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Primary-switched QUINT POWER power supply with free choice of output characteristic curve, SFB (selective fuse breaking) technology, and NFC interface, input: 3-phase, output: 24 V DC/40 A

Product description

The fourth generation of the high-performance QUINT POWER power supplies ensures superior system availability by means of new functions. Signaling thresholds and characteristic curves can be individually adjusted via the NFC interface. The unique SFB technology and preventive function monitoring of the QUINT POWER power supply increase the availability of your application.

Your advantages

- Most powerful output side: easy system expansion, reliable heavy load startup and miniature circuit breaker tripping
- Most robust input side: high noise immunity, thanks to integrated gas-filled surge arrester (up to 6 kV) and  $\geq 20$  ms mains failure buffer time
- Most comprehensive signaling: preventive function monitoring reports critical operating states before errors occur
- Available pre-configured: from a batch quantity of just 1

Commercial data

|                                      |                     |
|--------------------------------------|---------------------|
| Item number                          | 2904623             |
| Packing unit                         | 1 pc                |
| Minimum order quantity               | 1 pc                |
| Sales key                            | CM10                |
| Product key                          | CMPI33              |
| Catalog page                         | Page 237 (C-4-2019) |
| GTIN                                 | 4055626356105       |
| Weight per piece (including packing) | 2,811.6 g           |
| Weight per piece (excluding packing) | 2,422 g             |
| Customs tariff number                | 85044095            |
| Country of origin                    | TH                  |

# QUINT4-PS/3AC/24DC/40 - Power supply unit



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## Technical data

### Input data

|                                  |                                                                            |
|----------------------------------|----------------------------------------------------------------------------|
| Control input (configurable) Rem | Output power ON/OFF (SLEEP MODE)                                           |
| Default                          | Output power ON (>40 k $\Omega$ /24 V DC/open bridge between Rem and SGnd) |

### AC operation

|                                          |                                                                                                                                      |
|------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| Network type                             | Star network                                                                                                                         |
| Nominal input voltage range              | 3x 400 V AC ... 500 V AC<br>2x 400 V AC ... 500 V AC                                                                                 |
| Input voltage range                      | 3x 400 V AC ... 500 V AC -20 % ... +10 %<br>2x 400 V AC ... 500 V AC -10 % ... +10 %                                                 |
| Typical national grid voltage            | 400 V AC<br>480 V AC                                                                                                                 |
| Voltage type of supply voltage           | AC/DC                                                                                                                                |
| Inrush current                           | typ. 1.5 A (at 25 °C)                                                                                                                |
| Inrush current integral ( $I^2t$ )       | < 0.06 A <sup>2</sup> s                                                                                                              |
| Inrush current limitation                | 1.5 A (after 1 ms)                                                                                                                   |
| AC frequency range                       | 50 Hz ... 60 Hz -10 % ... +10 %                                                                                                      |
| Frequency range ( $f_N$ )                | 50 Hz ... 60 Hz -10 % ... +10 %                                                                                                      |
| Mains buffering time                     | typ. 28 ms (3x 400 V AC)<br>typ. 28 ms (3x 480 V AC)                                                                                 |
| Current consumption                      | 3x 1.8 A (400 V AC)<br>3x 1.5 A (480 V AC)<br>2x 3 A (400 V AC)<br>2x 2.5 A (480 V AC)<br>3x 1.5 A (500 V AC)<br>2x 2.4 A (500 V AC) |
| Nominal power consumption                | 1217 VA                                                                                                                              |
| Protective circuit                       | Transient surge protection; Varistor, gas-filled surge arrester                                                                      |
| Power factor (cos phi)                   | 0.95                                                                                                                                 |
| Switch-on time                           | < 1 s                                                                                                                                |
| Typical response time                    | 300 ms (from SLEEP MODE)                                                                                                             |
| Recommended breaker for input protection | 3x 4 A ... 20 A (Characteristic B, C, D, K or comparable)                                                                            |
| Recommended fuse for input protection    | $\geq$ 300 V AC                                                                                                                      |
| Discharge current to PE                  | < 3.5 mA<br>1 mA (550 V AC, 60 Hz)                                                                                                   |

### DC operation

|                             |                                                    |
|-----------------------------|----------------------------------------------------|
| Nominal input voltage range | $\pm$ 260 V DC ... 300 V DC                        |
| Input voltage range         | $\pm$ 260 V DC ... 300 V DC -13 % ... +30 %        |
| Current consumption         | 2.2 A ( $\pm$ 260 V DC)<br>1.9 A ( $\pm$ 300 V DC) |

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|                                          |                                       |
|------------------------------------------|---------------------------------------|
| Nominal power consumption                | 1217 VA                               |
| Recommended breaker for input protection | 1x 6 A (10 x 38 mm, 30 kA L/R = 2 ms) |
| Recommended fuse for input protection    | ≥ 1000 V DC                           |

## Output data

|                                                    |                                                    |
|----------------------------------------------------|----------------------------------------------------|
| Efficiency                                         | typ. 95.7 % (400 V AC)                             |
|                                                    | typ. 95.7 % (480 V AC)                             |
| Nominal output voltage                             | 24 V DC                                            |
| Setting range of the output voltage ( $U_{Set}$ )  | 24 V DC ... 29.5 V DC (constant capacity)          |
| Nominal output current ( $I_N$ )                   | 40 A                                               |
| Static Boost ( $I_{Stat.Boost}$ )                  | 45 A                                               |
| Dynamic Boost ( $I_{Dyn.Boost}$ )                  | 60 A (5 s)                                         |
| Selective Fuse Breaking ( $I_{SFB}$ )              | 215 A (15 ms)                                      |
| Magnetic circuit breaker tripping                  | A1...A40 / B2...B25 / C1...C13 / Z1...Z16          |
| Derating                                           | > 60 °C ... 70 °C (2.5 %/K)                        |
| Feedback voltage resistance                        | ≤ 35 V DC                                          |
| Protection against overvoltage at the output (OVP) | ≤ 32 V DC                                          |
| Control deviation                                  | < 0.5 % (Static load change 10 % ... 90 %)         |
|                                                    | < 3 % (Dynamic load change 10 % ... 90 %, (10 Hz)) |
|                                                    | < 0.25 % (change in input voltage ±10 %)           |
| Residual ripple                                    | < 50 mV <sub>PP</sub> (with nominal values)        |
| Short-circuit-proof                                | yes                                                |
| No-load proof                                      | yes                                                |
| Output power                                       | 960 W                                              |
|                                                    | 1080 W                                             |
|                                                    | 1440 W                                             |
| Maximum no-load power dissipation                  | < 5 W (400 V AC)                                   |
|                                                    | < 5 W (480 V AC)                                   |
| Power loss nominal load max.                       | < 45 W (400 V AC)                                  |
|                                                    | < 45 W (480 V AC)                                  |
| Power dissipation SLEEP MODE                       | < 2 W (400 V AC)                                   |
|                                                    | < 2 W (480 V AC)                                   |
| Crest factor                                       | typ. 1.6 (400 V AC)                                |
|                                                    | typ. 1.9 (480 V AC)                                |
| Rise time                                          | < 1 s ( $U_{Out}$ = 10 % ... 90 %)                 |
| Connection in parallel                             | yes, for redundancy and increased capacity         |
| Connection in series                               | yes                                                |

## Signal

|                    |                                             |
|--------------------|---------------------------------------------|
| Signal ground SGnd | Reference potential for Out1, Out2, and Rem |
|--------------------|---------------------------------------------|

## Signal Out 1 (configurable)

|         |                                                          |
|---------|----------------------------------------------------------|
| Digital | 24 V DC 20 mA                                            |
| Default | 24 V DC 20 mA 24 V DC for $U_{Out} > 0.9 \times U_{Set}$ |

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## Signal Out 2 (configurable)

|         |                                                     |
|---------|-----------------------------------------------------|
| Digital | 24 V DC 20 mA                                       |
| Analog  | 4 mA ... 20 mA $\pm 5\%$ (Load $\leq 400\ \Omega$ ) |
| Default | 24 V DC 20 mA 24 V DC for $P_{Out} < P_N$           |

## Signal relay 13/14 (configurable)

|         |                                    |
|---------|------------------------------------|
| Default | closed ( $U_{out} > 0.9 U_{Set}$ ) |
| Digital | 24 V DC 1 A                        |
|         | 30 V AC/DC 0.5 A                   |

## Connection data

### Input

|                                                                                    |                      |
|------------------------------------------------------------------------------------|----------------------|
| Connection method                                                                  | Screw connection     |
| Conductor cross section, rigid min.                                                | 0.2 mm <sup>2</sup>  |
| Conductor cross section, rigid max.                                                | 6 mm <sup>2</sup>    |
| Conductor cross section flexible min.                                              | 0.2 mm <sup>2</sup>  |
| Conductor cross section flexible max.                                              | 4 mm <sup>2</sup>    |
| Single conductor/flexible terminal point with ferrule with plastic sleeve, min.    | 0.25 mm <sup>2</sup> |
| Single conductor/flexible terminal point with ferrule with plastic sleeve, max.    | 4 mm <sup>2</sup>    |
| Single conductor/flexible terminal point with ferrule without plastic sleeve, min. | 0.25 mm <sup>2</sup> |
| Single conductor/flexible terminal point with ferrule without plastic sleeve, max. | 4 mm <sup>2</sup>    |
| Conductor cross section AWG min.                                                   | 24                   |
| Conductor cross section AWG max.                                                   | 10                   |
| 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.                                                | 0.5 mm <sup>2</sup> |
| Conductor cross section, rigid max.                                                | 16 mm <sup>2</sup>  |
| Conductor cross section flexible min.                                              | 0.5 mm <sup>2</sup> |
| Conductor cross section flexible max.                                              | 16 mm <sup>2</sup>  |
| Single conductor/flexible terminal point with ferrule with plastic sleeve, min.    | 0.5 mm <sup>2</sup> |
| Single conductor/flexible terminal point with ferrule with plastic sleeve, max.    | 16 mm <sup>2</sup>  |
| Single conductor/flexible terminal point with ferrule without plastic sleeve, min. | 0.5 mm <sup>2</sup> |
| Single conductor/flexible terminal point with ferrule without plastic sleeve, max. | 16 mm <sup>2</sup>  |
| Conductor cross section AWG min.                                                   | 20                  |

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|                                  |        |
|----------------------------------|--------|
| Conductor cross section AWG max. | 6      |
| Stripping length                 | 10 mm  |
| Tightening torque, min           | 1.2 Nm |
| Tightening torque max            | 1.5 Nm |

## Signal

|                                                                                    |                      |
|------------------------------------------------------------------------------------|----------------------|
| Connection method                                                                  | Push-in connection   |
| Conductor cross section, rigid min.                                                | 0.2 mm <sup>2</sup>  |
| Conductor cross section, rigid max.                                                | 1 mm <sup>2</sup>    |
| Conductor cross section flexible min.                                              | 0.2 mm <sup>2</sup>  |
| Conductor cross section flexible max.                                              | 1.5 mm <sup>2</sup>  |
| Single conductor/flexible terminal point with ferrule with plastic sleeve, min.    | 0.2 mm <sup>2</sup>  |
| Single conductor/flexible terminal point with ferrule with plastic sleeve, max.    | 0.75 mm <sup>2</sup> |
| Single conductor/flexible terminal point with ferrule without plastic sleeve, min. | 0.2 mm <sup>2</sup>  |
| Single conductor/flexible terminal point with ferrule without plastic sleeve, max. | 1.5 mm <sup>2</sup>  |
| Conductor cross section AWG min.                                                   | 24                   |
| Conductor cross section AWG max.                                                   | 16                   |
| Stripping length                                                                   | 8 mm                 |

## Signaling

### Signal output

|                  |                                                      |
|------------------|------------------------------------------------------|
| P <sub>Out</sub> | > 100 % (LED lights up yellow, output power > 960 W) |
|                  | > 75 % (LED lights up green, output power > 720 W)   |
|                  | > 50 % (LED lights up green, output power > 480 W)   |
| U <sub>Out</sub> | > 0.9 × U <sub>Set</sub> (LED lights up green)       |
|                  | < 0.9 × U <sub>Set</sub> (LED flashes green)         |

## Electrical properties

|                                 |                                                      |
|---------------------------------|------------------------------------------------------|
| Number of phases                | 3.00                                                 |
| Insulation voltage input/output | 4 kV AC (type test)                                  |
|                                 | 2.4 kV AC (routine test)                             |
| Insulation voltage output / PE  | 0.5 kV DC (type test)                                |
|                                 | 0.5 kV DC (routine test)                             |
| Insulation voltage input / PE   | 3.5 kV AC (type test)                                |
|                                 | 2.4 kV AC (routine test)                             |
| Switching frequency             | 32.00 kHz ... 100.00 kHz (Auxiliary converter stage) |
|                                 | 55.00 kHz ... 300.00 kHz (Main converter stage)      |
|                                 | 25.00 kHz ... 500.00 kHz (PFC stage)                 |

## Product properties

|              |              |
|--------------|--------------|
| Product type | Power supply |
|--------------|--------------|

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|                                    |                           |
|------------------------------------|---------------------------|
| Product family                     | QUINT POWER               |
| MTBF (IEC 61709, SN 29500)         | > 849000 h (25 °C)        |
|                                    | > 517000 h (40 °C)        |
|                                    | > 236000 h (60 °C)        |
| Environmental protection directive | RoHS Directive 2011/65/EU |
|                                    | WEEE                      |
|                                    | Reach                     |

## Insulation characteristics

|                     |   |
|---------------------|---|
| Protection class    | I |
| Degree of pollution | 2 |

## Life expectancy (electrolytic capacitors)

|                 |          |
|-----------------|----------|
| Current         | 20 A     |
| Temperature     | 40 °C    |
| Time            | 394000 h |
| Additional text | 400 V AC |

## Life expectancy (electrolytic capacitors)

|                 |          |
|-----------------|----------|
| Current         | 20 A     |
| Temperature     | 40 °C    |
| Time            | 367000 h |
| Additional text | 480 V AC |

## Life expectancy (electrolytic capacitors)

|                 |          |
|-----------------|----------|
| Current         | 40 A     |
| Temperature     | 25 °C    |
| Time            | 394000 h |
| Additional text | 400 V AC |

## Life expectancy (electrolytic capacitors)

|                 |          |
|-----------------|----------|
| Current         | 40 A     |
| Temperature     | 25 °C    |
| Time            | 367000 h |
| Additional text | 480 V AC |

## Life expectancy (electrolytic capacitors)

|                 |          |
|-----------------|----------|
| Current         | 40 A     |
| Temperature     | 40 °C    |
| Time            | 139000 h |
| Additional text | 400 V AC |

## Life expectancy (electrolytic capacitors)

|                 |          |
|-----------------|----------|
| Current         | 40 A     |
| Temperature     | 40 °C    |
| Time            | 130000 h |
| Additional text | 480 V AC |

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## Dimensions

|        |        |
|--------|--------|
| Width  | 120 mm |
| Height | 130 mm |
| Depth  | 125 mm |

### Installation dimensions

|                                  |               |
|----------------------------------|---------------|
| Installation distance right/left | 5 mm / 5 mm   |
| Installation distance top/bottom | 50 mm / 50 mm |

## Mounting

|                         |                                     |
|-------------------------|-------------------------------------|
| Mounting type           | DIN rail mounting                   |
| Mounting position       | horizontal DIN rail NS 35, EN 60715 |
| With protective coating | No                                  |

## Material specifications

|                                                                    |                        |
|--------------------------------------------------------------------|------------------------|
| Flammability rating according to UL 94 (housing / terminal blocks) | V0                     |
| Housing material                                                   | Metal                  |
| Hood version                                                       | Stainless steel X6Cr17 |
| Side element version                                               | Aluminum               |

## 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                                          | 11 ms, 15 g, in each space direction (according to IEC 60068-2-27)                                                                                                                                                                                                      |
| Vibration (operation)                          | 5 Hz ... 100 Hz resonance search 0.7g, 90 min., resonance frequency 0.7g, 90 min. (in accordance with DNV GL Class A)<br>5 Hz ... 100 Hz resonance search 2.3g, 90 min., resonance frequency 2.3g, 90 min. (according to DNV GL Class C) mounted with UWA 130 - 2901664 |

## Standards and regulations

|                                                       |                                    |
|-------------------------------------------------------|------------------------------------|
| Rail applications                                     | EN 50121-3-2                       |
|                                                       | EN 50121-5                         |
|                                                       | IEC 62236-3-2                      |
|                                                       | IEC 62236-5                        |
| HART FSK Physical Layer Test Specification Compliance | Output voltage $U_{Out}$ compliant |
| Standard – Limitation of mains harmonic currents      | EN 61000-3-2                       |

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|                                                                                        |                              |
|----------------------------------------------------------------------------------------|------------------------------|
| Standard - Electrical safety                                                           | IEC 61010-2-201 (SELV)       |
| 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                  |
| Standard - Safety of transformers                                                      | EN 61558-2-16                |
| Battery charging                                                                       | DIN 41773-1                  |
| Approval - requirement of the semiconductor industry with regard to mains voltage dips | SEMI F47-0706, EN 61000-4-11 |

## Overvoltage category

|               |                      |
|---------------|----------------------|
| EN 61010-1    | II ( $\leq 5000$ m)  |
| EN 62477-1    | III ( $\leq 2000$ m) |
| EN 61558-2-16 | II ( $\leq 4000$ m)  |

## Approvals

|                       |                                                                                  |
|-----------------------|----------------------------------------------------------------------------------|
| CSA                   | CAN/CSA-C22.2 No. 60950-1-07                                                     |
|                       | CSA-C22.2 No. 107.1-01                                                           |
| Shipbuilding approval | DNV GL, BV, LR, ABS                                                              |
| SIQ                   | BG (type approved)                                                               |
|                       | CB-Scheme (IEC 61010-1, IEC 61010-2-201, IEC 60950-1)                            |
| UL approvals          | UL Listed UL 508                                                                 |
|                       | UL/C-UL Recognized UL 60950-1                                                    |
|                       | UL ANSI/ISA-12.12.01 Class I, Division 2, Groups A, B, C, D (Hazardous Location) |

## EMC data

|                                     |                                                                                                    |
|-------------------------------------|----------------------------------------------------------------------------------------------------|
| Low Voltage Directive               | Conformance with Low Voltage Directive 2014/35/EC                                                  |
| EMC requirements for noise emission | EN 61000-6-3                                                                                       |
|                                     | EN 61000-6-4                                                                                       |
| EMC requirements for noise immunity | EN 61000-6-1                                                                                       |
|                                     | EN 61000-6-2                                                                                       |
| Electromagnetic compatibility       | Conformance with EMC Directive 2014/30/EU                                                          |
| EMC requirements, power plant       | IEC 61850-3                                                                                        |
|                                     | EN 61000-6-5                                                                                       |
| Conducted noise emission            | EN 55016                                                                                           |
|                                     | EN 61000-6-3 (Class B)                                                                             |
| Noise emission                      | Additional basic standard EN 61000-6-5 (immunity in power station), IEC/EN 61850-3 (energy supply) |
| Noise emission                      | EN 55016                                                                                           |
|                                     | EN 61000-6-3 (Class B)                                                                             |
| DNV GL conducted interference       | Class A                                                                                            |
| Additional text                     | Area power distribution                                                                            |
| DNV GL noise radiation              | Class B                                                                                            |

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|                            |                                    |
|----------------------------|------------------------------------|
| Additional text            | Bridge and deck area               |
| 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                       |
|                            | 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 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                     | 4 kV (Test Level 4 - asymmetrical) |
| Signal                     | 4 kV (Test Level 4 - asymmetrical) |
| Comments                   | Criterion A                        |
| Surge voltage load (surge) |                                    |
| Standards/regulations      | EN 61000-4-5                       |
| Surge voltage load (surge) |                                    |
| Input                      | 2 kV (Test Level 3 - symmetrical)  |
|                            | 6 kV (Test Level 4 - asymmetrical) |
| Output                     | 1 kV (Test Level 3 - symmetrical)  |
|                            | 2 kV (Test Level 3 - asymmetrical) |
| Signal                     | 4 kV (Test Level 2 - asymmetrical) |

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| Comments | Criterion A |
|----------|-------------|
|----------|-------------|

## Conducted interference

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

## Conducted interference

|                 |                     |
|-----------------|---------------------|
| I/O/S           | 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             | 16.7 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               | 400 V AC                                                         |
| Frequency             | 50 Hz                                                            |
| Voltage dip           | 70 %                                                             |
| Number of periods     | 0.5 / 1 / 25 periods                                             |
| Additional text       | Test Level 2                                                     |
| Comments              | Criterion A: 0.5 / 1 period<br>Criterion B: 25 periods           |
| 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 / 250 periods                                   |
| Additional text       | Test Level 2                                                     |
| Comments              | Criterion A: 0.5 / 1 period<br>Criterion B: 5 / 50 / 250 periods |

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## Pulse-shape magnetic field

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

## Attenuated sinusoidal oscillations (ring wave)

|                       |                                                                         |
|-----------------------|-------------------------------------------------------------------------|
| Standards/regulations | EN 61000-4-12                                                           |
| Input                 | 2 kV (Test Level 4 - symmetrical)<br>4 kV (Test Level 4 - asymmetrical) |
| Comments              | Criterion A                                                             |

## Asymmetrical conducted disturbance variables

|                       |                                                  |
|-----------------------|--------------------------------------------------|
| Standards/regulations | EN 61000-4-16                                    |
| Test level 1          | 15 Hz 150 Hz (Test Level 4)                      |
| Voltage               | 30 V 3 V                                         |
| Test level 2          | 150 Hz 1.5 kHz (Test Level 4)                    |
| Voltage               | 3 V                                              |
| Test level 3          | 1.5 kHz 15 kHz (Test Level 4)                    |
| Voltage               | 3 V 30 V                                         |
| Test level 4          | 15 kHz 150 kHz (Test Level 4)                    |
| Voltage               | 30 V                                             |
| Test level 5          | 16.7 Hz 50 Hz 60 Hz 150 Hz 180 Hz (Test Level 4) |
| Voltage               | 30 V (10 s)                                      |
| Test level 6          | 16.7 Hz 50 Hz 60 Hz (Test Level 4)               |
| Voltage               | 300 V (1 s)                                      |
| Comments              | Criterion A                                      |

## Attenuated oscillating wave

|                              |                                             |
|------------------------------|---------------------------------------------|
| Standards/regulations        | EN 61000-4-18                               |
| Input, output (test level 1) | 100 kHz 1 MHz (Test Level 3 - symmetrical)  |
| Voltage                      | 1 kV                                        |
| Input, output (test level 2) | 10 MHz                                      |
| Voltage                      | 1 kV                                        |
| Input, output (test level 3) | 100 kHz 1 MHz (Test Level 3 - asymmetrical) |
| Voltage                      | 2.5 kV                                      |
| Signals (test level 1)       | 100 kHz 1 MHz (Test Level 3 - symmetrical)  |
| Voltage                      | 1 kV                                        |
| Signals (test level 2)       | 100 kHz 1 MHz (Test Level 3 - asymmetrical) |
| Voltage                      | 2.5 kV                                      |
| Comments                     | Criterion A                                 |

## Attenuated oscillating magnetic field

|                       |               |
|-----------------------|---------------|
| Standards/regulations | EN 61000-4-10 |
| Test field strength   | 100 A/m       |
| Test level 1          | 100 kHz       |

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|                     |             |
|---------------------|-------------|
| Test field strength | 100 A/m     |
| Test level 2        | 1 MHz       |
| 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. |

# QUINT4-PS/3AC/24DC/40 - Power supply unit

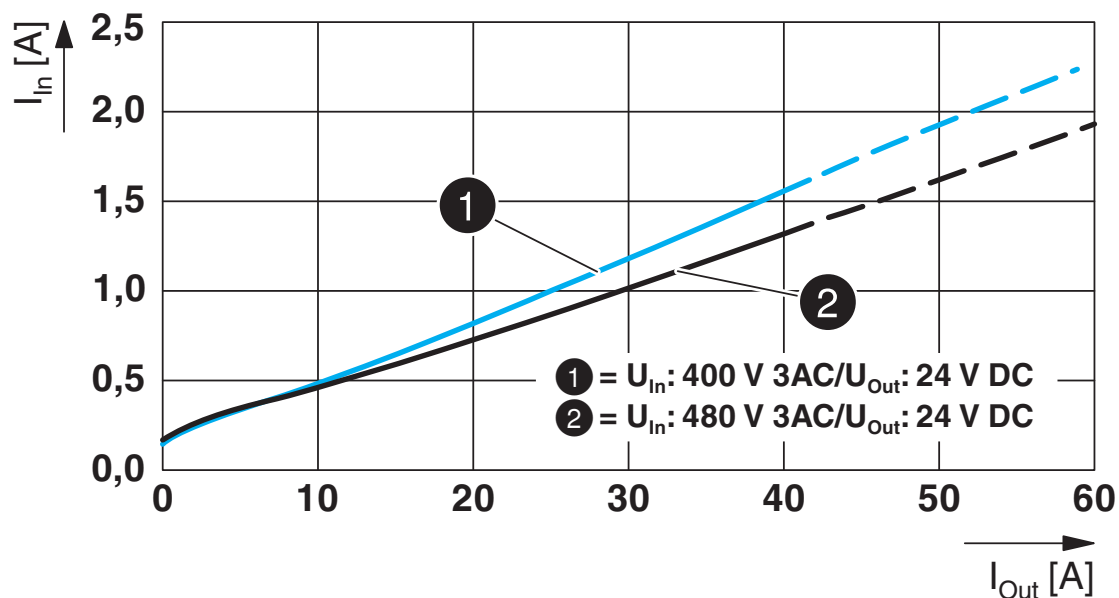
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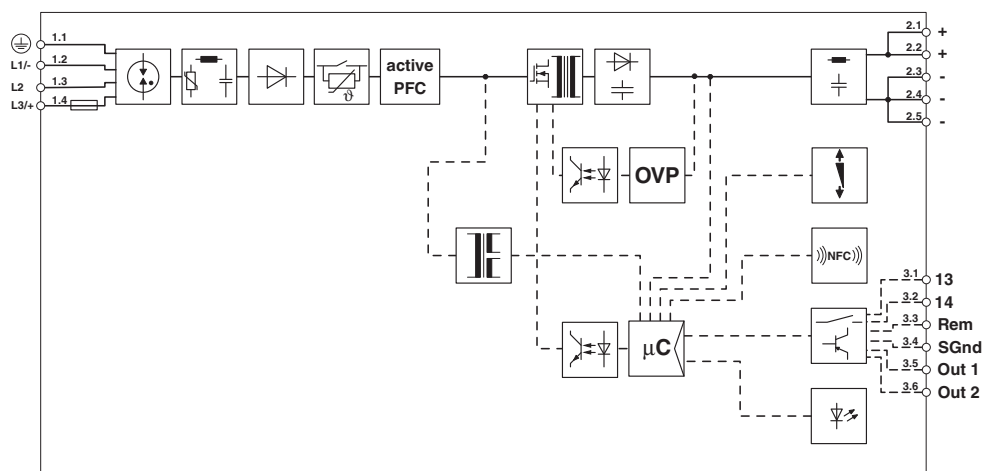


## Drawings

Diagram

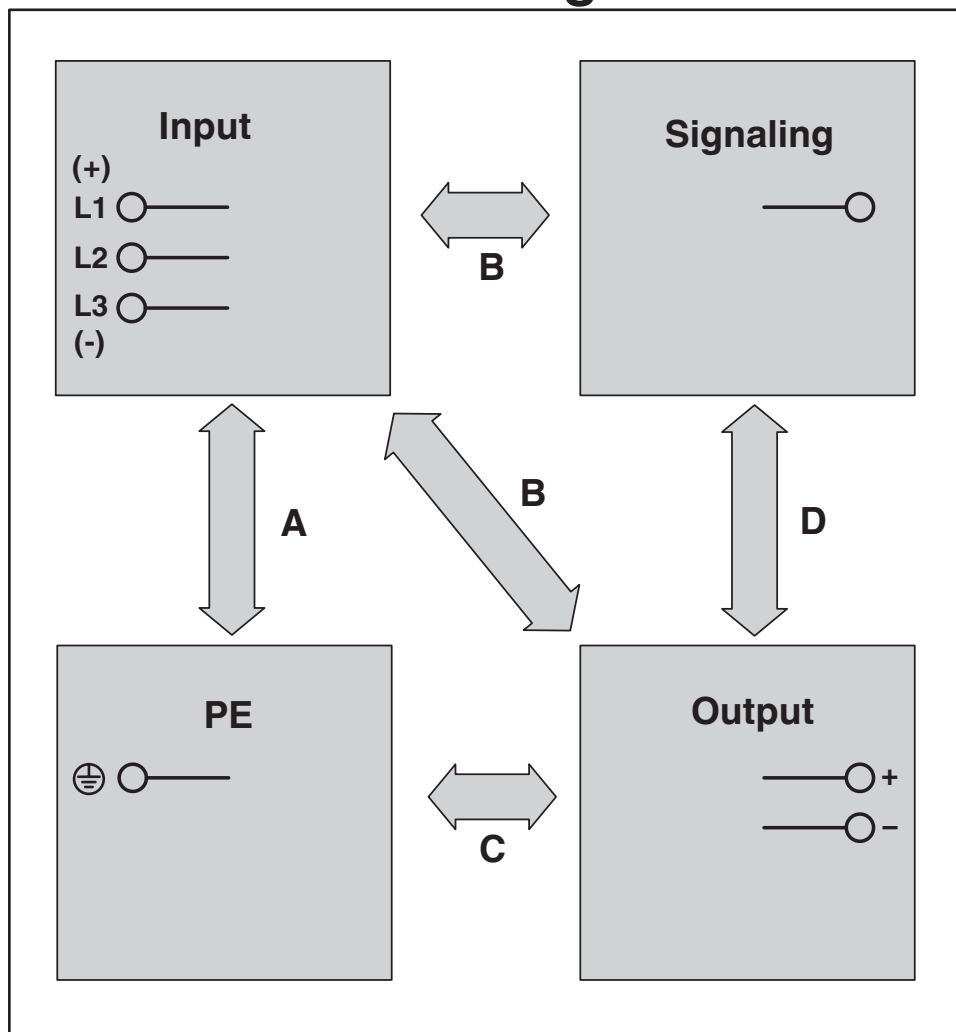


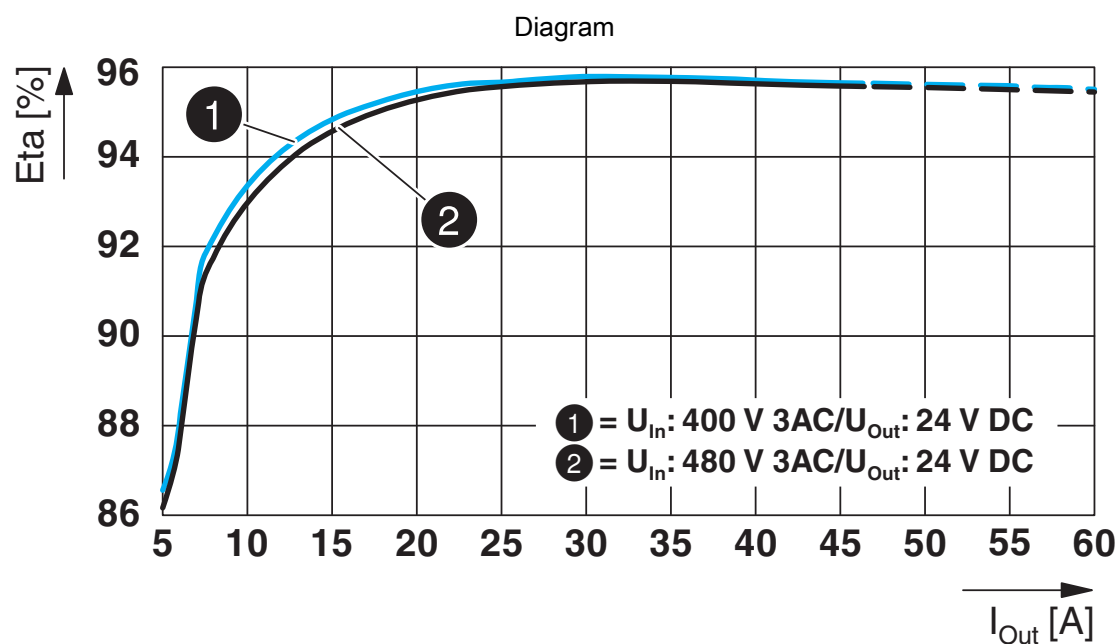
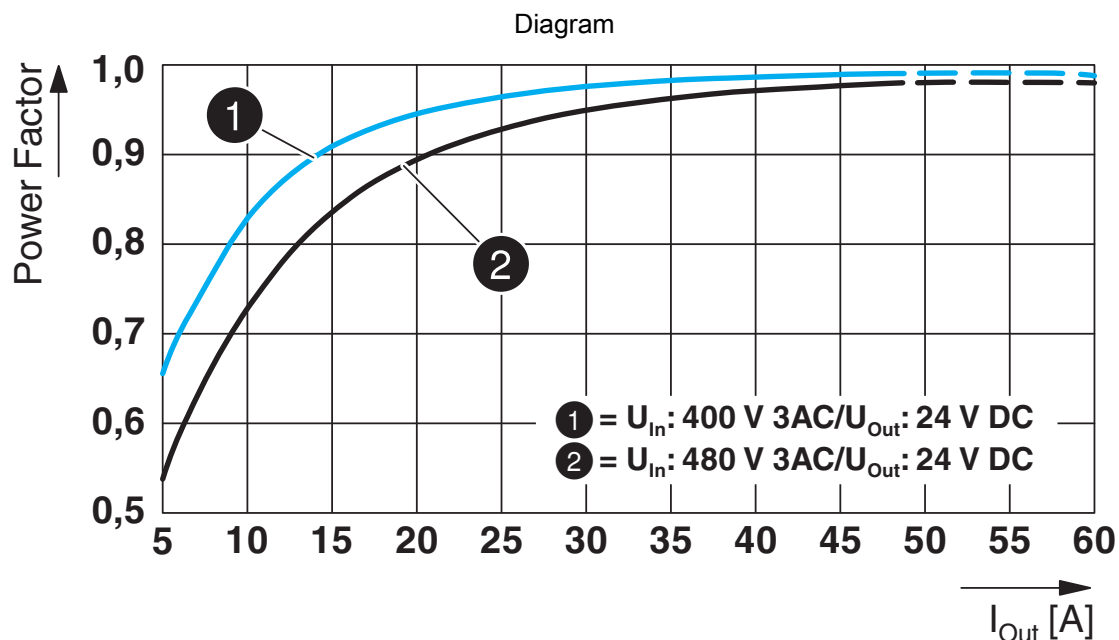
Block diagram



Schematic diagram

## Housing





# QUINT4-PS/3AC/24DC/40 - Power supply unit



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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2904623>



**cUL Recognized**  
Approval ID: FILE E 211944



**UL Recognized**  
Approval ID: FILE E 211944



**IECEE CB Scheme**  
Approval ID: SI-7230



**EAC**  
Approval ID: RU S-DE.BL08.W.00764



**LR**  
Approval ID: LR22472797TA



**NK**  
Approval ID: TA21182M



**IECEE CB Scheme**  
Approval ID: SI-7268



**UL Listed**  
Approval ID: FILE E 123528



**cUL Listed**  
Approval ID: FILE E 123528

**ABS**  
Approval ID: 20-1973616-PDA



**EAC**  
Approval ID: RU S-DE.BL08.W.00764

# QUINT4-PS/3AC/24DC/40 - Power supply unit



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**DNV**  
Approval ID: TAA00000BV

**BV**  
Approval ID: 44621/B0 BV

**cCSAus**  
Approval ID: 800097463

**cUL Listed**  
Approval ID: FILE E 199827

**UL Listed**  
Approval ID: FILE E 199827

**cULus Recognized**

**cULus Listed**

**cULus Listed**

# QUINT4-PS/3AC/24DC/40 - Power supply unit



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## Classifications

### ECLASS

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

### ETIM

|          |          |
|----------|----------|
| ETIM 9.0 | EC002540 |
|----------|----------|

### UNSPSC

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

# QUINT4-PS/3AC/24DC/40 - Power supply unit



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## Environmental product compliance

|                                         |                                                                                                                                                                                                                                   |
|-----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| EU RoHS                                 |                                                                                                                                                                                                                                   |
| Fulfills EU RoHS substance requirements | Yes                                                                                                                                                                                                                               |
| Exemption                               | 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                                    | 95cb6219-1f6e-46d0-9ebd-ed4377268ff2                                                                                                                                                                                              |

# QUINT4-PS/3AC/24DC/40 - Power supply unit



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## Accessories

### UWA 182/52 - Mounting adapter

2938235

<https://www.phoenixcontact.com/us/products/2938235>



Universal wall adapter for securely mounting the device in the event of strong vibrations. The device is screwed directly onto the mounting surface. The universal wall adapter is attached on the top/bottom.

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### UWA 130 - Mounting adapter

2901664

<https://www.phoenixcontact.com/us/products/2901664>



2-piece universal wall adapter for securely mounting the device in the event of strong vibrations. The profiles that are screwed onto the side of the device are screwed directly onto the mounting surface. The universal wall adapter is attached on the left/right.

## QUINT4-PS/3AC/24DC/40 - Power supply unit

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## TWN4 MIFARE NFC USB ADAPTER - Programming adapter

2909681

<https://www.phoenixcontact.com/us/products/2909681>



Near Field Communication (NFC) programming adapter with USB interface for the wireless configuration of NFC-capable products from Phoenix Contact with software. A separate USB driver is not required.

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## FUSE 10,3X38 6A PV - Fuse

3061318

<https://www.phoenixcontact.com/us/products/3061318>



Fuse, 10.3x38 mm, up to 1000 V DC, gPV characteristics

# QUINT4-PS/3AC/24DC/40 - Power supply unit

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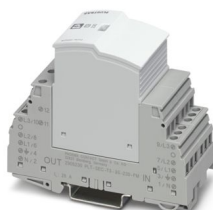
<https://www.phoenixcontact.com/us/products/2904623>



## PLT-SEC-T3-3S-230-FM - Type 3 surge protection device

2905230

<https://www.phoenixcontact.com/us/products/2905230>



Plug-in device protection, according to type 3/class III, for 3-phase power supply networks with separate N and PE (5-conductor system: L1, L2, L3, N, PE), with integrated surge-proof fuse and remote indication contact.

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## PLT-SEC-T3-24-FM-UT - Type 3 surge protection device

2907916

<https://www.phoenixcontact.com/us/products/2907916>



Type 3 surge protection, consisting of protective plug and base element, with integrated status indicator and remote signaling for single-phase power supply networks. Nominal voltage: 24 V AC/DC

# QUINT4-PS/3AC/24DC/40 - Power supply unit

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<https://www.phoenixcontact.com/us/products/2904623>



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

2906031

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

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

2906032

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

# QUINT4-PS/3AC/24DC/40 - Power supply unit

2904623

<https://www.phoenixcontact.com/us/products/2904623>



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

2910410

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

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

2910411

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

# QUINT4-PS/3AC/24DC/40 - Power supply unit

2904623

<https://www.phoenixcontact.com/us/products/2904623>



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

2905743

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

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

2905744

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

# QUINT4-PS/3AC/24DC/40 - Power supply unit



2904623

<https://www.phoenixcontact.com/us/products/2904623>

## E/AL-NS 35 - End bracket

1201662

<https://www.phoenixcontact.com/us/products/1201662>



End clamp, for end support of UKH 50 to UKH 240, is pushed onto DIN rail NS 35 and fixed with 2 screws, width: 10 mm, color: aluminum

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