

Datasheet OSF5400

Differential pressure transmitter HART OSF5400

Non-Intrusive Magnetic Controls
 with Three Push-buttons Allow Field Calibration



Backlight LCD Display
 for the Dark Environment

Housing can be rotated by 360°

Characteristics

- Field Differential Pressure transmitter MSP80D with stainless steel sensor is suitable for a wide variety of liquids, gases and vapors.
- Nominal Pressure Ranges:
 From -0.075...0.075pa
 Up to -70bar...70bar
- Max. Turndown:100:1
- LCD Display with backlight
- Housing can be rotated through 360°

Application

- For application in the process engineering
 Suit for liquids, vapour, or gases
 Preferred areas of use are: Process engineering
 Chemical industry

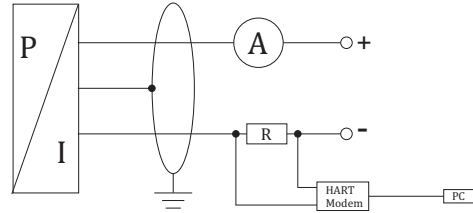
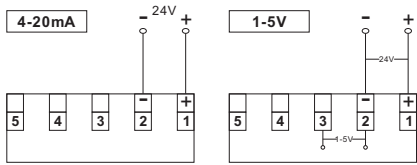


Technical data

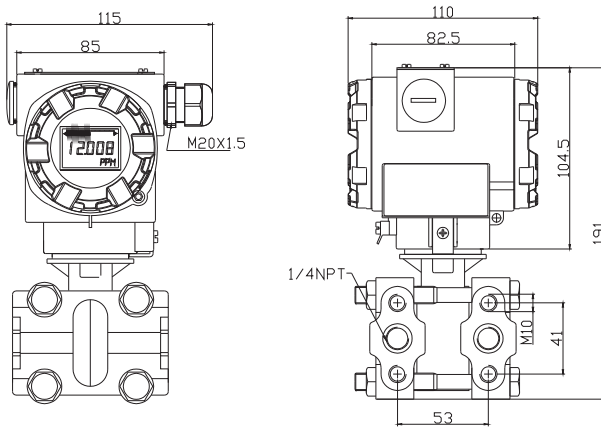
Measuring range					
Code	Nominal pressure	Measurement limit		Overload	Min.operating pressure
		Lower (LRL)	Upper (URL)		
3S	7.5kPa	-7.5kPa	7.5kPa	13MPa	0.12kPa
4S	40kPa	-40kPa	40kPa	13MPa	0.04kPa
5S	200kPa	-200kPa	200kPa	13MPa	2kPa
6S	700kPa	-700kPa	700kPa	13MPa	7kPa
7S	2100kPa	-2100kPa	2100kPa	13MPa	21kPa
8S	7000kPa	-7000kPa	7000kPa	125%	70kPa
Power supply (polarity protected)					
Supply voltage			10.5...45 V DC		
Input					
2-wire-system			4...20mA with superimposed signal for HART protocol digital communication		
Signal range- 4 to 20 mA			3.8mA...20.8mA		
Signal on alarm			3.8mA/Option: 22.8mA/Others on request		

Electrical protection		
Isolation resistance	> 250MΩ	
Insulation resistance	Permanent	
Reverse polarity protection	No damage, and no function	
Overvoltage protection	500V	
Intrinsic safety	Ex ia CT4~T6	
Performance		
Accuracy	3S	0.1% accuracy for range trundown 5:1 (0.1+0.01XURL/Span) between 1/5 and 1/50 of measuring
	4S...7S	0.075% accuracy for range trundown 10:1 (0.075+0.00751XURL/Span) between 1/10 and 1/100 of measuring
		8S
	Power supply effect	Negligible
Static pressure effect	<0.01%URL/g when 200Hz	
Vibration effect	±0.05%/10K	
Installation position effect	Zero: 0.1%/7MPa; Span: 0.2%/7MPa	
Thermal effect	Offset can be set to zero	
Static pressure	0.1%URL /year	
Stability	5s	
Cycle time/Updater time	0 to 100s, in 0.1s-step	
Switch on delay	≤200ms (without consideration of electronic damping)	
Damping	0 bis 2%	
Response time	0 bis 160μA	
Self stability configuration	30bar...130bar	
Filter configured	0.25s	
Environment		
Humidity	5...98%	
Ambient and operation	-40 to +85 °C (without display), -20 to +70 °C(with display)	
Storage Temperature	-40 to +85 °C	
Ingress protection	IP 65	
Electromagnetic coMPatibility(EMC)	Interference immunity and interference emission according to IEC 61326-1 : 2006.	
Physical specifications		
Diaphragms	Stainless steel 316L, Others on request	
Flange	Stainless steel 316L	
Drain/vent valve	Stainless steel 316L	
Media wetted o-rings	FKM, others on request	
Electronic housing	Die-cast aluminium	
Flange screws, identification plate	Carbon steel with Zinc coating	
Mounting brackets (Option)	Carbon steel with Zinc coating or with painting	
Sight glass	Laminated safety glass	
Filling fluid	Silicon oil/Others on request	
Others		
Display	Visible range 32.5 x 22.5mm; 5-digit 7-segment main display, digit height 8mm, 8-digit 14 segment additional display, digit height 5mm;	
	52 bars meter with 2% resolution	
Display Range	-19999-99999	
Weight	Standard model approx. 3.8kg	

Electrical Connection

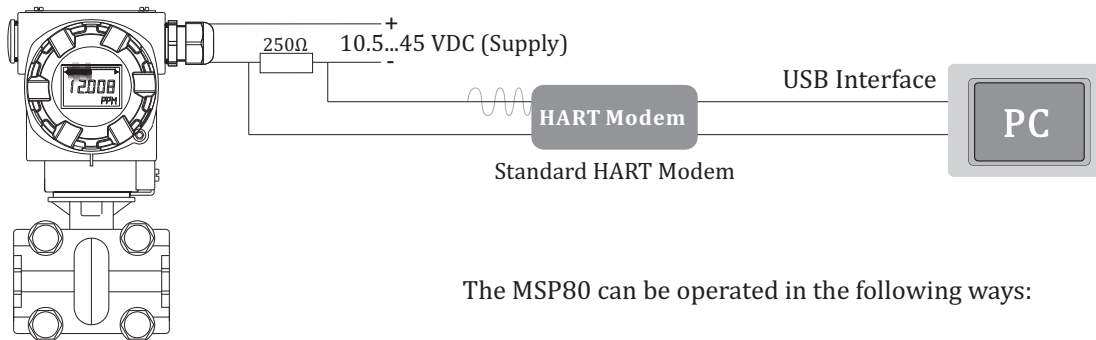


Dimensions



Dimensions in mm

Operation



The MSP80 can be operated in the following ways:

- Using the three buttons on device for setting of parameters.
- Operating remotely using the HART®-protocol.
e.g. via HART Modem and PC-Software or via a HART Handheld.

Ordering code												
Type	OSF5400											
Communication Type												
	HART	H										
Meas. Range [bar]												
	-0.075...0.075		3	S								
	-0.4...0.4		4	S								
	-2...2		5	S								
	-7...7		6	S								
	-21...21		7	S								
	-70...70		8	S								
	Others on request		9	9								
Fill Fluid												
	Silicone oil, standard cleaning		0	1								
	Silicone oil, degrease cleaning		0	2								
	Fluorocarbonoil, degrease cleaning		0	3								
Process connection												
	None, 1/4 NPT female on the voer flanges		1	0								
	1/2-14, female, two electrical connections		1	1								
	Others on request		9	9								
Seal												
	FPM						0	1				
	Others on request						9	9				
Wetted Parts Material												
	SUS316 SST with SUS316 SST Isolating diaphragm						0	1				
	SUS316 SST with Hastelloy C276 Isolating diaphragm						0	2				
	Hastelloy C276 with Hastelloy C276 Isolating diaphragm						0	3				
Electrical connection												
	M20X1.5 DIN								0	1		
	Others on request								9	9		
Mounting bracket												
	Horizontal bracket										H	
	Vertical bracket										V	
	None										O	
LCD Display												
	None											N
	With Display											D
Signal on alarm												
	Factory preset 3.8 or 22.8mA											0 0
	Others on request											9 9
Other Options												
												9 9

Typical model number: OSF5400-H-3S-01-10-01-01-01-OD-00