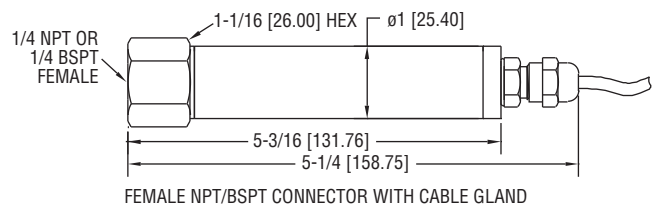
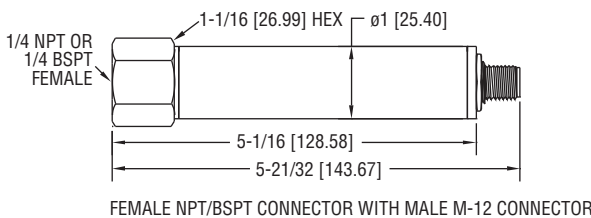
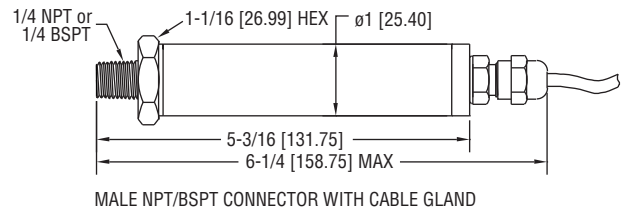
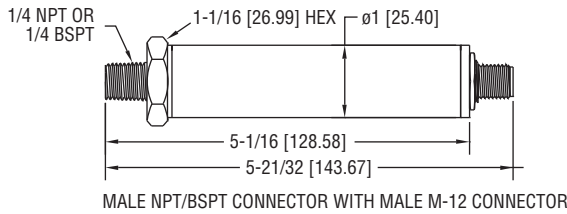




Series IS626 Pressure Transducer

Specifications - Installation and Operating Instructions



Ⓢ = CRITICAL DIMENSION
STANDARD TOLERANCES UNLESS NOTED:
ALL DECIMAL DIMENSIONS ± .005
ALL ANGLES ± 1°

The Dwyer Series IS626 Pressure Transducer convert pressure into a standard 4-20 mA output signal. The Series IS626 can be used to accurately measure compatible gases and liquids. Series IS626 full scale accuracy is 0.25% (see specifications). Designed for industrial environments with a NEMA 4X (IP66) housing, this transmitter resists most effects of shock and vibration.

Intrinsic Safety Approval Classification

The IS626 is UL listed for use in Hazardous (Classified) Locations. The protection method is by Intrinsic Safety, "ia". It was investigated by UL under UL Standard 913 Sixth Edition and CSA Standard No. 157-92.

For use in Hazardous (Classified) Locations:

Class I Div. 1 Groups A,B,C,D

Class II Div. 1 Groups E,F,G

Class III Div. 1

Temperature Code: T4 @ 80°C ambient

Install in accordance with control drawing 01-700797-00.



WARNING: To prevent ignition of flammable or combustible atmospheres, disconnect power before servicing.

Use with approved safety barriers using entity evaluation.

IS626 Entity Parameters

V _{max}	I _{max}	C _i	L _i	P _i
28VDC	93mA	0.051_F	240_H	0.651W

SPECIFICATIONS

Service: Compatible gases and liquids.

Wetted Materials: Type 316, 316L SS.

Accuracy: 0.25% full scale (includes linearity, hysteresis, and repeatability).

Temperature Limit: 0 to 176°F (-18 to 80°C).

Compensated Temperature Range: 0 to 176°F (-18 to 80°C).

Thermal Effect: ±0.02% FS/°F (includes zero and span).

Pressure Limits: See Pressure Range Table (Next Page).

Power Requirements: 10 to 28 VDC.

Output Signal: 4 to 20 mA.

Response Time: 50 msec.

Loop Resistance: 0 - 900 ohms maximum.

Current Consumption: 38 mA (maximum).

Electrical Connections: 3 ft. cable or 4-pin M-12 Connector.

Process Connection: 1/4" male/female NPT and BSPT.

Enclosure Rating: NEMA 4X (IP66).

Mounting Orientation: Mount in any position.

Weight: 8.9 oz (252 g).

Agency Approvals: CE, UL Intrinsically Safe to UL Standard 913. (See Intrinsic Safety Approval Classification)

The following standards were used for CE approval:

IEC 61000-4-2: 2001

IEC 61000-4-3: 2006

IEC 61000-4-4: 2004

IEC 61000-4-5: 2005

IEC 61000-4-6: 2006

IEC 61000-4-8: 2001

CENELEC EN 55011: 2003

CENELEC EN 61326: 2003

89/336/EEC EMC Directive



CAUTION: Do not exceed specified supply voltage ratings. Permanent damage not covered by warranty will result. This device is not designed for 120 or 240 volt AC operation. Use only on 10 to 28 VDC.

Pressure Range Table

Pressure Range (psig)	Maximum Pressure (psig)	Over Pressure (psig)
30" Hg-0	30	150
30" Hg-0-15	30	150
30" Hg-0-30	60	300
30" Hg-0-45	100	300
30" Hg-0-60	200	500
30" Hg-0-100	200	500
0-5	10	50
0-15	30	150
0-30	60	300
0-50	100	300
0-100	200	500
0-150	300	750
0-200	400	1000
0-300	600	1500
0-500	1000	2500
0-1000	2000	5000
0-1500	3000	5000
0-2000	4000	5000
0-3000	6000	7500
0-5000	7500	10000
0-8000	10000	12000

INSTALLATION

1. Location: Select a location where the temperature of the transducer will be between 0 and 176°F (-18 to 80°C). Distance from the receiver is limited only by total loop resistance. The tubing or piping supplying pressure to the unit can be practically any length required but long lengths will increase response time slightly.

2. Position: The transducer is not position sensitive. However all standard models are originally calibrated with the unit in a position with the pressure connection downward. Although they can be used at other angles, for best accuracy it is recommended that units be installed in the position calibrated at the factory.

3. Pressure Connection: Use a small amount of plumber's tape or other suitable sealants to prevent leaks. Be sure the pressure passage inside the port is not blocked.

4. Electrical Connections

Wire Length - The maximum length of wire connecting the transducer and receiver is a function of wire size and receiver resistance. Wiring should not contribute more than 10% of the receiver resistance to total loop resistance. For extremely long runs (over 1000 feet), choose receivers with higher resistance to minimize the size and cost of connecting leads. Where wiring length is under 100 feet, wire as small as 22 AWG can be used.

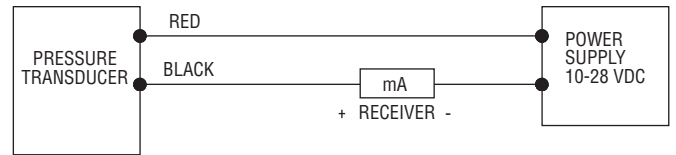
5. Wiring

An external power supply delivering 10-28 VDC with minimum current capability of 40 mA DC (per transducer) is required to power the control loop. See Fig. A for connection of the power supply, transducer and receiver. The range of appropriate receiver load resistance (RL) for the DC power supply voltage available is expressed by the formula:

$$R_{L \max} = \frac{V_{ps} - 12.3V}{20 \text{ mA}}$$

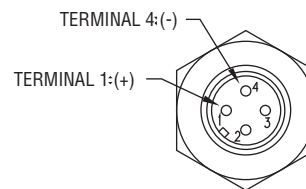
Shielded cable is recommended for control loop wiring.

Fig. A



When using cable version IS626, black wire is negative (-) and red wire is positive (+). When using 4-pin M-12 connector models, wire to pins as shown below in Fig. B.

Fig. B

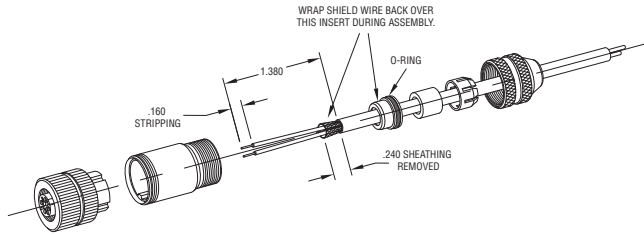


Male-12 Connector

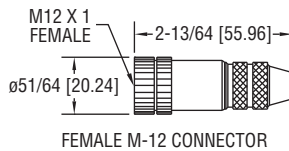
ACCESSORIES

A-295 Female M-12 Connector

A female 4 position M-12 connector for use in connecting to the M-12 male connector on the IS626. Fit 0.16" to 0.29" diameter cables with a maximum wire gage at 18 AWG (0.75 mm²).



ACCESSORY A-295



A-231 Shielded Cable

A pre-made 16.4 ft (5 m) cable with a 4 pin Female M-12 connector is available for use when connecting to the male M-12 connector on the IS626. Black wire is negative and the brown wire is positive.

MAINTENANCE

After final installation of the pressure transducer and its companion receiver, no routine maintenance is required. A periodic check of system calibration is suggested. The Series IS626 transducers are not field repairable and should be returned if repair is needed (field repair should not be attempted and may void warranty). Be sure to include a brief description of the problem plus any relevant application notes. Contact customer service to receive a return goods authorization number before shipping.

NOTES:

1. MAX SAFE AREA VOLTAGE NOT TO EXCEED 250 VAC.
2. NO REVISIONS WITHOUT PRIOR UNDERWRITERS LABORATORY APPROVAL.
3. (ENTITY CONCEPT DEFINITIONS)

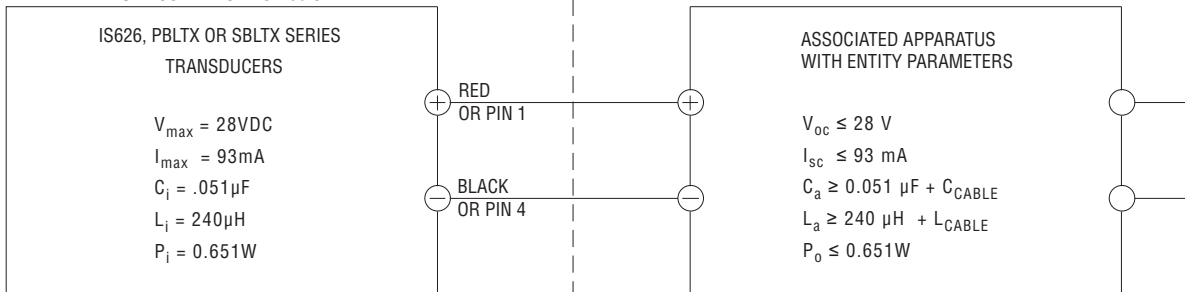
IMPORTANT! NO REVISIONS WITHOUT PRIOR UNDERWRITERS LABORATORIES APPROVAL CAN BE IMPLEMENTED

THE ENTITY CONCEPT ALLOWS INTERCONNECTION OF INTRINSICALLY SAFE APPARATUS TO ASSOCIATED APPARATUS NOT SPECIFICALLY EXAMINED IN SUCH COMBINATION. THE CRITERIA FOR INTERCONNECTION IS THAT THE VOLTAGE AND CURRENT WHICH INTRINSICALLY SAFE APPARATUS CAN RECEIVE AND REMAIN INTRINSICALLY SAFE, CONSIDERING FAULTS, MUST BE EQUAL TO OR GREATER THAN THE VOLTAGE (V_{oc}) AND CURRENT (I_{sc}) LEVELS WHICH CAN BE DELIVERED BY THE ASSOCIATED APPARATUS. CONSIDERING FAULTS AND APPLICABLE FACTORS. IN ADDITION, THE MAXIMUM UNPROTECTED CAPACITANCE AND INDUCTANCE (C_i & L_i) OF THE INTRINSICALLY SAFE APPARATUS, INCLUDING INTERCONNECTING WIRING, MUST BE EQUAL TO OR LESS THAN THE CAPACITANCE AND INDUCTANCE WHICH CAN BE SAFELY CONNECTED TO ASSOCIATED APPARATUS.

4. INSTALLATION MUST BE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE (NFPA 70, ARTICLE 504) AND ANSI/ISA-RP12.6.

HAZARDOUS (CLASSIFIED) LOCATION
INTRINSICALLY SAFE
FOR CLASS I DIV.1 GROUPS A,B,C,D
CLASS II DIV. 1 GROUP E,F,G
CLASS III DIV. 1
T4 TEMPERATURE CODE BASED ON 80°C AMBIENT

NONHAZARDOUS LOCATION



IS626, PBLTX OR SBLTX SERIES
TRANSDUCERS

$V_{max} = 28VDC$
 $I_{max} = 93mA$
 $C_i = .051\mu F$
 $L_i = 240\mu H$
 $P_i = 0.651W$

ASSOCIATED APPARATUS
WITH ENTITY PARAMETERS

$V_{oc} \leq 28 V$
 $I_{sc} \leq 93 mA$
 $C_a \geq 0.051 \mu F + C_{CABLE}$
 $L_a \geq 240 \mu H + L_{CABLE}$
 $P_o \leq 0.651W$

CATALOG NUMBERS:
IS626-aa-bb-cc-dd-ee-ffff
PBLTX-aaa-bbb-cccc
SBLTX-aa-bb-cccc

WHERE:

a,b,c,d,e & f = ANY LETTER OR NUMBER

Ⓢ = CRITICAL DIMENSION
STANDARD TOLERANCES UNLESS NOTED:
ALL DECIMAL DIMENSIONS $\pm .005$
ALL ANGLES $\pm 1^\circ$

SCALE 1:1

		DATE 7-14-06	NAME BULLETIN ARTWORK INTRINSIC SAFETY CONTROL DRAWING FOR IS626, PBLTX & SBLTX SERIES	MATERIAL
		DWN BY DGH		FINISH
2		CHKD CAT		DWYER INSTRUMENTS, INC. MICHIGAN CITY, INDIANA 46360 U.S.A.
1	ADDED LABELS TO PLUS & MINUS TERMINALS. ADDED P_i & $P_o = 0.651W$ TO BOXES. ECR #21141.	BRENT 1-22-07		
NO.	CHANGES	BY/DATE	ACAD2002	
<small>NOTICE: This drawing and the principles and elements of design embodied therein are the exclusive property of DWYER INSTRUMENTS, INC. and are not to be communicated, disclosed, reproduced or used except as previously authorized in writing by such corporation and must not be submitted to outside parties for examination without the written consent of said corporation.</small>				FR. NO. 01-700797-00
				3