

Datasheet

Pressure Transmitter LP100 - Display

Introduction

Equipped with display, LP100 is convenient to use and view the measured value. Rotatable display, compact design makes it good for limited mount space. Analog and switching output at the same time.



Characteristics

330° rotatable display

Measuring range -1...400 bar / -14.5...5800 psi

On-site setting

High repeatability

4...20mA + 2 switching output

Integrated / remote transmitter

Applications

Applicable to water / gas

Hydraulic and lubrication system

Pump run-dry protection

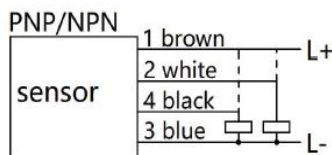
Leaking monitor

Pressure control system

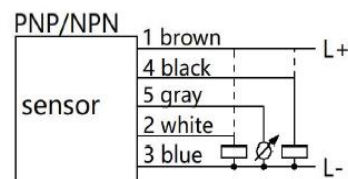
Specifications

Measuring range	See order code for details
Overpressure	See technical data below for details
Switching output	Calibrating span: 0.5%...100% of full span
	Accuracy: 0.5% of full span
	Number of switches: 1 or 2 selectable
	Output: PNP / NPN, NC / NO programmable.
	Rated current: ≤300mA
	Response time: ≤30ms
Analog output	Output type: 4...20mA analog output
	Load resistance: ≤500Ω
	Accuracy: 0.5% of full span
Repeatability	0.5% of full span
Display	Red 9mm 4-LED, display range: -999...9999
Power supply	24 VDC
Wiring protection	Reverse polarity, Overvoltage and Short-circuit
Ambient temperature	-20...80°C / -4...176°F
Medium temperature	-25...85°C / -13...185°F
Storage temperature	-40...85°C / -40...185°F
Temp. effect	< ±0.03%F.S./K
Protection class	IP65
Process connection	Stainless steel + NBR sealing
Housing material	Zinc Alloy
Electrical connection	M12x1 4-pin plug
	M12x1 5-pin plug (for 1 analog output + 2 switching output)

Wiring



2 switching output



2 switching output +



1 analog output



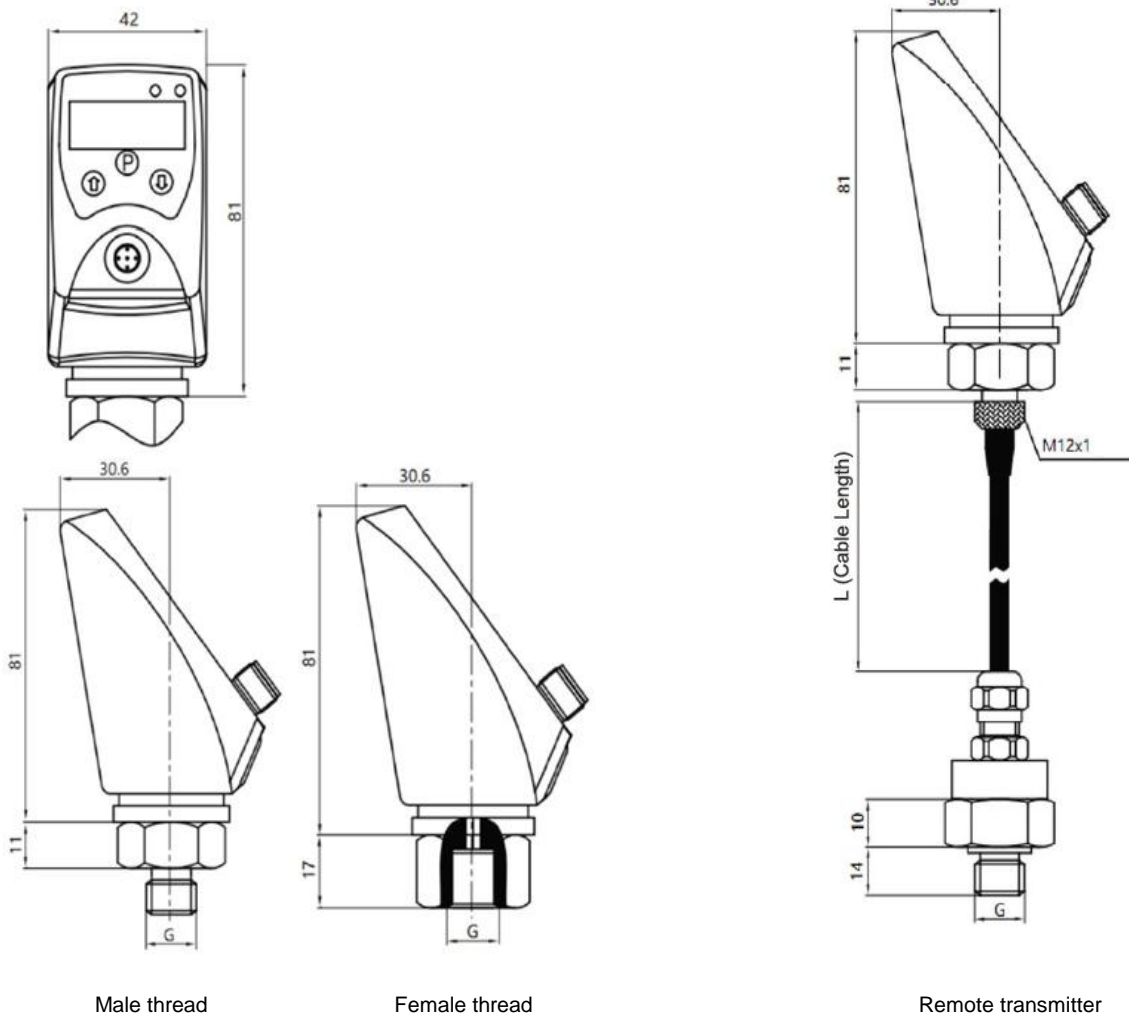
1 switching output +
1 analog output

Pin	Cable	2 switching output	1 switching + analog output	2 switching + analog output
1	Brown	Power: 24VDC(±20%)	Power: 24VDC(±20%)	Power: 24VDC(±20%)
2	White	Switch 2 output	4...20mA output	Switching 2 output
3	Blue	VDC Ground (0V)	VDC Ground (0V)	VDC Ground (0V)
4	Black	Switch 1 output	Switch 1 output	Switch 1 output
5	Gray	/	/	4...20mA

Technical data

Measuring range		Over-pressure		Burst pressure		Medium temperature °C / °F
bar	psi	bar	psi	bar	psi	
-1...1	14.5...14.5	5	72.5	6	87	-20...85°C / -4...185°F
-1...2	-14.5...29	10	145	12	174	
-1...5	-14.5...72.5	20	290	25	362	
-1...10	-14.5...145	20	290	25	362	
0...1	0...14.5	5	72.5	6	87	
0...10	0...145	20	290	25	362	
0...25	0...362	50	725	250	3625	
0...60	0...800	120	1740	550	8000	
0...100	0...1450	200	2900	800	11600	
0...160	0...2300	320	4600	1000	14500	
0...250	0...3600	500	7200	1200	17400	
0...400	0...5800	800	11600	1400	20300	

Dimensions in mm



Panel



- 1- I = output 1 state
II = output 2 state
- 2- LED display
- 3- P confirm
- 4- up
- 5- down

Keys

keys	Function
+	Press and hold for 3 seconds, enter setting mode
	Shift up menu item / change setting value
	Shift down menu item / shift setting bit
	Enter menu / Confirm and enter next menu

Menus

Menus	Description	Options
unit	Display unit	psi / bar
SP1	Switch 1 set point	2%...100% of measuring range
rP1	Switch 1 reset point	0...98% of measuring range
out1	Switch 1 output mode	Hno / Hnc / Fno / Fnc*
SP2	Switch 2 set point	2%...100% of measuring range
rP2	Switch 2 reset point	0...98% of measuring range
out2	Switch 2 output mode	Hno / Hnc / Fno / Fnc*
Sfun	Switch output function	PnP / nPn
Afr	Analog output lower limit	0...75% of measuring range
Ato	Analog output upper limit	25%...100% of measuring range
Aout	Analog output range	0...20 / 4...20
dAp	Wave filter coefficient	0...8
Sto	Save	YES / NO

Hno - Hysteresis normally open

Hnc - Hysteresis normally close

Fno - Window normally open

Fnc - Window normally close

Note:

1) The difference between set point and reset point must be at least 2% of measuring range, or one of them will be adjusted automatically.

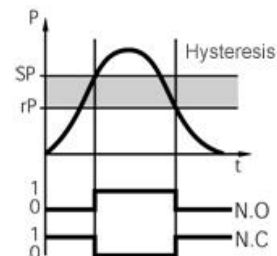
2) The difference between analog output upper limit and lower limit must be at least 25% of measuring range, or it will be adjusted automatically.

Others	Description
OL	Higher than upper limit alerting
UL	Lower than low limit alerting

Output function - Window / Hysteresis

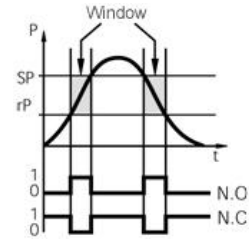
Hysteresis

Hysteresis of LP100 could be set through menus. The hysteresis is shown as gray band in right diagram, that is, SP-rP. The hysteresis keeps the switching output stable if the pressure fluctuates around the preset value. For rising pressure, the output switches when it reaches the set point (SP); For falling pressure, the output switches back only if the reset point (rP) is reached.



Window

The window function of LP100 could be used to monitor a certain pressure range, alerting will be activated if the pressure is out of the range. The window is shown as gray band in right diagram, it allows the monitoring of a defined range. If the pressure between the set point (SP) and reset point (rP), the output is activated(N.O) respective deactivated(NC).



Order Code

Example: LP100-IP010G12H1AM-

1. Model

LP10- Pressure transmitter

- N14 Thread NPT1/4
- N18 Thread NPT1/8
- G12 Thread G1/2
- G14 Thread G1/4
- G18 Thread G1/8

2. Version

- I Integrated version
- R Remote version

2. Pressure

- P Positive pressure
- N Negative pressure

3. Measuring range

- 001 -1...1 bar or 0...1 bar
- 002 -1...2 bar or 0...2 bar
- 005 -1...5 bar or 0...5 bar
- 010 0...10 bar
- 025 0...25 bar
- 060 0...60 bar
- 100 0...100 bar
- 160 0...160 bar
- 250 0...250 bar
- 400 0...400 bar

4. Process connection

- M20 Thread M20 x 1.5
- N12 Thread NPT1/2

5. Thread

- H Male thread
- I Female thread (applicable 1/4 and 1/8 only)

6. Output signal

- 2S 2 switching output
- 1A 4...20mA output
- 2A 4...20mA + 1 switching output
- 3A 4...20mA + 2 switching output

7. Electrical connection

- M M12 x 1

8. Cable length

- None
- 2 Cable length 2 m / 6.5 ft (remote transmitter only)
- 5 Cable length 5 m / 16.5 ft (remote transmitter only)
- 10 Cable length 10 m / 33 ft (remote transmitter only)
- S Customization

Accessory

ST04-	PU	02	F	G	Description
ET04(05)-					M12 4(5)-pin plug
ST04(05)-					Self locking M12 cable
	PU				Material: PUR
		02			Length: 2 m / 6.5 ft
		05			Length: 5 m / 16.5 ft
		10			Length: 10 m / 33 ft
			F		Female plug
				G	Straight
				W	Bend

Note: 5-pin plug is for 2 switching outputs + analog output

