Technical specifications

Input		
Measured variable	Level	
Span (infinitely adjustable)	Span (min. ... max.)	Maximum operating pressure
	1.25 ... 250 mbar (0.5 … 100 inH_2O)	See "Mounting flange"
	6.25 ... 1250 mbar (2.5 ... 500 inH_2O)	
	31.25 ... 6250 mbar (12.54 ... 2509 inH_2O)	
Lower range limit		
• Measuring cell with silicone oil filling	-100 % of max. span or 500 mbar a (7.25 psi a) vacuum resistance Also available as vacuum-resistant remote seal: 30 mbar a (0.44 psi a)	
Upper range limit	100% of max. span	
Start of scale	Between measuring limits (freely adjustable)	
Output		
Output current signal	4 ... 20 mA	
• Lower current limit (freely adjustable)	3.55 mA, factory setting 3.8 mA	
• Upper current limit (freely adjustable)	23 mA, factory setting 20.5 mA	
• Ripple (without HART communication)	I_{pp} ≤ 0.4 of max. output current	
• adjustable damping	0... 100 s in steps of 0.1 s, factory setting 2 s	
• current transmitter	3.55 ... 23 mA	
• Failure signal	Adjustable within limits: • Lower: 3.55 … 3.7 mA (factory setting 3.6 mA) • Upper: 21.0 … 23 mA (factory setting 22.8 mA)	
Load		
• Without HART communication	$R_B \leq (U_H - 10.5\ V)/0.023\ A$ in Ω, U_H : Power supply in V	
• With HART communication		
- HART Communicator	R_B = 230 ... 1100 Ω	
- HART modem	R_B = 230 ... 500 Ω	
Characteristic curve	Linearly rising or linearly falling and user-specific	
Measuring accuracy		
Reference conditions (in accordance with IEC 60770-1) All error information always refers to the set span.	• Rising characteristic curve • Start of scale 0 bar • Stainless steel seal diaphragm • Measuring cell with silicone oil filling • Room temperature (25 °C (77 °F))	
Error in measurement at limit setting incl. hysteresis and reproducibility r: Span ratio (r = max. span / set span)		
Linear characteristic	r ≤ 10	r ≥ 10
• 250 mbar (100 inH_2O) 1250 mbar (502 inH_2O) 6250 mbar (2509 inH_2O)	≤ 0.03 %	≤ (0.003 · r) %
Long-term stability	≤ (0.05 · r) % per 5 years ≤ (0.08 · r) % per 10 years	
Influence of ambient temperature per 28 °C (50 °F)[1]		
• 250 mbar (100 inH_2O)	≤ (0.025 · r + 0.014) %	
• 1250 mbar (502 inH_2O) 6250 mbar (2509 inH_2O)	≤ (0.006 · r + 0.03) %	
Influence of static pressure		
• At the start of scale value (PKN)[1] [2]		
- 250 mbar (100 inH_2O)	≤ (0.035 · r) % je 70 bar (1015 psi) correction via zero point correction	
- 1250 mbar (502 inH_2O) 6250 mbar (2509 inH_2O)	≤ (0.007 · r) % je 70 bar (1015 psi) correction via zero point correction	
• On the span (PKS)[1]		
- 250 mbar (100 inH_2O) 1250 mbar (502 inH_2O)	≤ 0.03 % je 70 bar (1015 psi)	
- 6250 mbar (2509 inH_2O)	≤ 0.09 % je 70 bar (1015 psi)	
Influence of power supply	≤ 0.005 %/1 V	
Rated conditions		
Mounting position	Defined by flange	
Ambient conditions		
• Ambient temperature (Note: Observe the temperature class in areas subject to explosion hazard.)		
- total device	-40 ... +85 °C (-40 ... +185 °F)	
- Readable display	-20 ... +85 °C (-4 ... +185 °F)	
- Storage temperature	-50 ... +90 °C (-58 ... +194 °F)	
Climatic class		
• Condensation	Relative humidity 0 … 100 % (condensation permissible)	
Degree of protection to IEC 60529	IP66/IP68 and NEMA 4X (with corresponding cable gland)	
Electromagnetic Compatibility		
• Emitted interference and interference immunity	Acc. to IEC 61326 and NAMUR NE 21	
Permissible pressures	According to 2014/68/EU pressure equipment directive	
Medium temperature of high-pressure side		
• Measuring cell with silicone oil filling		
- $p_{abs} \geq 1$ bar	-40 ... +175[3] °C (-40 ... +347[3] °F)	
- $p_{abs} < 1$ bar	-40 ... +80 °C (-40 ... +176 °F)	
Design		
Weight		
• To EN (pressure transmitter with mounting flange, without tube)	approx. 9.8 … 11.8 kg (21.6… 26.0 (lb)	
• To ASME (pressure transmitter with mounting flange, without tube)	approx. 9.8 … 16.8 kg (21.6 … 37.0 lb)	

Material of wetted parts at the high-pressure side	
• Seal diaphragm of mounting flange	Stainless steel 1.4404/316L, Hastelloy C276, mat. no. 2.4819, Monel 400, mat. no. 2.4360, Tantal, PFA auf Edelstahl 1.4404/316L, PTFE auf Edelstahl 1.4404/316L
• Sealing surface	Smooth to EN 1092-1, Form B1 and/or ASME B16.5 RF 125 … 250 AA for stainless steel316L, EN 1092-1 Form B2 and/or ASME B16.5 RFSF in the case of other materials
• Sealing material in the process connection	
- O-Ring	• Standard: Viton (FKM (FPM)) • Optional: NBR, PTFE (virginal), PTFE (glas fiber-reinforced), FFPM (Kalrez), Graphite
- For vacuum application of mounting flange	Copper
Material of wetted parts at the low-pressure side	
• Seal diaphragm	Stainless steel, mat. no. 1.4404/316L, Hastelloy C276, Monel 400
• Process connection and sealing screw	• Stainless steel, mat. no. 1.4404/316L
• Sealing material in the process connection	
- O-Ring	• Standard: Viton (FKM (FPM)) • Optional: NBR, PTFE (virginal), PTFE (glas fiber-reinforced), FFPM (Kalrez), Graphite
Material of parts not in contact with media	
Die-cast aluminum housing	• Low copper die-cast aluminum AC-AlSi12 (Fe) or AC-AlSi 10 Mg (Fe) to DIN EN 1706 • Lacquer on polyurethane base, optional epoxy-based primer • Stainless steel serial plate
Stainless steel precision cast housing	Stainless steel, mat. no. 1.4404/316L
Process connection screws	Stainless steel
Measuring cell filling	Silicone oil
• Liquid mounting flange	Silicone oil or other material
Process connection	
• High-pressure side	Flange to EN and ASME
• Low-pressure side	¼-18 NPT female thread and flange connection with M10 to DIN 19213 or 7/16-20 UNF mounting thread to IEC 61518/DIN EN 61518
Electrical connection	• Screw terminals • Cable entry via the following screwed glands: - M20 x 1.5 - ½-14 NPT - Device plug Han 7D/Han 8D - Device plug M12
Displays and controls	
Push buttons	3; for operation directly on the device
Display	• With or without integrated display • Cover with or without window

Auxiliary power supply	
Terminal voltage on transmitter	• DC 10.6 ... 44 V • With intrinsically-safe operation DC 10.6 ... 30 V
Certificates and approvals	
Classification according to PED 2014/68/EU	
• PN 160 (MAWP 2320 psi)	For gases of fluid group 1 and liquids of fluid group 1; complies with requirements of article 4, paragraph 3 (sound engineering practice)
Explosion protection	
Explosion protection for Europe (to ATEX)	
• Intrinsic safety "i"	PTB 09 ATEX 2004 X
- Marking	Ex II 1/2 G Ex ia/ib IIC T4
- Permissible ambient temperature	-40 ... +85 °C (-40 ... +185 °F)
- Connection	To certified intrinsically-safe circuits with peak values: U_i = 30 V, I_i = 100 mA, P_i = 750 mW; R_i = 300 Ω
- Effective internal inductance:	L_i = 400 µH
- Effective inner capacitance:	C_i = 6 nF
• Explosion-proof "d"	BVS 09 ATEX E 027
- Marking	Ex II 1/2 G Ex db ia IIC T4/T6 Ga/Gb
- Permissible ambient temperature	-40 ... +85 °C (-40 ... +185 °F) temperature class T4; -40 ... +60 °C (-40 ... +140 °F) temperature class T6
- Connection	To circuits with values: U_m = DC 10.5 ... 45 V
• Dust explosion protection for zone 20	BVS 09 ATEX E 027
- Marking	Ex II 1 D Ex ta ia IIIC T120°C Da
- Permissible ambient temperature	-40 ... +85 °C (-40 ... +185 °F)
- Max. surface temperature	120 °C (248 °F)
- Connection	To certified intrinsically-safe circuits with peak values: U_i = 30 V, I_i = 100 mA, P_i = 750 mW, R_i = 300 Ω
- Effective internal inductance:	L_i = 400 µH
- Effective inner capacitance:	C_i = 6 nF
• Dust explosion protection for zone 21/22	BVS 09 ATEX E 027
- Marking	Ex II 2 D Ex tb ia IIIC T120°C Db
- Connection	To circuits with values: U_H = 10.5 ... 45 V DC; P_{max} = 1.2 W
• Type of protection "n" (zone 2)	PTB 09 ATEX 2004 X
- Marking	Ex II 3 G Ex nA II T4/T6 Ex II 2/3 G Ex ib/nL IIC T4/T6 Ex II 2/3 G Ex ib/ic IIC T4/T6
- "nA" connection	U_m = 45 V DC
- "nL, ic" connection	U_i = 45 V
- Effective internal inductance	L_i = 400 µH
- Effective inner capacitance	C_i = 6 nF

Explosion protection for USA (to FM)	
Certificate of Compliance	No. 3033013
• Identification (XP/DIP) or (IS)	XP CL I, DIV 1, GP ABCDEFG T4 / T6 DIP CL II, III, DIV1, GP EFG T4/T6 IS CL I, II, III, DIV1, GP ABCDEFG T4 CL I, Zone 0, AEx ia IIC T4 CL I, Zone 1, AEX ib IIC T4
- Permissible Ambient Temperature	T_a = T4: -40 ... +85 °C (-40 ... +185 °F) T_a = T6: -40 ... +60 °C (-40 ... +140 °F)
- Entity parameters	According to "control drawing": A5E02189134N U_m = 30 V, I_m = 100 mA, P_i = 750 mW, L_i = 400 µH , C_i = 6 nF
• Marking (NI/NO)	NI CL I, DIV 2, GP ABCD T4/T6 NI CL I, Zone 2, GP IIC T4/T6 S CL II, III, GPFG T4/T6 NI CL I, DIV 2, GP ABCD T4/T6, NIFW NI CL I, Zone 2, GP IIC T4/T6, NIFW NI CLII, III, DIV 2, GP FG T4/T6, NIFW
- Permissible Ambient Temperature	T_a = T4: -40 ... +85 °C (-40 ... +185 °F) T_a = T6: -40 ... +60 °C (-40 ... +140 °F)
- (NI/S) parameters	According to "control drawing": A5E02189134N U_m = 45 V, L_i = 400 µH, Ci = 6 nF
Explosion protection for Canada (to $_C$CSA$_{US}$)	
Certificate of Compliance	No. 2280963
• Marking (XP/DIP)	CL I, DIV 1, GP ABCD T4 /T6; CL II, DIV 1, GP EFG T4/T6
- Permissible Ambient Temperature	T_a = T4: -40 ... +85 °C (-40 ... +185 °F) T_a = T6: -40 ... +60 °C (-40 ... +140 °F)
- Entity parameters	According to "control drawing": A5E02189134N, U_m = 45 V
• Marking (ia/ib)	CL I, Ex ia/Ex ib IIC, T4 CL II, III, Ex ia/Ex ib, GP EFG, T4 CL I, AEx ia/AEx ib IIC, T4 CL II, III, AEx ia/ AEx ib, GP EFG, T4
- Permissible Ambient Temperature	T_a = T4: -40 ... +85 °C (-40 ... +185 °F)
- Entity parameters	U_i = 30 V, I_i = 100 mA, P_i = 750 mW, R_i = 300 Ω , L_i = 400 µH, C_i = 6 nF
• Marking (NI/n)	CL I, DIV2, GP ABCD T4/T6 CL II, III, DIV2, GP FG T4/T6 Ex nA IIC T4/T6 AEx nA IIC T4/T6 Ex nL IIC T4/T6 AEx nL IIC T4/T6
- Permissible Ambient Temperature	T_a = T4: -40 ... +85 °C (-40 ... +185 °F) T_a = T6: -40 ... +60 °C (-40 ... +140 °F)
- NI/nA parameters	According to "control drawing": A5E02189134N, U_m = 45 V
- nL parameters	According to "control drawing": A5E02189134N, U_i = 45 V, I_i = 100 mA, L_i = 400 µH, C_i = 6 nF

Explosion protection for China (acc. to NEPSI)	
• Intrinsic safety "i"	GYJ111111X
- Marking	Ex ia/ib IIB/IIC T4
- Permissible ambient temperature	40 ... +85 °C (-40 ... +185 °F)
- Connection	To certified intrinsically-safe circuits with maximum values: U_i = 30 V I_i = 100 mA, P_i = 750 mW
- Effective internal inductance	L_i = 400 mH
- Effective inner capacitance	C_i = 6 nF
• Explosion-proof "d"	GYJ111112
- Marking	Ex dia IIC T4/T6
- Permissible ambient temperature	-40 ... +85 °C (-40 ... +185 °F) temperature class T4; -40 ... +60 °C (-40 ... +140 °F) temperature class T6
- Connection	To circuits with values: U_m = DC 10.5 ... 45 V
• Dust explosion protection for zone 21/22	GYJ111112
- Marking	DIP A21 TA,T120 °C IP68 D21
- Connection	To circuits with values: U_m = DC 10.5 ... 45 V
• Type of protection "n" (zone 2)	GYJ111111X
- Marking	Ex nL IIB/IIC T4/T6 Ex nA II T4/T6
- Connection	U_i = 45 V DC
- Effective internal inductance	L_i = 400 mH
- Effective inner capacitance	C_i = 6 nF

1) Only relevant for the pressure transmitter. The temperature error of the remote seal must calculated separately.
2) If the Type "D" measuring cell is used, the error should be increased by a factor of 5. This error can be reduced to 0 by a means of a zero adjustment.
3) This value may be increased if the process connection is sufficiently insulated.

HART communication	
Load with connection of	
• HART Communicator	R_B = 230 ... 1100 Ω
• HART modem	R_B = 230 ... 500 Ω
Cable	2 wire shielded: ≤ 3.0 km (1.86 miles), multiwire shielded: ≤ 1.5 km (0.93 miles)
Protocol	HART Version 6.0
PC/laptop requirements	IBM compatible, RAM > 32 MByte, hard disk > 70 MByte, depending on modem type: RS 232-interface or USB connection, VGA graphics
Software for computer	SIMATIC PDM 6.0

Selection and Ordering data		Article No.	Order code
Pressure transmitters for level, SITRANS P500 HART		↗ 7MF56 ■■ - ■■■■ 0 - ■■■■	■■■
↗ Click on the Article No. for the online configuration in the PIA Life Cycle Portal.			
Enclosure	**Thread for cable gland[9)]**		
Die-cast aluminum, dual compartment	M20x1.5	0	
Die-cast aluminum, dual compartment	½-14 NPT	1	
Stainless steel precision casting, two-chamber housing	M20x1.5	2	
Stainless steel precision casting, two-chamber housing	½-14 NPT	3	
Output			
4 ... 20 mA, HART		3	
Measuring cell filling	**Measuring cell cleaning**		
Silicone oil	normal	1	
Measuring span (min. ... max.)			
1.25 ... 250 mbar	(0.5 ... 100 inH_2O)	D	
6.25 ... 1250 mbar	(2.5 ... 500 inH_2O)	E	
31.25 ... 6250 mbar	(12.54 ... 2509 inH_2O)	F	
Wetted parts of the low-pressure side (stainless steel process flanges)			
Seal diaphragm	Process connection		
Stainless steel 1.4404/316L	Stainless steel 1.4404/316L	A	
Hastelloy C276	Stainless steel 1.4404/316L	B	
Monel 400	Stainless steel 1.4404/316L	C	
Process connection of low-pressure side			
Female thread ¼-18 NPT			
• Sealing screw opposite process connection			
- Mounting thread 7/16 - 20 UNF according to IEC 61518/DIN EN 61518		0	
- Mounting thread M10 to DIN 19213		1	
• Vent on side of process flange			
- Mounting thread 7/16 - 20 UNF according to IEC 61518/DIN EN 61518		4	
- Mounting thread M10 to DIN 19213		5	
Wetted parts materials (high-pressure side)			
Stainless steel 1.4404/316L		0	
Hastelloy C276 mat. no. 2.4819		1	
Monel 400 mat. no. 2.4360		2	
Tantalum		3	
PFA coated on stainless steel		4	
PTFE on stainless steel 1.4404/316L (not in combination with an extension)		6	A
Other version Add Order code and plain text: Material: ... ; Extension length: ...		9	Y N1Y
Process connection on high-pressure side: Extension length			
None			A
50 mm (1.97 inch)			B
100 mm (3.94 inch)			C
150 mm (5.90 inch)			D
200 mm (7.87 inch)			E
Other version: See option "9" for "Wetted parts materials"			
Process connection on high-pressure side: Nominal diameter/Nominal pressure			
DN 50, PN 40[6)]			B
DN 80, PN 40			D
DN 100, PN 16			G
DN 100, PN 40			H
2", class 150[6)]			L
2", class 300[6)]			M
3", class 150			Q
3", class 300			R
4", class 150			T
4", class 300			U
Other version, add Order code and plain text: Nominal diameter: ... ; Nominal pressure: ...			Z Q1Y

Selection and Ordering data	Article No.	Order code
Pressure transmitters for level, SITRANS P500 HART	**7MF56 ■■ - ■■■■ 0 -**	**■■■**
Process connection on high-pressure side: Filling liquid		
Silicone oil M5	**0**	
Silicone oil M50	**1**	
High-temperature oil	**2**	
Halocarbon (for oxygen measurement)	**3**	
FDA compliant oil	**4**	
Other version, add Order code and plain text: Filling liquid: ...	**9**	**R1Y**

for level

Selection and Ordering data	Order code
Further designs Add "**-Z**" to Article No. and specify Order code.	
Display (Standard: no display, cover closed)	
With display and blanking cover	**A10**
With display and glass cover	**A11**
Special version: cover/casing	
Two coats of lacquer on casing, cover (PU on epoxy)	**A20**
Electrical connection and cable entry (Standard: no cable gland, only dust protection caps)	
Cable gland made of plastic (IP66/68)[4]	**A50**
Cable glands made of metal (IP66/68)	**A51**
Cable glands made of stainless steel (IP66/68)	**A52**
Device plug M12 without cable socket (IP66/67)[4]	**A60**
Device plug M12, cable socket (IP66/67)[4]	**A61**
Device plug Han 7D, plastic, straight (with cable socket) (IP65)[4]	**A71**
Device plug Han 7D, plastic, angled (with cable socket) (IP65)[4]	**A72**
Device plug Han 7D, metal enclosure, straight (with cable socket) (IP65)[4]	**A73**
Device plug Han 7D, metal enclosure, angled (with cable socket) (IP65)[4]	**A74**
Device plug Han 8D, plastic, straight (with cable socket) (IP65)[4][7]	**A75**
Device plug Han 8D, plastic, angled (with cable socket) (IP65)[4][7]	**A76**
Device plug Han 8D, metal enclosure, straight (with cable socket) (IP65)[4][7]	**A77**
Device plug Han 8D, metal enclosure, angled (with cable socket) (IP65)[4][7]	**A78**
PG 13.5 adapters[4]	**A82**
Language for labels, quick-start guide and menu language default[8] (instead of English as standard)	
German	**B10**
French	**B12**
Spanish	**B13**
Italian	**B14**
Chinese	**B15**
Russian	**B16**
Japanese	**B17**
English with units: psi/inH_2O	**B21**
Special version: Supplementary menu languages (Standard: English, German, French, Spanish, Italian)	
Asia language package (in addition: Chinese, Japanese, Russian)	**B80**
Certificates (available online for downloading)[1]	
Quality Inspection Certificate (5-point characteristic curve test) according to IEC 60770-2[2]	**C11**
Acceptance test certificate according to EN 10204-3.1[3]	**C12**
Acceptance certificate (EN 10204-3.1); PMI test of parts in contact with medium	**C15**
Functional Safety (SIL2) Devices suitable for use according to IEC 61508 and IEC 61511. Includes SIL conformity declaration	**C20**
Degree of protection approvals: Ex ia/ib (intrinsic safety)	
Ex ia/ib protection (ATEX) (T4)	**E00**
Ex IS protection (FM) (T4)	**E01**
Ex IS protection ($_C$CSA$_{US}$) (T4)	**E02**
Ex ia/ib protection (NEPSI) (T4)	**E06**

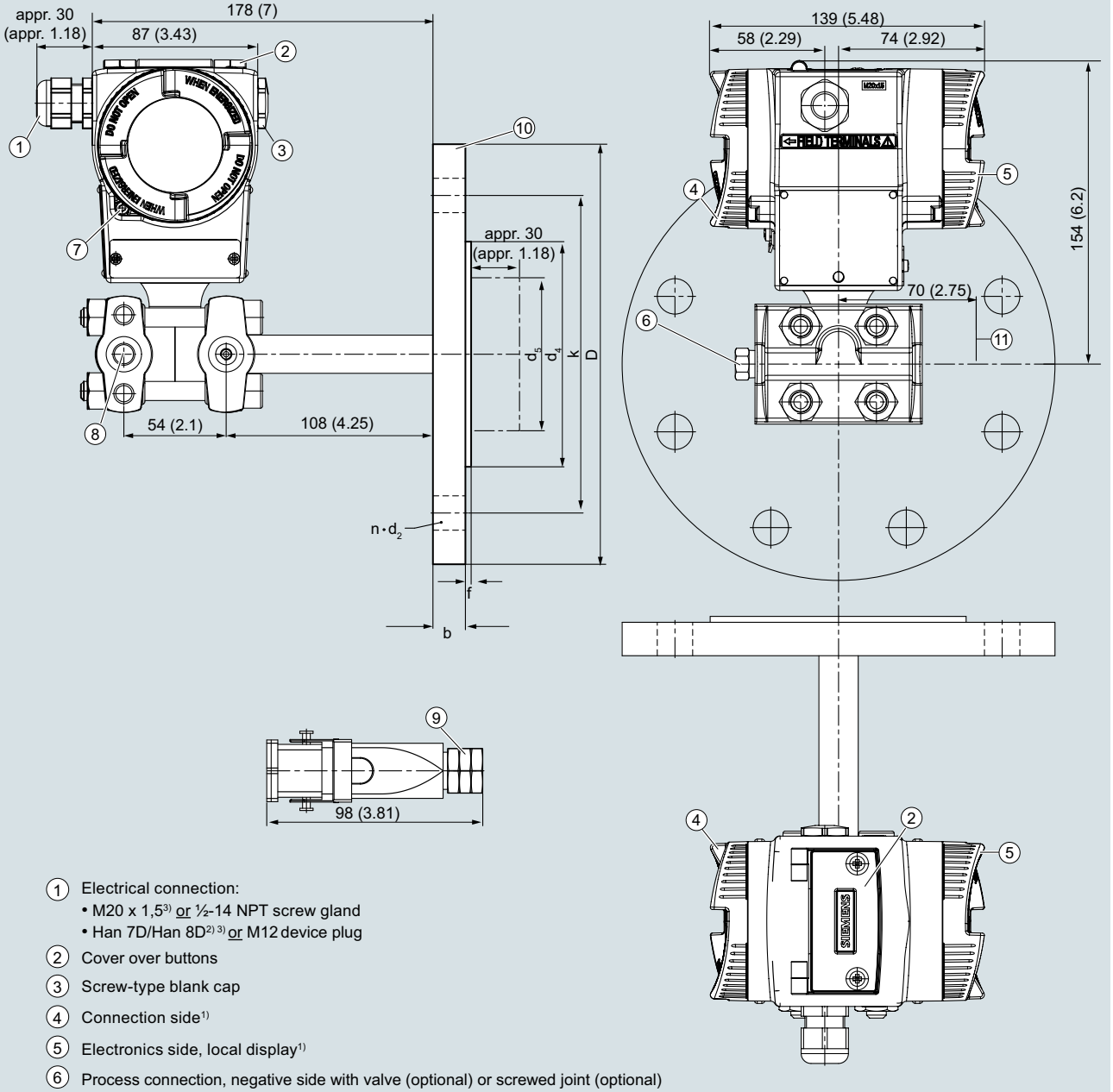
Selection and Ordering data	Order code
Further designs Add "**-Z**" to Article No. and specify Order code.	
Degree of protection approvals: Ex d (flameproof)	
Ex d explosion-proof (ATEX)(T4/T6)	**E20**
Ex XP explosion-proof and DIP (FM)(T4/T6)	**E21**
Ex XP explosion-proof and DIP ($_C$CSA$_{US}$)(T4/T6)	**E22**
Ex d explosion-proof (NEPSI)(T4/T6)	**E26**
Degree of protection approvals: n/NI	
Zone 2 (nA, nL, ic) (ATEX) (T4/T6)	**E40**
Div2 NI, Div2 NI-field wiring (FM) (T4/T6)	**E41**
Zone 2 (nA, nL), Div2 NI ($_C$CSA$_{US}$) (T4/T6)	**E42**
Zone 2 (nA, nL) (NEPSI) (T4/T6)	**E46**
Degree of protection approvals: Zone 20/21/22	
Use in Zone 21/22 (Ex tD) (ATEX) Ex tb	**E60**
Use in Zone 20/21/22 (Ex iaD) (ATEX) Ex ta	**E61**
Use in Zone (Ex DIP) (ATEX) (NEPSI)	**E66**
Degree of protection approvals: Combinations	
IS protection and XP and DIP (FM)	**E71**
IS protection and XP and DIP ($_C$CSA$_{US}$)	**E72**
IS protection and XP and DIP (FM/$_C$CSA$_{US}$)	**E73**
Supplementary approvals / degree of protection	
Ex-protection Ex ia according to EAC Ex (Russia)	**E80**
Ex-protection Ex d according to EAC Ex (Russia)	**E81**
Dual Seal approval[5]	**E85**
Export approval Korea	**E86**
Special process connection versions (diff. pressure)	
Swap process connection: high-pressure side at front	**L33**
Mosquito protection	
4 pcs. for ¼-18 NPT thread	**L36**
Process flanges, O-rings, special material **Standard: Viton (FKM (FPM)**	
Process connection sealing rings made of FFPM (Kalrez)	**L62**
Process connection sealing rings made of NBR	**L63**
Process connection sealing rings made of graphite	**L64**
Drain/Vent valve (1 set = 2 units)	
2 ventilation valves ¼- 18 NPT, in material of process flange)	**L80**
Vacuum-proof design	
Vacuum service	**V04**
Spark arrester For mounting on zone 0 (including documentation)	**V05**

1) Enclosed in print or as DVD: see page 1/320.
2) When also ordering the quality inspection certificate (factory calibration) according to IEC 60770-2 for transmitters with mounted diaphragm seals: Order this certificate only together with the remote seals. The measuring accuracy of the total combination is certified here.
3) When also ordering the acceptance test certificate according to EN 10204-3.1 for transmitters with mounted diaphragm seals: Order this certificate as well in addition to the respective remote seals.
4) Not together with types of protection "Explosion-proof", "Ex nA" and "Intrinsic safety and explosion-proof"
5) Only in conjunction with FM and/or $_C$CSA$_{US}$
6) Not recommended for Measuring span "D"
7) The device plug Han 8D is identical with the former Han 8U versio.
8) For option B15, B16 and B17 the menu language default is English. Otherwise the Option B80 (Asia language package) is necessary.
9) Cable glands must be ordered separately from "Further designs" (add "-Z" to Article No. and specify order code).

Selection and ordering data	Order code
Additional data Please add "**-Z**" to Article No. and specify Order code(s) and plain text.	
Measuring range to be set Specify in plain text:	
Linear characteristic curve (max. 5 characters): Y01: ... up to ... mbar, kPa, MPa, psi	**Y01**
Measuring point number and measuring point identifier (only standard ASCII character set) Specify in plain text:	
Measuring point number (TAG No.), max. 16 characters Y15:	**Y15**
Measuring point text (max. 27 char.) Y16:	**Y16**
Entry of HART address (TAG), max. 32 characters Y17:	**Y17**
Setting of pressure indication in pressure units Specify in plain text (standard setting: mbar) Y21: bar, kPa, MPa, psi, ...	**Y21**
Note: The following pressure units are selectable: bar, mbar, mm H_2O*), in H_2O*), ftH_2O*), mmHG, inHG, psi, Pa, kPa, MPa, g/cm^2, kg/cm^2, Torr, ATM, % or mA *) Reference temperature 20 °C	
Setting of pressure indication in non-pressure units[1)] Specify in plain text: Y22: ... up to ... l/min, m^3/h, m, USgpm, ... (specification of measuring range in pressure units "Y01" is essential, unit with max. 5 characters)	**Y22 +** **Y01**
Customer-specific settings	
Damping setting (range: 0 ... 100 s) (Standard setting: 2 s)	**Y30**

[1)] Preset values can only be changed over SIMATIC PDM.

Dimensional drawings



1. Electrical connection:
   - M20 x 1,5[3] or ½-14 NPT screw gland
   - Han 7D/Han 8D[2) 3)] or M12 device plug
2. Cover over buttons
3. Screw-type blank cap
4. Connection side[1)]
5. Electronics side, local display[1)]
6. Process connection, negative side with valve (optional) or screwed joint (optional)
7. Screw lid - safety bracket
8. Process connection: negative side ¼-18 NPT (IEC 61518)
9. Electrical connection:
   - Han 7D/Han 8D device plug[2) 3)]
10. Mounting flange as per EN 1092-1 or ASME B16.5
11. Space for rotation of enclosure

1) In addition, allow approx. 20 mm (0.79 inch) for the thread length
2) Not with "flameproof enclosure" type of protection
3) Not with type of protection "FM + CSA" [is + XP]"

SITRANS P pressure transmitter for filling level, P500 series, measurements in mm (inch)

Connection to EN 1092-1

Nominal diameter	Nominal pressure	b	D	d	d_2	d_4	d_5	d_M	f	k	n	L
		mm	mm	mm	mm	mm	mm	mm	mm	mm		mm
DN50	PN 40	20	165	61	18	102	48.3	45[1)]	2	125	4	0, 50, 100, 150 or 200
DN 80	PN 40	24	200	90	18	138	76	72[2)]	2	160	8	
DN 100	PN 16	20	220	115	18	158	94	89	2	180	8	
	PN 40	24	235	115	22	162	94	89	2	190	8	

Connection to ASME B16.5

Nominal diameter	Nominal pressure	b	D	d_2	d_4	d_5	d_M	f	k	n	L
	lb/sq.in.	inch (mm)	inch (mm)	inch (mm)	inch (mm)	inch (mm)	inch (mm)	inch (mm)	inch (mm)		inch (mm)
2 inch	class 150	0.77 (19.5)	5.91 (150)	0.75 (19.0)	3.62 (92)	1.9 (48.3)	1.77 (45)[1)]	0.079 (2.0)	4.75 (120.7)	4	0, 2, 3.94, 5.94 or 7.87 (0, 50, 100, 150 or 200)
	class 300	0.89 (22.7)	6.49 (165)	0.75 (19.0)	3.62 (92)	1.9 (48.3)	1.77 (45)[1)]	0.079 (2.0)	5.0 (127)	8	
3 inch	class 150	0.96 (24.3)	7.5 (190.5)	0.75 (19.0)	5 (127)	3.0 (76)	2.83 (72)[2)]	0.079 (2.0)	6 (152.4)	4	
	class 300	1.14 (29.0)	8.27 (210)	0.87 (22.2)	5 (127)	3.0 (76)	2.83 (72)[2)]	0.079 (2.0)	6.69 (168.3)	8	
4 inch	class 150	0.96 (24.3)	9.06 (230)	0.75 (19.0)	6.19 (157.2)	3.69 (94)	3.5 (89)	0.079 (2.0)	7.5 (190.5)	8	
	class 300	1.27 (32.2)	10.04 (255)	0.87 (22.2)	6.19 (157.2)	3.69 (94)	3.5 (89)	0.079 (2.0)	7.88 (200)	8	

Explanations of tables:

d: Internal diameter of gasket to DIN 2690

d_M: Effective diaphragm diameter

d_5: Diameter of extension

f: Milling edge

L: Extension length

1) 59 mm = 2.32 inch with tube length L=0.

2) 89 mm = 3½ inch with tube length L=0.