Supplementary documentation for the Operating Instructions

Proline Promag 10H, 50H, 53H, 55H

Supplementary information to following modifications:

- New nominal diameters DN 125 to 150 (5 to 6")
- New process connections for nominal diameters DN 40 to 150 (1½ to 6")
- New mechanical construction for nominal diameters DN 40 to 100 (1½ to 4")

The following additional diameters DN 125 (5") and DN 150 (6") have been added to the Promag 10H, 50H, 53H and 55H as well as process connections with a new sealing system. In addition the mechanical constructions for the nominal diameters DN 40…100 (1½…4") have been changed.

In this documentation you will find the supplementary information for the following documentations:

- BA00082D: Proline Promag 10 HART
- BA00046D: Proline Promag 50 HART
- BA00055D: Proline Promag 50 PROFIBUS DP/PA
- BA047D: Proline Promag 53 HART
- BA052D: Proline Promag 53 FOUNDATION FIELDBUS
- BA117D: Proline Promag 53 MODBUS
- BA053D: Proline Promag 53 PROFIBUS DP/PA
- BA119D: Proline Promag 55 HART
- BA126D: Proline Promag 55 FOUNDATION FIELDBUS
- BA00124D: Proline Promag 55 PROFIBUS DP/PA

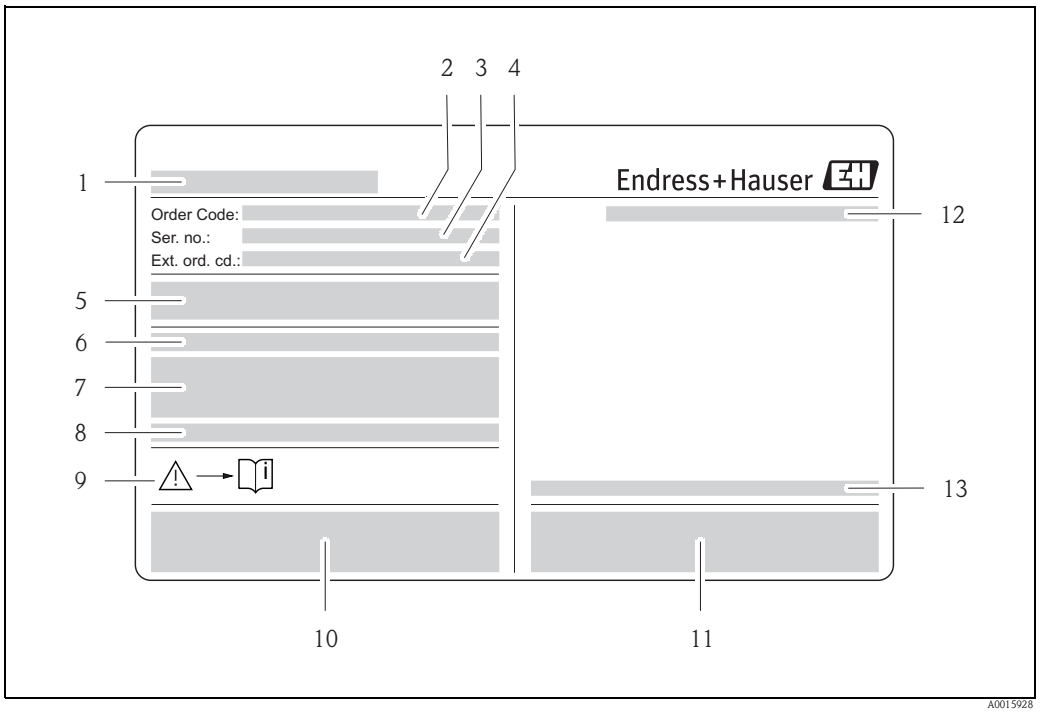
SD00160D/06/EN/01.12
71184812

Endress+Hauser

People for Process Automation

Identification

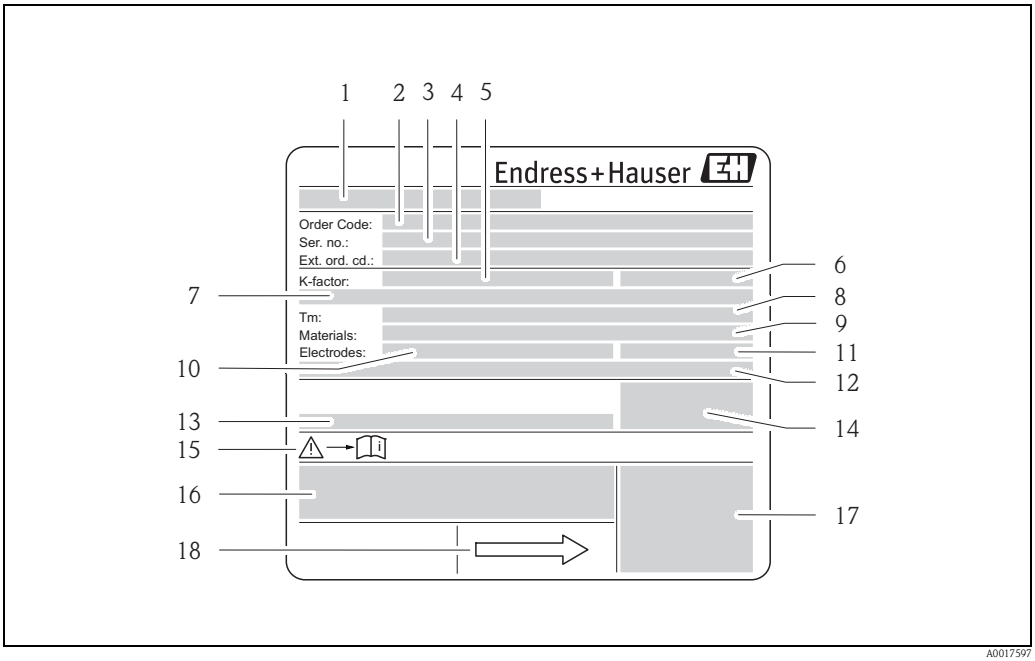
Nameplate of the transmitter
DN 40 to 150 (1½ to 6")



Example of transmitter nameplate

1 Name of transmitter
2 Order code
3 Serial number (Ser.No.)
4 Extended order code (Ext. ord. co.)
5 Power supply, frequency, power consumption
6 Additional function and software
7 Available inputs and outputs
8 Reserved for additional information
9 Please refer to operating instructions
10 Reserved for certificates, approvals and for additional information on device version
11 Patents
12 Degree of protection
13 Ambient temperature range

Nameplate of the sensor
DN 40 to 150 (1½ to 6")



Example of sensor nameplate

1 Name of the sensor
2 Order code
3 Serial number (Ser. no.)
4 Extended order code (Ext. ord. cd.)
5 Calibration factor with zero point (K-factor)
6 Calibration tolerance
7 Flange nominal diameter and nominal pressure
8 Fluid temperature range (Tm)
9 Material of measuring tubes (Materials)
10 Materials of measuring electrodes (Electrodes)
11 Reserved for additional information
12 Reserved for additional information
13 Ambient temperature range
14 Degree of protection
15 Please refer to operating instructions
16 Reserved for additional information on device version (approvals, certificates)
17 Reserved for additional information on device version (approvals, certificates)
18 Flow direction

Installation

Recommended flow
DN 125 to 150 (5 to 6")

Min./max. full scale value (v ≈ 0.3 or 10 m/s):

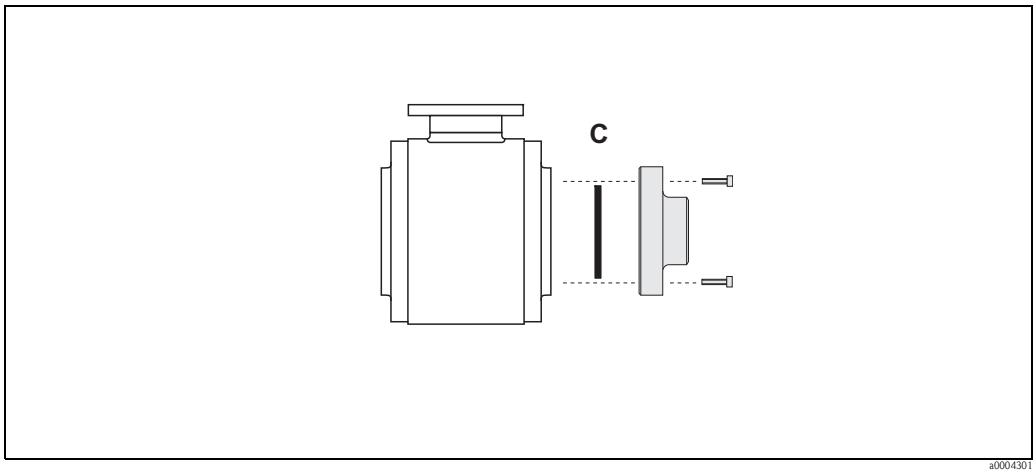
SI units:
- DN 125 (5"): 220 to 7500 dm^3/min
- DN 150 (6"): 20 to 600 m^3/h

US units:
- DN 125 (5"): 60 to 1950 gal/min
- DN 150 (6"): 90 to 2650 gal/min

Installing the sensor
DN 40 to 150 (1½ to 6")

The sensor is supplied to order, with or without pre-installed process connections. Pre-installed process connections are secured to the sensor with 4 or 6 hex-head threaded fasteners.

Caution!
The sensor might require support or additional attachments, depending on the application and the length of the piping run. When plastic process connections are used, the sensor must be additionally supported mechanically. A wall-mounting kit can be ordered separately from Endress+Hauser as an accessory.



Promag H process connections (DN 40 to 150, 1½ to 6")

C = DN 40 to 150 (1½ to 6")/process connections with aseptic gasket seal
- *weld nipples (DIN 11850, ODT/SMS, ASME BPE, ISO 2037)*
- *clamp (ISO 2852, DIN 32676, L14 AM7)*
- *coupling (DIN 11851, DIN 11864-1, ISO 2853, SMS 1145)*
- *flange (DIN 11864-2)*

Seals

When installing the process connections, make sure that the seals are clean and correctly centered.

Caution!
- With metal process connections, you must fully tighten the screws. The process connection forms a metallic connection with the sensor, which ensures a defined compression of the seal.
- With plastic process connections, note the max. torques for lubricated threads (7 Nm / 5.2 lbf ft). With plastic flanges, always use seals between connection and counter flange.
- The seals must be replaced periodically, depending on the application, particularly in the case of gasket seals (aseptic version)!
  The period between changes depends on the frequency of cleaning cycles, the cleaning temperature and the fluid temperature. Replacement seals can be ordered as accessories.

Welding the transmitter into the piping (weld nipples)

Caution!
Risk of destroying the measuring electronics. Make sure that the welding machine is *not* grounded via the sensor or the transmitter.

1. Tack-weld the sensor into the pipe. A suitable welding jig can be ordered separately as an accessory.
2. Loosen the screws on the process connection flange and remove the sensor, complete with the seal, from the pipe.
3. Weld the process connection to the pipe.
4. Reinstall the sensor in the pipe. Make sure that everything is clean and that the seal is correctly seated.

Note!
- If thin-walled foodstuffs pipes are not welded correctly, the heat could damage the installed seal. It is therefore advisable to remove the sensor and the seal prior to welding.
- The pipe has to be spread approximately 8 mm to permit disassembly.

Cleaning with pigs

If pigs are used for cleaning, it is essential to take the inside diameters of the measuring tube and process connection into account. All the dimensions and lengths of the sensor and transmitter are provided in the separate documentation "Technical Documentation".

Technical data

Medium temperature range
DN 125 to 150 (5 to 6")

Sensor and seals:
-20 to +150 °C (-4 to +302 °F)

Medium pressure range (nominal pressure)
DN 40 to 150 (1/12 to 6")

The permitted nominal pressure depends on the process connection, the seal and the nominal diameter:

Process connections DN 40 to 150 (1½ to 6") with aseptic gasket seal (1.44404/316L)

Nominal diameter	**[mm]**	**40**	**50**	**65**	**80**	**100**	**125**	**150**
	[inch]	**1½"**	**2"**	**-**	**3"**	**4"**	**5"**	**6"**
Weld socket: ODT/SMS		PN 16 (232 psi)						
Weld socket: DIN 11850		PN 16 (232 psi)						
– For order codes with suffixes +CA/+CB		PN 40 (580 psi)	PN 25 (362.5 psi)				PN 16 (232 psi)	
Weld socket: ISO 2037		PN 40 (580 psi)	PN 25 (362.5 psi)				PN16 (232 psi)	
Weld socket: ASME BPE		PN 40 (580 psi)	PN 25 (362.5 psi)				-	PN 16 (232 psi)
Clamp: ISO 2852, DIN 32676, L14 AM7		PN 16 (232 psi)					PN 10 (145 psi)	
Coupling: SC DIN 11851		PN 16 (232 psi)						
– For order codes with suffixes +CA/+CB		PN 40 (580 psi)	PN 25 (362.5 psi)				PN 16 (232 psi)	
Coupling: SMS 1145		PN 16 (232 psi)						
Coupling: DIN 11864-1, ISO 2853		PN 16 (232 psi)						
– For order codes with suffixes +CA/+CB		PN 40 (580 psi)	PN 25 (362.5 psi)				-	
Flange: DIN 11864-2		PN 16 (232 psi)						
– For order codes with suffixes +CA/+CB		PN 25 (362.5 psi)	PN 16 (232 psi)				PN 10 (145 psi)	

Pressure tightness
DN 125 to 150 (5 to 6")

Measuring tube lining: PFA

Nominal diameter		Limit values for abs. pressure [mbar] ([psi]) at fluid temperatures:				
[mm]	[inch]	25 °C (77 °F)	80 °C (176 °F)	100 °C (212 °F)	130 °C (266 °F)	150 °C (302 °F)
125 to 150	5 to 6"	0	0	0	0	0

Weight
DN 40 to 150 (1½ to 6")

Promag 10H:

Weight in SI units and US units

Nominal diameter		Compact version (DIN)		Remote version (without cable; DIN)			
				Sensor		Transmitter (wall-mount housing)	
[mm]	[inch]	[kg]	[lbs]	[kg]	[lbs]	[kg]	[lbs]
40	1½"	5.5	12.1	4.1	4.1	3.1	7.0
50	2"	6.0	13.2	4.6	4.1	3.1	7.0
65	–	6.8	15.0	5.4	4.6	3.1	7.0
80	3"	7.4	16.3	6.0	6.0	3.1	7.0
100	4"	8.7	19.2	7.3	7.3	3.1	7.0
125	5"	14.1	31.1	12.7	12.7	3.1	7.0
150	6"	16.5	36.4	15.1	15.1	3.1	7.0

- Transmitter (compact version): 1.8 kg (3.97 lbs)
- Weight data valid for standard pressure ratings and without packaging material.

Promag 50H, 53H und 55H:

Weight in SI units

Nominal diameter	Compact version (DIN)		Remote version (without cable; DIN)	
DN	Aluminum field housing	Stainless steel field housing	Sensor	Transmitter (wall-mount housing)
[mm]	[kg]	[kg]	[kg]	[kg]
40	7.1	7.6	4.1	6
50	7.6	8.1	4.6	6
65	8.4	8.9	5.4	6
80	9	9.5	6.0	6
100	10.3	10.8	7.3	6
125	15.7	16.2	12.7	6
150	18.1	18.6	15.1	6

- Transmitter (compact version): 3.4 kg
- Weight data valid for standard pressure ratings and without packaging material.

Weight in US units

Nominal diameter	Compact version (DIN)		Remote version (without cable; DIN)	
DN	Aluminum field housing	Stainless steel field housing	Sensor	Transmitter (wall-mount housing)
[in]	[lbs]	[lbs]	[lbs]	[lbs]
1½"	15.7	16.8	4.1	13
2"	16.8	17.9	4.6	13
3"	19.8	20.9	6.0	13
4"	22.7	23.8	7.3	13
5"	34.6	35.7	12.7	13
6"	39.9	41.0	15.1	13

- Transmitter (compact version): 7.5 lbs
- Weight data valid for standard pressure ratings and without packaging material.

Material
DN 125 to 150 (5 to 6")

Seals: gasket seal (EPDM*, Silicon*)
* = USP class VI; FDA 21 CFR 177.2600: 3A

Process connections
DN 40 to 150 (1½ to 6")

With gasket seals:
- Weld sockets (DIN 11850, ODT/SMS, ASME BPE, ISO 2037)
- Clamps (ISO 2852, DIN 32676, L14 AM7)
- Coupling (DIN 11851, DIN 11864-1, ISO 2853, SMS 1145)
- Flange (DIN 11864-2)

www.endress.com/worldwide

Endress+Hauser

People for Process Automation

SD00160D/06/EN/01.12
71184812
FM+SGML 9.0 ProMoDo