

NPST480-24

AC/DC Power Supply 3 phase input 24V 20A



■ Main Features

- High efficiency and compact size
- Active PFC
- Overload 150%
- Usable for application where low line voltage is often present

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TECHNICAL DATA

| Model type | NPST480-24 | |
|------------------------------------|--|--|
| OUTPUT DATA | | |
| Rated voltage | 24Vdc | |
| Adj. output voltage range | 23...28Vdc | |
| Continuous current | 20A | |
| Overload limit | 28A | |
| Short circuit peak current | 50A | |
| Load regulation | ≤ 1% | |
| Ripple & Noise ¹ | ≤ 50mVpp | |
| Hold up time | ≥ 20ms | |
| Protections | <ul style="list-style-type: none"> ▪ Overload, short circuit: Hiccup mode ▪ Thermal protection ▪ Output overvoltage | |
| Output overvoltage protection | ≥ 33Vdc | |
| Status Signals | <ul style="list-style-type: none"> ▪ DC OK - green LED ▪ OVERLOAD - red LED ▪ DC OK - dry contact (NO, 24Vdc / 1A) | |
| Parallel connection | Possible for redundancy (with external ORing module) | |
| INPUT DATA | | |
| Input AC rated voltage | Nominal: 3 phases, 400...500Vac (UL certified) | |
| Frequency | Range: 340...550Vac 47...63Hz | |
| Input DC rated voltage | 470...725Vdc | |
| Input AC rated current | 1.3A | |
| Vin = 400Vac | 1.1A | |
| Vin = 500Vac | | |
| Input DC rated current | 1.2A | |
| Vin = 470Vdc | 0.8A | |
| Vin = 725Vdc | | |
| Power factor correction | Active / > 0.9 | |
| Inrush peak current | ≤ 60A | |
| Touch (leakage) current | ≤ 0.5mA | |
| Internal protection fuse | None, external fuse must be provided | |
| Recommended external protection | Fuse 3x 6.3AT or 3x MCB 6A C curve or 3x 4A D curve It is strongly recommended to provide external surge arresters (SPD) according to local regulations. | |
| GENERAL DATA | | |
| Efficiency | > 92% | |
| Dissipated power | < 42W | |
| Operating temperature ² | - 40°C...+ 70°C UL certified up to 45°C | |
| Derating | -10W/°C over 45°C | |
| Storage temperature | - 40°C...+ 80°C | |
| Humidity | 5...95% r.H. non condensing | |
| Life time expectation | 65'496h (7.4 years) at 25°C ambient full load | |
| Overvoltage category | ▪ EN50178 | III |
| Pollution degree | ▪ IEC60664-1 | 2 |
| Protection Class | ▪ CLASS | I |
| Input / output isolation | 4.2kVdc | |
| Input / ground isolation | 2.2kVdc | |
| Output / ground isolation | 0.75kVdc | |
| Safety Standards | <ul style="list-style-type: none"> ▪ UL508 (certified E356563) ▪ EN60950 (reference) ▪ EN50178 (reference) | |
| EMC Emission | <ul style="list-style-type: none"> ▪ EN55011 (CISPR11) Class A ▪ EN55022 (CISPR22) Class A ▪ EN61000-3-2 Class A | |
| EMC Immunity | <ul style="list-style-type: none"> ▪ EN61000-4-2 Level 3 ▪ EN61000-4-3 Level 3 ▪ EN61000-4-4 Level 3 ▪ EN61000-4-5 Level 3 ▪ EN61000-4-11 Level 2 | |
| Protection degree | ▪ EN60529 | IP20 |
| Vibration sinusoidal | ▪ IEC 60068-2-6 | (5-17.8Hz: ±1.6mm; 17.8-500Hz: 2g 2hours / axis (X,Y,Z)) |
| Shock | ▪ IEC 60068-2-27 | (30g 6ms, 20g 11ms; 3 bumps / direction, 18 bumps total) |
| Connection terminals | 2.5mm ² , screw type pluggable (24...12AWG) | |
| Case material | Aluminum | |
| Weight | 1.0kg | |
| Size (W x H x D) | 73.0 x 140.0 x 125.0mm | |

1) Ripple and Noise are measured with 20MHz bandwidth, probe terminated with a 0.1µF MKP parallel capacitor.

2) Start-up type tested: - 40°C, possible at nominal voltage with load deration.

Notes:

- Technical parameters are typical, measured in laboratory environment at 25°C and 400Vac / 50Hz, at nominal values, after minimum 5 minutes of operation.

- Power rating, losses, efficiency, ripple, thermal behaviour and start-up may change outside of the nominal rated input range. Contact factory for details.

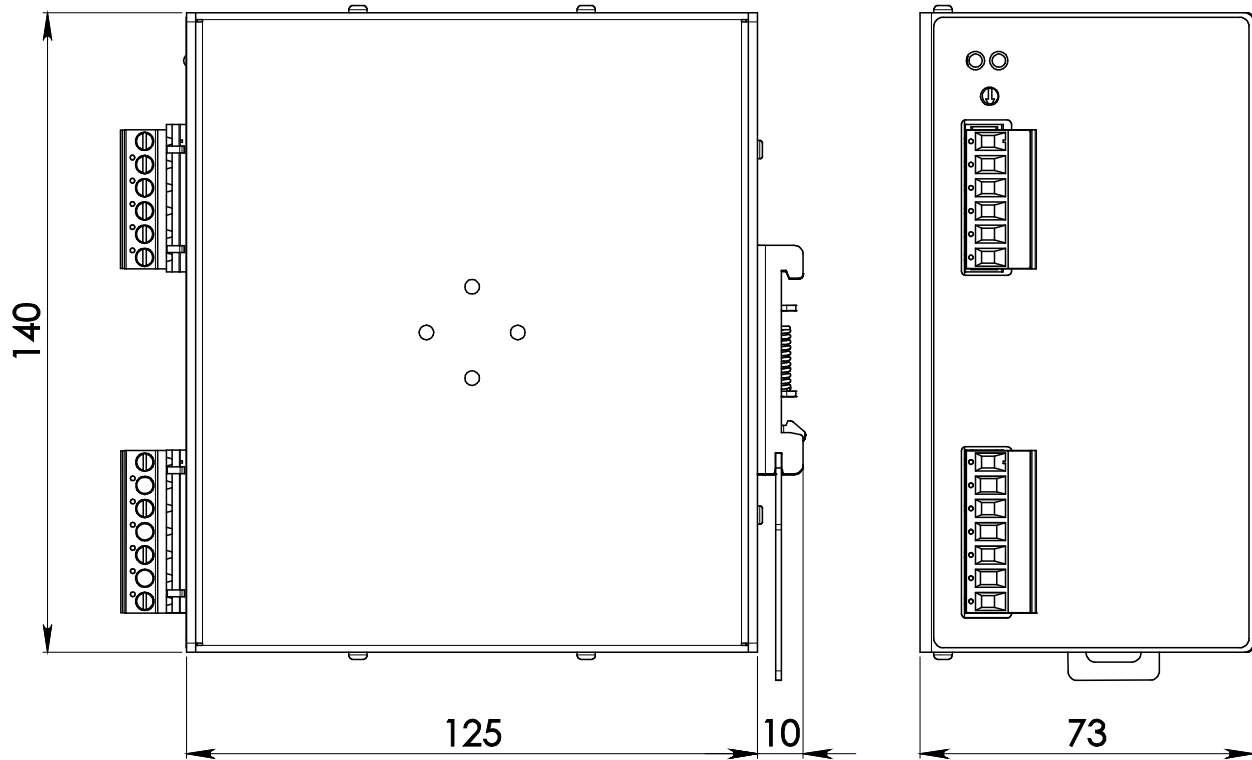
- Data may change without prior notice in order to improve the product.

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DIMENSIONS



CONNECTION



Input Connection:

3 phases:

- L1 = phase 1
- L2 = phase 2
- L3 = phase 3
- | = Earth ground

DC:

- L1 = + Positive DC
- L2 = - Negative DC
- L3 = do not connect
- | = Earth ground

Output Connection:

- + = Positive DC
- - = Negative DC

Signalling:

- DC OK: dry contact
- NO
- COM