



Level



Pressure



Flow



Temperature



Liquid  
Analysis



Registration



Systems  
Components



Services



Solutions

## Technical Information

# Promonitor NRF560

## Tank side monitor

For tank side monitoring and controlling of Proservo NMS 5 intelligent tank gauge



### Application

Promonitor NRF560 is a monitoring unit for use with the Proservo series of tank gauges.

Mounted at the tank side or up to 1200 meters away (local HART connection).

Promonitor provides indication of measured level, temperature data and operating status, and can send operating commands to the Proservo NMS 5 from a convenient location.

### Features and benefits

- Remote monitoring and control for Proservo tank gauge
- Indication via two line illuminated display
- Operation via 3 optical keys (touch control) and Endress+Hauser user friendly
- Programming matrix
- Protection class IP 67 housing
- Explosion proof for hazardous area mounting

# Table of Contents

<b>Function and system design</b> .....	<b>3</b>	<b>Ambient condition.</b> .....	<b>8</b>
System design .....	3	Ambient temperature .....	8
<b>Input</b> .....	<b>4</b>	Ingress protection .....	8
Measured variables .....	4	<b>Human interface</b> .....	<b>8</b>
Communication .....	4	Display element .....	8
<b>Auxiliary energy</b> .....	<b>4</b>	Operating element .....	9
Power Supply .....	4	<b>Certificates and approvals</b> .....	<b>9</b>
Current Consumption .....	4	CE approvals .....	9
Grounding .....	4	Ex approvals .....	9
<b>Electrical connection</b> .....	<b>5</b>	External standards and guide line .....	9
NRF560 Terminal .....	5	<b>Ordering Information</b> .....	<b>10</b>
<b>Performance characteristics</b> .....	<b>5</b>	Promonitor NRF560 .....	10
Display(LCD) .....	5	<b>Accessories</b> .....	<b>11</b>
<b>Installation conditions</b> .....	<b>6</b>	Mounting bracket .....	11
Wiring .....	6	<b>Supplementary Documentation</b> .....	<b>12</b>
Dimensions .....	6	Technical Information .....	12
Weight .....	6	Operating Instructions .....	12
Housing material .....	6	<b>Safety Instructions</b> .....	<b>12</b>
<b>Mounting</b> .....	<b>7</b>		
Mounting on the wall .....	7		
Engaging the display and operating elements .....	7		
Mounting on a 2"(50mm) pipe .....	8		

## Function and system design

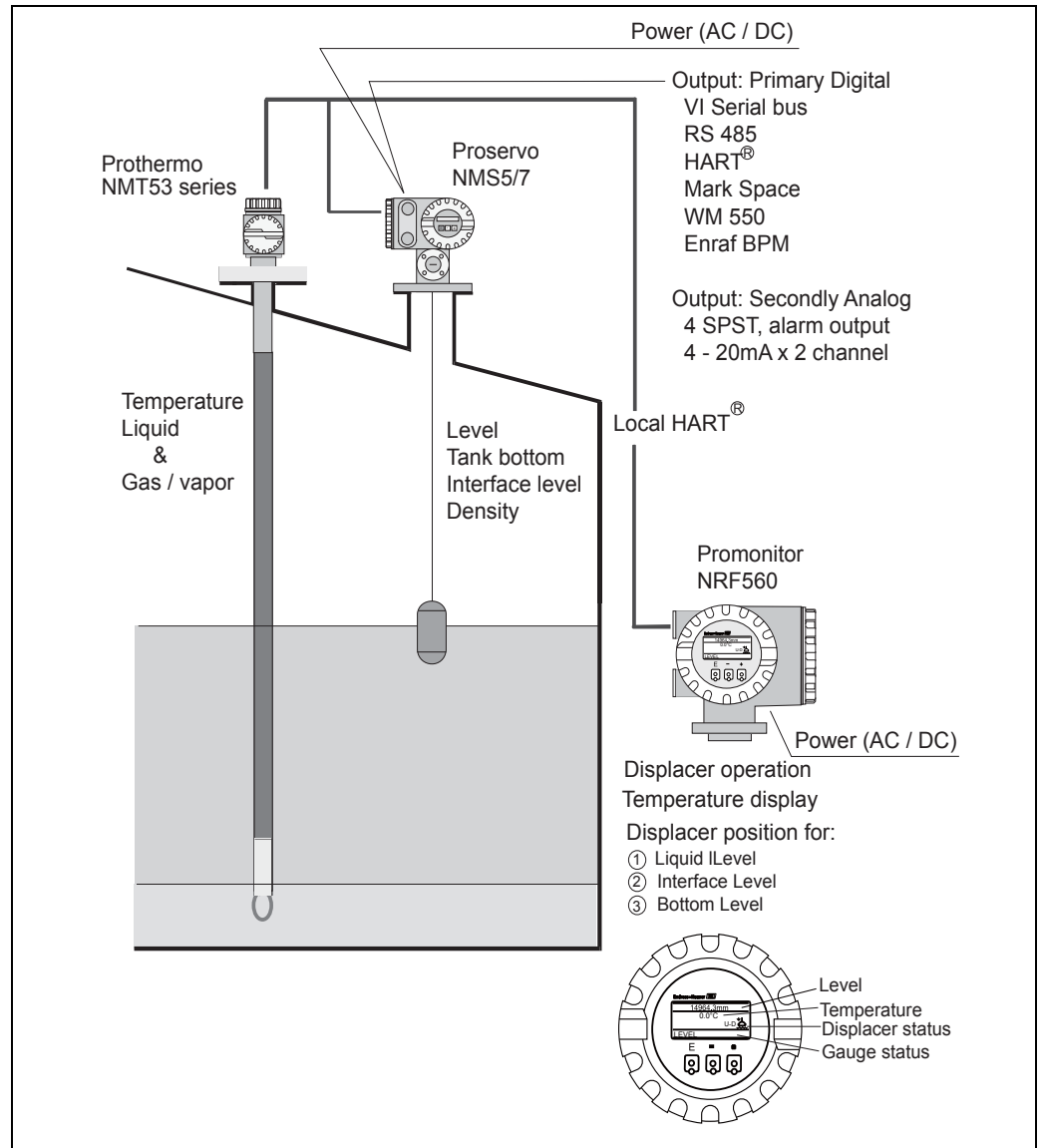
### System design

The Promonitor NRF 560 is a tank side monitor and control station for the Proservo NMS5 of intelligent tank gauges.

The Promonitor NRF 560 is a simple low-cost tank site monitor for displaying interface level, tank bottom level, and temperature. Additionally, the Proservo NMS5 can be operated to measure the level, interface level, bottom level, or to hoist the displacer.

The tank gauge is operated by three visual operating elements ("touch control").

For the transmission between the Proservo NMS5 and the Promonitor NRF 560, a two-wire HART® protocol is utilized.



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## Input

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**Measured variables**      Multidrop local HART®

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**Communication**            2 wire, Endress + Hauser HART® protocol to host commanding gauge  
    ■ Proservo NMS5

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## Auxiliary energy

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**Power Supply**              85-264VAC, 50/60Hz, 25VA  
    20-62VDC, 25VA/20-55, 50/60Hz, 25VA

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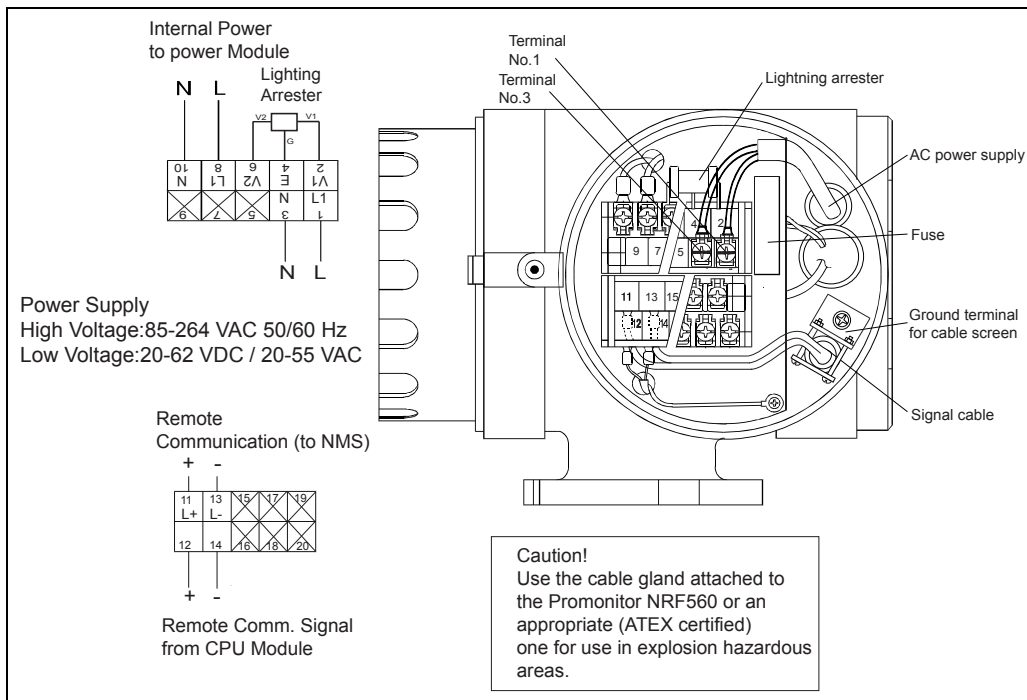
**Current Consumption**      Maximum 10 VA

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**Grounding**                 The NRF560 must be grounded to the tank potential before connection to host gauge. All ground connections must be compliant with local and company regulations, and checked before the equipment is commissioned.

## Electrical connection

### NRF560 Terminal



Check that the power supply of the Promonitor is turned off.

Insert AC power supply and signal cable from each side of the cable entries. Establish a grounding for the signal cable screen.

Connect cables to each terminal. We recommend a crimped connection.

After completing all electric connections, screw the terminal cover and hook its lock (shroud).

During the installation take care of mounting the conductor in such a way that self-loosening and corrosive effects will be prevented.

## Performance characteristics

### Display(LCD)

4 lines. 128 x 64 (pixels)

Language selection:

English, Chinese, Japanese

## Installation conditions

### Wiring

The following cable entries are available:

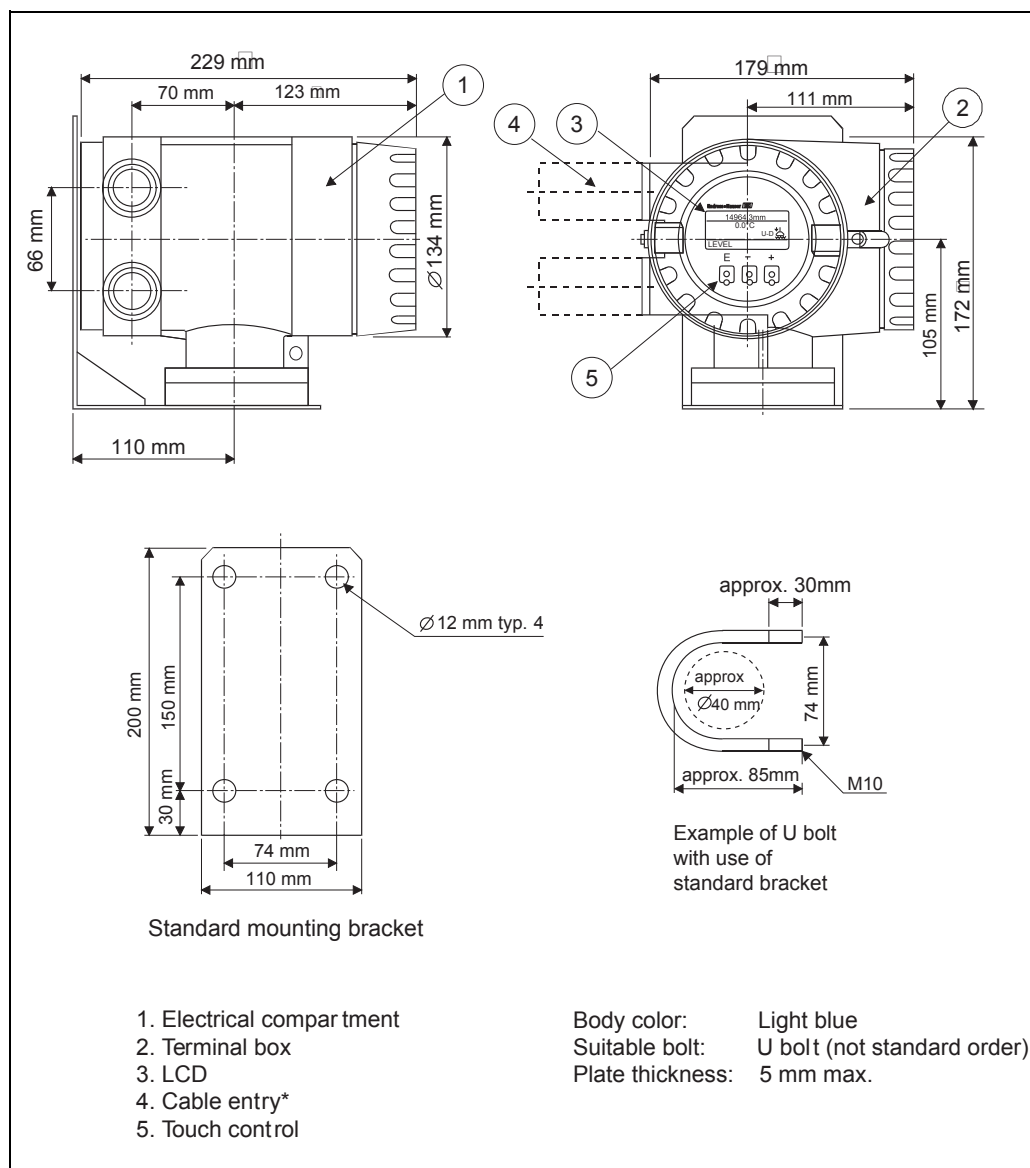
- G PF 1/2
- NPT 1/2"
- PG 16
- M 20

### Note!

For Ex d IIB T4 IIIS explosion-proof, the same class of cable gland is standard.

For Ex d IIC T4 CENELEC, Ex d IIC T4 ATEX explosion-proof, however, cable gland will not be supplied.

### Dimensions



### Weight

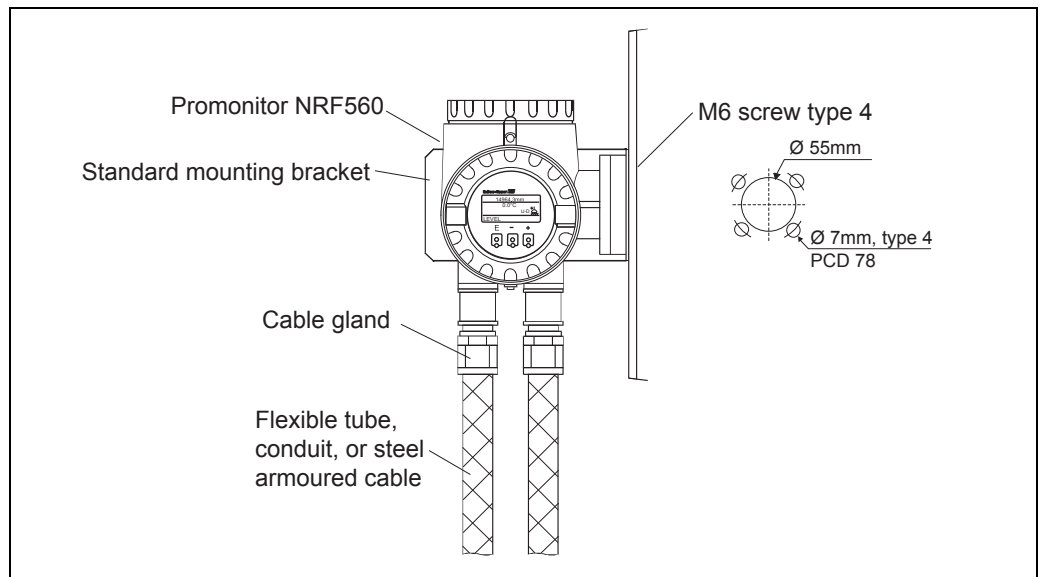
Approx. 6.5 kg

### Housing material

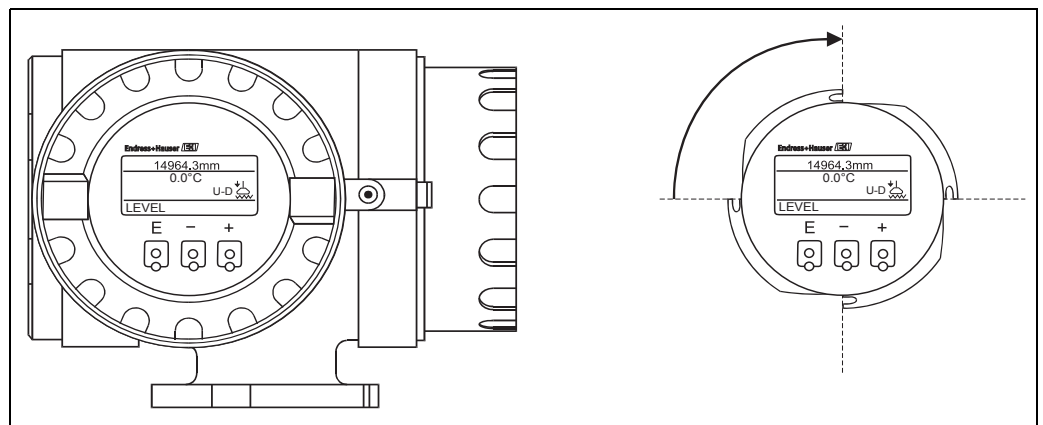
Aluminium, coated with rust-inhibitor paint

## Mounting

### Mounting on the wall



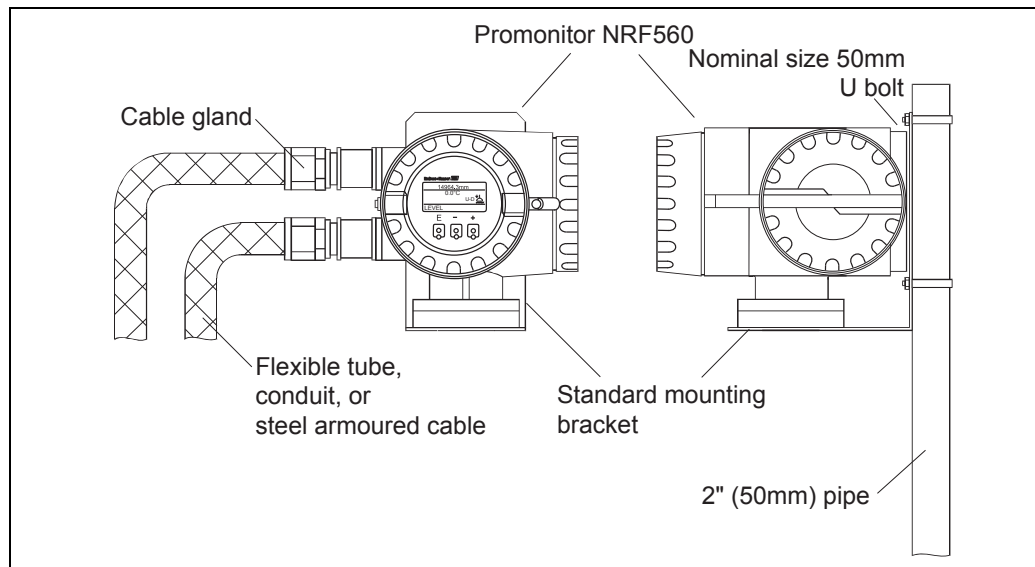
### Engaging the display and operating elements



#### Note!

After removal of the cover, the display and operating elements of the Promonitor NRF560 can be engaged in steps of 90°.

Mounting on a 2" (50mm) pipe

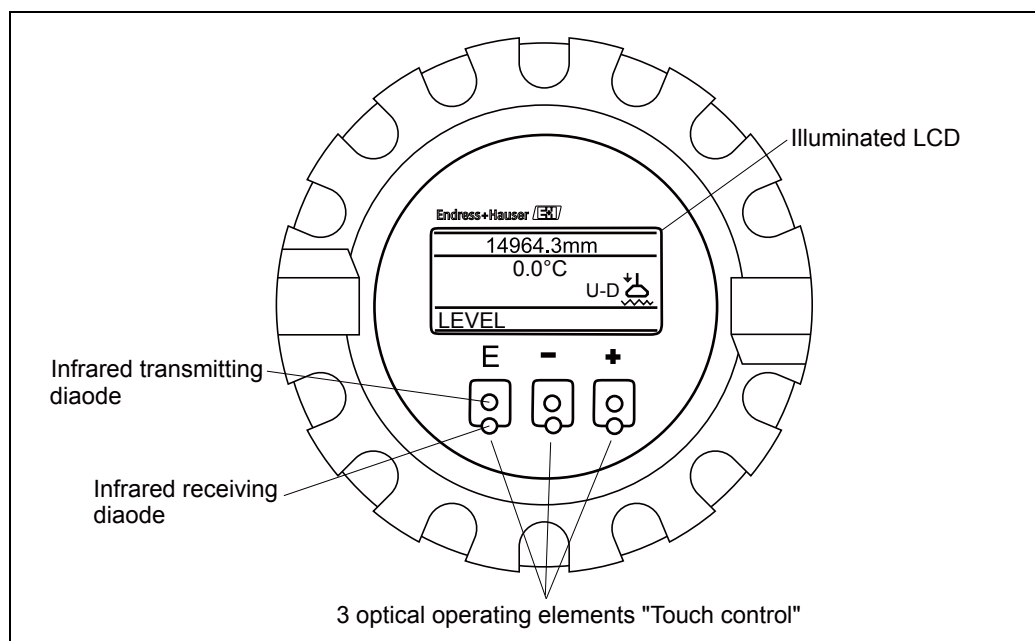


Ambient condition

Ambient temperature	-20...+60°C (-4...+140°F) (converter housing)
Ingress protection	IP67

Human interface



**Display element** The Promonitor NRF560 has an illuminated LCD that consists of 4 lines with 128 x 64 pixels). During normal operation, it shows the level, the temperature, and the status of the device on the "HOME" position. For the display of the other data and the programming of the parameters for operation, the Promonitor NRF560 uses a convenient programming matrix.





**Operating element**

The Promonitor NRF560 is operated by three visual operating elements, namely the keys "E", "-", and "+". They are activated when the appropriate field on the protective glass of the display is touched with the finger ("touch control"). The software and hardware installed in the Promonitor NRF560 rule out any malfunction that may be caused in this way. Even in explosion hazardous areas, the explosion-proof housing of the touch control ensures safe access to the data.

Key	Function
	<ul style="list-style-type: none"> <li>■ Access to the programming matrix (touching the key for more than 3 s)</li> <li>■ Return to the HOME position (touching the key for more than 3 s)</li> <li>■ Moving horizontally within a function group to select functions</li> <li>■ Saving parameters or access code</li> </ul>
	<ul style="list-style-type: none"> <li>■ Moving vertically to select function groups</li> <li>■ Selecting or setting parameters</li> <li>■ Setting access code</li> </ul>

## Certificates and approvals

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**CE approvals**

By attaching the CE - mark, Endress+Hauser confirms that the instruments pass the required tests.

**Ex approvals**

See ordering information

**External standards and guide line**

**EN 50081-1**  
Immunity to surge on data lines

**EN 50082-2**  
Immunity to burst on data lines

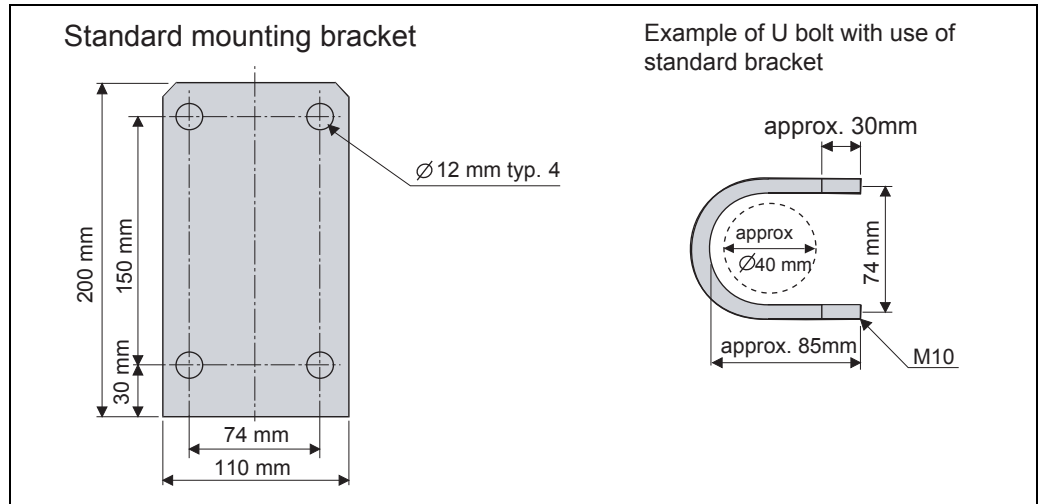


## Accessories

### Mounting bracket

#### Note!

U bolt is not attached to the mounting bracket. If you have need U bolt, please contact Endress+Hauser .



## Supplementary Documentation

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**Technical Information**

**TI 006N**  
Technical Information Proservo NMS5

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**Operating Instructions**

**BA 1003N**  
Operating Instructions Promonitor NRF560

**BA 1001N**  
Operating Instructions Proservo NMS5

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**Safety Instructions**

**XA 003N**  
Promonitor NRF560 - ZELM 03 ATEX 0154

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