

# TRIO-PS67/1AC/24DC/8/INC - Power supply unit



1065976

<https://www.phoenixcontact.com/us/products/1065976>

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Primary-switched power supply unit TRIO POWER, 7/8" circular connector, Wall mounting, input: 1-phase, output: 24 V DC / 8 A



## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 1065976       |
| Packing unit                         | 1 pc          |
| Minimum order quantity               | 1 pc          |
| Sales key                            | CM08          |
| Product key                          | CMPF13        |
| GTIN                                 | 4055626731032 |
| Weight per piece (including packing) | 1,753 g       |
| Weight per piece (excluding packing) | 1,312 g       |
| Customs tariff number                | 85044095      |
| Country of origin                    | CN            |

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## Technical data

### Input data

#### AC operation

|  |  |
|--|--|
| Supply system configuration              | Star network (TN, TT, IT (PE))   |
| Nominal input voltage range              | 100 V AC ... 240 V AC  |
| Input voltage range                      | 100 V AC ... 240 V AC $\pm 10\%$   |
| Switch-on voltage                        | $> 75$ V AC  |
| Shut-down voltage                        | $< 70$ V AC  |
| Electric strength, max.                  | $\leq 300$ V AC 15 s   |
| Typical national grid voltage            | 120 V AC<br>230 V AC   |
| Voltage type of supply voltage           | AC   |
| Inrush current                           | $\leq 25$ A (typical)  |
| Inrush current integral ( $I^2t$ )       | $< 0.5$ A <sup>2</sup> s   |
| Inrush current limitation                | typ. 25 A (after 1 ms)   |
| AC frequency range                       | 50 Hz ... 60 Hz $\pm 10\%$   |
| Frequency range ( $f_N$ )                | 50 Hz ... 60 Hz $\pm 10\%$   |
| Mains buffering time                     | $> 15$ ms (120 V AC)<br>$> 15$ ms (230 V AC)   |
| Current consumption                      | 2.2 A (100 V AC)<br>0.9 A (240 V AC)   |
| Nominal power consumption                | 285 VA   |
| Protective circuit                       | Transient surge protection; Varistor   |
| Power factor (cos phi)                   | $> 0.93$   |
| Switch-on time                           | $< 1$ s  |
| Input fuse                               | 6.3 A (internal (device protection))   |
| Recommended breaker for input protection | 6 A ... 16 A (US/CAN: branch circuit protection $< 20$ A)<br>(Characteristic B, C, D, K or comparable) |
| Discharge current to PE                  | $< 3.5$ mA   |

#### DC operation

|                                |                                      |
|--------------------------------|--------------------------------------|
| Nominal input voltage range    | 110 V DC ... 250 V DC                |
| Input voltage range            | 110 V DC ... 250 V DC $\pm 10\%$     |
| Switch-on voltage              | $\geq 95$ V DC                       |
| Shut-down voltage              | $< 95$ V DC                          |
| Voltage type of supply voltage | DC                                   |
| Mains buffering time           | $> 15$ ms (230 V AC)                 |
| Current consumption            | 1.9 A (110 V DC)<br>0.8 A (250 V DC) |

### Output data

|            |                      |
|------------|----------------------|
| Efficiency | typ. 91 % (120 V AC) |
|------------|----------------------|

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|  |  |
|--|--|
|  | typ. 93 % (230 V AC)   |
| Nominal output voltage                             | 24 V DC $\pm 1$ %  |
| Nominal output current ( $I_N$ )                   | 8 A  |
| Dynamic Boost ( $I_{Dyn.Boost}$ )                  | 12 A (5 s)   |
| Derating   | > 60 °C ... 70 °C (2.5 %/K)  |
| Feedback voltage resistance                        | $\leq 35$ V DC   |
| Protection against overvoltage at the output (OVP) | $\leq 30$ V DC   |
| Control deviation                                  | < 1 % (change in load, static 10 % ... 90 %)<br>< 3 % (Dynamic load change 10 % ... 90 %, 10 Hz)<br>< 0.1 % (change in input voltage $\pm 10$ %) |
| Residual ripple                                    | $\leq 10$ mV <sub>PP</sub>   |
| Short-circuit-proof                                | yes  |
| No-load proof                                      | yes  |
| Output power                                       | 192 W<br>288 W   |
| Maximum no-load power dissipation                  | < 8 W (120 V AC)<br>< 5 W (230 V AC)   |
| Power loss nominal load max.                       | < 18 W (120 V AC)<br>< 14 W (230 V AC)   |
| Rise time  | $\leq 12$ ms ( $U_{OUT}$ (10 % ... 90 %))  |
| Connection in parallel                             | yes, for redundancy and increased capacity   |
| Connection in series                               | yes  |

## Signal: DC OK

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

## Signal relay 13/14

|         |                        |
|---------|------------------------|
| Default | closed                 |
| Digital | 30 V AC 30 V DC 100 mA |

## Connection data

### Input

|                     |                         |
|---------------------|-------------------------|
| Connection method   | 7/8" circular connector |
| Type of locking     | Screw locking mechanism |
| Number of positions | 3                       |

### Output

|                     |                         |
|---------------------|-------------------------|
| Connection method   | 7/8" circular connector |
| Type of locking     | Screw locking mechanism |
| Number of positions | 4                       |

### Signal

|                   |                        |
|-------------------|------------------------|
| Connection method | M12 circular connector |
| Coding            | A                      |

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|                     |     |
|---------------------|-----|
| Type of locking     | M12 |
| Number of positions | 5   |

## Signaling

|                    |                                |
|--------------------|--------------------------------|
| Types of signaling | LED<br>Floating signal contact |
| Status display     | 2 x LED (green)                |

### Signal output: LED status indicator

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

### Signal output: LED status indicator

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

## Electrical properties

|                                 |   |
|---------------------------------|---|
| Number of phases                | 1.00  |
| Insulation voltage input/output | 3 kV AC (type test)<br>1.5 kV AC (routine test) |

## Product properties

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

### Data management status

|                  |    |
|------------------|----|
| Article revision | 02 |
|------------------|----|

### Insulation characteristics

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

## Dimensions

### Item dimensions

|        |        |
|--------|--------|
| Width  | 136 mm |
| Height | 240 mm |
| Depth  | 53 mm  |

### Drill hole

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|          |        |
|----------|--------|
| Diameter | 5.6 mm |
|----------|--------|

## Installation dimensions

|                                  |               |
|----------------------------------|---------------|
| Installation distance right/left | 10 mm / 10 mm |
| Installation distance top/bottom | 0 mm / 100 mm |

## Mounting

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

## Material specifications

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

## Environmental and real-life conditions

### Ambient conditions

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

## Standards and regulations

### Overvoltage category

|            |                                 |
|------------|---------------------------------|
| EN 61010-1 | III (≤ 2000 m)<br>II (≤ 4000 m) |
|------------|---------------------------------|

### Electrical safety

|                          |                   |
|--------------------------|-------------------|
| Standard designation     | Electrical safety |
| Standards/specifications | IEC 61010-1       |

### Protective extra-low voltage

|                          |  |
|--------------------------|--|
| Standard designation     | Protective extra-low voltage                 |
| Standards/specifications | IEC 61010-1 (SELV)<br>IEC 61010-2-201 (PELV) |

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## Safe isolation

|                      |                |
|----------------------|----------------|
| Standard designation | Safe isolation |
|----------------------|----------------|

## Low-voltage power supplies, DC output

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

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

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

## Limit values for harmonic currents

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

## Degrees of protection provided by enclosures (IP code)

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

## Approvals

### UL

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

### UL

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

## EMC data

|                               |  |
|-------------------------------|--|
| Low Voltage Directive         | Conformance with Low Voltage Directive 2014/35/EC  |
| Interference emission         | Interference emission in accordance with EN 61000-6-3 (residential and commercial) and EN 61000-6-4 (industrial) |
| Noise immunity                | Immunity in accordance with EN 61000-6-1 (residential), EN 61000-6-2 (industrial)                                |
| Electromagnetic compatibility | Conformance with EMC Directive 2014/30/EU  |
| Conducted noise emission      | EN 55016<br>EN 61000-6-3 (Class B)   |
| Noise emission                | EN 55011 (EN 55022)  |
| Noise emission                | EN 55016<br>EN 61000-6-3 (Class B)   |

## Harmonic currents

|                       |  |
|-----------------------|--|
| Standards/regulations | EN 61000-3-2<br>EN 61000-3-2 (Class A) |
|-----------------------|--|

## Electrostatic discharge

|                       |              |
|-----------------------|--------------|
| Standards/regulations | EN 61000-4-2 |
|-----------------------|--------------|

## Electrostatic discharge

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|                   |                     |
|-------------------|---------------------|
| Contact discharge | 6 kV (Test Level 3) |
| Comments          | Criterion A         |

## Electromagnetic HF field

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

## Electromagnetic HF field

|                     |                       |
|---------------------|-----------------------|
| Frequency range     | 80 MHz ... 1 GHz      |
| Test field strength | 10 V/m (Test Level 3) |
| Frequency range     | 1 GHz ... 2 GHz       |
| Test field strength | 10 V/m (Test Level 3) |
| Frequency range     | 2 GHz ... 6 GHz       |
| Test field strength | 10 V/m (Test Level 3) |
| Comments            | Criterion A           |

## Fast transients (burst)

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

## Fast transients (burst)

|          |                                    |
|----------|------------------------------------|
| Input    | 4 kV (Test Level 3 - asymmetrical) |
| Output   | 2 kV (Test Level 3 - asymmetrical) |
| Signal   | 2 kV (Test Level 3 - asymmetrical) |
| Comments | Criterion A                        |

## Surge voltage load (surge)

|                       |              |
|-----------------------|--------------|
| Standards/regulations | EN 61000-4-5 |
|-----------------------|--------------|

## Surge voltage load (surge)

|          |                                      |
|----------|--------------------------------------|
| Input    | 1 kV (Test Level 1 - symmetrical)    |
|          | 2 kV (Test Level 1 - asymmetrical)   |
| Output   | 0.5 kV (Test Level 1 - symmetrical)  |
|          | 0.5 kV (Test Level 1 - asymmetrical) |
| Signal   | 1 kV (Test Level 2 - asymmetrical)   |
| Comments | Criterion B                          |

## Conducted interference

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

## Conducted interference

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

## Voltage dips

|                       |               |
|-----------------------|---------------|
| Standards/regulations | EN 61000-4-11 |
| Voltage               | 230 V AC      |
| Frequency             | 50 Hz         |

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|                   |             |
|-------------------|-------------|
| Voltage dip       | 70 %        |
| Number of periods | 25 periods  |
| Comments          | Criterion A |
| Voltage dip       | 40 %        |
| Number of periods | 10 periods  |
| Comments          | Criterion A |
| Voltage dip       | 0 %         |
| Number of periods | 1 period    |
| Comments          | Criterion A |

## Emitted interference

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

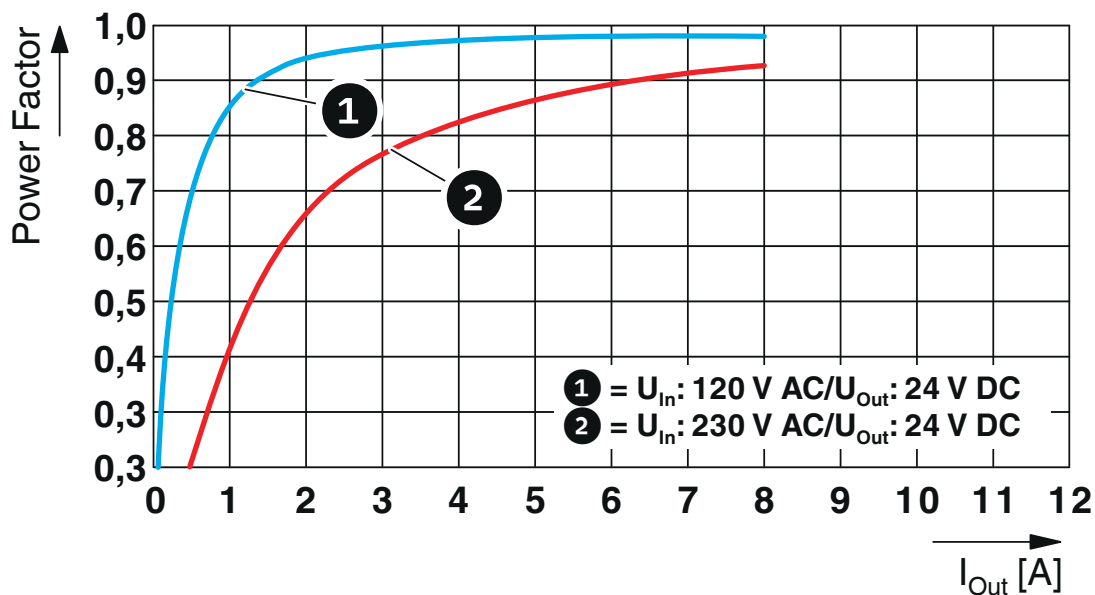
## Criteria

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



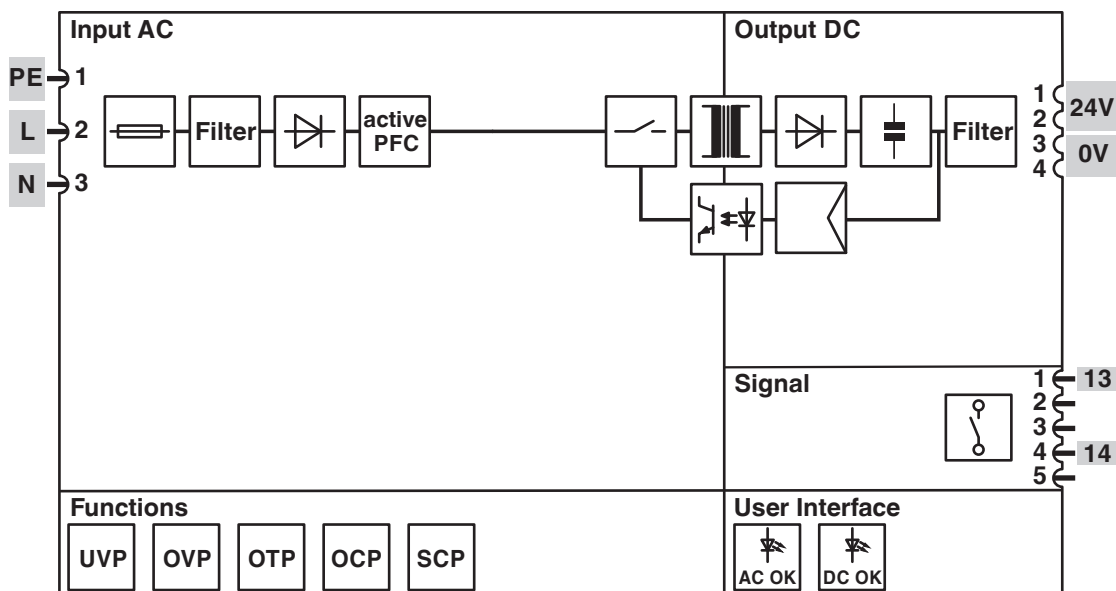
Drawings

Diagram



Power factor

Block diagram



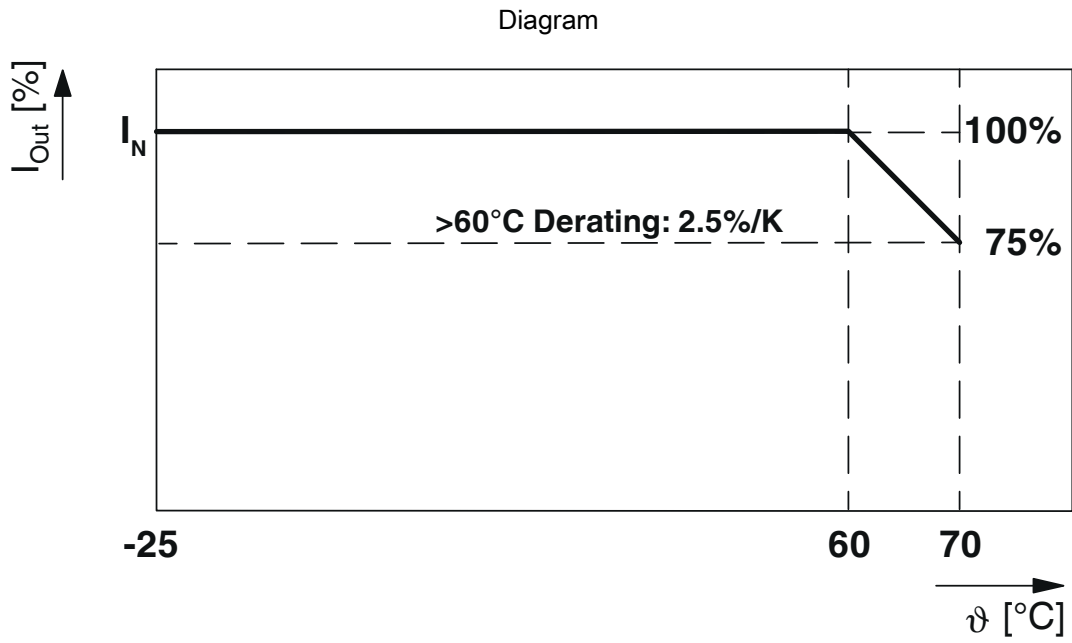
Block diagram

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Output current/ambient temperature

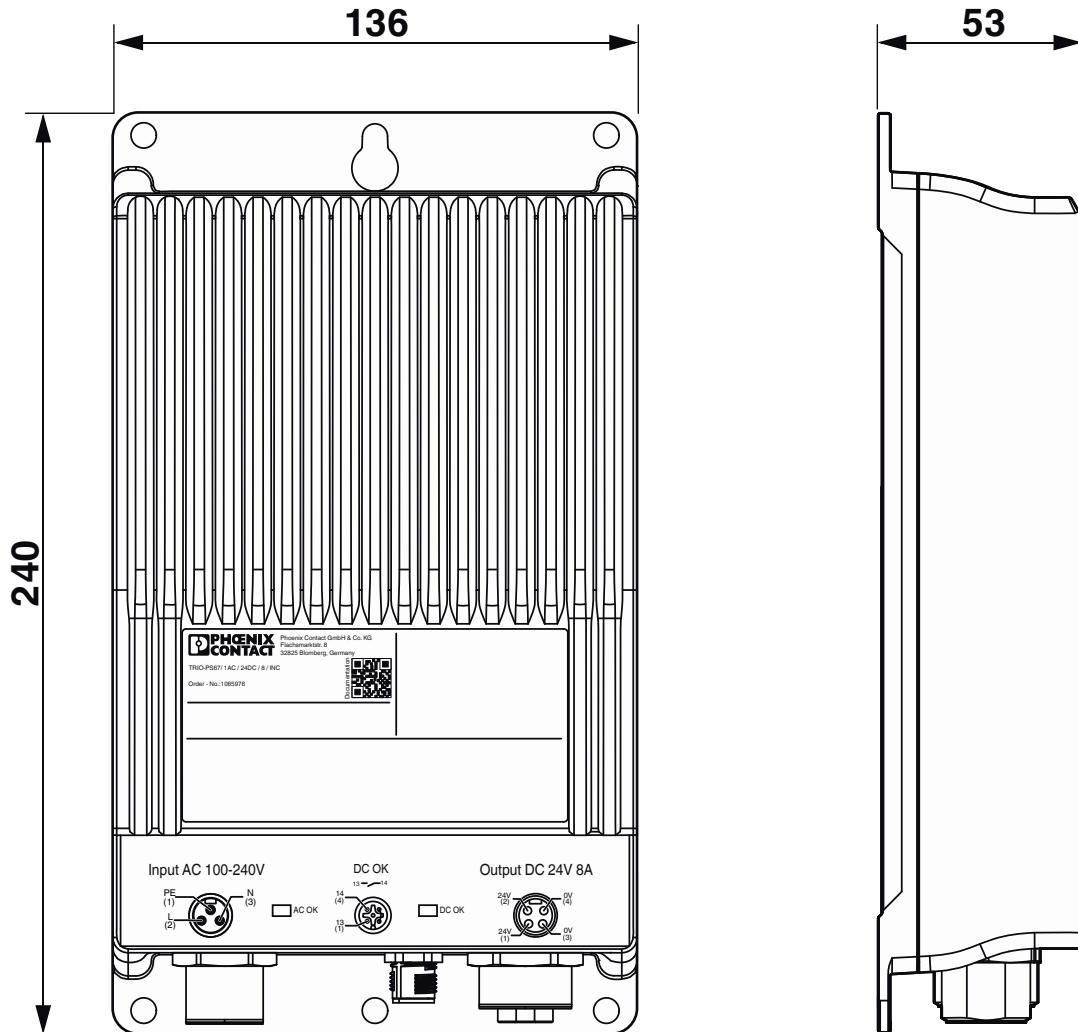
# TRIO-PS67/1AC/24DC/8/INC - Power supply unit



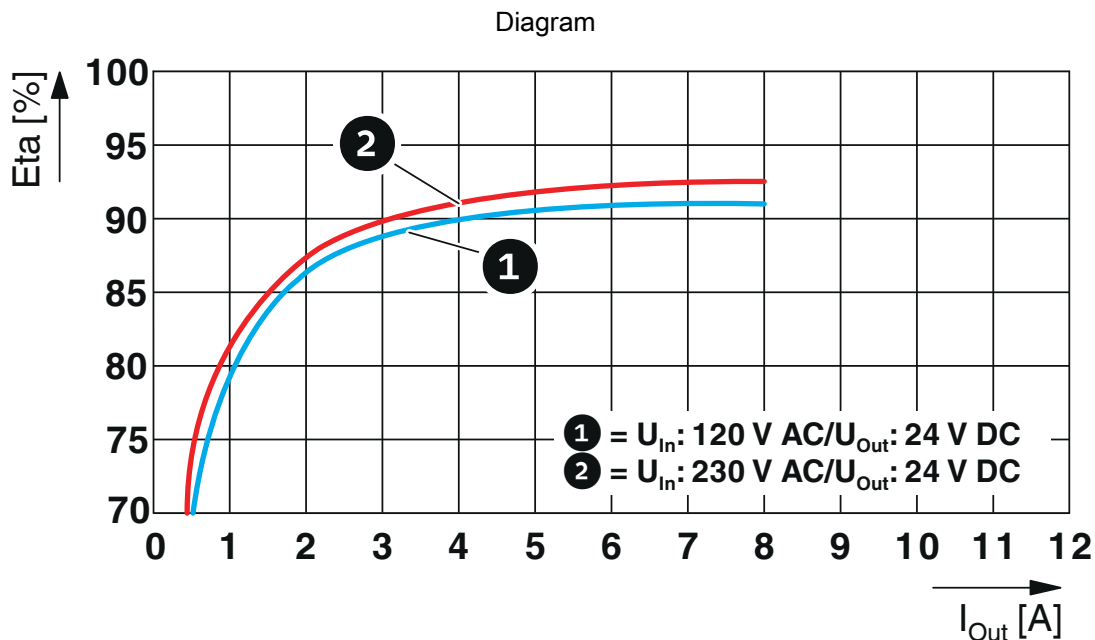
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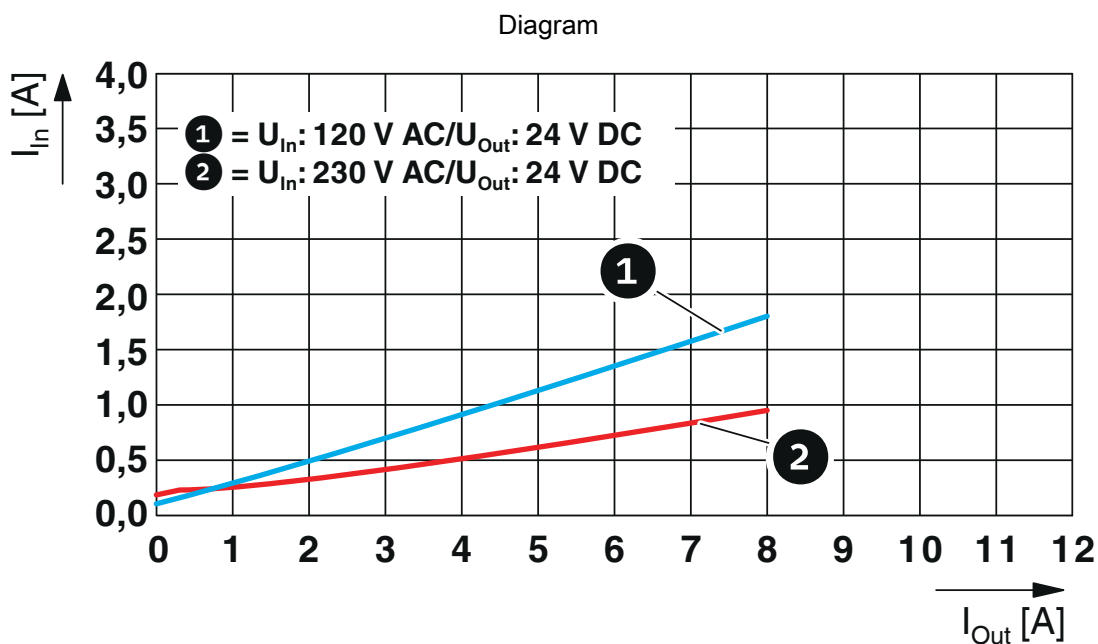
Dimensional drawing



Device dimensions (dimensions in mm)



Efficiency



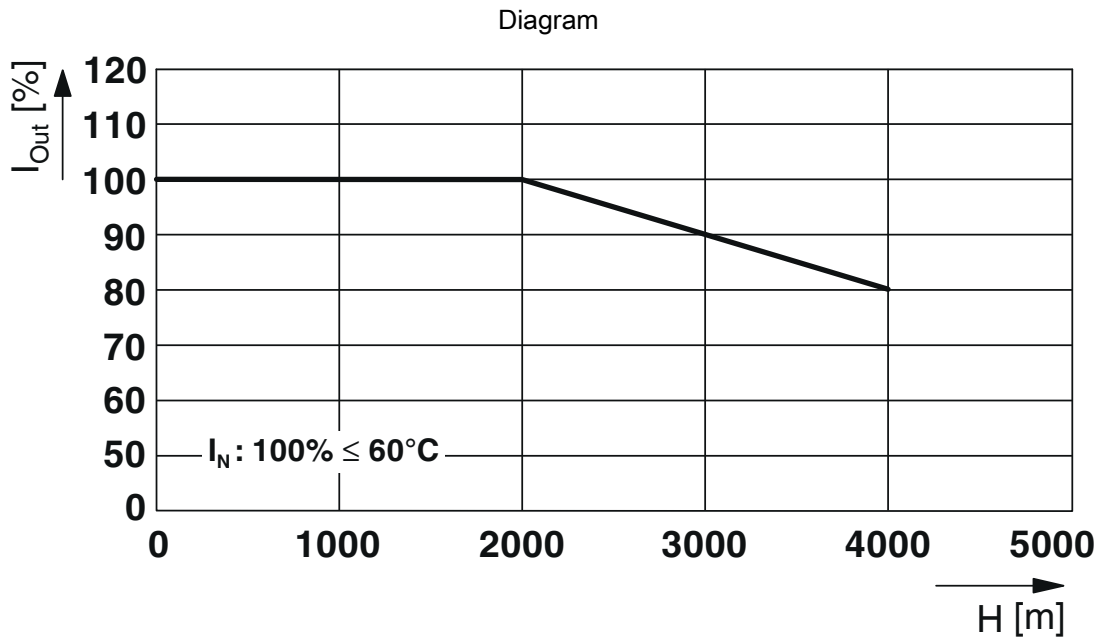
Input current/output current

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Output current/installation altitude

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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1065976>



### IECEE CB Scheme

Approval ID: DK-135371-A1-UL



### cULus Listed

Approval ID: FILE E 123528



### EAC

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

# TRIO-PS67/1AC/24DC/8/INC - 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 |
|-------------|----------|

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## Environmental product compliance

### EU RoHS

|   |                    |
|---|--------------------|
| Fulfills EU RoHS substance requirements | Yes                |
| Exemption                               | 6(c), 7(a), 7(c)-I |

### China RoHS

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

### EU REACH SVHC

|                                     |                                      |
|-------------------------------------|--------------------------------------|
| REACH candidate substance (CAS No.) | Lead(CAS: 7439-92-1)                 |
| SCIP                                | 8eff7996-8c21-4152-919e-5b5ba1f54916 |

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