Interface Converter AD-NETGW 100 GT

Description

The network interface converter (AD-NETGW 100 GT) enables a connection to devices with serial interface vie IP-based networks (LAN). For this, the device contains a LAN connection, a RS485 interface and an AD-UART interface. An integral wide range power pack enables operation in almost all supply situations.

Application

The AD-NETGW 100 GT makes access to measuring values and unit conditions from distant sites possible at all times. Devices can be parameterized or measuring values can be read out. For instance, this way conditions in pumping stations can be interrogated and monitored at any time. The remote maintenance of ADAMCZEWSKI devices in local networks or via the internet can be realised.

Specific characteristics

- Ethernet 10/100 Mbit
- Protocols: modbus/TCP, modbus-RTU, data transparency
- RS-485 interface for field devices
- Integrated web server for configuration
- Password protected configuration

Business data

Order number
AD-NetGw 100 GT

Technical specifications

Ethernet-interface

LAN	10/100 Mbit
Protocol	TCP/IP
Addressing	IP4
DHCP	can be deactivated
IP standard address	192.168.178.99
Access port	80
Password protection	configuration / webserver

RS485-interface

Baud rate	2400, 4800, 9600, 14400, 19200, 28800, 38400, 57600, 76800
Data format	8N1, 8E1, 8O1
Max. bus users	32
Bus termination	120 ohms both sides at the end
Max. length of bus	500 m (no stubs)
Cable	twisted and shielded

AD-UART-interface

Baud rate	2400, 4800, 9600, 14400, 19200, 28800, 38400, 57600, 76800
Data format	8N1, 8E1, 8O1

Supply

Voltage range AC	50 ... 253 V AC, 50/60 Hz
Nominal voltage AC	230 V AC
Voltage range DC	20 ... 253 V DC
Nominal voltage DC	24 V DC
Input power AC/DC	1,8 VA / 1 W

Housing

Dimensions (WxHxD)	35,5 x 90 x 58 mm
Type of protection	IP 20
Connection method	screw clamp
Terminals, wire cross section	2,5 mm² flex wire / 4 mm² one wire
Bolting torque terminals	0,6 Nm
Skinning length	6 mm
Weight	~ 90 g
Manner of fastening	35 mm DIN rail 35mm

Environmental conditions

Ambient temperature	-10 ... 50 °C
Storage and transport	-10 ... 70 °C (no condensation)

EMC

Product family standard	EN 61326-1 [1]
Emitted interference	EN 55011, CISPR11 Cl. B, Gr. 1

Electrical safety requirements

Product family standard	EN 61010-1
Overvoltage category	II
Pollution degree	2

Galvanic isolation, test voltages

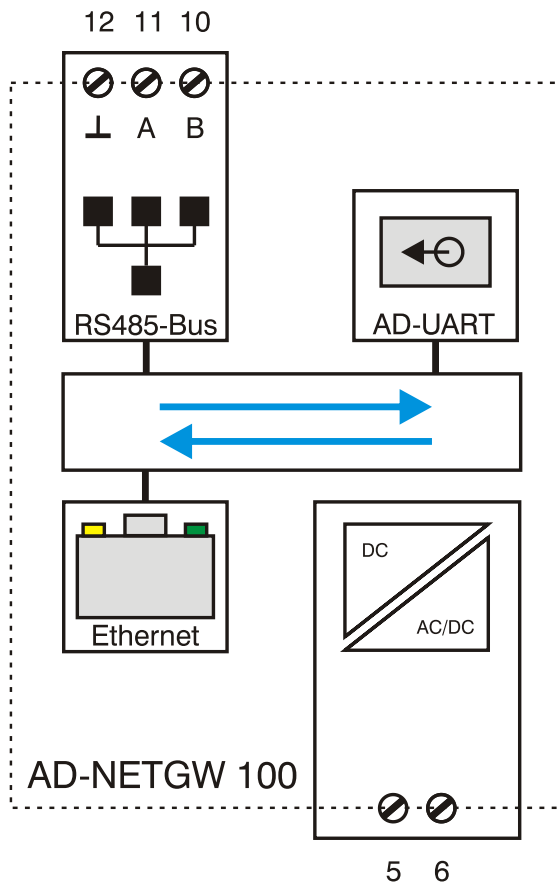|	
Supply line to all interfaces	3 kV, 50 Hz (1 min.)
Ethernet to AD-UART/RS-485	1,5 kV, 50 Hz (1 min.)

Protection circuits

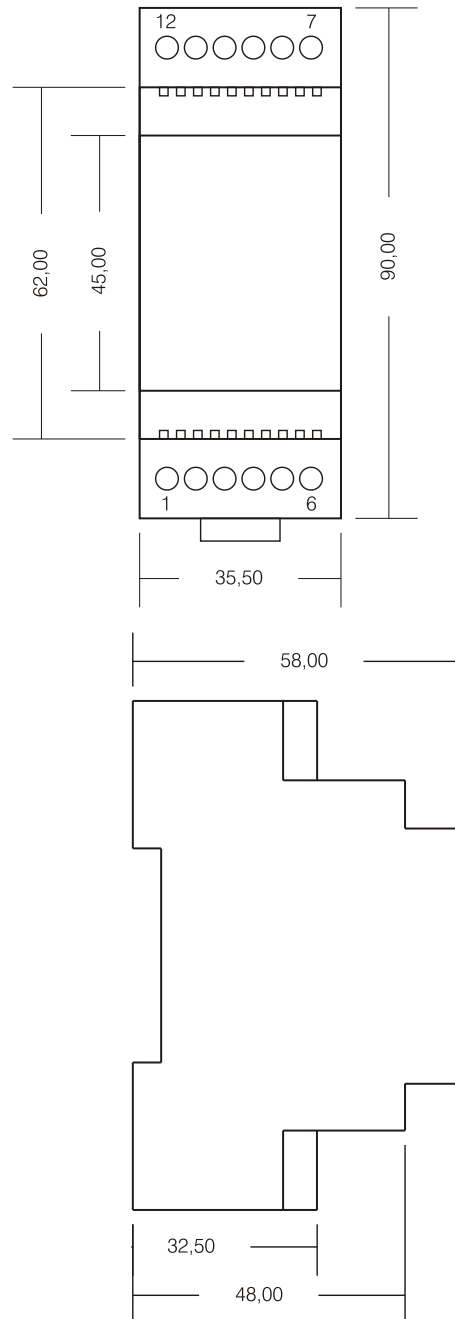|	
Interfaces	electrical surge protection
Power supply	protection against over-temperature, over-voltage and over-current

[1] During checking, communication errors are possible.

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Interface Converter

AD-NETGW 100 GT

Block and wiring diagram

12 11 10

⊥ A B

RS485-Bus

AD-UART

Ethernet

DC / AC/DC

AD-NETGW 100

5 6

Dimensions

12 ... 7

1 ... 6

62,00

45,00

90,00

35,50

58,00

32,50

48,00

Interface Converter

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AD-NETGW 100 GT

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Function

On the network side, the device has 6 freely usable TCP channels, so-called sockets. Each of these channels can be configured freely. Also, this way up to 6 simultaneous network enquiries can be processed (i.e. of Modbus-TCP masters). For each channel, port number, bridge functions and timeout can be set. The data transport path such as Modbus-TCP can be determined on RS485 modbus RTU via the bridge functions. The date interfaces work simultaneous and independent of each other. The setting up of the serial interfaces is possible in different tapes of protocol. The connection of any device with serial interface is, of course, also possible due to the transparent router function. Ready for operation is indicated by the green illuminated diode at the LAN socket when the network cable is plugged in. The device configuration is carried out via the web server integral in the device. Here, all settings can be carried out manually via one surface. Alternatively, the device can be set up with the PC software "AD-Studio" via the AD-UART interface. Apart from the protocol conversion Modbus-TCP to Modbus-RTU, a data transparent connection can also be selected. With this, any devices with the most diverse protocols can be tied to IP networks. Already at the initial commissioning via the web interface, a password for the web surface is essential. This password is activated during the initial use of the set-up surface and will be asked for again with each new session.

Accessories (not included)

The voltage multiplier AD-SV 1224 GL is suitable for operation with 12V supply voltages. For connection to ADAMCZEWSKI devices with AD-UART interface, an adapter cable, 6 polar on a jack, is available.

Circuit examples