DATA SHEET

KFA4-TH

Fully integrated remote level monitoring solution with embedded cellular modem, integrated standard AA batteries, and external cellular antenna.

The sensor can be customized to send data to any third-party IoT platform. It is also fully remote configurable.

PRINCIPLE OF OPERATION

KFA4-TH is based on our established and reliable TDR level measurement sensor platform. Added to that is an embedded cellular modem and an external antenna for connecting to third-party IoT platforms. The device does not require an external power supply, as it fully powered by integrated standard AA batteries.
In addition, the KFA4-TH can be fully analysed and configured remotely.

APPLICATION AREA

The KFA4-TH remote level monitoring solution is ideal for monitoring level of all kinds of fluids and solids.
The KFA4-TH is designed for rugged outdoor standalone applications in remote locations and has a very low energy consumption, which allows for extended periods of time without service or battery replacement.

BENEFITS

- Unmatched price / performance ratio
- Precise and reliable continuous level and interface level measurement
- Rugged, low-power design with standard AA battery power for remote outdoor installations
- Can be customized to send data to any third-party IoT platform
- Remote analysis and configuration of the connected KFA4-TH sensors

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LEVEL MEASUREMENTS

KFA4-TH is a TDR-Sensor with single rod, wire rope or coaxial probe for continuous level measurement in liquids and light solids – it offers precise and reliable continuous level measurement.

In addition, KFA4-TH measures and transmits the ambient temperature, as well as various performance parameters of the cellular network and the batteries.

MOUNTING AND ANTENNA

KFA4-TH is mounted directly onto the top of the tank.

We can also supply you with custom fittings to make mounting the sensor in your application as convenient and efficient as possible. We will be happy to discuss your requirements with you.

Different cellular antennas are available on request, based on the desired cellular standard. In the case of antennas that are directly mounted into the enclosure of KFA4-TH, it is important to choose and installation location that is free of obstacles that could hamper connectivity, e.g. metal objects blocking the antenna. External antennas with cable tails offer more flexibility for mounting the KFA4-TH as they can be placed separately from the enclosure. External antennas with a magnetic base are available.

BATTERIES

The device does not require an external power supply, as it fully powered by six integrated standard AA batteries. The battery compartment is easily accessible right underneath the lid.

This ensures easy and cost-effective availability of replacement batteries worldwide and avoids the hassle associated with shipping Lithium batteries.

We recommend using six AA Lithium batteries, as they provide by far the best lifetime and performance in outdoor applications. The battery lifetime strongly depends on various factors such as number of sensors connected, network type and strength, measurement and transmission intervals and ambient temperature. Field tests have shown that in common storage tank monitoring applications, the battery lifetime will exceed several years, even in cold climates.

CONNECTIVITY OPTIONS

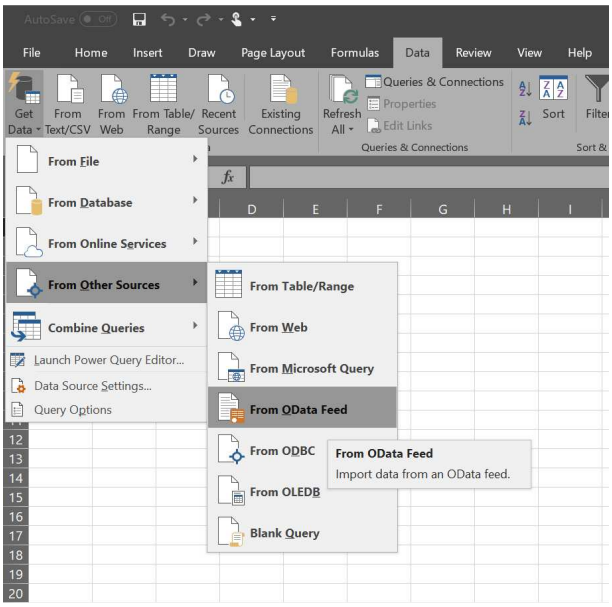
KFA4-TH is equipped with a TELIT HE910-D cellular modem.

KFA4-TH has an embedded SIM card holder for a microSIM (3FF) card. However, the actual SIM card or data plan is not included and is usually provided by either the end user or the third-party IoT solutions provider.

IOT PLATFORM AND DATABASE INTEGRATION

KFA4-TH can be customized to send data to any third-party IoT platform, e.g. Microsoft Azure, SAP, Salesforce, or directly into customers' standard databases.

Through IoT platforms, the measurement data sent by the sensor can be used to realize a multitude of added functionalities, e.g. alerts for various scenarios, inventory management, route planning, data visualization and analysis. For example, importing the data into Excel is easily done



All protocols, standards and formats used for transferring the sensor data are easily understood and commonly used by IT staff.

Please contact KFA to discuss your requirements.

CONFIGURATION

Configuration of the KFA4-TH can be done locally on the device via a USB connection, utilizing a straightforward configuration tool or remotely via the cellular network connection. All configuration elements are easily accessible underneath the lid.

The intervals for level measurements and data transmission can be adjusted independently of each other.

ORDERING INFORMATION

The KFA4-TH can be customized to your application requirements.

Please get in touch with KFA – we are happy to work with you, explain all details and guide you through the options.

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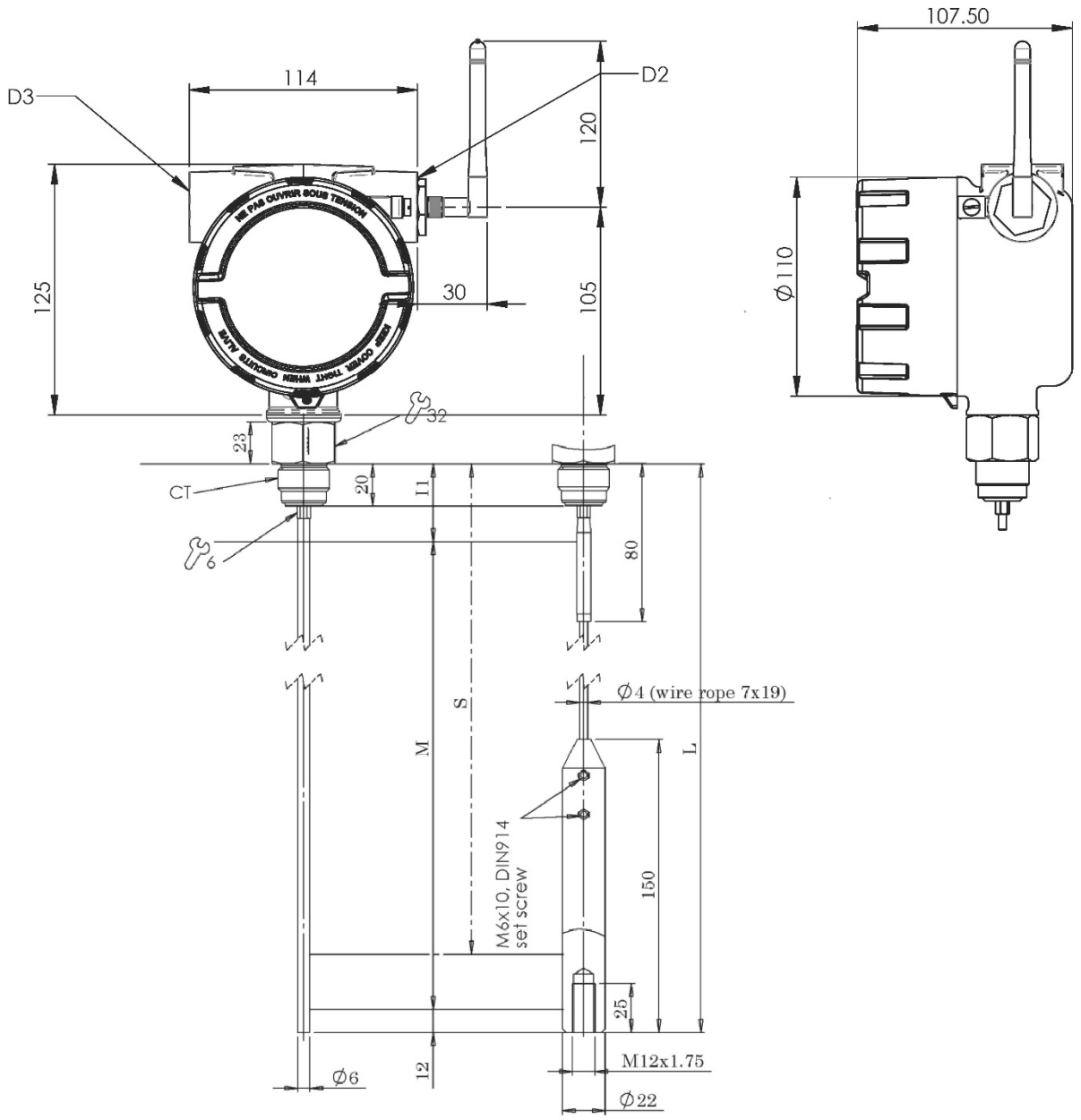
MAIN SPECIFICATIONS

Sensor	TDR level measurement sensor platform With single rod, wire rope or coaxial probe for continuous level measurement in liquids and light solids
Enclosure	Aluminium, IP67
Connection thread [CT]	G¾A or ¾"NPT (wrench size 32mm)
Antenna	Depending on the mounting location and chosen cellular standard Enclosure-mounted or external with cable tail and magnetic base
Power	Six standard AA internal batteries (Lithium batteries recommended) No external power supply required
Connectivity	Embedded cellular modem: TELIT HE910-D Operating Bands 3G: B5, B8, B2, B1, B4 (B6&B19 (800 MHz) are subset of B5 (850 MHz) and supported as well Frequency Bands [MHz]: 800/850, 900, AWS1700, 1900, 2100 microSIM (3FF) card and/or data plan not included. Can be included upon request
IoT platform integration	The sensor can be customized to send data to any third-party IoT platform. Through these platforms, the measurement data sent by the KFA4-TH can be used to realize a multitude of added functionalities, e.g. alerts for various scenarios, inventory management, route planning, data visualization and analysis. Please contact KFA to discuss your requirements
Configuration	Locally on the device via a USB connection, utilizing a straightforward configuration tool or remotely via the cellular network connection The intervals for level measurements and data transmission can be adjusted independently of each other
Weight	Sensor head: 1350g (complete with process connection and electronics, WITHOUT batteries) single rod probe, 1m: 230g wire rope probe, 1m (no counterweight): 66g; counterweight: 380g

DIMENSIONS IN MM



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