VEGA

Supplementary instructions

LoRa gateway

Gateway with LoRaWAN interface for use
with VEGA sensors

Contents

1 For your safety

1.1 Appropriate use

The LoRa-Gateway is used for wireless transmission of measurement and diagnostic data of LoRa sensors to a VEGA server.

1.2 General instructions

This supplementary instructions manual describes the setup of the LoRa gateway in conjunction with LoRa sensors. It serves as supplement to the original operating instructions of Messrs. Kerlink. You can find additional information under https://www.kerlink.com.

2 Product description

Scope of delivery

The scope of delivery encompasses:

- LoRa-Gateway
- Plug-in power supply unit (only for indoor version)
- Power supply unit with PoE-Injector (only for outdoor version)
- Mounting adapter (only for outdoor version)
- VEGA identification card
- Documentation
  – This operating instructions manual
  – Quick Start Guide of Kerlink
  – Information sheet " *PINs and Codes*" with access data

What is LoRaWAN?

LoRaWAN stands for Long Range Wide Area Network. This network enables very energy-efficient transmission of data from many sensors over long distances. Due to the very low energy consumption, battery-powered sensors can be operated for many years without battery replacement.

Application area

The LoRa-Gateway receives via LoRaWAN the measurement and diagnosis data of appropriately configured LoRa sensors. The gateway combines the received data and transmits them via mobile network to the VEGA Inventory System.

The measured values and messages are transmitted via the GSM/GPRS/UMTS/LTE network.

The gateway is available in two versions:

- Indoor version for use in offices and living rooms
- Outdoor version for use in harsh environments such as workshops and factory halls and for outdoor use

VEGA identification card

A mobile phone contract with an activated SIM card is required for the transmission of measured values via mobile phone. The VEGA identification card is therefore included in the scope of delivery of the gateway.

3   Mounting and connection

3.1   Mounting

Mounting options

Both versions of the LoRa-Gateway are intended for wall mounting. For the outdoor version, pipe mounting is also possible. Details on mounting can be found in the original instructions manual of Kerlink supplied with the device.

Installation position

Before installation, check that there is sufficient network coverage (signal strength) at the intended location.

3.2   Connection

Voltage supply indoor version

The power supply is provided by the plug-in power supply unit supplied. To do this, slide the socket adapter that suits your needs onto the power supply unit.

Voltage supply outdoor version

Power is supplied via Power is supplied via " *Power over Ethernet* " (PoE). You can use the supplied PoE-Injector or an existing PoE connection. The PoE connection is only required for the power supply, no data transmission takes place here, as this is implemented via mobile radio.

Note:
The PoE-Injector is intended for indoor use only, outdoor installation is not permitted. An Ethernet patch cable of the correct length is required by the customer for connection.

Details of the power supply can be found in the technical data in the appendix or in the original operating instructions manual of Kerlink.

4 Setup

The VEGA identification card is inserted from factory and all necessary parameters are already preset. As soon as the gateway is supplied with voltage, it is immediately ready for operation without further configuration.

5 Supplement

5.1 Technical data

Voltage supply

Power supply unit indoor version	
– Input	100 … 240 V AC, 0.3 A
– Output	12 V DC, 0.5 A
PoE-Injector outdoor version	
– Input	100 … 240 V AC, 0.67 A
– Output	55 V DC, 0.54 A

PoE interface

Voltage supply	48 V DC, 140 mA
Plug connection	RJ45

Communication

Sensor -> LoRa gateway	LoRaWAN
LoRa-Gateway -> VEGA Inventory System	Mobile radio (3G/4G)

Ambient conditions

Ambient temperature	
– Indoor version	-20 … +55 °C (-4 … +131 °F)
– Outdoor version	-40 … +60 °C (-40 … +140 °F)

Electrical protective measures

Protection rating	
– Indoor version	IP30
– Outdoor version	IP67