

143DP Intelligent d/p Transmitter

- Communication HART or FOXCOM
- Conventional operation with local keys
- Easy adaptation to the measuring point without calibration at the workshop
- Backdocumentation of measuring point
- Continuous self-diagnostics
- Configurable safety value
- Software lock for keys and reconfiguration
- Simulation of analog output for loop-check
- Local display in %, mA or physical units
- Signal noise suppression by Smart Smoothing
- Linear, square root or customized characteristic
- Process temperature from -50 °C to +120 °C (-58 °F to +248 °F)
- Materials for use with aggressive media
- Micro sintermetall sensor technology
- Separate mounting of sensor and amplifier with remote amplifier mounting kit



Intelligent transmitter for differential pressure and flow of liquids, vapours and gases on vessels, pipes and hydraulic systems. Easy remote configuration and supervision with PC or Universal Handterminal. The devices also can be operated conventionally using the local keys. Total I/A series measurement integration is possible thru FOXCOM communication protocol. The transmitters are approved for use in hazardous areas.

Measuring Ranges, Overload Resistance

Span Code	Measuring span		Measuring limits	Overload Limit
	min.	max.		
-A	3.2 mbar 1.28 in H ₂ O	64 mbar 25.7 in H ₂ O	-64 ... 64 mbar -25.7 ... 25.7 in H ₂ O	up to static pressure rating
-B	32 mbar 12.8 in H ₂ O	640 mbar 258 in H ₂ O	-640 ... 640 mbar -258 ... 258 in H ₂ O	
-C	200 mbar 80.3 in H ₂ O	4 000 mbar 1 606 in H ₂ O	-4 000 ... 4 000 mbar -1 606 ... 1 606 in H ₂ O	

Output

HART and FOXCOM Analog Mode

- Lower range value. continuously adjustable within the measuring limits
- Turn-down 1:1 to 1:50
- Signal range 4 to 20 mA / 20 to 4 mA
- Operating range 3.8 to 20.5 mA
- Permitted load. $R_{Lmax} = (U_S - 12V) / 0.023A$
(U_S = Supply voltage)

Accuracy

- Analog output. $\pm 0.1 \%$
- Digital output $\pm 0.075 \%$

Transfer function linear or square root with low flow cut-off

FOXCOM Digital Mode

Output current const. approx. 12 mA

Operation condition effects

- Ambient temperature -10 ... +70 °C (14 ... 158 °F)
- Zero $\leq 0.03 \%$ / 10 K
- Span $\pm 0.07 \%$ / 10 K
- Total

$$\left(0.03 \frac{\text{max. sp.}}{\text{adjusted sp.}} \pm 0.07 \frac{\text{measured value}}{\text{adjusted span}} \right) \% / 10K$$
 (sp. = measuring span)
 $< -10 \text{ °C} / > +70 \text{ °C}$ twice the values
- Process temperature $\leq 0.1 \%$ / 10 K
- Mounting position. adjustable
- Mech. vibrations
 up to 500 Hz and 2 g. $\leq 0.2 \%$
- Static pressure. $\leq 0.2 \%$ / 100 bar

Model Codes 143DP (continued)

Electrical classification							
CSA intrinsically safe (h)	CAA						
CSA explosionproof (h)	CDZ						
CENELEC EEx ia IIC T4	EA4						
CENELEC EEx d IIB (h).	EDZ						
FM intrinsically safe (h)	FAA						
FM explosionproof (h)	FDZ						
RUSSIAN intrinsically safe	GAA						
FM nonincendive (h)	NFM						
Ex N IIC, BS 6941	NSP						
without electrical classification	ZZZ						
Communication							
FOXCOM adjustment analog (4-20mA)(adjustment digital with option -T)	F						
HART	H						
Options							
Certificate EN 10204-2.1 (DIN 50 049-2.1)	-1						
Certificate EN 10204-2.3 (DIN 50 049-2.3)	-2						
Certificate EN 10204-3.1B (DIN 50 049-3.1B)	-3						
Certificate comply with NACE Standard MR-01-75 (with diaphragm material Hastelloy C only or ECEPSE002T)	-6						
LCD Indicator	-A						
Horizontal flange mounting position	-B						
Remote Amplifier Mounting Kit (10 m), mounted (g)	-C						
National Certificate Zone 0, IIA, IIB (with el. class. EA4) (for pressure seals in Zone 0 see EMP9001/2).	-E						
Tag.No. Labeling stainless steel label fixed on amplifier	-F						
National Certificate GOST Metrological Certificate	-G						
Housing 316L, without external push buttons (with el. class. EA4, NSP, ZZZ only)	-H						
female thread for side mounted drains/vents	-K						
Tag.No. Labeling stainless steel label fixed with wire	-L						
Oxygen service cleaned (not available with fill fluid code 1).	-O						
Housing Al, without external push buttons	-P						
Remote Amplifier Mounting Kit (3 m), mounted (g)	-R						
Tag.No. Labeling stamped with weather resistant color.	-S						
Custom Configuration	-T						
National Certificate Overfill protection per VbF (with opt.-E only)	-U						
Overfill protection per WHG (with el. class. EA4, NSP, ZZZ only)	-V						
National Certificate dust-ignitionproof per Zone 10 (with EA4 only)(with Communication Code H only)	-X						
Footnotes							
(c) Process connection flanges, manifold valves and other accessories see EMP9003/4							
(d) Pressure Seals S990 see EMP9001/2							
(e) With FPM O-ring (Viton) only							
(f) Pending							
(g) Not with FDZ/CDZ or EDZ							
(h) With cable entry N1 or M1 only							
(i) For static pressure rating code 1 only							
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