UNO2-PS/1AC/24DC/480W - Power supply unit

2910105

https://www.phoenixcontact.com/ro/produse/2910105

Vă rugăm să țineți cont de faptul că datele afișate în acest document PDF au fost generate din catalogul nostru online. Datele complete sunt disponibile în documentația pentru utilizator. În cazul descărcărilor, se aplică Termenii și condițiile generale de utilizare ale companiei noastre.



Primary-switched power supply unit, UNO POWER, Screw connection, DIN rail mounting, input: 1-phase, output: 24 V DC / 20 A, adjustable from 24 V DC ... 28 V DC

Avantajele dumneavoastră

- Save space in the control cabinet, thanks to an extremely narrow overall width of just 59 mm
- Save energy, thanks to a high degree of efficiency
- Outdoor installation possible, with a wide temperature range of -25°C … +70°C
- Simple output voltage monitoring, thanks to the floating DC OK relay contact

Date comerciale

Număr articol	2910105
Unitate de ambalare	1 Bucată
Cantitate minimă pentru comandă	1 Bucată
Cod produs	CMPV13
Pagina de catalog	Pagina 268 (C-4-2019)
GTIN	4055626456652
Greutate pe bucată (inclusiv ambalajul)	1.252,4 g
Greutate pe bucată (fără ambalaj)	1.084 g
Cod tarifar vamal	85044095
Țara de origine	TH

Date tehnice

Input data

AC operation

Supply system configuration	Star network (TN, TT, IT (PE))
Nominal input voltage range	100 V AC ... 240 V AC
Input voltage range	100 V AC ... 240 V AC -15 % ... +10 %
Derating	< 90 V AC (1 %/V)
Typical national grid voltage	120 V AC
	230 V AC
Voltage type of supply voltage	AC
Inrush current	typ. 15 A (at 25 °C)
Inrush current integral (I^2t)	< 1 A^2s
Frequency range (f_N)	50 Hz ... 60 Hz ±10 %
Mains buffering time	typ. 17 ms (120 V AC)
	typ. 18 ms (230 V AC)
Current consumption	5.4 A (100 V AC)
	4.4 A (120 V AC)
	2.3 A (230 V AC)
	2.2 A (240 V AC)
Protective circuit	Transient surge protection; Varistor, gas-filled surge arrester
Switch-on time	typ. 1 s
Device mains fuse	8 A internal (device protection), fast-blow
Recommended breaker for input protection	10 A ... 16 A (Characteristic B, C, D, K or comparable)
Discharge current to PE	< 3.5 mA

Output data

Efficiency	typ. 93 % (120 V AC)
	typ. 94.6 % (230 V AC)
Nominal output voltage	24 V DC
Setting range of the output voltage (U_{Set})	24 V DC ... 28 V DC (> 24 V DC, constant capacity restricted)
Nominal output current (I_N)	20 A
Short-circuit-proof	yes
No-load proof	yes
Derating	55 °C ... 70 °C
Crest factor	typ. 1.667 (120 V AC)
	typ. 1.75 (230 V AC)
Output power (P_N)	480 W
Connection in parallel	yes, for redundancy
Connection in series	yes, for increased output voltage
Feedback voltage resistance	≤ 35 V DC
Protection against overvoltage at the output (OVP)	≤ 35 V DC
Residual ripple	typ. 70 mV_{PP} (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 ±10 %)
Rise time	< 1 s (U_{Out} = 10 % ... 90 %)
Minimum no-load power dissipation	< 2.9 W (120 V AC)
Maximum no-load power dissipation	< 3 W (230 V AC)
Minimum nominal load power dissipation	< 37 W (120 V AC)
Power loss nominal load max.	< 28 W (230 V AC)

Signal relay 13/14

Connection level	3.x
Connection labeling	3.1 (13), 3.2 (14)
Switch contact (floating)	OptoMOS
Switching voltage	max. 30 V AC/DC
	max. 60 V DC
Current carrying capacity	max. 50 mA
State condition	U_{OUT} > 0,9 x U_N (Contact closed)
	U_{OUT} < 0,9 x U_N (Contact open)

Connection data

Input

Position	1.x
Identification	1.1 (L), 1.3 (N)

Conductor connection

Connection method	Screw connection
rigid	0.2 mm² ... 6 mm²
flexible	0.2 mm² ... 4 mm²
flexible with ferrule without plastic sleeve	0.25 mm² ... 4 mm²
flexible with ferrule with plastic sleeve	0.25 mm² ... 4 mm²
rigid (AWG)	24 ... 10 (Cu)
Stripping length	8 mm
Tightening torque	0.5 Nm ... 0.6 Nm
	4 lb_f-in. ... 5 lb_f-in.
Drive form screw head	Slotted L

Output

Position	2.x
Identification	2.1, 2.2 (+), 2.3, 2.4 (-)

Conductor connection

Connection method	Screw connection
rigid	0.2 mm² ... 6 mm²
flexible	0.2 mm² ... 4 mm²
flexible with ferrule without plastic sleeve	0.25 mm² ... 4 mm²

flexible with ferrule with plastic sleeve	0.25 mm² ... 4 mm²
rigid (AWG)	24 ... 10 (Cu)
Stripping length	8 mm
Tightening torque	0.5 Nm ... 0.6 Nm
	4 lb_f-in. ... 5 lb_f-in.
Drive form screw head	Slotted L

Signal

Position	3.x
Identification	3.1 (13), 3.2 (14)

Conductor connection

Connection method	Screw connection
rigid	0.2 mm² ... 6 mm²
flexible	0.2 mm² ... 4 mm²
flexible with ferrule without plastic sleeve	0.25 mm² ... 4 mm²
flexible with ferrule with plastic sleeve	0.25 mm² ... 4 mm²
rigid (AWG)	24 ... 10 (Cu)
Stripping length	8 mm
Tightening torque	0.5 Nm ... 0.6 Nm
	4 lb_f-in. ... 5 lb_f-in.
Drive form screw head	Slotted L

Signaling

LED signaling

Types of signaling	LED DC OK – signal state operation (U_N = 24 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 x U_N (On (green), DC OK)
LED on (flashing green) DC OK < 0.9 x UN	U_{OUT} < 0,9 x U_N (on (flashing green))

Electrical properties

Number of phases	1.00
Insulation voltage input/output	4 kV AC (type test)
	3 kV AC (routine test)
Insulation voltage input / PE	3.5 kV AC (type test)
	2.4 kV AC (routine test)

Product properties

Product type	Power supply
Product family	UNO POWER
MTBF (IEC 61709, SN 29500)	> 900000 h (25 °C)
	> 530000 h (40 °C)
	> 280000 h (55 °C)

Environmental protection directive	RoHS Directive 2011/65/EU
	WEEE
	Reach

Data management status

Article revision	01

Insulation characteristics

Protection class	I
Degree of pollution	2

Dimensions

Item dimensions

Width	59 mm
Height	130 mm
Depth	129 mm
	125 mm (Device depth (DIN rail mounting))

Installation dimensions

Installation distance right/left (active, passive)	0 mm / 0 mm
Installation distance top/bottom (active, passive)	30 mm / 30 mm

Mounting

Mounting type	DIN rail mounting
Assembly note	alignable: 0 mm horizontally, 30 mm vertically
Mounting position	horizontal DIN rail NS 35, EN 60715
With protective coating	No

Material specifications

Flammability rating according to UL 94	V0 (Housing, terminal blocks)
Housing material	Metal
Housing material	Aluminum (AlMg3) / sheet steel, zinc-plated
Hood version	Stainless steel
Side element version	Aluminum
Foot latch material	Sheet steel, zinc-plated

Environmental and real-life conditions

Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-25 °C ... 70 °C (> 55 °C Derating: 2.5 %/K)
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Ambient temperature (start-up type tested)	-40 °C
Maximum altitude	≤ 3000 m (> 2000 m, Derating: 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 ... 50 Hz, amplitude ±0.2 mm
	50 Hz ... 150 Hz, 2.3g, 90 min.

Standards and regulations

Overvoltage category

EN 61010-1	II (≤ 3000 m)

Overvoltage category

EN 62477-1	III (≤3000 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)

Electronic equipment for use in power installations

Standard designation	Equipping high voltage installations with electronic equipment
Standards/specifications	EN 50178/VDE 0160 (PELV)

Safety for measurement, control, and laboratory equipment

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 voltage dips

Standard designation	Requirement of the semiconductor industry with regard to mains voltage dips
Standards/specifications	SEMI F47 - 0706 (180 V AC)

Approvals

UL

Identification	UL/C-UL Listed UL 61010-1

UL

Identification	UL/C-UL Listed UL 61010-2-201

UL

Identification	UL/C-UL Listed ANSI/UL 121201 Class I, Division 2, Groups A, B, C, D (Hazardous Location)

SIQ

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

EMC data

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
Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
Conducted noise emission	EN 55016
	EN 61000-6-3 (Class B)
Noise emission	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

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

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

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

Surge voltage load (surge)

Input	1 kV (Test Level 3 - symmetrical)
	2 kV (Test Level 3 - asymmetrical)
Output	0.5 kV (Test Level 2 - symmetrical)
	1 kV (Test Level 2 - asymmetrical)
Comments	Criterion B

Conducted interference

Standards/regulations	EN 61000-4-6

Conducted interference

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

Voltage dips

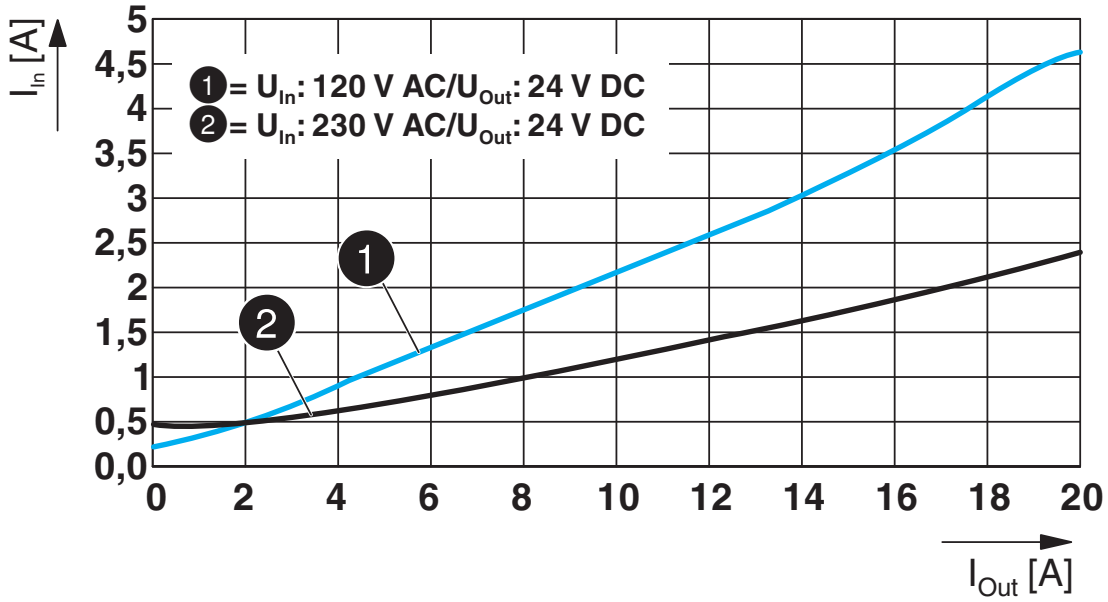
Standards/regulations	EN 61000-4-11
Voltage	230 V AC
Frequency	50 Hz
Voltage dip	70 %
Number of periods	25 / 30 periods
Comments	Criterion A
Voltage dip	40 %
Number of periods	12 periods
Additional text	Test Level 2
Comments	Criterion A
Voltage dip	0 %
Number of periods	1 period
Additional text	Test Level 2
Comments	Criterion B

Criteria

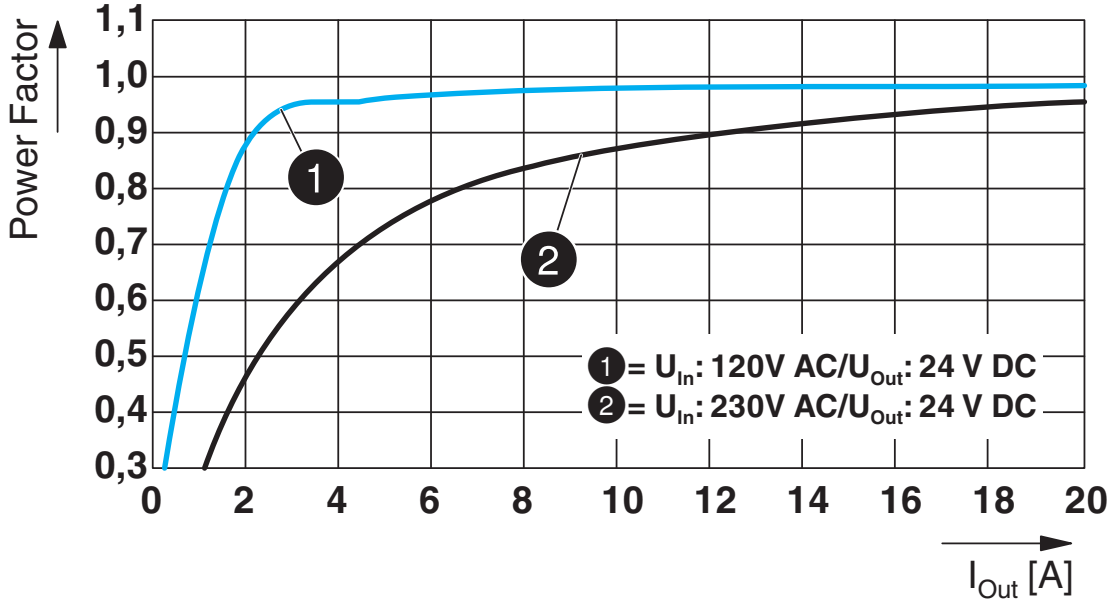
Criterion A	Normal operating behavior within the specified limits.
Criterion B	Temporary impairment to operational behavior that is corrected by the device itself.

Desene

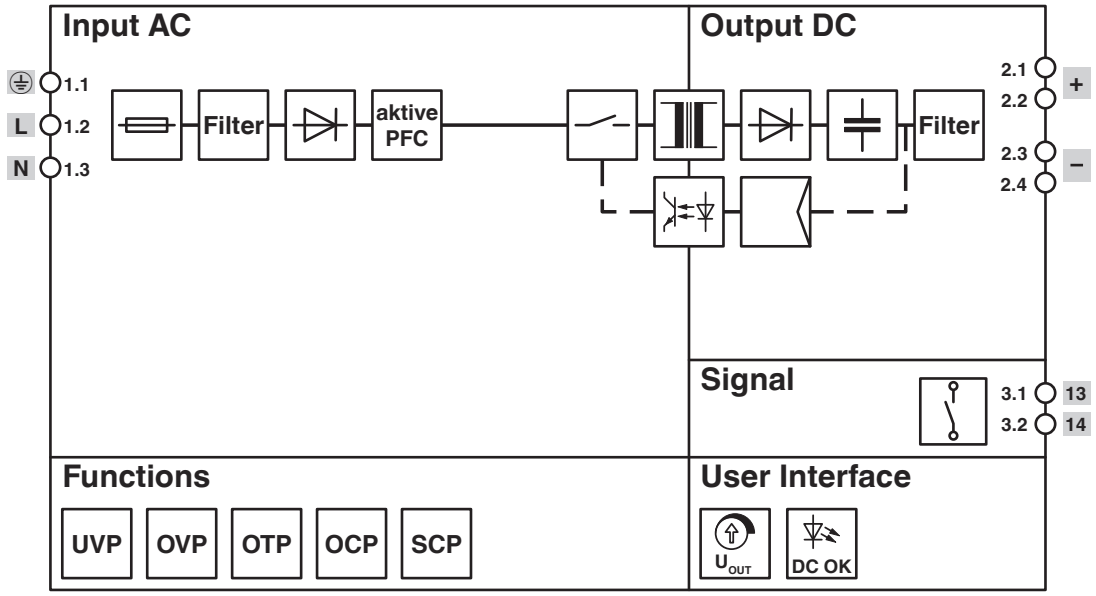
Diagram



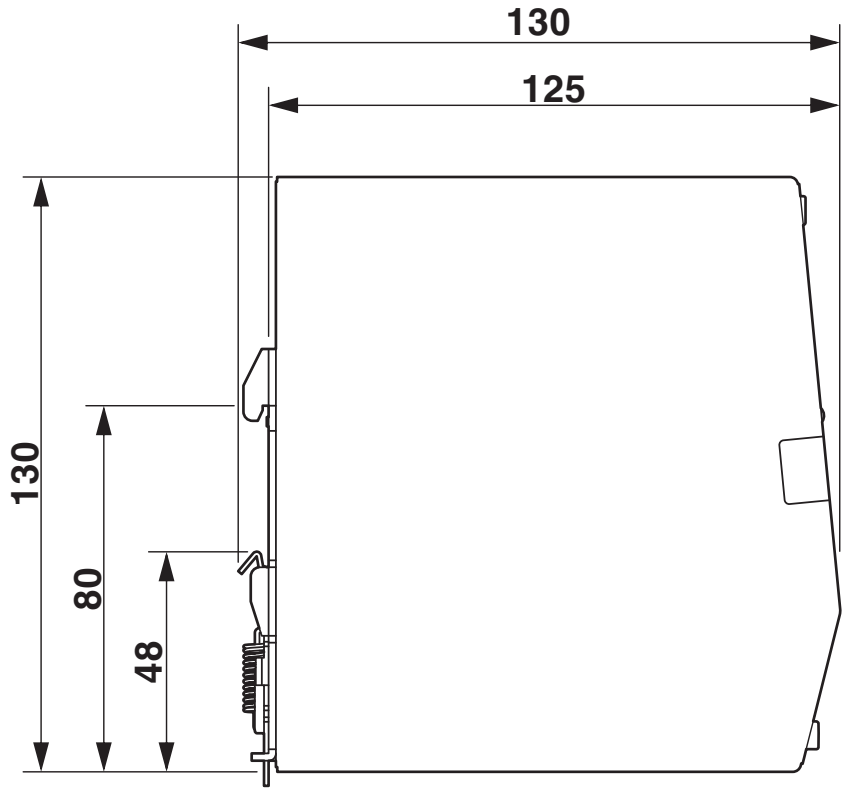
Diagram



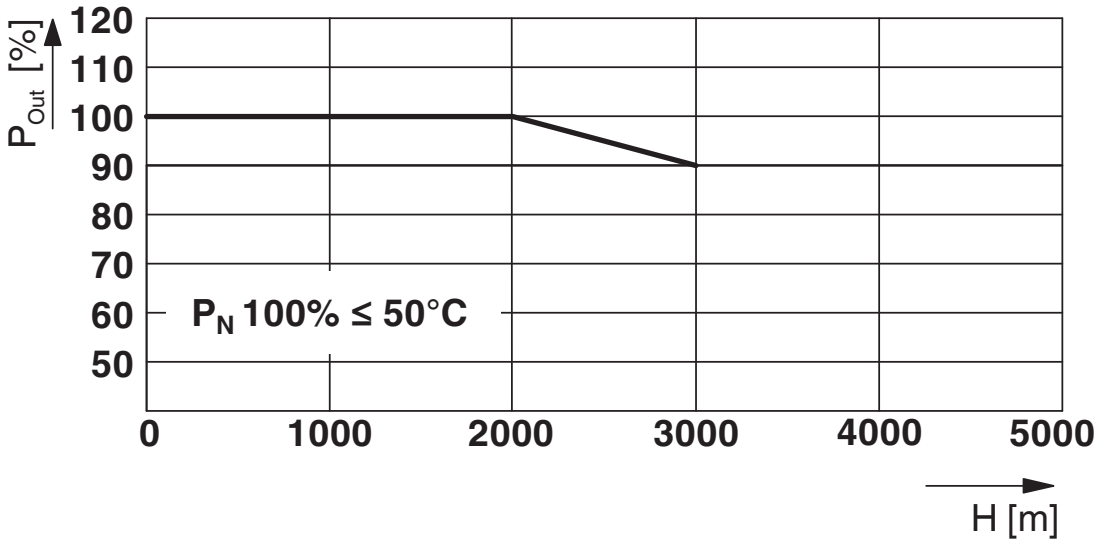
Block diagram



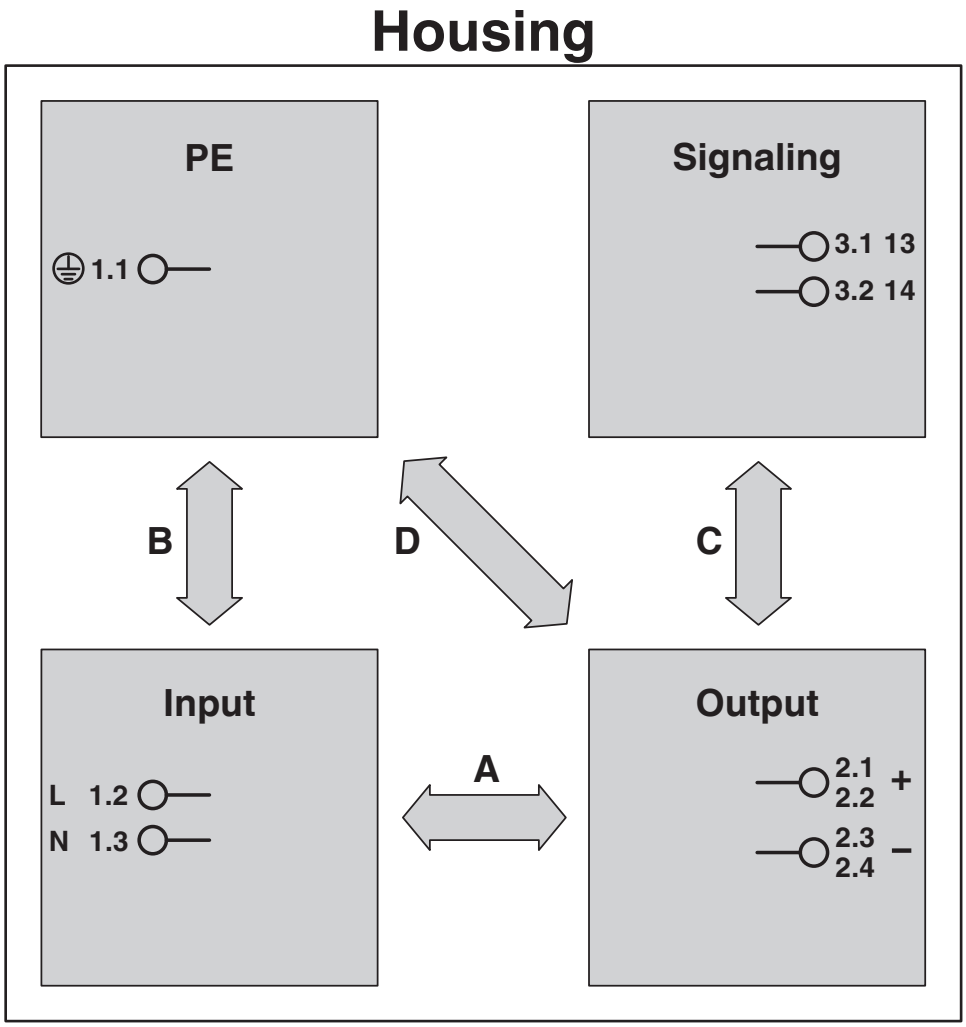
Dimensional drawing



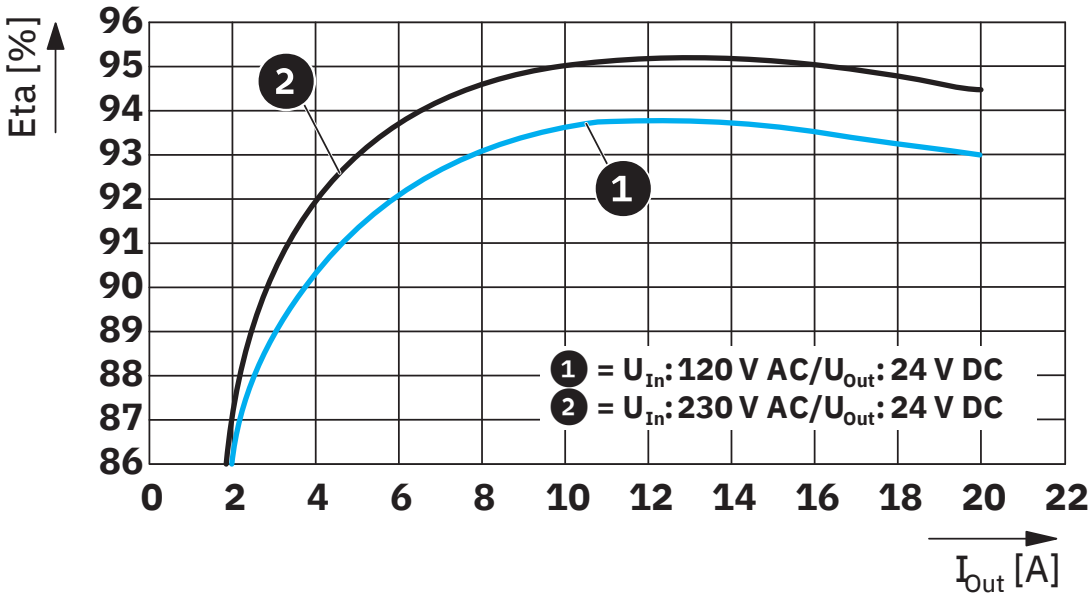
Diagram


P Out [%]
120
110
100
90
80
70
60
50
P N 100% ≤ 50°C
0
1000
2000
3000
4000
5000
H [m]

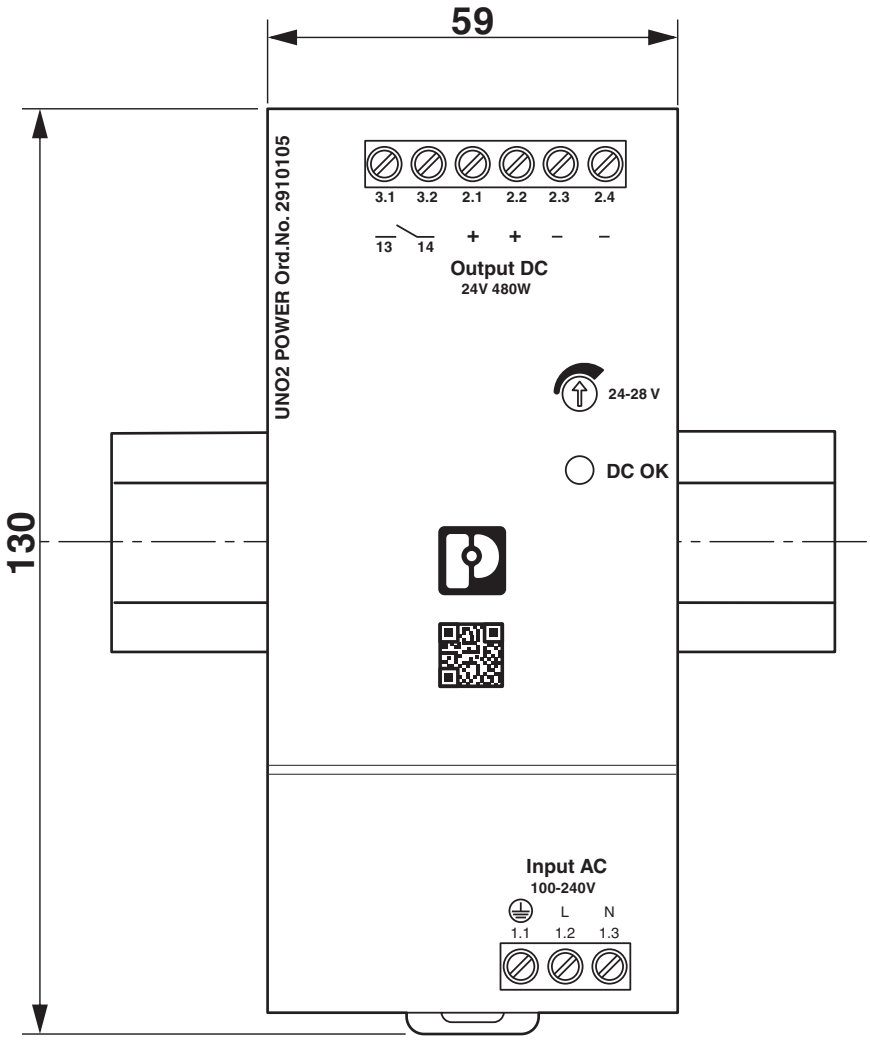
Schematic diagram



Diagram


Eta [%]
96
95
94
93
92
91
90
89
88
87
86
0
2
4
6
8
10
12
14
16
18
20
22
I Out [A]
1 = U In: 120 V AC/U Out: 24 V DC
2 = U In: 230 V AC/U Out: 24 V DC

Dimensional drawing



Aprobări

To download certificates, visit the product detail page: https://www.phoenixcontact.com/ro/produse/2910105

IECEE CB Scheme
ID de înregistrare: SI-8862

UL Listed
ID de înregistrare: E123528

cUL Listed
ID de înregistrare: E123528

EAC
ID de înregistrare: RU S-DE.BL08.W.00764

cUL Listed
ID de înregistrare: E199827

UL Listed
ID de înregistrare: E199827

cULus Listed

cULus Listed

Clasificări

ECLASS

ECLASS-11.0	27040701
ECLASS-13.0	27040701
ECLASS-12.0	27040701

ETIM

ETIM 8.0	EC002540

UNSPSC

UNSPSC 21.0	39121000

Environmental product compliance

EU RoHS

Îndeplinește cerințele conform directivei RoHS	Da
reglementări excepționale, dacă sunt cunoscute	7(a), 7(c)-I

China RoHS

Environment friendly use period (EFUP)	EFUP-25
	Un tabel de declarații China RoHS legat de articol poate fi găsit în zona de descărcare a articolului respectiv la „Declarația producătorului”. Nu se emite și nu este necesar niciun tabel de declarații China RoHS pentru toate articolele EFUP-E.

EU REACH SVHC

Trimitere la substanța candidată REACH (nr. CAS)	Lead(nr. CAS: 7439-92-1)
SCIP	73c1ec9c-e95e-4452-8f4b-8bfe396d6c7e

EF3.0 Climate Change

CO2e kg	36,324 kg CO2e

Accesorii

QUINT4-DIODE/12-24DC/2X20/1X40 - Redundancy module

2907719

https://www.phoenixcontact.com/ro/produse/2907719



DIN rail diode module 12-24 V DC/2x20 A or 1x40 A. Uniform redundancy up to the consumer.

QUINT4-ORING/12-24DC/2X20/2X20 - Redundancy module

1088207

https://www.phoenixcontact.com/ro/produse/1088207



Active redundancy module QUINT ORING with decoupling MOSFET, ACB Technology, DIN rail mounting, 12 V DC ... 24 V DC, 2x 20 A, 2x 20 A

TRIO2-DIODE/12-24DC/2X20/1X40 - Redundancy module

2907379

https://www.phoenixcontact.com/ro/produse/2907379



Redundancy module, 12 V - 24 V DC, 2 x 20 A, 1 x 40 A

PLT-SEC-T3-230-FM-UT - Type 3 surge protection device

2907919

https://www.phoenixcontact.com/ro/produse/2907919



Type 2/3 surge protection, consisting of protective plug and base element with screw connection. For single-phase power supply network with integrated status indicator and remote signaling. Nominal voltage: 230 V AC/DC

CBMC E4 24DC/1-4A NO - Electronic circuit breaker

2906031

https://www.phoenixcontact.com/ro/produse/2906031



Multi-channel electronic circuit breaker for protecting four loads at 24 V DC in the event of overload and short circuit. With electronic locking of the set nominal currents. For installation on DIN rails.

CBMC E4 24DC/1-10A NO - Electronic circuit breaker

2906032

https://www.phoenixcontact.com/ro/produse/2906032



Multi-channel electronic circuit breaker for protecting four loads at 24 V DC in the event of overload and short circuit. With electronic locking of the set nominal currents. For installation on DIN rails.

CBMC E4 24DC/1-4A+ IOL - Electronic circuit breaker

2910410

https://www.phoenixcontact.com/ro/produse/2910410



Multi-channel electronic circuit breaker with IO-Link interface for protecting four loads at 24 V DC in the event of overload and short circuit. With electronic locking of the set nominal currents. For installation on DIN rails.

CBMC E4 24DC/1-10A IOL - Electronic circuit breaker

2910411

https://www.phoenixcontact.com/ro/produse/2910411



Multi-channel electronic circuit breaker with IO-Link interface for protecting four loads at 24 V DC in the event of overload and short circuit. With electronic locking of the set nominal currents. For installation on DIN rails.

CBM E4 24DC/0.5-10A NO-R - Electronic circuit breaker

2905743

https://www.phoenixcontact.com/ro/produse/2905743



Multi-channel, electronic circuit breaker with active current limitation for protecting four loads at 24 V DC in the event of overload and short circuit. With nominal current assistant and electronic locking of the set nominal currents. For installation on DIN rails.

CBM E8 24DC/0.5-10A NO-R - Electronic circuit breaker

2905744

https://www.phoenixcontact.com/ro/produse/2905744



Multi-channel, electronic circuit breaker with active current limitation for protecting eight loads at 24 V DC in the event of overload and short circuit. With nominal current assistant and electronic locking of the set nominal currents. For installation on DIN rails.

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