

TRIO-PS67/1AC/24DC/10/IPD - Power supply unit



1111664

<https://www.phoenixcontact.com/us/products/1111664>

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Primary-switched power supply unit TRIO POWER, IPD panel feed-through with Push-in spring connection, Wall mounting, input: 1-phase, output: 24 V DC / 10 A

Commercial data

Item number	1111664
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	CM08
Product key	CMPF13
GTIN	4063151031428
Weight per piece (including packing)	1,749 g
Weight per piece (excluding packing)	1,326 g
Customs tariff number	85044095
Country of origin	CN

Technical data

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 ± 10 %
Switch-on voltage	> 75 V AC
Shut-down voltage	< 70 V AC
Electric strength, max.	≤ 300 V AC 15 s
Typical national grid voltage	120 V AC
	230 V AC
Voltage type of supply voltage	AC/DC
Inrush current	≤ 25 A (typical)
Inrush current integral (I^2t)	< 0.5 A ² s
Inrush current limitation	typ. 25 A (after 1 ms)
AC frequency range	50 Hz ... 60 Hz ± 10 %
Frequency range (f_N)	50 Hz ... 60 Hz ± 10 %
Mains buffering time	> 15 ms (120 V AC)
	> 15 ms (230 V AC)
Current consumption	2.8 A (100 V AC)
	1.2 A (240 V AC)
Nominal power consumption	285 VA
Protective circuit	Transient surge protection; Varistor
Power factor (cos phi)	> 0.93
Switch-on time	< 1 s
Input fuse	6.3 A (internal (device protection))
Recommended breaker for input protection	6 A ... 16 A (US/CAN: branch circuit protection < 20 A) (Characteristic B, C, D, K or comparable)
Discharge current to PE	< 3.5 mA

DC operation

Nominal input voltage range	110 V DC ... 250 V DC
Input voltage range	110 V DC ... 250 V DC ± 10 %
Switch-on voltage	≥ 95 V DC
Shut-down voltage	< 95 V DC
Voltage type of supply voltage	AC/DC
Mains buffering time	> 15 ms (230 V AC)
Current consumption	2.4 A (110 V DC)
	1.1 A (250 V DC)

Output data

Efficiency	typ. 91 % (120 V AC)
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	typ. 93 % (230 V AC)
Nominal output voltage	24 V DC ± 1 %
Nominal output current (I_N)	10 A
Dynamic Boost ($I_{Dyn.Boost}$)	15 A (5 s)
Derating	> 60 °C ... 70 °C (2.5 %/K)
Feedback voltage resistance	≤ 35 V DC
Protection against overvoltage at the output (OVP)	≤ 30 V DC
Control deviation	< 1 % (change in load, static 10 % ... 90 %)
	< 3 % (Dynamic load change 10 % ... 90 %, 10 Hz)
	< 0.1 % (change in input voltage ± 10 %)
Residual ripple	≤ 10 mV _{PP}
Short-circuit-proof	yes
No-load proof	yes
Output power	240 W
	360 W
Maximum no-load power dissipation	< 10 W (120 V AC)
	< 6 W (230 V AC)
Power loss nominal load max.	< 22 W (120 V AC)
	< 17 W (230 V AC)
Rise time	≤ 12 ms (U_{OUT} (10 % ... 90 %))
Connection in parallel	yes, for redundancy and increased capacity
Connection in series	yes

Signal: DC OK

Maximum switching voltage	30 V AC/DC
Continuous load current	100 mA

Signal relay 13/14

Default	closed
Digital	30 V AC 30 V DC 100 mA

Connection data

Input

Connection method	IPD panel feed-through with Push-in spring connection
Conductor cross section, rigid min.	0.5 mm ²
Conductor cross section, rigid max.	2.5 mm ²
Conductor cross section flexible min.	0.5 mm ²
Conductor cross section flexible max.	2.5 mm ²
Single conductor/terminal point, stranded, with ferrule, min.	0.5 mm ²
Single conductor/terminal point, stranded, with ferrule, max.	2.5 mm ²
Conductor cross section AWG max.	14
Color-coded	gray
Type of locking	Clip locking
Number of positions	3

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Output

Connection method	IPD panel feed-through with Push-in spring connection
Conductor cross section, rigid min.	0.5 mm ²
Conductor cross section, rigid max.	2.5 mm ²
Conductor cross section flexible min.	0.5 mm ²
Conductor cross section flexible max.	2.5 mm ²
Single conductor/terminal point, stranded, with ferrule, min.	0.5 mm ²
Single conductor/terminal point, stranded, with ferrule, max.	2.5 mm ²
Conductor cross section AWG max.	14
Color-coded	black
Type of locking	Clip locking
Number of positions	3

Signaling

Types of signaling	LED Floating signal contact
Status display	2 x LED (green)

Signal output: LED status indicator

Signalization designation	AC OK
Status display	LED
Color	green
AC OK	$AC_{In} > 0.55 \times AC_N$ ($AC_N = 90 \text{ V AC}$)

Signal output: LED status indicator

Signalization designation	DC OK
Status display	LED
Color	green
DC OK	$U_{OUT} > 0.9 \times U_N$ ($U_N = 24 \text{ V DC}$)

Electrical properties

Number of phases	1.00
Insulation voltage input/output	3 kV AC (type test) 1.5 kV AC (routine test)

Product properties

Product type	Power supply
Product family	TRIO POWER
MTBF (IEC 61709, SN 29500)	> 1200000 h (25 °C) > 700000 h (40 °C) > 300000 h (60 °C)

Data management status

Article revision	01
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Insulation characteristics

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Protection class	I
Pollution degree	2 (IEC 61010-1)

Dimensions

Item dimensions

Width	136 mm
Height	292 mm
Depth	53 mm

Drill hole

Diameter	5.6 mm
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Installation dimensions

Installation distance right/left	10 mm / 10 mm
Installation distance top/bottom	0 mm / 102 mm

Mounting

Mounting type	Wall mounting
Assembly note	Alignable: 20 mm horizontally, 50 mm vertically above, 100 mm vertically below
With protective coating	no

Material specifications

Flammability rating according to UL 94 (housing / terminal blocks)	V0
Housing material	Metal
Type of housing	Aluminum (AlMg3)

Environmental and real-life conditions

Ambient conditions

Degree of protection	IP67
Ambient temperature (operation)	-25 °C ... 70 °C (Derating >60°C: 2.5 %/K)
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Ambient temperature (start-up type tested)	-40 °C
Maximum altitude	≤ 4000 m (> 2000 m, Derating: 10 %/1000 m)
Climatic class	4K26 (EN 60721-3-4)
Max. permissible relative humidity (operation)	≤ 100 % (at 25 °C, non-condensing)
Permissible humidity (operation)	≤ 100 % (at 25 °C, non-condensing)
Shock	18 ms, 30g, in each space direction (according to IEC 60068-2-27)
Vibration (operation)	< 15 Hz, amplitude ±2.5 mm (according to IEC 60068-2-6)
	15 Hz ... 150 Hz, 4g, 90 min.

Standards and regulations

Overvoltage category

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EN 61010-1	III (≤ 2000 m)
	II (≤ 4000 m)

Electrical safety

Standard designation	Electrical safety
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
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Low-voltage power supplies, DC output

Standard designation	Low-voltage power supplies, DC output
Standards/specifications	EN 61204-3

Safety requirements for electrical equipment for measurement, control, and laboratory use

Standard designation	Safety requirements for electrical equipment for measurement, control, and laboratory use
Standards/specifications	IEC 61010-1

Limit values for harmonic currents

Standard designation	Limit values for harmonic currents
Standards/specifications	EN 61000-3-2

Degrees of protection provided by enclosures (IP code)

Standard designation	Degrees of protection provided by enclosures (IP code)
Standards/specifications	EN/IEC 60529

Approvals

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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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)
Noise immunity	Immunity in accordance with EN 61000-6-1 (residential), EN 61000-6-2 (industrial)
Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
Conducted noise emission	EN 55016
	EN 61000-6-3 (Class B)

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Noise emission	EN 55011 (EN 55022)
Noise emission	EN 55016
	EN 61000-6-3 (Class B)

Harmonic currents

Standards/regulations	EN 61000-3-2
	EN 61000-3-2 (Class A)

Electrostatic discharge

Standards/regulations	EN 61000-4-2
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Electrostatic discharge

Contact discharge	6 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 ... 2 GHz
Test field strength	10 V/m (Test Level 3)
Frequency range	2 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 3 - asymmetrical)
Output	2 kV (Test Level 3 - asymmetrical)
Signal	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	1 kV (Test Level 1 - symmetrical)
	2 kV (Test Level 1 - asymmetrical)
Output	0.5 kV (Test Level 1 - symmetrical)
	0.5 kV (Test Level 1 - asymmetrical)
Signal	1 kV (Test Level 2 - asymmetrical)
Comments	Criterion B

Conducted interference

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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 %
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

Emitted interference

Standards/regulations	EN 61000-6-3
Radio interference voltage in acc. with EN 55011	EN 55011 (EN 55022) Class B, area of application: Industry and residential
Emitted radio interference in acc. with EN 55011	EN 55011 (EN 55022) Class B, area of application: Industry and residential

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.

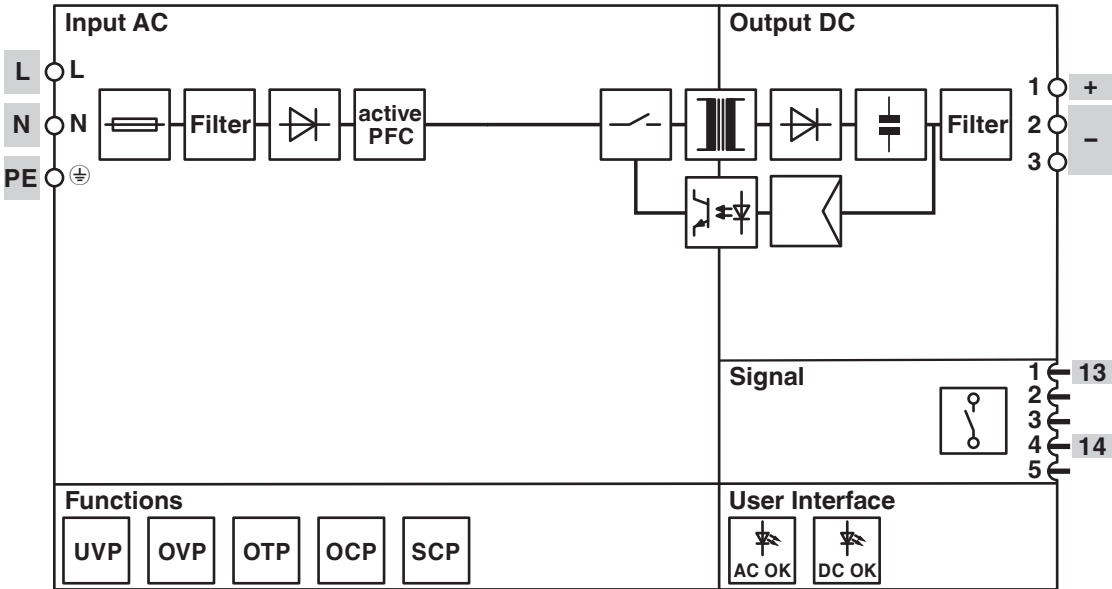
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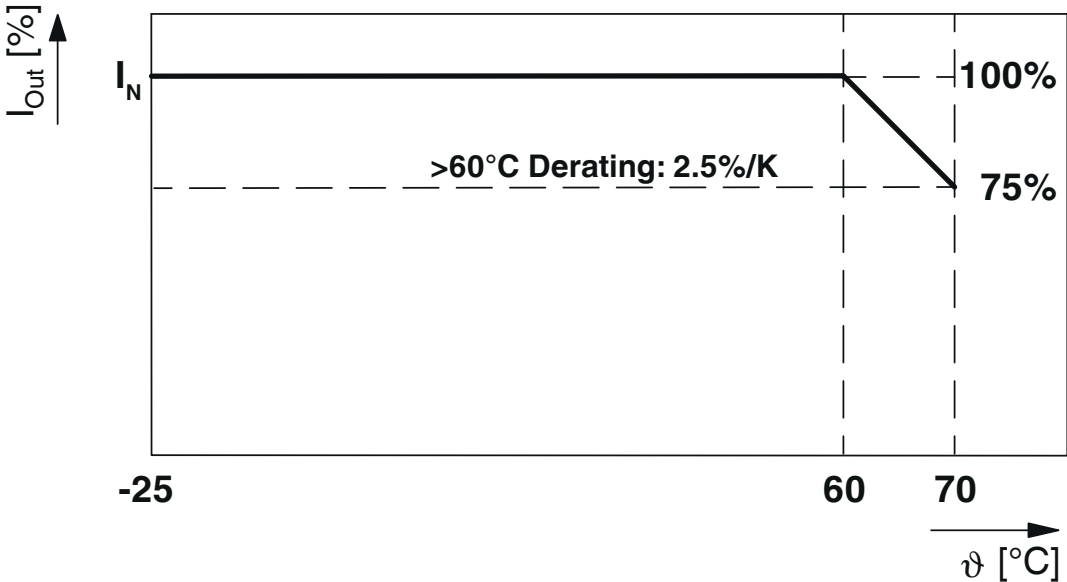
Drawings

Block diagram



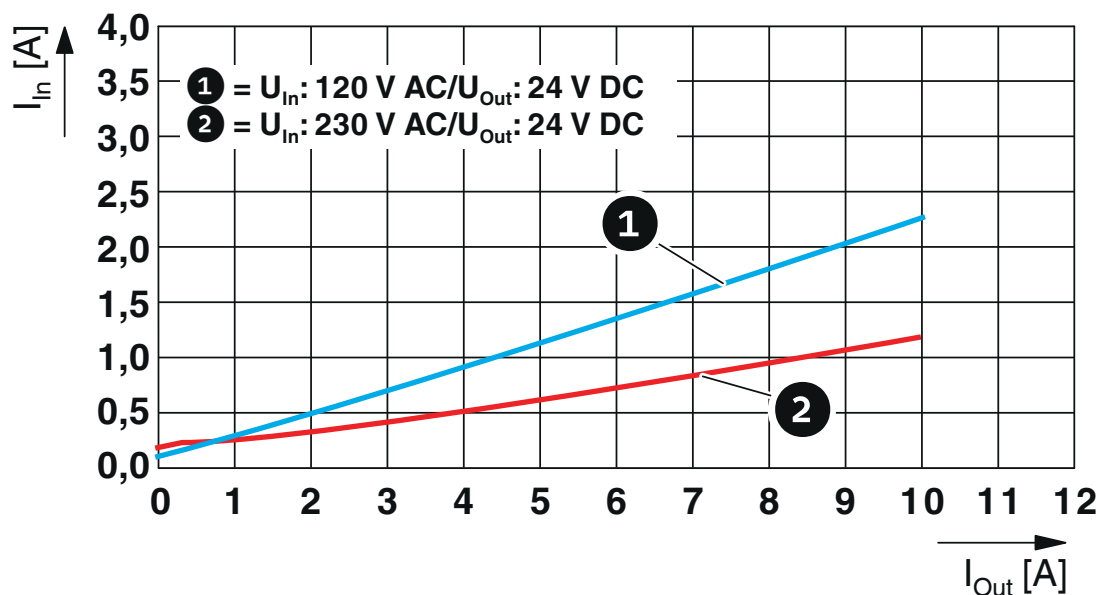
Block diagram

Diagram



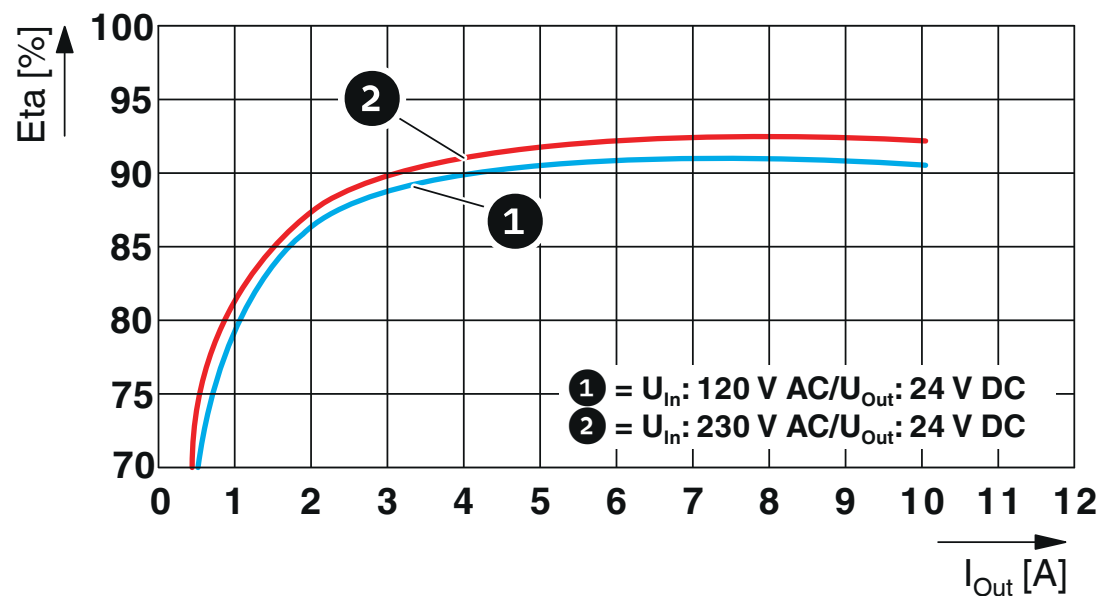
Output current/ambient temperature

Diagram

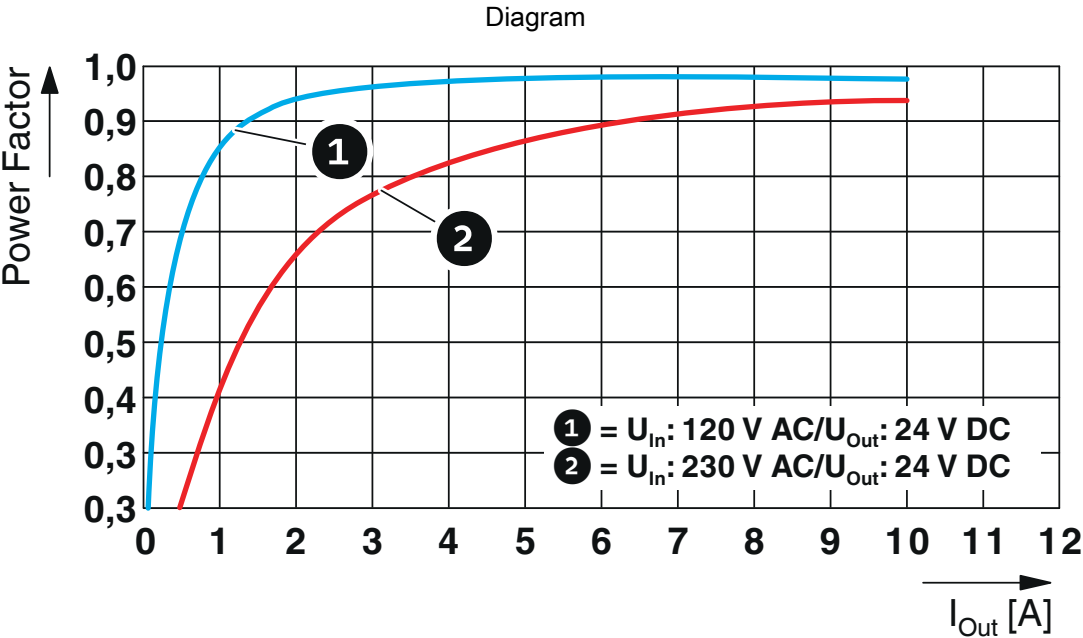


Input current/output current

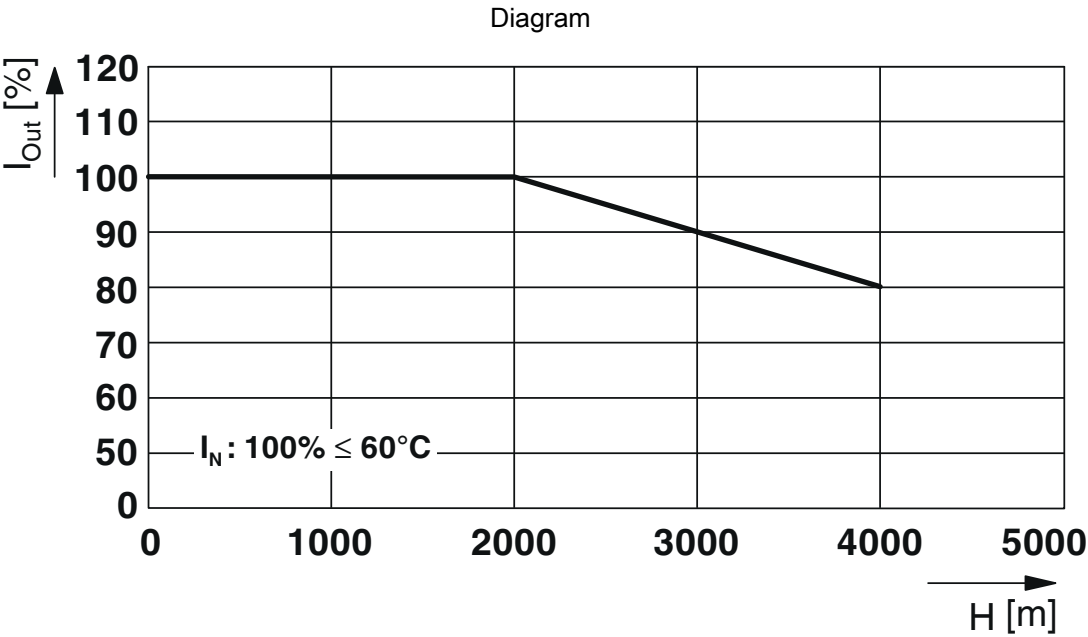
Diagram



Efficiency



Power factor



Output current/installation altitude

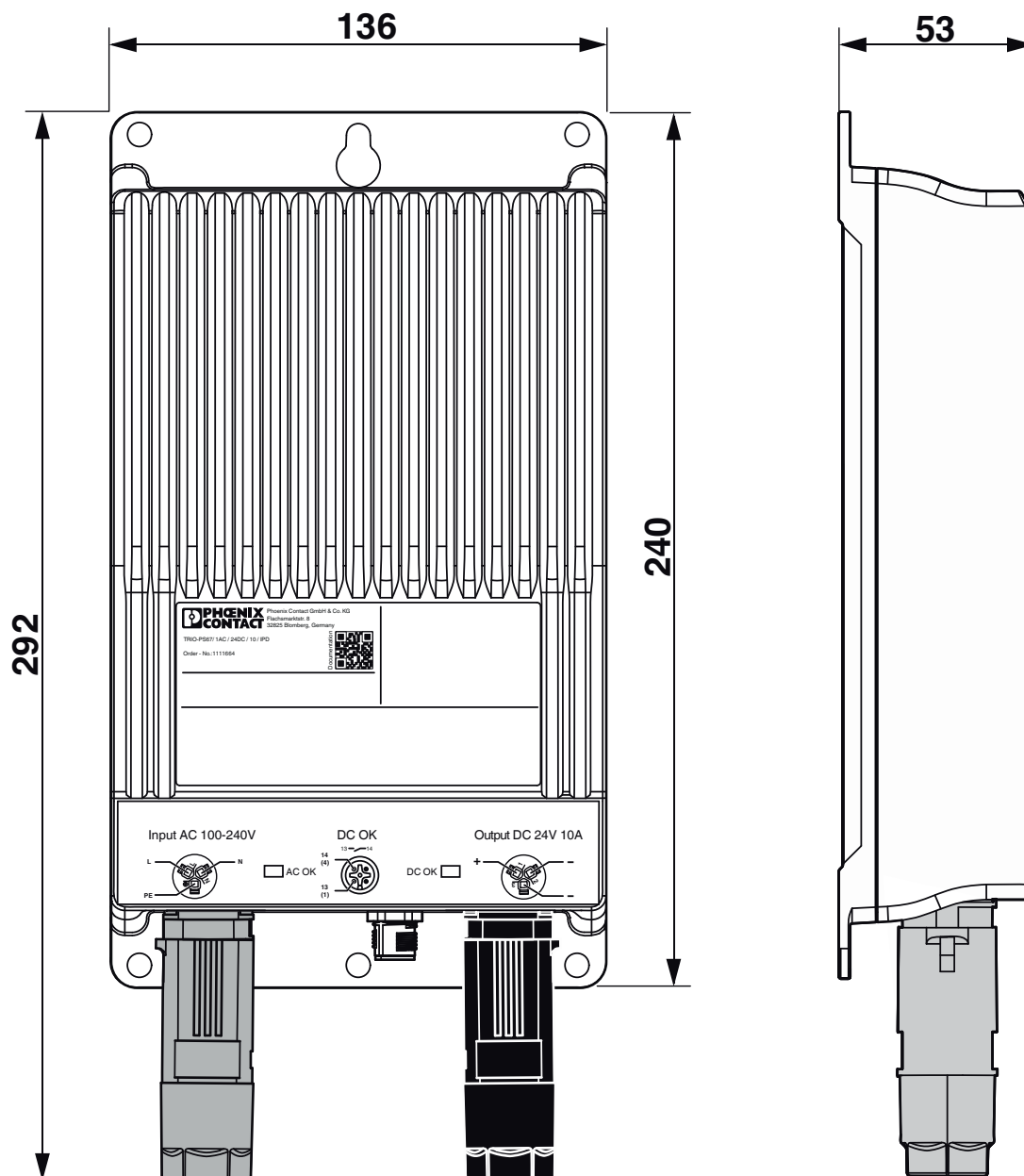
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Dimensional drawing



Device dimensions (dimensions in mm)

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Approvals

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IECEE CB Scheme

Approval ID: DK-135371-A1-UL



EAC

Approval ID: C-DE.BL08.W.00764/20



cULus Listed

Approval ID: FILE E 123528

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Classifications

ECLASS

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

ETIM

ETIM 9.0	EC002540
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UNSPSC

UNSPSC 21.0	39121000
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Environmental product compliance

EU RoHS	
Fulfills EU RoHS substance requirements	Yes
Exemption	6(c), 7(a), 7(c)-I
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)
SCIP	5507f685-b5db-4085-b521-74d72e0cb211

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Accessories

SACC-M12FS-5PL M - Connector

1424652

<https://www.phoenixcontact.com/us/products/1424652>



Connector, Universal, 5-position, unshielded, Socket straight M12, coding: A, Push-lock spring connection, knurl material: Zinc die-cast, nickel-plated, external cable diameter 4 mm ... 8 mm

SAC-5P- 1,5-PUR/M12FS - Sensor/actuator cable

1669822

<https://www.phoenixcontact.com/us/products/1669822>



Sensor/actuator cable, 5-position, PUR halogen-free, black-gray RAL 7021, free cable end, on Socket straight M12, coding: A, cable length: 1.5 m

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IPD WD 3P2,5 M20 GY - Panel feed-through

1047319

<https://www.phoenixcontact.com/us/products/1047319>



Panel feed-through, Direct connection, product family: IPD, connection method: Push-in connection/ Push-in connection, number of positions: 2+PE, M20, 0.5 mm² ... 2.5 mm², 600 V, 20 A, PA, light gray, external cable diameter: 6 mm ... 9 mm and 8 mm ... 13 mm

IPD WD 3X2,5 M20 BK - Panel feed-through

1189585

<https://www.phoenixcontact.com/us/products/1189585>



Panel feed-through, Direct connection, product family: IPD, connection method: Push-in connection/ Push-in connection, M20, 0.5 mm² ... 2.5 mm², 600 V, 15 A, PA, black, external cable diameter: 6 mm ... 9 mm and 8 mm ... 13 mm

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