Basic Information
The supplementary MiniControl module extends the use of the MiniTrans sensor and MiniTrans power supply by rectifier control and channel duplication functions, when installed in rectifiers.

Installation
The MiniTrans power supply provides a voltage of 8 V DC to MiniControl and MiniTrans. The MiniControl module is driven by the switching input (“TaktMT”) being connected to the MiniTrans switching output (“Takt”).

Rectifier Control
As soon as the MiniTrans receives the command to control the rectifier, it will start switching in a special MiniControl switching sequence (“0” or “1”). The corresponding relay output, “LA+” or “LA-”, will then be closed for 200 ms. A fitting rectifier control responds to the closing of the relay contacts and adjusts the output voltage accordingly to a higher or lower value.

Channel Duplication
The channel duplication outputs (K1MT, K2MT, MIKMT, GNMT) must be connected to the MiniTrans measuring inputs. The two electrically isolated channel sides for the channel duplication (K1A, K2A, MIKA, GNDA) and (K1B, K2B, MIKB, GNDB), respectively, have to be connected to the two pipe objects. The switching outputs can be used either separately (TaktA and TaktB) or jointly (TaktMT) for both channel sides.

The MiniTrans controls the channel duplication in the MiniControl switching sequence (“2” or “3”). Both channel sides are measured at intervals of 5 minutes according to the programmed measuring times. The duplicated channels can be assigned independently to the corresponding pipe objects via WinTrans.

Technical data

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Switching Capacity</td>
<td>60 Volt, 0.1 Ampere</td>
</tr>
<tr>
<td>Internal Resistance</td>
<td>Approx. 30 Ohms (switching and rectifier control)</td>
</tr>
<tr>
<td>Supply</td>
<td>8 Volt DC, max. 40 mA</td>
</tr>
<tr>
<td>Housing</td>
<td>Phoenix, approx. 105 x 100 x 25 mm</td>
</tr>
<tr>
<td>Screw Terminals</td>
<td>Phoenix (included in the delivery scope)</td>
</tr>
<tr>
<td>Weight</td>
<td>120 g</td>
</tr>
</tbody>
</table>
1) Updating MTPara and WinTrans

To parameterise MiniControl, versions from “1.083” up for MTPara and from Build 144 up for WinTrans are required. Please refer to the following website for the current update: [http://www.weilekes.de](http://www.weilekes.de)
Start wtupdate_e.exe and follow the given instructions to update MTPara and WinTrans.

2) Updating MiniTrans Firmware

A MiniTrans with the firmware “RAM 08.06.01” or later is required for driving MiniControl. Check the current RAM version of your MiniTrans using MTPara: In the activated parameterisation mode, the CPU and RAM versions are indicated on the upper right side of the MTPara window. Update an older RAM version as described below:

- Start the parameterisation of the MiniTrans with MTPara and click the “Start” button as usual.
- After having activated the parameterisation mode, double-click (!) the blue MTPara window.
  The buttons “Options”, “Calibrate”, and “Upload” appear to the left in the blue window.
  Click “Upload” and select the most current firmware file (e.g. “mt990629_010608.obj”) from the diskette or the WinTrans upload directory (e.g. “C:\Programs\Wintrans\Upload”) on your hard disk.
  The upload lasts approximately 3 minutes and is signalled by a series of numbers in the MTPara window.
- After the series of numbers have stopped for a while (about 10 s) and “OK” has appeared in the last line, the update is finished.
- Conclude the update by clicking “Finish”, and re-start the parameterisation by clicking “Start”.

3) Installing MiniControl and MiniTrans

Wire the MiniControl as illustrated on the front page. Also use the circuit diagram sticker on the MiniControl housing and the corresponding labelling on the MiniControl screw terminals for support. Both channel sides (A and B) are electrically isolated and can thus be assigned independently of each other.

4) Activating MiniControl and MiniTrans with MTPara

The following adjustments are required for a remote control operation of the MiniControl/MiniTrans combination:

- Mark the checkbox “MiniControl installed” in the MTPara dialog box called “Measuring”.
  You only need to use the “Channel Selection” in the same dialog box if you operate MiniTrans in the diagnosis or data-logging mode. Via “Channel Selection” you set a channel side (A or B) for the diagnosis or data logging.
  This is necessary as a channel duplication (measurement of A and B at 5 minute intervals) cannot be performed during the diagnosis or data logging.
- Check whether the measuring inputs and the switching inputs and outputs are wired correctly by clicking the “Measure” button. If the “MiniControl installed” checkbox has been activated as described above, you can choose between channel side A or B each time you perform a measurement.

5) Assigning MiniControl test points with WinTrans

After a MiniTrans equipped with a MiniControl has sended a current office info to your office, the two channel sides (A and B) can be assigned to two different test points.

The serial number of the MiniTrans / MiniControl combination is indicated in duplicate for selection in the “Sensor” column in the “CP” directory of the CP database after the MiniControl has been installed correctly.
This serial number is marked once with the letter “A” and once with the letter “B”.
For assigning the MiniTrans, select the respective channel side (A or B) fitting the test point.

Please refer to the sensor database in the “Base” directory for a survey of all MiniTrans / MiniControl combinations. All MiniTrans sensors with an activated MiniControl are marked in the “MC” check box column.