

# QUINT4-PS/1AC/24DC/10/+/F - Power supply unit



1672244

<https://www.phoenixcontact.com/us/products/1672244>

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Primary-switched power supply unit QUINT POWER, Screw connection, DIN rail mounting, input: 1-phase, output: 24 V DC / 10 A

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 1672244       |
| Packing unit                         | 1 pc          |
| Minimum order quantity               | 1 pc          |
| Sales key                            | CM10          |
| Product key                          | CMPI13        |
| GTIN                                 | 4067923220263 |
| Weight per piece (including packing) | 1,156 g       |
| Weight per piece (excluding packing) | 1,156 g       |
| Customs tariff number                | 85044095      |
| Country of origin                    | TH            |

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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              | 100 V AC ... 240 V AC                                           |
| Input voltage range                      | 100 V AC ... 240 V AC -15 % ... +10 %                           |
| Derating                                 | < 100 V AC (1 %/V)                                              |
| Electric strength, max.                  | 300 V AC 60 s                                                   |
| Typical national grid voltage            | 120 V AC                                                        |
|                                          | 230 V AC                                                        |
| Voltage type of supply voltage           | AC                                                              |
| Inrush current                           | typ. 15 A (at 25 °C)                                            |
| Inrush current integral ( $I^2t$ )       | < 0.9 A <sup>2</sup> s                                          |
| Inrush current limitation                | 15 A (after 1 ms)                                               |
| AC frequency range                       | 50 Hz ... 60 Hz -10 % ... +10 %                                 |
| Frequency range ( $f_N$ )                | 50 Hz ... 60 Hz -10 % ... +10 %                                 |
|                                          | 16.7 Hz (acc. to EN 50163)                                      |
| Mains buffering time                     | typ. 53 ms (120 V AC)                                           |
|                                          | typ. 55 ms (230 V AC)                                           |
| Current consumption                      | 3.4 A (100 V AC)                                                |
|                                          | 2.8 A (120 V AC)                                                |
|                                          | 1.5 A (230 V AC)                                                |
|                                          | 1.5 A (240 V AC)                                                |
| Nominal power consumption                | 274 VA                                                          |
| Protective circuit                       | Transient surge protection; Varistor, gas-filled surge arrester |
| Power factor (cos phi)                   | 0.94                                                            |
| Switch-on time                           | < 1 s                                                           |
| Typical response time                    | 300 ms (from SLEEP MODE)                                        |
| Input fuse                               | 8 A (slow-blow, internal)                                       |
| Recommended breaker for input protection | 10 A ... 16 A (Characteristic B, C, D, K or comparable)         |
| Discharge current to PE                  | < 3.5 mA                                                        |
|                                          | 0.7 mA (264 V AC, 60 Hz)                                        |

### DC operation

|                                |                                       |
|--------------------------------|---------------------------------------|
| Nominal input voltage range    | 110 V DC ... 250 V DC                 |
| Input voltage range            | 110 V DC ... 250 V DC -18 % ... +40 % |
| Derating                       | < 110 V DC (1 %/V)                    |
| Voltage type of supply voltage | DC                                    |
| Current consumption            | 3 A (110 V DC)                        |

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1.3 A (250 V DC)

## Output data

|                                                    |                                                                   |
|----------------------------------------------------|-------------------------------------------------------------------|
| Efficiency                                         | typ. 92.8 % (120 V AC)                                            |
|                                                    | typ. 93.8 % (230 V AC)                                            |
| Output characteristic                              | U/I Advanced                                                      |
|                                                    | Smart HICCU                                                       |
|                                                    | FUSE MODE                                                         |
| Nominal output voltage                             | 24 V DC                                                           |
| Setting range of the output voltage ( $U_{Set}$ )  | 24 V DC ... 28 V DC (constant capacity)                           |
| Nominal output current ( $I_N$ )                   | 10 A                                                              |
| Static Boost ( $I_{Stat.Boost}$ )                  | 12.5 A                                                            |
| Dynamic Boost ( $I_{Dyn.Boost}$ )                  | 20 A (5 s)                                                        |
| Selective Fuse Breaking ( $I_{SFB}$ )              | 60 A (15 ms)                                                      |
| Magnetic circuit breaker tripping                  | A1...A6 / B2...B6 / C1...C3 / Z1...Z6                             |
| Derating                                           | > 60 °C ... 70 °C (2.5 %/K)                                       |
| Feedback voltage resistance                        | ≤ 35 V DC                                                         |
| Protection against overvoltage at the output (OVP) | < 30 V DC (double protection with shut off within 20 ms)          |
| Control deviation                                  | < 0.5 % (Static load change 10 % ... 90 %)                        |
|                                                    | < 4 % (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                                       | 240 W                                                             |
|                                                    | 300 W                                                             |
|                                                    | 480 W                                                             |
| Apparent power                                     | 336 VA (120 V, $U_{OUT} = 24$ V, $I_{OUT} = \text{stat. Boost}$ ) |
|                                                    | 345 VA (230 V, $U_{OUT} = 24$ V, $I_{OUT} = \text{stat. Boost}$ ) |
| Maximum no-load power dissipation                  | < 4 W (120 V AC)                                                  |
|                                                    | < 4 W (230 V AC)                                                  |
| Power loss nominal load max.                       | < 19 W (120 V AC)                                                 |
|                                                    | < 16 W (230 V AC)                                                 |
| Power dissipation SLEEP MODE                       | < 3 W (120 V AC)                                                  |
|                                                    | < 3 W (230 V AC)                                                  |
| Crest factor                                       | typ. 1.57 (120 V AC)                                              |
|                                                    | typ. 1.59 (230 V AC)                                              |
| Rise time                                          | < 100 ms ( $U_{Out} = 10$ % ... 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)

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

## 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.                                                | 2.5 mm <sup>2</sup>  |
| Conductor cross section flexible min.                                              | 0.2 mm <sup>2</sup>  |
| Conductor cross section flexible max.                                              | 2.5 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.    | 2.5 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. | 2.5 mm <sup>2</sup>  |
| Conductor cross section AWG min.                                                   | 24                   |
| Conductor cross section AWG max.                                                   | 14                   |
| Stripping length                                                                   | 6.5 mm               |
| Tightening torque, min                                                             | 0.5 Nm               |
| Tightening torque max                                                              | 0.6 Nm               |

### Output

|                                                                                    |                      |
|------------------------------------------------------------------------------------|----------------------|
| Connection method                                                                  | Screw connection     |
| Conductor cross section, rigid min.                                                | 0.2 mm <sup>2</sup>  |
| Conductor cross section, rigid max.                                                | 2.5 mm <sup>2</sup>  |
| Conductor cross section flexible min.                                              | 0.2 mm <sup>2</sup>  |
| Conductor cross section flexible max.                                              | 2.5 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.    | 2.5 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              | 2.5 mm <sup>2</sup>  |

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|                                  |        |
|----------------------------------|--------|
| sleeve, max.                     |        |
| Conductor cross section AWG min. | 24     |
| Conductor cross section AWG max. | 14     |
| Stripping length                 | 6.5 mm |
| Tightening torque, min           | 0.5 Nm |
| Tightening torque max            | 0.6 Nm |

## Signal

|                                                                                    |                      |
|------------------------------------------------------------------------------------|----------------------|
| Connection method                                                                  | Push-in connection   |
| Conductor cross section, rigid min.                                                | 0.2 mm <sup>2</sup>  |
| Conductor cross section, rigid max.                                                | 1.5 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

|                    |                                                   |
|--------------------|---------------------------------------------------|
| Types of signaling | LED                                               |
|                    | Floating signal contact                           |
|                    | Active signal output Out1 (digital, configurable) |
|                    | Active signal output Out2 (analog, configurable)  |
|                    | Remote contact                                    |
|                    | Signal ground SGnd                                |

## Signal output

|                  |                                                      |
|------------------|------------------------------------------------------|
| P <sub>Out</sub> | > 100 % (LED lights up yellow, output power > 240 W) |
|                  | > 75 % (LED lights up green, output power > 180 W)   |
|                  | > 50 % (LED lights up green, output power > 120 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                | 1.00                                                 |
| Insulation voltage input/output | 4 kV AC (type test)                                  |
|                                 | 2 kV AC (routine test)                               |
| Switching frequency             | 90.00 kHz ... 110.00 kHz (Auxiliary converter stage) |
|                                 | 50.00 kHz ... 245.00 kHz (Main converter stage)      |

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35.00 kHz ... 700.00 kHz (PFC stage)

## Product properties

|                                    |                           |
|------------------------------------|---------------------------|
| Product type                       | Power supply              |
| Product family                     | QUINT POWER               |
| MTBF (IEC 61709, SN 29500)         | > 1165000 h (25 °C)       |
|                                    | > 700000 h (40 °C)        |
|                                    | > 321000 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         | 5 A      |
| Temperature     | 40 °C    |
| Time            | 247000 h |
| Additional text | 120 V AC |

## Life expectancy (electrolytic capacitors)

|                 |          |
|-----------------|----------|
| Current         | 5 A      |
| Temperature     | 40 °C    |
| Time            | 247000 h |
| Additional text | 230 V AC |

## Life expectancy (electrolytic capacitors)

|                 |          |
|-----------------|----------|
| Current         | 10 A     |
| Temperature     | 25 °C    |
| Time            | 288000 h |
| Additional text | 120 V AC |

## Life expectancy (electrolytic capacitors)

|                 |          |
|-----------------|----------|
| Current         | 10 A     |
| Temperature     | 25 °C    |
| Time            | 345000 h |
| Additional text | 230 V AC |

## Life expectancy (electrolytic capacitors)

|                 |          |
|-----------------|----------|
| Current         | 10 A     |
| Temperature     | 40 °C    |
| Time            | 112000 h |
| Additional text | 120 V AC |

## Life expectancy (electrolytic capacitors)

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|                 |          |
|-----------------|----------|
| Current         | 10 A     |
| Temperature     | 40 °C    |
| Time            | 138000 h |
| Additional text | 230 V AC |

## Dimensions

|        |        |
|--------|--------|
| Width  | 50 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 |

### Alternative assembly

|        |        |
|--------|--------|
| Width  | 122 mm |
| Height | 130 mm |
| Depth  | 53 mm  |

## Mounting

|                         |                                                                                                                                                                                                 |
|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Mounting type           | DIN rail mounting                                                                                                                                                                               |
| Assembly note           | alignable: $P_N \geq 50\%$ , 5 mm horizontally, 15 mm next to active components, 50 mm vertically<br>alignable: $P_N < 50\%$ , 0 mm horizontally, 40 mm vertically top, 20 mm vertically bottom |
| Mounting position       | horizontal DIN rail NS 35, EN 60715                                                                                                                                                             |
| With protective coating | yes                                                                                                                                                                                             |

## 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)                | -40 °C ... 75 °C (> 60 °C Derating: 2,5 %/K)                                                                    |
| Ambient temperature (storage/transport)        | -40 °C ... 85 °C                                                                                                |
| Maximum altitude                               | ≤ 5000 m (> 2000 m, observe derating)                                                                           |
| Climatic class                                 | 3K22 (in accordance with EN 60721-3-3)                                                                          |
| Max. permissible relative humidity (operation) | ≤ 100 % (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) |

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## Standards and regulations

|                                                                                        |                                    |
|----------------------------------------------------------------------------------------|------------------------------------|
| Rail applications                                                                      | EN 50121-3-2                       |
|                                                                                        | EN 50121-4                         |
|                                                                                        | EN 50121-5                         |
|                                                                                        | EN 50163                           |
|                                                                                        | IEC 62236-3-2                      |
|                                                                                        | IEC 62236-4                        |
|                                                                                        | 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                       |
| 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                        |
| 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 ( $\leq 5000$ m)  |

## Approvals

|              |                                                                                                             |
|--------------|-------------------------------------------------------------------------------------------------------------|
| CSA          | CAN/CSA-C22.2 No. 61010-2-201                                                                               |
|              | CSA-C22.2 No. 107.1-16                                                                                      |
| SIQ          | CB-Scheme (IEC 61010-1, IEC 61010-2-201)                                                                    |
| UL approvals | UL Listed UL 508                                                                                            |
|              | UL 121201 & CSA C22.2 No. 213-17 Class I, Division 2, Groups A, B, C, D T4 (Hazardous Location) applied for |

## EMC data

|                                     |                                                   |
|-------------------------------------|---------------------------------------------------|
| Electromagnetic compatibility       | Conformance with EMC Directive 2014/30/EU         |
| 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                                      |
| EMC requirements, power plant       | IEC 61850-3                                       |
|                                     | EN 61000-6-5                                      |
| Conducted noise emission            | EN 55016                                          |
|                                     | EN 61000-6-3 (Class B)                            |

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|                               |                                                                                                    |
|-------------------------------|----------------------------------------------------------------------------------------------------|
| 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 B                                                                                            |
| Additional text               | Bridge and deck area                                                                               |
| DNV GL noise radiation        | Class B                                                                                            |
| 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 |
|-----------------------|--------------|

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## Surge voltage load (surge)

|          |                                         |
|----------|-----------------------------------------|
| Input    | typ. 3 kV (Test Level 4 - symmetrical)  |
|          | typ. 6 kV (Test Level 4 - asymmetrical) |
| Output   | 1 kV (Test Level 3 - symmetrical)       |
|          | 2 kV (Test Level 3 - asymmetrical)      |
| Signal   | 4 kV (Test Level 4 - asymmetrical)      |
| 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               | 230 V AC                               |
| Frequency             | 50 Hz                                  |
| Voltage dip           | 70 %                                   |
| Number of periods     | 0.5 / 1 / 25 / 30 periods              |
| Additional text       | Test Level 2                           |
| Comments              | Criterion A: 0.5 / 1 / 25 / 30 periods |
| Voltage dip           | 40 %                                   |
| Number of periods     | 5 / 10 / 50 periods                    |
| Additional text       | Test Level 2                           |

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

## 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 (Test Level 4) |
| Voltage               | 30 V (10 s)                        |
| Test level 6          | 150 Hz 180 Hz (Test Level 4)       |
| Voltage               | 30 V (10 s)                        |
| Test level 7          | 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 (Test Level 3 - asymmetrical)        |
| Voltage                      | 2 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                                        |

# QUINT4-PS/1AC/24DC/10/+F - Power supply unit



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|                        |                                             |
|------------------------|---------------------------------------------|
| 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       |
| 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. |

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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1672244>



**cULus Listed**

Approval ID: FILE E 123528



**Type approved**

Approval ID: SI-SIQ BG 005/108



**cCSAus**

Approval ID: 80128434



**cULus Listed**

Approval ID: FILE E 199827

# QUINT4-PS/1AC/24DC/10/+/F - Power supply unit



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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)                                                                                                                                                                                                              |

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