

Power supply unit - TRIO-PS/600DC/24DC/20 - 2866530

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DIN rail power supply unit, primary-switched, 1-phase, input: 600 V DC; output: 24 V DC/20 A

Product Description

TRIO POWER is the power supply unit for the DIN rail with basic functionality at the highest level. TRIO POWER, 600 V DC, 24 V DC is ideally suited for connection to 600 V DC intermediate circuits of frequency inverters: In the event of a line supply failure, 24 V loads are supplied using the kinetic energy of the motor.



Key commercial data

package_quantity	1
GTIN	4046356556163

Technical data

Dimensions

Width	115 mm
Height	130 mm
Depth	152.5 mm

Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-25 °C ... 70 °C (> 55° C derating)
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Max. permissible relative humidity (operation)	≤ 95 % (at 25 °C, no condensation)
Noise immunity	EN 61000-6-2:2005

Input data

Nominal input voltage range	600 V DC
Input voltage range DC	450 V DC ... 840 V DC (Dielectric strength up to 900 V DC)
Frequency range DC	0 Hz
Current consumption	0.9 A (600 V DC)
Inrush surge current	< 26 A
Power failure bypass	> 15 ms (600 V DC)
Type of protection	Transient surge protection
Protective circuit/component	Varistor

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Output data

Nominal output voltage	24 V DC \pm 1%
Setting range of the output voltage	22.5 V DC ... 29.5 V DC ($U_{IN} > 475$ V DC)
Setting range of the output voltage	22.5 V DC ... 28 V DC ($U_{IN} \leq 475$ V DC)
Output current	20 A (-25°C ... 55°C)
Derating	55 °C ... 70 °C (2.5%/K)
Connection in parallel	Yes, for redundancy and increased capacity
Connection in series	Yes
Max. capacitive load	Unlimited
Current limitation	Approx. 25 A (for short-circuit)
Control deviation	< 1 % (change in load, static 10% ... 90%)
Control deviation	< 2 % (change in load, dynamic 10% ... 90%)
Control deviation	< 0.1 % (change in input voltage \pm 10%)
Residual ripple	< 40 mV _{PP}
Peak switching voltages nominal load	< 10 mV _{PP}
Maximum power dissipation NO-Load	3.8 W
Power loss nominal load max.	45 W

General

Net weight	2 kg
Efficiency	> 91 % (With 600 V DC and nominal values)
Insulation voltage input/output	4 kV AC (type test)
Insulation voltage input/output	2 kV AC (routine test)
Protection class	I, with PE connection
MTBF (IEC 61709, SN 29500)	> 701147 h (According to EN 29500)
Mounting position	horizontal DIN rail NS 35, EN 60715
Assembly instructions	Can be aligned: Horizontally 0 mm, vertically 50 mm
Electromagnetic compatibility	Conformance with EMC Directive 2004/108/EC
Low Voltage Directive	Conformance with LV directive 2006/95/EC
Standard – Electrical equipment of machines	EN 60204
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)
Standard – Safety extra-low voltage	EN 60204 (PELV)
Standard - Safe isolation	DIN VDE 0100-410
Standard - Safe isolation	DIN VDE 0106-1010
Standard – Protection against electric shock	DIN 57100-410
Standard – Protection against shock currents, basic requirements for protective separation in electrical equipment	DIN VDE 0106-101
Standard – Limitation of mains harmonic currents	EN 61000-3-2
UL approvals	UL/C-UL listed UL 508
UL approvals	UL/C-UL Recognized UL 60950

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Technical data

General

Surge voltage category	III
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Connection data, input

Connection method	Screw connection
Conductor cross section solid min.	0.2 mm ²
Conductor cross section solid max.	2.5 mm ²
Conductor cross section stranded min.	0.2 mm ²
Conductor cross section stranded max.	2.5 mm ²
Conductor cross section AWG/kcmil min.	24
Conductor cross section AWG/kcmil max	14
Stripping length	9 mm
Screw thread	M2,5

Connection data, output

Connection method	Screw connection
Conductor cross section solid min.	0.5 mm ²
Conductor cross section solid max.	6 mm ²
Conductor cross section stranded min.	0.5 mm ²
Conductor cross section stranded max.	4 mm ²
Conductor cross section AWG/kcmil min.	12
Conductor cross section AWG/kcmil max	10
Stripping length	14 mm

Signaling

Status display	"DC OK" LED green
Note on status display	U _{OUT} > 21.5 V: LED lights up

classifications

eCl@ss

eCl@ss 4.0	27040702
eCl@ss 4.1	27040702
eCl@ss 5.0	27049002
eCl@ss 5.1	27049002
eCl@ss 6.0	27049002
eCl@ss 7.0	27049002
eCl@ss 8.0	27049002

ETIM

ETIM 3.0	EC001039
ETIM 4.0	EC000599
ETIM 5.0	EC002540

UNSPSC

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classifications

UNSPSC

UNSPSC 6.01	30211502
UNSPSC 7.0901	39121004
UNSPSC 11	39121004
UNSPSC 12.01	39121004
UNSPSC 13.2	39121004

approvals

UL Recognized / UL Listed / cUL Recognized / cUL Listed / cULus Recognized / cULus Listed /

Approval details

UL Recognized

UL Listed

cUL Recognized

cUL Listed

cULus Recognized

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accessories

Assembly adapter

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accessories

UWA 182/52 - 2938235

Mounting rail adapter

UTA 107 - 2853983



Drawings

Block diagram

