



## IM 2

M-Bus pulse collector



### Your benefits

- Interface conversion from pulse to M-Bus:  
**System change without meter removal**
- Power supply via the M-Bus or integrated battery:  
**No mains adapter required, thus saving time and costs per measuring point**
- Regular storage of meter readings in the EEPROM:  
**No data loss**

### Applications

- IM 2 enables the integration of two consumption meters, each with one pulse output, into the M-Bus data chain

### Properties

- 2-way M-Bus pulse collector
- Fixed date function – implemented clock with calendar function
- Parameters of both pulse inputs freely configurable
- Parameterisation via M-Bus with read only function
- M-Bus protocol according to EN 1434-3
- Automatic Baud rate detection (300 or 2400 baud)
- Supports primary and secondary addressing
- Full functionality in case of M-Bus failure (battery operation)
- Simple wall mounting

# Technische Daten

## Supply

Remote supply from the M-Bus with automatic changeover to battery operation in case of Bus failure	
Bus operation	Max. 1.5mA (1 M-Bus standard load)
Battery operation	app. 50µA at 25°C
Battery	Lithium 3V, button cell, 230mAh, can be replaced
Battery service life without other supply	app. 1/2 year at 25°C
Permissible no. of days with battery operation per year during 10 years of operation	app. 18 days at 25°C

## M-Bus protocol

Reference standard	EN 1434-3
Transfer rate	300 or 2400 Baud with automatic detection
Addressing	Primary and secondary addressing
Supports telegrams	SND_NKE, REQ_UD2, SND_UD
Data structure: Variable structure, Low-Byte-First (identifier 72h) Length = 53 B	<ol style="list-style-type: none"><li>1. Data record: Meter reading</li><li>2. Data record: Time and date</li><li>3. Data record: Last fixed date</li><li>4. Data record: Last fixed date value</li><li>5. Data record: Next fixed date</li><li>6. Data record: Company-specific attachment</li></ol>

## Pulse contact requirements

Potential	Potential-free, insulation to earth >1MΩ
Resistance	Open >1MΩ, closed <2kΩ
Maximum capacity (incl. cable)	2nF (short power feed), 12nF (long power feed)
Minimum contact duration	30ms
Minimum interval between 2 pulses	30ms
Maximum pulse frequency	14Hz
Contact voltage	2,5V to 3,6V
Contact current	30µA
Guaranteed debouncing time	5ms
Connection cable	Max. 10m (twisted pair recommended)

## Housing

Dimensions	80x80x52mm
Installation	Wall-mounted
Material	Polystyrene
Colour	Light grey
Protection class	IP54
Pulse inputs	2, parameters individually configurable

## Ambient conditions

Operating temperature	0 to +55°C
Storage temperature	-20 to +70°C
Humidity (non-condensing)	10 to 70%