SVM M-Bus Encoder register

DATA SHEET

- **M-Bus reading of water meters**
- **Single jet water meters VU**
- **Multi-jet water meters VM**
- **Woltman water meters WS and WP**
- **Readout of actual register reading**
- **Bettryless register**

M-Bus Encoder register

SVM M-Bus encoder is a mechanical roller register with an M-Bus interface according to EN13757-2/3. The interface allows remote readout of the actual register reading of any type of mechanical water meter. Single-jet water meters of the type VU, multi-jet water meters of the type VM and Woltman water meters of the type WS and WP can be supplied with an M-Bus encoder interface mounted. No battery is required and the interface is powered directly from the M-Bus loop.

SVM M-Bus encoder is delivered as "Plug & Play" and no configuration is required prior to commissioning. Together with the register reading, also the meter type, serial number, production date and size can be read on M-Bus.

The opto-electronic readout of the roller counter, provides absolute correlation between electronic readout and register reading. At the event of interrupted M-Bus communication, no information can be lost. When the communication is restored the exact readouts are obtained again.

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Application

- Remote reading for hard to reach metering installations
- Automated readout of billing relevant data

Features

- Fits all mechanical flow meters.
  - Single jet
  - Multi-jet
  - Woltman
- Proven mechanical roller wheel register with electronic interface
- No battery required, powered from the M-Bus loop
- 1,5 meter connection cable
- Low friction opto-electronic module
- Non contact wheel position sensing, provides great reliability, error free and exact
- Guaranteed correlation between electronic readout and register reading
- No programming required, "Plug & Play" functionality

Data package

Digital data package from the Encoder register:	
Medium	Water / Gas
Absolute meter reading	123654 m³
Meter number	43215678
Meter prod. date	dd-mm-yy
Meter size	DN 15 / G¾

Interface options

In order to guarantee the highest degree of flexibility as far as the interface is concerned, the hardware is arranged on a separate circuit board thus enabling individual applications.

Physical (Layer)	
M-Com (e.g.)	AMR system for readout of meters
M-Bus EN 13757-2	EN 1434-3

Application (Protocol)	
IEC 62056-21 Mode A	IEC 1107 (ZVEI)
M-Bus EN 13757-3	EN 1434-3

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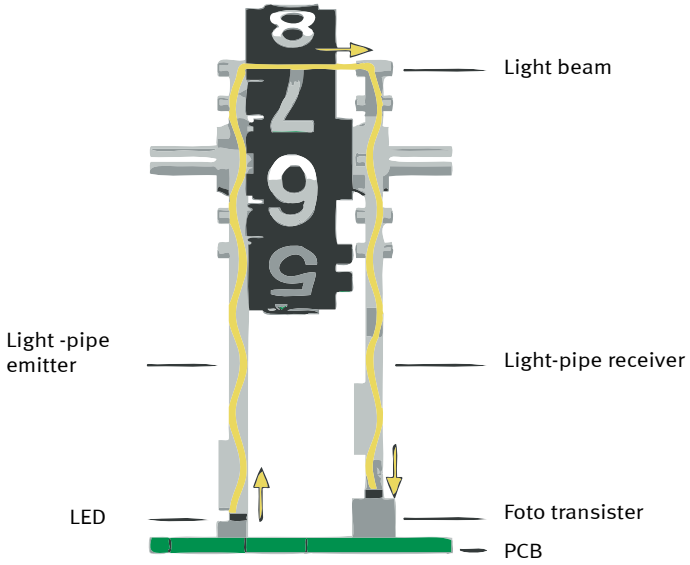
Operating principle of the Encoder system

The absolute Encoder index is an ideal combination of the advantages to be found in both mechanical and electronic indices. In this system, the individual rollers of the mechanical index are scanned opto-electronically.

For this purpose, each roller has three slots, which vary in length and are ordered asymmetrically.

Five beams of light then scan the slots to determine their position. Intermediate positions can also be precisely determined. The encoded roller counter reading is then integrated into the datapackage which is then transferred as part of a pre-defined protocol to the supplementary device via the electrical interface.



“Plug & Play” functionality

It is not necessary to set any complicated parameters. No pulses are lost when there is a power failure. Configuration errors cannot occur during commissioning of the meters.