

Datasheet

ADA-1040PC2

MODBUS-RTU Device Address Converter (RS232)



APPLICATION

ADA-1040PC2 address converter of device with MODBUS-RTU / JBUS protocol, is the converter solves a problem of connection devices having **fixed address (SLAVE address) to multipoint RS485 bus**, to which connected devices have **colliding addresses** with the address of the device. The address changing is made by setting the address on the BUS port in ADA-1040PC2 and setting device address with colliding address on the **DEV (RS232)** port of the converter. Simultaneously, the converter can convert baud rate and format of transmitted data. Depending on configurations, can be set baud rate, data bits, parity, number of stop bits. The setting can be **different for DEV and BUS ports**. The convert allows connect **RS232** devices to RS485 bus without any collisions. Additionally, ADA-1040PC2 separates devices connected to **RS485** bus. Galvanic isolation of ADA-1040PC2, protect the system structured on RS422/485 bus and increases its reliability.

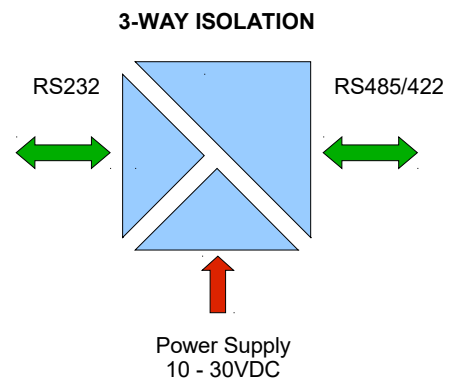
ADA-1040PC2 supports the asynchronous baud rate up to 230.4 kbps through four or two pairs of twisted-pair cables connected to screw terminals. The converter use RX+, RX-, TX+/A, TX-/B lines for functioning. It is possible to connect 32 devices to RS485/RS422 network constructed on base of ADA-1040PC2, working at the half duplex or full duplex mode. Over-voltage protection on each RS485/RS422 line was made on base of 600W over-voltage led and fuses.

TECHNICAL DATA

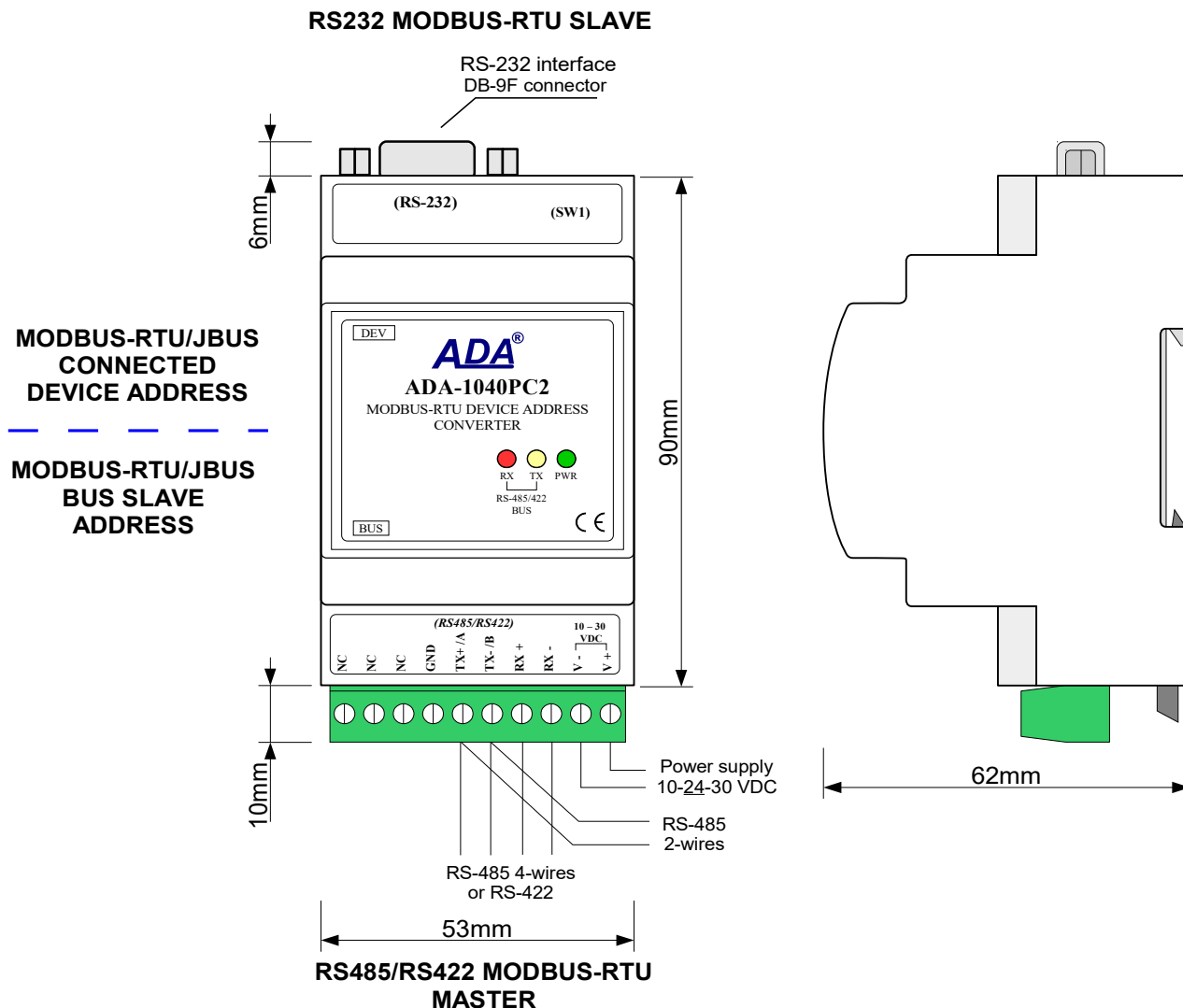
Transition Parameters		
Interface	RS-232 (DEV)	RS-485/RS-422 (BUS)
Connector	DSUB-9 socket, female	Screw terminal, wire max. Ø 2,5mm ²
Line length	up to 15m	1200m (depends on baud rate)
Max. number of connected device	1	32
Transmission line	DB9F/DB9M cable, multicore 9x0,34 shielded (up to 15m)	Twisted cable 1-pair or 2-pair, UTP Nx2x0,5 (24AWG), shield inside large interferences STP Nx2x0,5(24AWG)
Standards	EIA-232, CCITT V.24,	EIA-485, CCITT V.11

Data formats	Data bits 5, 6, 7, 8, Parity: None, Parity, Odd, Number of stop bits: 1, 2,
Baud rates (bps)	300, 600, 1200, 1800, 2400, 4800, 7200, 9600, 14400, 19200, 28800, 38400, 57600, 76800, 115200, 230400
Transmission type	Asynchronism full duplex, half duplex.
Optical signalisation	<ul style="list-style-type: none"> • PWR – green LED power supply, • RX - red LED data receiving from BUS port – RS485/RS422, • TX - yellow LED data transmission through BUS port – RS485/RS422.
Electrical Parameters	
Power requirements	10 - 24 – 30 V DC
Power Cable	Recommended length of power cable – up to 3m.
Power	<2W
Protection from reverse power polarization	YES
Galvanic Isolation	1kVDC or 3kVDC between power circuit and RS-232 (DEV) and RS485 (BUS) – depend on version.
Optoisolation	~3kVDC - between signal lines RS-232 (DEV) and RS-485/RS-422 (BUS)
Electromagnetic compatibility	Resistance to disruptions according to the standard PN-EN 55024. Emission of disruptions according to the standard PN-EN 55022.
Safety requiring	According to the PN-EN60950 norm.
Environment	Commercial and light industrial.
Environmental Parameters	
Operating temperature	-30 ÷ 60°C
Humidity	5 ÷ 95% - non-condensing
Storage temperature	-40 ÷ 70 °C
Casing	
Dimensions	53 x 90 x 62 mm
Material	PC/ABS
Degree of casing protection	IP40
Degree of terminal protection	IP20
Weight	0,10 kg
According to standard	DIN EN50022, DIN EN43880
Position during operation	Free
Mounting	Rail mounting according to DIN35 standard / TS35.

GALVANIC ISOLATION



DIMENSIONS AND CONNECTION



VERSIONS

ADA-1040PC2 - [] - []	
Version:	
Standard	1
3-way galvanic isolation:	
1kV=	23
3kV=	33

Order example:
 Product Symbol: **ADA-1040PC2-1-23**
 1 – standard version,
 23 – 1kV=, 3-way galvanic isolation,