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DC/DC converters - QUINT-PS/24DC/24DC/10 - 2320092

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Primary-switched QUINT DC/DC converter for DIN rail mounting with SFB (Selective Fuse Breaking) Technology, input: 24 V DC, output: 24 V DC/10 A

Product Description

QUINT DC/DC converter with maximum functionality

DC/DC converters alter the voltage level, regenerate the voltage at the end of long cables or enable the creation of independent supply systems by means of electrical isolation.

QUINT DC/DC converters magnetically and therefore quickly trip circuit breakers with six times the nominal current, for selective and therefore cost-effective system protection. The high level of system availability is additionally ensured, thanks to preventive function monitoring, as it reports critical operating states before errors occur.

Why buy this product

- Reliable starting of difficult loads, thanks to the static POWER BOOST power reserve with up to 125% nominal current permanently
- Preventive function monitoring indicates critical operating states before errors occur
- Electrical isolation: for setting up independent supply systems
- Constant voltage: output voltage regenerated even at the end of long cables
- Support conversion to various voltage levels



Key Commercial Data

Packing unit	1 STK
GTIN	4 046356 481885

Technical data

Dimensions

Width	48 mm
Height	130 mm
Depth	125 mm
Width with alternative assembly	122 mm
Height with alternative assembly	130 mm
Depth with alternative assembly	51 mm

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Technical data

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)	≤ 95 % (at 25 °C, non-condensing)
Noise immunity	EN 61000-6-2:2005

Input data

Nominal input voltage range	24 V DC
Input voltage range	18 V DC ... 32 V DC
Inrush surge current	< 15 A (typical)
Power failure bypass	> 12 ms (24 V DC)
Input fuse	25 A (internal (device protection))
Choice of suitable circuit breakers	16 A ... 20 A (Characteristics B, C, D, K)
Type of protection	Transient surge protection
Protective circuit/component	Varistor

Output data

Nominal output voltage	24 V DC ±1 %
Setting range of the output voltage	18 V DC ... 29.5 V DC (> 24 V DC, constant capacity restricted)
Nominal output current	10 A (-25 °C ... 60 °C)
POWER BOOST (I_{Boost})	12.5 A (-25 °C ... 40 °C permanent, $U_{OUT} = 24$ V DC)
Selective Fuse Breaking (I_{SFB})	60 A (12 ms)
Derating	60 °C ... 70 °C (2.5%/K)
Connection in parallel	Yes, for redundancy and increased capacity
Connection in series	Yes
Max. capacitive load	Unlimited
Active current limitation	Approx. 18 A
Control deviation	< 1 % (change in load, static 10 % ... 90 %)
	< 2 % (change in load, dynamic 10 % ... 90 %)
	< 0.1 % (change in input voltage ±10 %)
Residual ripple	< 20 mV _{PP}
Peak switching voltages nominal load	< 10 mV _{PP} (20 MHz)
Maximum power dissipation in no-load condition	1.6 W
Power loss nominal load max.	24 W

General

Net weight	0.9 kg
Efficiency	> 92 %
Insulation voltage input/output	1.5 kV (type test)
	1 kV (routine test)
Protection class	III
	> 763000 h (40 °C)

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Technical data

General

Mounting position	horizontal DIN rail NS 35, EN 60715
Assembly instructions	Alignable: 5 mm horizontally, 15 mm next to active components, 50 mm vertically

Connection data, input

Connection method	Pluggable screw connection
Conductor cross section solid min.	0.2 mm ²
Conductor cross section solid max.	2.5 mm ²
Conductor cross section flexible min.	0.2 mm ²
Conductor cross section flexible max.	2.5 mm ²
Conductor cross section AWG min.	24
Conductor cross section AWG max.	12
Stripping length	8 mm
Screw thread	M3

Connection data, output

Connection method	Pluggable screw connection
Conductor cross section solid min.	0.2 mm ²
Conductor cross section solid max.	2.5 mm ²
Conductor cross section flexible min.	0.2 mm ²
Conductor cross section flexible max.	2.5 mm ²
Conductor cross section AWG min.	24
Conductor cross section AWG max.	12
Stripping length	7 mm
Screw thread	M3

Connection data for signaling

Conductor cross section solid min.	0.2 mm ²
Conductor cross section solid max.	2.5 mm ²
Conductor cross section flexible min.	0.2 mm ²
Conductor cross section flexible max.	2.5 mm ²
Conductor cross section AWG min.	24
Conductor cross section AWG max.	12
Screw thread	M3

Standards and Regulations

Electromagnetic compatibility	Conformance with EMC Directive 2004/108/EC
Shock	30g in each direction, according to IEC 60068-2-27
Noise immunity	EN 61000-6-2:2005
Connection in acc. with standard	CUL
Standards/regulations	EN 61000-4-3
	EN 61000-4-4
	EN 61000-4-6

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Standards and Regulations

Standard – Electrical equipment of machines	EN 60204-1
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)
	EN 60204 (PELV)
Standard - Safe isolation	DIN VDE 0100-410
Shipbuilding approval	Germanischer Lloyd (EMC 1)
UL approvals	UL/C-UL listed UL 508
	UL/C-UL Recognized UL 60950
	UL ANSI/ISA-12.12.01 Class I, Division 2, Groups A, B, C, D (Hazardous Location)
Vibration (operation)	< 5 Hz, amplitude ±1.6 mm (according to IEC 60068-2-6)
Rail applications	EN 50121-4

Classifications

eCl@ss

eCl@ss 4.0	27250311
eCl@ss 4.1	27250311
eCl@ss 5.0	27242213
eCl@ss 5.1	27242213
eCl@ss 6.0	27049005
eCl@ss 7.0	27049005
eCl@ss 8.0	27210901

ETIM

ETIM 4.0	EC002542
ETIM 5.0	EC002046

UNSPSC

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

Approvals

Approvals

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Approvals

Approvals

UL Recognized / UL Listed / cUL Recognized / cUL Listed / IEC CB Scheme / GL / ABS / BV / RINA / NK / LR / DNV / EAC / EAC / cULus Recognized / cULus Listed

Ex Approvals

UL Listed / cUL Listed / cULus Listed

Approvals submitted

Approval details

UL Recognized

UL Listed

cUL Recognized

cUL Listed

IECEE CB Scheme

GL

ABS

BV

RINA

NK

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Approvals

LR

DNV	
mm ² /AWG/kcmil	4
Nominal current I _N	15 A
Nominal voltage U _N	750 V

EAC

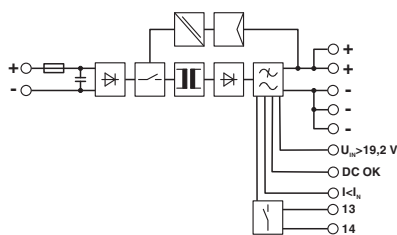
EAC

cULus Recognized

cULus Listed

Drawings

Block diagram



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Product	Code	Reference	Product link
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