■ *Main Features*

- High efficiency and compact size
- Active PFC
- Overload 140%
- Usable for application where low line voltage is often present

TECHNICAL DATA

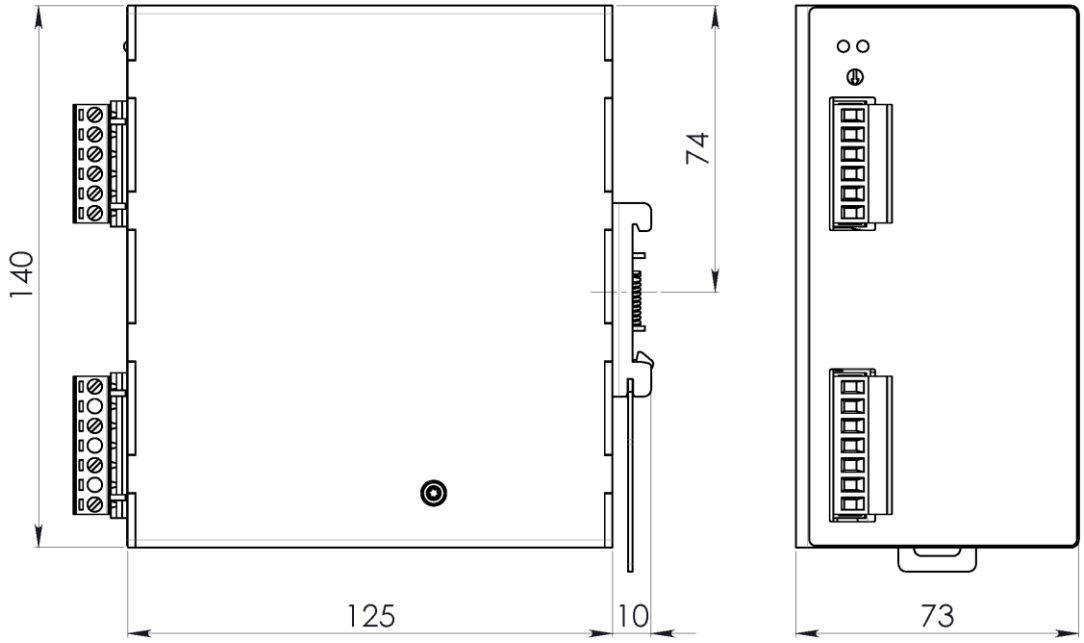
Model type	NPST480-24	
OUTPUT DATA		
Rated voltage	24Vdc	
Adj. output voltage range	23…28Vdc	
Continuous current	20A	
Overload limit	28A	
Short circuit peak current	50A	
Load regulation	≤ 1%	
Ripple & Noise[1]	≤ 50mVpp	
Hold up time	≥ 20ms	
Protections	▪ Overload, short circuit: Hiccup mode ▪ Thermal protection ▪ Output overvoltage	
Output overvoltage protection	≥ 33Vdc	
Status Signals	▪ **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 Frequency	Nominal: 3 phases, 400…500Vac (UL certified) Range: 340…550Vac 47...63Hz	
Input DC rated voltage	470...725Vdc	
Input AC rated current Vin = 400Vac Vin = 500Vac	 1.3A 1.1A	
Input DC rated current Vin = 470Vdc Vin = 725Vdc	 1.2A 0.8A	
Power factor correction	Active / > 0.9	
Inrush peak current[2] / I^2t	≤ 55A / 2.16A^2s	
Touch (leakage) current	≤ 0.5mA	
Internal protection fuse	None, external fuse must be provided	
Recommended external protection	Fuse 3x 6AT 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[3]	- 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	
MTBF	▪ MIL-HDBK-217F	> 500'000h at 25°C ambient full load
Overvoltage category Pollution degree	▪ EN50178 ▪ IEC60664-1	III 2
Protection Class	▪ CLASS	I
Input / output isolation	4.2kVdc	
Input / ground isolation	2.2kVdc	
Output / ground isolation	0.75kVdc	
Safety Standards	▪ UL508 ▪ UL61010-1 ▪ UL61010-2-201 ▪ IEC/EN61010-1 ▪ IEC/EN61010-2-201	(certified E356563) (certified E356563) (certified E356563)
EMC Emission	▪ EN55011 (CISPR11)	Class A
EMC Immunity	▪ EN61000-4-2 ▪ EN61000-4-3 ▪ EN61000-4-4 ▪ EN61000-4-5 ▪ EN61000-4-6 ▪ EN61000-4-8 ▪ EN61000-4-11	Level 3 (Air), Level 2 (Contact) Level 3 (80-1000MHz), Level 2 (1.4-6GHz) Level 3 Level 3 Level 3 Level 4 Level 2
Protection degree	▪ EN60529	IP20
Vibration sinuosoidal	▪ 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	2.5mm², 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) Peak current measured after 0.2ms from main connection; 400Vac/50Hz; Ambient temperature at 25°C; Cold Start.
3) 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.

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