Datasheet

ADA-1040D

RS-232 to RS-485(4W) / RS-422 digital converter

APPLICATION

ADA-1040D Digital Converter is used to extend RS232 ports of device using for communication signals: Tx, Rx, RTS, CTS, DTR, DSR. The converter receives data from RS-232 port and sends them via RS485(4W) / RS422 to second converter together with information about line condition of RS232 interface. It is possible to configure the baud rate (up to 230,4 kbps), number of data bits, parity or no parity and number of stop bits – the setting of RS-232 can be different on both sides of RS485(4W) / RS422. Additionally, it is possible to set baud rate on RS485(4W) / RS422 link.

Using RS485(4W) /422 bus enables to extend the RS232 device port at a distance 1200m, provides galvanic isolation between connected devices and resistance to interference in the transmission line. Connection of RS485(4W) /422 bus is made by the use of 2-pairs twisted cable. The converter has the connection control for testing the correctness connection of RS485(4W) bus with him.

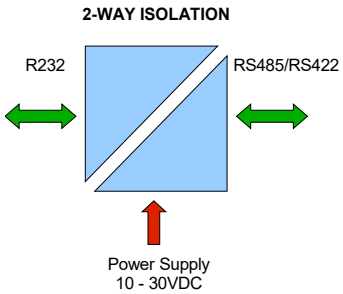
ADA-1040D is equipped with DSUB-9 female connector from RS232 interface and screw terminal block from RS485(4W) / RS422 and power supply. ADA-1040D supports data rates of up to 230.4 kbps RS232 interface. Converter has 1kVDC or 3kVDC galvanic isolation and 5kVDC optoisolation in signal line. It separates RS232 form RS485/RS422 interface and protect device connected to RS232 port from overvoltage on RS485/RS422 bus and power circuit. Overvoltage protection on each RS485/RS422 line was made on base overvoltage LEDs and fuses. ADA-1040 D should be supplied from the power supply voltage stabilized voltage range of 10 - 30 VDC and minimum power 2W.

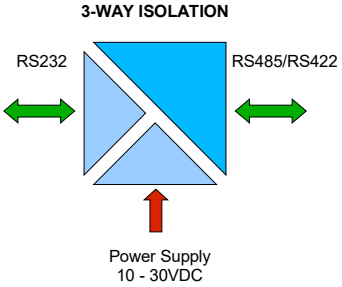
TECHNICAL DATA

Transmission Parameters		
Interface	**RS-232**	**RS-485/RS-422**
Connector	DSUB-9 Female	Screw terminal block - max. Ø 2,5mm^2
Max. Line length	15 m	1200 m
Max. number of connected device	1	1

Transmission line	DB9F/DB9M multicore cable 9x0,34 shielded or 9-pair twisted cable, UTP 9x2x0,5 (24AWG) shield inside large interferences STP 9x2x0,5 (24AWG).	1-pair or 2-pair twisted cable, UTP Nx2x0,5 (24AWG), shield inside large interferences STP Nx2x0,5 (24AWG)
Standards	EIA-232, CCITT V.24	EIA-485, CCITT V.11
Max. baud rate	230,4 kbps	
Transmission type	Asynchronous full duplex, half duplex.	
Optical Signalization	• PWD – green LED power supply, • RX - red LED data receiving on RS485/RS422, • TX - yellow LED data transmission via 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 signal line	
Optoisolation	3kV - between signals lines RS-232 and RS-485	
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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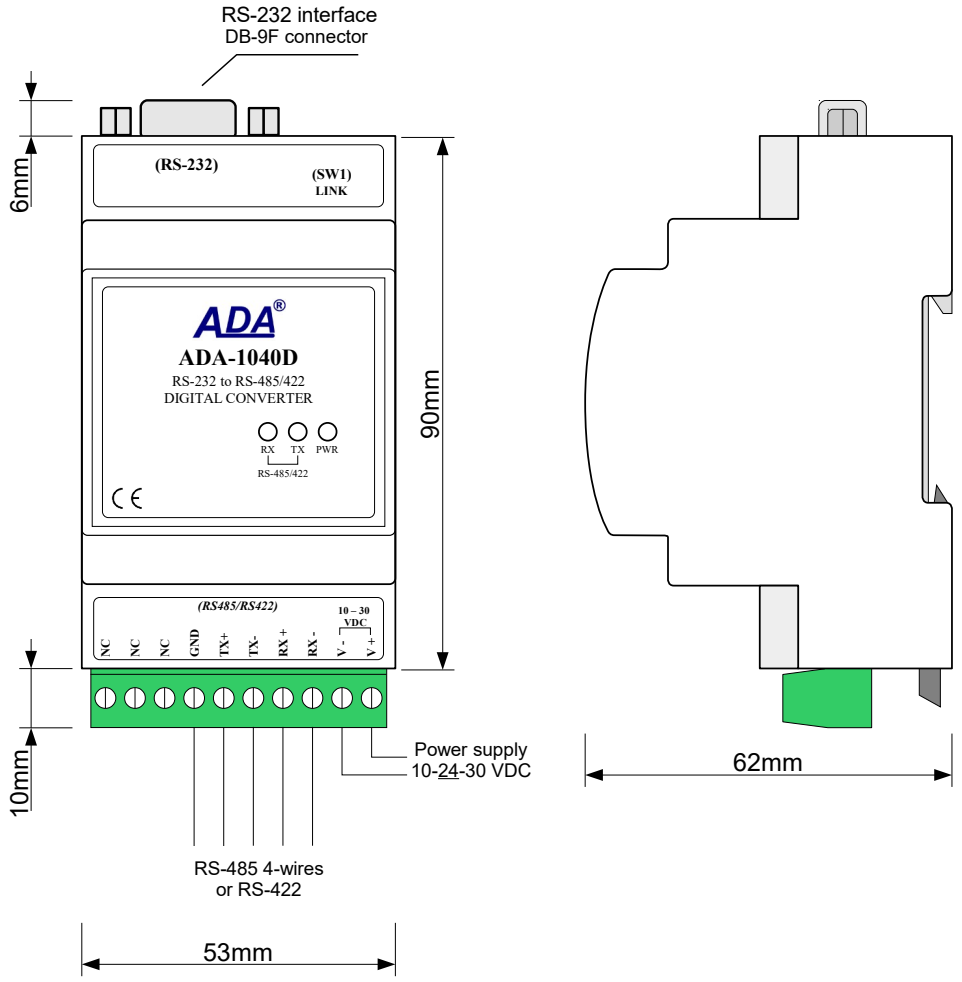
DIMENSIONS AND CONNECTION



VERSIONS

ADA-1040D - ☐ - ☐

Galvanic isolation:	
1kV= 2-way	**2**
1kV= 3-way	**23**
3kV= 2-way	**3**
3kV= 3-way	**33**

Terminal & Terminal Cover:	
Cover without inlets, screw terminal block	**1**
Cover with inlets, screw terminal block	**2**
Cover without inlets, plug-in screw terminal block	**3**

Order example:

Product Symbol: **ADA-1040D-23-3**

23 - galvanic isolation: 1kV= 3-way,
3 - cover without inlets, plug-in screw terminal block

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