

# 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,  $\pm 15$  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.

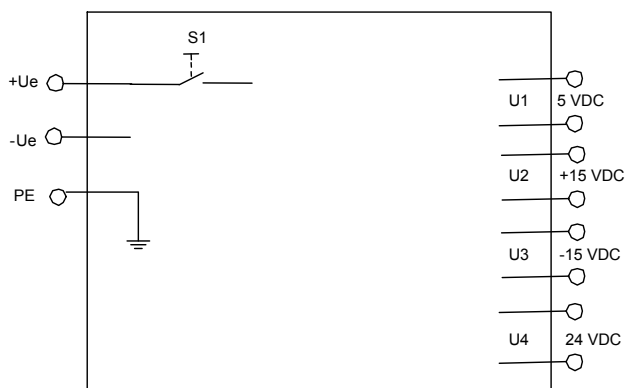


Figure 1: Block diagram 520PSD01

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

Ordering information	
520PSD01 R0001	1KGT031500R0001



**Note:**

The specifications, data, design or other information contained in this document (the "Brochure") - together: the "Information" - shall only be for information purposes and shall in no respect be binding. The Brochure does not claim to be exhaustive. Technical data in the Information are only approximate figures. We reserve the right at any time to make technical changes or modify the contents of this document without prior notice. The user shall be solely responsible for the use of any application example or information described within this document. The described examples and solutions are examples only and do not represent any comprehensive or complete solution. The user shall determine at its sole discretion, or as the case may be, customize, program or add value to the ABB products including software by creating solutions for the end customer and to assess whether and to what extent the products are suitable and need to be adjusted or customized.

This product is designed to be connected to and to communicate information and data via a network interface. It is the users sole responsibility to provide and continuously ensure a secure connection between the product and users or end customers network or any other network (as the case may be). The user shall establish and maintain any appropriate measures (such as but not limited to the installation of firewalls, application of authentication measures, encryption of data, installation of anti-virus programs, etc) to protect the product, the network, its system and the interface against any kind of security breaches, unauthorized access, interference, intrusion, leakage and/or theft of data or information. ABB AG is not liable for any damages and/or losses related to such security breaches, any unauthorized access, interference, intrusion, leakage and/or theft of data or information.

ABB AG shall be under no warranty whatsoever whether express or implied and assumes no responsibility for the information contained in this document or for any errors that may appear in this document. ABB AG's liability under or in connection with this Brochure or the files included within the Brochure, irrespective of the legal ground towards any person or entity, to which the Brochure has been made available, in view of any damages including costs or losses shall be excluded. In particular ABB AG shall in no event be liable for any indirect, consequential or special damages, such as – but not limited to – loss of profit, loss of production, loss of revenue, loss of data, loss of use, loss of earnings, cost of capital or cost connected with an interruption of business or operation, third party claims. The exclusion of liability shall not apply in the case of intention or gross negligence. The present declaration shall be governed by and construed in accordance with the laws of Switzerland under exclusion of its conflict of laws rules and of the Vienna Convention on the International Sale of Goods (CISG).

ABB AG reserves all rights in particular copyrights and other intellectual property rights. Any reproduction, disclosure to third parties or utilization of its contents - in whole or in part - is not permitted without the prior written consent of ABB AG.

© Copyright ABB 2014

All rights reserved