

## Heat Meter Integrator

### Features



- Simple operation
- Pulsed output or M-bus output options
- Wall bracket included
- Battery supply, 230V optional supply

### Specification

#### Heat meter:

Temp. range	5 to 150°C
Temp. resolution	0.01°C
Min temp. diff.	0.2°C
Display type	7 digit + characters LCD
Energy display	MWh
Data storage	Non-volatile memory, once daily
Power supply	3V Lithium battery as standard (230Vac available on request)
Battery life	6+1 years
Output pulse:	
Max. operating voltage	75Vdc, 150mA max
Pulse width	100ms
Conformity	EN1434 Class C & MID
Ambient temperature	0 to 55°C
Protection	IP54

#### Temperature sensors:

Sensor element:	PT500 (to DIN IEC 60751)
Sensor lead length:	3m as standard (10m available on request)
Diameter:	6mm
Pockets:	100mm, ½" BSP stainless steel

### Product Codes

#### MW-DHM

Pulsed output integrator

#### MW-DHM-M-bus

M-bus output integrator

Suffixes: (add to partcode, extra cost)

#### -230V

230Vac supply

#### -10M

Sensors with 10m cable

Replacements items:

#### MW-HM-PK100

100mm stainless steel pocket

### Technical Overview

The MW-DHM range of meter integrator's, are available with either a pulsed output or M-bus output.

Integrators come complete with a matched pair of high accuracy temperature sensors, and pockets. As standard, the temperature sensor length is 3m and supply module is battery. Optional 10m sensor pair and 230Vac supply options are available upon request.

The microprocessor-controlled calculator has a large, easy-to-read display that constantly shows the energy used. The integrated non-volatile E<sup>2</sup>PROM automatically stores the meter data 6 times a day. It is possible to view the last 12 monthly values from the display.

### Installation of Pockets & Sensors

1. In a suitable location on the flow and return pipes, fit a 1/2" BSPT boss.
2. Screw the pocket in to the boss using a thread seal compound.
3. Insert the temperature sensors into the pockets and gently tighten the grub screw to retain the sensor.

**The red coloured sensor should always be located in the hottest pipe and the blue coloured sensor should always be located in the coolest pipe.**

**The sensor cables must not be lengthened or shortened**

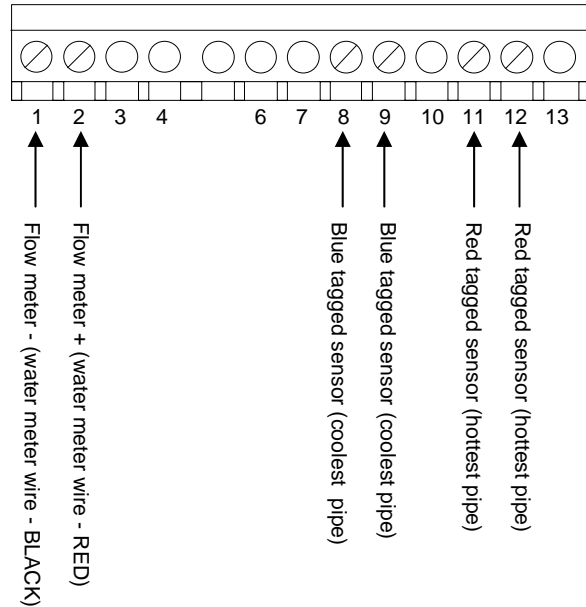
### Installation of Integrator

1. The calculator is supplied with a wall bracket allowing it to be fixed on an even wall. Use the bracket as a template, fix to the wall using suitable fixings.
2. Latch the output module to the wall bracket.
3. Make the connections for pulsed output.
4. Remove the fixing screw of the output module.
5. Latch the calculator to the option module.
6. Remove the screw on the terminal cover of the calculator and fix the calculator to the option module using the screw removed on step 4.
7. Make connections as required for the temperature sensors and water meter.
8. Replace the terminal cover and use seal on the screw to prevent unauthorized opening.

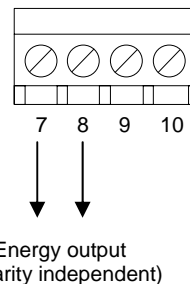
### Connections

#### Pulsed output:

Calculator:



Output module:



#### Please note

If the wire link is between 8 & 9 this **MUST** be removed before operation.

Water meter pulse value

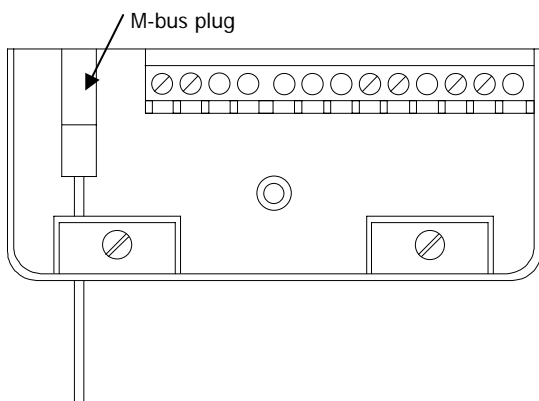
1LPP	1kW
10LPP	10kW
100 & 1000LPP	100kW

#### M-bus:

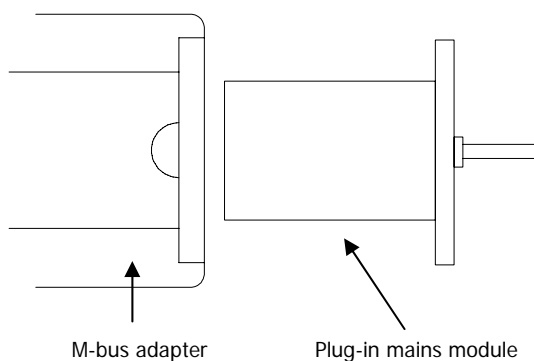
Please contact Sontay for full information.

## 230Vac Supply Option

1. Remove the lower screw on the front side of the calculator and take off the cover.
2. Remove the strain relief clip.
3. Insert the plug from the M-bus adapter, as far as it will go into the plug socket. The plug is directional.
4. Replace the strain relief clip, and replace the cover.
5. Remove screws and remove the empty housing from the adapter.



6. Insert the plug-in mains unit into the M-bus adapter, and tighten the screws.
7. Connect the 2.5 meter lead to a permanent mains supply, not with a plug.



### Display Loops

All the information is displayed in four easy to read loops.

#### Main loop A1:

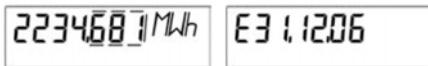
1. Total heat (standard display)



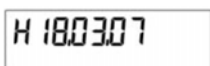
2. Segment test



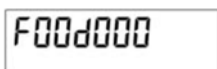
3. Heat quantity at last annual billing date, alternating with the billing date.



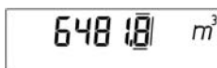
4. Current date



5. Error message „F“ , „d“ stands for „days“ since the error started



6. Total volume since installation in m<sup>3</sup>



#### Technical loop A2:

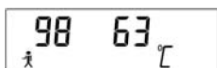
1. Current flow in m<sup>3</sup>/h



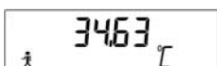
2. Current power in kW



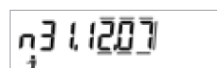
3. Forward flow & return temperatures



4. Temperature difference



5. Date of next billing date



### Display Loops (continued)

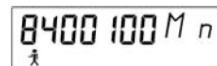
6. Days in operation since verification



7. Pulse value alternating with its unit



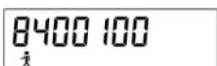
8. Customer number or measurement location number



9. M-bus address



10. Serial number



#### Statistic loop A3:

1. Heat quantity at next to last billing date alternating with next to last billing date



2. -13 Heat quantities of the last 12 months alternating with the corresponding billing date



#### Tariff loop A4:

1. Maximum power for 1 hour



2. Maximum flow for 1 hour



3. Max. power up to previous billing date alternating with previous billing date



4. Max. flow up to previous billing date alternating with previous billing date

