NDC-communication module

with wireless M-Bus and LoRaWAN® radio interface

Communication module to connect to ZENNER ultrasonic water meter series IUW / IUWS

The NDC communication module (Near Field Data Capture module) with wireless M-Bus and LoRaWAN® interface is used for remote reading of the ZENNER ultrasonic water meter series IUW / IUWS. The NDC queries the consumption and status information via the NFC interface of the respective meter and transmits this wirelessly. The data is forwarded unchanged from the NDC to the gateways or wireless M-Bus receivers within range.

An NDC module is always required for radio reading of the IUW ultrasonic bulk water meters. It functions as an external radio module and has a cable length of three or ten meters. The IUWS ultrasonic water meter is equipped with an integrated radio module. Optionally, the NDC module can be used to optimize the radio range at difficult installation points. Depending on the version, transmission interval and environmental conditions, the module can achieve a battery life of approx. 12 years.

Performance characteristics at a glance

- **Composite housing with wall mounting bracket**
- **Battery operation (independent of the water meter)**
- **Flood-proof (protection class IP68)**
- **Optical interface (IrDA)**
- **Supports both LoRaWAN® and wireless M-Bus and automatically adopts the settings of the connected water meter**

Variants

- **Standard variant with a three meter cable length for connection to IUW / IUWS without breaking the meter's calibration seal**

Smart Metering functions *

- **Leakage detection**
- **Pipe burst warning**
- **Detection incorrect installation**
- **Reverse water flow detection**
- **Meter oversized detection**
- **Meter undersized detection**
- **Meter stop detection**
- **Meter Dry detection**
- **Frost warning**
- **Battery warning**

* depending on the respective meter configuration

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Technical data

Operating frequency	868 MHz
Transmission power	approx. 14 dBm, 25 mW
Error detection	CRC
Protection class	IP68
Optical interface	yes (IrDA)
Display	no
Energy supply	Lithium battery, not exchangable
Battery life	approx. 12 years + reserve, depending on the transmission scenario, spreading factor and environmental conditions
Battery status monitoring	yes
Ambient conditions	>0°C bis +55 °C;
CE conformity	according to directive 2014/53/EU (RED)
Telegram content	Depending on meter configuration, e.g. serial number, date, meter index (current value or daily value), previous month´s value (max. 15), status information

Duration of transmission telegrams	LoRaWAN®	Up to 1.5 s (depending on spreading factor)
	wM-Bus:	~ 10 - 15 ms
Transmission interval	LoRaWAN®:	Depending on the respective meter configuration, e.g. daily; optional: monthly or 8 telegrams with three hourly values each
	wM-Bus:	Depending on meter configuration*
Encryption of radio protocols	LoRaWAN®:	yes
	wM-Bus:	yes, depending on the meter configuration (Standard Security Profile A, Encryption Mode 5; Security profile B, mode 7 on request)

Activation of the radio interface	• by illuminating the IR diodes with a light source (> 20s; please do not use LEDs) • via the IrDA interface using the associated ZENNER opto head, MinoConnect and related configuration software • Automatic activation takes place within a maximum period of 24 h if no activation by lighting or via the IrDA interface was carried out during installation

*After activation, the modules are sending for a period of one hour with a quicker transmission interval of 30 s (commissioning scenario).
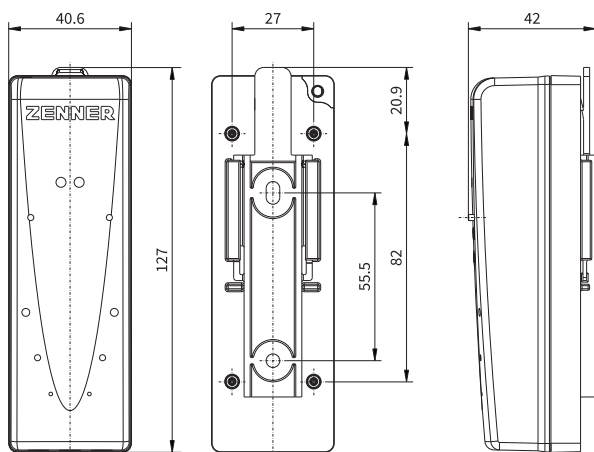
Dimensions

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