

Datasheet

ADA-401WA

Addressable RS-485/RS-422 to 1-WIRE Converter



APPLICATION

The industrial addressable RS485/422 converter to 1-WIRE ADA-401WA enables on basis of the RS485/422 bus to build the network with addressable node, to which it is possible to connect a lot of devices with the 1-WIRE interface so as: arrangements for the measurement of the temperature, clocks of the real time, the EPROM memory, A/C converters, for and the like. Applying ADA-401WA converter as addressable node for the 1-WIRE bus increase the distance up to 1200m between 1-WIRE devices and the computer with the monitoring software or other the MASTER type device.

The DS2480B system provide conversion from 1-WIRE interface to RS485/422 interface in ADA-401WA and the converter of TTL levels on RS485/422. It's exempt the user from go into details of the enough complicated 1-WIRE protocol.

ADA-401WA is equipped with screw terminal for twisted connection of 1-WIRE and RS-485 bus, as well as for connecting the power supply. Over-voltage protection on each RS485/422 line was made on base over-voltage LEDs and fuses.

It is possible to connect 32 ADA-401WA devices operating in linear topology to RS485/422 bus. It is possible to connect other 32 converters by applying ADA-4040 repeater.

ADA-401WA is adapted for powering permanent tension from the outside source which value should contain oneself around from the 10V up to the 30V and was delivered from power pack about the power of 2W min.

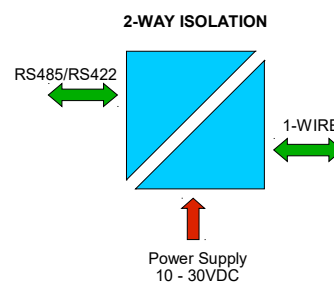
Converter has Implemented protection against opposite polarization of power supply.

TECHNICAL DATA

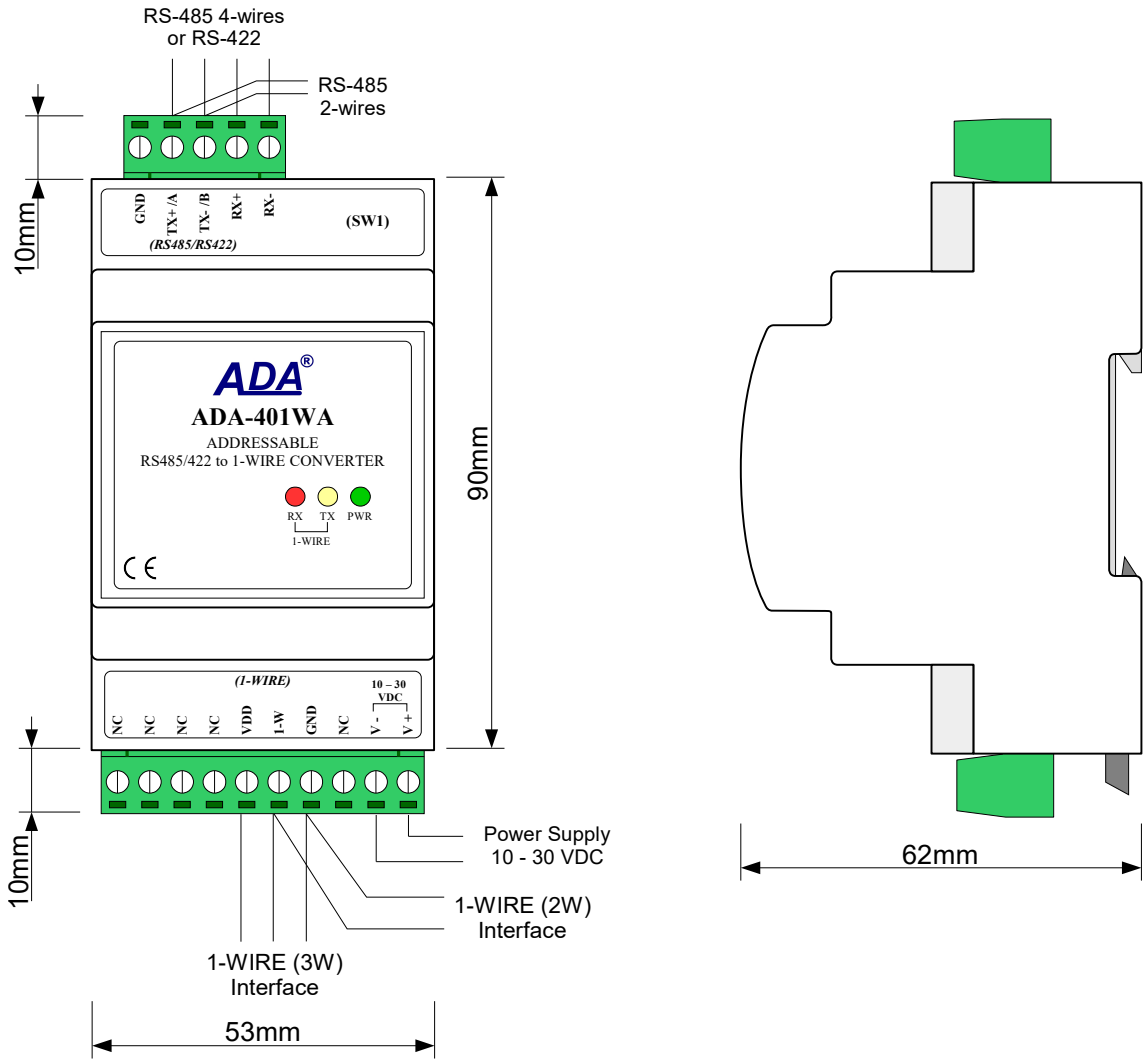
Transmission Parameters		
Interface	RS485/RS422	1-WIRE
Connector	Screw terminal block - max. Ø 2,5mm ²	Screw terminal block - max. Ø 2,5mm ²
Max. Line length	1200m	Up to 300 m – for sensors DS1820

Max. number of connected device	32	100
Max. baud rate	up to 230,4 [kbit/sek]	standard: 0 do 16,3 kbps, overdrive: 0 do 142 kbps,
Transmission line	Twisted cable 2-pair , UTP Nx2x0,5 (24AWG), shield inside large interferences STP Nx2x0,5(24AWG).	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.	TTL signal,
Transmission type	1-WIRE - half duplex (transmitting and receiving on the same wire)	
Optical Signalization	<ul style="list-style-type: none"> • PWD – green LED power supply, • RX - red LED data receiving via 1-WIRE interface, • TX - yellow LED data transmission via 1-WIRE interface. 	
Electrical Parameters		
Power requirements	10 - 24 – 30 V DC	
Power Cable	Recommended length of power cable – do 3m	
Power	<3W	
Protection from reverse power polarization	YES	
Galvanic Isolation	1kV DC or 3kV DC - between power circuit and RS485/422 signal line	
Optoisolation	~3kV - between signals lines 1-WIRE and RS485/422	
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 (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



DIMENSIONS AND CONNECTION



VERSIONS

<p>Electronic Version:</p> <p>Without possibility of programming the memory of 1-WIRE interface 1</p> <p>With possibility of programming the memory of 1-WIRE interface 2</p>	
<p>Galvanic isolation:</p> <p>1kV= 2</p> <p>3kV= 3</p>	
<p>Terminal & Terminal Cover:</p> <p>Cover without inlets, screw terminal block 1</p> <p>Cover with inlets, screw terminal block 2</p> <p>Cover without inlets, plug-in screw terminal block 3</p>	

Order example:
 Product Symbol: **ADA-401WA-1-2-3**
1 – without possibility of programming the memory of 1-WIRE interface,
2 - galvanic isolation 1kV=,
3 - cover without inlets, plug-in screw terminal block,