

Technical Datasheet



D Series

SMART Compact Differential Pressure Transmitter

Model: D33

Key Features

- Accuracy +/-0.1%.
- 4-20mA output signal.
- Fully HART ® compatible.
- Static pressure limit up to 420 bar.
- ATEX certified (Intrinsic Safety).
- Gold plated diaphragm option.
- Hastelloy C276 wetted parts option.

Series Overview

- The D-Series pressure, differential pressure and temperature transmitters offer customers cost-effective and accurate solutions to their individual process requirements.
- Available with a wide range of process connections and easily configurable via the D-Soft software, the D-Series can be used for a variety of applications when pressure, differential pressure, temperature, level or flow measurements are needed.

Other products in the series include:

- D23 SMART Pressure Transmitter



Product applications

The D33 D-Series is suitable for a wide range of applications for measuring:

- Differential Pressure
- Level
- Flow

The choice of models available ensures that the D33 D-Series is suitable for use in:

- Corrosive atmospheres
- Resistant to chemical attack



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+44 (0) 1252 729140

D-Series
Model: D33

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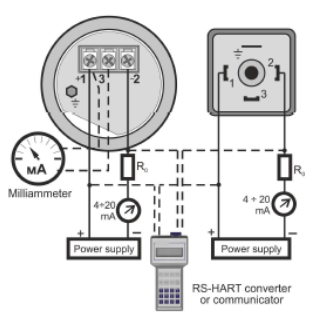
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$$R [\Omega] \leq \frac{U_{SUP} [V] - 7.5V}{0.0225A}$$



Technical Data (cont.)

Materials

Wetted parts: type P, PN process connection: 316Lss
 type P(H) process connection: 316Lss or Hastelloy C276
 type C process connection: 316Lss

Diaphragms: 316Lss, Hastelloy C 276, Au

Casing : 304ss
 Option : 316ss

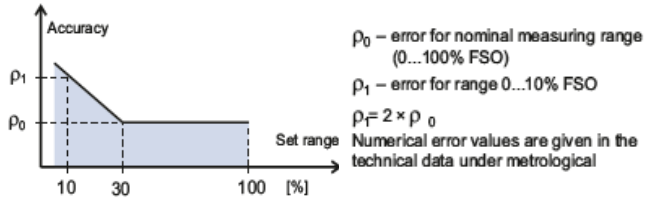
Operating conditions

Operating temperature range (ambient temp.) -25...85°C
 Ex ia -25...80°C

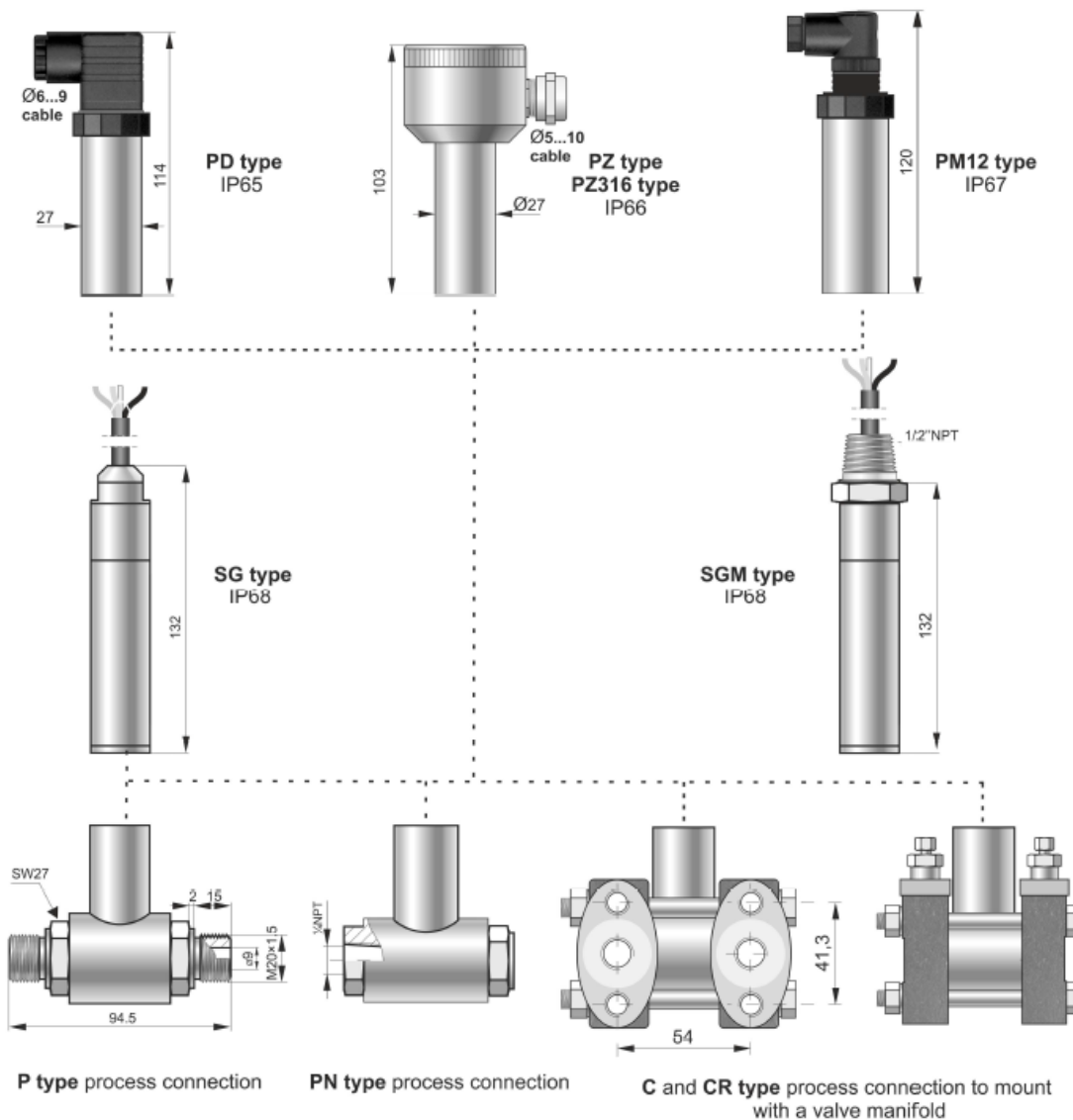
Medium temperature range -25...120°C
 Over 120°C - measurement with the use of impulse line or diaphragm seals

CAUTION: The medium must not be allowed to freeze in the impulse line or close to the process connection of the transmitter

Accuracy depending on the set range



Dimensions



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How to Order

Model	Code	Description	
D33		Smart differential pressure transmitter	
Versions, certificates* more than one option is available	/Exia /320 bar /420 bar	II 1/2G Ex ia IIC T4/T5/T6 Ga/Gb II 1 D Ex ia IIIC T105°C Da I M1 Ex ia I Ma Static pressure 320 bar, only for C process connection Static pressure 420 bar, only for C process connection	
Nominal measuring range		Range	Min. set range
	/0÷70 bar	0÷70 bar (0÷7000 kPa)	7 bar (700 kPa)
	/0÷16 bar	0÷16 bar (0÷1600 kPa)	1,6 bar (160 kPa)
	/0÷2,5 bar	0÷2,5 bar (0÷250 kPa)	0,2 bar (20 kPa)
	/0÷1 bar	0÷1 bar (0÷100 kPa)	50 mbar (5 kPa)
	/0÷0.25 bar	0÷0.25 bar (0÷25 kPa)	10 mbar (1 kPa)
	/-0.5÷+0.5 bar	-0.5÷+0,5 bar (-50÷+50 kPa)	0,1 bar (10 kPa)
	/-0,1÷+0,1 bar	-1÷+0,1 bar (-10÷+10 kPa)	10 mbar (1 kPa)
	/-5÷70 mbar	-5÷70 mbar (-0,5÷+7 kPa)	4 mbar (0,4 kPa)
	/-25÷25 mbar	-25÷25 mbar (-2,5÷+2,5 kPa)	2 mbar (0,2 kPa)
Measuring set range	/...+... (required units)	Calibrated range in relation to 4mA and 20mA output	
Casing, electrical connection	/PD..... /PZ..... /PZ316..... /PM12..... /SG..... /SGM.....	Housing IP65 with DIN43650 connector 304SS housing, IP66, packing gland M20x1,5 316SS housing, IP66, packing gland M20x1,5 Housing IP67 with thread M12x1 and connector 316LSS housing, IP68, cable electrical connection (3 m of cable in standard) 316LSS housing, IP68, cable electrical connection (3 m of cable in standard)	
Process connections	/C /CR /P /PN /code of diaphragm seal.....	Thread 1/4"NPT F on the cover flanges. Cover flanges material SS316. Allows mounting with a valve manifold. Process connection of cover flange: M10 (option /C(7/16) - 7/16"UNF acc. to IEC 61518) C-type process connection rotated 90° Thread M20x1,5 (male) Thread 1/4"NPT (female) Diaphragm seal (see chapter of diaphragm seals) mounted on Hi side of transmitter, Lo side 1/4"NPT Female	
Material of diaphragms (refers only to C, CR, P, PN process connection)	(without marking)..... /(H)..... /(Au).....	Diaphragms material SS316L Diaphragms material Hastelloy C276 (/P and /PN – all wetted parts in Hastelloy C276 on request) Gold plated diaphragms	
Gasket (refers only to C, CR process connection)	(without marking)..... /NBR..... /PTFE.....	FPM Viton NBR (for oxygen service) PTFE	
Accessories	/C-2"..... /C-2"(SS)..... /FI25..... /RedSpaw P..... /RedSpaw C..... /Red d/P 1/2".....	Mounting bracket for 2" pipe (to C process conn.), mat. zincd steel Mounting bracket for 2" pipe (to C process conn.), mat. Stainless Steel Mounting bracket for 2" pipe (to P process conn.), mat. Stainless Steel Connector to weld impulse pipes dia. 12 and 14 mm, material 15HM(SO) or SS316(S). Only process connection P type Connector to weld impulse pipes dia. 12 and 14 mm, material 15HM. Only process connection C type. Adapter for differential pressure transmitters with C type process connection, output thread 1/2NPT F. Material SS316L	
Other specification	/	Description of required parameters	