**Introduction**

The M-Bus Splitter allows two parties to have access to the same main meter. Two M-Bus masters can be connected to the meter and register readings individually. This manual provides the information needed to get started with the M-Bus Splitter. For a complete description of the product, download the manual from Elvaco AB web site, www.elvaco.com.

**Overview**

1. Screw terminal M-Bus OUT1 - Isolated
2. LED M-Bus OUT1 - Isolated
3. LED M-Bus IN
4. Screw terminal M-Bus IN
5. Configuration jumpers
6. Screw terminal external power
7. LED M-Bus OUT2 - Power
8. Screw terminal M-Bus OUT2 - Power

**M-Bus 2-wire system**

M-Bus is a multi-drop 2-wire bus with no polarity. Use a cable of area 0.25-1.5 mm², e.g. a standard telephone cable (EKKX 2x2x0.5).

**Mounting**

M-Bus Splitter can be mounted on a DIN-rail or directly on the wall. For wall mounting, the black mounting bracket on the back of the M-Bus Splitter has to be demounted from the unit and mounted on the wall. The M-Bus Splitter will then be snapped on to the black mounting bracket.

1. 24 V power supply should be connected when more than one meter is connected or if the Splitter does not manage to operate the connected meter.
2. Connect meter on the terminal marked with M-Bus IN. The meters must have unique primary addresses between 1 and 250.
3. Connect M-Bus master on the terminals marked with M-Bus OUT2 and OUT1. M-Bus OUT2 must be connected as it provides power to the Splitter.

**Operation**

When the Splitter is powered up it takes up to 5 minutes before it is ready to use since it needs charging. During charging, all LEDs will flash four short flashes in order every three seconds.

1. There are four settings to be done to adapt the Splitter to the installation. This is done by setting the jumpers in on or off mode. See Settings for more information.
2. Start the meter installation by changing the position of any jumper (off to on/on to off). Put the jumper back to its original position. See settings.
3. During scanning, the LED for M-Bus IN flashes with a short flash every second. Depending on the scanning speed the scanning time varies from 1 to 8 minutes.
4. When the scanning is completed, the M-Bus Splitter is in normal operation. See LED indications.

**Troubleshooting**

Make sure that:

1. All cables are connected properly, both on the M-Bus Splitter and on the M-Bus master.
2. The voltage on M-Bus IN is greater than 23 VDC. If the voltage is lower, disconnect one meter at a time to find the failing meter.
3. The voltage on M-Bus OUT2 is greater than 26 VDC. If the voltage is not within this range, check the function of the M-Bus master. Connect external 24 VAC power supply when connecting more than one meter. When low voltage is detected on M-Bus IN, all LEDs flashes four times.
4. The connected M-Bus meters all have unique primary addresses.
5. Contact the supplier if the error remains.
### M-Bus OUT 1

#### LED indications for M-Bus OUT 1

<table>
<thead>
<tr>
<th>Mode</th>
<th>Description</th>
<th>Visual</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 short flashes every 3 seconds</td>
<td>Start-up/charging</td>
<td>✅ ✅</td>
</tr>
<tr>
<td>off</td>
<td>Error on the bus</td>
<td>✅</td>
</tr>
<tr>
<td>1 flash every 12 seconds</td>
<td>Normal operation</td>
<td>✅</td>
</tr>
<tr>
<td>2 flashes every 12 seconds</td>
<td>Communication took place last minute</td>
<td>✅</td>
</tr>
</tbody>
</table>

### Technical specifications

- **Mechanics**
  - Material: Polycarbonate
  - Dimensions: 75x55x110 mm
  - Weight: 100 g
  - Mounting: DIN-rail or wall mounting

- **Connections and interface**
  - Connection: M-Bus screw terminal

#### M-Bus 2-wire interface - master port

- Nominal voltage: 23-27 VDC
- M-Bus baud rate: 300, 2400 Bit/s
- Max. connected meters: 4
- Scanning range: 0-250 (multiple slave), 254 (single slave)
- Scanning interval: 1 min, 5 min, 30 min or 60 min
- Standards: EN 13757

#### M-Bus 2-wire interface – slave ports

- Nominal voltage: 21-42 VDC (M-Bus standard)
- Power consumption: 27-6T (3-9 mA)
- M-Bus baud rate: 300, 2400 Bit/s
- Standarder: EN 13757
- M-Bus commands: SND_NKE, REQ_UD2

- **External power**
  - Nominal voltage: 24-35 VAC or 30-40 VDC
  - Power consumption: 25 mA

- **User interface**
  - Operation indication: See LED indications

- **Other**
  - Other: Independent of meter manufacturer, auto configuring

### Ordering information

<table>
<thead>
<tr>
<th>Product</th>
<th>Part number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>M-Bus Splitter</td>
<td>1050013</td>
<td>Share up to 4 M-Bus slaves</td>
</tr>
</tbody>
</table>

### Contact information

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