

QUINT4-SYS-PS/1AC/24DC/2.5/SC - Power supply



2904614

<https://www.phoenixcontact.com/us/products/2904614>

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, QUINT POWER, screw connection, DIN rail mounting, supply of devices possible via the TBUS DIN rail connector, protective coating, input: single-phase, output: 24 V DC/2.5 A

Product description

The QUINT POWER power supply has been specially developed for supplying power to compatible Phoenix Contact products via the T-bus DIN rail connector. Furthermore, it can be directly latched onto the DIN rail. The device features a protective coating and has IECEx, ATEX, and HazLoc approvals. The OVP (overvoltage protection) of <30 V DC protects your system against voltage increases. In the event of an error, the output is switched off to protect the loads against overvoltages. The output circuit is decoupled by a MOSFET.

Your advantages

- Also for operation in potentially explosive areas (zone 2)
- Optionally for supplying devices via the TBUS DIN rail connector
- Preventive function monitoring indicates critical operating states before errors occur
- Starting of heavy loads with dynamic boost
- High efficiency and long service life, with low power dissipation and low heating

Commercial data

| | |
|--------------------------------------|---------------|
| Item number | 2904614 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Sales key | CM10 |
| Product key | CMPI13 |
| GTIN | 4055626255651 |
| Weight per piece (including packing) | 357.6 g |
| Weight per piece (excluding packing) | 360 g |
| Customs tariff number | 85044095 |
| Country of origin | VN |

Technical data

Input data

AC operation

| | |
|--|--|
| Nominal input voltage range | 100 V AC ... 240 V AC |
| Input voltage range | 100 V AC ... 240 V AC -15 % ... +10 % |
| Electric strength, max. | 300 V AC 30 s |
| Typical national grid voltage | 120 V AC |
| | 230 V AC |
| Voltage type of supply voltage | AC |
| Inrush current | typ. 10 A (at 25 °C) |
| Inrush current integral (I^2t) | typ. 0.1 A ² s |
| Inrush current limitation | 10 A |
| Frequency range (f_N) | 50 Hz ... 60 Hz \pm 10 % |
| | 16.7 Hz (acc. to EN 50163) |
| Mains buffering time | typ. 31 ms (120 V AC) |
| | typ. 31 ms (230 V AC) |
| Current consumption | 0.85 A (100 V AC) |
| | 0.7 A (120 V AC) |
| | 0.39 A (230 V AC) |
| | 0.37 A (240 V AC) |
| Nominal power consumption | 69 VA |
| Protective circuit | Transient surge protection; Varistor |
| Typical response time | 500 ms |
| Input fuse | 4 A (slow-blow, internal) |
| Recommended breaker for input protection | 6 A ... 16 A (Characteristic B, C, D, K or comparable) |
| Discharge current to PE | < 0.25 mA (264 V AC, 60 Hz) |
| | < 0.22 mA |

DC operation

| | |
|--------------------------------|---------------------------------------|
| Input voltage range | 110 V DC ... 250 V DC -20 % ... +40 % |
| Voltage type of supply voltage | DC |
| Current consumption | 0.75 A (110 V DC) |
| | 0.33 A (250 V DC) |

Output data

| | |
|---|--|
| Efficiency | typ. 93 % (120 V AC) |
| | typ. 94 % (230 V AC) |
| Nominal output voltage | 24 V DC |
| Setting range of the output voltage (U_{Set}) | 24 V DC ... 27 V DC (constant capacity) |
| Nominal output current (I_N) | 2.5 A |
| Static Boost ($I_{Stat.Boost}$) | 3.125 A (\leq 40 °C) |
| Dynamic Boost ($I_{Dyn.Boost}$) | 4 A (\leq 60 °C (on \leq 5 s/off \geq 5 s)) |

2904614

<https://www.phoenixcontact.com/us/products/2904614>

| | |
|--|---|
| Feedback voltage resistance | ≤ 32 V DC |
| Protection against overvoltage at the output (OVP) | ≤ 30 V DC ±2 % |
| Control deviation | < 0.5 % (Static load change 10 % ... 90 %) |
| | < 2 % (Dynamic load change 10 % ... 90 %, (10 Hz)) |
| | < 0.25 % (change in input voltage ±10 %) |
| Residual ripple | < 40 mV _{PP} (with nominal values) |
| Short-circuit-proof | yes |
| No-load proof | yes |
| Output power | 60 W |
| | 75 W |
| | 96 W |
| Maximum no-load power dissipation | < 1 W (120 V AC) |
| | < 1 W (230 V AC) |
| Power loss nominal load max. | < 5 W (120 V AC) |
| | < 4 W (230 V AC) |
| Crest factor | typ. 1.8 (120 V AC) |
| | typ. 1.84 (230 V AC) |
| Rise time | 50 ms (U _{Out} = 10 % ... 90 %) |
| Fuse protection (secondary side) | electronic |
| Signal (configurable) | |
| Digital | 0 V DC 24 V DC 30 mA |
| Default | 24 V DC 30 mA 24 V DC for U _{Out} > 0.9 x U _{Set} |

Connection data

Input

| | |
|---|----------------------|
| Connection method | Screw connection |
| Conductor cross-section, rigid min. | 0.14 mm ² |
| Conductor cross-section, rigid max. | 2.5 mm ² |
| Conductor cross-section flexible min. | 0.14 mm ² |
| Conductor cross-section flexible max. | 2.5 mm ² |
| Single conductor/terminal point, stranded, with ferrule, min. | 0.25 mm ² |
| Single conductor/terminal point, stranded, with ferrule, max. | 2.5 mm ² |
| Conductor cross-section AWG min. | 26 |
| Conductor cross-section AWG max. | 14 |
| Stripping length | 8 mm |
| Tightening torque, min | 0.5 Nm |
| Tightening torque max | 0.6 Nm |

Output

| | |
|---------------------------------------|----------------------|
| Connection method | Screw connection |
| Conductor cross-section, rigid min. | 0.14 mm ² |
| Conductor cross-section, rigid max. | 2.5 mm ² |
| Conductor cross-section flexible min. | 0.14 mm ² |

QUINT4-SYS-PS/1AC/24DC/2.5/SC - Power supply



2904614

<https://www.phoenixcontact.com/us/products/2904614>

| | |
|---|----------------------|
| Conductor cross-section flexible max. | 2.5 mm ² |
| Single conductor/terminal point, stranded, with ferrule, min. | 0.25 mm ² |
| Single conductor/terminal point, stranded, with ferrule, max. | 2.5 mm ² |
| Conductor cross-section AWG min. | 26 |
| Conductor cross-section AWG max. | 14 |
| Stripping length | 8 mm |
| Tightening torque, min | 0.5 Nm |
| Tightening torque max | 0.6 Nm |

Signal

| | |
|---|----------------------|
| Connection method | Screw connection |
| Conductor cross-section, rigid min. | 0.14 mm ² |
| Conductor cross-section, rigid max. | 2.5 mm ² |
| Conductor cross-section flexible min. | 0.14 mm ² |
| Conductor cross-section flexible max. | 2.5 mm ² |
| Single conductor/terminal point, stranded, with ferrule, min. | 0.25 mm ² |
| Single conductor/terminal point, stranded, with ferrule, max. | 2.5 mm ² |
| Conductor cross-section AWG min. | 26 |
| Conductor cross-section AWG max. | 14 |
| Stripping length | 8 mm |
| Tightening torque, min | 0.5 Nm |
| Tightening torque max | 0.6 Nm |

Signaling

| | |
|--------------------|-----|
| Types of signaling | LED |
|--------------------|-----|

Signal output

| | |
|-----------|--|
| P_{Out} | $> P_{Thr}$ (LED lights up yellow, output power $> P_{Thr}$, depending on the rotary selector switch setting) |
| U_{Out} | $> 0.9 \times U_{Set}$ (LED lights up green) |
| | $< 0.9 \times U_{Set}$ (LED flashes green) |

Electrical properties

| | |
|---------------------------------|--|
| Number of phases | 1 |
| Insulation voltage input/output | 4 kV AC (type test) |
| | 3 kV AC (routine test) |
| Switching frequency | 90.00 kHz ... 110.00 kHz (Auxiliary converter stage) |
| | 50.00 kHz ... 195.00 kHz (Main converter stage) |
| | 60.00 kHz ... 360.00 kHz (PFC stage) |

Product properties

| | |
|----------------------------|-----------------------|
| Product type | Power supply |
| Product family | QUINT POWER |
| MTBF (IEC 61709, SN 29500) | > 2000000 h (25 °C) |
| | > 1161000 h (40 °C) |

QUINT4-SYS-PS/1AC/24DC/2.5/SC - Power supply



2904614

<https://www.phoenixcontact.com/us/products/2904614>

| | |
|------------------------------------|---------------------------|
| | > 514000 h (60 °C) |
| Environmental protection directive | RoHS Directive 2011/65/EU |
| | WEEE |
| | Reach |

Insulation characteristics

| | |
|-----------------------------------|----------------------|
| Protection class | II |
| Overvoltage category (EN 61010-1) | II (≤ 5000 m) |
| Overvoltage category (EN 62477-1) | III (≤ 2000 m) |
| Degree of pollution | 2 |

Life expectancy (electrolytic capacitors)

| | |
|-----------------|----------|
| Current | 2.5 A |
| Temperature | 40 °C |
| Time | 323000 h |
| Additional text | 120 V AC |

Life expectancy (electrolytic capacitors)

| | |
|-----------------|----------|
| Current | 2.5 A |
| Temperature | 40 °C |
| Time | 346000 h |
| Additional text | 230 V AC |

Life expectancy (electrolytic capacitors)

| | |
|-----------------|----------|
| Current | 2.5 A |
| Temperature | 25 °C |
| Time | 915000 h |
| Additional text | 120 V AC |

Life expectancy (electrolytic capacitors)

| | |
|-----------------|----------|
| Current | 2.5 A |
| Temperature | 25 °C |
| Time | 980000 h |
| Additional text | 230 V AC |

Dimensions

| | |
|--------|--------|
| Width | 40 mm |
| Height | 99 mm |
| Depth | 114 mm |

Installation dimensions

| | |
|--|---------------------------------------|
| Installation distance right/left (active) | 15 mm / 15 mm ($P_{Out} \geq 50\%$) |
| Installation distance right/left (passive) | 5 mm / 5 mm ($P_{Out} \geq 50\%$) |
| Installation distance right/left (active, passive) | 0 mm / 0 mm ($P_{Out} \leq 50\%$) |
| Installation distance top/bottom (active) | 30 mm / 30 mm ($P_{Out} \geq 50\%$) |
| Installation distance top/bottom (passive) | 30 mm / 30 mm ($P_{Out} \geq 50\%$) |
| Installation distance top/bottom (active, passive) | 30 mm / 30 mm ($P_{Out} \leq 50\%$) |

2904614

<https://www.phoenixcontact.com/us/products/2904614>

Mounting

| | |
|-------------------------|-------------------|
| Mounting type | DIN rail mounting |
| With protective coating | yes |

Material specifications

| | |
|--|---------------|
| Flammability rating according to UL 94 (housing / terminal blocks) | V0 |
| Housing material | Plastic |
| Type of housing | Polycarbonate |
| Hood version | Polycarbonate |

Environmental and real-life conditions

Ambient conditions

| | |
|--|---|
| Degree of protection | IP20 |
| Ambient temperature (operation) | -25 °C ... 70 °C (> 60 °C Derating: 2,5 %/K) |
| Ambient temperature (storage/transport) | -40 °C ... 85 °C |
| Ambient temperature (start-up type tested) | -40 °C |
| Maximum altitude | ≤ 5000 m (> 2000 m, observe derating) |
| Climatic class | 3K3 (in acc. with EN 60721) |
| Max. permissible relative humidity (operation) | ≤ 95 % (at 25 °C, non-condensing) |
| Shock | 18 ms, 30g, in each space direction (according to IEC 60068-2-27) |
| Vibration (operation) | 5 Hz ... 100 Hz resonance search 2.3g, 90 min., resonance frequency 2.3g, 90 min. (according to DNV GL Class C) |
| Temp code | T4 (-25 ... +70 °C; > 60 °C, Derating: 2,5 %/K) |

Standards and regulations

| | |
|--|------------------------|
| Rail applications | EN 50121-3-2 |
| | EN 50121-4 |
| | EN 50121-5 |
| | IEC 62236-3-2 |
| | IEC 62236-4 |
| | IEC 62236-5 |
| Standard – Limitation of mains harmonic currents | EN 61000-3-2 |
| Standard – Safety extra-low voltage | IEC 61010-1 (SELV) |
| | IEC 61010-2-201 (PELV) |
| Standard - Safe isolation | IEC 61558-2-16 |
| | IEC 61010-2-201 |
| Standard - safety for equipment for measurement, control, and laboratory use | IEC 61010-1 |
| | IEC 61010-2-201 (SELV) |
| Standard - Safety of transformers | EN 61558-2-16 |

Approvals

QUINT4-SYS-PS/1AC/24DC/2.5/SC - Power supply



2904614

<https://www.phoenixcontact.com/us/products/2904614>

| | |
|--------------|---|
| UL approvals | UL 121201 & CSA C22.2 No. 213-17 Class I, Division 2, Groups A, B, C, D T4 (Hazardous Location) |
|--------------|---|

ATEX

| | |
|----------------|--|
| Identification | UL 21 ATEX 2597 X ⊕ II 3 G Ex ec nC IIC T4 Gc |
|----------------|--|

IECEX

| | |
|----------------|--|
| Identification | IECEX ULD 21.0023X Ex ec nC IIC T4 Gc |
|----------------|--|

UKEX

| | |
|----------------|---------------|
| Identification | UL21UKEX2208X |
|----------------|---------------|

UL

| | |
|----------------|----------------------|
| Identification | UL Listed UL 61010-1 |
|----------------|----------------------|

UL

| | |
|----------------|--------------------------|
| Identification | UL Listed UL 61010-2-201 |
|----------------|--------------------------|

UL

| | |
|----------------|-----------------------------|
| Identification | UL 1310 Class 2 Power Units |
|----------------|-----------------------------|

UL

| | |
|----------------|--|
| Identification | 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

| | |
|-----------------------------------|--|
| Electromagnetic compatibility | Conformance with EMC Directive 2014/30/EU |
| 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), and EN 61000-6-5 (switching devices), IEC/EN 61850-3 (power supply) |
| EMC requirements for power supply | IEC 61850-3 (G,H) EN 61000-6-5 (switching devices) |

Conducted noise emission

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

Noise emission

| | |
|-----------------------|---|
| Standards/regulations | Additional basic standard EN 61000-6-5 (immunity in switching devices), IEC/EN 61850-3 (power supply) |
|-----------------------|---|

Noise emission

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

QUINT4-SYS-PS/1AC/24DC/2.5/SC - Power supply



2904614

<https://www.phoenixcontact.com/us/products/2904614>

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 | 8 kV (Test Level 4) |
| Discharge in air | 15 kV (Test Level 4) |
| Comments | Criterion A |

Electromagnetic HF field

| | |
|-----------------------|--------------|
| Standards/regulations | EN 61000-4-3 |
|-----------------------|--------------|

Electromagnetic HF field

| | |
|---------------------|-----------------------|
| Frequency range | 80 MHz ... 1 GHz |
| Test field strength | 20 V/m (Test Level X) |
| 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 | 4 kV (Test Level X - asymmetrical) |
| Signal | 4 kV (Test Level X - 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 | 1 kV (Test Level 3 - symmetrical) |
| | 2 kV (Test Level 3 - asymmetrical) |
| Comments | Criterion A |

Conducted interference

| | |
|-----------------------|--------------|
| Standards/regulations | EN 61000-4-6 |
|-----------------------|--------------|

2904614

<https://www.phoenixcontact.com/us/products/2904614>

Conducted interference

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

Power frequency magnetic field

| | |
|-----------------------|-----------------|
| Standards/regulations | EN 61000-4-8 |
| Frequency | 16.67 Hz |
| | 50 Hz |
| | 60 Hz |
| Test field strength | 100 A/m |
| Additional text | 60 s |
| Comments | Criterion A |
| Frequency | 50 Hz |
| | 60 Hz |
| Frequency range | 50 Hz ... 60 Hz |
| Test field strength | 1 kA/m |
| Additional text | 3 s |
| Frequency | 0 Hz |
| Test field strength | 300 A/m |
| Additional text | DC, 60 s |

Voltage dips

| | |
|-----------------------|--------------------------|
| Standards/regulations | EN 61000-4-11 |
| Voltage | 100 V AC |
| Frequency | 60 Hz |
| Voltage dip | 70 % |
| Number of periods | 0.5 / 1 / 30 periods |
| Additional text | Test Level 2 |
| Comments | Criterion A |
| Voltage dip | 40 % |
| Number of periods | 5 / 10 / 50 periods |
| Additional text | Test Level 2 |
| Comments | Criterion B |
| Voltage dip | 0 % |
| Number of periods | 0.5 / 1 / 5 / 50 periods |
| Additional text | Test Level 2 |
| Comments | Criterion B |

Pulse-shape magnetic field

| | |
|-----------------------|--------------|
| Standards/regulations | EN 61000-4-9 |
| Test field strength | 1000 A/m |
| Comments | Criterion A |

QUINT4-SYS-PS/1AC/24DC/2.5/SC - Power supply



2904614

<https://www.phoenixcontact.com/us/products/2904614>

Attenuated sinusoidal oscillations (ring wave)

| | |
|-----------------------|---------------------|
| Standards/regulations | EN 61000-4-12 |
| Input | 2 kV (symmetrical) |
| | 4 kV (asymmetrical) |
| Comments | Criterion A |

Asymmetrical conducted disturbance variables

| | |
|-----------------------|---|
| Standards/regulations | EN 61000-4-16 |
| Test level 1 | 16.67 Hz 50 Hz 60 Hz 150 Hz 180 Hz (Test Level 3) |
| Voltage | 30 V (10 s) |
| Test level 2 | 16.67 Hz 50 Hz 60 Hz (Test Level 2) |
| Voltage | 300 V (1 s) |
| Comments | Criterion A |

Attenuated oscillating wave

| | |
|-----------------------|-----------------------|
| Standards/regulations | EN 61000-4-18 |
| Voltage | 1 kV (symmetrical) |
| | 2.5 kV (asymmetrical) |
| | 1 kV (symmetrical) |
| Comments | Criterion A |

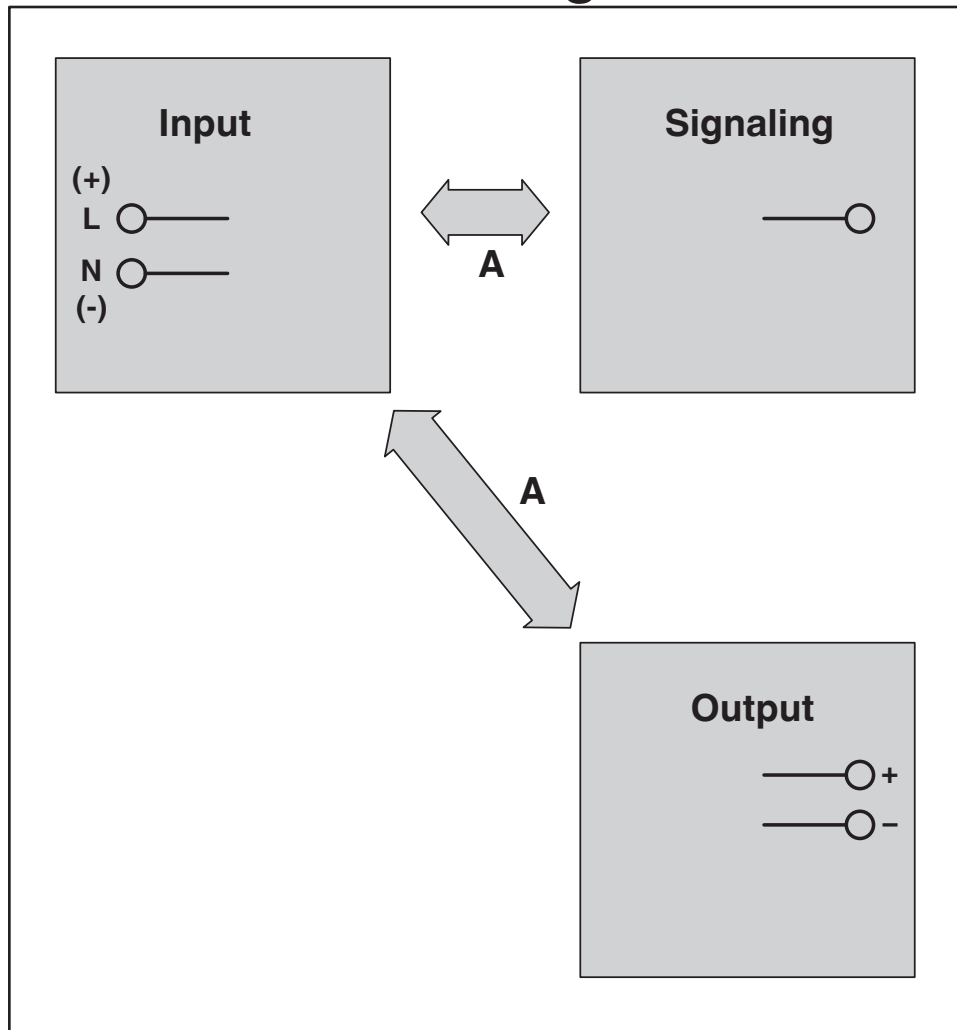
Criteria

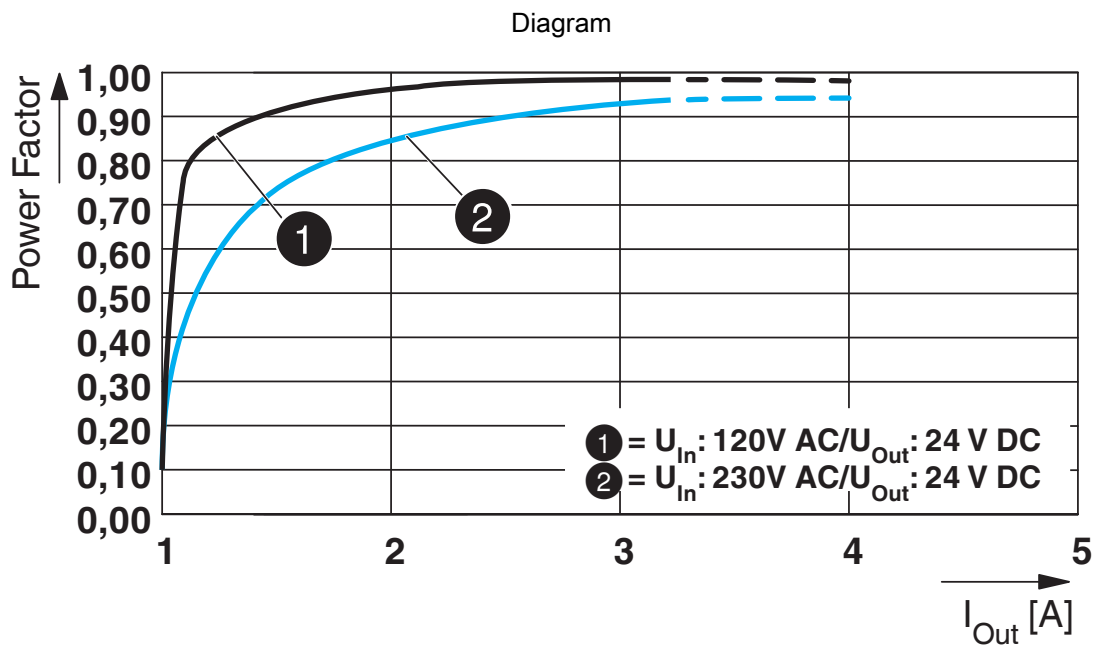
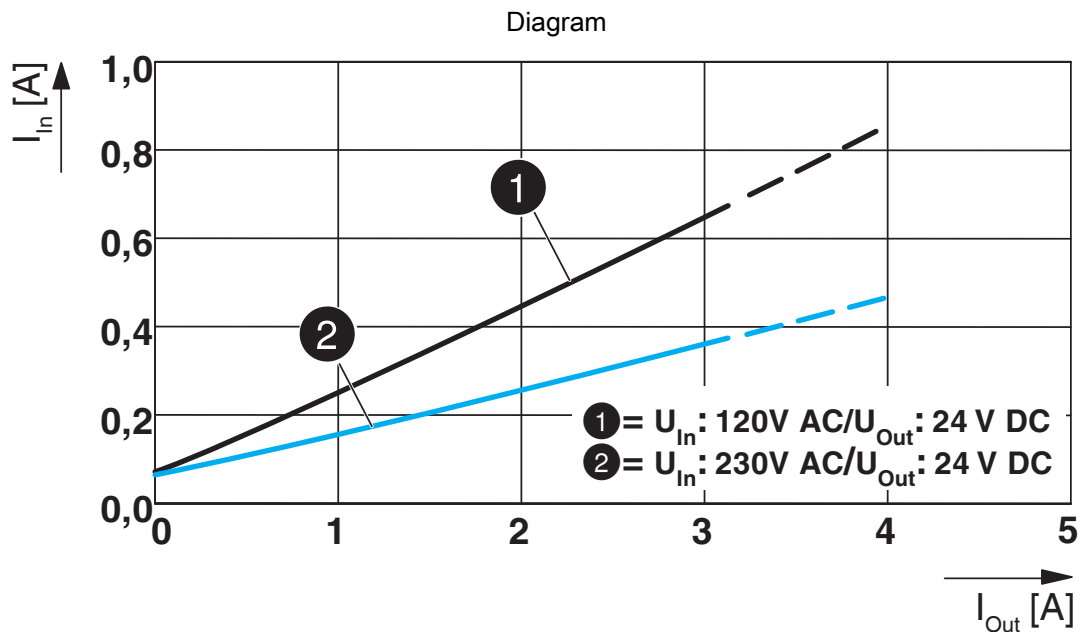
| | |
|-------------|--|
| Criterion A | Normal operating behavior within the specified limits. |
| Criterion B | Temporary impairment to operational behavior that is corrected by the device itself. |
| Criterion C | Temporary adverse effects on the operating behavior, which the device corrects automatically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

Drawings

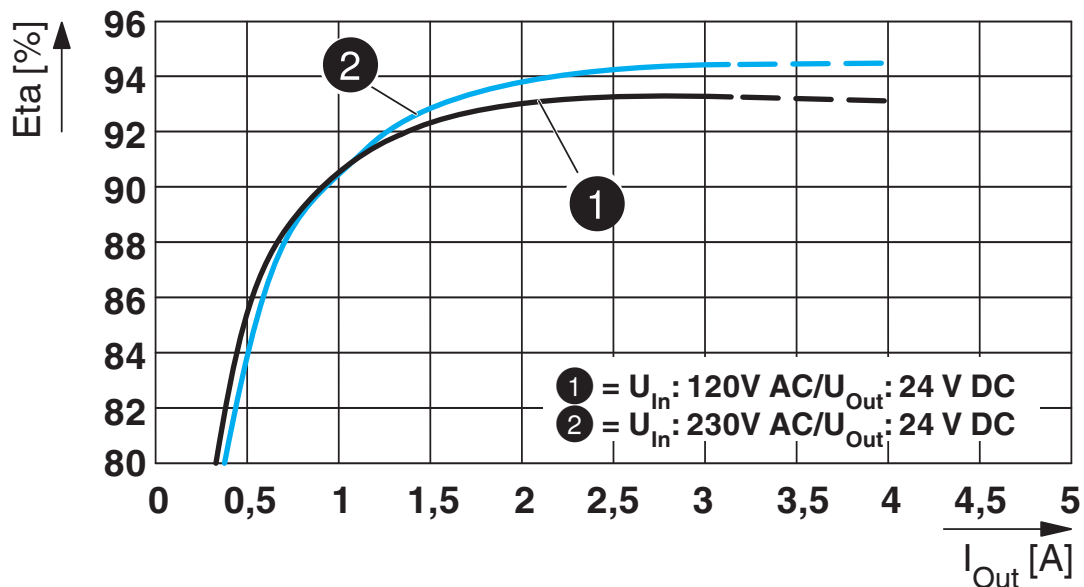
Schematic diagram

Housing

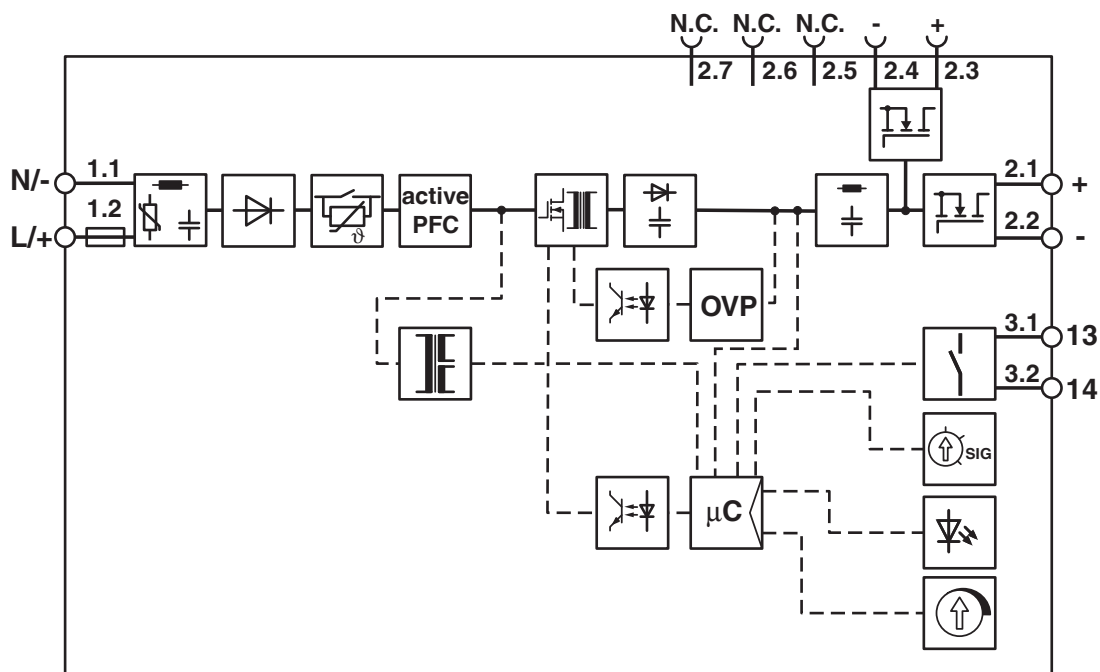




Diagram



Block diagram



2904614

<https://www.phoenixcontact.com/us/products/2904614>

Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2904614>



IECEE CB Scheme

Approval ID: DK-116799-A1-UL



cULus Listed

Approval ID: FILE E 123528

DNV

Approval ID: TAA00001YD



Type approved

Approval ID: SI-SIQ BG 005/109



BV

Approval ID: 44621/B1 BV



IECEX

Approval ID: IECEX ULD 21.0023X



ATEX

Approval ID: UL 21 ATEX 2597X



cULus Listed

Approval ID: FILE E 199827



UKCA-EX

Approval ID: UL21UKEX2208X

INMETRO

Approval ID: DNV 24.0254 X

2904614

<https://www.phoenixcontact.com/us/products/2904614>

Classifications

ECLASS

| | |
|-------------|----------|
| ECLASS-13.0 | 27040701 |
| ECLASS-15.0 | 27040701 |

ETIM

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

UNSPSC

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

2904614

<https://www.phoenixcontact.com/us/products/2904614>

Environmental product compliance

EU RoHS

| | |
|---|--------------|
| Fulfills EU RoHS substance requirements | Yes |
| Exemption | 6(c), 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) |
|-------------------------------------|----------------------|

EF3.1 Climate Change

| | |
|---------|---------------|
| CO2e kg | 6.998 kg CO2e |
|---------|---------------|

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