

PRESSURE TRANSDUCERS

BULLETIN DB-88S
PART #K796398

Model 88S Sanitary Pressure Transmitter

FEATURES

- ◆ A high-quality, full featured transmitter at just 1.6 lbs. (720 grams)
- ◆ Clean in Place (CIP)
- ◆ Meets 3A sanitary standards
- ◆ Two standard Tri-Clover connections (1-1/2 inch & 2 inch)
- ◆ Designed to mount flush against process media
- ◆ All welded 316 stainless steel construction (no aluminum)
- ◆ Standard 316L stainless steel diaphragm/Tri-Clover base
- ◆ Ranges from 0 to 6 to 0 to 300 psig (0.4 to 0 to 20 bar)
- ◆ $\pm 0.25\%$ accuracy
- ◆ Zero and span adjustability
- ◆ Up to 5:1 turndown
- ◆ 4 to 20 mA output at 12 to 40 VDC

DESCRIPTION

The Model 88S is a durable, full featured sanitary/flush diaphragm pressure transmitter. It is designed to mount flush using a standard Tri-Clover connection. Two sizes are available which will inhibit particulate and bacterial growth while facilitating Clean in Place (CIP) systems. It's rugged 316 stainless steel construction and Tri-Clover connection make it perfect for any pharmaceutical or food and drug application where frequent cleaning is required.



MODEL 88S TRANSMITTER

The compact size and weight of the Model 88S transmitter eliminate any complicated mounting hardware and mechanical supports.

The integral junction box permits field wiring, too. All of this reduces your installation time substantially. And, with the cover retained by a stainless steel chain and no internal jumpers for span turndown, losses due to misplaced parts are eliminated.

A 4 to 20mA output is standard with a 12 to 40 VDC power supply. The Model 88S also meets NACE standards.

SPECIFICATIONS

FUNCTIONAL SPECIFICATIONS

SERVICE: Liquid, gas, or vapor

RANGE LIMITS

0 to 6 to 0 to 15 psi (0.4 to 0 to 1 bar)
0 to 15 to 0 to 30 psi (0 to 1 to 0 to 2 bar)
0 to 20 to 0 to 100 psi (0 to 1.4 to 0 to 7 bar)
0 to 60 to 0 to 300 psi (0 to 4 to 0 to 20 bar)

OUTPUT: 4 to 20 mADC, limited to 30 mADC

POWER SUPPLY: 12 to 40 VDC with reverse polarity protection

LOOP RESISTANCE: 1400 ohms max at 40 volts

TURNDOWN: 5:1, (30 psi. = 2:1) (15 psi. = 2.5:1)

ZERO ADJUST: $\pm 10\%$

SPAN ADJUST: $\pm 10\%$

TEMPERATURE LIMITS

Electronics (Ambient):

10° F to 180° F (-12° C to 82° C)

Process Interface (Continuous): 10° F to 212° F (-12° C to 100° C)

Process Interface (CIP): Excursions to 250° F (121° C)

Storage: -40° F to 212° F (-40° C to 100° C)

Compensated: 10° F to 180° F (-12° C to 82° C)

OVERRANGE: 300% upper range limit

HUMIDITY LIMITS: 0 to 100% RH

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PERFORMANCE SPECIFICATIONS

ACCURACY: $\pm 0.25\%$ of calibrated span including linearity (BFSL), hysteresis and repeatability

RESPONSE TIME: Time constant of 20 milliseconds

STABILITY: $\pm 0.5\%$ of upper range limit for six months

TEMPERATURE EFFECT (includes zero and span)

Compensated 10° F to 180° F (-12° C to 82° C):

Between 30° F and 130° F (-1° C and 54° C): $\pm 1\%$ of URL per 50° F (28° C)

Between 10° F and 180° F (-12° C and 82° C): $\pm 1.6\%$ of URL per 50° F (28° C)

POWER SUPPLY EFFECT: $\pm 0.005\%$ full scale per volt

SURGE PROTECTION: Standard

VIBRATION EFFECT: $\pm 0.1\%$ of upper range limit for 3 g to 200 Hz

POSITION EFFECT: .05%/90° tilt

OVERRANGE EFFECT: $\pm 0.15\%$ full scale per 300% of maximum range

PHYSICAL SPECIFICATIONS

MATERIALS OF CONSTRUCTION

Process Wetted Parts: 316L Stainless steel

Diaphragm: 316L Stainless steel

Non Wetted Parts: 316 Stainless steel

Cast Head: CF-8M (316 Cast Stainless steel)

"O" Ring: Buna N

Fill Fluid: Mineral oil (standard)

Process Connection: Refer to dimension drawing.

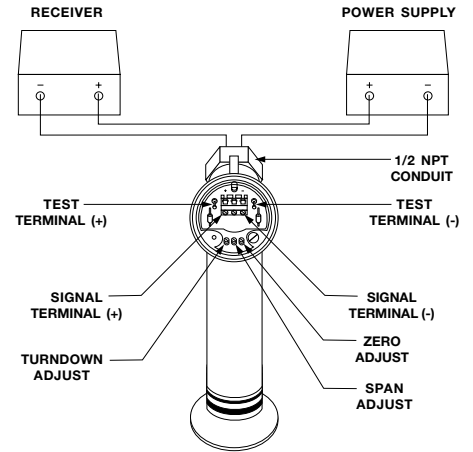
Electrical Connection: 1/2 NPT Female

Weight: 1.67 lbs. (720 grams)

CLASSIFICATIONS

Meets 3A requirements for Sanitary Applications

WIRING DIAGRAM



SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

ORDERING INFORMATION DIMENSIONS

MODEL NUMBER

88S 004 L 2 T1 (0 to 75 psi)

MODEL

88S = Model 88S Sanitary Pressure Transmitter

RANGES

002 = 0 to 6 to 0 to 15 psi (0 to 0.4 to 0 to 1.0 bar)

003 = 0 to 15 to 0 to 30 psi (0 to 1.0 to 0 to 2 bar)

004 = 0 to 20 to 0 to 100 psi (0 to 1.4 to 0 to 7.0 bar)

005 = 0 to 60 to 0 to 300 psi (0 to 4.0 to 0 to 20 bar)

MATERIAL BASE/DIAPHRAGM FILL

L = 316L Stainless steel/mineral oil

Others = Consult factory for availability

OUTPUT

2 = 4 to 20 mA DC

PROCESS CONNECTION

T1 = 1-1/2 Inch Tri-Clover Connection

T2 = 2 Inch Tri-Clover Connection

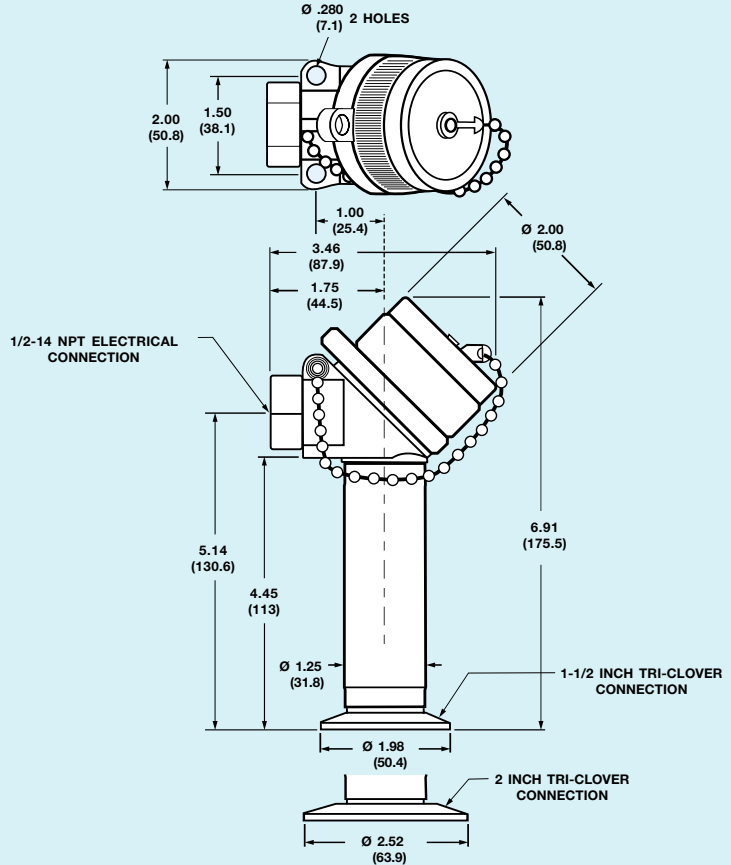
CALIBRATION RANGE (Specify)

Will be calibrated at maximum range in psi if not specified

EXAMPLE:
88S-004-L-2-T1
(0 to 75 psi)

Model 88S Pressure Transmitter, 100 psi maximum range, 316L stainless steel base, 316L stainless steel diaphragm, mineral oil fill, output at 4 to 20 mA DC, 1-1/2 inch Tri-Clover connection and calibrated to 0 to 75 psi pressure gives 4 to 20 mA DC output.

IN (MM)



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