

## Power supply unit - MINI-PS-100-240AC/24DC/1.5/EX - 2866653

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Primary-switched power supply MINI POWER for DIN rail mounting, input: 1-phase, output: 24 V DC/1,5 A, for the potentially explosive area

### Product Description

MINI POWER power supplies for MCR technology

In measurement and control technology (MCR), modular electronics housing has become the industry standard. MINI POWER is the power supply unit to go with it. The devices are flexible, thanks to special voltages and special versions.

### Your advantages

- ✓ Easy-maintenance connection technology thanks to keyed COMBICON connectors
- ✓ For supplying the supply voltage via the foot element (DIN rail connector) where AC voltages are available
- ✓ 100 ... 240 V AC nominal input voltage range
- ✓ 24 V DC output voltage
- ✓ For up to 60 MINI Analog modules
- ✓ For up to 1.5 A, secondary
- ✓ Status and error indication via diagnostic LEDs



### Key Commercial Data

|                                      |                                                                                                         |
|--------------------------------------|---------------------------------------------------------------------------------------------------------|
| Packing unit                         | 1 pc                                                                                                    |
| GTIN                                 | <br>4 046356 147989 |
| GTIN                                 | 4046356147989                                                                                           |
| Weight per Piece (excluding packing) | 293.600 g                                                                                               |
| Custom tariff number                 | 85044030                                                                                                |
| Country of origin                    | China                                                                                                   |

# Power supply unit - MINI-PS-100-240AC/24DC/1.5/EX - 2866653

## Technical data

### Dimensions

|                                  |               |
|----------------------------------|---------------|
| Width                            | 35 mm         |
| Height                           | 99 mm         |
| Depth                            | 95 mm         |
| Installation distance right/left | 0 mm / 0 mm   |
| Installation distance top/bottom | 50 mm / 50 mm |

### 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                             |
| Max. permissible relative humidity (operation) | 100 % (condensation permitted)               |
| Degree of pollution                            | 2                                            |

### Input data

|                                          |                                               |
|------------------------------------------|-----------------------------------------------|
| Nominal input voltage range              | 100 V AC ... 240 V AC                         |
| Input voltage range                      | 85 V AC ... 264 V AC                          |
| AC frequency range                       | 45 Hz ... 65 Hz                               |
| Current consumption                      | 0.75 A (120 V AC)                             |
|                                          | 0.45 A (230 V AC)                             |
| Nominal power consumption                | 88 VA                                         |
| Inrush current                           | < 15 A (typical)                              |
| Mains buffering time                     | typ. 35 ms (120 V AC)                         |
|                                          | typ. 150 ms (230 V AC)                        |
| Input fuse                               | 3.15 A (slow-blow, internal)                  |
| Recommended breaker for input protection | 6 A ... 16 A (AC: Characteristics B, C, D, K) |

### Output data

|                                      |                                             |
|--------------------------------------|---------------------------------------------|
| Nominal output voltage               | 24 V DC $\pm 1$ %                           |
| Nominal output current ( $I_N$ )     | 1.5 A (-25 °C ... 60 °C)                    |
| POWER BOOST ( $I_{Boost}$ )          | 2 A (-25 °C ... 40 °C)                      |
| Derating                             | 60 °C ... 70 °C (2.5%/K)                    |
| Connection in parallel               | Yes, for redundancy and increased capacity  |
| Connection in series                 | yes                                         |
| Feedback voltage resistance          | 35 V DC                                     |
| Residual ripple                      | < 40 mV <sub>pp</sub> (with nominal values) |
| Output power                         | 36 W                                        |
| Typical response time                | < 0.5 s                                     |
| Peak switching voltages nominal load | < 20 mV <sub>pp</sub> (20 MHz)              |

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## Technical data

### Output data

|                                                |       |
|------------------------------------------------|-------|
| Maximum power dissipation in no-load condition | 1.5 W |
| Power loss nominal load max.                   | 6.5 W |

### General

|                                 |                                                |
|---------------------------------|------------------------------------------------|
| Net weight                      | 0.25 kg                                        |
| Efficiency                      | > 84 % (for 230 V AC and nominal values)       |
| MTBF (IEC 61709, SN 29500)      | > 2789000 h (40 °C)                            |
| Insulation voltage input/output | 4 kV AC (type test)                            |
|                                 | 3 kV AC (routine test)                         |
| Insulation voltage input / PE   | 4 kV AC (type test)                            |
|                                 | 3 kV AC (routine test)                         |
| Degree of protection            | IP20                                           |
| Protection class                | II (in closed control cabinet)                 |
| Mounting position               | horizontal DIN rail NS 35, EN 60715            |
| Assembly instructions           | alignable: horizontally 0 mm, vertically 50 mm |

### Connection data, input

|                                       |                            |
|---------------------------------------|----------------------------|
| Connection method                     | Pluggable screw connection |
| Conductor cross section solid min.    | 0.2 mm <sup>2</sup>        |
| Conductor cross section solid 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>        |
| Conductor cross section AWG min.      | 24                         |
| Conductor cross section AWG max.      | 12                         |
| Screw thread                          | M3                         |

### Connection data, output

|                                       |                            |
|---------------------------------------|----------------------------|
| Connection method                     | Pluggable screw connection |
| Conductor cross section solid min.    | 0.2 mm <sup>2</sup>        |
| Conductor cross section solid 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>        |
| Conductor cross section AWG min.      | 24                         |
| Conductor cross section AWG max.      | 12                         |
| Screw thread                          | M3                         |

### Connection data for signaling

|                                    |                     |
|------------------------------------|---------------------|
| Conductor cross section solid min. | 0.5 mm <sup>2</sup> |
| Conductor cross section solid max. | 2.5 mm <sup>2</sup> |

## Power supply unit - MINI-PS-100-240AC/24DC/1.5/EX - 2866653

### Technical data

#### Connection data for signaling

|                                       |                     |
|---------------------------------------|---------------------|
| Conductor cross section flexible min. | 0.5 mm <sup>2</sup> |
| Conductor cross section flexible max. | 2.5 mm <sup>2</sup> |
| Conductor cross section AWG min.      | 24                  |
| Conductor cross section AWG max.      | 12                  |
| Screw thread                          | M4                  |

#### Standards

|                                                                                                                                  |                                         |
|----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|
| EMC requirements for noise immunity                                                                                              | EN 61000-6-1                            |
|                                                                                                                                  | EN 61000-6-2                            |
| EMC requirements for noise emission                                                                                              | EN 61000-6-3                            |
|                                                                                                                                  | EN 61000-6-4                            |
| Standard - Electrical safety                                                                                                     | EN 60950-1/VDE 0805 (SELV)              |
| Standard – Electronic equipment for use in electrical power installations and their assembly into electrical power installations | EN 50178/VDE 0160 (PELV)                |
| Standard – Safety extra-low voltage                                                                                              | EN 60950-1 (SELV) and EN 60204-1 (PELV) |
| Standard - Safe isolation                                                                                                        | DIN VDE 0100-410                        |
| Standard – Limitation of mains harmonic currents                                                                                 | EN 61000-3-2                            |
| Rail applications                                                                                                                | EN 50121-4                              |
| Standards/regulations                                                                                                            | EN 60079-0                              |

#### Conformance/approvals

|              |                               |
|--------------|-------------------------------|
| UL approvals | UL/C-UL listed UL 508         |
|              | UL/C-UL Recognized UL 60950-1 |

#### EMC data

|                               |                                           |
|-------------------------------|-------------------------------------------|
| Electromagnetic compatibility | Conformance with EMC Directive 2014/30/EU |
|-------------------------------|-------------------------------------------|

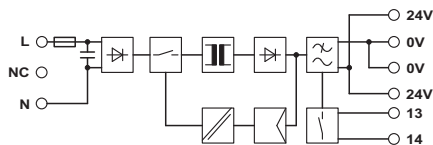
#### Environmental Product Compliance

|            |                                                                                                     |
|------------|-----------------------------------------------------------------------------------------------------|
| REACH SVHC | Lead 7439-92-1                                                                                      |
| China RoHS | Environmentally Friendly Use Period = 25;                                                           |
|            | For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration" |

### Drawings

## Power supply unit - MINI-PS-100-240AC/24DC/1.5/EX - 2866653

Block diagram



### Classifications

#### eCl@ss

|               |          |
|---------------|----------|
| eCl@ss 10.0.1 | 27040701 |
| eCl@ss 4.0    | 27040700 |
| eCl@ss 4.1    | 27040700 |
| eCl@ss 5.0    | 27049000 |
| eCl@ss 5.1    | 27049000 |
| eCl@ss 6.0    | 27049000 |
| eCl@ss 7.0    | 27049002 |
| eCl@ss 9.0    | 27040701 |

#### ETIM

|          |          |
|----------|----------|
| ETIM 2.0 | EC001039 |
| ETIM 3.0 | EC001039 |
| ETIM 4.0 | EC000599 |
| ETIM 6.0 | EC002540 |
| ETIM 7.0 | EC002540 |

#### UNSPSC

|               |          |
|---------------|----------|
| UNSPSC 6.01   | 30211502 |
| UNSPSC 7.0901 | 39121004 |
| UNSPSC 11     | 39121004 |
| UNSPSC 12.01  | 39121004 |
| UNSPSC 13.2   | 39121004 |
| UNSPSC 18.0   | 39121004 |
| UNSPSC 19.0   | 39121004 |
| UNSPSC 20.0   | 39121004 |
| UNSPSC 21.0   | 39121004 |

### Accessories

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## Power supply unit - MINI-PS-100-240AC/24DC/1.5/EX - 2866653

### Accessories

#### Device protection

Type 3 surge protection device - TTC-6P-T3-24DC-PT-I - 1027586



Type 3 surge protection, consisting of protective plug and base element, with integrated status indicator for 24 V DC power supplies

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#### DIN rail connector

DIN rail bus connectors - ME 17,5 TBUS 1,5/ 5-ST-3,81 GN - 2709561



DIN rail connector for DIN rail mounting. Universal for TBUS housing. Gold-plated contacts, 5-pos.