Temperature Transmitter
head mounted TF02/TF02-Ex, field mounted TF202/TF202-Ex

FOUNDATION Fieldbus
Firmware version 01.03.01
Hardware version 1.07
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field mounted TF202/TF202-Ex

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Important information

Symbols
In order that you can make the best use of this document and to ensure safety during commissioning, operation
and maintenance of the equipment, please note the following explanation of the symbols used.

Explanation of the symbols used.

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Signal Word</th>
<th>Definitions</th>
</tr>
</thead>
<tbody>
<tr>
<td>![DANGER]</td>
<td>DANGER</td>
<td>DANGER indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury. (High level of risk.)</td>
</tr>
<tr>
<td>![WARNING]</td>
<td>WARNING</td>
<td>WARNING indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury. (Medium level of risk.)</td>
</tr>
<tr>
<td>![CAUTION]</td>
<td>CAUTION</td>
<td>CAUTION indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury. (Low level of risk.)</td>
</tr>
<tr>
<td>![NOTICE]</td>
<td>NOTICE</td>
<td>NOTICE indicates a potentially harmful situation which, if not avoided, may result in damage of the product itself or of adjacent objects. (Damage to property)</td>
</tr>
<tr>
<td>![IMPORTANT]</td>
<td>IMPORTANT</td>
<td>IMPORTANT indicates useful hints or other special information which, if not observed, could lead to a decline in operating convenience or affect the functionality. (Does not indicate a dangerous or harmful situation.)</td>
</tr>
</tbody>
</table>

As well as the instructions in this document, you must also follow the generally applicable accident prevention
and safety regulations.
If the information in this document is insufficient in any situation, please contact our service department, who will
be happy to help you.

Please read this document carefully before installation and commissioning

CE Marking
This product meets the requirements specified in EMC Directive 89/336/EEC and in Low Voltage Directive 73/23/EEC.
1 About this document

1.1 Revision history

1.1.1 Firmware

<table>
<thead>
<tr>
<th>Version</th>
<th>Date</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>01.02.06</td>
<td>13.01.2004</td>
<td>changed watchdog behavior (FieldbusASIC)</td>
</tr>
<tr>
<td>01.02.07</td>
<td>27.02.2004</td>
<td>status filters in the case of sensor error</td>
</tr>
<tr>
<td>01.02.08</td>
<td>15.03.2005</td>
<td>improved telegram error detection sensor board interface</td>
</tr>
<tr>
<td>01.03.01</td>
<td>12.12.2005</td>
<td>Support of local HMI</td>
</tr>
</tbody>
</table>

1.1.2 Hardware

<table>
<thead>
<tr>
<th>Version</th>
<th>Date</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.07</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1.2 Compatibility

All valid DD’s keep their validity. TF02/TF202 can be used in existing plants together / beside other versions of TF02/TF202.

All released firmware versions are compatible to all previously released hardware versions.

1.3 Limitations

None.

2 Functions description

2.1 Functions not yet released

None.

2.2 New functions

From Version 01.03.01 the firmware supports a local HMI.

2.3 Modified functions

None.

2.4 Functions that are no longer supported

None.

2.5 Identified problem areas and remedial measures

None.
2.6 Corrected behavior

2.6.1 Firmware version 01.02.08
In isolated circumstances involving components with tolerance fluctuations, internal communication in earlier versions could produce transmission errors. As a result, an incorrect measured value was displayed. As of version 01.02.08 the data security layer was improved, and thus the bug eliminated.

2.6.2 Firmware version 01.02.07
Sporadically the host system announces a sensor error for individual devices briefly. When short lines i.e. with small lead resistances of some 10 mΩ a “negative” result of the AD conversion in consequence of temperature drift, noise, disturbances and other conceivable external influences is possible. This leads to the status message “negative measurement” which as more “Sensor error” one passes on. The error shown arises both with 3 leader and with 4 leader connection.

With firmware version 01.02.07 the raw values are validated first. A bad status will be announced only if the error is surely detected.

2.7 Recommendations
None.

3 Software Update

Notice
An update of TF02’s/TF202’s firmware is allowed only for skilled personal authorized by ABB. Contact Your local ABB representative in case of an update is required.

3.1 Hardware required
PC or Laptop with serial interface COM1(2),
Windows 98, 2000, NT, XP
LCI Flashadapter

3.2 Software required
Fwupdate.exe
TF02ramF.h86
TF02_01_03_01.hex

3.3 Firmwareflash
– Connect TF02 / TF202 and PC by LCI Flashadapter.
– Start Fwupdate.exe;
– Properties
  adjust COM interface;
– Load firmware
  load TF02_01_03_01.hex;
– Connect
  start connection.
– Activate button at the LCI adapter.
The TF02 / TF202 must be supplied with power. It may remain contacted at the field bus during the update. During the update the transmitter is passive (it does not communicate during this time).

If the update has finished, the transmitter becomes immediately active.

The configuration of the equipment is not changed by the update.