

I/O adapter 520ADD02

Data sheet



Application

The I/O adapter 520ADD02 is used to connect more than 16 RTU520 I/O modules to an I/O bus with RS485 or fiber optic connection in RTU520 or RTU540.

The adapter is also used to extend the WRB I/O bus for decentralized I/O applications up to 2 km distance and if distances of more than 30 cm between the I/O adapters are required.

In addition the I/O adapter 520ADD02 is used as a stand-alone module to connect RTU560 I/O modules (e. g. 23BE40, 23BE50, 23BA40) to an RTU540.

The module is available in two versions (rubrics):

- R0001: RS485
- R0002: RS485 and glass fiber optical, 840 nm

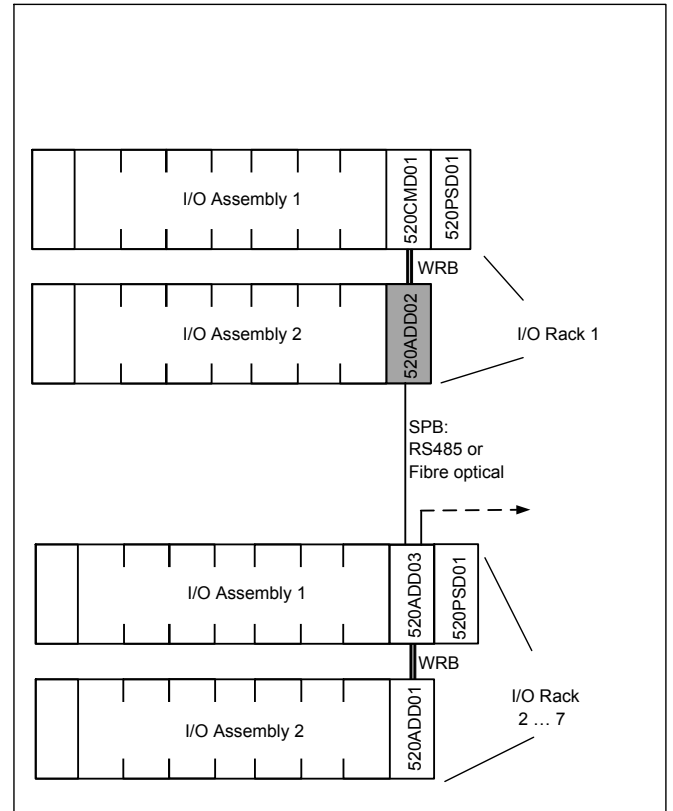


Figure 1: Connection diagram 520ADD02

Characteristics

The I/O adapter is connected to the WRB I/O bus (wired OR bus) and generates the addresses for the connected I/O modules within the I/O assembly automatically. The I/O adapter is always the last adapter unit within the virtual I/O rack 1.

The adapter converts the WRB I/O bus to the SPB I/O bus (serial peripheral bus) with electrical RS485 or fiber optical connection.

The glass fiber optical variant of the module is compatible to the module 23OK24 and 560FOC40.

The module has two green LEDs for signaling the activity on the I/O bus.

Technical data

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

Current consumption for power supplied via WRB bus	
5 V DC	70 mA
15 V DC	
18 V DC	
24 V DC	

Signaling by LEDs	
Tx	Transmission to the I/O bus
Rx	Receiving from the I/O bus

Mechanical layout	
Dimensions	35 mm x 98 mm x 117 mm (Width x Hight 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	0.11 kg

Connection Type	
Connector to the I/O modules (X1)	2 x 10 pin, female
WRB I/O bus (X2) from CMU module or 520ADD01	2 x 10 pin, male for standard ribbon cable (included in delivery)
SPB I/O bus RS485	1 x 3 pole 5.08 mm pluggable screw terminals (included in delivery) for shielded cable, max. 200 m
SPB I/O bus glass fibre optic (R0002)	2 x connector of type ST (Rx and Tx) Multimode 840 nm, 62.5/125, max. 2000 m

Insulation tests	
AC test voltage IEC 61000-4-16 IEC 60870-2-1 (class VW3)	2.5 kV, 50 Hz Test duration: 1 min
Impulse voltage withstand test IEC 60255-5 IEC 60870-2-1 (class VW 3)	5 kV (1.2 / 50 µs)
Insulation resistance IEC 60255-5	> 100 MΩ at 500 V DC

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

Ordering information	
520ADD02 R0001	1KGT024300R0001
520ADD02 R0002	1KGT024300R0002

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