

Technical Datasheet

TRETEC 2424 N



Switch mode power supply

NFPG 1529G03001

(TRETEC 2424 N)

1 Short description

The **TRETEC 2424 N** is a switch mode power supply of the latest generation, which is characterised by its high efficiency and the resulting minimum power losses. The device also works with power boost function (output $30\text{ A} \leq 5\text{ seconds}$ at 60°C). The **TRETEC N** can be operated in a redundant way. It is possible to connect the device in series (max. 2 units) and in parallel up to 3 units without decoupling module. Due to its modern design it can be operated with a peak current in temperatures up to 45°C without load reduction.

2 Technical Data

Input	
Input	3 x 360 V ... 500 VAC 2 x 380 V ... 500 VAC 500 V ... 700 VDC*
Voltage range	3 x 324 V ... 572 VAC 2 x 340 V ... 572 VAC 450 V ... 745 VDC*
Customer needs to use suitable external protection. DC operation is not included to UL approval	
Network	TN-S, TN-C, TT, IT grid (use only in star-architecture networks!)
Nominal frequency	50 / 60 Hz $\pm 6\%$
Nominal current	1,3 A @ 3 x 360 V AC 1,0 A @ 3 x 500 V AC
Efficiency	94,8 %
No load power losses	1,8 W
Recommended pre-fusing max.	Max. 3 x 32 A (T) in house installation
Recommended circuit breaker	3 x 6...32 A characteristics C
Output	
Voltage	24 VDC $\pm 1\%$
Voltage adjustable	24-28 VDC / Potentiometer in front plate
Residual ripple	< 20 mV eff / rms
Output current max. 45°C	24,0 A
Derating at 60°C	20,0 A
at 70°C	15,0 A
Ride-through	> 20 ms
"Power Boost" current	30 A > 5 s without voltage drop
Short circuit current	after "Power Boost" follows constant current: 24 A
Switching in parallel	3 devices
Switching in series	2 devices
Connection input	

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Elektrotechnik

Terminal strip	4 x 6 mm ² with Push-In spring-type terminals
Connection output	
Terminal strip	4 x 6 mm ² with Push-In spring-type terminals
Alarm contact	
Potential-free alarm contact for pre-warning at over-load, overheating or short-circuit	30 V AC/DC 50 mA (ohmic)
Over voltage protection	yes
Terminal strip	2 x 2,5 mm ² Push-In spring-type terminals
Classification of environmental conditions	class 3K3 according to EN 60721
Relative humidity	95%, no condensation
Environmental temperature	-40 ... +70 °C see Derating
Storage temperature	-40 ... +85 °C
MTBF according to DIN EN 61709:1999-01, SN 29500, DIN EN ISO 13849-1:2008-12	>950.000h
Housing	
Dimensions	143 x 65 x 162 mm (H x W x D)
Weight	1,2 kg
Protection class	I
IP protection	IP 20
Degree of pollution	2
Fixation	Snap-on mounting on DIN rail
Installation direction	vertical
Material	Aluminium and stainless steel

3 Norms and regulations

EN 61204-3
EN 55011 Klasse B, Gruppe 1
EN 61000-3-2
EN 61000-3-3
EN 61000-4-2 ESD
EN 61000-4-3 HF-Feld
EN 61000-4-4 Burst
EN 61000-4-5 Surge
EN 61000-4-6 HF-asymm
EN 61000-4-11
IEC 60068-2-6 Test Fc: Vibration
IEC 60068-2-27 Test Fa: Shock
EN 60204-1
EN 61010-1
EN 61010-2-201
EN 60204-1
SEMI F47 – 0706
EN 60664-1 Überspannungskategorie II

CE-approval according to EMI standard 2014/30/EU and low voltage standard 2014/35/EU and EU standard 2011/65/EU (RoHS - standard) of the European Parliament and of the European Council from 8th of June 2011 for the limitation of the use of certain dangerous material in electrical and electronic devices (amended version).