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BUFFER MODULE, 24 V DC

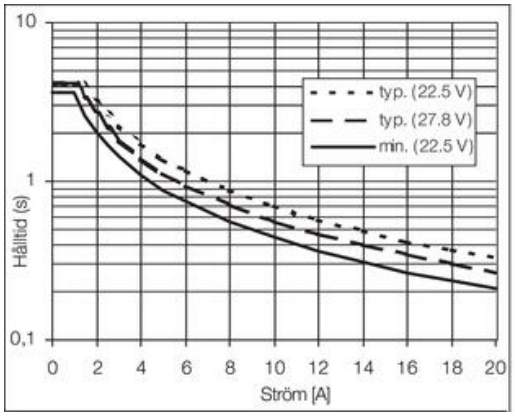
UF20.241
Buffer Module 24V dc I/P 24V dc 20A O/P

- Overcomes temporary power failures
- Manages 20 A/24 V DC for 200 ms
- Status outputs
- Maintenance-free

PRODUCT DESCRIPTION

The buffer module is connected in parallel with the power supply unit's 24 V dc output and is changed with a capacitor bank. If the primary voltage of the power supply unit falls to zero and the output voltage falls to 22.5 V dc, the buffer module is automatically switched in and overcomes the power failure. The buffer module can supply 20 A/24 V dc for 200 ms; if the load current is lower, the time increases. When connecting two modules in parallel, the time is doubled up to 20 A, alternatively, up to 40 A power supply can be connected for 200 ms. There are two status inputs that indicate when the buffer module is ready to discharge and when it is active. Additionally, there is an input for disconnection of the module for safety circuits and service, for example. A LED on the front shows the status. The buffer module requires no maintenance in that it lacks a battery and fits all applications for which one wants to avoid stops due to temporary power failures. Available for both the Dimension and Silverline series.

V -1 V must be used if working with voltages higher than 24 V dc, such as for compensation of voltage drops in cables. The module will then be activated when the voltage falls -1 V beneath the set voltage, faster than 0.54 V/s. (If the fall time is slower than 0.54 V/s, the buffer module is connected when the voltage reaches 22.5 V dc.)



Discharge curve

TECHNICAL DATA

INPUT DATA

Input voltage from the unit	24 V DC
Input current during charging	0.6 A

OUTPUT DATA

Output current in buffer mode max	20 A
Output current at 24 V dc	20 A
Output voltage normal operation	24 V DC
Output voltage at buffering	22.5 V DC
Output current during operation max	20 A

EFFICIENCY / LIFETIME / MTBF

Efficiency	99 %
Life span	166 000 h @ 40 °C, stand-by mode
MTBF (IEC 61709)	2 327 000 h @ 40 °C, stand-by mode

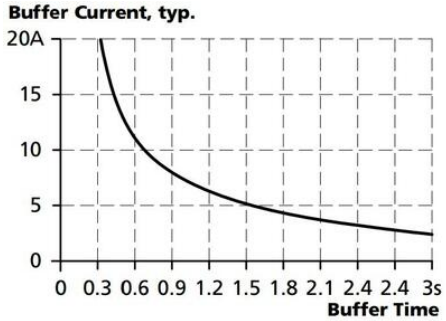
DIMENSIONS

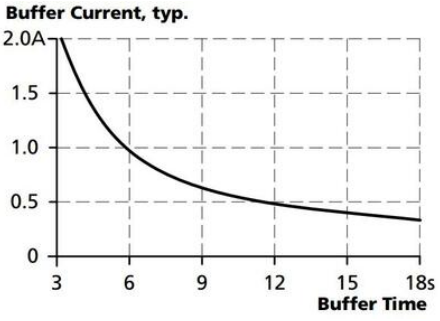
Width	64 mm
Height	124 mm
Depth	102 mm
Weight	0.74 kg

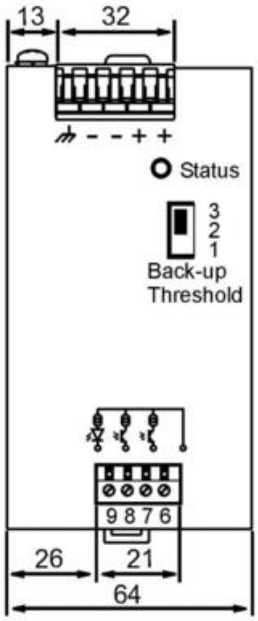
OTHER

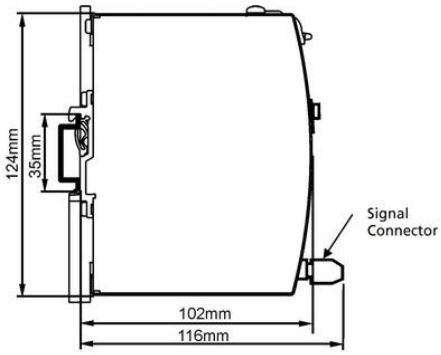
Approvals	CB, CE, CSA, CSA US, UL
IP class	IP20
Charging the battery type	0.6 A
Material protection	Aluminium
Ripple max	200 mV pp
Voltage level for activating the buffer module	22.5 V DC
Temperature min without derating	-25 °C
Temperature max without derating	70 °C

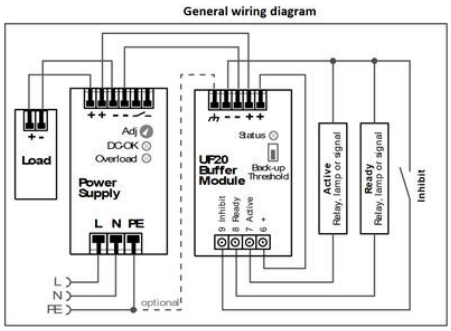
Type Power Supply	Buffer Module

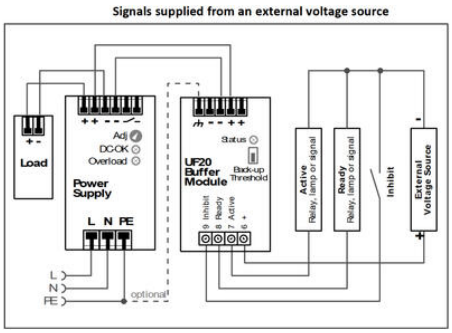

Buffer Current, typ.
20A
15
10
5
0
0 0.3 0.6 0.9 1.2 1.5 1.8 2.1 2.4 2.4 3s
Buffer Time

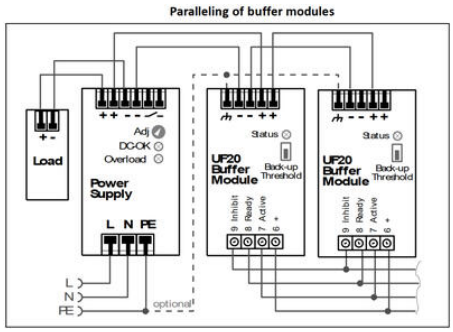

Buffer Current, typ.
2.0A
1.5
1.0
0.5
0
3 6 9 12 15 18s
Buffer Time

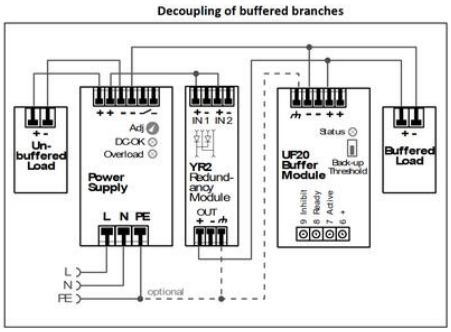

13
32
Status
3
2
1
Back-up
Threshold
9 8 7 6
26
21
64

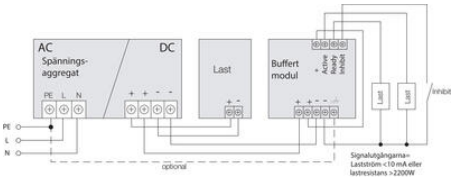

124mm
35mm
Signal
Connector
102mm
116mm

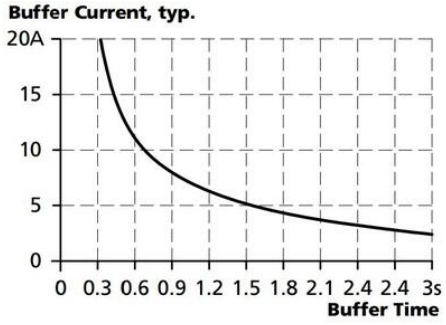

General wiring diagram
Load
Power
Supply
L N PE
Adj
DC-OK
Overload
Status
UF20
Buffer
Module
Back-up
Threshold
9 Inhibit
8 Ready
7 Active
6 +
Active
Relay, lamp or signal
Ready
Relay, lamp or signal
Inhibit
L
N
PE
optional

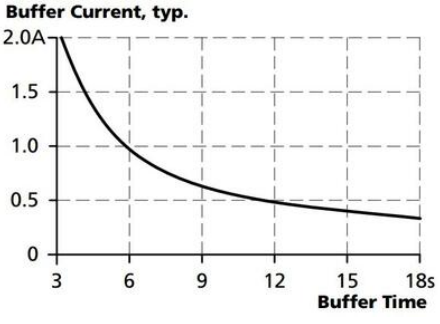

Signals supplied from an external voltage source
Load
Power
Supply
L N PE
Adj
DC-OK
Overload
Status
UF20
Buffer
Module
Back-up
Threshold
Active
Relay, lamp or signal
Ready
Relay, lamp or signal
Inhibit
External
Voltage Source
L
N
PE
optional

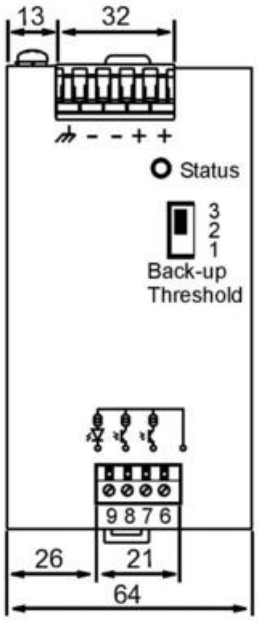

Paralleling of buffer modules
Load
Power
Supply
L N PE
Adj
DC-OK
Overload
Status
UF20
Buffer
Module
Back-up
Threshold
9 Inhibit
8 Ready
7 Active
6 +
L
N
PE
optional

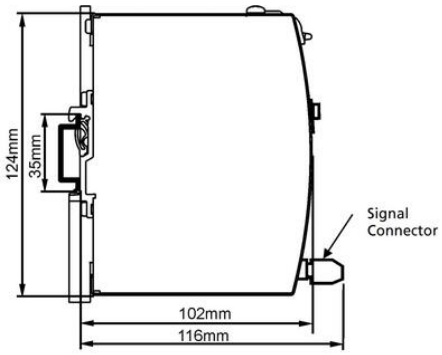

Decoupling of buffered branches
Un-
buffered
Load
Power
Supply
L N PE
Adj
DC-OK
Overload
IN1 IN2
YR2
Redund-
ancy
Module
OUT
Status
UF20
Buffer
Module
Back-up
Threshold
Buffered
Load
L
N
PE
optional


AC
Spännings-
aggregat
DC
Last
Buffert
modul
Active
Ready
Inhibit
Last
Last
Inhibit
PE
L
N
optional
Signalutgångarna=
Lastström: <10 mA eller
lastresistans >2200W

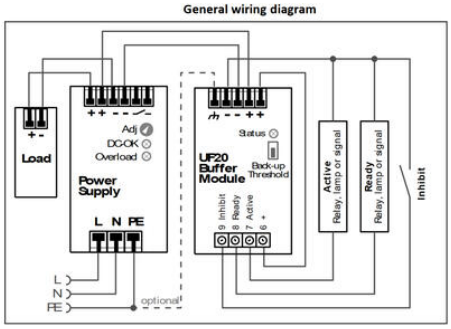

Buffer Current, typ.
20A
15
10
5
0
0 0.3 0.6 0.9 1.2 1.5 1.8 2.1 2.4 2.4 3s
Buffer Time


Buffer Current, typ.
2.0A
1.5
1.0
0.5
0
3 6 9 12 15 18s
Buffer Time

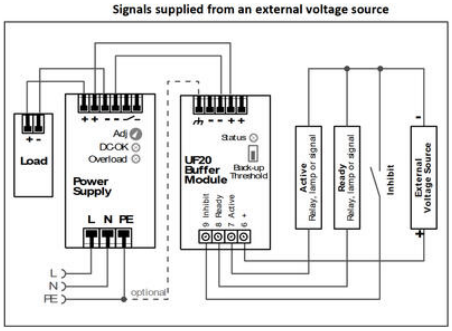




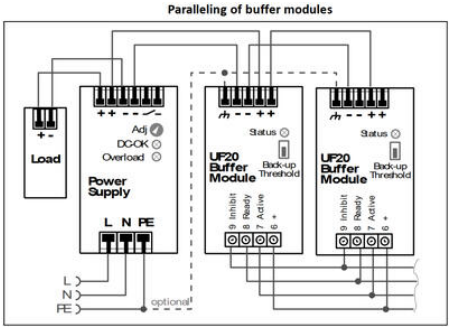
General wiring diagram



Signals supplied from an external voltage source



Paralleling of buffer modules



Decoupling of buffered branches