Supplement / changes of the operating and commissioning instruction for TTF200 and TTF300, valid for the following models:

Use in potentially explosive atmospheres in accordance with ATEX and IECEx

- TTF200-E1, TTF300-E1 (ATEX intrinsic safety Zone 0)
- TTF200-E3, TTF300-E3 (ATEX flameproof enclosure Zone 1)
- TTF200-E4, TTF300-E4 (ATEX intrinsic safety Zone 0 and flameproof enclosure Zone 1)
- TTF200-H1, TTF300-H1 (IECEx intrinsic safety Zone 0)
- TTF200-H5, TTF300-H5 (IECEx flameproof enclosure Zone 1)

Introduction

The reason for this supplement to the general operating instruction is the change of the explosion protection marking for intrinsically safe devices and devices with flameproof enclosures in the updated version of the appropriate type examination certificates. Furthermore, the requirements for device and application identification have changed. This supplement to the general operating instruction refers to the explosion protection aspect only.

Like the operating instruction itself, this document should be carefully read before beginning installation to guarantee device function, as well as for your own safety. For further information on use in potentially explosive atmospheres, the notices in operating instruction OI/TTF200-EN or CI/TTF200-EN and OI/TTF300-EN or CI/TTF300-EN should be complied with!

Contact ABB Automation Products GmbH as the manufacturer if anything is unclear. This supplement is valid only in conjunction with the general operating instruction.
Explosion protection marking

ATEX 'intrinsic safety' type of protection:
Refer to Figure 2.

IECEx 'intrinsic safety' type of protection:
Ex ia IIC T6...T1 Ga
Ex [ia IIC Ga] lb IIC T6...T1 Gb
Ex [ia III C Da] lb IIC T6...T1 Gb

Explosion protection marking for devices with flameproof enclosure in accordance with ATEX:
Refer to Figure 3.

Explosion protection marking for devices with flameproof enclosure in accordance with IECEx:
Ex db IIC T6/T4 Gb

Explosion protection marking for devices with one type of protection
Devices with an explosion-proof design are marked with the following additional plates.

Note
• Further information on the approval of devices for use in potentially explosive atmospheres can be found in the type examination certificates (at www.abb.com/temperature).
• Depending on the design, a specific marking in accordance with ATEX or IECEx applies.

Explosion protection marking for devices with a combination of explosion protection types
Coding of the type of protection of the device in accordance with order information can also refer to a combination of different explosion approvals for various types of protection.

Figure 2: Additional plate TTF200, TTF300 for explosion-protected devices (example TTF200)

Figure 3: Combination of 'intrinsic safety' and 'flameproof enclosure' types of protection, coding of type of protection: E4 (example TTF200)
Measures required before the use of devices with combined explosion protection types

**WARNING**

Note for temperature transmitters with combined approval:
Before the transmitter is installed, the selected type of protection must be permanently marked on the explosion protection certification plate. The transmitter can then only be operated with this type of protection throughout its entire service life.

- If two protection types are permanently marked on the explosion protection certification plate, the transmitter must not be used in areas categorized as hazardous.

The additional plate has two checkboxes (see Figure 3) for marking.

It is absolutely necessary to mark one of the checkboxes on the left side permanently in accordance with the selected type of protection of the application. This has to be done before the TTF200 or TTF300 are commissioned in the application.

The marking must be applied in a permanent and nonerasable manner, for example using a caustic or acidic pencil or by stamping on a metallic plate.

Unmarked devices must **NOT** be commissioned.

**Note**

- For the specification and installation notes for devices in the ‘Intrinsic safety’ type of protection:
  See instructions OI/TTF200 and CI/TTF200, or OI/TTF300 and CI/TTF300.
- For the specification and installation notes for devices in the ‘Flameproof enclosure’ type of protection:
  see **Notes on assembly, installation, operation and repair of devices in the ‘Flameproof enclosure’ type of protection** on page 4 as well as instructions OI/TTF200 und CI/TTF200, or OI/TTF300 and CI/TTF300.

Devices with combined types of protection may only be operated in one of the possible types of protection.

Before commissioning, users must decide on one of these types of protection and their corresponding approval.

The ‘E4’ coding combines the ‘Intrinsic safety’, type ‘TTF200-E1’ and ‘Flameproof enclosure’, type ‘TTF200-E3’ or ‘TTF300-E1’ and ‘TTF300-E3’ types of protection.
Notes on assembly, installation, operation and repair of devices in the ‘Flameproof enclosure’ type of protection

The following requirements for assembly, installation, operation and repair of devices in the ‘Flameproof enclosure’ type of protection should be complied with.

The supplements are in line with the updated type examination certificates PTB 99 ATEX 1144 X, version: 01 and IECEx PTB 12.0039 X, Issue No: 1.

### Electrical data

#### Transmitter

<table>
<thead>
<tr>
<th>Supply circuit</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum voltage</td>
<td>$U_s = 30$ V</td>
<td></td>
</tr>
<tr>
<td>Maximum current</td>
<td>$I_s = 32$ mA, limited by the upstream fuse (rated fuse current 32 mA)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Measurement current circuit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum voltage</td>
</tr>
<tr>
<td>Maximum current</td>
</tr>
<tr>
<td>Maximum power</td>
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<tr>
<td></td>
</tr>
</tbody>
</table>

### Operating instructions

#### DANGER

**Risk of explosion due to hot parts**

Hot parts inside the device pose an explosion hazard.
- Never open the device immediately after switch-off.
- A waiting time of at least four minutes should be observed before opening the device.

#### DANGER

**Explosion hazard when opening the device**

Explosion hazard when opening the device with activated power supply.
- Before opening the device, switch off the power supply.

### Repair

#### DANGER

**Explosion hazard**

Explosion hazard due to improper repair of the device. Faulty devices may not be repaired by the operator.
- Any repair may only be performed in the production plant or by workshops authorized by ABB.

Repair work on the flameproof joint may be conducted only in accordance with the manufacturer’s design specifications. Repair work in accordance with the values in Tables 1 and 2 of EN 60079-1 is not permissible.