

## 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.



### Key Commercial Data

Packing unit	1 pc
GTIN	
GTIN	4017918959739

### 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

#### 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)

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## Technical data

### Ambient conditions

Degree of pollution	2
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### 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 resistance	< 35 V DC (buffer mode)
Protection against surge voltage on the output	Yes, limited to approx. 35 V DC
Residual ripple	< 100 mV <sub>PP</sub> (buffer mode)
Output power	480 W
Peak switching voltages nominal load	< 100 mV <sub>PP</sub> (20 MHz)
Type of protection	Transient surge protection
Protective circuit/component	Suppressor diode, 35 V DC

### General

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

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## Technical data

### General

Assembly instructions	alignable: horizontally 0 mm, vertically 50 mm
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### Connection data, input

Connection method	Screw connection
Conductor cross section solid min.	0.5 mm <sup>2</sup>
Conductor cross section solid max.	16 mm <sup>2</sup>
Conductor cross section flexible min.	0.5 mm <sup>2</sup>
Conductor cross section flexible max.	10 mm <sup>2</sup>
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 mm <sup>2</sup>
Conductor cross section solid max.	16 mm <sup>2</sup>
Conductor cross section flexible min.	0.5 mm <sup>2</sup>
Conductor cross section flexible max.	10 mm <sup>2</sup>
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
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 mm <sup>2</sup>
Conductor cross section solid max.	2.5 mm <sup>2</sup>
Conductor cross section flexible min.	0.2 mm <sup>2</sup>
Conductor cross section flexible max.	2.5 mm <sup>2</sup>
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

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## Technical data

### 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 LV directive 2006/95/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
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.

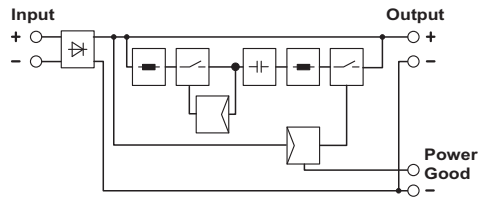
### Environmental Product Compliance

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"

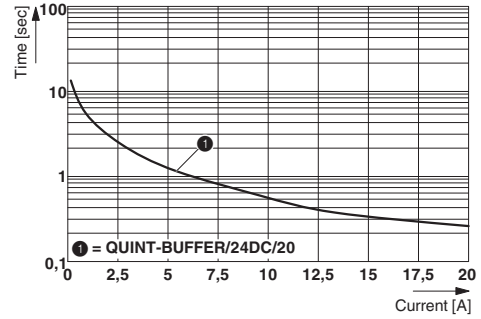
## Drawings

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

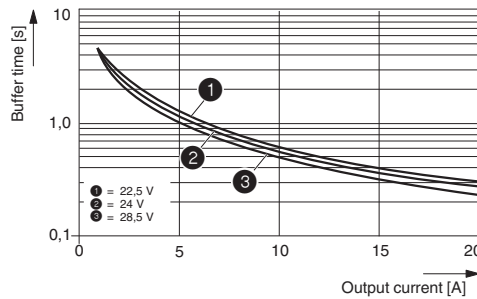
Block diagram



Diagram



Diagram



## Approvals

### Approvals

#### Approvals

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

#### Ex Approvals

UL Listed / cUL Listed / cULus Listed


### Approval details


ABS		<a href="http://www.eagle.org/eagleExternalPortalWEB/">http://www.eagle.org/eagleExternalPortalWEB/</a>	15-HG1369922-PDA-DUB
DNV		<a href="http://exchange.dnv.com/tari/">http://exchange.dnv.com/tari/</a>	E-13905
GL		<a href="http://exchange.dnv.com/tari/">http://exchange.dnv.com/tari/</a>	20582-04 HH


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## Approvals

ABS	<a href="http://www.eagle.org/eagleExternalPortalWEB/">http://www.eagle.org/eagleExternalPortalWEB/</a>	15-HG1369922-PDA
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UL Listed		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 123528
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UL Recognized		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 211944
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cUL Recognized		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 211944
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cUL Listed		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 123528
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EAC		EAC-Zulassung
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EAC		RU C- DE.A*30.B.01082
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cULus Recognized	
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cULus Listed	
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