20 mm² – 2,5 mm² / AWG 24 – 12
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
Approvals	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 60068-2-27 (Shock), 30 g 6 ms, 20 g 11 ms, 3 bumps / direction, 18 bumps total 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)
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

Power supply · Compact Ultra, 480 W

Primary switchmode power supply, PFC, Single-phase
Input: AC 90–264 V, DC 110–345 V
Output: DC 24 V, 20 A

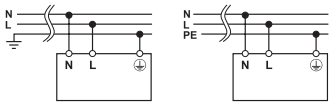
Part No.	Type	Weight/unit kg	PU (units)
723700	CPS2B1-480-24E	1.1	1

Dimensions



PIN assignment

AC



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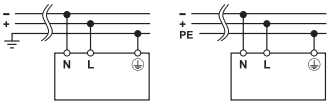


Power supply · Compact Economy, 480 W

Primary switchmode power supply, PFC, Single-phase
Input: AC 187–264 V, DC 250–375 V
Output: DC 24 V, 20 A

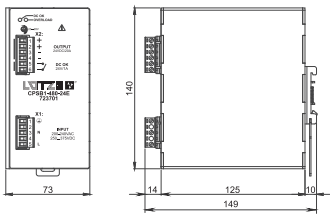
Input	
Rated voltage U_N	AC 200–240 V (UL certified)
Operation voltage range	AC 187–264 V / DC 250–375 V
Frequency range	47 Hz – 63 Hz
Rated current I_N	2.9 A @ AC 200 V / 2.5 A @ AC 240 V
Internal fuse	No internal fuse, an external fuse must be provided.
External protection	6,3AT or MCB 6A C-curve or 4A D-curve
Power factor correction P.F.C.	>0,90, enabled
Number of phases	1
Inrush peak current	≤29 A / 0.61 A²s
Touch current (leakage current)	≤0.5 mA
Output	
Rated voltage U_N	DC 24 V
Rated current I_N	20 A
Max. output current	28 A, 5 s @ Hiccup Mode
Setting range $U_{out\ min.}/U_{out\ max.}$	DC 23–28 V
Ripple and noise	≤50 mV pp
Hold up time	≥50 ms @ AC 240 V
Status indication DC ON LED green	≥21.6 V
Status indication DC LOW LED red	≤21.6 V
Parallel / redundant mode	Yes/via external decoupling diode e.g. Part-No. 722999
Efficiency	>91 % @ AC 240 V
Over voltage protection	≥DC 33 V (U_A=24 V)
Short circuit	Hiccup Mode
Overload limit in constant current mode	50 A
Overtemperature protection	Yes
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.
Operation temperature range	-40 °C … +70 °C
Derating	>45 °C: -10 W/°C @ AC 240 V
MTBF	MIL-HDBK-217F, >500000 h at 25 °C ambient full load
Relative air humidity	5 – 95 %, non-condensing
Dimensions (w × h × d)	73.0 mm × 140.0 mm × 149.0 mm
Cooling	Air convection, 100 mm distance top/ bottom, 20 mm side
Housing material	Aluminum
Mounting	DIN rail mountable TS35 (EN 60715)
Degree of protection	IP20 (IEC 529 / EN 60529)
Protection class	I
Over voltage category	III (EN 50178)
Connection type	Screw terminal
Strip length	0,20 mm² – 2,5 mm² / AWG 24 – 12 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
Approvals	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 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
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

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

Part No.	Type	Weight/unit kg	PU (units)
723701	CPSB1-480-24E	1	1

Dimensions



PIN assignment

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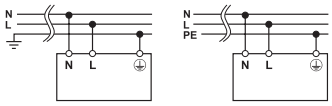

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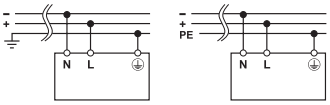


Power supply · Compact Universal, 480 W

Switchmode power supplies, PFC, 1/2/3-phase
Input: wide-range input AC 187–550 V, DC 250–725 V (UL: DC 300–500 V)
Output: DC 24 V, 20 A

Input

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 A²s
External protection	Mini-circuit breaker: C 6 A, or D 4 A (required)
Power factor correction P.F.C.	>0.9
Number of phases	3

Output

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
Setting range $U_{out\ min.}/U_{out\ max.}$	23-28 V
Ripple and noise	<50 mV pp
Hold up time	>50 ms
Status indication DC ON LED green	≥21.6 V
Status indication DC LOW LED red	I_{out} >1.1 I_N
Parallel / redundant mode	Yes/via external decoupling diode
Efficiency	>92 %
Over voltage protection	≥DC 33 V
Short circuit	Hiccup Mode
Overtemperature protection	Yes

General

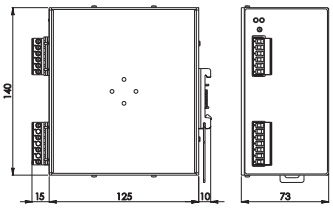
Insulation voltage input / output	DC 4.2 kV
Insulation voltage input / ground	DC 2.2 kV
Insulation voltage output / ground	DC 750 V
Operation temperature range	-40 °C … +70 °C (UL approved up to +45 °C)
Derating	>45 °C: -10 W/°C
MTBF	>500000 h: SN29500 / >500000 h: MIL HDBK 217F
Relative air humidity	5 – 95 % RH, non-condensing
Dimensions (w × h × d)	73.0 mm × 140.0 mm × 125.0 mm
Cooling	Air convection, 50 mm distance top/ bottom, 20 mm side
Housing material	Aluminum
Mounting	DIN rail mountable TS35 (EN 60715)
Degree of protection	IP20 (IEC 529 / EN 60529)
Protection class	I
Over voltage category	III
Connection type	Screw terminal 0,20 mm² – 2,5 mm² AWG 24 – AWG 12 plug-in
Approvals	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 sinuosoidal), 5-17.8 Hz: ±1.6 mm, 17.8-500 Hz: 2 g 2 hours / axis (X,Y,Z)

Monitoring

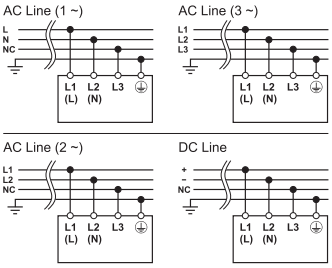
DC ON Control (Rdy)	N/O contact
Switching voltage	AC/DC 30 V
Switching current	AC/DC 1 A
Switching capacity	30 VA / 30 W
Isolation voltage	AC 500 V

Part No.	Type	Weight/unit kg	PU (units)
722801	CPSB-123-480-24	1	1

Dimensions



PIN assignment



Power supply · Compact Ultra, 480 W

Primary switchmode power supply, PFC, Single-phase
Input: AC 90–264 V, DC 110–345 V
Output: DC 48 V, 10 A

Input

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	4.8 A @ AC 120 V / 2.4 A @ AC 240 V
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
Number of phases	1
Inrush peak current	≤23 A / 0.56 A²s

Output

Rated voltage U_N	DC 48 V
Rated current I_N	10 A
Max. output current	17 A, 5 s @ Hiccup Mode
Setting range $U_{out\ min.}$/$U_{out\ max.}$	DC 45–55 V
Ripple and noise	<200 mV pp
Hold up time	>25 ms @ AC 240 V
Status indication DC ON LED green	≥43.2 V
Status indication DC LOW LED red	≤43.2 V
Parallel / redundant mode	Yes/via external decoupling diode e.g. Part-No. 722999
Efficiency	>94 % @ AC 240 V
Over voltage protection	≥DC 68 V
Short circuit	Hiccup Mode, Constant current (C.C.)
Overload limit in constant current mode	12 A
Overtemperature protection	Yes

General

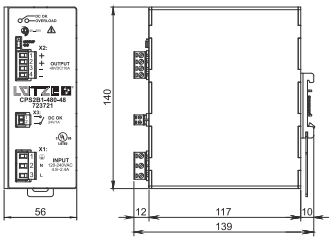
Insulation voltage input / output	DC 4.2 kV, 1 min.
Insulation voltage input / ground	DC 2.2 kV, 1 min.
Insulation voltage output / ground	DC 750 V, 1 min.
Operation temperature range	-40 °C … +70 °C
Derating	>50 °C: -7.6 W/°C @ AC 120 V >60 °C: -7.2 W/°C @ AC 240 V
MTBF	MIL-HDBK-217F, >600000 h at 25 °C ambient full load
Relative air humidity	5 – 95 %, non-condensing
Dimensions (w × h × d)	56.0 mm × 140.0 mm × 139.0 mm
Cooling	Air convection, 100 mm distance top/ bottom, 20 mm side
Housing material	Aluminum
Mounting	DIN rail mountable TS35 (EN 60715)
Degree of protection	IP20 (IEC 529 / EN 60529)
Protection class	I
Over voltage category	III (EN 50178)
Connection type	Screw terminal
	0,20 mm² – 2,5 mm² / AWG 24 – 12
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
Approvals	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 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

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

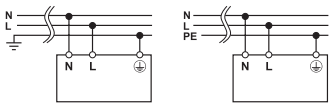
Part No.	Type	Weight/unit kg	PU (units)
723721	CPS2B1-480-48	1.1	1

Dimensions



PIN assignment

AC



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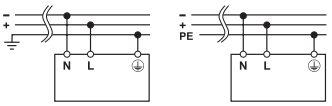


Further product information at
www.lutze.com

Power supply · Compact 3-phase, 960 W

Switchmode power supply, PFC, 3-phase
Input: Wide range input AC 340 - 550 V
Output: DC 24 V, 40 A

Input

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 A²s
External protection	Mini-circuit breaker: 3 × C 10 A / safety fuse: 3 × T 10 A (required)
Power factor correction P.F.C.	>0.7
Number of phases	3

Output

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
Setting range $U_{out\ min.}$/$U_{out\ max.}$	23-28 V
Ripple and noise	<150 mV pp
Hold up time	>15 ms
Status indication DC ON LED green	≥21.6 V
Status indication DC LOW LED red	≤21.6 V
Parallel / redundant mode	Max. 2 devices / via external decoupling diodes e.g. 722999
Efficiency	>92.5 %
Rated over load protection	> 90°C, auto-reset
Over voltage protection	≥DC 33 V
Short circuit	Adjustable: Hiccup, current limiting

General

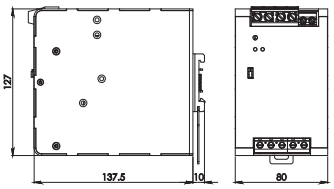
Switching frequency	Approx. 70 - 110 kHz
Insulation voltage input / output	DC 4.2 kV
Insulation voltage input / ground	DC 2.2 kV
Insulation voltage output / ground	DC 750 V
Operation temperature range	-40 °C … +70 °C (UL approved up to +45 °C)
Derating	>45 °C: -15 W/°C
MTBF	>500000 h: SN29500 / >500000 h: MIL HDBK 217F
Relative air humidity	5 – 95 % RH, non-condensing
Dimensions (w × h × d)	80.0 mm × 127.0 mm × 137.5 mm
Cooling	Air convection, forced cooling >50°C, 50 mm distance top/bottom
Housing material	Aluminum
Mounting	DIN rail mountable TS35 (EN 60715)
Degree of protection	IP20 (IEC 529 / EN 60529)
Protection class	I
Over voltage category	III
Connection type	Screw terminal 0.20 mm² – 10.0 mm² max. 0.62 Nm
Approvals	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 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

Monitoring

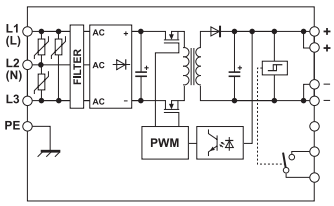
DC ON Control (Rdy)	N/O contact
Switching voltage	AC 300 V / DC 150 V
Switching current	AC/DC 1 A
Switching capacity	300 VA / 30 W
Isolation voltage	AC 500 V

Part No.	Type	Weight/unit kg	PU (units)
722811	CPSB3-960-24	1.3	1

Dimensions



PIN assignment



Power supply · Compact 3-phase, 960 W

Switchmode power supply, PFC, 3-phase
Input: Wide range input AC 340 - 550 V
Output: DC 48 V, 20 A

Input

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 A²s
External protection	Mini-circuit breaker: 3 × C 10 A / safety fuse: 3 × T 10 A (required)
Power factor correction P.F.C.	>0.7
Number of phases	3

Output

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
Setting range $U_{out\ min.}/U_{out\ max.}$	45-55 V
Ripple and noise	<150 mV pp
Hold up time	>15 ms
Status indication DC ON LED green	≥43.2 V
Status indication DC LOW LED red	≤43.2 V
Parallel / redundant mode	Max. 2 devices / via external decoupling diodes e.g. 722999
Efficiency	>92.5 %
Rated over load protection	> 90°C, auto-reset
Over voltage protection	≥DC 68 V
Short circuit	Adjustable: Hiccup, current limiting (C.C. Modus)

General

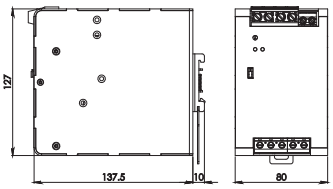
Switching frequency	Approx. 70 - 110 kHz
Insulation voltage input / output	DC 4.2 kV
Insulation voltage input / ground	DC 2.2 kV
Insulation voltage output / ground	DC 750 V
Operation temperature range	-40 °C … +70 °C (UL approved up to +45 °C)
Derating	>45 °C: -15 W/°C
MTBF	>500000 h: SN29500 / >500000 h: MIL HDBK 217F
Relative air humidity	5 – 95 % RH, non-condensing
Dimensions (w × h × d)	80.0 mm × 127.0 mm × 137.5 mm
Cooling	Air convection, forced cooling >50°C, 50 mm distance top/bottom
Housing material	Aluminum
Mounting	DIN rail mountable TS35 (EN 60715)
Degree of protection	IP20 (IEC 529 / EN 60529)
Protection class	I
Over voltage category	III
Connection type	Screw terminal 0.20 mm² – 6.0 mm² max. 0.62 Nm
Approvals	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

Monitoring

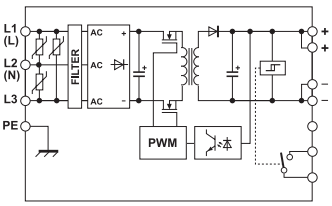
DC ON Control (Rdy)	N/O contact
Switching voltage	AC 300 V / DC 150 V
Switching current	AC/DC 1 A
Switching capacity	300 VA / 30 W
Isolation voltage	AC 500 V

Part No.	Type	Weight/unit kg	PU (units)
722812	CPSB3-960-48	1.3	1

Dimensions



PIN assignment



Further product information at
www.lutze.com

Power supply · Compact 3-phase, 960 W

Switchmode power supply, PFC, 3-phase
Input: Wide range input AC 340 - 550 V
Output: DC 72 V, 13.3 A

Input

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 A²s
External protection	Mini-circuit breaker: 3 × C 10 A / safety fuse: 3 × T 10 A (required)
Power factor correction P.F.C.	>0.7
Number of phases	3

Output

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
Setting range $U_{out\ min.}$/$U_{out\ max.}$	72–85 V
Ripple and noise	<150 mV pp
Hold up time	>15 ms
Status indication DC ON LED green	≥64.8 V
Status indication DC LOW LED red	≤64.8 V
Parallel / redundant mode	Max. 2 devices / via external decoupling diodes e.g. 722999
Efficiency	>93 %
Rated over load protection	> 90°C, auto-reset
Over voltage protection	<100 V
Short circuit	Adjustable: Hiccup, current limiting (C.C. Modus)

General

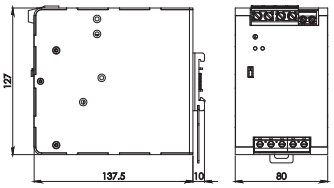
Switching frequency	Approx. 70 - 110 kHz
Insulation voltage input / output	DC 4.2 kV
Insulation voltage input / ground	DC 2.2 kV
Insulation voltage output / ground	DC 750 V
Operation temperature range	-40 °C … +70 °C (UL approved up to +45 °C)
Derating	>45 °C: -15 W/°C
MTBF	>500000 h: SN29500 / >500000 h: MIL HDBK 217F
Relative air humidity	5 – 95 % RH, non-condensing
Dimensions (w × h × d)	80.0 mm × 127.0 mm × 137.5 mm
Cooling	Air convection, forced cooling >50°C, 50 mm distance top/bottom
Housing material	Aluminum
Mounting	DIN rail mountable TS35 (EN 60715)
Degree of protection	IP20 (IEC 529 / EN 60529)
Protection class	I
Over voltage category	III
Connection type	Screw terminal 0.20 mm² – 6.0 mm² max. 0.62 Nm
Approvals	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

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

Part No.	Type	Weight/unit kg	PU (units)
722813	CPSB3-960-72	1.3	1

Dimensions



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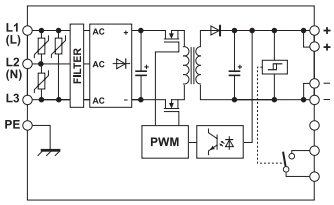


Power supply · Compact 3-phase, 2400 W

Switchmode power supply, PFC, 3-phase
Input: Wide range input AC 340 - 550 V
Output: DC 24 V, 100 A

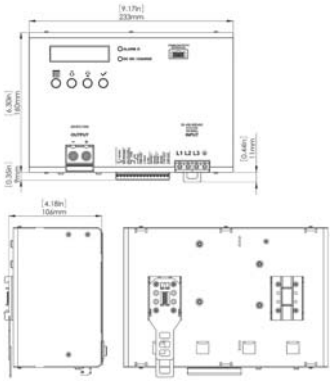
Input	
Rated voltage U_N	3 × AC 400–500 V
Operation voltage range	AC 340–550 V / DC 520–750 V
Frequency range	47 Hz – 63 Hz
Rated current I_N	4.5 A @ AC 400 V / 3.5 A @ AC 500 V
Inrush current	< 12.5 A (active inrush current limitation)
External protection	Mini-circuit breaker: 3 × C 10 A / safety fuse: 3 × T 10 A (required)
Power factor correction P.F.C.	>0.92
Input protection	Surge protection according to VDE 0160, over/undervoltage (auto restart) Phase monitoring (reduced output power): PFC error
Number of phases	3
Output	
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
Setting range $U_{out\ min.}/U_{out\ max.}$	DC 11.9–29 V
Ripple and noise	<200 mV pp
Hold up time	>10 ms @ AC 400 V / >10 ms @ AC 500 V
Status indication DC ON LED green	Alphanumeric display
Status indication DC LOW LED red	Alphanumeric display
Parallel / redundant mode	Max. 4 devices
Efficiency	>92 %
Over voltage protection	>DC 33 V
Short circuit	Adjustable: Hiccup, current limiting (C.C. Modus)
General	
Insulation voltage input / output	DC 4.2 kV
Insulation voltage input / ground	DC 2.2 kV
Insulation voltage output / ground	DC 750 V
Operation temperature range	-40 °C … +70 °C (UL approved up to +50 °C)
Derating	>50 °C: -60 W/°C Automatic power derating (1200 W) for 2 phases operation
MTBF	>500000 h: SN29500 / >700000 h: MIL HDBK 217F
Relative air humidity	5 – 95 % RH, non-condensing
Dimensions (w × h × d)	233.0 mm × 160.0 mm × 101.0 mm
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)
Degree of protection	IP20 (IEC 529 / EN 60529)
Protection class	I
Over voltage category	III
Connection type	Screw terminal Input 0.20 mm² – 4.0 mm² Output 0.20 mm² – 35.0 mm² Auxiliary 0.20 mm² – 1.5 mm²
Approvals	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 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
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

Power supply · Compact 3-phase, 2400 W

Switchmode power supply, PFC, 3-phase
Input: Wide range input AC 340 - 550 V
Output: DC 24 V, 100 A

Part No.	Type	Weight/unit kg	PU (units)
722814	CPSB3-2400-24	2.8	1

Dimensions



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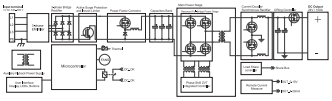


Power supply · Compact 3-phase, 2400 W

Switchmode power supply, PFC, 3-phase
Input: Wide range input AC 340 - 550 V
Output: DC 48 V, 50 A

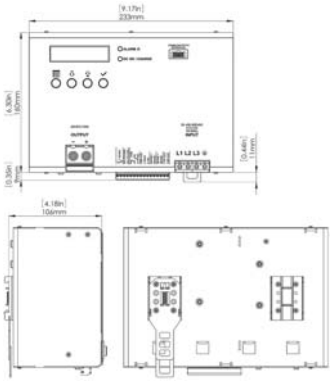
Input	
Rated voltage U_N	3 × AC 400–500 V
Operation voltage range	AC 340–550 V / DC 520–750 V
Frequency range	47 Hz – 63 Hz
Rated current I_N	4.5 A @ AC 400 V / 3.5 A @ AC 500 V
Inrush current	< 10 A (active inrush current limitation)
External protection	Mini-circuit breaker: 3 × C 10 A / safety fuse: 3 × T 10 A (required)
Power factor correction P.F.C.	>0.92
Input protection	Surge protection according to VDE 0160, over/undervoltage (auto restart) Phase monitoring (reduced output power): PFC error
Number of phases	3
Output	
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
Setting range $U_{out\ min.}/U_{out\ max.}$	DC 23–56 V
Ripple and noise	<200 mV pp
Hold up time	>10 ms @ AC 400 V / >10 ms @ AC 500 V
Status indication DC ON LED green	Alphanumeric display
Status indication DC LOW LED red	Alphanumeric display
Parallel / redundant mode	Max. 4 devices
Efficiency	>92 %
Over voltage protection	≥DC 68 V
Short circuit	Adjustable: Hiccup, current limiting (C.C. Modus)
General	
Insulation voltage input / output	DC 4.2 kV
Insulation voltage input / ground	DC 2.2 kV
Insulation voltage output / ground	DC 750 V
Operation temperature range	-40 °C … +70 °C (UL approved up to +50 °C)
Derating	>50 °C: -60 W/°C Automatic power derating (1200 W) for 2 phases operation
MTBF	>500000 h: SN29500 / >700000 h: MIL HDBK 217F
Relative air humidity	5 – 95 % RH, non-condensing
Dimensions (w × h × d)	233.0 mm × 160.0 mm × 101.0 mm
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)
Degree of protection	IP20 (IEC 529 / EN 60529)
Protection class	I
Over voltage category	III
Connection type	Screw terminal Input 0.20 mm² – 4.0 mm² Output 0.20 mm² – 35.0 mm² Auxiliary 0.20 mm² – 1.5 mm²
Approvals	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 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
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

Power supply · Compact 3-phase, 2400 W

Switchmode power supply, PFC, 3-phase
Input: Wide range input AC 340 - 550 V
Output: DC 48 V, 50 A

Part No.	Type	Weight/unit kg	PU (units)
722816	CPSB3-2400-48	2.8	1

Dimensions



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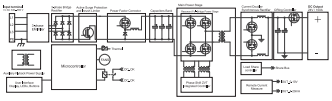


Power supply · Compact 3-phase, 2400 W

Switchmode power supply, PFC, 3-phase
Input: Wide range input AC 340 - 550 V
Output: DC 72 V, 33 A

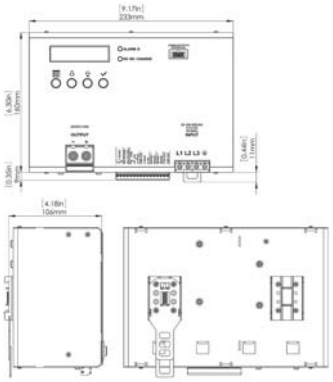
Input	
Rated voltage U_N	3 × AC 400–500 V
Operation voltage range	AC 340–550 V / DC 520–750 V
Frequency range	47 Hz – 63 Hz
Rated current I_N	4.5 A @ AC 400 V / 3.5 A @ AC 500 V
Inrush current	< 10 A (active inrush current limitation)
External protection	Mini-circuit breaker: 3 × C 10 A / safety fuse: 3 × T 10 A (required)
Power factor correction P.F.C.	>0.92
Input protection	Surge protection according to VDE 0160, over/undervoltage (auto restart) Phase monitoring (reduced output power): PFC error
Number of phases	3
Output	
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
Setting range $U_{out\ min.}/U_{out\ max.}$	DC 50–87 V
Ripple and noise	<200 mV pp
Hold up time	>10 ms @ AC 400 V / >10 ms @ AC 500 V
Status indication DC ON LED green	Alphanumeric display
Status indication DC LOW LED red	Alphanumeric display
Parallel / redundant mode	Max. 4 devices
Efficiency	>93 %
Over voltage protection	>DC 100 V
Short circuit	Adjustable: Hiccup, current limiting (C.C. Modus)
General	
Insulation voltage input / output	DC 4.2 kV
Insulation voltage input / ground	DC 2.2 kV
Insulation voltage output / ground	DC 750 V
Operation temperature range	-40 °C … +70 °C (UL approved up to +50 °C)
Derating	>50 °C: -60 W/°C Automatic power derating (1200 W) for 2 phases operation
MTBF	>500000 h: SN29500 / >150000 h: MIL HDBK 217F
Relative air humidity	5 – 95 % RH, non-condensing
Dimensions (w × h × d)	233.0 mm × 160.0 mm × 101.0 mm
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)
Degree of protection	IP20 (IEC 529 / EN 60529)
Protection class	I
Over voltage category	III
Connection type	Screw terminal Input 0.20 mm² – 4.0 mm² Output 0.20 mm² – 35.0 mm² Auxiliary 0.20 mm² – 1.5 mm²
Approvals	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 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
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

Power supply · Compact 3-phase, 2400 W

Switchmode power supply, PFC, 3-phase
Input: Wide range input AC 340 - 550 V
Output: DC 72 V, 33 A

Part No.	Type	Weight/unit kg	PU (units)
722817	CPSB3-2400-72	2.8	1

Dimensions



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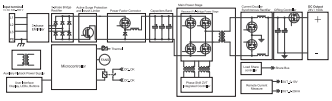


Redundant module 12 to 85 V, 50 A
Potential-free signalling contact
Status LED per input

Input

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

Output

Max. output current	300 A
Status indication DC ON LED green	IN1, IN2 OK
Status indication DC ON LED red	Redundancy error
Over voltage protection	No
Voltage drop	<0.2 V
Overtemperature protection	No

General

Operation temperature range	-40 °C … +75 °C (UL approved up to +75 °C)
Relative air humidity	5 – 95 % RH, non-condensing
Dimensions (w × h × d)	40.0 mm × 115.0 mm × 110.0 mm
Cooling	Air convection
Housing material	Aluminum
Mounting	DIN rail mountable TS35 (EN 60715)
Degree of protection	IP20 (IEC 529 / EN 60529)
Over voltage category	II
Connection type	Input Screw terminal plug-in 0.20 mm² – 16.0 mm² Output Screw terminal plug-in 0.20 mm² – 16.0 mm² Relays Screw terminal plug-in 0.20 mm² – 1.5 mm²

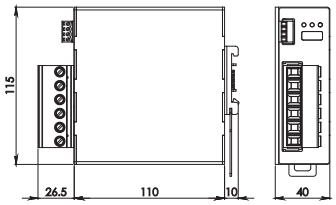
Approvals	CE UKCA cULus (E249179)
Standards	UL 508 IEC/EN 61010-1 IEC/EN 61010-2-201 IEC/EN 60950 EN 55011 (CISPR11) Class A EN 55022 (CISPR22) Class A EN 61000-4-2 Level 3 EN 61000-4-3 Level 3 EN 61000-4-4 Level 3 EN 61000-4-5 Level 3 EN 61000-4-11 Level 2 IEC 60068-2-6 (Vibration sinuosoidal), 5-17.8 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

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

Part No.	Type	Weight/unit kg	PU (units)
722999	CPSRM50	0.35	1

Dimensions



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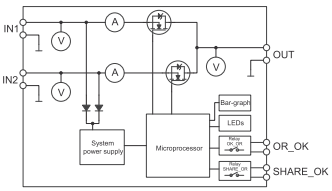


Power supply · Compact DC/DC–Converter, 240 W

Programmable DC/DC–Converter
Input: wide-range input DC 12–48 V
Output: DC 5–55 V

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 replacable)
External protection	Mini-circuit breaker: C 20 A
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)
Setting range $U_{out\ min.}/U_{out\ max.}$	DC 5–55 V
Ripple and noise	<200 mV
Hold up time	≥5 ms
Parallel / redundant mode	yes
Efficiency	77 % – 92 %, depending on the input/ output voltage
Over voltage protection	120% of the output voltage
Short circuit	Current limit Hiccup Mode
Overtemperature protection	Yes

General

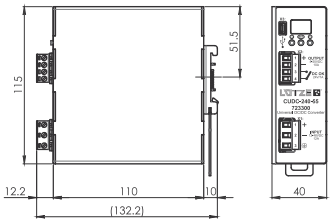
Insulation voltage input / output	DC 4.2 kV
Insulation voltage input / ground	DC 2.2 kV
Insulation voltage output / ground	DC 750 V
Operation temperature range	-40 °C … +70 °C (UL approved up to +60 °C)
Derating	>60 °C: -2.4 W/°C
MTBF	>600000 h: MIL-HDBK-217F
Relative air humidity	5 – 95 % RH, non-condensing
Dimensions (w × h × d)	40.0 mm × 115.0 mm × 132.2 mm
Cooling	Air convection, 50 mm distance top/ bottom, 20 mm side
Housing material	Aluminum
Mounting	DIN rail mountable TS35 (EN 60715)
Degree of protection	IP20 (EN 60529)
Protection class	I
Over voltage category	I (EN 70178)
Connection type	Screw terminal 0,20 mm² – 2,5 mm² AWG 24 – AWG 12 plug-in
Approvals	CE UKCA cULus (E249179)
Standards	UL 508 IEC/EN 61010-1 IEC/EN 61010-2-201 IEC/EN 60950 EN 61000-6-2 EN 61000-6-3 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

Monitoring

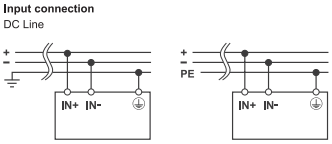
DC ON Control (Rdy)	N/O contact
Switching voltage	AC/DC 24 V
Switching current	AC/DC 1 A
Switching capacity	24 W
Isolation voltage	AC 500 V

Part No.	Type	Weight/unit kg	PU (units)
723300	CUDC-240-55	0.4	1

Dimensions



PIN assignment



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

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
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

Output

Rated voltage U_N	DC 24 V
Max. output current	DC 10 A
Status display output	LED yellow: Load OK
Output voltage	DC 20 - 28 V

General

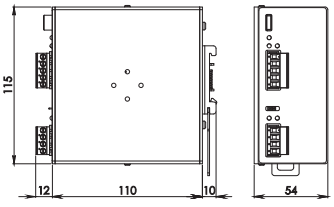
Operation temperature range	-40 °C … +70 °C (UL approved up to +60 °C)
Derating	>60 °C: -0.25 A/°C
Relative air humidity	5 – 95 % RH, non-condensing
Dimensions (w × h × d)	54.0 mm × 115.0 mm × 110.0 mm
Cooling	Free convection
Housing material	Aluminum
Mounting	DIN rail mountable TS35 (EN 60715)
Degree of protection	IP20 (EN 60529)
Over voltage category	II
Connection type	Connector with screws: 2.5 mm² (AWG 24–12)
Approvals	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
Comments	Suitable for power supply with applicable output voltage Load mode with simultaneous charging Integrated battery fuse Deep discharging protection Battery not included

Monitoring

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

Part No.	Type	Weight/unit kg	PU (units)
723110	CNUPS24	0.3	1

Dimensions



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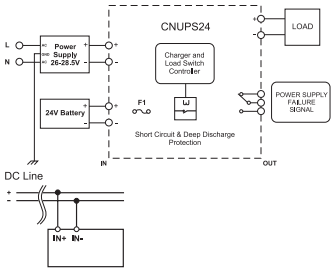


Further product information at
www.lutze.com

Power supply · Compact DC UPS, 480 W

Uninterrupted DC system voltage
DC UPS for lead batteries, NiMH (NiCd), Li-ION (LiFePO4)
Input: wide-range input DC 12 V, DC 24 V, output: max. DC 20 A

Input

Input voltage	DC 12 V or 24 V
Input current	Max. DC 20 A
Status display input	See monitoring
Parameterisation	Button/LCD display Software Powermaster (free Download LUTZE web page)
Power Dissipation	<3 W
Protection device Input	None

Energy storage

Memory type	Chemical (lead based, Ni-MH / Ni-Cd, Li-ION / $LiFePo_4$)
Nominal battery voltage	DC 12 V or DC 24 V
Max. charging current	DC 5 A
Max. battery capacity	Max. 150 Ah
Switching time on memory medium	<5 µs
Backup time	Can be configured max. up to deep discharging protection

Output

Rated voltage U_N	DC 24 V
Rated current I_N	20 A
Max. output current	DC 20 A, 35 A @ 5 s
Status display output	See monitoring
Output voltage	DC 10 - 29 V

General

Insulation voltage input / ground	0.5 kV, 1 min.
Operation temperature range	-40 °C … +60 °C (UL approved up to +60 °C)
Relative air humidity	5 – 95 % RH, non-condensing
Dimensions (w × h × d)	54.0 mm × 115.0 mm × 110.0 mm
Cooling	Free convection
Housing material	Aluminum
Mounting	DIN rail mountable TS35 (EN 60715)
Degree of protection	IP20 (EN 60529)
Over voltage category	I (EN 50178)
Connection type	IN/Battery/Out : 6 pin connector 2.5 mm², Grid dimensions 5.08 Auxiliary: 7 pin connector 0.5 mm², Grid dimensions 2.54 Temperature sensor: 2 pin, friction lock, Grid dimensions 2 mm USB: Mini USB connector
Max. power loss (Nominal operations)	<13 W
Max. power loss (Battery mode)	<18 W
Charging efficiency	>90 %
Approvals	CE UKCA cULus (E249179)
Standards	UL 508 IEC/EN 61010 IEC/EN 61010-2-201 IEC/EN 60950 EN 61000-6-4 EN 61000-6-2 IEC 60068-2-27 (Shock), 30 g 6 ms, 20 g 11 ms, 3 bumps / direction, 18 bumps total IEC 60068-2-6 (Vibration sinuosoidal), 5-17.8 Hz: ±1.6 mm, 17.8-500 Hz: 2 g 2 hours / axis (X,Y,Z)
Comments	Monitoring via LCD display Suitable for lead batteries, NI-MH, Li Digital control Battery charging current up to 5 A Output current up to 20 A Cold start automatic Configuration / monitoring also via software Remote On / Off Battery not included

User Interface

USB	Connection to PC
Control Elements	4 keys (menu selection and programming)
Status indication	LED red ON: System error, flashing: Battery mode
LCD display	1.5 inch, colour, graphic

Monitoring

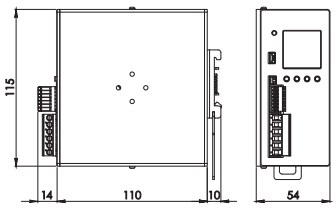
Switching voltage	30 V
Switching current	2 A
Number of channels	2
Monitored functions	Coulomb counter, battery temperature, battery operating hours, no. of charging cycles
Contact type	N/O contact

Power supply · Compact DC UPS, 480 W

Uninterrupted DC system voltage
DC UPS for lead batteries, NiMH (NiCd), Li-ION (LiFePO4)
Input: wide-range input DC 12 V, DC 24 V, output: max. DC 20 A

Part No.	Type	Weight/unit kg	PU (units)
723100	CDCU20 12/24DC UPS	0.5	1

Dimensions



Power supply · Compact DC UPS, buffer module

Uninterrupted DC system voltage
Capacitive energy store
Input: wide-range input DC 12 V - DC 85 V, output: max. DC 20 A

Input

Input voltage	DC 12 V / 24 V / 48 V / 72 V or automatic recognition
Input current	Max. DC 20 A
Status display input	LED green: selected voltage
Parameterisation	Button Selection of input voltage

Energy storage

Memory type	Capacitive
Discharge time at load current max	12 V: 600 ms, 24 V: 300ms, 48 V: 150 ms, 72 V: 75 ms

Output

Rated current I_N	20 A
Max. output current	20 A
Ripple and noise	<250 mV @ DC 24 V, 20 A
Status display output	LED green: DC OK, LED red: Overload
Short circuit	Enabled
Output voltage	Input voltage -1 V
Protection device	Over voltage protection, active

General

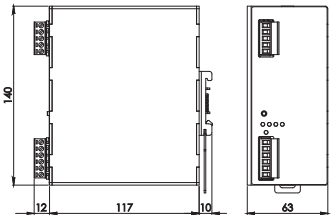
Insulation voltage input / ground	0.75 kV
Operation temperature range	-40 °C … +70 °C (UL approved up to +70 °C)
Relative air humidity	5 – 95 % RH, non-condensing
Dimensions (w × h × d)	63.0 mm × 140.0 mm × 139.0 mm
Cooling	Free convection
Housing material	Aluminum
Mounting	DIN rail mountable TS35 (EN 60715)
Degree of protection	IP00 (EN 60529)
Connection type	Plug-in screw terminal 2.5 mm² (AWG 24–12)
Approvals	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 2 EN 61000-4-5 Level 1 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
Comments	Input voltage range DC 12 V to DC 85 V Automatic detection of DC supply Economical design thanks to standard electrolyte capacitors Digital control Compact size

Monitoring

Switching voltage	DC 12 V
Switching current	DC 1 A
Number of channels	2
Contact type	N/O contact

Part No.	Type	Weight/unit kg	PU (units)
723120	CBU150U	0.9	1

Dimensions



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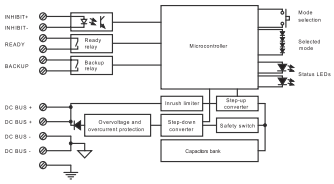
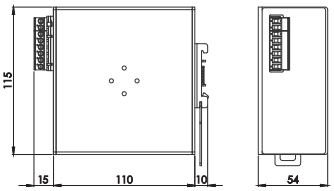


Battery housing for two lead batteries 12 V / 1.2 Ah

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.
Operation temperature range	-20 °C … +40 °C (or equivalent battery limit values)
Relative air humidity	5 – 95 % RH, non-condensing
Dimensions (w × h × d)	54.0 mm × 115.0 mm × 135.0 mm
Cooling	Free convection
Housing material	Aluminum
Mounting	DIN rail mountable TS35 (EN 60715)
Degree of protection	IP20 (EN 60529)
Over voltage category	II
Connection type	Connector with screws: 2.5 mm² (AWG 24–12)
Comments	Suitable for DC 12 V and DC 24 V applications, integrated self-healing fuse Batteries not included

Part No.	Type	Configured weight max./unit kg	PU (units)
723115	CNBP30	1.2	1

Dimensions



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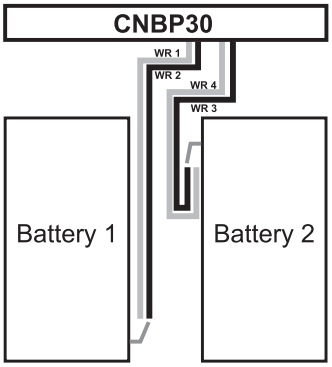
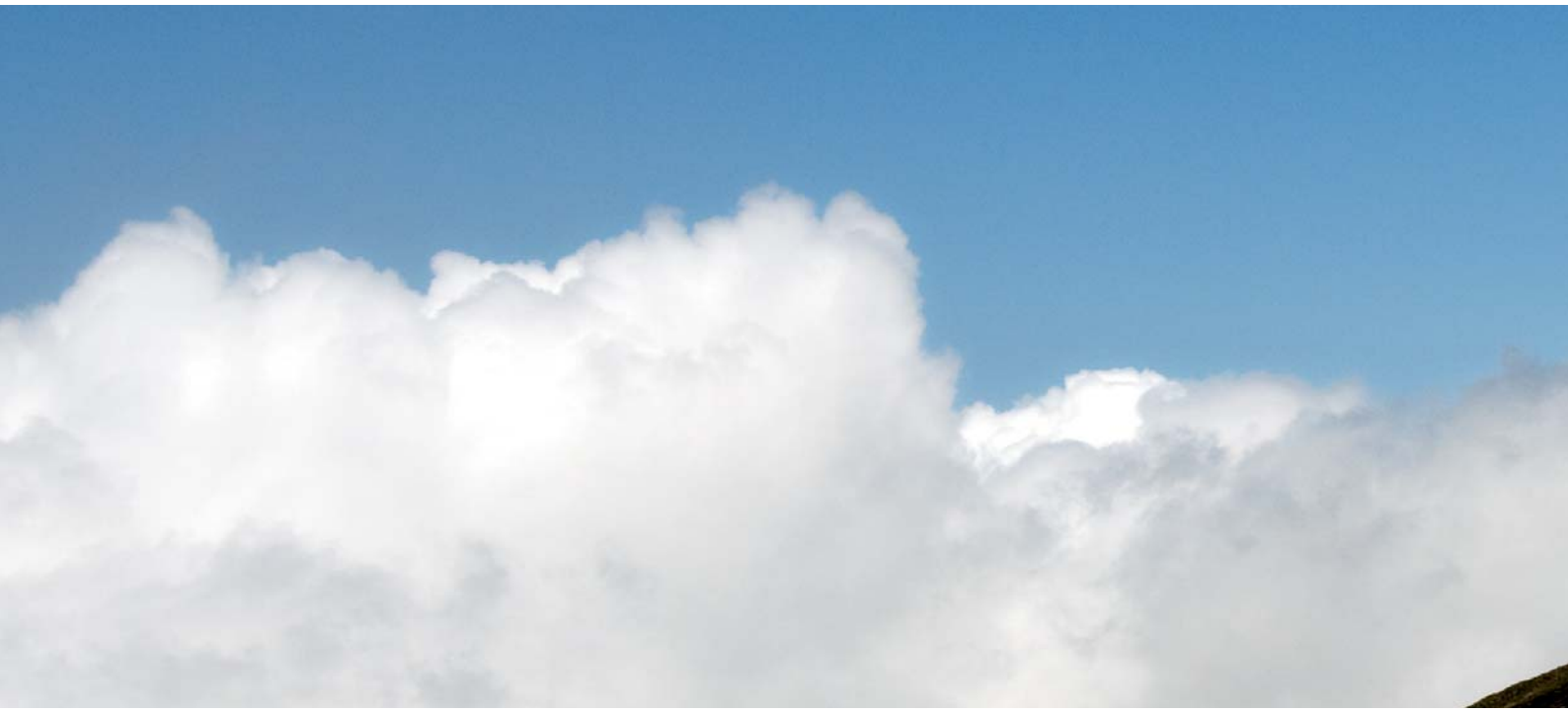


Notes

Business Management
Sustainable and forw



The future is blue

Sustainable enterprise means thinking and planning ahead, understanding and embedding the belief that long lasting success is more important than short-term profit maximisation.

This is an attitude that has existed within LUTZE for quite some time. Economic and environmental responsibilities complement each other well and are reflected in the sustainable management and product policy - and from now in the *Sky***BLUE** campaign.

We manufacture our products in a resourceful and energy-conscious manner. We use long lasting, environmentally-friendly materials. And our products, in turn, help our customers save energy and resources.
Good for everyone: for us, for the environment, for our customers a win-win-win situation.

SkyBLUE

:
ard-looking

“The competitiveness of our industry and of its suppliers depends quite substantially on how we succeed in developing practical results. The results that we produce together today, are our competitive advantages in the future.“

Udo Lütze,
Member of the Executive Committee of the Green Carbody Innovation Alliance

Goods with real value

The value of a product or a solution from LUTZE is determined by its sustainable qualities as well. Every innovation is only as successful in the future if it has a long-term positive effect. Therefore, we provide long lasting as well as highly efficient components.
We are incorporating the necessary knowledge and manufacturing competence in numerous joint projects with the objective of improving energy efficiency and sustainable technologies and industries. Thus, LUTZE provides answers and demonstrates how to handle resources responsibly, with our environment and our future in mind.

Innovations-Allianz Green Carbody Technologies

ISO 14001

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RoHS

Part number index

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Highly flexible tray cables and continuous motion cables for industrial control, Ethernet, motor, VFD, and servo applications

Connectivity Solutions
Servo cable assemblies, industrial Ethernet and M12 connectors, panel pass through devices and cable entry systems

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