

# M-Bus Slave for MULTICAL® 401

**Remote data acquisition from  
MULTICAL® 401**

**Supplied via M-Bus Master**

**Two pulse inputs**

**Supports primary/secondary/enhanced  
secondary addressing**

**Supports wildcard search and collision  
detection**

**Two-way communication  
(300/2400/9600 baud)**

**Customer number, date/time and pulse  
inputs are programmable via the M-Bus  
network**

**Complies with EN 1434-3 and EN 13757**



## Application

The M-Bus Slave module has been specially developed for MULTICAL® 401. The module is easy to mount in the meter's module area. Once the M-Bus Slave has been installed, the meter's data can be collected via M-Bus.

M-Bus is a local network which makes it possible to communicate with and collect data from energy meters from a centrally placed M-Bus Master.

The M-Bus Slave is equipped with two extra pulse inputs for collection of data from other volume meters, e.g. water meters.

M-Bus Slaves are supplied by the M-Bus Master, i.e. the module is independent of the meter's supply.

Two-way communication between M-Bus Slave and meter via optocouplers provides galvanic separation between M-Bus and meter.

The M-Bus Slave automatically collects data from the meter every hour, after reset/start, prompted by a "manual call" or an "application reset" command.

MULTICAL® 401 has a separate register for the primary M-Bus address. An M-Bus Slave supplied from Kamstrup will automatically use the three last digits of the meter's customer number for the primary M-Bus address.

If the customer number is changed via M-Bus or optical eye, the M-Bus address is changed correspondingly. If the M-Bus address is changed via M-Bus or optical eye, the customer number will not be changed.

Among other things, the eight last digits of the customer number are used to create the secondary address.

Enhanced secondary addressing uses the meter's series number in addition. This number is unique in each meter and cannot be changed after production.



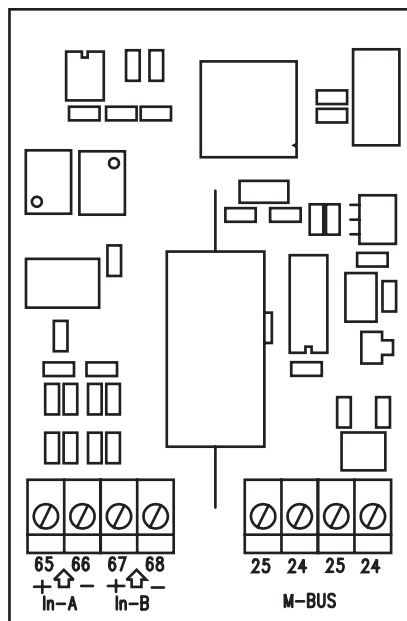
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## Data telegram

Series number	Peak power	Peak power*	TAR3
Energy	Flow	Peak flow*	TL3
Volume	Peak flow	In-A*	TAR2*
Hour counter	In-A	In-B*	TAR3*
T <sub>flow</sub>	In-B	Date*	Prog.No.
T <sub>return</sub>	Date/time	Info	Config.No.
T <sub>diff</sub>	Energy*	TAR2	Meter type/revision
Power	Volume*	TL2	Module type/revision

\* Target date data

## Connection diagram



Terminal 24	M-Bus connection
Terminal 25	M-Bus connection
Terminal 65	In-A (+)
Terminal 66	In-A (-)
Terminal 67	In-B (+)
Terminal 68	In-B (-)

## Technical data

### Electrical data

Supply	via M-Bus Master
Consumption	1 Unit Load (UL) 1.5 mA
R <sub>in</sub>	410 Ω
C <sub>in</sub>	0.5 nF

### Mechanical data

Dimensions	42 x 64 mm
Ambient temperature	0 - +60°C
Mounting	To be mounted in the meter's module area

### Markings/approvals

EN 1434-3  
EN 13757  
CE-marking

## Ordering details

### Description

M-Bus module, two pulse inputs  
M-Bus Master (Kamstrup) excl. display\*  
M-Bus Master (Kamstrup) incl. display\*  
M-Bus Master (Relay) 60 x M-Bus Slave  
M-Bus Master (Relay) 250 x M-Bus Slave

### Type No.

660P 000 000  
6698 11X XXX  
6698 A1X XXX  
5920 141  
5920 142

\* Supports primary addressing only