

Datasheet

ADA-7040

Multimode Fiber Optic to RS485/RS422 Converter



APPLICATION

Fibre Optic ADA-7040 is a device used to connect units with RS485/RS422 interface without interfering with the data format. The use of fibre-optic provides complete isolation between connected devices and resistance to interference on the transmission bus. The fibre connection is implemented by a line consisting of two fibres - one fiber for the TX signal and one for RX signal. Using two this type converters, can be use for communication with devices quite distant from each other eg. Computers, controllers etc.

ADA-7040 is equipped with screw terminal block for RS485/422 and power connections. The converter supports data rates of up to 2Mbps by four or two pairs of twisted pair connected to the screw terminals. The device use to operate lines RX +, RX-, TX +, TX-.

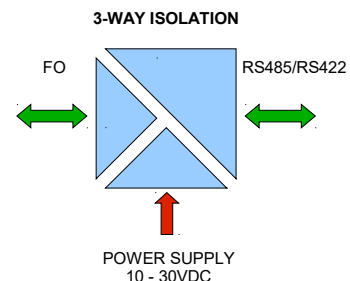
To RS485/422 bus built on the ADA-7040 can be connected 32 devices operating in half duplex mode or full duplex mode. Overvoltage protection was made on base safety diodes and fuses on each RS485/RS422 lines.

Max. number of connected device	1	32 / 2
Transmission line	Two multimode fibers optic: - ST-850 connectors, fiber type 50/125 mm, 62,5/125 mm, 100/140mm, 200mm HCS. - SC-850 connectors, fiber type 50/125 mm, 62,5/125 mm, 100/140mm, 200mm HCS. - SMA-650 connectors, fiber type plastic POF/1mm.	1-pair, 2-pair or 4-pair twisted cable eg UTP cat. 5e, shield inside large interferences eg STP cat. 5e.
Max. baud rate	up to 500kbps, depend on length of RS-485/RS-422 bus.	
Transmission type	Asynchronous full duplex, half duplex.	
Standards	EIA-485/422, CCITT V.24.	
Optical Signalization	<ul style="list-style-type: none"> PWR – green LED power supply, RX - red LED data receiving from RS-485/RS-422, TX - yellow LED data transmission through RS485/RS422 	
Electrical Parameters		
Power requirements	10 - 24 – 30 V DC	
Power cable	Recommended length of power cable < 3m	
Power	< 3W	
Protection from reverse power polarization	YES	
Galvanic isolation	1kV or 3kV between power circuit and signal line RS485/RS422 and FO	
Optoisolation	5kV – between signal lines FO and RS-485/RS-422	
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	53mm x 90mm x 62 mm,	
Material	ABS/PC	
Degree of casing protection	IP40	
Degree of terminal protection	IP20	
Weight	0,10 kg	
According to standard	DIN EN50022, DIN EN43880	
Location during work	Free	
Mounting method	On the rail compliant with DIN35 / TS35 standard.	

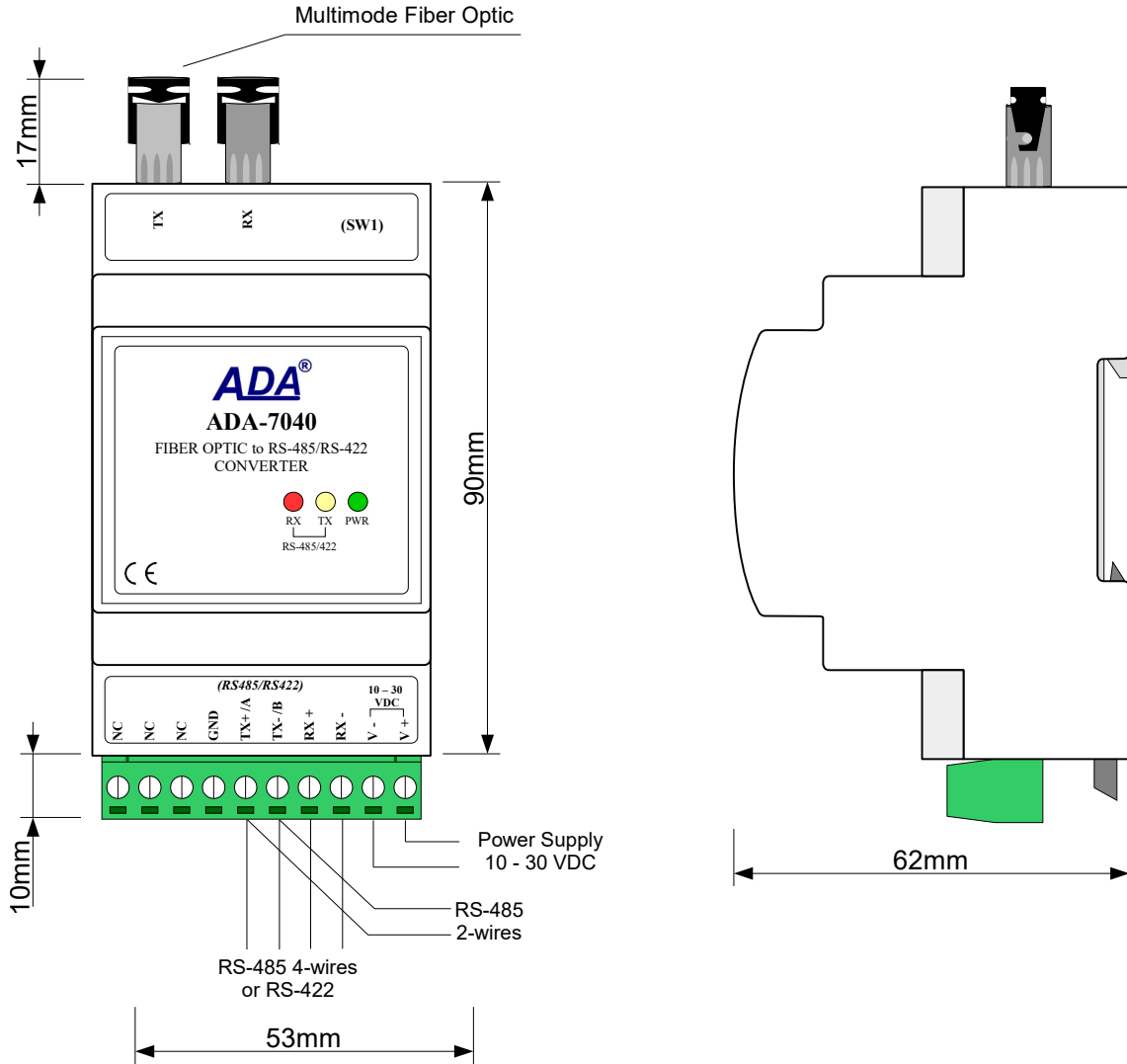
TECHNICAL DATA

Transmission Parameters		
Interface	Fiber optic	RS-485/RS-422
Connector	ST® * type - transmitter and receiver for an optical wavelength from 792nm to 865nm, SC type - transmitter and receiver for an optical wavelength from 792nm to 865nm, SMA type - transmitter and receiver for an optical wavelength from 640nm to 675nm.	Screw terminal block - max. Ø 2,5mm ²
Max. Line length	- up to 2000m for fibre type 50/125 mm, optical power budget Tx/Rx 9,6[dB], - up to 2500m for fibre type 62,5/125 mm, optical power budget Tx/Rx 15[dB], - up to 2000m for fibre type 100/140 mm, optical power budget Tx/Rx 15[dB], - up to 1500m for fibre type 200 mm HCS, optical power budget Tx/Rx 20[dB], - up to 20m for fibre type POF/1mm	1200 m

GALVANIC ISOLATION



DIMENSIONS AND CONNECTION



VERSIONS

ADA-7040 -		-	-	-	-
Electronics version:					
Basic		1			
Special		2			
Galvanic isolation:					
1kV=			2		
3kV=			3		
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
Fiber connectors:					
ST -type 850nm fiber connector					1
SC -type 850nm fiber connector					2
SMA -type 650nm fiber connector					3

Order example:
 Product Symbol: **ADA-7040-1-2-3-1**
 1 – Basic electronics version,
 2 – galvanic isolation 1kV=,
 3 – cover without inlets, plug-in screw terminal block,
 1 – ST-type 850nm fiber connectors,

* ST is a trademark of AT&T company.