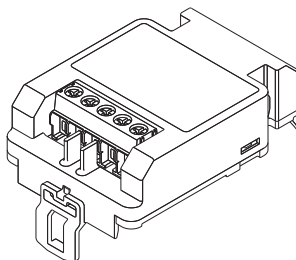


Special Documentation

Overvoltage Protection

1-channel (OVP10), 2-channel (OVP20)

Clip-on overvoltage protection module for 2-wire devices



1 Safety instructions

1.1 Designated use

The overvoltage protection modules OVP10 (1 channel) and OVP20 (2 channels) can be used for the following transmitters:

- Micropilot FMR5x/FMR6x
- Levelflex FMP5x
- Promass 200 / 8x2B; 8x2C
- Prosonic Flow 200 / 9x2B
- Prowirl 200 / 7x2B; 7x2C
- Promag 200 / 5x2B

OVP10 and OVP20 provide overvoltage protection according to DIN EN 60079-14, standard for test procedures 60060-1 (10 kA, pulse 8/20 µs).

 Depending on the approval of the transmitter the usage of the OVP module may be restricted. A device may only be retrofitted with an OVP module if the option *NA* (overvoltage protection) is quoted under *Optional Specifications* in the Safety Instructions (XA) pertaining to the device.

1.2 Operational safety

WARNING

The use of the OVP module may influence the Ex certification of the device at which the OVP module is used.

- ▶ Do not use the OVP module for devices with "Ex d"/"XP" type of protection.
- ▶ Do not use the OVP module for devices with with 4-wire electronics.
- ▶ Strictly observe the Safety Instructions (XA) of the device. The relevant XA is indicated on the nameplate of the device. It may contain special conditions for the use of the OVP module. It is essential to use the latest version of the XA, which can be downloaded from the internet at www.endress.com.

NOTICE

In case of retrofitting: The necessary internal safety distances are not met if the OVP module is used with the standard housing lid of the device.

- ▶ The lid must be replaced by a higher one. The following table specifies the appropriate lids. These lids are available as accessories.

 If the device was ordered with OVP, the suitable lid is already included in the delivery.

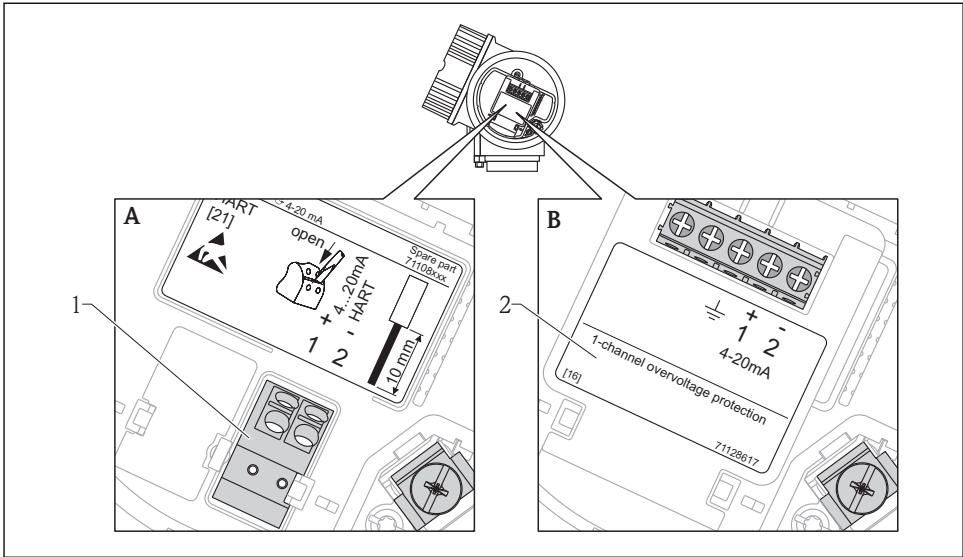
Housing	Order code of the required lid
GT18 (316L)	71185516
GT19 (PBT)	71185518
GT20 (aluminum)	71185517

2 Technical data

Technical data	
Resistance per channel	max. 2 * 0.5 Ω
Threshold DC voltage	400 to 700 V
Threshold impulse voltage	< 800 V
Capacitance at 1 MHz	< 1.5 pF
Nominal arrest impulse voltage (8/20 μs)	10 kA
Suited for wire cross-sections	0.2 to 2.5 mm ² (24 to 14 AWG)

3 Mounting and electrical connection

3.1 2-wire: 4-20 mA HART¹⁾ (OVP10)



A0018904

1 Application of the OVP10 for a one-channel HART device

A Without OVP module

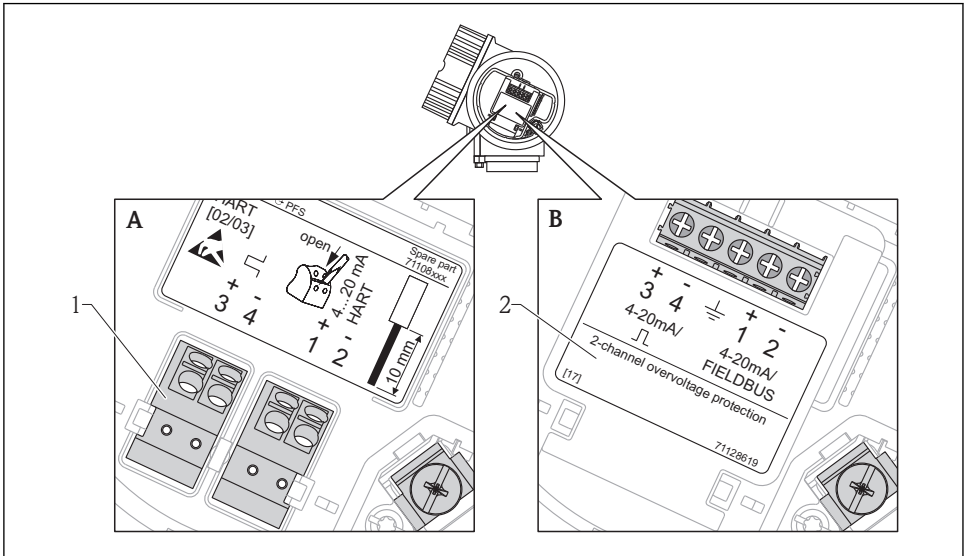
B With OVP module

1 Pluggable spring-force terminal; must be removed before the OVP10 can be clipped on

2 OVP10

1) Product structure of the transmitter: Feature 020 "Power supply, Output", option A

3.2 2-wire: 4-20 mA HART, switch output or pulse/frequency/switch output²⁾ (OVP20)



A0019382

2 Application of the OVP20 for a HART device with switch output

A Without OVP module

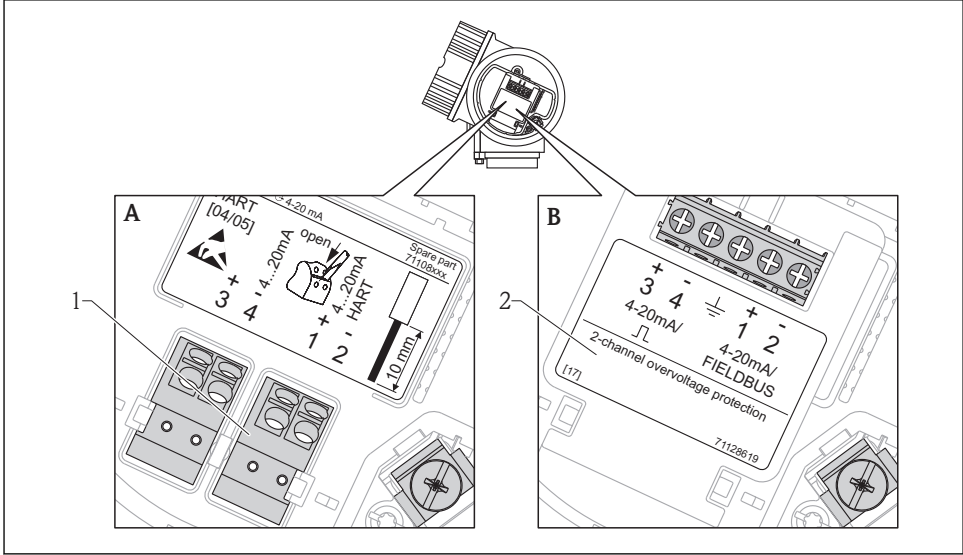
B With OVP module

1 Pluggable spring-force terminal; must be removed before the OVP20 can be clipped on

2 OVP20

2) Product structure of the transmitter: Feature 020 "Power supply, Output", option B

3.3 2-wire, 4-20 mA HART, 4-20mA³⁾ (OVP20)



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3 Application of the OVP20 for a two-channel HART device

A Without OVP module

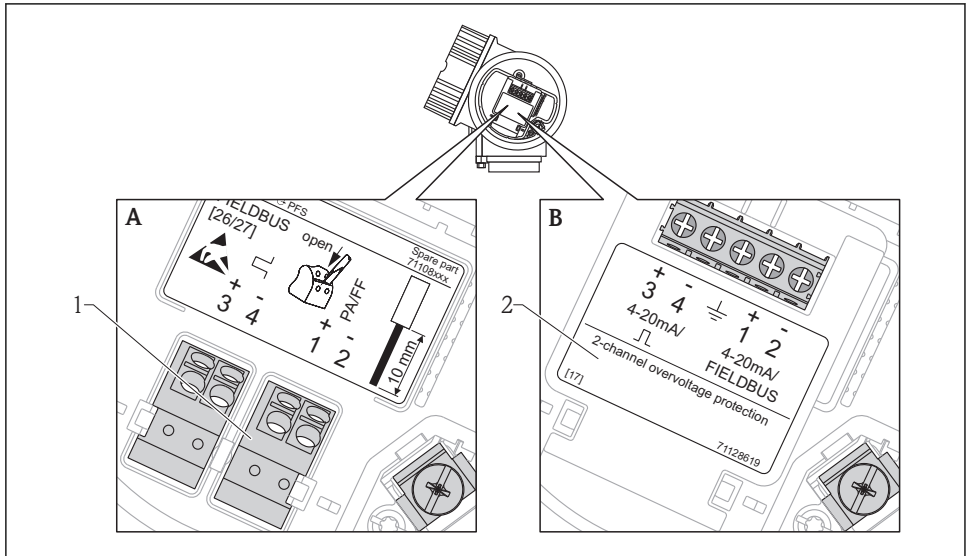
B With OVP module

1 Pluggable spring-force terminals; must be removed before the OVP20 can be clipped on

2 OVP20

3) Product structure of the transmitter: Feature 020 "Power supply, Output", option C

3.4 PROFIBUS PA⁴⁾ / FOUNDATION Fieldbus⁵⁾ (OVP20)



A0018906

4 Application of the OVP20 for a PROFIBUS PA or FOUNDATION Fieldbus device

A Without OVP module

B With OVP module

1 Pluggable spring-force terminals; must be removed before the OVP20 can be clipped on

2 OVP20

4) Product structure of the transmitter: Feature 020 "Power supply, Output", option G

5) Product structure of the transmitter: Feature 020 "Power supply, Output", option E



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