Features

- Basic device for level measurement in liquids
- Measuring range up to 12 m (39 ft)
- Process connection 3/4 in thread or with adapter flange
- Temperature range up to 80 °C (176 °F)
- Pressure range up to 6 bar (87 psi)
- Up to SIL3 acc. to IEC 61508

Function

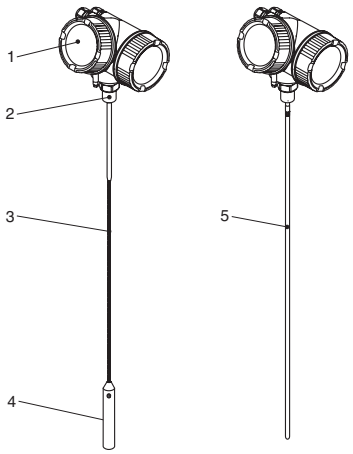
The device offers the following benefits:

- Reliable measurement even for changing product and process conditions
- HistoROM data management for easy commissioning, maintenance and diagnostics
- Highest reliability due to Multi-Echo tracking
- Seamless integration into control or asset management systems
- Intuitive user interface in national languages
- Approvals: ATEX, IECEx

The following interfaces are available for system integration:

- HART with 4 mA ... 20 mA analog (standard)
- PROFIBUS PA (option)

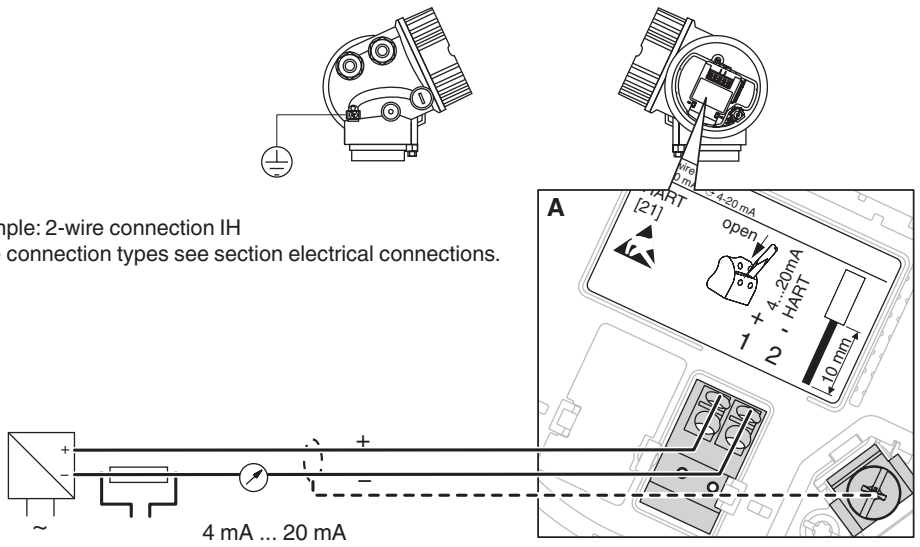
Assembly



1 Electronics housing
2 Process connection (thread)
3 Rope probe
4 End-of-probe weight
5 Rod probe

SIL 3

Connection



Example: 2-wire connection IH
More connection types see section electrical connections.

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General specifications	
Measuring method	The device is a measuring system that functions according to the time-of-flight method. The distance from the reference point (process connection of the measuring device) to the product surface is measured.
Construction type	device with rod probe device with rope probe
Supply	
Rated voltage U_n	11.5 ... 35 V DC, 2-wire 10.4 ... 48 V DC, 4-wire 90 ... 253 V AC, 50/60 Hz
Input	
Measured variable	distance between reference point and product surface
Measurement range	rod probe: 4 m (13 ft) rope probe: 12 m (39 ft)
Output	
Output signal	4 ... 20 mA 2 x 4 ... 20 mA
Communication	4 ... 20 mA HART (standard) PROFIBUS PA (option)
Directive conformity	
Electromagnetic compatibility	
Directive 2014/30/EU	EN 61326-1:2006 , EN 61326-2-3:2006
Low voltage	
Directive 2014/35/EU	EN 61010-1:2010
Conformity	
Degree of protection	IEC 60529:2001
Measurement accuracy	
Accuracy	digital: ±2 mm (0.08 inch) analog: 0.02 % sum of non-linearity, non-repeatability and hysteresis included in the maximum measured error
Operating conditions	
Process conditions	
Process temperature	-20 ... 80 °C (-4 ... 176 °F)
Process pressure (static pressure)	-1 ... 6 bar (-14.5 ... 87 psi)
Dielectric constant	rod probe: DC ≥ 1.6 rope probe: DC ≥ 1.6
Ambient conditions	
Ambient temperature	-40 ... 80 °C (-40 ... 176 °F)
Mechanical specifications	
Degree of protection	IP68, NEMA 6P (24 hours in water 1.83 m (6 ft) deep) IP66, NEMA 4X
Connection	gland M20 thread M20, G1/2, NPT1/2 device plug M12, 7/8 in
Material	materials in contact with process : rod probe: 1.4404/316L rope probe: 1.4401/316 process connections: 1.4404/316L, PPS-GF40 process membran, seal: Viton
Process connection	threads: G3/4, MNPT3/4 flanges: universal flange
Data for application in connection with Ex-areas	
EC-Type Examination Certificate	see instruction manuals (SI)
Directive conformity	
Directive 2014/34/EU	EN 60079-0:2012+A11:2013 , EN 60079-1:2007 , EN 60079-11:2012 , EN 60079-15:2010 , EN 60079-26:2007 , EN 60079-31:2009
International approvals	
IECEx approval	see instruction manuals (SI)
Certificates and approvals	
Overspill protection	see approval (ZE)
Telecommunications	radio license FCC
General information	
Supplementary documentation	technical information (TI) manuals, brief instructions (BA, KA) instruction manuals (SI) approval (ZE)
Supplementary information	EC-Type Examination Certificate, Statement of Conformity, Declaration of Conformity, Attestation of Conformity and instructions have to be observed where applicable. For information see www.pepperl-fuchs.com.

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Accessories	
Designation	see technical information (TI)

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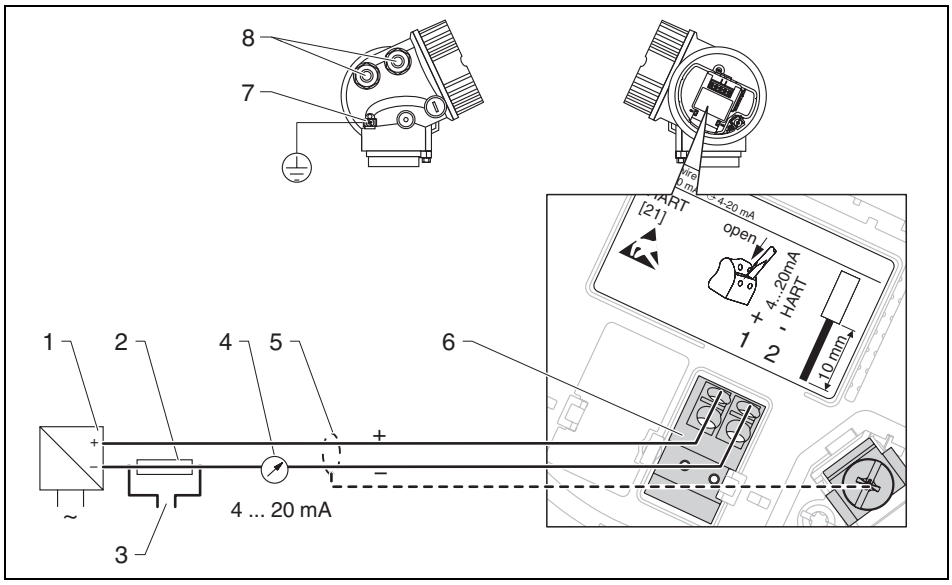
Electrical Connections (Excerpt)

2-wire, 4 mA ... 20 mA HART (version IH)



1 Active barrier with power supply (e. g. KCD2-STC-Ex1): observe terminal voltage
2 HART communication resistor (≥ 250 Ω): observe maximum load
3 Connection for optional field communicator
4 Analog display device: observe maximum load
5 Cable screen; observe cable specification
6 4 mA ... 20 mA HART (passive): terminals 1 and 2
7 Terminal for potential equalization line
8 Cable entry

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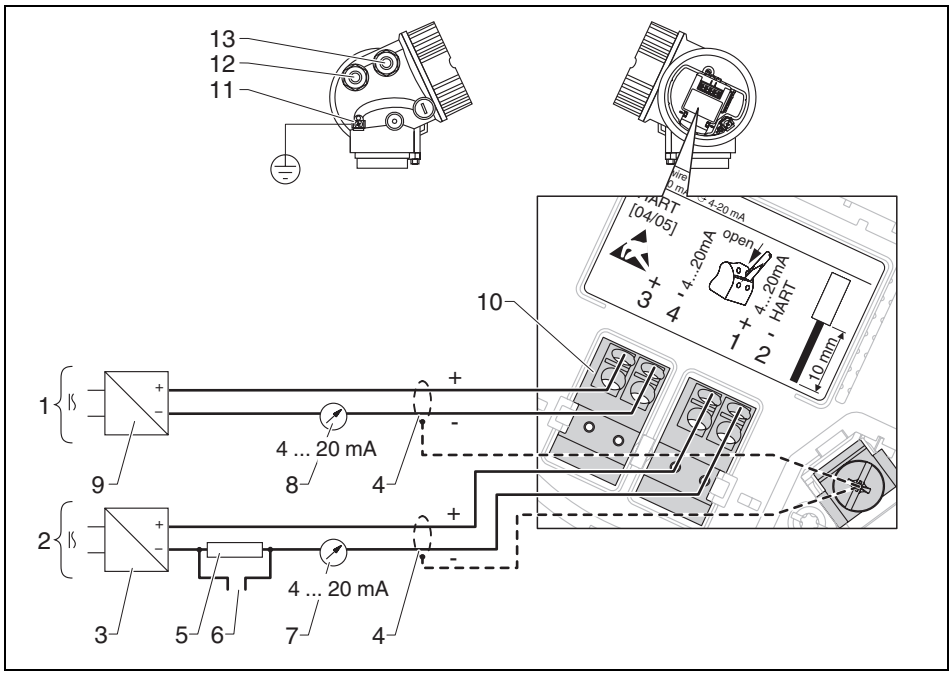
Electrical Connections (Excerpt)

2-wire, 4 mA ... 20 mA HART, 4 mA ... 20 mA (version IE)



1	Connection current output 2
2	Connection current output 1
3	Supply voltage for current output 1 (e. g. KCD2-STC-Ex1); observe terminal voltage
4	Cable screen; observe cable specification
5	HART communication resistor (≥ 250 Ω): observe maximum load
6	Connection for optional field communicator
7	Analog display device; observe maximum load
8	Analog display device; observe maximum load
9	Supply voltage for current output 2 (e. g. KCD2-STC-Ex1); observe terminal voltage
10	Current output 2: terminals 3 and 4
11	Terminal for the potential equalization line
12	Cable entry for current output 1
13	Cable entry for current output 2

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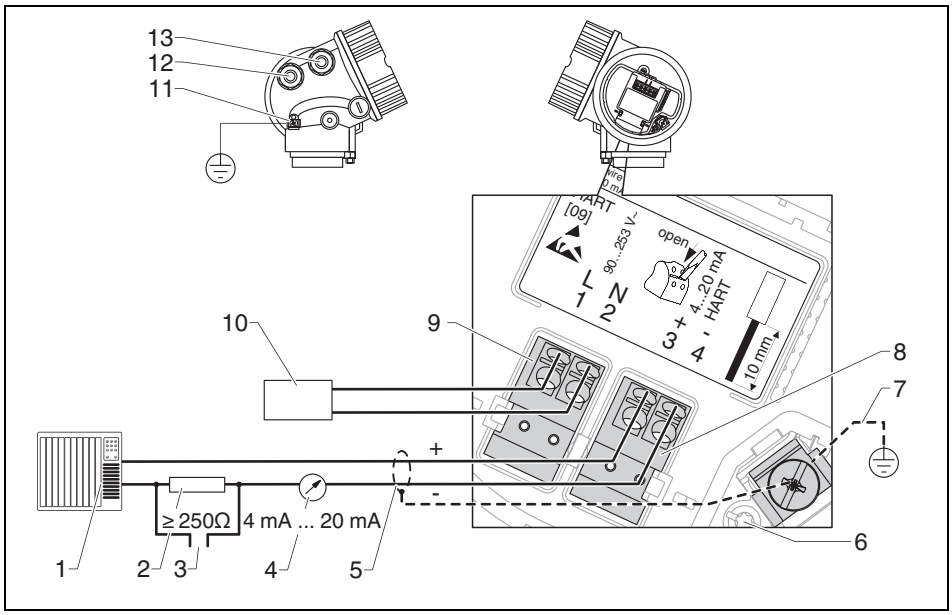
Electrical Connections (Excerpt)

4-wire: 4 ... 20 mA HART (90 ... 253 V AC) (version AH)



1	Evaluation unit, e. g. PLC
2	HART communication resistor (≥ 250 Ω): observe maximum load
3	Connection for optional filed communicator
4	Analog display device: observe maximum load
5	Signal cable including screening (if required), observe cable specification
6	Protective connection; do not disconnect!
7	Protective earth, observe cable specification
8	4 mA ... 20 mA HART (active): terminals 3 and 4
9	Supply voltage: terminals 1 and 2
10	Supply voltage: observe terminal voltage, observe cable specification
11	Terminal for potential equalization
12	Cable entry for signal line
13	Cable entry for power supply

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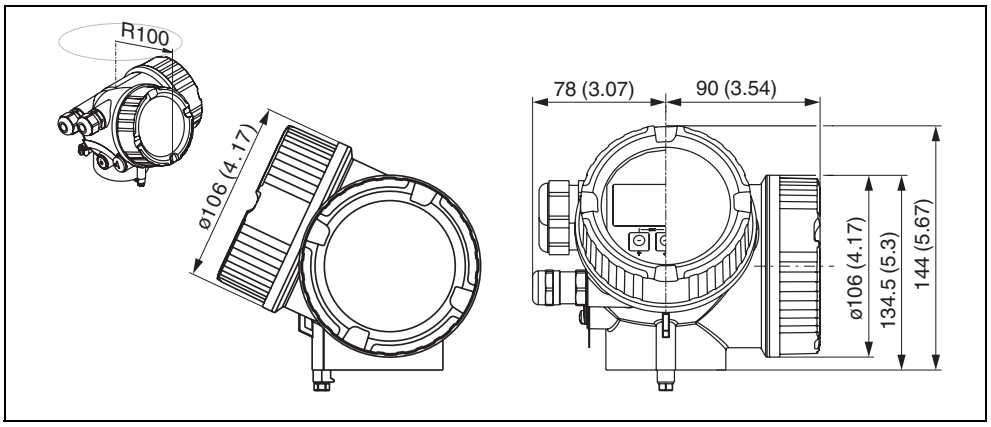
Dimensions

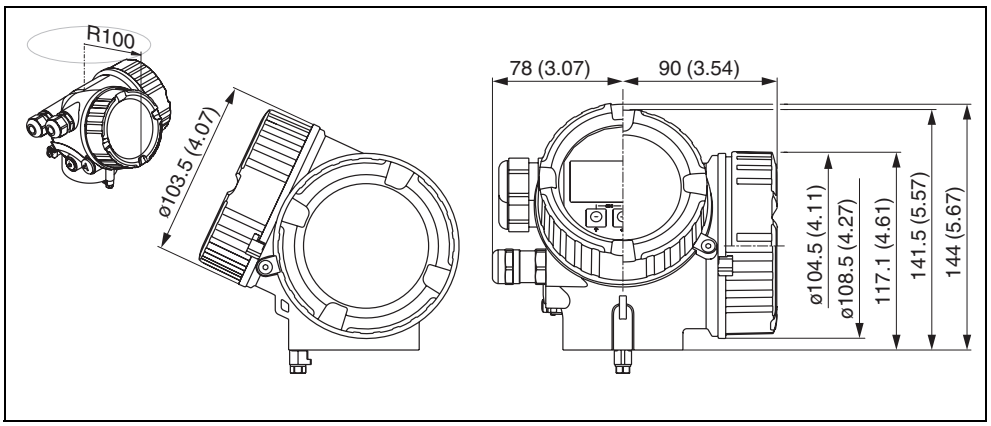
Housing GT19, plastics PBT (version A1)

Dimensions in mm (in)



Housing GT20, alu coated (version A2)

Dimensions in mm (in)



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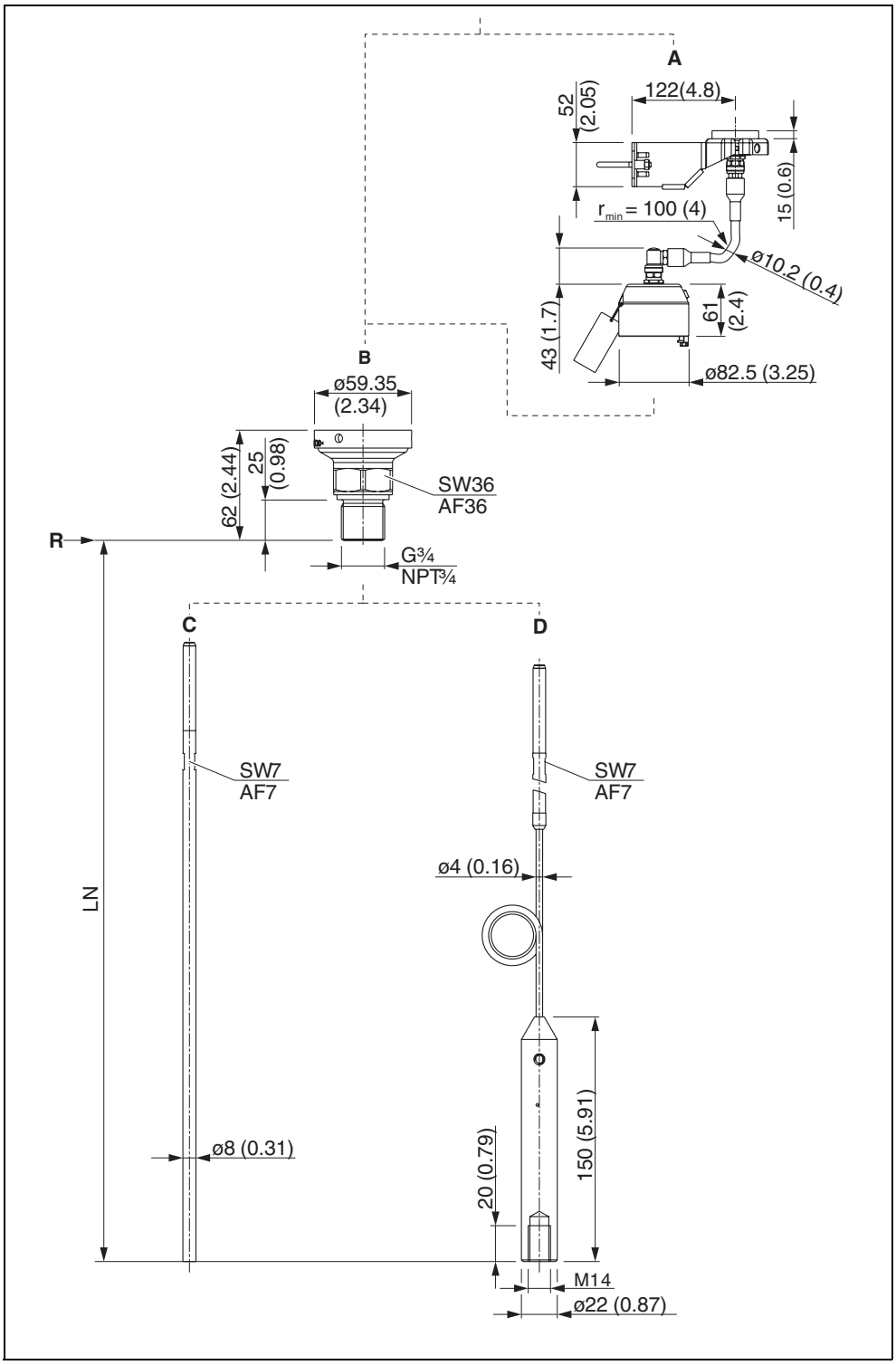
Dimensions

Process connections and probes

Dimensions in mm (in)



A Mounting bracket for probe design "Sensor remote" (feature "Probe design")

B Thread ISO228 G3/4 or ANSI MNPT3/4 (feature "Process connection")

C Rod probe 8 mm or 1/3 in (feature "Probe")

D Rope probe 4 mm or 1/6 in (feature "Probe")

LN Length of probe

R Reference point of the measurement

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Type Code

This overview does not mark options which are mutually exclusive.
*Option with * = on request/in preparation.*
*Option with ** = multiple options can be selected*

Device	
LTC50	Guided level radar

Probe	
1	in mm, rod Ø8 mm, 1.4404/316L
2	in mm, rope Ø4 mm, 1.4401/316
3	in inch, rope Ø1/6 inch, 1.4401/316
5	in inch, rod Ø1/3 inch, 1.4404/316L
X	Special version

Length	
XXXXX	Always indicate length. Length specification depends on chosen probe.

Process connection	
G21	Thread ISO 228 G3/4, 1.4404/316L
N21	Thread ANSI MNPT3/4, 1.4404/316L
XXX	Special version

Electrical connection	
A	Gland M20, IP66/68, NEMA 4X/6P
B	Thread M20, IP66/68, NEMA 4X/6P
C	Thread G1/2, IP66/68, NEMA 4X/6P
D	Thread NPT1/2, IP66/68, NEMA 4X/6P
I	Plug M12, IP66/68, NEMA 4X/6P
M	Plug 7/8 inch, IP66/68, NEMA 4X/6P
X	Special version

Seal	
2	Viton, -20 ... +80 °C
X	Special version

Housing	
A1	GT19 dual compartment, plastics PBT
A2	GT20 dual compartment, alu coated
XX	Special version

Electrical output	
AH	4-wire, 90 ... 253 V AC, 4 ... 20 mA, HART
DH	4-wire, 10.4 ... 48 V DC, 4 ... 20 mA, HART
ID	2-wire, 4 ... 20 mA, HART, switching output
IE	2-wire, 4 ... 20 mA, HART, 4 ... 20 mA
IH	2-wire, 4 ... 20 mA, HART
PA	2-wire, PROFIBUS PA, switching output
XX	Special version

Display, operation	
B	Without display, via communicator
D	SD02 4-line, push-buttons and data backup function
E	* SD03 4-line, illuminated, touch control and data backup function

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Approval	
C1	* CSA C/US IS Cl.I,II,III Div.1 Gr.A-G, NI Cl.1 Div.2, Ex ia
C2	* CSA C/US XP Cl.I,II,III Div.1 Gr.A-G, NI Cl.1 Div.2, Ex d
CB	CSA C/US IS Cl.I Div.1 Gr.A-D
CC	CSA C/US XP Cl.I Div.1 Gr.A-D
CG	CSA C/US General Purpose
E1	ATEX II 1G Ex ia IIC T6-T1 Ga
E3	ATEX II 3G Ex nA IIC T6-T1 Gc
E4	ATEX II 3G Ex ic IIC T6-T1 Gc
ED	ATEX II 1/2G Ex d [ia] IIC T6-T1 Ga/Gc
EG	* ATEX II 1/2G Ex d [ia] IIC T6-T6 Ga/Gb or 1/2 D Ex ta IIIC Txx°C Da/Db
EW	ATEX II 1/2G Ex ia IIC T6-T1 Ga/Gb or 1/2 G Ex d [ia] IIC T6-T1 Ga/Gb
EX	ATEX II 1/2G Ex ia IIC T6-T1 Ga/Gb
FI	* FM IS Cl.I,II,III Div.1 Gr.A-G, AEx ia, NI Cl.1 Div.2
FM	* FM IS Cl.I Div.1 Gr.A-D
FN	* FM XP Cl.I,II,III Div.1 Gr.A-G, AEx d, NI Cl.1 Div.2
FX	* FM XP Cl.I Div.1 Gr.A-D
IA	IECEx Ex ia T6-T1 Ga
IB	IECEx Ex ia IIC T6-T1 Ga/Gb
IC	IECEx Ex d [ia] IIC T6-T1 Ga/Gb
ID	IECEx Ex ic [ia] IIC T6-T1 Ga/Gc
IG	IECEx Ex nA IIC T6-T1 Gc
IH	IECEx Ex ic IIC T6-T1 Gc
NA	Version for non-hazardous area
SX	* ATEX II 1/2G Ex ia IIC T6-T1 Ga/Gb or 1/2 D Ex ia IIIC Txx°C Da/Db

Additional Options

Additional operation language	
0	No option
A	English
B	German
C	French
D	Spanish
E	Italian
F	Dutch
G	Portuguese
H	Polish
I	Russian
J	Turkish
K	Chinese abbreviations
L	Japanese
M	Korean
N	* Arabian
O	Bahasa
P	* Thai
Q	Vietnamnese
R	Czech

Application packages	
0	No option
9	Special version

Calibration	
0	No option
4	5-point linearity protocol
9	Special version

Service **	
0	No option
T	Customized parametrization HART
U	Customized parametrization PA
9	Special version

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Test, certificate **	
0	No option
A	Material certificate, wetted metallic parts, EN 10204-3.1 inspection certificate
9	Special version

Additional approval **	
0	No option
S	SIL
W	WHG overfill prevention
9	Special version

Probe design **	
0	No option
B	Sensor remote, 3 m cable, detachable, with mounting bracket
9	Special version

Accessory mounted * **	
0	No option
9	Special version

Accessory enclosed * **	
0	No option
B	Weather protection cover
G	Mounting kit, insulated, rope
9	Special version

Firmware version	
0	No option
5	01.00.zz, HART, DevRev01
7	01.00.zz, PROFIBUS PA, DevRev01

Tagging	
0	No option
1	Tagging (TAG), see additional specifications
2	Bus address, see additional specifications

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