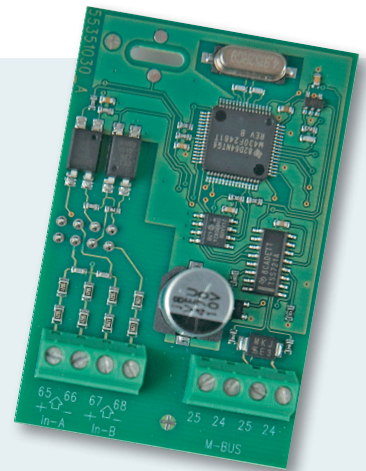


# M-Bus module

## for MULTICAL® 402 with MULTICAL® III compatible data package

### DATA SHEET

- Supplied via M-Bus Master
- Two pulse inputs
- 300/2400/9600 baud
- Programming of primary address, M-Bus ID number, date/time and pulse inputs via the M-Bus Network
- Collision detection
- Supports primary/secondary/enhanced secondary addressing and wild card search
- Fulfils EN 13757



## Application

A variety of M-Bus modules are available for the Kamstrup MULTICAL® 402 meter.

The contents of the M-Bus data package in the module are similar to the data for the M-Bus modules for MULTICAL® III and MULTICAL® Compact, allowing installation in older applications originally designed for e.g. MULTICAL® III.

The module can also be used together with the old 40 slaves M-Bus Master with display from Kamstrup as well as older regulators and reading software.

The module is mounted in the meter's module area and is used for remote reading and programming of MULTICAL® 402.

The module is galvanically separated from the meter and is supplied via the M-Bus Master. Thus, the supply of the meter is not burdened by the module.

The module is fitted with two pulse inputs for reading other meters, e.g. water or electricity meters.

By means of the M-Bus module's primary address, the M-Bus ID number,

date/time and pulse inputs (In-A and In-B) can be programmed via the M-Bus network.

The primary and secondary M-Bus addresses of the module are displayed in the meter.

# M-Bus module for MULTICAL® 402

with MULTICAL® III compatible data package

DATA SHEET

## Address fields

### Primary (000-250)

When supplied from Kamstrup, the M-Bus module will automatically use the 2-3 last digits of the meter's customer number as primary address. Otherwise, there is no bond between customer number and M-Bus address. MULTICAL® 402 has separate registers for the primary M-Bus address of the module.

### Secondary (00000000-99999999)

When the secondary address is created, the last eight digits of the customer number are used as M-Bus ID number. Furthermore, eight additional digits from the module's software, incl. Kamstrup's manufacturer's ID, can be added, thus extending the secondary address to 16 digits.

### Enhanced secondary (00000000-99999999)

The meter's serial number is used for enhanced secondary addressing. This number is unique to each meter and cannot be changed.

### Wild card search

Some or all digits of the M-Bus module's secondary or enhanced secondary addresses can be replaced by wild cards.

The M-Bus module will not compare the wild cards to the corresponding digits of its own secondary or enhanced secondary addresses, and it is possible to communicate with the M-Bus module if the other digits fit.

## Connections

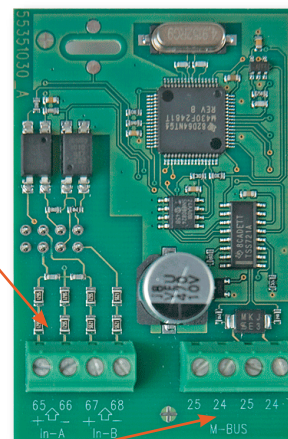
### Module

#### Pulse inputs

Terminal 65	Pulse input A/In-A (+)
Terminal 66	Pulse input A/In-A (-)
Terminal 67	Pulse input B/In-B (+)
Terminal 68	Pulse input B/In-B (-)

#### M-Bus connections

Terminal 24	M-Bus connection
Terminal 25	M-Bus connection



# M-Bus module for MULTICAL® 402

with MULTICAL® III compatible data package

DATA SHEET

## Technical data

### Data telegram

M-Bus data	Actual data	Target data default settings: yearly values	Manufacture specified data
Meter number	Heat energy E1	Heat energy E1	Customer number
Manufacturer ID	or cooling energy E3	or cooling energy E3	Peak power
Version ID	Volume	Volume	Info code
Meter type	Hour counter	Target date	TA2
Reading counter	T1		TA3
Configuration	T2		TL2
	T1-T2		TL3
	Power		In A
	Flow		In B
			Program number
			Config number
			Date

### Physical features

Power consumption	1 unit load (1.5 mA) per M-Bus Slave
Supply	From M-Bus Master
$R_{in} / C_{in}$	410 $\Omega$ /0.5 nF
Max. cable resistance	29 $\Omega$ / 180 nF per pair
Temperature area	0 - 60°C

### Markings/approvals

EN 1434  
EN 13757  
CE approval

# M-Bus module for MULTICAL® 402

with MULTICAL® III compatible data package

DATA SHEET

## Ordering

---

Description	Order No.	Module No.
M-Bus module for MULTICAL® 402 with MULTICAL® III compatible data package	4020290000000	5550-1140
M-Bus Master MultiPort 250D	MBM-M210000	