RTU520 product line

Power supply 520PSD01
Data sheet

Characteristics

The power supply unit 520PSD01 has the following characteristics and functions:
- 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
- No potential isolation between the input and the outputs
- LEDs for monitoring the output voltages

In interaction with the 520CMD01 the input voltage (24 VDC) is passed through to the I/O modules. During power-on the 520CMD01 is switching the 24 V output voltage active for the I/O modules.

Application

The power supply unit 520PSD01 generates or switches the voltages 24 VDC, ±15 VDC and 5 VDC for the RTU520 system. The output power is sufficient to supply RTU520 with up to 16 I/O modules.

The input voltage of the power supply unit is 24 V DC.

Figure 1: Block diagram 520PSD01
## Technical data

In addition to the RTU500 series general technical data, the following applies:

### Input

- **Input voltage:** 24 V DC
- **Input tolerance range:** -20%... +20%
- **Max. input current:** 1 A @ 24 V
- **Starting Current:** < 10 A; 50µs - 1.5ms (Class S1 according to IEC 60870-4)
- **Efficiency:** 85%
- **Reverse voltage protection:** yes

### Output

- **Total output power:** 20 W

#### Output 1

- **Voltage:** 5 VDC
- **Tolerance:** ± 5 %
- **Current max.:** 1.8 A @ 5 VDC
- **Residual ripple:** ≤ 100 mVpp

#### Output 2, 3

- **Voltage:** ± 15 VDC
- **Tolerance:** ± 10 %
- **Current max.:** 0.2 A @ 15 VDC
- **Residual ripple:** ≤ 200 mVpp

#### Output 4

- **Voltage:** 24 VDC
- **Tolerance:** ± 20 %
- **Current max.:** 0.2 A @ 24 VDC
- **Residual ripple:** according to power supply voltage

### Mechanical layout

- **Dimensions:** 35 mm x 98 mm x 117 mm (Width x Height x Depth)
- **Housing type:** Plastic housing (V-0), IP20, RAL 7035 light gray
- **Mounting:** DIN rail mounting
  - EN 50022 TS35: 35 mm x 15 mm or 35 mm x 7.5 mm
- **Weight:** 0.14 kg

### Connection type

- **Power supply input:** 1 x 3 pole 5.08 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: 10V/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: 4 kV (level 4)
  - 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:**
  - Start up: -25°C... 70°C
  - Max. operating temperature, max. 96h: -40 °C... +85 °C
- **Relative humidity**
  - EN 60068-2-30: 5 ... 95 % (non condensing)

### Ordering information

- **520PSD01 R0001**
- **1KGT031500R0001**
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