

# UNO2-PS/1AC/24DC/30W/PT - Power supply



1399932

<https://www.phoenixcontact.com/gb/products/1399932>

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Primary-switched power supply unit, UNO POWER, Push-in connection, DIN rail mounting, input: 1-phase, output: 24 V DC / 1.3 A, adjustable from 24 V DC ... 29 V DC

## Your advantages

- Save space in the control cabinet thanks to an extremely narrow overall width
- Save energy, thanks to a high degree of efficiency
- Outdoor installation possible, with a wide temperature range of -25°C ... +70°C

## Commercial data

Item number	1399932
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	CMPV13
Product key	CMPV13
GTIN	4063151786328
Weight per piece (including packing)	164 g
Weight per piece (excluding packing)	124 g
Customs tariff number	85044095
Country of origin	VN

## Technical data

### Input data

#### AC operation

Supply system configuration	TN, TT, IT (PE)
Nominal input voltage range	100 V AC ... 277 V AC
Input voltage range	100 V AC ... 277 V AC -15 % ... +10 % 110 V AC ... 277 V AC ±10 % (UL)
Derating	< 100 V AC (1 %/V)
Typical national grid voltage	120 V AC 230 V AC
Voltage type of supply voltage	AC
Inrush current	typ. 35 A (at 25 °C)
Inrush current integral ( $I^2t$ )	< 0.3 A <sup>2</sup> s
Frequency range ( $f_N$ )	50 Hz ... 60 Hz ±10 %
Mains buffering time	typ. 18 ms (120 V AC) typ. 90 ms (230 V AC)
Current consumption	0.58 A (100 V AC) 0.28 A (277 V AC)
Protective circuit	Transient surge protection; Varistor
Switch-on time	typ. 1 s
Device mains fuse	4 A internal (device protection), slow-blow
Recommended breaker for input protection	6 A ... 16 A (Characteristic B, C, D, K or comparable)
Discharge current to PE	< 0.25 mA

#### DC operation

Input voltage range	110 V DC ... 250 V DC ±20 % 125 V DC ... 250 V DC ±10 % (UL)
Derating	< 110 V DC (1 %/V)
Voltage type of supply voltage	DC
Current consumption	0.3 A (110 V DC) 0.13 A (250 V DC)

### Output data

Efficiency	typ. 90.5 % (120 V AC) typ. 91.9 % (230 V AC)
Nominal output voltage	24 V DC
Setting range of the output voltage ( $U_{Set}$ )	24 V DC ... 29 V DC (> 24 V DC, constant capacity restricted)
Nominal output current ( $I_N$ )	1.3 A
Output current range	1 A ... 1.25 A
Short-circuit-proof	yes
Crest factor	typ. 3.21 (120 V AC) typ. 4.23 (230 V AC)

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Output power ( $P_N$ )	30 W
Connection in parallel	yes, for increasing power and redundancy with diode
Connection in series	yes, for increased output voltage
Feedback voltage resistance	$\leq 35$ V DC
Protection against overvoltage at the output (OVP)	$\leq 35$ V DC
Residual ripple	typ. 60 mV <sub>PP</sub> (with nominal values)
Control deviation	< 1 % (change in load, static 10 % ... 90 %)
	< 3 % (change in load, dynamic 10 % ... 90 %)
	< 0.1 % (change in input voltage $\pm 10$ %)
Rise time	< 1 s ( $U_{Out} = 10$ % ... 90 %)
Minimum no-load power dissipation	< 0.16 W (120 V AC)
Maximum no-load power dissipation	< 0.26 W (230 V AC)
Minimum nominal load power dissipation	< 3.2 W (120 V AC)
Power loss nominal load max.	< 2.7 W (230 V AC)
Short-circuit current	2 A
Integrated fuse protection	no

## Connection data

### Input

Position	1.x
Identification	1.1 (L), 1.2 (N)

### Conductor connection

Connection method	Push-in connection
rigid	0.75 mm <sup>2</sup> ... 4 mm <sup>2</sup> (Push-in connection)
	1 mm <sup>2</sup>
flexible	0.2 mm <sup>2</sup> ... 4 mm <sup>2</sup>
	1 mm <sup>2</sup>
flexible with ferrule without plastic sleeve	0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
	1 mm <sup>2</sup>
flexible with ferrule with plastic sleeve	0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
	1 mm <sup>2</sup>
AWG	24 ... 12
	17
Stripping length	10 mm

### Output

Position	2.x
Identification	2.1 (+), 2.2 (-)

### Conductor connection

Connection method	Push-in connection
rigid	0.75 mm <sup>2</sup> ... 4 mm <sup>2</sup> (Push-in connection)
	1 mm <sup>2</sup>
flexible	0.2 mm <sup>2</sup> ... 4 mm <sup>2</sup>

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	1 mm <sup>2</sup>
flexible with ferrule without plastic sleeve	0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
	1 mm <sup>2</sup>
flexible with ferrule with plastic sleeve	0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
	1 mm <sup>2</sup>
rigid (AWG)	24 ... 12
	17
AWG	24 ... 12
	17
Stripping length	10 mm

## Conductor connection

Connection method	Push-in connection
rigid	0.2 mm <sup>2</sup> ... 4 mm <sup>2</sup>
flexible	0.2 mm <sup>2</sup> ... 4 mm <sup>2</sup>
flexible with ferrule without plastic sleeve	0.25 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
flexible with ferrule with plastic sleeve	0.25 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
AWG	24 ... 14 (Cu)
Stripping length	10 mm

## Signaling

### LED signaling

Types of signaling	LED DC OK - signal state operation ( $U_N = 24 \text{ V DC}$ , $I_{Out} = I_N$ )
Function	Visual operating state display
Color	green
LED off	Supply voltage input AC not present (Off)
LED on (green), DC OK	$U_{OUT} > 0,9 \times U_N$ (On (green), DC OK)

## Electrical properties

Number of phases	1
Insulation voltage input/output	4 kV AC (type test)
	3.75 kV AC (routine test)

## Product properties

Product type	Power supply
Product family	UNO POWER
MTBF (IEC 61709, SN 29500)	> 2872000 h (25 °C)
	> 1743000 h (40 °C)
	> 980000 h (55 °C)

### Insulation characteristics

Protection class	II
Degree of pollution	2

Life expectancy (electrolytic capacitors)

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Current	0.625 A
Temperature	40 °C
Time	284000 h
Additional text	120 V AC

## Life expectancy (electrolytic capacitors)

Current	0.625 A
Temperature	40 °C
Time	234000 h
Additional text	230 V AC

## Life expectancy (electrolytic capacitors)

Current	1.25 A
Temperature	40 °C
Time	138000 h
Additional text	120 V AC

## Life expectancy (electrolytic capacitors)

Current	1.25 A
Temperature	40 °C
Time	133000 h
Additional text	230 V AC

## Life expectancy (electrolytic capacitors)

Current	0.938 A
Temperature	40 °C
Time	192000 h
Additional text	120 V AC

## Life expectancy (electrolytic capacitors)

Current	0.938 A
Temperature	40 °C
Time	161000 h
Additional text	230 V AC

## Life expectancy (electrolytic capacitors)

Current	1.25 A
Temperature	25 °C
Time	392000 h
Additional text	120 V AC

## Life expectancy (electrolytic capacitors)

Current	1.25 A
Temperature	25 °C
Time	378000 h
Additional text	230 V AC

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## Dimensions

### Item dimensions

Width	21 mm
Height	90 mm
Depth	90 mm
Depth (Device depth (DIN rail mounting))	84 mm (Device depth (DIN rail mounting))

### Installation dimensions

Installation distance right/left	0 mm / 0 mm
Installation distance top/bottom	30 mm / 30 mm

## Mounting

Mounting type	DIN rail mounting
Assembly note	alignable: horizontally: 0 mm, vertically: 30 mm
Mounting position	horizontal DIN rail NS 35, EN 60715

## Material specifications

Flammability rating according to UL 94	V0 (Housing, terminal blocks)
Housing material	Plastic
Housing material	PC
Type of housing	Polycarbonate
Foot latch material	PBT (polybutylene terephthalate)

## Environmental and real-life conditions

### Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-25 °C ... 70 °C (> 55°C, derating P <sub>OUT</sub> : 2.5%/K)
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Ambient temperature (start-up type tested)	-40 °C
Maximum altitude	≤ 5000 m
Maximum altitude (Output power derating)	> 2000 m (Derating P <sub>OUT</sub> : 10 %/1000 m)
Max. permissible relative humidity (operation)	≤ 95 % (at 25 °C, non-condensing)
Shock (operation)	18 ms, 30g, per spatial direction (IEC 60068-2-27)
Vibration (operation)	10 Hz ... 56.9 Hz, amplitude ±0.35 mm (IEC 60068-2-6) 59.6 Hz ... 150 Hz, 5g, 20 cycles
Temp code	T4 (-25 ... +70 °C; > 55 °C, Derating P <sub>OUT</sub> : 2,5 %/K)

## Standards and regulations

### Overvoltage category

EN 61010-1	II (≤ 5000 m)
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### Overvoltage category

EN 62477-1	III (≤ 2000 m)
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## Overvoltage category

EN 61558-2-16	III ( $\leq 1\text{ m}$ , $U_{IN}$ : 100 V AC ... 250 V AC, 110 V DC ... 250 V DC)
	II ( $\leq 2000\text{ m}$ )

## Safety of power supply units up to 1100 V (insulation distances)

Standard designation	Safety of power supply units up to 1100 V (insulation distances)
Standards/specifications	DIN EN 61558-2-16

## Electrical safety

Standard designation	Electrical safety
Standards/specifications	IEC 61010-2-201 (SELV)
Standard designation	Safety for equipment for measurement, control, and laboratory use
Standards/specifications	IEC 61010-1

## Protective extra-low voltage

Standard designation	Protective extra-low voltage
Standards/specifications	IEC 61010-1 (SELV)
	IEC 61010-2-201 (PELV)

## Safe isolation

Standard designation	Safe isolation
Standards/specifications	IEC 61558-2-16
	IEC 61010-2-201

## Limitation of harmonic line currents

Standard designation	Limitation of harmonic line currents
Standards/specifications	EN 61000-3-2

## Mains variation/undervoltage

Standard designation	Mains variation/undervoltage
Standards/specifications	SEMI F47 - 0706 (200 V AC)

## Approvals

### UL

Identification	UL 1310 Class 2 Power Units
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### UL

Identification	UL/C-UL Listed UL 61010-1
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### UL

Identification	UL/C-UL Listed UL 61010-2-201
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### ANSI/UL 121201

Identification	PROCESS CONTROL EQUIPEMENT FOR HAZARDOUS LOCATIONS
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	(EN) • This equipment is suitable for use in Class I, Division 2, Groups A, B, C and D, Hazardous Locations, or non-hazardous locations only. (FR) • Cet appareil convient uniquement pour une utilisation en atmosphères explosibles de classe I, division 2, groupes A, B, C et D ou en atmosphères non explosibles.
	(EN) • WARNING: Explosion Hazard - Do not connect or disconnect equipment unless power has been switched off or the area is known to be non-hazardous. (FR) • AVERTISSEMENT : risque d'explosion - ne pas connecter ou déconnecter les équipements sauf si l'alimentation a été coupée ou si la zone est réputée non dangereuse.
	(EN) • If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired. (FR) • Si l'équipement est utilisé d'une manière non spécifiée par le fabricant, la protection fournie par cet équipement peut être altérée.
	(EN) • This equipment must be installed in a suitable, tool secured/key locked enclosure. (FR) • Cet équipement doit être installé dans un boîtier approprié, verrouillé par une clé ou dont l'ouverture nécessite l'utilisation d'un outil.

## SIQ

Identification	CB scheme (IEC 61010-1, IEC 61010-2-201)
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## EMC data

Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
Low Voltage Directive	Conformance with Low Voltage Directive 2014/35/EC
Interference emission	Interference emission in accordance with EN 61000-6-3 (residential and commercial) and EN 61000-6-4 (industrial)
EMC requirements for noise immunity	EN 61000-6-2

## Conducted noise emission

Standards/regulations	EN 55016
	EN 61000-6-3 (Class B)

## Noise emission

Standards/regulations	EN 55016
	EN 61000-6-3 (Class B)

## Harmonic currents

Standards/regulations	EN 61000-3-2
	EN 61000-3-2 (Class A)
Frequency range	0 kHz ... 2 kHz

## Flicker

Standards/regulations	EN 61000-3-3
Frequency range	0 kHz ... 2 kHz

## Electrostatic discharge

Standards/regulations	EN 61000-4-2
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## Electrostatic discharge

Contact discharge	6 kV (Test Level 3)
Discharge in air	8 kV (Test Level 3)
Comments	Criterion A

## Electromagnetic HF field

Standards/regulations	EN 61000-4-3
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## Electromagnetic HF field

Frequency range	80 MHz ... 1 GHz
Test field strength	10 V/m (Test Level 3)
Frequency range	1 GHz ... 6 GHz
Test field strength	10 V/m (Test Level 3)
Comments	Criterion A

## Fast transients (burst)

Standards/regulations	EN 61000-4-4
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## Fast transients (burst)

Input	4 kV (Test Level 4 - asymmetrical)
Output	2 kV (Test Level 3 - asymmetrical)
Comments	Criterion A

## Surge voltage load (surge)

Standards/regulations	EN 61000-4-5
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## Surge voltage load (surge)

Input	2 kV (Test Level 4 - symmetrical)
	4 kV (Test Level 4 - asymmetrical)
Output	1 kV (Test Level 3 - symmetrical)
	2 kV (Test Level 3 - asymmetrical)
Comments	Criterion A

## Conducted interference

Standards/regulations	EN 61000-4-6
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## Conducted interference

Input/Output	asymmetrical
Frequency range	0.15 MHz ... 80 MHz
Comments	Criterion A
Voltage	10 V (Test Level 3)

## Voltage dips

Standards/regulations	EN 61000-4-11
Voltage	230 V AC
Frequency	50 Hz
Voltage dip	70 %

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Number of periods	25 periods
Additional text	Class 3
Comments	Criterion A
Voltage dip	40 %
Number of periods	10 periods
Additional text	Class 3
Comments	Criterion A
Voltage dip	0 %
Number of periods	1 period
Additional text	Class 3
Comments	Criterion A

## Criteria

Criterion A	Normal operating behavior within the specified limits.
Criterion B	Temporary impairment to operational behavior that is corrected by the device itself.
Criterion C	Temporary adverse effects on the operating behavior, which the device corrects automatically or which can be restored by actuating the operating elements.

# UNO2-PS/1AC/24DC/30W/PT - Power supply

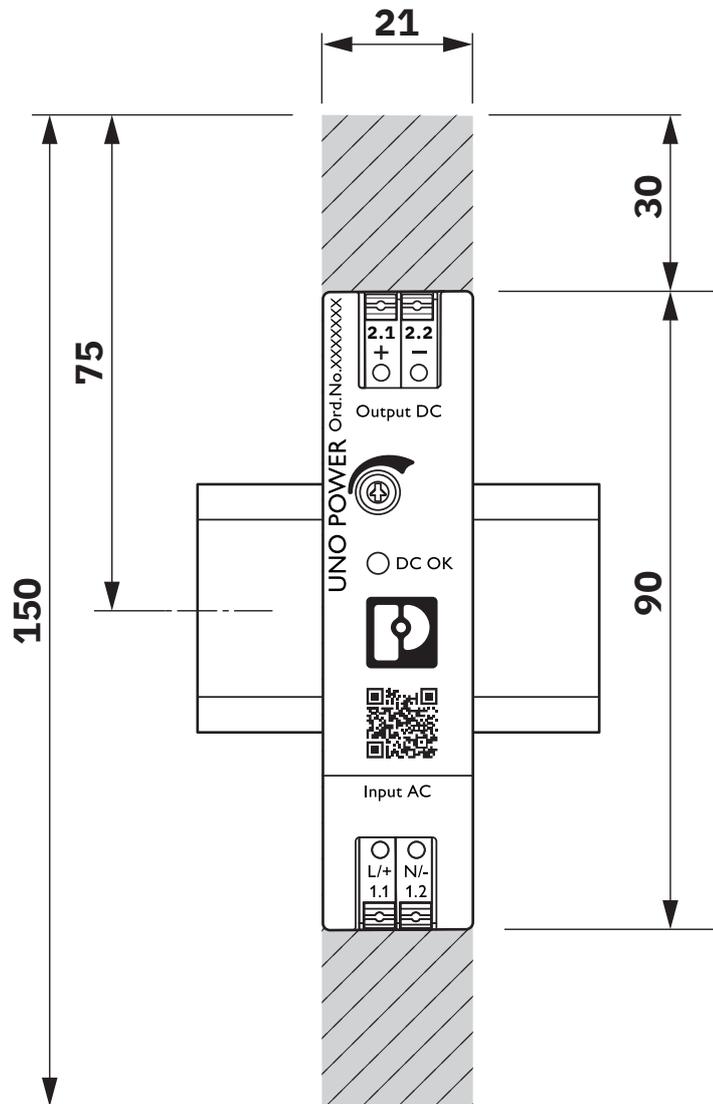


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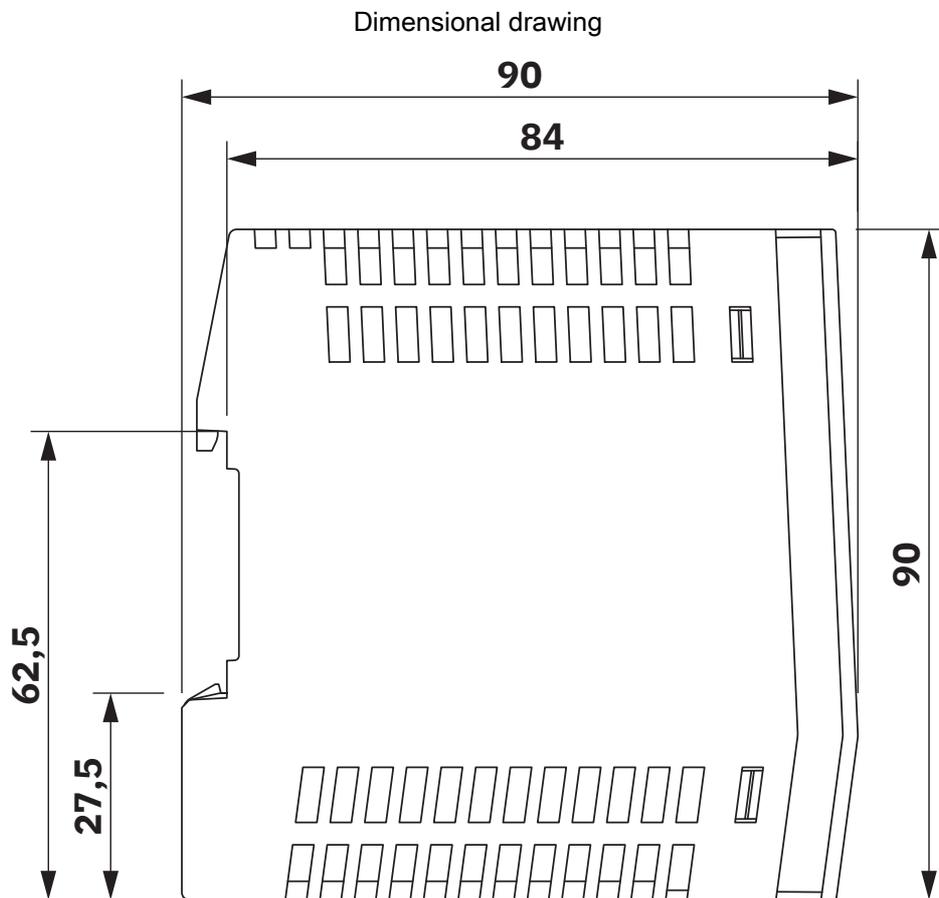
<https://www.phoenixcontact.com/gb/products/1399932>

## Drawings

Dimensional drawing



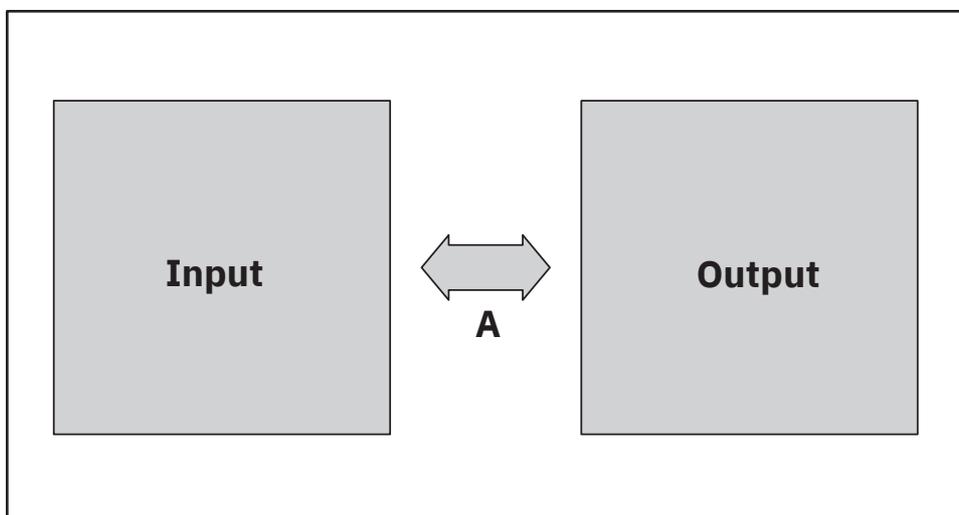
Device dimensions (dimensions in mm)

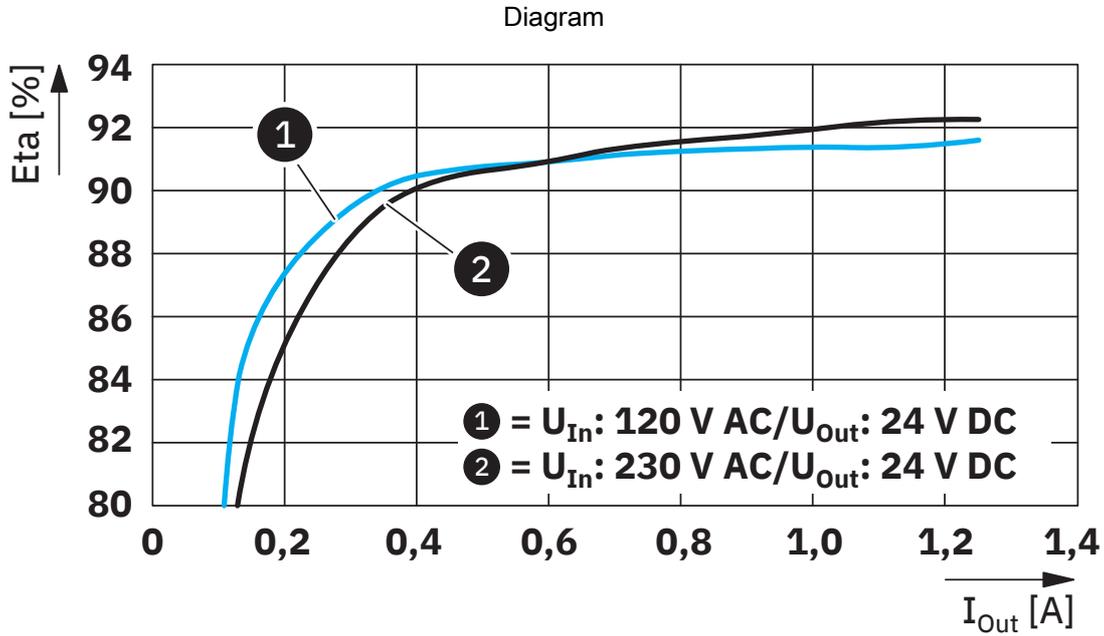


Device dimensions (dimensions in mm)

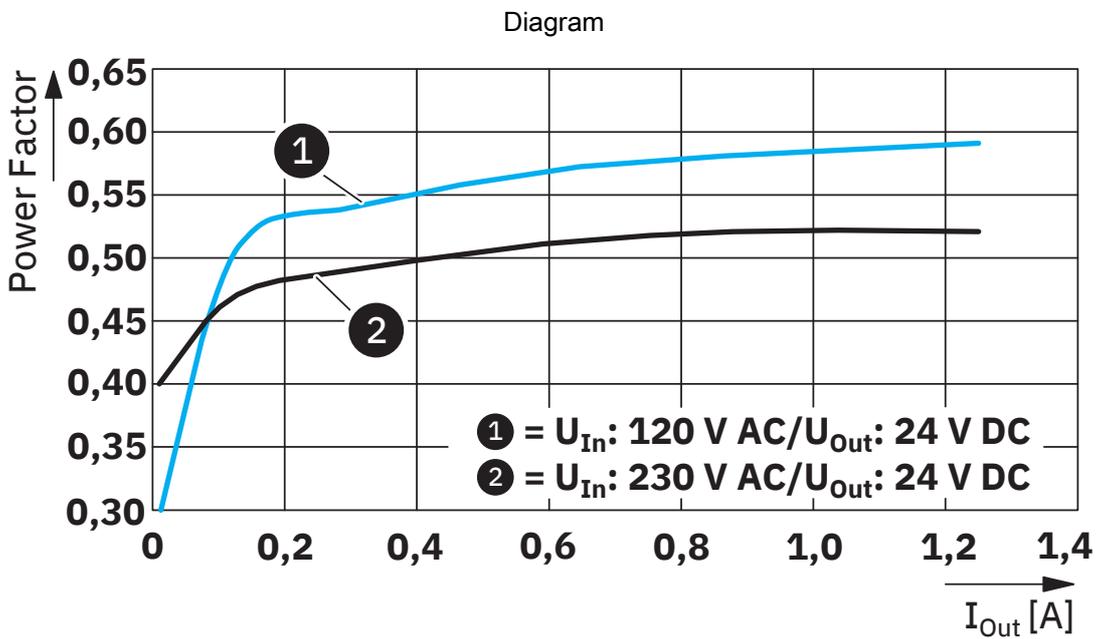
Schematic diagram

## Housing



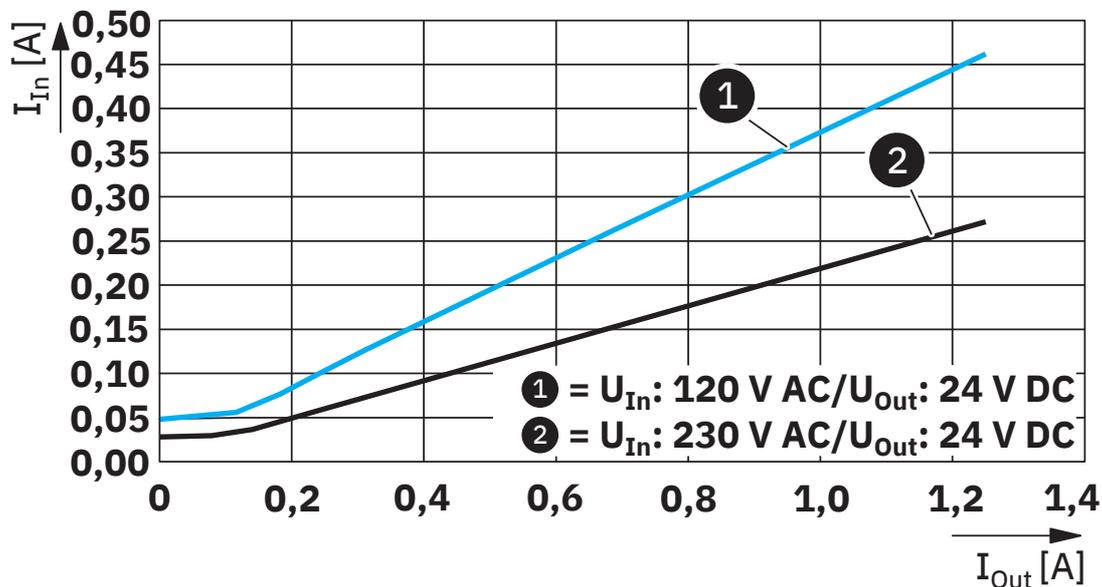


Efficiency



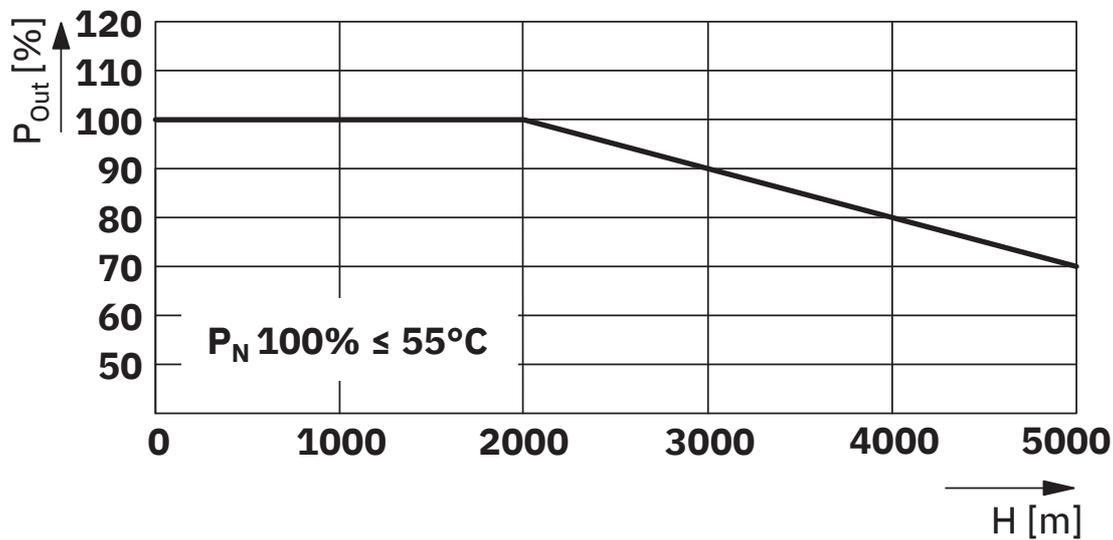
Power factor

Diagram



Input current/output current

Diagram



Output power/installation altitude

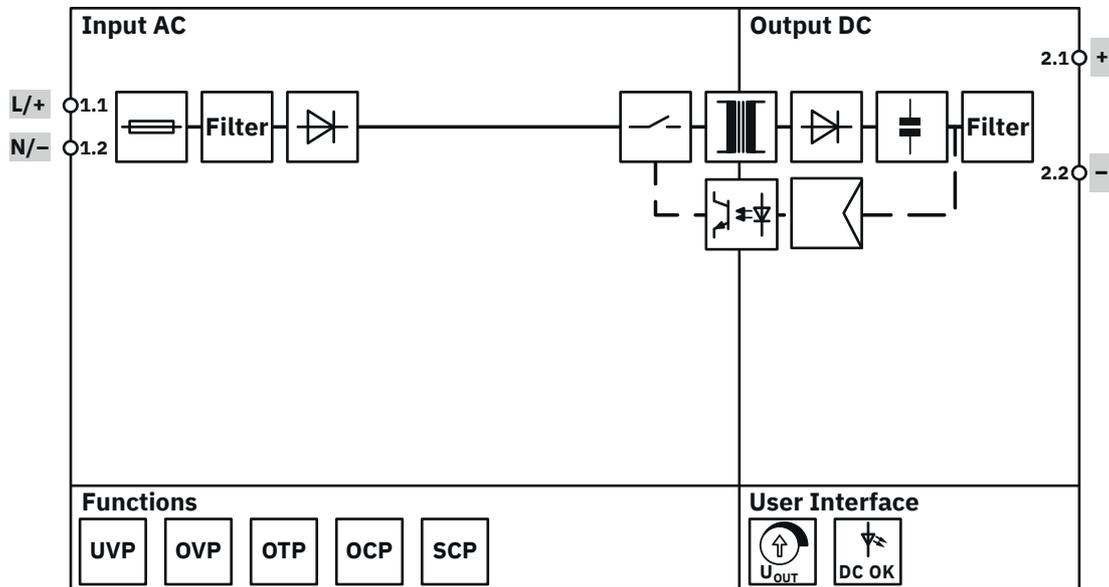
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Block diagram



Block diagram

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## Approvals

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**IECEE CB Scheme**

Approval ID: SI-12014



**cULus Listed**

Approval ID: E123528-20250324

**CoC / Compliance Statement**

Approval ID: C223-0010/25



**UL Listed**

Approval ID: E199827-20250327

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## Classifications

### ECLASS

ECLASS-13.0	27040701
ECLASS-15.0	27040701

### ETIM

ETIM 9.0	EC002540
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