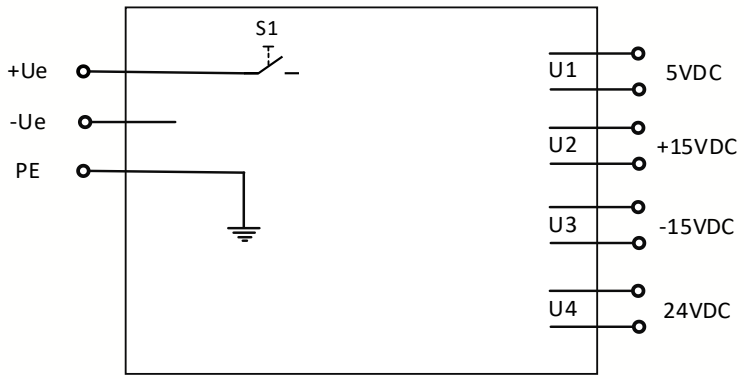
Application

The power supply unit 620PSU01 generates or witches the voltages 24 VDC, ±15 VDC and 5 VDC for the RTU620 system. The output power is sufficient to supply RTU620 with up to 16 I/O modules.

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



Block diagram 620PSU01

Characteristic

The power supply unit 620PSU01 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 620CPU01 the input voltage (24 VDC) is passed through to the I/O modules. During power -on the 620CPU01 is switching the 24 V output voltage active for the I/O modules.

Operation

The power supply unit 620PSU01 is used to generate the necessary power for the RTU620 system. The 620PSU01 is connected directly with the 620CPU01 via connector X1 (see Figure1 and Figure2).The RTU620 system could only be supplied via the 620CPU01 board, other boards aren't provided.

The input voltage is not galvanic isolated against the output voltages.

Total Output Power

The power supply unit 620PSU01 supplies a total output power of 20 W. This can be used for:

- +24VDC, max. 0.2A
- +15VDC, max. 0.2A
- -15VDC, max. 0.2A
- +5VDC, max. 1.8A

A label with some information about the output power could be found on the left side of the housing (see Figure 3).

Signaling

The power supply unit 620PSU01 indicates operational states by light emitting diodes on the front plate (see Figure 2).

- +24VDC
- +15VDC
- -15VDC
- +5VDC

The 24V LED is in OFF state as long as the IO-Bus not runs. The 24V LED signalize the internal 24V to the IO boards.

Connections

The supply voltage for the power supply 620PSU01 is 24 VDC. The connector X3 consists of a 3 pole pluggable screw-terminal 5.08mm (see Table 1 and Figure 1). The maximum input power is 24W.

Functional Earth

To obtain higher EMC protection it is important to make a connection as short as possible to a system earth (may be DIN-rail or mounting plate). An common multi-core wire can be used and should not exceed a length of 100 cm (39 inch). The third pin of the 3 pole DC-In connector is the functional earth-pin (see Table 1 and Figure 1).

Power Supply	
DC-IN	**Pin**
+Vin	1
-Vin	2
Functional earth	3

Table 1

The functional earth must be connected to screw terminal **X3-3** (see Table 1).

Safety Instructions

- Installation, operation and service may be only done by qualified personnel .
- The personnel have to meet the relevant standards and safety regulations .
- Before changing the 620PSU01 must be disconnect from power supply .
- The power supply connector X3 is used as separator .
- A preceding fuse is needed for operation of the 620PSU01.

Setting

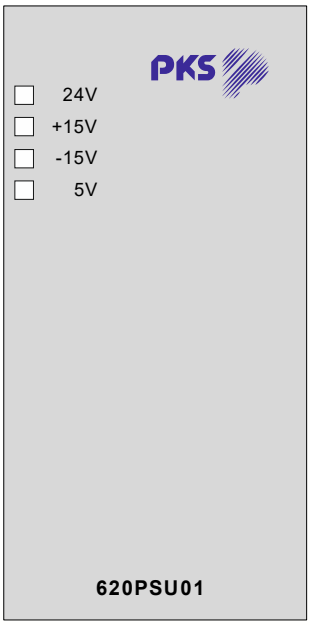


Fig.1: 620PSU01 front plate

X1	X3
Output 24 VDC/0.2A +15 VDC/0.2A - 15 VDC/0.2A 5 VDC/1.8A	Input 1 +24V 2 - 3 FE

Fig.2: Position of the connections and settings elements

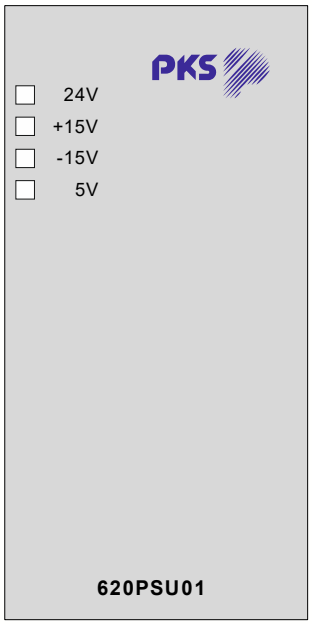


Fig.3: 620PSU01 front plate

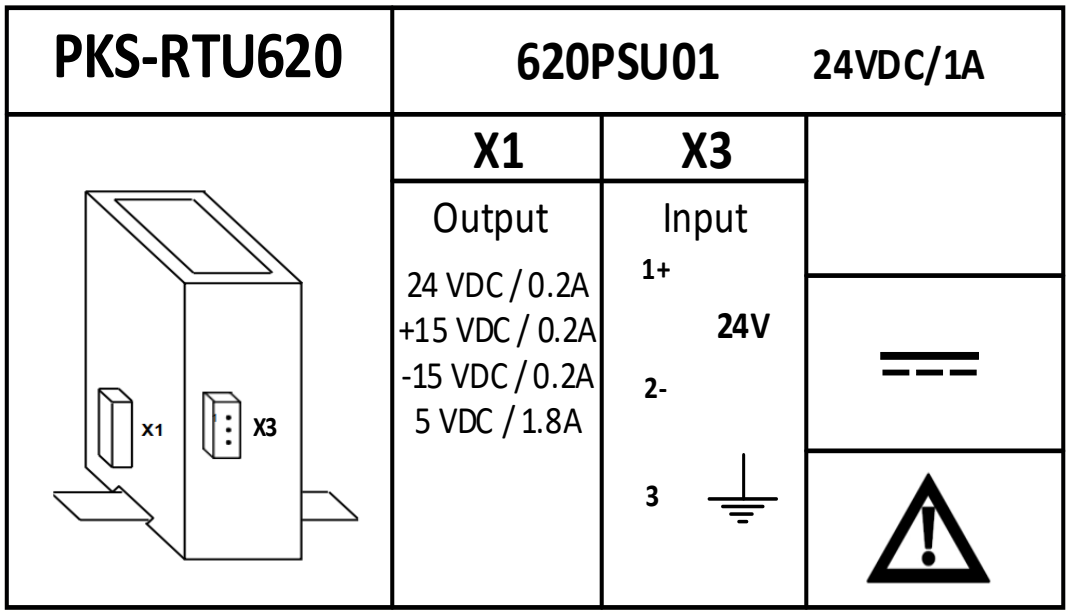


Fig.4: 620PSU01 label

Setting

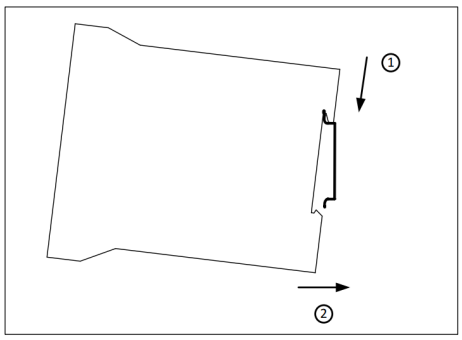


Fig.5: RTU620 DIN rail mounting - step 1

1 Insert upper edge into DIN rail and push downwards

2 Push lower edge towards DIN rail and snap in the module

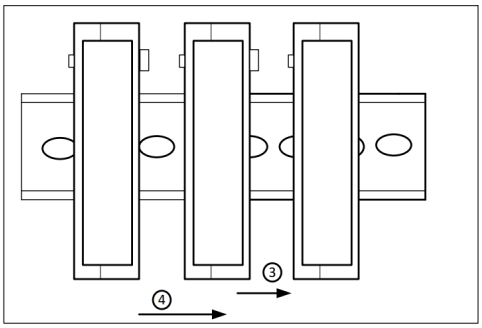


Fig.6: RTU620 DIN rail mounting - step 2

3 + 4 :

Shift one module connector into the other starting from right to left

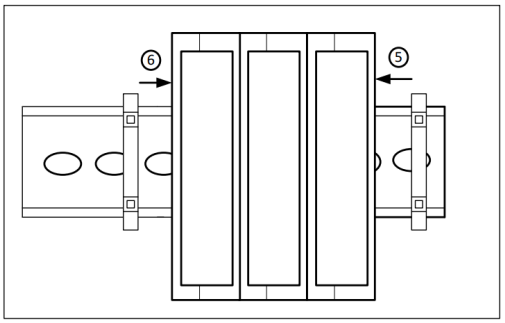


Fig.7: RTU620 DIN rail mounting - step 3

5 + 6 :

Mount end stops at the left and right side

Setting

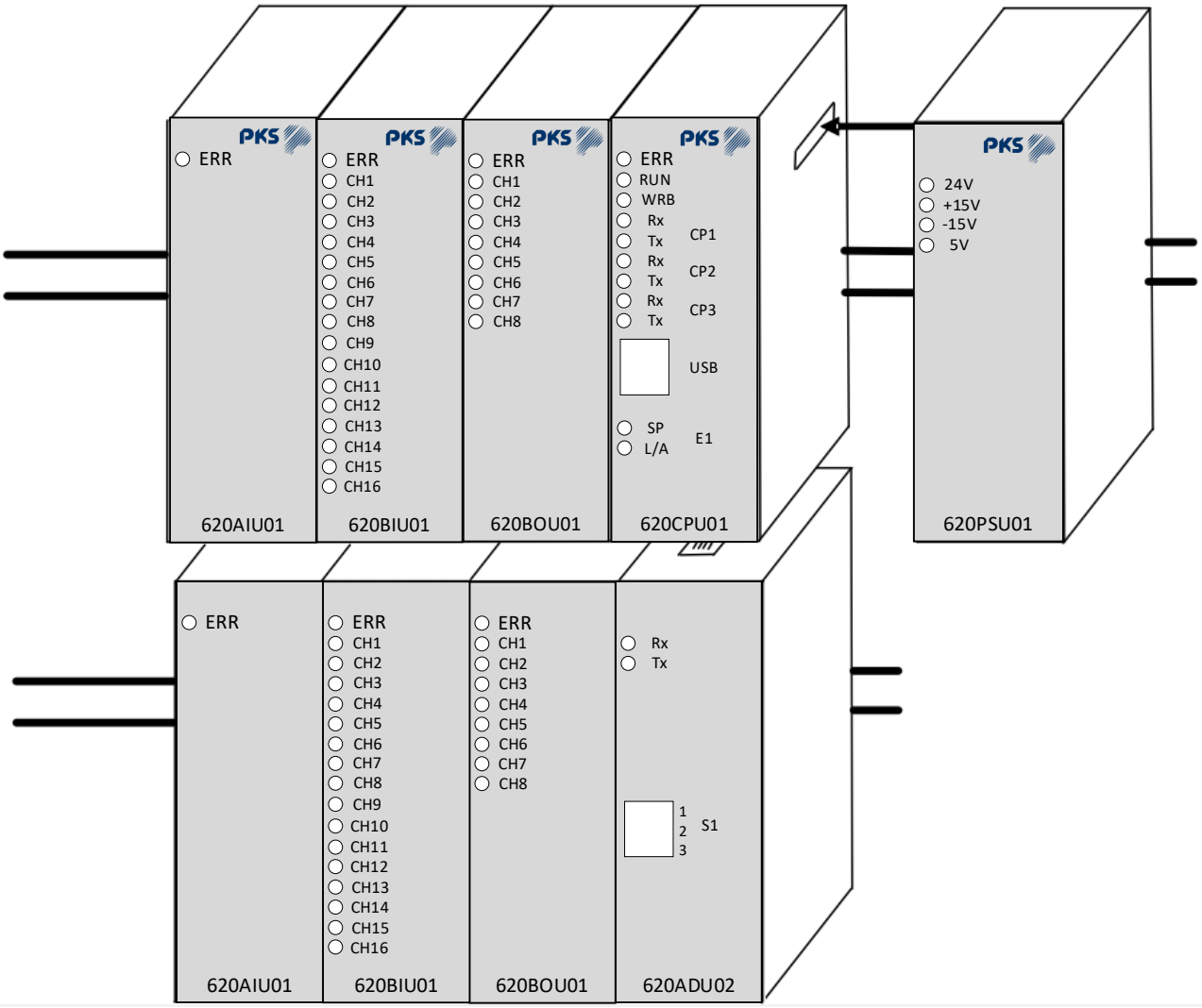


Figure 8: Example RTU620 installation with a 620PSU01

Technical Data

In addition to the PKS RTU620 general technical data, the following applies:

Input

Inputs Voltage	24VDC
Input tolerance range	-20% …. +20%
Max Input current	< 10 A; 50µs - 1.5ms (Class S1 according to IEC 60870-4)
Efficiency	85%
Reverse voltage protection	Yes

Output

Total output power	20W

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

Technical Data

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

Environmental conditions

Nominal operating temperature range Start up Max. operating temperature, max.96h EN 60068-2-1, -2-2, -2-14	-25°C ... 70°C -40°C +85°C
Relative humidity EN 60068-2-30	5 ... 95 % (non condensing)

Immunity Test

Electrostatic dicharge IEC 61000-4-2 (	8kV / 6 kV Contact Performance criteria A
Radiated Radio- Frequency Electromagnetic Field IEC 61000-4-3	10 V/m Performance criteria A
Electrical Fast Transient / Burst IEC 61000-4-4	4 kV Performance criteria A
Surge IEC 61000-4-5	2 kV Performance criteria A
Conducted Disturbances, induced by Radio- Frequency Fields IEC 61000-4-6	10 V Performance criteria A
Damped oscillatory wave IEC 61000-4-18	2.5 / 1kV Performance criteria A