

Power supply unit - UNO2-PS/1AC/24DC/480W - 2910105

Please be informed that the data shown in this PDF Document is generated from our Online Catalog. Please find the complete data in the user's documentation. Our General Terms of Use for Downloads are valid (<http://phoenixcontact.com/download>)




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

Your advantages

- ✓ 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



Key Commercial Data

Packing unit	1 pc
GTIN	 4 055626 456652
GTIN	4055626456652
Weight per Piece (excluding packing)	1,000.080 g
Custom tariff number	85044030
Country of origin	Thailand
Sales Key	CMPV13

Technical data

Dimensions

Width	59 mm
Height	130 mm
Depth	129 mm
	125 mm (Device depth (DIN rail mounting))
Installation distance right/left (active, passive)	0 mm / 0 mm ($P_{Out} \geq 50\%$)
Installation distance top/bottom (active, passive)	30 mm / 30 mm ($P_{Out} \geq 50\%$)
Ambient temperature (operation)	-25 °C ... 70 °C (> 55 °C Derating: 2.5 %/K)

Power supply unit - UNO2-PS/1AC/24DC/480W - 2910105

Technical data

Ambient temperature (start-up type tested)	-40 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Max. permissible relative humidity (operation)	≤ 95 % (at 25 °C, non-condensing)
Maximum altitude	≤ 3000 m (> 2000 m, Derating: 10 %/1000 m)
Vibration (operation)	10 Hz ... 50 Hz, amplitude ±0.2 mm (in accordance with IEC 60068-2-6)
	50 Hz to 150 Hz, 2.3 g, 90 min.
Shock	18 ms, 30g, in each space direction (according to IEC 60068-2-27)
Degree of pollution	2
Climatic class	3K3 (in acc. with EN 60721)

Input data

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)
Frequency range (f_N)	50 Hz ... 60 Hz #10 %
Typical national grid voltage	120 V AC
	230 V AC
Voltage type of supply voltage	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)
Discharge current to PE	< 3.5 mA
Mains buffering time	typ. 17 ms (120 V AC)
	typ. 18 ms (230 V AC)
Switch-on time	typ. 1 s
Inrush current	typ. 15 A (at 25 °C)
Inrush current integral (I^2t)	< 1 A ² s
Type of protection	Transient protection
Protective circuit/component	Varistor, gas-filled surge arrester
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)

Output data

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
Control deviation	< 1 % (change in load, static 10 % ... 90 %)
	< 3 % (change in load, dynamic 10 % ... 90 %)
	< 0.1 % (change in input voltage ±10 %)
Short-circuit-proof	yes
No-load proof	yes

Power supply unit - UNO2-PS/1AC/24DC/480W - 2910105

Technical data

Output data

Residual ripple	typ. 70 mV _{PP} (with nominal values)
Connection in parallel	yes, for increased efficiency and redundancy
Connection in series	yes, for increased efficiency
Feedback voltage resistance	≤ 35 V DC
Protection against overvoltage at the output (OVP)	≤ 35 V DC
Rise time	< 1 s (U _{Out} = 10 % ... 90 %)
Derating	55 °C ... 70 °C
Crest factor	typ. 1,667 (120 V AC)
	typ. 1,75 (230 V AC)
Output power	480 W
Minimum no-load power dissipation	< 2.9 W (120 V AC)
Maximum power dissipation in no-load condition	< 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)

General

Net weight	1 kg
Environmental protection directive	RoHS Directive 2011/65/EU
	WEEE
	Reach
Efficiency	typ. 93 % (120 V AC)
	typ. 94.6 % (230 V AC)
MTBF (IEC 61709, SN 29500)	> 900000 h (25 °C)
	> 530000 h (40 °C)
	> 280000 h (55 °C)
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)
Degree of protection	IP20
Protection class	I
Housing material	Aluminum (AlMg3) / sheet steel, zinc-plated
Foot latch material	Sheet steel, zinc-plated
Mounting position	horizontal DIN rail NS 35, EN 60715
Assembly instructions	alignable: 0 mm horizontally, 30 mm vertically

Input connection data

Connection method	Screw connection
Stripping length	8 mm
Conductor cross section solid	0.2 mm ² ... 6 mm ²
Conductor cross section flexible	0.2 mm ² ... 4 mm ²
Flexible conductor cross section (ferrule with plastic sleeve)	0.25 mm ² ... 4 mm ²

Power supply unit - UNO2-PS/1AC/24DC/480W - 2910105

Technical data

Input connection data

Flexible conductor cross section flexible (ferrule, w/o plastic sleeve)	0.25 mm ² ... 4 mm ²
Conductor cross section AWG	24 ... 10 (Cu)
Torque	0.5 Nm ... 0.6 Nm

Output connection data

Connection method	Screw connection
Stripping length	8 mm
Conductor cross section solid	0.2 mm ² ... 6 mm ²
Conductor cross section flexible	0.2 mm ² ... 4 mm ²
Flexible conductor cross section (ferrule with plastic sleeve)	0.25 mm ² ... 4 mm ²
Flexible conductor cross section flexible (ferrule, w/o plastic sleeve)	0.25 mm ² ... 4 mm ²
Conductor cross section AWG	24 ... 10 (Cu)
Torque	0.5 Nm ... 0.6 Nm

Signal connection data

Connection method	Screw connection
Stripping length	8 mm
Conductor cross section solid	0.2 mm ² ... 6 mm ²
Conductor cross section flexible	0.2 mm ² ... 4 mm ²
Flexible conductor cross section (ferrule with plastic sleeve)	0.25 mm ² ... 4 mm ²
Flexible conductor cross section flexible (ferrule, w/o plastic sleeve)	0.25 mm ² ... 4 mm ²
Conductor cross section AWG	24 ... 10 (Cu)
Torque	0.5 Nm ... 0.6 Nm

LED signaling

Types of signaling	LED
	Floating signal contact
U_{Out}	$> 0,9 \times U_N$ ($U_N = 24$ V DC) (LED lights up green)
	$< 0,9 \times U_N$ ($U_N = 24$ V DC) (LED flashes green)

Standards

EMC requirements for noise immunity	EN 61000-6-2
Standard designation	Safety of power supply units up to 1100 V (insulation distances)
Standards/regulations	DIN EN 61558-2-16
Standard designation	Electrical safety
Standards/regulations	IEC 61010-2-201 (SELV)
Standard designation	Equipping high voltage installations with electronic equipment
Standards/regulations	EN 50178/VDE 0160 (PELV)
Standard designation	Safety for equipment for measurement, control, and laboratory use
Standards/regulations	IEC 61010-1
Standard designation	Safety extra-low voltage
Standards/regulations	IEC 61010-1 (SELV)
	IEC 61010-2-201 (PELV)

Power supply unit - UNO2-PS/1AC/24DC/480W - 2910105

Technical data

Standards

Standard designation	Safe isolation
Standards/regulations	IEC 61558-2-16
	IEC 61010-2-201
Standard designation	Limitation of harmonic line currents
Standards/regulations	EN 61000-3-2
Standard designation	Requirement of the semiconductor industry with regard to mains voltage dips
Standards/regulations	SEMI F47 - 0706 (185 V AC)
Overvoltage category EN 61010-1	II (≤ 3000 m)
Overvoltage category EN 62477-1	III (≤ 3000 m)

Conformance/approvals

Designation	UL
Identification	UL/C-UL Listed UL 61010-1
Designation	UL
Identification	UL/C-UL Listed UL 61010-2-201
Designation	SIQ
Identification	CB scheme (IEC 61010-1, IEC 61010-2-201)

EMC data

Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
Low Voltage Directive	Conformance with Low Voltage Directive 2014/35/EC
Conducted noise emission	EN 55016
	EN 61000-6-3 (Class B)
Noise emission	EN 55016
	EN 61000-6-3 (Class B)
Harmonic currents	EN 61000-3-2
	EN 61000-3-2 (Class A)
Electrostatic discharge	EN 61000-4-2
Contact discharge	6 kV (Test Level 3)
Discharge in air	8 kV (Test Level 3)
Electromagnetic HF field	EN 61000-4-3
Frequency range	80 MHz ... 1 GHz
Test field strength	10 V/m (Test Level 3)
Frequency range	1 GHz ... 2 GHz
Test field strength	10 V/m (Test Level 3)
Frequency range	2 GHz ... 3 GHz
Test field strength	10 V/m (Test Level 3)
Comments	Criterion A
Fast transients (burst)	EN 61000-4-4
Input	4 kV (Test Level 4 - asymmetrical)
Output	2 kV (Test Level 3 - asymmetrical)

Power supply unit - UNO2-PS/1AC/24DC/480W - 2910105

Technical data

EMC data

Comments	Criterion A
Surge voltage load (surge)	EN 61000-4-5
Input	2 kV (Test Level 3 - symmetrical)
	4 kV (Test Level 4 - asymmetrical)
Output	1 kV (Test Level 2 - symmetrical)
	2 kV (Test Level 3 - asymmetrical)
Comments	Criterion A
Conducted interference	EN 61000-4-6
Frequency range	0.15 MHz ... 80 MHz
Voltage	10 V (Test Level 3)
Comments	Criterion A
Voltage dips	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
Criterion A	Normal operating behavior within the specified limits.
Criterion B	Temporary impairment to operational behavior that is corrected by the device itself.

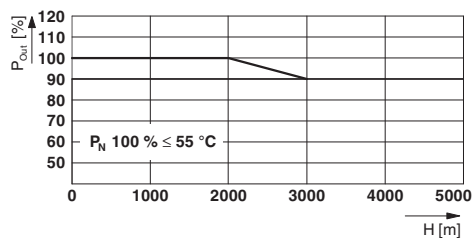
Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 25;
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

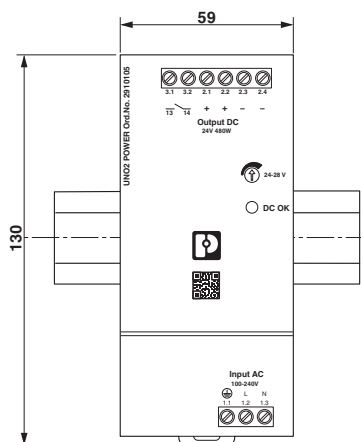
Drawings

Power supply unit - UNO2-PS/1AC/24DC/480W - 2910105

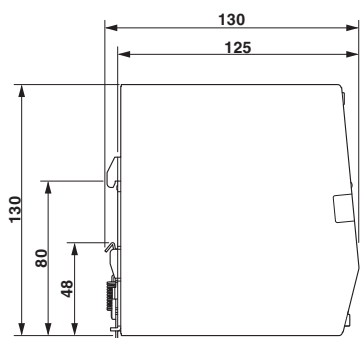
Diagram



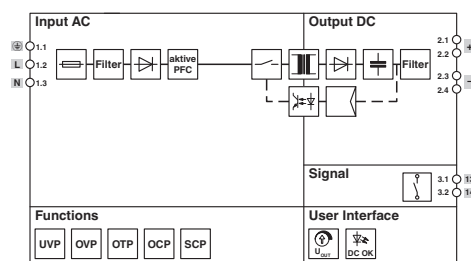
Dimensional drawing



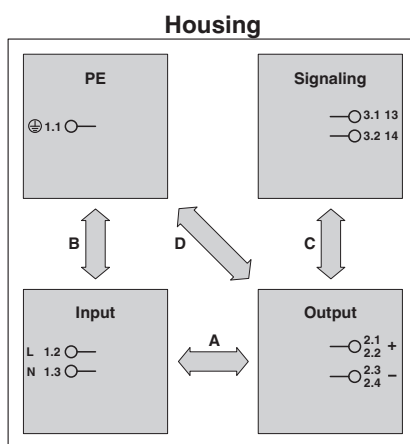
Dimensional drawing



Block diagram

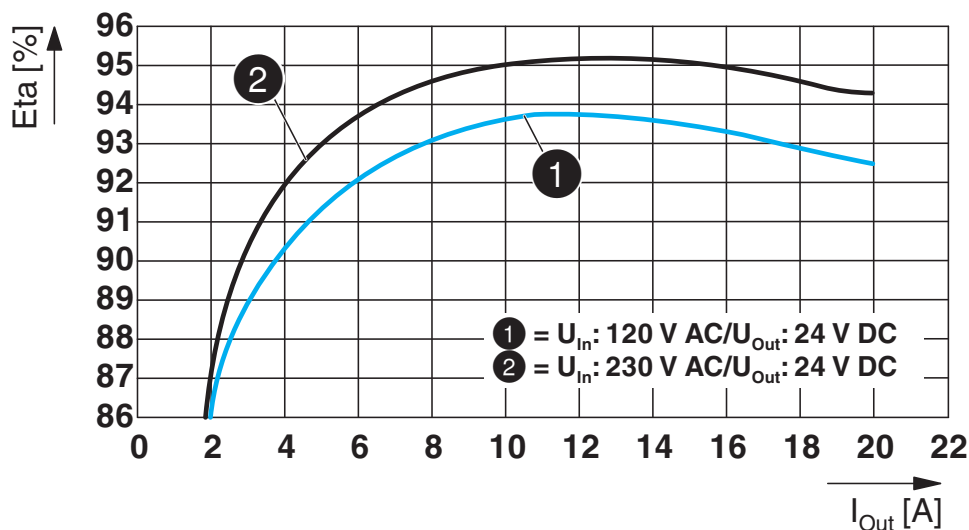


Schematic diagram

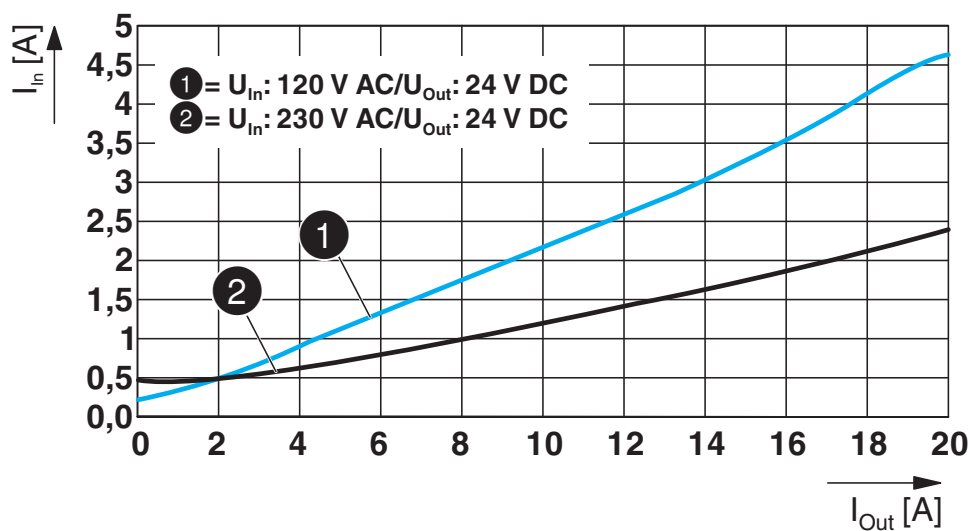


Power supply unit - UNO2-PS/1AC/24DC/480W - 2910105

Diagram

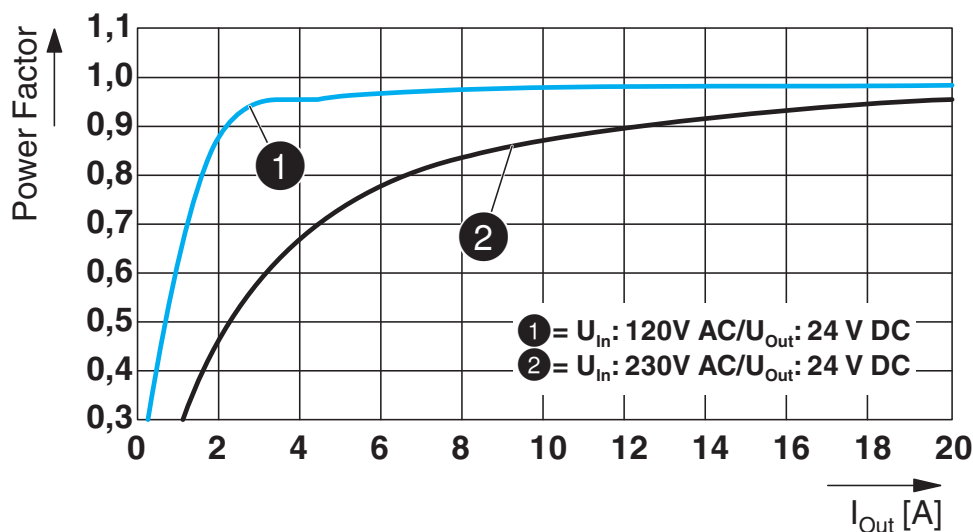


Diagram



Power supply unit - UNO2-PS/1AC/24DC/480W - 2910105

Diagram



Classifications

eCl@ss

eCl@ss 10.0.1	27040701
eCl@ss 11.0	27040701
eCl@ss 9.0	27040701

ETIM

ETIM 6.0	EC002540
ETIM 7.0	EC002540

Approvals

Approvals

Approvals

IECEE CB Scheme / UL Listed / cUL Listed / cULus Listed

Ex Approvals

UL Listed / cUL Listed / cULus Listed

Approval details

IECEE CB Scheme		http://www.iecee.org/	SI-7397
-----------------	--	---	---------

Power supply unit - UNO2-PS/1AC/24DC/480W - 2910105

Approvals

UL Listed

<http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm> FILE E 123528

cUL Listed

<http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm> FILE E 123528

cULus Listed





SCATTERGOOD & JOHNSON LTD

ELECTRICAL ENGINEERING & FLUID CONTROL DISTRIBUTORS

Est.1899

At Scattergood & Johnson Ltd, we pride ourselves on being a technical distributor to specialist industries.

Working with a range of quality product suppliers across a number of specialist markets, we are not your average 'box shifter' - we are your technical and supply chain partner.

We fully support every product we sell - for free! Our internal team and external sales engineers can answer any product or application question, no matter the complexity.

Backing up this technical ability is a range of 50,000+ products available from stock for nationwide next day delivery (same day if required!), or you can collect what you need from any of our trade counters around the UK.

Select your specialist interest below to learn more about how we can help.



Online, In Branch and On the Road - Scattergood & Johnson Ltd, there when you need us.

www.scatts.co.uk