Network gateway
Short guide

1. Overview

Network gateway GE-24-Cloud is designed to connect the network devices working with the Modbus protocol over RS485 interface to the cloud service akYtec Cloud via Ethernet.

The detailed user guide is available for download at www.akytec.de.

2. Specifications

Table 1 Specifications

Parameter	Value
Power supply	
Power supply	24 (10…48) VDC
Power consumption, max.	6 W
Galvanic isolation	1770 V
Network interface	
Interface	RS485
Protocols	Modbus RTU, Modbus ASCII, akYtec*
Baud rate	1200...115200 bps
Cable length, max.	1000 m
Cloud interface	
Interface	Ethernet
Protocols	TCP, DNS, DHCP
Baud rate	10 Mbps, 100 Mbps
Cable length, max.	100 m
Configuration interface	
Interface	USB 2.0 (Micro-USB); Ethernet 10/100 Mbps
Mechanical	
Dimensions	55 × 96 × 58 mm
IP code	IP20
Average service life	10 years
Weight	approx. 0.15 kg

NOTE
Only devices listed in the library can be connected via the akYtec protocol.

3. Environmental conditions

The device is designed for natural convection cooling which should be taken into account when choosing the installation site.

The following environmental conditions must be observed:

- clean, dry and controlled environment, low dust level;
- closed non-hazardous areas, free of corrosive or flammable gases.

Table 2 Environmental conditions

Condition	Permissible range
Ambient temperature	−40...+55 °C
Relative humidity	10...95 % (non-condensing)
Altitude	up to 2000 m above sea level
EMC emission / immunity	conforms to IEC 61131-2
Vibration / shock resistance	

4. Dimensions

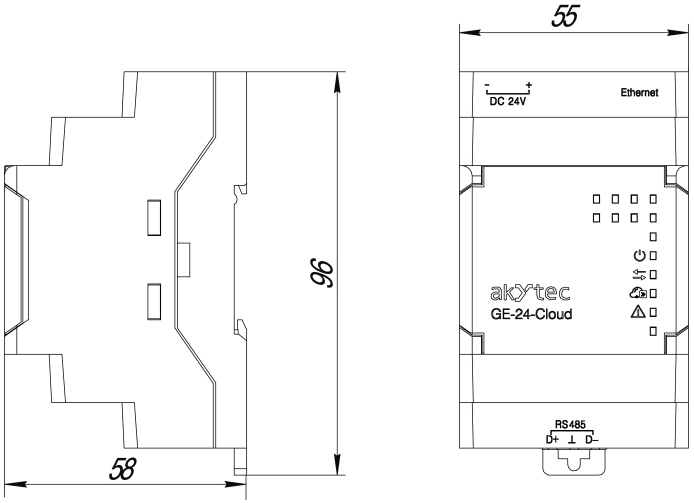


Fig. 1 Dimensions

5. Indication and control

There are 4 LEDs on the front cover.

Table 3 LED indicators

LED	State	Description
⏻	ON	Power is on
⇄	flashing	Data transfer over RS485 interface
☁	flashing	Command transfer from akYtec Cloud
⚠	OFF	No error
	ON	Error (see *Table 4*)

Table 4 Error indication and remedy

LED	State	Description	Remedy
⏻ ■ ⇄ □ ☁ □ ⚠ ■	⚠ ON	Hardware / software error	Contact akYtec service staff
⏻ ■ ⇄ □ ☁ □ ⚠ ▪	⚠ flashing (short ON, long OFF)	Cannot establish connection to cloud server	Check the network settings of the device and the Internet access point. Check the integrity of the Ethernet cable
⏻ ■ ⇄ □ ☁ □ ⚠ ■	⚠ flashing (ON and OFF of the same length)	No internet access. DNS or DHCP server failure if DHCP is enabled	

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akYtec GmbH · Vahrenwalder Str. 269 A · 30179 Hannover · Germany
Tel.: +49 (0) 511 16 59 672-0 · www.akytec.de

Under the front cover:

1. Service button
2. 4 DIP switches
3. Micro-USB connector

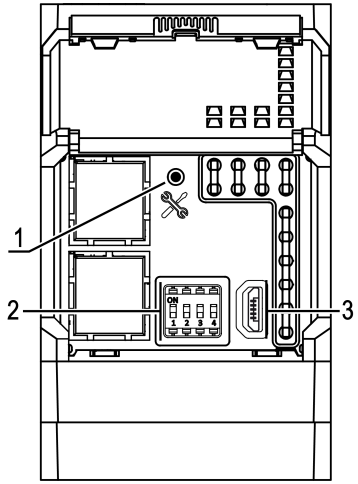
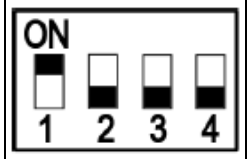
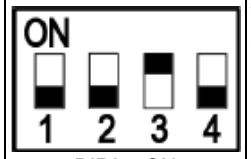
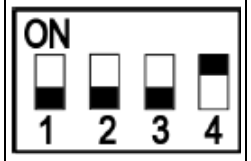
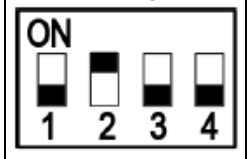


Fig. 2 Under the cover

To restart the device, press the service button shortly.
To reset the device to the factory settings, press and hold the service button for at least 12 s, then power the device off and on again.
Power must be disconnected and reconnected after pressing the button (reset the gateway to factory settings).
Pressing the button without holding it down restarts the gateway.

Table 5 DIP switches

DIP switch	Description
 DIP1 = ON	120 Ω terminating resistor is connected
 DIP3 = ON	Write commands via RS485 interface are disabled
 DIP4 = ON  DIP2 = ON	Only for akYtec service staff. The switch must be turned off during normal operation

NOTE
DIP switch positions are read in ascending order starting from 1.

6. Startup

After mounting and powering the network gateway on:

1. Connect the gateway to a PC over USB.
2. Set up the gateway network parameters using akYtec Tool Pro.

NOTE
To connect to akYtec Cloud server, use the local port 25001.

3. Connect the gateway to Ethernet access point.
4. Power off the gateway.
5. Connect all devices to the gateway. Ensure all devices are configured before being connected.
6. Power on the gateway and all connected devices.
7. Add the gateway and all devices connected to the gateway to akYtecCloud.
8. Ensure the connection to akYtec Cloud is established checking the LEDs on the gateway front cover (see *Table 4*).

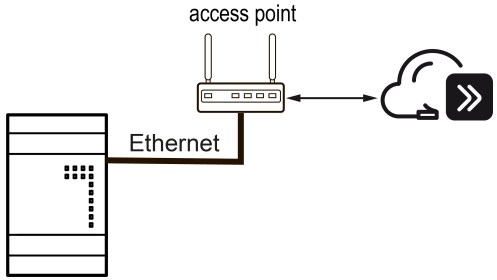


Fig. 3 Connection to akYtec Cloud

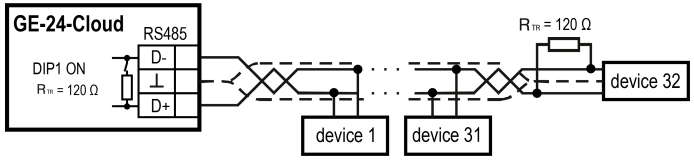


Fig. 4 Connection to RS485 interface

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