

PS-EE-2G/1AC/48DC/240W/SC - Power supply



1585286

<https://www.phoenixcontact.com/us/products/1585286>

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 documentation. Our general terms of use for downloads are valid.



Primary-switched power supply unit ESSENTIAL POWER, Screw connection, DIN rail mounting, input: 1-phase, output: 48 V DC / 5 A, adjustable from 48 V DC ... 57 V DC



Commercial data

Item number	1585286
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	CM07
Product key	CMB314
GTIN	4067923139541
Weight per piece (including packing)	905.3 g
Weight per piece (excluding packing)	790 g
Customs tariff number	85044095
Country of origin	CN

PS-EE-2G/1AC/48DC/240W/SC - Power supply



1585286

<https://www.phoenixcontact.com/us/products/1585286>

Technical data

Input data

AC operation

Supply system configuration	TN, TT, IT (PE)
Nominal input voltage range	100 V AC ... 240 V AC
Input voltage range	110 V AC ... 240 V AC $\pm 10\%$ ($P_N = 240\text{ W}$) 100 V AC ... 109 V AC -15% ... $+10\%$ ($P_N = 200\text{ W}$)
Typical national grid voltage	120 V AC 230 V AC
Voltage type of supply voltage	AC
Inrush current	typ. 25 A (at 25 °C)
Inrush current integral (I^2t)	typ. 0.7 A ² s
Frequency range (f_N)	50 Hz ... 60 Hz $\pm 10\%$
Mains buffering time	typ. 20 ms (120 V AC) typ. 30 ms (230 V AC)
Current consumption	max. 3 A (240 W) max. 2.5 A (200 W) typ. 2.4 A (110 V AC (240 W)) typ. 1.2 A (240 V AC (240 W)) typ. 2.4 A (100 V AC (200 W)) typ. 2.3 A (109 V AC (200 W))
Protective circuit	Transient protection; Varistor
Switch-on time	typ. 1 s
Device mains fuse	5 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 % (230 V AC)
Nominal output voltage	48 V DC
Setting range of the output voltage (U_{Set})	48 V DC ... 57 V DC (> 48 V DC, constant capacity restricted)
Nominal output current (I_N) (I_{N_PMax})	max. 5 A ($P_N = 240\text{ W}$)
Nominal output current (I_N) (I_{N_PMin})	max. 4.2 A ($P_N = 200\text{ W}$)
Short-circuit-proof	yes
No-load proof	yes
Crest factor	typ. 1.7 (120 V AC) typ. 1.8 (230 V AC)
Output power (P_N)	240 W (240 V AC) 200 W (100 V AC)
Connection in parallel	yes, for increasing power and redundancy with diode
Connection in series	yes, for increased output voltage

PS-EE-2G/1AC/48DC/240W/SC - Power supply



1585286

<https://www.phoenixcontact.com/us/products/1585286>

Feedback voltage resistance	≤ 60 V DC
Protection against overvoltage at the output (OVP)	≤ 60 V DC
Residual ripple	typ. 200 mV _{PP} (with nominal values)
Control deviation	< 0.3 % (change in load, static 10 % ... 90 %)
	< 1.5 % (change in load, dynamic 10 % ... 90 %)
	< 0.1 % (change in input voltage ±10 %)
Rise time	< 100 ms (U _{Out} = 10 % ... 90 %)
Minimum no-load power dissipation	< 2 W (120 V AC)
Maximum no-load power dissipation	< 3 W (230 V AC)
Minimum nominal load power dissipation	< 18 W (120 V AC)
Power loss nominal load max.	< 15 W (230 V AC)
Integrated fuse protection	no

Connection data

Input

Position	1.x
Identification	1.1 (Ⓢ IEC 60384-1, Ⓢ UL 508, Ⓢ UL 508, Ⓢ FS L), 1.3 (N)

Conductor connection

Connection method	Screw connection
rigid	0.5 mm² ... 2.5 mm²
flexible	0.5 mm² ... 2.5 mm²
flexible with ferrule without plastic sleeve	0.5 mm² ... 2.5 mm²
flexible with ferrule with plastic sleeve	0.5 mm² ... 2.5 mm²
rigid (AWG)	18 ... 14 (Cu)
Stripping length	6.5 mm
Tightening torque (EU)	0.5 Nm ... 0.6 Nm
Tightening torque ()	5 lb _F -in. ... 7 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	1.5 mm² ... 2.5 mm²
flexible	1.5 mm² ... 2.5 mm²
flexible with ferrule without plastic sleeve	1.5 mm² ... 2.5 mm²
flexible with ferrule with plastic sleeve	1.5 mm² ... 2.5 mm²
rigid (AWG)	16 ... 14 (Cu)
Stripping length	6.5 mm
Tightening torque (EU)	0.5 Nm ... 0.6 Nm
Tightening torque ()	5 lb _F -in. ... 7 lb _F -in.
Drive form screw head	Slotted L

Signaling

LED signaling

Types of signaling	DC OK LED - signal state operation ($U_N = 48 \text{ V DC}$, $I_{\text{Out}} = I_N$)
Function	Visual operating state display
Color	green
LED off	Supply voltage input AC not present (Off)
LED on (green), DC OK	$U_{\text{OUT}} > 41 \text{ V}$ (On (green), DC OK)

Electrical properties

Number of phases	1
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	ESSENTIAL POWER
MTBF (Telcordia SR-332)	> 5500000 h (25 °C)
	> 3100000 h (40 °C)
	> 2600000 h (45 °C)

Insulation characteristics

Protection class	I
Overvoltage category (EN 61010-1)	II ($\leq 5000 \text{ m}$)
Overvoltage category (EN 62368-1)	II ($\leq 5000 \text{ m}$)
Degree of pollution	2

Life expectancy (electrolytic capacitors)

Current	5 A
Temperature	40 °C
Time	38000 h
Additional text	120 V AC

Life expectancy (electrolytic capacitors)

Current	5 A
Temperature	30 °C
Time	77000 h
Additional text	120 V AC

Life expectancy (electrolytic capacitors)

Current	5 A
Temperature	40 °C
Time	49000 h
Additional text	230 V AC

PS-EE-2G/1AC/48DC/240W/SC - Power supply



1585286

<https://www.phoenixcontact.com/us/products/1585286>

Life expectancy (electrolytic capacitors)

Current	5 A
Temperature	30 °C
Time	99000 h
Additional text	230 V AC

Dimensions

Item dimensions

Width	60 mm
Height	124 mm
Depth	125 mm

Installation dimensions

Installation distance right/left	10 mm / 10 mm
Installation distance top/bottom	30 mm / 30 mm

Mounting

Mounting type	DIN rail mounting
Assembly note	alignable: 10 mm horizontally, 30 mm vertically
Mounting position	horizontal DIN rail NS 35, EN 60715

Material specifications

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)	-20 °C ... 70 °C (Derating >45°C: 2.5%/K)
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Maximum altitude	≤ 5000 m (> 2000 m, Derating: 10 %/1000 m)
Climatic class	3K22 (in accordance with EN 60721-3-3)
Max. permissible relative humidity (operation)	≤ 95 % (at 25 °C, non-condensing)
Shock (operation)	18 ms, 15g, 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.
Temp code	T4 (-20 ... +70 °C; > 45 °C, Derating: 2,5 %/K)

Standards and regulations

Electrical safety

PS-EE-2G/1AC/48DC/240W/SC - Power supply



1585286

<https://www.phoenixcontact.com/us/products/1585286>

Standard designation	Electrical safety
Standards/specifications	IEC 61010-2-201 (SELV)

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)

Limitation of harmonic line currents

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

Approvals

UL

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

UL

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

CB scheme

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
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

Electrostatic discharge

PS-EE-2G/1AC/48DC/240W/SC - Power supply



1585286

<https://www.phoenixcontact.com/us/products/1585286>

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)
Frequency range	2 GHz ... 3 GHz
Test field strength	1 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	2 kV (Test Level 4 - symmetrical)
	4 kV (Test Level 4 - asymmetrical)
Output	0.5 kV (Test Level 2 - symmetrical)
	1 kV (Test Level 3 - asymmetrical)
Comments	Criterion A
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

PS-EE-2G/1AC/48DC/240W/SC - Power supply



1585286

<https://www.phoenixcontact.com/us/products/1585286>

Voltage	230 V AC
Frequency	50 Hz
Voltage dip	70 %
Number of periods	25 periods
Comments	Criterion A
Voltage dip	40 %
Number of periods	10 periods
Comments	Criterion A
Voltage dip	0 %
Number of periods	1 period
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.

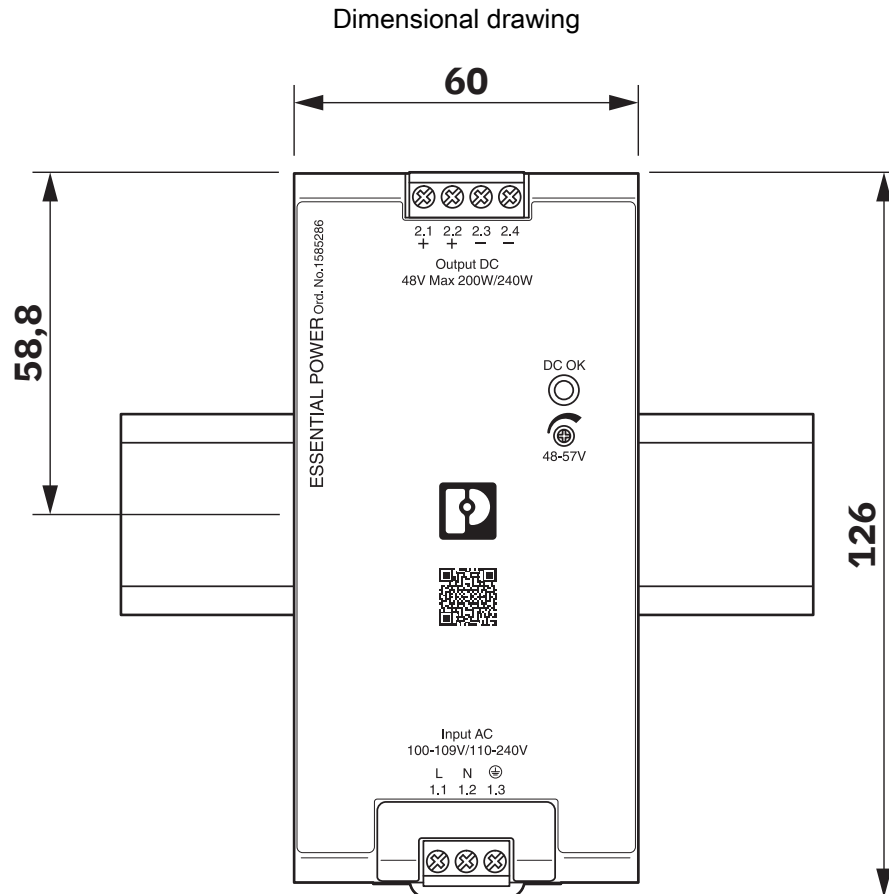
PS-EE-2G/1AC/48DC/240W/SC - Power supply

1585286

<https://www.phoenixcontact.com/us/products/1585286>



Drawings



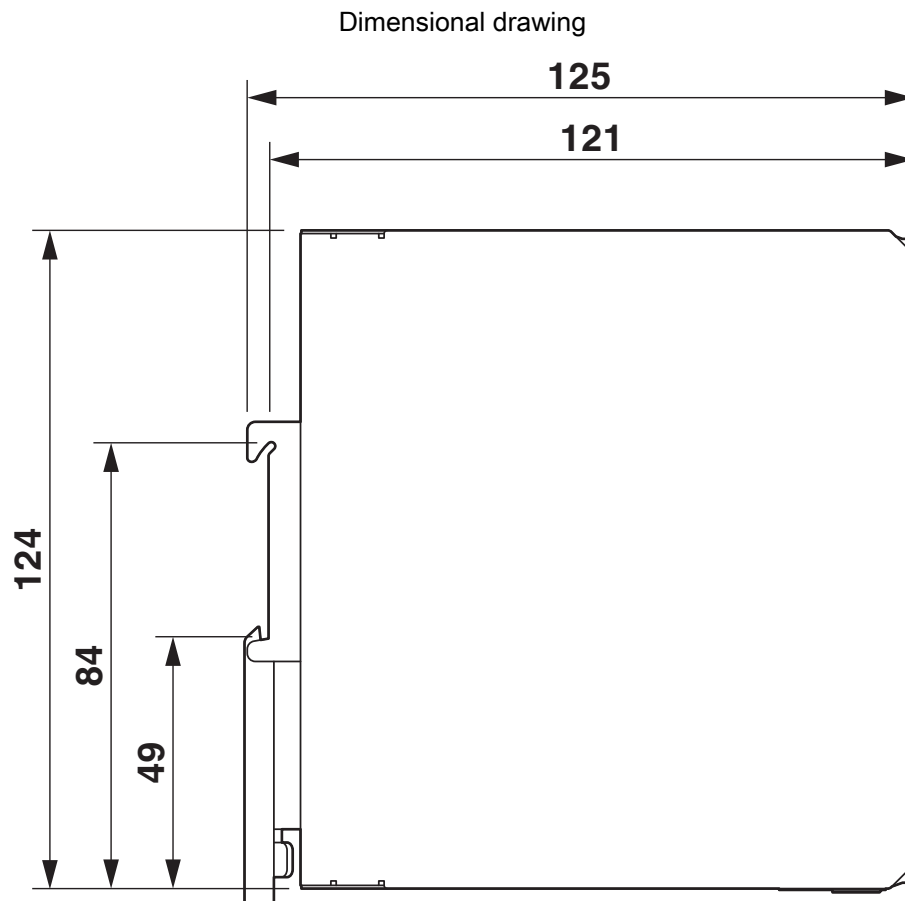
Device dimensions (dimensions in mm)

PS-EE-2G/1AC/48DC/240W/SC - Power supply



1585286

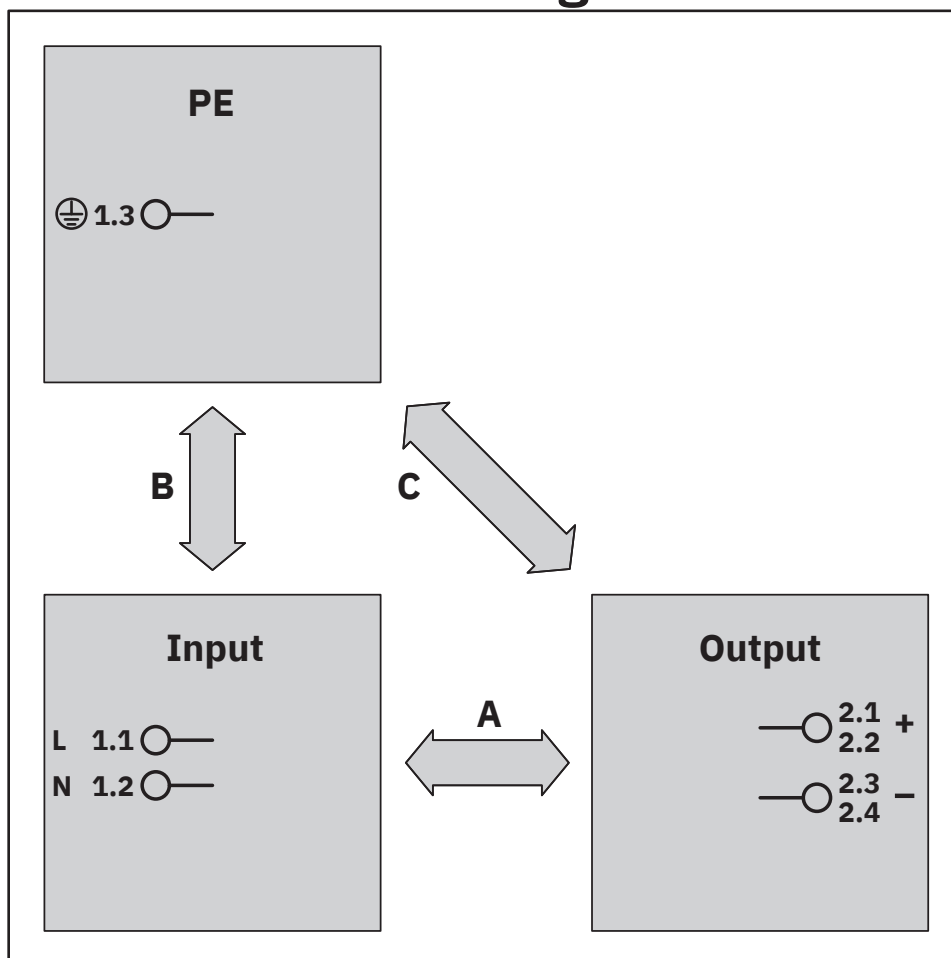
<https://www.phoenixcontact.com/us/products/1585286>



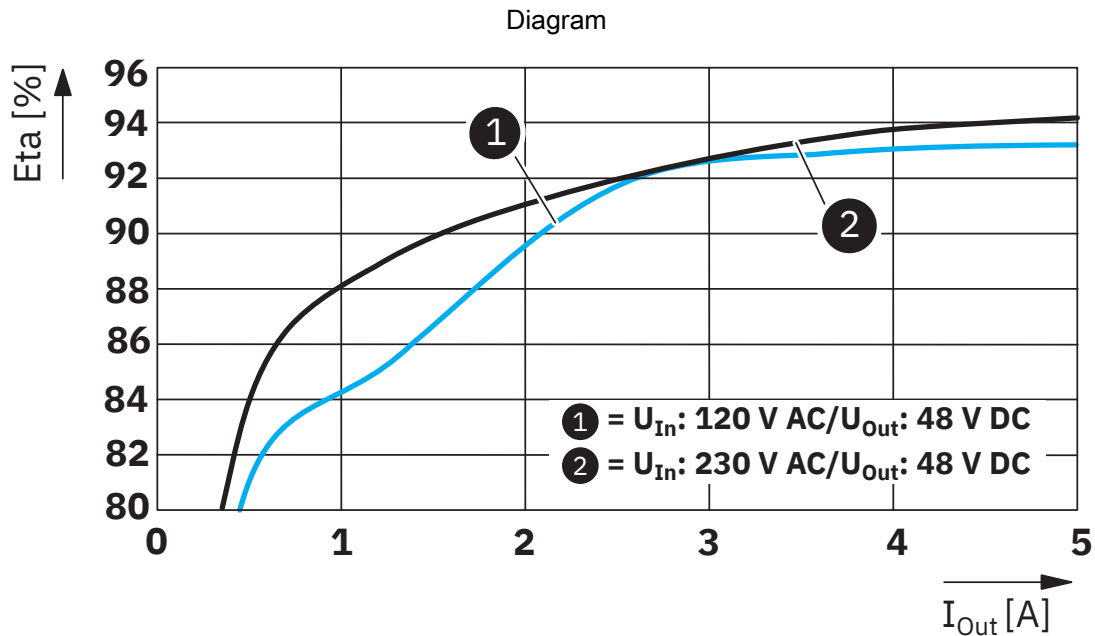
Device dimensions (dimensions in mm)

Schematic diagram

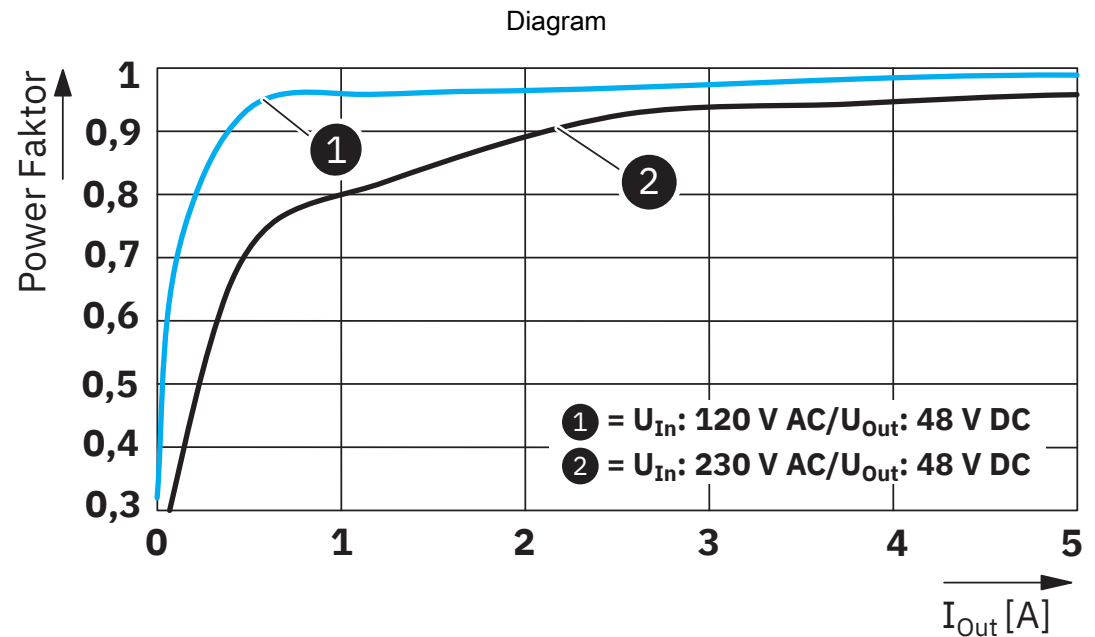
Housing



Test sections, insulation voltage

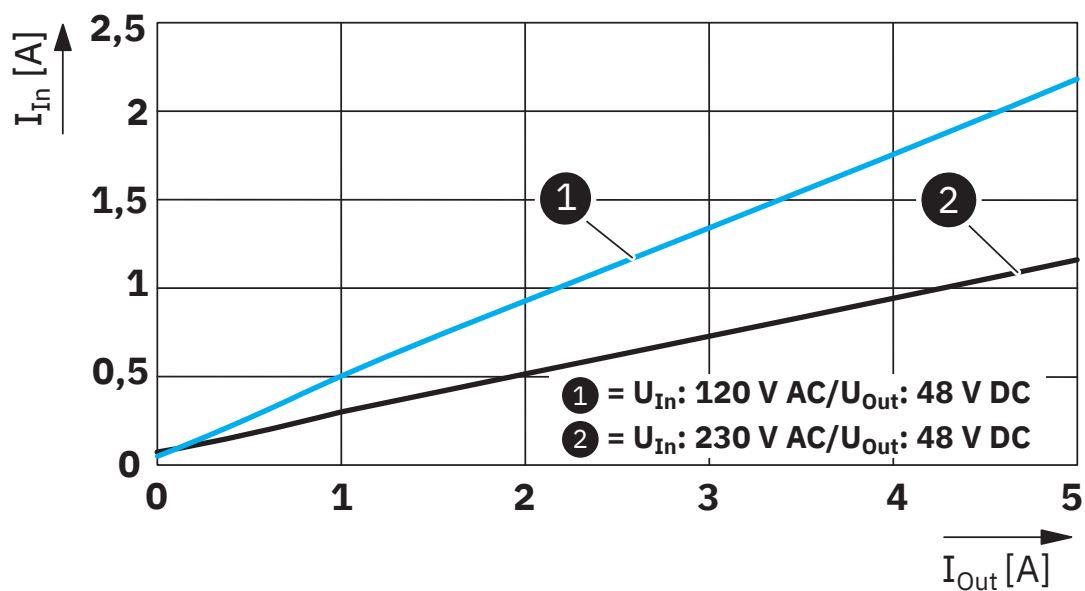


Efficiency



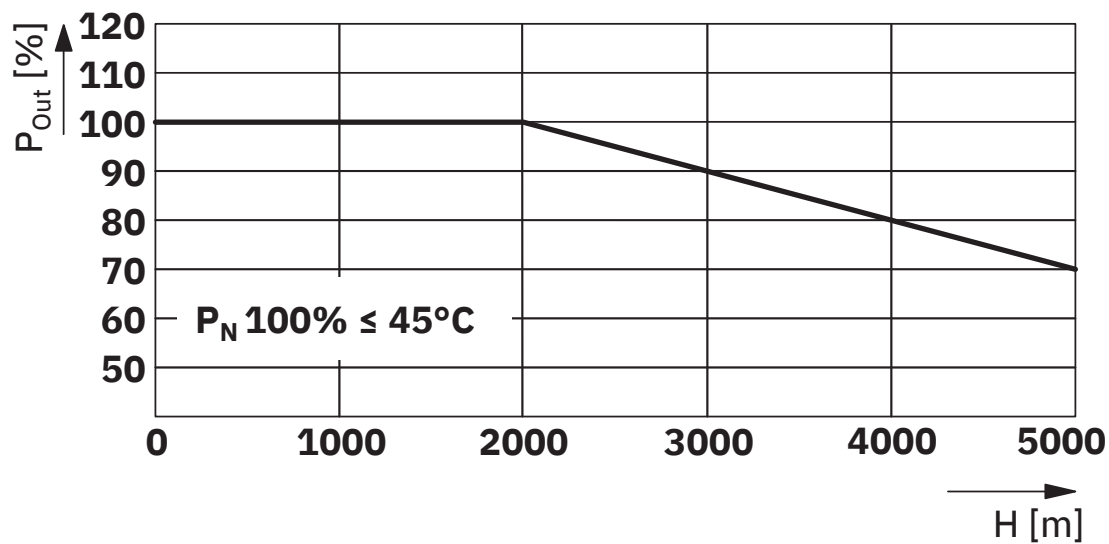
Power factor

Diagram



Input current/output current

Diagram



Output power Installation altitude

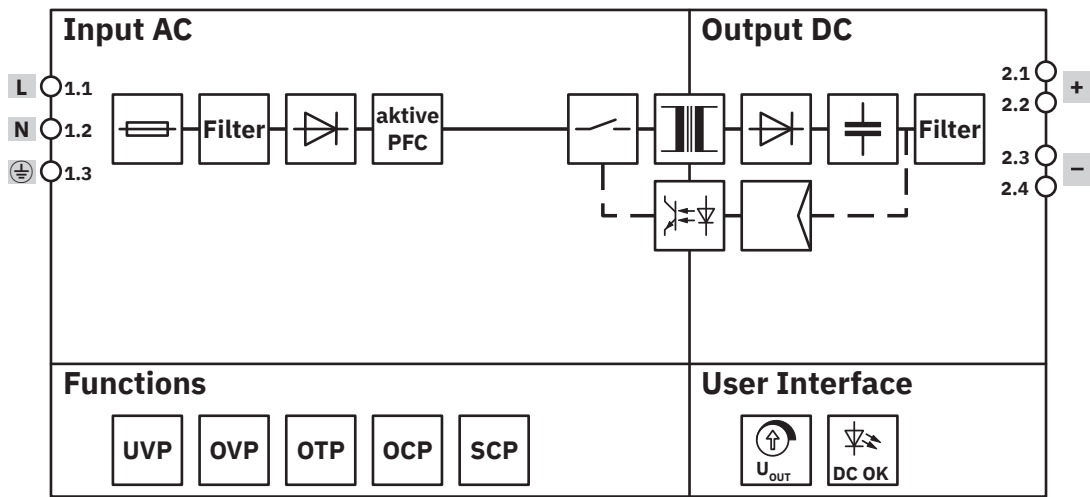
PS-EE-2G/1AC/48DC/240W/SC - Power supply



1585286

<https://www.phoenixcontact.com/us/products/1585286>

Block diagram



Block diagram

PS-EE-2G/1AC/48DC/240W/SC - Power supply



1585286

<https://www.phoenixcontact.com/us/products/1585286>

Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1585286>

	IECEE CB Scheme Approval ID: DE 2-043431
	IECEE CB Scheme Approval ID: DE 2-043431
	cULus Listed Approval ID: E123528-20241213
	IECEE CB Scheme Approval ID: JPTUV-167732
	IECEE CB Scheme Approval ID: JPTUV-167732

PS-EE-2G/1AC/48DC/240W/SC - Power supply



1585286

<https://www.phoenixcontact.com/us/products/1585286>

Classifications

ECLASS

ECLASS-13.0	27040701
ECLASS-15.0	27040701

ETIM

ETIM 10.0	EC002540
-----------	----------

UNSPSC

UNSPSC 21.0	39121000
-------------	----------

PS-EE-2G/1AC/48DC/240W/SC - Power supply



1585286

<https://www.phoenixcontact.com/us/products/1585286>

Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	7(a)

China RoHS

Environment friendly use period (EFUP)	EFUP-25
	An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required.

EU REACH SVHC

REACH candidate substance (CAS No.)	Lead(CAS: 7439-92-1)
-------------------------------------	----------------------

Phoenix Contact 2026 © - all rights reserved

<https://www.phoenixcontact.com>

Phoenix Contact USA
586 Fulling Mill Road
Middletown, PA 17057, United States
(+717) 944-1300
info@phoenixcon.com