

# Opto-Encoder ER56

For Domestic and  
C&I water meters



## Main Characteristics

- **Opto-electronic encoder for absolute reading of the index and number of the meter**
- **Maintenance free operation without internal battery**
- **Absolute correlation between electronic readout and mechanical register is guaranteed**
- **Plug and play functionality without any programming**
- **Meter performance is not affected by any mechanical friction within encoder register**
- **Readout energy is supplied by the reading device**
- **Available in IP68 glass/copper register**
- **HRI pulse module can be retrofitted**  
1,5 m serial output cable (5 m with C&I meters)

## Application

The Opto-Encoder register, combining the advantages of an electronic and a mechanical register, offers an easy way for remote reading of meter index.

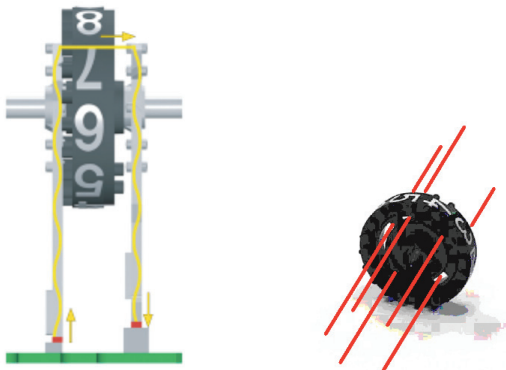
It provides a maintenance free operation with no need for an internal battery or for any external power supply. The required energy needed for reading index and serial number is provided by the reading device while reading.

The main applications are:

- Automated mobile meter reading
  - Inductive
  - Radio
- Fixed net remote reading
  - wired M-Bus
  - wireless
- Smart Metering applications
- Readout of meters installed in places difficult to access (flooded pits, industry, banks etc.)

## Principle

The absolute Opto-Encoder is an ideal combination of the advantages of mechanical and electronic technology. In this system, the individual rollers of the mechanical index are scanned optoelectronically. For this purpose, each roller has slots, which vary in length and are arranged asymmetrically. Five beams of light scan the slots to determine their position. Intermediate positions can also be precisely determined. The counter reading is then transferred as a predefined data protocol to the supplementary device via the electrical interface. This functioning principle has been patented.



## Data Package

Absolute meter reading	
- Sentinel 630C	12345,6 m <sup>3</sup>
- MeiStream DN40...125	123456 m <sup>3</sup>
- MeiStream DN150...300	123456 x10m <sup>3</sup>
Meter ID number	8 (17) digit
M-Bus Address*	Primary & Secondary
Medium*	

\*other information depending on the used data protocol interface

## Data Interface Options

### M-Bus

Wired M-Bus acc. EN13757

<= 2 M-Bus loads

Baudrate: 2400 (300) Baud

Serial No. with 8 (17) digit

### MiniBus

Protocol acc. EN13757

Baudrate:2400 (300) Baud

Low voltage physical layer

Serial No. with 8 (17) digit

### Sensus

Protocol acc. UI-1203

## Readout device compatibility

M-Bus	PWxx – Levelconverter DRxx- Digital M-Bus Master MRxx – M-Bus Datalogger MOD003 – Modem Master and other EN13757 compliant devices
MiniBus	XENON-GSM (at 300Baud) MiniPad – Touchread system (one pad per register) Scout-MB - Radioread Sensus - WMBus Radioread
Sensus	Sensus – Touchread Systems

## Readout device compatibility

630C	DN 15	Q3=2,5
630C	DN 20	Q3=4
630MC	coax	Q3=2,5

MeiStream	DN 40 - 150
MeiStream Plus	DN 40 - 150



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