

## Datasheet

### ADA-101W

#### RS-232 to 1-WIRE Converter



## APPLICATION

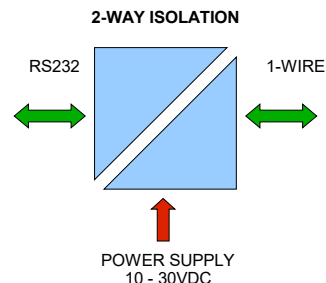
ADA-101W industrial converter RS-232 to 1-Wire is for general using. It lets to connect many circuits with 1-Wire interface for example: temperature measurement circuits, real-time clock, EPROM memory, converter A/C, to common 1-Wire bus. Circuit DS2480B and converter TTL to RS-232 provide transition from 1-Wire to RS-232 interface. It is possible to monitor and/or control 1-Wire circuit by RS-232 interface in PC (suitable software have to be installed) using ADA-101W. CEL-MAR make available example software to visualisation of temperature measurement - Lämpömittari made by Timo Sara-aho. This software works with temperature measurement e.g. DS18S20. It should be used DS9097U adapter in section MicroLAN of software Lämpömittari configuration. ADA-101W is equipped with one female DB-9F connection to connect RS232 interface and terminal block for twisted pair connection of 1-Wire bus and power supply. Connector DB-9F RS232 interface is made like DCE, it let connect converter to other devices equipped with RS232 in use the extension cable RS232 (typical cable for modem connection) without crossing Tx with Rx. Converter uses signals Rx, Tx and GND for working, which are entered via DB-9F connector. ADA-101W should be powered from external sours of D/C, which value should be between 10V-30V and power min. 2W. Converter has implemented protection of opposite connecting powering.

## TECHNICAL DATA

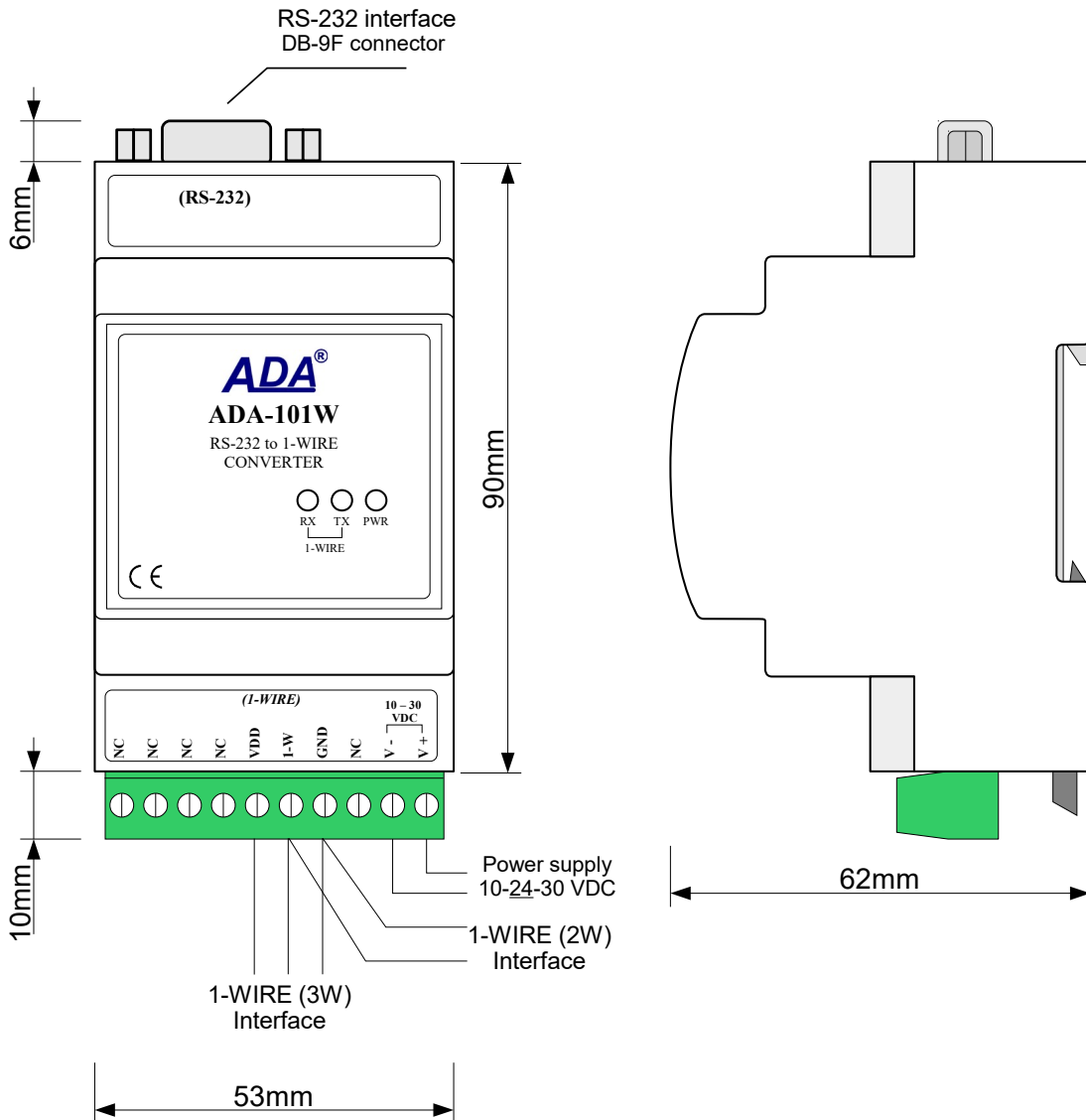
Interface	Transmission Parameters	
	RS-232	1-WIRE
Connector	DSUB-9 Female	Screw terminal block - max. Ø 2,5mm <sup>2</sup>
Max. Line length	Up to 15 m	Up to 400 m – for sensors DS1820
Max. number of connected device	1	100

Max. baud rate	9.6, 19.2, 57.6, 115.2 [kbit/sek]	standard: 0 do 16,3 kbps, overdrive: 0 do 142 kbps,
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 Cat.5e, shield inside large interferences STP Cat.5e
Standards	EIA-232, CCITT V.24.	TTL signal,
Transmission type	1-WIRE - half duplex (transmitting and receiving on the same wire)	
Optical Signalization	<ul style="list-style-type: none"> <li>• PWD – green LED power supply,</li> <li>• RX - red LED data receiving via 1-WIRE interface,</li> <li>• TX - yellow LED data transmission via 1-WIRE interface.</li> </ul>	
<b>Electrical Parameters</b>		
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	1kV DC or 3kV DC - between power circuit and RS-232 signal line	
Optoisolation	~3kV - between signals lines 1-WIRE and RS-232	
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.	
<b>Environmental Parameters</b>		
Operating temperature	-30 + 60°C	
Humidity	5 + 95% - non-condensing	
Storage temperature	-40 + 70°C	
<b>Casing</b>		
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

	ADA-101W -	-	-
<b>Electronic Version:</b>			
Without possibility of programming the memory of 1-WIRE interface	1		
With possibility of programming the memory of 1-WIRE interface	2		
<b>Galvanic isolation:</b>			
1kV=		2	
3kV=			3
<b>Terminal &amp; Terminal Cover:</b>			
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-101W-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,