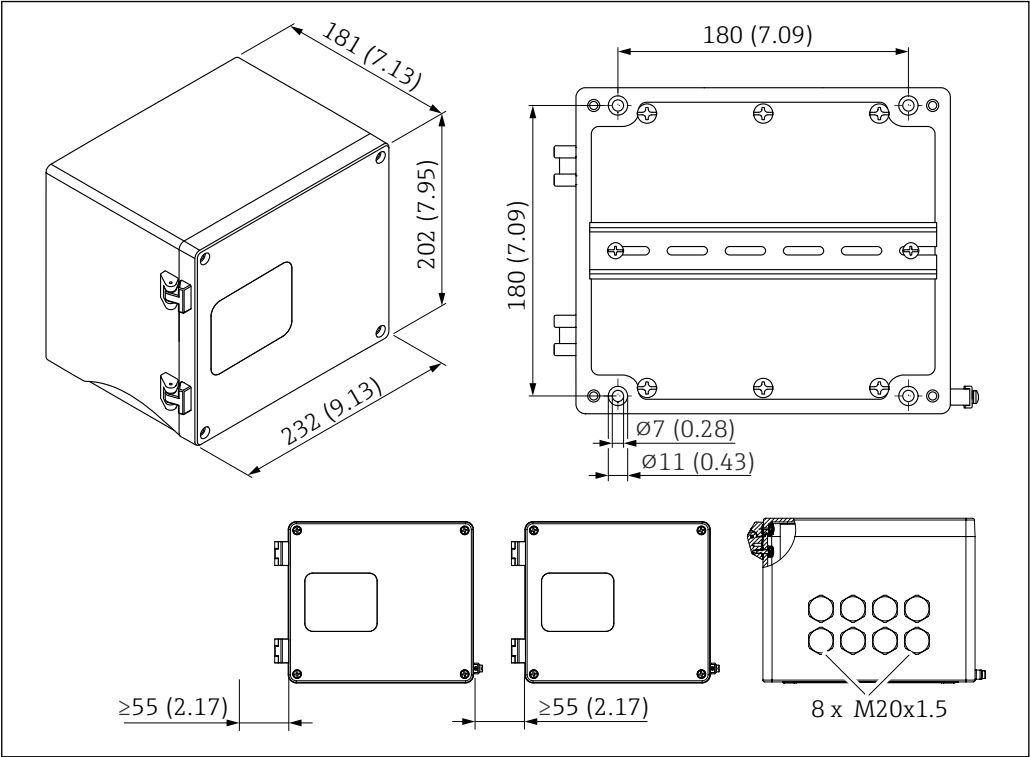
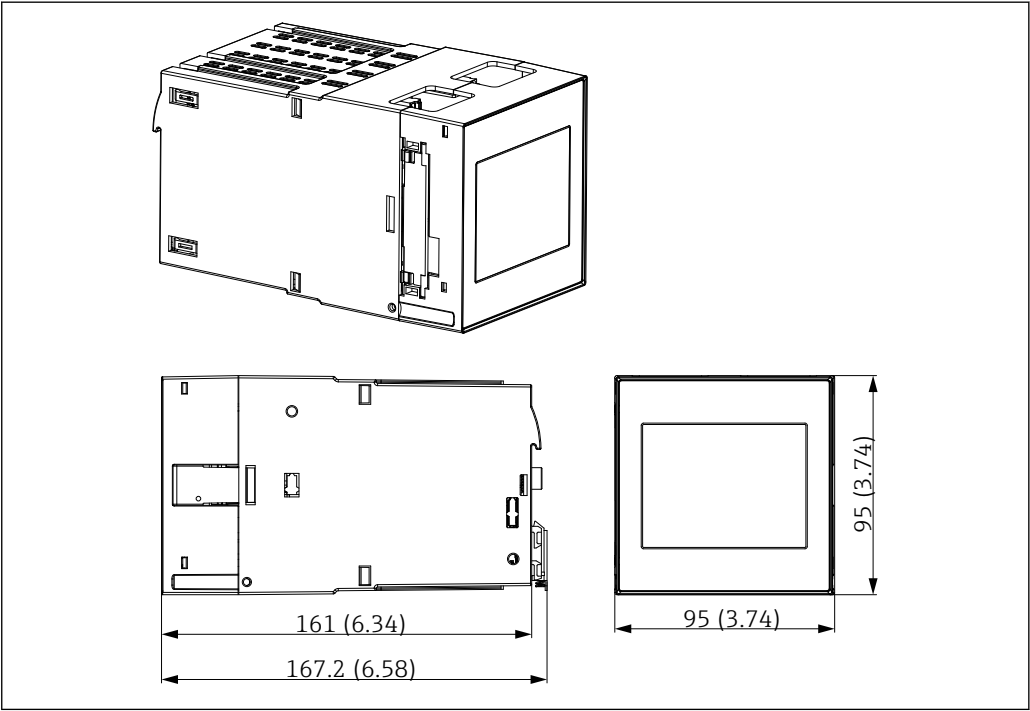


Aluminum field housing



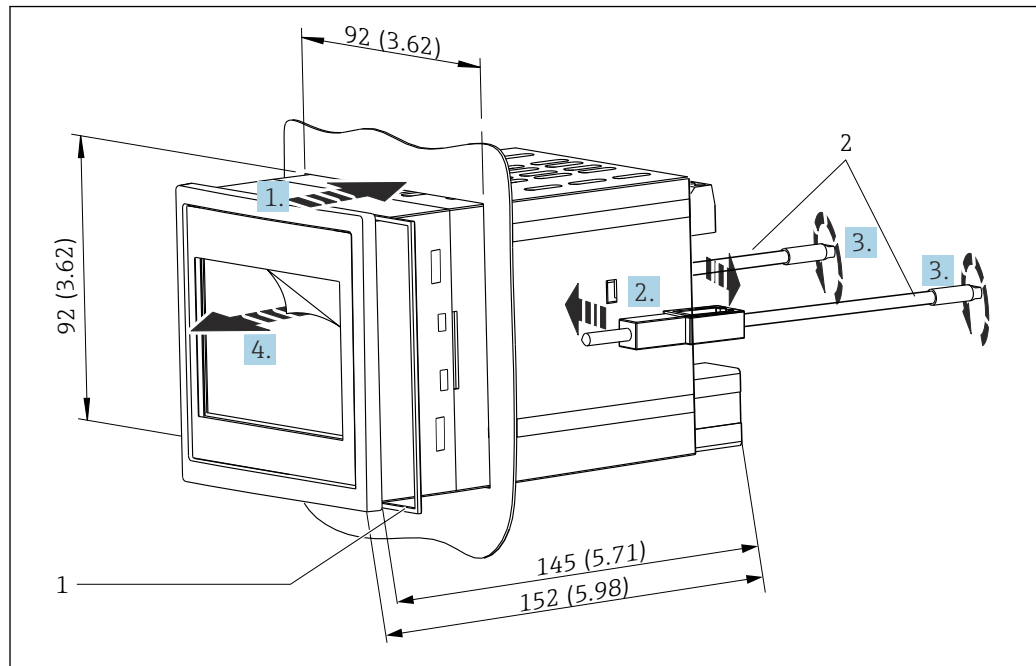
55 Aluminum field housing (for installing the DIN rail device). The cable entries are located on the bottom. Unit of measurement mm (in)

DIN rail device



56 DIN rail housing. Unit of measurement mm (in)

Panel-mounted device



57 Panel housing (panel cutout 92 mm (3.62 in) x 92 mm (3.62 in)). Unit of measurement mm (in)

- 1 Sealing ring (included in the delivery)
- 2 Fastening clips (2x included in the delivery)

15.8.2 Weight

Polycarbonate field housing

Approx. 1.6 to 1.8 kg (3.53 to 3.97 lb) depending on device version

Aluminum field housing

Approx. 1.6 to 1.8 kg (3.53 to 3.97 lb) depending on device version

DIN rail device

Approx. 0.7 kg (1.54 lb) depending on device version

Panel-mounted device

Approx. 0.5 kg (1.10 lb)

15.8.3 Materials

Polycarbonate field housing

- Assembly board for pipe mounting: Stainless steel 316L
- Field housing: PC-FR
- Seal: VMQ
- Nameplate: Polyester
- Screws: A4 (1.4578)

Aluminum field housing

- Field housing: Aluminum
- Seal: PUR soft foam
- Nameplate: Polyester
- Screws: A4 (1.4578)

Panel-mounted and DIN rail device

- Housing: PC
- Seal for panel housing: EPDM
- Nameplate: Lasered on

15.9 Display and user interface

The device's display and operating options are defined in order code 050 (display, operation)

- 1: None; RJ45 Ethernet
- 2: None; RJ45 Ethernet + WLAN
- 3: 3.5" TFT touch display; RJ45 Ethernet
- 4: 3.5" TFT touch display; RJ45 Ethernet + WLAN

15.9.1 Onsite operation and display

The device is optionally equipped with a 3.5" TFT touch display for onsite operation.

Size (diagonal screen measurement)

90 mm (3.5 ")

Resolution

QVGA, 76,800 pixels (320 x 240)

Backlight

50,000 h half-life (= half brightness)

Number of colors

24 bit color depth; 16.7 million displayable colors

Maximum character size; number of digits

Digit height max. 50 pixels or 13 mm with max. seven digits

Viewing angle

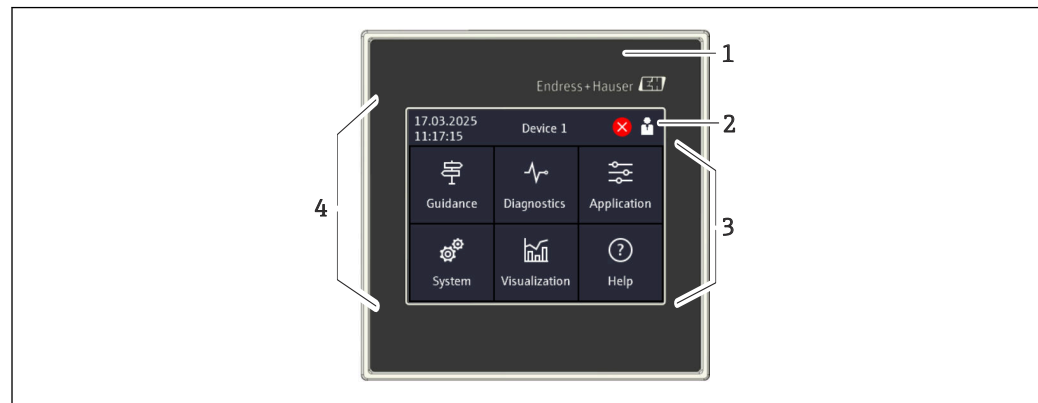
Max. viewing angle range: 85° in all directions from the display central axis

Screen displays

- Users can choose between black and white for the background color.
- Active channels can be assigned to up to six groups. For unique identification, each group can be given a descriptive name.
- Linear scales
- Horizontal curve display, bar graph display or digital display

15.9.2 Elements on front of device with touch display

i The device version without display features 3 LEDs: DS (device status), NS (network status) and WLAN status at the bottom left instead of the display



A0052679

- 1 Front of device
- 2 Header: date/time, tag name, diagnostic information, quick access menu (logging in/log out, language)
- 3 Function tiles for display and touch operation
- 4 Touch display

15.9.3 Light emitting diodes (LEDs)

i The LEDs are only visible with the DIN rail version without touch display.

DS (device status): LED for operating status

- **Lit green**
Normal operation; no faults detected.
- **Flashes red**
Warning is pending. Details are saved in the diagnostic list.
- **Lit red**
Alarm is pending. Details are saved in the diagnostic list.
- **Off**
No supply voltage.

NS (network status): LED for PROFINET or Ethernet/IP

- **Lit red**
Communication active
- **Lit green**
Connection established, no active communication
- **Off**
No connection

WLAN: LED for communication

- **Flashing blue**
Searching for WLAN access point
- **Lit blue**
Connection established
- **Off**
No connection

15.9.4 Operation concept

The device can be operated directly on site (option of 3.5" TFT touch display), or through remote configuration via interfaces and operating tools (web server).

Integrated Operating Instructions

Thanks to the device's simple operating concept, it is possible to commission the device for many applications without a hard copy of the Operating Instructions. The device has an integrated help function and displays operating instructions directly on the monitor.

Dynamic operating menu

Only function groups that are relevant for the device version and installation environment are displayed in the menu. The integrated wizard guides the user intuitively through the entire commissioning process.

Locking operation

- Via the lock switch in the terminal compartment
- Via touch display on the operating module
- Automatic operating lock after a set time (configurable)

15.9.5 Languages

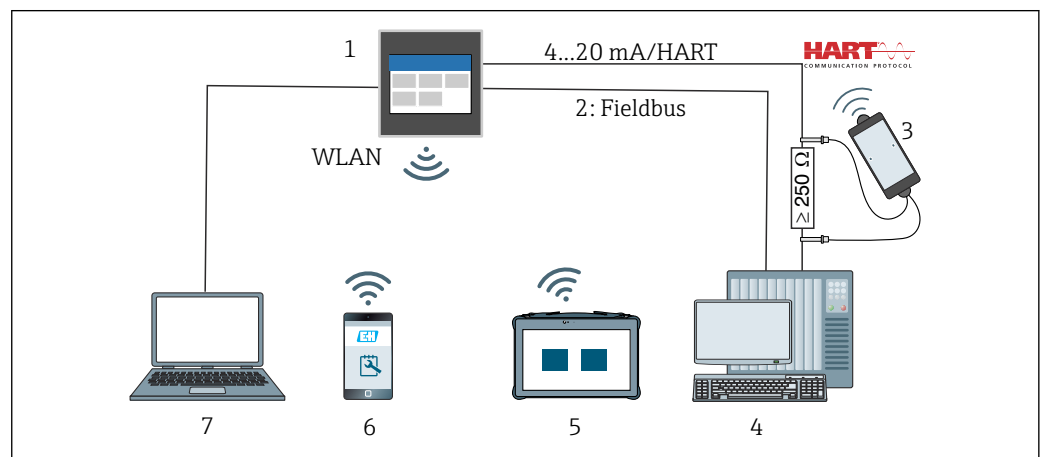
The following languages can be selected in order code 500 (operating language display):

English, German, French, Spanish, Italian, Dutch, Portuguese, Polish, Russian, Turkish, Chinese (simplified), Japanese, Korean, Indonesian, Czech, Swedish

15.9.6 Remote operation

The device can be operated independently of the optional touch display using the following operating tools:

Operation options



58 System integration

- 1 FlexView FMA90
- 2 Fieldbus: PROFINET, Modbus TCP, EtherNet/IP to PLC (optional)
- 3 HART modem with connection cable, e.g. Commubox FXA195 or VIATOR Bluetooth (restricted operation)
- 4 PLC via HART protocol (FDI package, restricted operation)
- 5 Field Xpert SMT70 via WLAN and web server
- 6 Operation and configuration via WLAN and web server
- 7 Operation and configuration via Ethernet and web server

Device access via WLAN

The device is optionally equipped with WLAN. In addition to Ethernet TCP/IP, device access is therefore also possible via WLAN.

Operation options via web server

A web server is integrated into the device. The web server offers the following range of functions:

- Easy configuration without additional installed software
- Instantaneous value display and diagnostics information
- Display of current measured value curves
- Display of events and logbook entries
- Device firmware update
- Device configuration indicated as PDF

15.9.7 System integration

Communication	Driver technology	Configuration possible	Systems (examples)
HART	EDD	No	EDD hosts (e.g. Emerson AMS, Yokogawa PRM)
HART	EDD (Siemens)	No	Siemens PDM

15.9.8 Supported operating tools

Device configuration and measured value retrieval can also be done via interfaces. The following operating tools are available for this purpose:

Operating tool	Functions	Communication
Web server (integrated into the device; access via browser)	▪ Easy configuration without additional installed software ▪ Display of data and measured value curves via the web browser ▪ Remote access to device and diagnostic information	Ethernet, WLAN

15.10 Certificates and approvals

Current certificates and approvals for the product are available at www.endress.com on the relevant product page:

1. Select the product using the filters and search field.
2. Open the product page.
3. Select **Downloads**.

15.11 Ordering information

Detailed ordering information is available from your nearest sales organization www.addresses.endress.com or in the Product Configurator at www.endress.com:

1. Select the product using the filters and search field.
2. Open the product page.

3. Select **Configuration**.



Product Configurator - the tool for individual product configuration

- Up-to-the-minute configuration data
- Depending on the device: direct input of information specific to the measuring point, such as the measuring range or operating language
- Automatic verification of exclusion criteria
- Automatic creation of the order code and its breakdown in PDF or Excel output format
- Ability to order directly in the Endress+Hauser Online Shop

15.11.1 Scope of delivery

The scope of delivery of the device comprises:

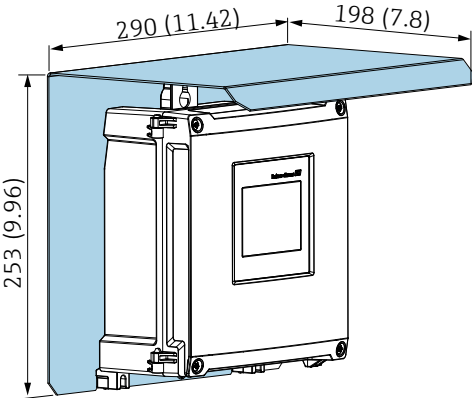
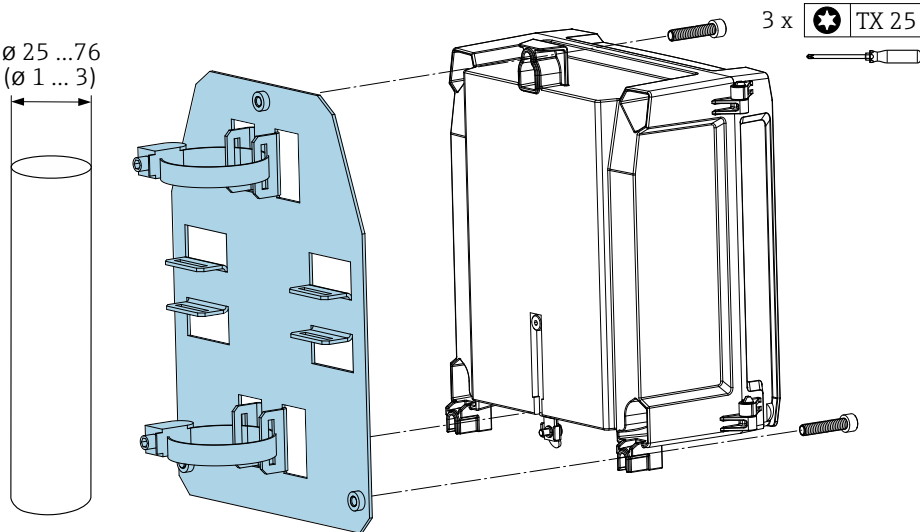
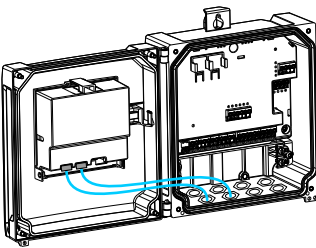
- Device (with terminals, according to order)
- Panel-mounted device: Two screw fastening clips, sealing rubber towards the panel wall
- Delivery note
- Hard copy of Brief Operating Instructions
- Hard copy of Ex Safety Instructions (optional)

15.12 Accessories

The accessories currently available for the product can be selected at www.endress.com:

1. Select the product using the filters and search field.
2. Open the product page.
3. Select **Spare parts & Accessories**.

15.12.1 Device-specific accessories

Type	
Stainless steel 316Ti (1.4571) weather protection cover for polycarbonate field housing	
	
A0053172	
59 Weather protection cover for direct wall mounting or using assembly board for pipe mounting. Unit of measurement mm (in)	
Assembly board for pipe mounting for polycarbonate field housing	
	
A0053940	
60 Mounting plate for pipe mounting of polycarbonate field housing. Unit of measurement mm (in)	
■ Pipe diameter: 25 to 76 mm (1 to 3 in) ■ Dimensions: 210 x 110 mm (8.27 x 4.33 in) ■ Material: Stainless steel 316L ■ Mounting accessories: fastening clips, screws and nuts are supplied.	
Cable glands 4x M16x1.5/2x M20x1.5/2x M25x1.5	
	1x M12 plug, Ethernet/PROFINET (adapter RJ45 on M12 plug; for polycarbonate field housing)
	2x M12 plug, Ethernet/PROFINET (adapter RJ45 on M12 plug; for polycarbonate field housing)
A0056168	

15.12.2 Online tools

Product information over the entire life cycle of the device: www.endress.com/onlinetools

15.12.3 System components

Surge arrester modules from the HAW product family

Surge arrester modules for DIN rail and field device mounting, for the protection of plants and measuring instruments with power supply and signal/communication lines.

More detailed information: www.endress.com

15.13 Supplementary documentation

The following document types are available in the Downloads area of the Endress+Hauser website (www.endress.com/downloads):

Document type	Purpose and content of the document
Technical Information (TI)	Planning aid for your device The document contains all the technical data on the device and provides an overview of the accessories and other products that can be ordered for the device.
Brief Operating Instructions (KA)	Guide that takes you quickly to the 1st measured value The Brief Operating Instructions contain all the essential information from incoming acceptance to initial commissioning.
Operating Instructions (BA)	Your reference document These Operating Instructions contain all the information that is required in the various life cycle phases of the device: from product identification, incoming acceptance and storage, to mounting, connection, operation and commissioning, through to troubleshooting, maintenance and disposal.
Description of Device Parameters (GP)	Reference for your parameters The document provides a detailed explanation of each individual parameter. The description is aimed at those who work with the device over the entire life cycle and perform specific configurations.
Safety Instructions (XA)	Depending on the approval, safety instructions for electrical equipment in hazardous areas are also supplied with the device. These are an integral part of the Operating Instructions.  Information on the Safety Instructions (XA) that are relevant for the device is provided on the nameplate.
Supplementary device-dependent documentation (SD/FY)	Always comply strictly with the instructions in the relevant supplementary documentation. The supplementary documentation is an integral part of the device documentation.



www.addresses.endress.com
