

## DATA SHEET



### KFA200

Remote level monitoring solution with cellular connectivity and optional battery power (also for connected sensors). To be used together with up to four KFA2-d TDR-Sensors.

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

#### PRINCIPLE OF OPERATION

KFA200 interfaces with the innovative and highly reliable KFA2-d TDR-Sensors. The level measurement data taken by those sensors is then transmitted via mobile phone networks to third-party IoT platforms. In addition, the KFA200 and the connected sensors can be fully remotely analysed and configured.

#### APPLICATION AREA

The KFA200 remote level monitoring solution is ideal for monitoring level of all kinds of fluids and solids. It is particularly suited for fresh, used or mixed oil storage, either animal, vegetable or petrochemical oils. The system is capable of measuring interface level, i.e. detecting the position of the oil/water separation layer that occurs over time in storage tanks. This is especially valuable for controlling that deliveries or collections do not include the water content in tank. The KFA200 is designed for rugged outdoor applications in remote locations and features a sealed aluminium housing that also contains optional standard batteries to power the device as well as all connected sensors. In addition, the system 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 optional battery power for remote outdoor installations
- Can be customized to send data to any third-party IoT platform
- Remote analysis and configuration, also of the connected KFA2-d sensors

#### CONTACT

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## **MOUNTING AND ANTENNA**

KFA200 is mounted either directly onto the tank or near the tank. It is important to utilize the mounting kit supplied with the housing and not to drill any extra holes into the KFA200 enclosure – this will lead to water ingress and will most likely destroy the device.

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 KFA200, 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 KFA200 as they can be placed separately from the enclosure. External antennas with a magnetic base are available.

The cable length between the KFA2-d sensor(s) – on top of the tank(s) - and the KFA200 is not the primary factor in determining the best mounting location. Cable length is usually flexible.

The KFA200 can be supplied with connectors instead of cable glands, as well as matching preconfigured connection cables. This allows for a very quick, easy and error-proof installation.

## **POWER SUPPLY AND BATTERIES**

Depending on the application and installation location, the KFA200 can be powered with 100...250VAC, 10...30VDC, or completely powered via internal batteries.

The KFA200 will supply power to the connected KFA2-d sensors.

For 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 with one connected KFA2-d sensor and three daily measurements and data transmissions, the battery lifetime will exceed two years, even in cold climates.

## **CONNECTIVITY OPTIONS**

KFA200 is available with various cellular connectivity options, e.g. GSM or CDMA, 3G, NB-IoT, LTE Cat M1. Other standards like LoRa would be possible upon request.

KFA200 has an embedded SIM card holder for a standard size SIM 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 INTEGRATION**

The system can be customized to send data to any third-party IoT platform, e.g. Microsoft Azure, SAP, Salesforce. Through these platforms, the measurement data sent by the KFA200 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**

Configuration of the KFA200 can be done 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.

## **LEVEL MEASUREMENTS**

The KFA200 works in conjunction with up to four KFA2-d level sensors.

KFA2-d 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.

## **ORDERING INFORMATION**

The KFA200 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.

## MAIN SPECIFICATIONS

|                          |   |
|--------------------------|---|
| Sensors                  | Up to 4 KFA2-d TDR level sensors  |
| Enclosure                | Aluminium, IP67   |
| Antenna                  | Depending on the mounting location and chosen cellular standard<br>Enclosure-mounted or external with cable tail and magnetic base  |
| Power                    | Depending on the application and installation location, the KFA200 can be powered with 100...250VAC, 10...30VDC, or completely powered via internal batteries (6 AA Lithium batteries)<br><br>The KFA200 will supply power to the connected KFA2-d sensors  |
| Connectivity             | KFA200 is available with various cellular connectivity options, e.g. GSM or CDMA, 3G, NB-IoT, LTE Cat M1. Other standards possible upon request<br><br>SIM card and/or data plan not included   |
| IoT platform integration | The system can be customized to send data to any third-party IoT platform. Through these platforms, the measurement data sent by the KFA200 can be used to realize a multitude of added functionalities, e.g. alerts for various scenarios, inventory management, route planning, data visualization and analysis.<br>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<br><br>The intervals for level measurements and data transmission can be adjusted independently of each other  |

## DIMENSIONS IN MM

200 x 150 x 75

