ABB Service Manual

560PSU02

1. Description

Application

3. Product Information

Application

The power supply unit 560PSU02 generates the two supplyvolt-ages (5 V DC and 24 V DC) for the RTU560 subracks 560MPR03and 560SFR02. The output power is sufficient to supply a sub-rack with up to 8 communication units (CMU).

It is possible to configure redundant power supplies for projectconfigurations with higher requirements to availability. In this con-figuration two power supply units 56OPSU02 are operating inparallel mode. They are able to take over the full load, if one pow-er supply fails. Only power supplies of the same type and rubricshould be used for redundant operation.

The input voltage of the power supply unit is 48... 220 V DC.

Characteristics

The power supply unit 560PSU02 has the following character-istics and functions:

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Potential isolation between the input and the outputsCodling by natural convection

Electronic power limitation on outputs

Short-circuit proof outputs

Over-voltage protection of the inputReverse voltage protection of the inputParalel operation with monitoring of redundant power sup-

ply configuration

Contrdlled load balancing in redundant operationLEDs for monitoring the output voltagesAlarm indication in case of failure

Tolerant oninput voltage interuptions up to 50 ms

Input	
Input voltage:	48...220 V DC
Input tolerance range	20%... +15%
Voltage Interruption	$ 50 ms; 0% UN (UN2 48V)
Max. input current	2.4... 0.5A
Starting Current:	< 10A; 50us -1.5ms
48...220 V DC	(Class S1 according to IEC 60870-4)
20%... +15%	Fuse
$ 50 ms; 0% UN (UN2 48V)	Efficiency:
2.4... 0.5A	External circuit-breaker
< 10A; 50us -1.5ms	F1=4AT
(Class S1 according to IEC 60870-4)	74% @ 48...110 VDC
Fuse	The plus lead needs a be protected bya circuit-breaker upstream with 10 A
Efficiency:	trip current.
External circuit-breaker	Reverse voltage protection
F1=4AT	yes
74% @ 48...110 VDC	Output
The plus lead needs a be protected bya circuit-breaker upstream with 10 A	Total output power
trip current.	Derating
Reverse voltage protection	85W
yes	-2,5 %/Kelvin; 50°C
Output	Output U1
Total output power	Voltage
Derating	Tolerance
85W	Current min.
-2,5 %/Kelvin; 50°C	Current max
Output U1	Residual Ripple
Voltage	5.1VDC
Tolerance	5.0...5.3VDC
Current min.	0A
Current max	15A
Residual Ripple	s 30 mVss
5.1VDC	Output U2
5.0...5.3VDC	Voltage
0A	Tolerance
15A	24 VDC
s 30 mVss	22,4 ...26,3 VDC
Output U2	
Voltage	
Tolerance	
24 VDC	
22,4 ...26,3 VDC	

Current min.

Current max.

Residual Ripple

0A

0,4A

s 80 mVss

Mechanical layout

Dimensions

160 mm x 100 mm, 3HE euro card

format

8R (40 mm) front panel

Housing type

Mounting

Weight

Printed circuit board

for mounting in RTU560 racks

ca. 0,65 kg

Connection type

RTU560 backplanecannector

Supply connector

48pdetypeF DN 41612

3 pole 7.62 mm pluggable screw ter-minals (included in delivery)0.2... 2.5 mm2/AWG 24 - AWG 12

Environmentalconditions

Nominal operating temperature range:0°C... 70%C

EN 60068-2-1,-2-2,-2-14

Relative humidity

EN60068-2-30

5...95 9

(non condensing)

Ordering information

560PSU02 R0001

1KGT011900R0001