Datasheet

ADA-4040PC1

MODBUS-ASCII to MODBUS-RTU converter

APPLICATION

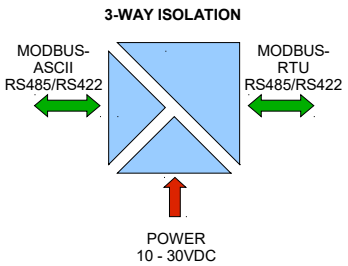
Protocol converter MODBUS-ASCII to MODBUS-RTU ADA-4040PC1 is a device solves a problem of connection RS484/RS422 devices (communication MODBUS-ASCII protocol) to multipoint RS-485 bus with devices communicate by MODBUS-ASCII protocol.
Simultaneously, the converter can convert baud rate and format of transmitted data. Depending on configurations, can be set baud rate, data bits, parity, number of stop bits. The setting can be different for MODBUS-ASCII port and MODBUS-RTU port.
The convert allows connect RS422 devices to RS485 bus without any collisions. Additionally, ADA-4040PC1 separates devices connected to RS485 bus. Galvanic isolation of ADA-4040PC1, protect the system structured on RS422/485 bus and increases its reliability.
ADA-4040PC 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 devises to RS485/RS422 network constructed on base of ADA-4040PC1, 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

Transmission Parameters		
Interface	**RS-485/RS-422 (ASCII)**	**RS-485/RS-422 (RTU)**
Connector	Screw terminal, wire max. Ø 2,5mm^2.	
Max. Line length	1200m (depends on baud rate)	
Max. number of connected device	up to 32	
Max. baud rate	300, 600, 1200, 1800, 2400, 4800, 7200, 9600, 14400, 19200, 28800, 38400, 57600, 76800, 115200, 230400,	

Data formats	Data bits 5, 6, 7, 8, Parity: None, Parity, Odd, Number of stop bits: 1, 2,
Transmission line	Twisted cable 1-pair or 2-pair, UTP Nx2x0,5 (24AWG), shield inside large interferences STP Nx2x0,5(24AWG).
Standards	EIA-485, CCITT V.11
Transmission type	Asynchronic half duplex or full duplex
Optical Signalization	• PWR – green LED power supply, • RX - red LED data receiving from RTU port – RS485/RS422, • TX - yellow LED data transmission through RTU port – RS485/RS422.
Electrical Parameters	
Power requirements	10 - 24 – 30 V DC
Power Cable	Recommended length of power cable – do 3m
Power	<2W
Protection from reverse power polarization	YES
Galvanic Isolation	1kVDC or 3kVDC between power circuit and RS-485/RS-422 ASCII and RTU signal line.
Optoisolation	~3kV - between signal line RS-485/RS-422 (ASCII) and RS-485/RS-422 (RTU)
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 (W x D x H)	53mm x 90mm x 62 mm
Material	PC/ABS
Degree of casing protection	IP40
Degree of terminal protection	IP20
Weight	0,10 kg
According to standards	DIN EN50022, DIN EN43880
Location during work	Free
Mounting method	On the rail compliant with DIN35 / TS35 standard.

GALVANIC ISOLATION



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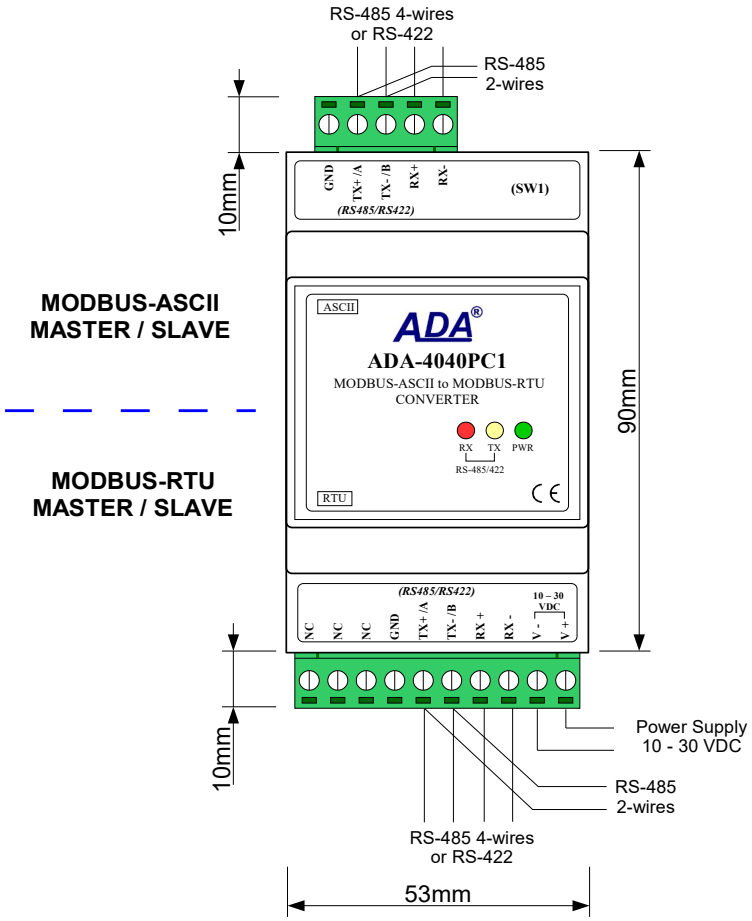
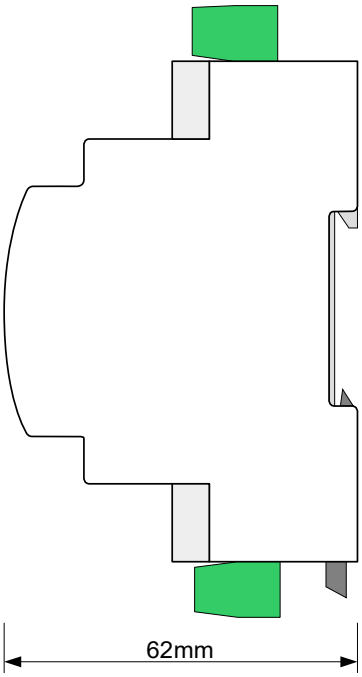
DIMENSIONS AND CONNECTION





VERSIONS

ADA-4040PC1 - [ ] - [ ]	
Version:	
Standard	**1**
3-way galvanic isolation:	
1kV=	**23**
3kV=	**33**

Order example:

Product Symbol: **ADA-4040PC1-1-23**

1 – standard version,

23 – 1kV=, 3-way galvanic isolation,

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