Buffer module - QUINT-BUFFER/24DC/20 - 2866213

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Buffer module 24 V DC/20 A, maintenance-free energy storage device on a capacitor basis. In the download area, there is a clearly arranged selection table available with load currents and buffer times, as well as charging times after buffer mode.

Product Description

Short-term mains interruptions are bridged by QUINT BUFFER, a maintenance-free buffer module on a capacitor basis. Systems can therefore also run in unstable networks or are, in the event of failures of a longer duration, correctly shut down after all relevant process data is saved. The bridging time is 200 ms at 20 A and 4 s at 1 A. The buffer module also acts as a energy storage device for peak loads and for triggering fuses. For function monitoring, an active switching output and a control lamp are used. With the integrated diode, loads can be divided into buffered and unbuffered loads. Thus, the buffer period is extended and the buffered consumers are protected against errors in the internal network.

RoHS



Key Commercial Data

Packing unit	1 pc
GTIN	4 017918 959739
GTIN	4017918959739
Weight per Piece (excluding packing)	1,140.000 g
Custom tariff number	85049090
Country of origin	China

Technical data

Dimensions

Width	64 mm
Height	130 mm
Depth	125 mm
Width with alternative assembly	122 mm
Height with alternative assembly	130 mm
Depth with alternative assembly	67 mm

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Technical data

Dimensions

Installation distance right/left	5 mm / 5 mm
Installation distance top/bottom	50 mm / 50 mm

Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-25 °C ... 70 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Max. permissible relative humidity (operation)	≤ 95 % (at 25 °C, non-condensing)
Climatic class	3K3 (in acc. with EN 60721)
Degree of pollution	2
Installation height	≤ 2000 m

Input data

Nominal input voltage	24 V DC
Input voltage range	22.5 V DC ... 30 V DC
Current consumption	approx. 0.1 A
	0.6 A (charging process)
	20.6 A (max.)
Current consumption (maximum)	20.6 A (max.)
Current consumption (idle)	approx. 0.1 A
Current consumption (charging process)	0.6 A (charging process)
Buffer period	0.2 s (20 A)
	4 s (1 A)
Type of protection	Transient surge protection
Protective circuit/component	Suppressor diode, 35 V DC

Output data

Nominal output voltage	24 V DC (depending on the input voltage)
Setting range of the output voltage (U_{Set})	22 V DC ... 28.5 V DC
Nominal output current (I_N)	20 A
Connection in parallel	Yes, for increasing the buffer time and for redundancy
Connection in series	yes
Feedback voltage resistance	< 35 V DC (buffer mode)
Protection against overvoltage at the output (OVP)	< 35 V DC
Residual ripple	< 100 mV_{PP} (buffer mode)
Output power	480 W
Peak switching voltages nominal load	< 100 mV_{PP} (20 MHz)
Type of protection	Transient surge protection
Protective circuit/component	Suppressor diode, 35 V DC

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Technical data

General

IQ technology	no
Net weight	1 kg
Memory medium	Internal, capacity
Operating voltage display	Green LED
Efficiency	> 95 %
MTBF (IEC 61709, SN 29500)	> 500000 h
Insulation voltage input/output	1 kV (routine test)
	1 kV (type test)
Degree of protection	IP20
Protection class	III
Mounting position	horizontal DIN rail NS 35, EN 60715
Assembly instructions	alignable: horizontally 0 mm, vertically 50 mm

Connection data, input

Connection method	Screw connection
Conductor cross section solid min.	0.5 mm²
Conductor cross section solid max.	16 mm²
Conductor cross section flexible min.	0.5 mm²
Conductor cross section flexible max.	10 mm²
Conductor cross section AWG min.	20
Conductor cross section AWG max.	6
Stripping length	10 mm
Screw thread	M4

Connection data, output

Connection method	Screw connection
Conductor cross section solid min.	0.5 mm²
Conductor cross section solid max.	16 mm²
Conductor cross section flexible min.	0.5 mm²
Conductor cross section flexible max.	10 mm²
Conductor cross section AWG min.	20
Conductor cross section AWG max.	6
Stripping length	10 mm
Screw thread	M4

Signaling

Output name	Active (high = buffer module is loaded)
Output description	Power Good
Maximum switching voltage	≤ 24 V

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Technical data

Signaling

Output voltage	+ 24 V
Continuous load current	≤ 20 mA
Status display	LED "Power Good", green
Note on status display	Buffer module is loaded: LED ON
Conductor cross section solid min.	0.2 mm²
Conductor cross section solid max.	2.5 mm²
Conductor cross section flexible min.	0.2 mm²
Conductor cross section flexible max.	2.5 mm²
Conductor cross section AWG min.	24
Conductor cross section AWG max.	12
Tightening torque, min	0.5 Nm
Tightening torque max	0.6 Nm
Screw thread	M3

Standards and Regulations

Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
Noise emission	EN 55011 (EN 55022)
Noise immunity	EN 61000-6-2:2005
Connection in acc. with standard	CUL
Standards/regulations	EN 61000-4-2
Contact discharge	8 kV
Standards/regulations	EN 61000-4-3
Frequency range	80 MHz ... 1 GHz
Test field strength	10 V/m
Standards/regulations	EN 61000-4-4
Comments	Criterion B
Standards/regulations	EN 61000-6-3
	EN 61000-4-6
Frequency range	0.15 MHz ... 80 MHz
Voltage	10 V
Standards/regulations	EN 61000-4-11
Low Voltage Directive	Conformance with Low Voltage Directive 2014/35/EC
Standard - Safety of transformers	EN 61558-2-17
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) and EN 60204 (PELV)
Standard - Safe isolation	DIN VDE 0106-101

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Technical data

Standards and Regulations

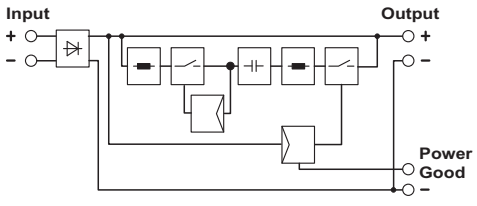
Shipbuilding approval	DNV GL (EMC A), ABS
UL approvals	UL/C-UL listed UL 508
	UL/C-UL Recognized UL 60950-1
	UL/C-UL Listed UL 1604 Class I, Division 2, Groups A, B, C, D
Shock	18 ms, 30g, in each space direction (according to IEC 60068-2-27)
Vibration (operation)	< 15 Hz, amplitude ±2.5 mm (according to IEC 60068-2-6)
	15 Hz ... 150 Hz, 2.3g, 90 min.

Environmental Product Compliance

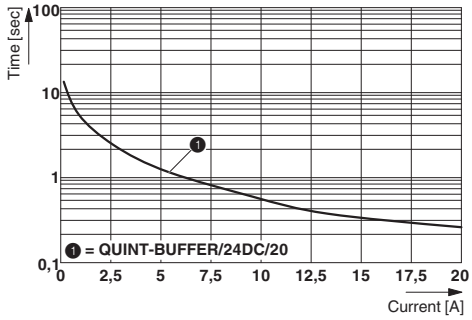
REACh SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 25;
	For details about hazardous substances go to tab “Downloads”, Category “Manufacturer's declaration”

Drawings

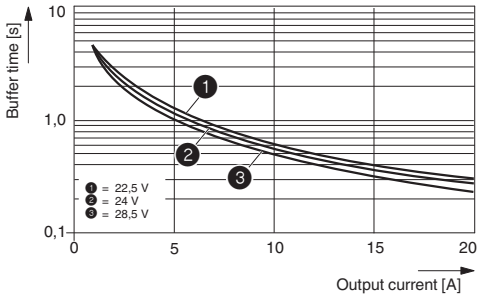
Block diagram



Diagram



Diagram



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Classifications

eCl@ss

eCl@ss 4.0	27040600
eCl@ss 4.1	27040600
eCl@ss 5.0	34174000
eCl@ss 5.1	34174000
eCl@ss 6.0	27049200
eCl@ss 7.0	27049201
eCl@ss 8.0	27049201
eCl@ss 9.0	27049201

ETIM

ETIM 2.0	EC001039
ETIM 3.0	EC001039
ETIM 4.0	EC000599
ETIM 5.0	EC000382
ETIM 6.0	EC002850
ETIM 7.0	EC002850

UNSPSC

UNSPSC 6.01	30211510
UNSPSC 7.0901	39121011
UNSPSC 11	39121011
UNSPSC 12.01	39121011
UNSPSC 13.2	39121011
UNSPSC 18.0	26111710
UNSPSC 19.0	26111710
UNSPSC 20.0	26111710
UNSPSC 21.0	26111710

Approvals

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GL / EAC / EAC / UL Recognized / cUL Recognized / UL Listed / cUL Listed / cULus Recognized / cULus Listed

Ex Approvals

UL Listed / cUL Listed / cULus Listed

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Approvals

Approval details

GL		https://approvalfinder.dnvgl.com/	TAA00002EW
EAC			EAC-Zulassung
EAC			RU*DE*08.B.01873/19
UL Recognized		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 211944
cUL Recognized		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 211944
UL Listed		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 123528
cUL Listed		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 123528
cULus Recognized			
cULus Listed			

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Accessories

Accessories

Assembly adapter

Assembly adapters - UWA 182/52 - 2938235



Universal wall adapter for securely mounting the device in the event of strong vibrations. The device is screwed directly onto the mounting surface. The universal wall adapter is attached on the top/bottom.

Assembly adapters - QUINT-PS-ADAPTERS7/2 - 2938206



Assembly adapter for QUINT POWER 10A on S7-300 rail

Mounting rail adapter

DIN rail adapter - UTA 107 - 2853983



Universal DIN rail adapter, for screwing on switchgear

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