

Datasheet

ADA-14040

RS485/RS422 to Wi-Fi (802.11b) Wireless Serial Server with MODBUS GATEWAY



APPLICATION

ADA-14010 Wireless Serial Server transmits data between devices equipped with the RS485/RS422 interface via the wireless network WLAN. Functioning in Wi-Fi network can be in the virtual serial port, serial bridge TCP, serial bridge UDP, TCP sockets, UDP sockets, MODBUS Data Gateway.

The MODBUS Data Gateway converts MODBUS-RTU master/slave protocol and MODBUS-ASCII master/slave to MODBUS-TCP protocol and inversely. This allows integrating the MODBUS-RTU/ASCII devices with MODBUS-TCP devices in a single network. ADA-14040 supports protocols such as TCP, UDP, DHCP, SNMP, SSL/TLS, Telnet, Rlogin, LPD, HTTP/HTTPS, SMTP, ICMP, IGMP, ARP. The Server has implemented WWW server for remote configuration and management via internet browser. The baud rate is up to 230,4kbps via the RS485/422 interface without the interference into the format of transmitted data. For operating ADA-14040 uses signals such as RX+, RX-, TX+/A, TX-/B.

Can be connected 32 devices to RS485 Bus created on the base ADA-14040, operate in half duplex or full duplex mode on 4-wire RS485 Bus. It is adapted to supply an external voltage source in scope from 10V= to 30V= and 4W power. Converter has protection against power supply reverse connection and short-circuit protection and surge on RS485/422 Bus. ADA-14040 has also galvanic separation between power supply and Wi-Fi interfaces and RS485/RS422 interfaces and additionally optoisolation between RS485/422 and WiFi.

The range of transmission in the wireless network Wi-Fi (IEEE 802.11b):
 - in buildings from 30m to 150m,
 - in open area to 300m,

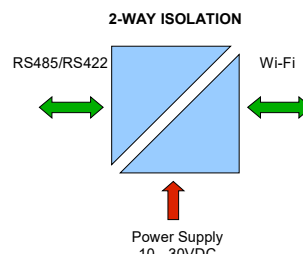
The transmission range can be increased after the application of additional directional antennas.

Together with the ADA-14040 we provide the drivers, which after installation, create in operating system additional COM port on the next free number e.g. COM3. It can be use as standard COM port but isn't hardware port but virtual, create in Windows system. This is the reason why some applications running in DOS and use this port, can operate improperly.

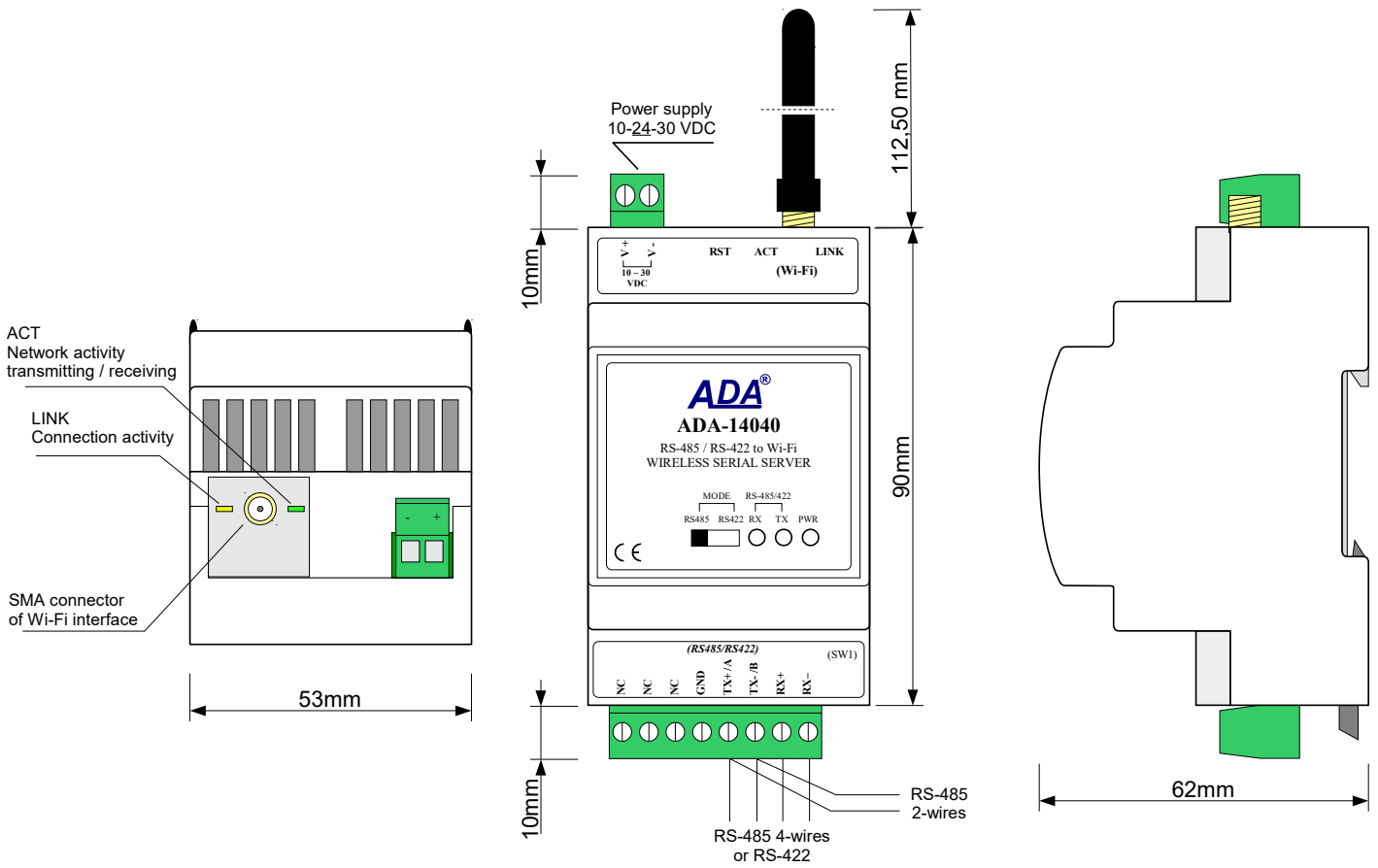
TECHNICAL DATA

Transmission Parameters		
Interface	Wi-Fi	RS485/RS422
Connector	SMA -plug + Antenna	Screw terminal block - max. Ø 2,5mm ²
Max. Line length	- inside building – from 30m to 150m, - open area up to 300m,	1200 m
Max. number of connected device	Depend on addressing type in network	32
Transmission line	2-pair twisted cable, UTP Nx2x0,5 (24AWG), shield inside large interferences STP Nx2x0,5 (24AWG)	
Standards	IEEE 802.3, IEEE 802.11b (2.4GHz)	EIA-485, CCITT V.11
Baud rate	11 Mbit/s	do 230,4 kbps
Transmission type	Asynchronism half duplex or full duplex,	
Optical Signalization	<ul style="list-style-type: none"> • 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	4W	
Protection from reverse power polarization	YES	
Galvanic Isolation	1kVDC or 3kVDC 2-WAY depend on version	
Optoisolation	~3kVDC between interfaces Wi-Fi and RS485/422	
Electromagnetic compatibility	Resistance to disruptions PN-EN 55024. Emission of disruptions PN-EN 55022 A class. PN-EN 301 489-3 v1.4.1:2006, PN-EN 300 328 v1.7.1:2007.	
Safety requiring	According to the PN-EN60950 norm.	
Environment	Commercial and light industrial.	
Environmental Parameters		
Operating temperature	-30 ÷ 50°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	Noryl UL. 94 V-O	
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-14040 - [] - [] - []	
Electronic versions:	
Basic	1
Galvanic isolation:	
1kV DC (2-WAY)	2
3kV DC (2-WAY)	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

Order example:
 Product Symbol: **ADA-14040-1-2-3**
 1 – basic version of electronic,
 2 - galvanic isolation 2kV= (2-way),
 3 - cover without inlets, plug-in screw terminal block,