Application, characteristics and technical data have to be taken from the hardware data sheet:

520PSD01 data sheet 1KGT 150 823

Operation
The power supply unit 520PSD01 is used to generate the necessary power for the RTU520 system. The 520PSD01 is connected directly with the 520CMD01 via connector X1 (see Figure 1 and Figure 2). The RTU520 system could only be supplied via the 520CMD01 board, other boards aren't provided.

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

Advice
In some cases an external potential isolation for the DC-Input is necessary. This can be done e.g. by a power supply unit 560PSU40/41 or CP-E 24/2.5.

Only one 560PSU40/41 or rather CP-E 24/2.5 can be used for one 520PSD01 power supply due to the inrush current.

Total Output Power
The power supply unit 520PSD01 supplies a total output power of 20 W. This can be used for:

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

A label with some information about the output power could be found on the left side of the housing (see Figure 1).

Signaling
The power supply unit 520PSD01 indicates operational states by light emitting diodes on the front plate (see Figure 1).

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

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 520PSD01 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).

<table>
<thead>
<tr>
<th>Power supply</th>
<th>DC-IN</th>
<th>Pin</th>
</tr>
</thead>
<tbody>
<tr>
<td>+ Vin</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>- Vin</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Functional earth</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

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

Settings
There are no settings required.

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 520PSD01 must be disconnect from power supply.
- The power supply connector X3 is used as separator
- The 520PSD01 is not certified for ATEX relevant applications
- A preceding fuse is needed for operation of the 520PSD01.
### Figure 1: 520CMD01 front plate

#### Table 1: Connections and Settings Elements

<table>
<thead>
<tr>
<th></th>
<th>X1</th>
<th>X3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Output</strong></td>
<td>24 VDC / 0,2A</td>
<td><strong>Input</strong></td>
</tr>
<tr>
<td></td>
<td>+15VDC / 0,2A</td>
<td>1 + 24V</td>
</tr>
<tr>
<td></td>
<td>-15VDC / 0,2A</td>
<td>2 -</td>
</tr>
<tr>
<td></td>
<td>5 VDC / 1,8A</td>
<td>3 FE</td>
</tr>
</tbody>
</table>

**Figure 2: Position of the connections and settings elements**
ABB AG

520PSD01  24VDC / 1A

<table>
<thead>
<tr>
<th>X1</th>
<th>X3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Output</strong></td>
<td></td>
</tr>
<tr>
<td>24VDC / 0,2A</td>
<td></td>
</tr>
<tr>
<td>+15VDC / 0,2A</td>
<td></td>
</tr>
<tr>
<td>-15VDC / 0,2A</td>
<td></td>
</tr>
<tr>
<td>5VDC / 1,8A</td>
<td></td>
</tr>
<tr>
<td><strong>Input</strong></td>
<td></td>
</tr>
<tr>
<td>1+ 24V</td>
<td></td>
</tr>
<tr>
<td>2-</td>
<td></td>
</tr>
</tbody>
</table>

Figure 3: 520CMD01 front plate
Figure 4: 520CMD01 label

Figure 5: RTU520 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

Figure 6: RTU520 DIN rail mounting - step 2
3 + 4:
Shift one module connector into the other starting from right to left

Figure 7: RTU520 DIN rail mounting - step 3
5 + 6:
Mount end stops at the left and right side
Figure 8: Example RTU520 installation with a 520PSD01