Remote Terminal Units - Data sheet

Power supply 560PSR00
RTU560 product line

Power supply unit for RTU560 racks
- Input voltage 24...60 V DC
- Output voltage: 5 and 24 V DC
- Suitable for redundant power supply in 560MPR03/560SFR02

Application
The power supply unit 560PSR00 generates the two supply voltages (5 V DC and 24 V DC) for the RTU560 subracks 560MPR03 and 560SFR02. The output power is sufficient to supply a subrack with up to 8 communication units (560CMR01/02).

It is possible to configure redundant power supplies for project configurations with higher requirements to availability. In this configuration two power supply units 560PSR00 are operating in parallel mode. They are able to take over the full load, if one power supply fails. Only power supplies of the same type and rubric should be used for redundant operation.

The power supply unit 560PSR00 is available in the following version (rubric):
- R0001 Input range 24 ... 60 V DC (-20%... +15%)

Characteristics
The power supply unit 560PSR00 has the following characteristics and functions:
- Potential isolation between the input and the outputs
- Cooling by natural convection
- Electronic power limitation on outputs
- Short-circuit proof outputs
- Over-voltage protection of the input
- Reverse voltage protection of the input
- Parallel operation with monitoring of redundant power supply configuration
- Controlled load balancing in redundant operation
• LEDs for monitoring the output voltages
• Alarm indication in case of failure
• Tolerant on input voltage interruptions up to 50 ms
Technical data
In addition to the RTU500 series general technical data, the following applies:

### Power supply input
- **Input voltage**: 24 ... 60 V DC
- **Input tolerance range**: -20% ... +15%
- **Voltage Interruption**: ≤ 50 ms; 0 % $U_N$ ($U_N \geq 48V$)
- **Max. input current**: 2.3 ... 0.9 A
- **Starting Current**: <10 A; 50µs - 1.5ms (Class S1 according to IEC 60870-4)
- **Efficiency**: 85%
- **External circuit-breaker**: The plus lead needs a be protected by a circuit-breaker upstream with 10 A trip current.
- **Reverse voltage protection**: yes
- **Potential isolation between input and outputs**: yes

### Power supply output
- **Total output power**: 44.3 W
- **Derating**: -2.5 % / Kelvin; ≥ 55 °C

#### Output U1
- **Voltage**: 5.1 V DC
- **Tolerance**: 5.0... 5.3 V DC
- **Current min.**: 0.2 A
- **Current max.**: 5.5 A
- **Residual Ripple**: ≤ 30 mV$ss$

#### Output U2
- **Voltage**: 24 V DC
- **Tolerance**: 22.4... 26.3 V DC
- **Current min.**: 0 A
- **Current max.**: 0.7 A
- **Residual Ripple**: ≤ 80 mV$ss$

### Mechanical layout
- **Dimensions**: 160 mm x 100 mm, 3HE euro card format 8R (40 mm) front panel
- **Housing type**: Printed circuit board
- **Mounting**: for mounting in RTU560 racks
- **Weight**: ca. 0.6 kg

### Connection type
- **RTU560 backplane connector**: 48 pole type F DIN 41612

### Connection type
- **Supply connector**: 3 pole 7.62 mm pluggable screw terminals (included in delivery)
  0.2... 2.5 mm² / AWG 24 - AWG 12

### Immunity test
- **Electrostatic discharge**
  - IEC 61000-4-2
  - 8 kV air / 6 kV contact (level 3)
  - Performance criteria A
- **Radiated Radio-Frequency Electromagnetic Field**
  - IEC 61000-4-3
  - 10 V/m (level 3)
  - Performance criteria A
- **Electrical Fast Transient / Burst**
  - IEC 61000-4-4
  - 2 kV (level 3)
  - Performance criteria A
- **Surge**
  - IEC 61000-4-5
  - 2 kV (level 3)
  - Performance criteria A
- **Conducted Disturbances, induced by Radio-Frequency Fields**
  - IEC 61000-4-6
  - 10 V (level 3)
  - Performance criteria A
- **Damped oscillatory wave**
  - IEC 61000-4-18
  - 2.5 / 1 kV (level 3)
  - Performance criteria A

### Environmental conditions
- **Nominal operating temperature range**: -25 °C... 70 °C
- **Start up**: -40 °C
- **Relative humidity**: 5 ... 95 % (non condensing)

### Ordering information
- 560PSR00 R0001
- 1KGT026500R0001