

Реле давления. Серия 805. Описание.

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805 Pressure Switch-Transmitter

The 805 pressure switch-transmitter is a compact loop-powered pressure switch-transmitter. A supplemental continuous output is also available (either 4-20mA or 1-5VDC). Its rugged construction makes cost of ownership low and it carries a three-year warranty. The SOR® 805 pressure switch-transmitter is suitable for hazardous locations and hostile environments where space is limited. It meets applications where low-cost, discrete and continuous monitoring is preferred. Switch set points and supplemental continuous output zero and span points are field adjusted via SOR Calibration Kit with USB communication cable.

Features

- Compact, 316 Stainless Steel, explosion proof housing
- Stainless Steel sensor, no o-ring
- Solid state switch output (805QS only)
- 0.25% continuous output accuracy
- Hermetically sealed leads
- LCD Display option available
- EMI/RFI protection
- NEMA 4X, IP 66 housing
- Dual Seal approval
- INMETRO approval
- FM and ATEX certified for hazardous locations in U.S., Canada and Europe



Product Specifications

Primary Switch Output (805QS only)		Construction	
Accuracy	±2% URL	316SS housing (CF8M)	
Type	Normally Open	Process Connection	1/2" NPT(M) with 1/4" NPT(F) and Autoclave F250C(F) for 1/4" OD tubing
	Solid State Relay	Electrical Connection	
Electrical Rating	30V, 120mA	Size	1/2" NPT(M)
Temperature Effect	±2% URL/100°F @ -40 to 176°F	Termination	18 AWG shielded cable, 72-inch length
Continuous Output		<i>(Consult factory for alternate electrical connections)</i>	
Accuracy	±0.25% URL (BFSL) (Linearity, Hysteresis, and Repeatability)	Wetted Materials	316-SST (for pressure ranges 0-5 psi thru 0-100 psi)
Turndown	5:1		17-4SST (for pressure ranges above 0-100 psi)
Output	4-20 mA	Over Pressure	
1-5 VDC option (27mW ± 5mW @ 9 VDC)		0-5 thru 0-100 psi	3 times FSPR
Zero Offset	+10% URL	0-250 thru 0-10,000 psi	2 times FSPR
Temperature	±1% URL/100°F @ -40 to -176°F	Up to 30,000 psi	1.4 times FSPR
Temperature Range		Burst Pressure	
Compensated	-40 to 176°F (-40 to 80°C)	0-5 thru 0-100 psi	4 times FSPR
Ambient	-40 to 176°F (-40 to 80°C)	0-250 psi	40 times FSPR
Process	-40 to 194°F (-40 to 90°C)	0-500 thru 0-1000 psi	20 times FSPR
Storage	-40 to 194°F (-40 to 90°C)	0-2500 psi	10 times FSPR
Long Term Stability	≤ ±0.5% URL per year	0-5000 psi	8 times FSPR
Response Time	≤ 5 ms	0-10,000 thru 0-15,000 psi	4 times FSPR
Supply Voltage	8-30VDC	0-30,000 psi	1.8 times FSPR
Loop Resistance	800 ohms @ 24VDC	Weight	
Circuit Protection	Reverse polarity and EMI/RFI protected	1.8 lb (0.8 kg)	
		Warranty	
		3 years	

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Switch Operation

The primary switch output of the 805QS is a “Normally Open Solid State Relay” rated 30V, 120mA. It can be configured 3 ways; as shown below. Switch set point(s) and supplemental continuous output zero and span points are set at the factory as specified by the customer.

In all three configurations, the fail-safe state for the 805QS switch output will be open (i.e., if power is removed from the 805QS, the switch contacts will open automatically).

Window Mode Switch is closed when the process pressure is within the user selected range (LO and HI set points), and open when the pressure is above or below that range.



Close on Rise/Open on Fall Switch is open when the process pressure is below the user selected set point and closed when the pressure is above that set point.



Open on Rise/Close on Fall Switch is closed when the process pressure is below the user selected set point and open when the pressure is above that set point.



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How to Order

How to Order

Below is the SOR quick select model number tree that provides you with all the options to configure and order a product for your application.

- You must select a designator for each component
- Reference tables, charts and additional information are provided throughout the catalog to help you make your selections, see pages noted in the tree.

Range		3	4 Process Connection Size	
0-5 psi	00	3	A	Stainless Steel, 1/2"NPT(M) with 1/4"NPT(F), Process Connection (316SS for ranges 0-100 psi and below) (17-4SS for ranges above 0-100 psi)
0-15 psi	01		S	316SS, 1/2" NPT(M) flush-mount, liquid filled, diaphragm seal, Process Connection*
0-50 psi	02		H	17-4SS, Autoclave F250C Female (For 1/4" OD Tubing), Process Connection**
0-100 psi	03		Note: See page 4 for more information. If alternate process connection is required, consult factory.	
0-250 psi	04		5 Accessories	
0-500 psi	05		IN	LCD Display for local indication (see page 5 for more information)
0-1000 psi	06		BB	Cleaned for industrial oxygen service
0-2500 psi	07		DS	Dual Seal approval (FM)***
0-5000 psi	08		HB	SS universal terminal box, 1/2" NPT(F), ATEX/IECEX approved
0-10000 psi	09		HBME	SS universal terminal box, M20 x 1.5(F), ATEX/IECEX approved
0-15000 psi	10		HT	SS universal terminal box, 1/2" NPT(F), FM and CSA certified
0-30000 psi	11		NM	INMETRO approved (not available for ranges 13-15)
0-15 psia	13		NC	Compliance to NACE Certification MR0 175/ISO 15156 (Only available with S process connection. Consult factory for other ranges.)
0-50 psia	14		PK	Pipe mounting kit
0-100 psia	15		RR	SS tag wired to housing with customer specified information
Supplemental Output		2	Certificates	
4-20 mA	C	2	C1	Calibration
1-5 VDC	V		C2	Hydrostatic Pressure Test
Model		1	C3	Inspection Report
Pressure Transmitter	PT	1	C4	Compliance/Conformance
Pressure Switch-Transmitter	QS		C8	Typical Material of Wetted Parts

805QS - C 07 - A - RR

Example Model No.

* Only available for range option 04 thru 08

** For pressure ranges above 0-10000psi (range options 10 and 11)

*** Dual Seal version is not hermetically sealed, only available for range options 00 thru 09.

Calibration Kit - Part Number 9231026 (includes hardware and software). This kit allows you to adjust switch set point(s) and zero and span points in the field. The calibration kit does not require any license or registration fees.

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Specifications

Agency Approvals

Approved*	Safety Method	Approval
FM (U.S. and Canada)	Explosion Proof Hazardous Locations	Class I, II, III; Division 1 Groups A-G; T5; Type 4X
	Non-incendive	Class I, II, III; Division 2 Groups A-G; T5; Type 4X
ATEX or INMETRO	Flameproof	II 2 G Ex d IIC T5 IP 66

* Product holds a Canadian Registration Number (CRN) in all provinces, only available for range options 04 thru 09.

Process Connection Size

Designator	A	S	H	Alternate
Description	Stainless Steel, 1/2"NPT(M) with 1/4"NPT(F), Process Connection (316SS for ranges 0-100 psi and below) (17-4SS for ranges above 0-100 psi)	316SS, 1/2" NPT(M) flush-mount, liquid filled, diaphragm seal, Process Connection	17-4SS, Autoclave F250C Female (For 1/4" OD Tubing), Process Connection	If alternate process connection is required, please consult the factory.
Application	General applications with process materials not containing heavy particulates that could induce clogging of pressure port.	Use when applications contain dirty, sticky or high particulate process material such as paraffin.	Use for applications where pressures are greater than 10,000 psi, Standard NPT threads are not suitable at these high pressures.	SOR can provide many other process connections including: • Thread & port size adapters • Direct & remote mount diaphragm seals • Tri-clamp/sanitary fittings • Flanged • Other
Photo				

805 Pressure Switch-Transmitter

Specifications



LCD Display “IN” Option

The “IN” LCD display is a low cost option for when a simple local indication is needed. The “IN” option is provided with a 5-digit backlit loop powered LCD display enclosed in an explosion proof housing with terminal block connections inside. For configuring the display, push buttons are provided on the front of the housing. Configuration of the display and transmitter are done separately.

Display Specifications

Analog Signal	2 wire: 4-20mA	Instrument Connection	1/2" NPTF
Power Supply		Electrical Conduit Connection	3/4" NPTF
(with 805 series transmitter)	16-30 VDC	Housing Material	Die-casting Aluminum
Permissible Temperature	-20 to +70°C		with chromating and chemically resistant paint
Accuracy	≤0.1% F.S.	Window Material	Glass
Digits	4 1/2 neg; 5 pos	Housing Agency Approvals	FM (US and Canada)
Units	Blank, kPa, MPa, Pa, bar, mbar, psi, mH2O, mmH2O, cmH2O, mmHg, Torr, atm, kg, g, mg, N, kN, °C, °F, K, %RH, %VOL, PPM, %LEL, pH, m, cm, mm, inch, m/s, Ω (ohm), k Ω (kohm), mV, V, L/min, M3/hr		CSA
			ATEX IEC Ex d IP68
		Weight (Display only)	≈2.0 lbs

Display option can be sold separately without transmitter installed and will work with any 4-20mA two-wire device. Part number 9231526.

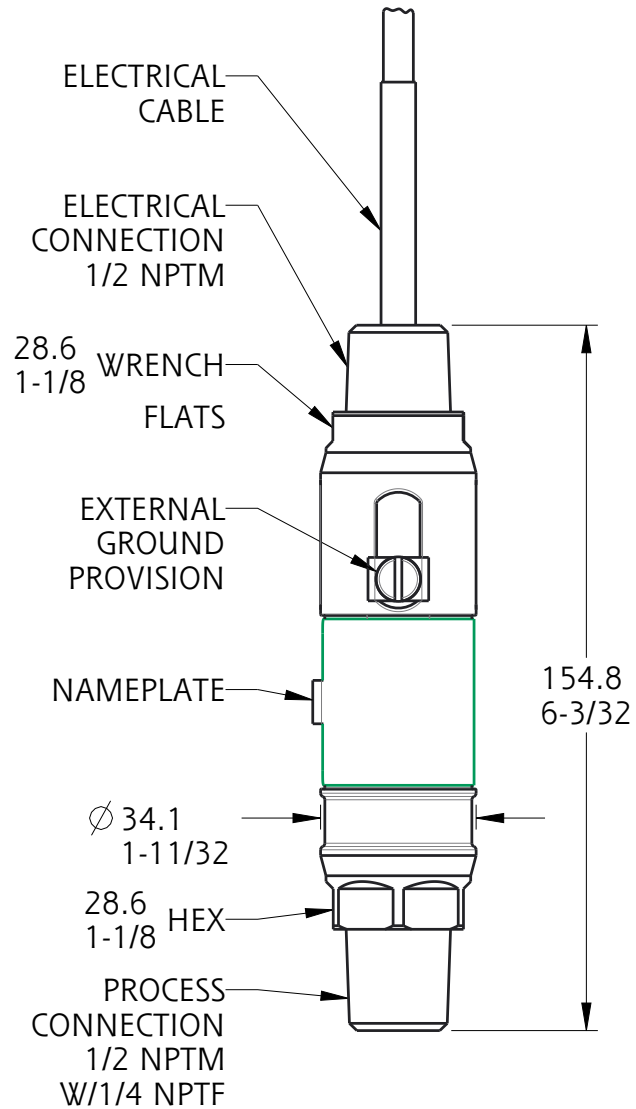
Design and specifications are subject to change without notice. For latest revision, see SORInc.com.

805 Pressure Switch-Transmitter

Dimensions

Dimensions shown are for reference only. Contact the factory for certified dimension drawings.
Linear = mm/in.

Drawing 0091438

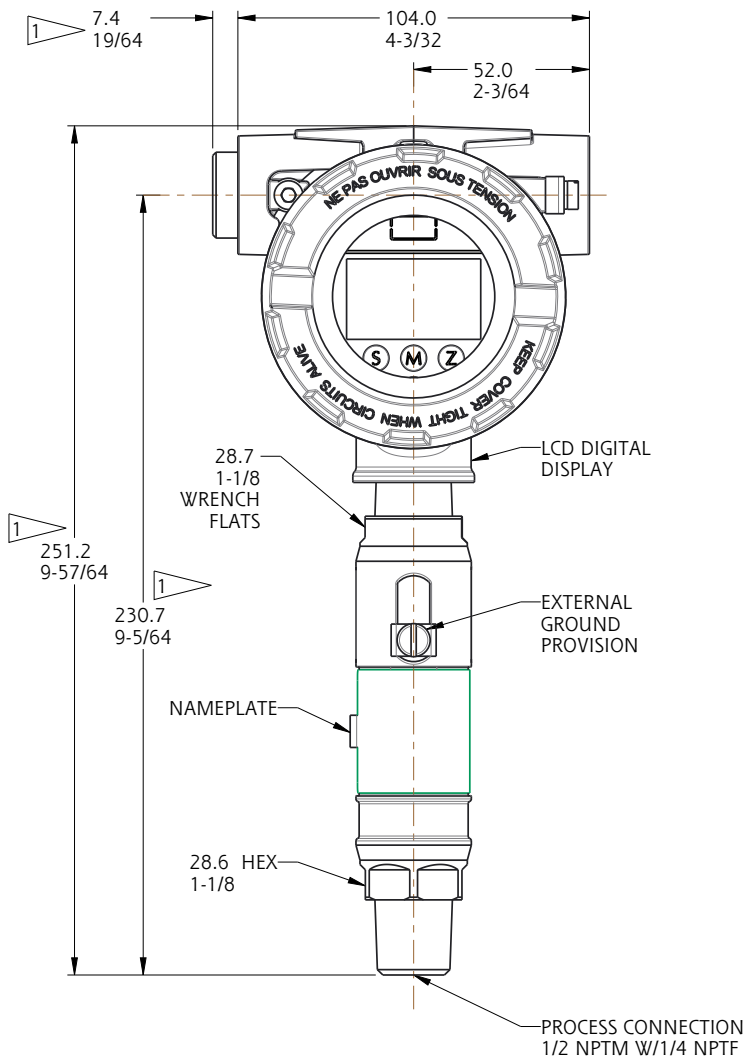


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Dimensions

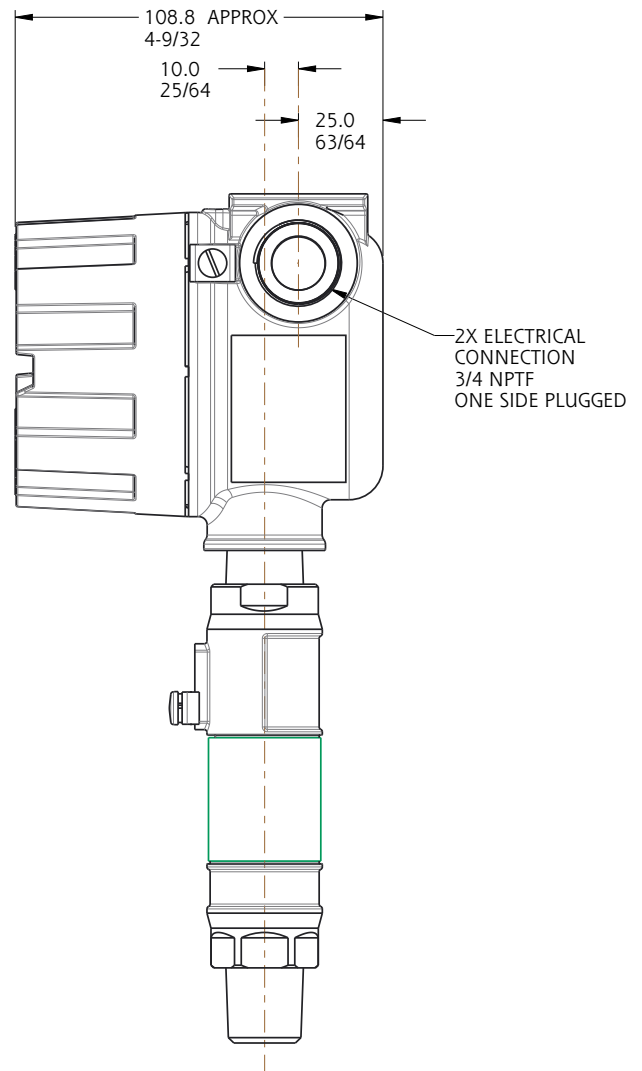
Dimensions shown are for reference only. Contact the factory for certified dimension drawings.
Linear = mm/in.

Drawing 0098738



NOTES:

1. DIMENSION APPROXIMATE AND BASED ON A FIVE THREAD ENGAGEMENT.
2. TRANSMITTER ORIENTATION MAY VARY IN RELATION TO THE LCD DIGITAL DISPLAY. VARIATION WILL NOT AFFECT FUNCTIONALITY.





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