

INTRODUCTION

The 3XEP series product is a pressure transducer which provides linear electrical output proportional to applied pressure and is intended for use for pressure measurement.

The 3XEP series is CSA certified Explosion Proof for Class I use in:

Class I Division 1, Groups A,B,C & D
Class I Zone 1 Exd IIC T4 Gb; Class I, Zone 1 AExd IIC T4 Gb

MODEL SPECIFICATION : 3XEPdaaaaabbcfeegg

Where: X = 1 or 2

CODE	Type
1	Standard Duty
2	Heavy Duty

d = Output Code

CODE	DESCRIPTION (Output)	OUTPUT TYPE
B	4-20mA	Current
C	1-6V	Absolute
F	0.1-5.1V	Absolute
G	0.2-10.2V	Absolute
H	1-5V	Absolute
N	0.5-4.5V Non Ratio-metric	Absolute
P	1-10V	Absolute
R	0-5V	Absolute
S	0-10V	Absolute
T	0.5-4.5V Ratio-metric	Ratio-Metric
V	0.5-4V	Absolute
Z	Place Holder in Compliance with Schedule Drawing 243285	

aaaaa = Pressure Range Code

CODE	PRESSURE RANGE (Bar)
0006G	6 bar Gauge
0010G	10 bar Gauge
0016G	16 bar Gauge
0025G	25 bar Gauge
0040G	40 bar Gauge
0060G	60 bar Gauge
0100S	100 bar Sealed
0160S	160 bar Sealed
0250S	250 bar Sealed
0400S	400 bar Sealed
0600S	600 bar Sealed
1000S	1000 bar Sealed

CODE	PRESSURE RANGE (psi)
100PG	100 psi Gauge
150PG	150 psi Gauge
200PG	200 psi Gauge
300PG	300 psi Gauge
500PG	500 psi Gauge
600PG	600 psi Gauge
750PG	750 psi Gauge
10CPG	1000 psi Gauge
15CPS	1500 psi Sealed
20CPS	2000 psi Sealed
25CPS	2500 psi Sealed
30CPS	3000 psi Sealed
35CPS	3500 psi Sealed
40CPS	4000 psi Sealed
50CPS	5000 psi Sealed
60CPS	6000 psi Sealed
75CPS	7500 psi Sealed
10KPS	10000 psi Sealed

bb = Pressure Port

CODE	DESCRIPTION (Union Type)	CODE	DESCRIPTION (Union Type)
0H	1/2" NPT	1J	7/16" - 20 UNF 2A SA1926/2 O'RING
02	1/4" - 18 NPT	1P	9/16" - 18UNF 22 A/F
0E	1/4" - 18 NPT Female	4P	G1/2" A 27A/F
4C	1/4" - 18 NPTF Dryseal	05	G1/4" A Integral Face Seal
0A	1/4" - 19 PT (JIS) or 1/4" - 19 BSPT	01	G1/4" A Stud (BS 5380 Port)
4B	1/4" Female (7/16UN with Schraeder Deflator)	0S	G1/8" A Stud (BS 5380 Port)
08	1/8" - 27 NPT	2T	M12x1.5 (6g) High Pressure (Washer Seal)
4D	1/8" - 27 NPTF Dryseal	0L	M12x1.5P (6g) O'Ring to ISO 6149-2
4N	3/8" - 24 UNF Union	1G	Schraeder 7-16" - 20 UN 2B Female
04	7/16" - 20 (37FLARE.SAE J514 SIZE 4)	0K	M14 x 1.5 straight
		ZZ	Place Holder in Compliance with Schedule Drawing 243285

c = Connector Code

CODE	DESCRIPTION (Electrical Connection)
S	Explosion proof Conduit ½" NPT

f = Pressure Restrictor Option

CODE	Type
0	Not Fitted
R	Fitted

ee = Cable Length

CODE	DESCRIPTION (Cable Length)
00	NOT FITTED
01	1 METER
02	2 METER
03	3 METER
05	5 METER
10	10 METER
ZZ	Place Holder in Compliance with Schedule Drawing 243285

gg = Any combination of alpha/numeric characters representing options not affecting Explosion Proof certification

HAZARDOUS PRODUCTS

Products which are supplied per this bulletin may be classified as Electrical, Electro-Mechanical and Electronic equipment.

These products are tested and supplied in accordance with our published specifications or individual special requirements that are agreed in writing at time of order. They are constructed so as not to affect adversely the safety of persons and property installed, maintained and used by qualified personnel, in the application for which they were designed and manufactured.

GENERAL

The equipment is designed and manufactured to:

- a) Avoid physical injury or other harm which may be caused by direct or indirect contact.
- b) Ensure that excess surface temperature of accessible parts or radiation which would cause a danger is not produced.
- c) Eliminate non-electrical dangers which are revealed by experience.
- d) Ensure that foreseeable conditions of overload will not give rise to dangerous situations.

Provided that:

- Pressure range must be compatible with the maximum pressure being measured.
- Pressure media must be compatible with the transducer/transmitter wetted parts listed in these instructions.
- Liquid must not be allowed to freeze in the pressure port.
- The gasket must be fitted under the electrical connector where applicable.

INSTALLATION & START UP

- Install and start up the transducer ONLY if it is in a faultless condition
- Screw or unscrew the transducer using the pressure port hexagon flats ONLY and observe the prescribed torque
- Do NOT use the hexagon on the electrical connector housing for screwing or unscrewing the transducer into a pressure connection, only for installing to electrical conduit.
- Cable screen is not connected to the transducer housing. The simultaneous connection of case and shield wire to ground is only permitted if ground loop problems can be excluded.
- Switch on the operating voltage only after establishing the electrical connection in order to avoid any spark formation.
- Electrical connection to the transducer should only be used as originally supplied. Bypassing or modifying electrical connection (with the exception of cable length) will invalidate explosion protection classification per certification.
- Integral cable should be subjected to a minimum bend radius of 75mm.
- The permanently attached cable shall be suitably protected from impact when in use.

Tools required for Installation:

Transducer Mounting:

Wrench 22mm or 27mm depending on hex

'O' Rings: Transducers are not shipped with soft seals. Process connections which require a soft seal ('O' ring) are the responsibility of the installer. They must be suitable for both application temperature and relevant media.

ELECTRICAL INSTALLATION

Installation of this type must be carried out in accordance with the Approved Installation drawing.

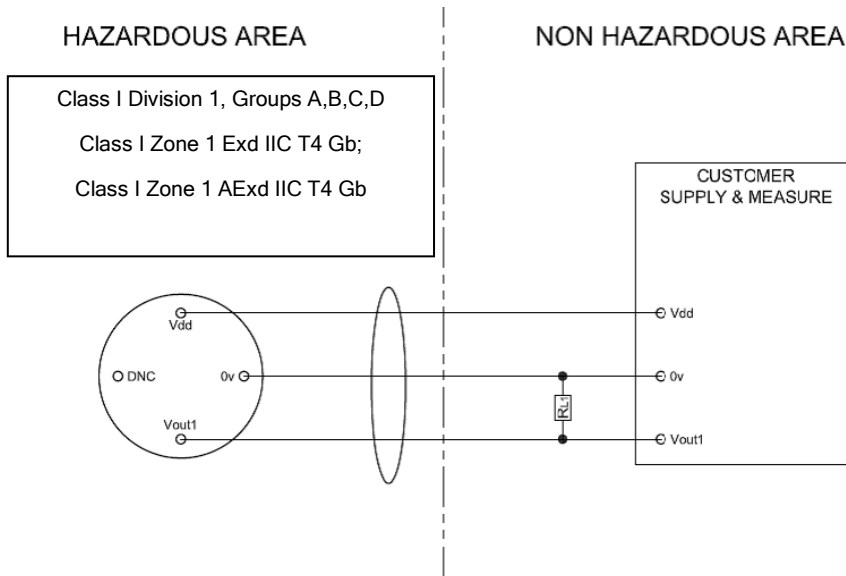
Voltage Applications:

The following schematic is applicable for any voltage output - only pull-down configuration shown. External load (R_{L1}) is optional and can be connected between Vout1 and EITHER supply rail.

With "0V offsets", pull-up resistors cannot be used.

Application Schematic (Example):

Absolute Output Mode: (Typical output ranges are 0-10V, 0-5V, 1-6V and 1-5V)



Parameter	Min	Typ	Max	Units	Comments
Supply Voltage (Vdd)	8		30	V	Measured at the input to the transducer terminals.
Supply Head-Room to Vout1 Output	1			V	Example: 0-10V doable from 11V supply. This is only valid with no external leads

Ratiometric Output Mode: (Typical output ranges are 0.5-4.5V(r) and 0.25-4.75V(r))

Various Optional failure diagnostics exist - consult factory:

Parameter	Min	Typ	Max	Units	Comments
Supply Voltage (Vdd)	4.5	5	5.5	V	

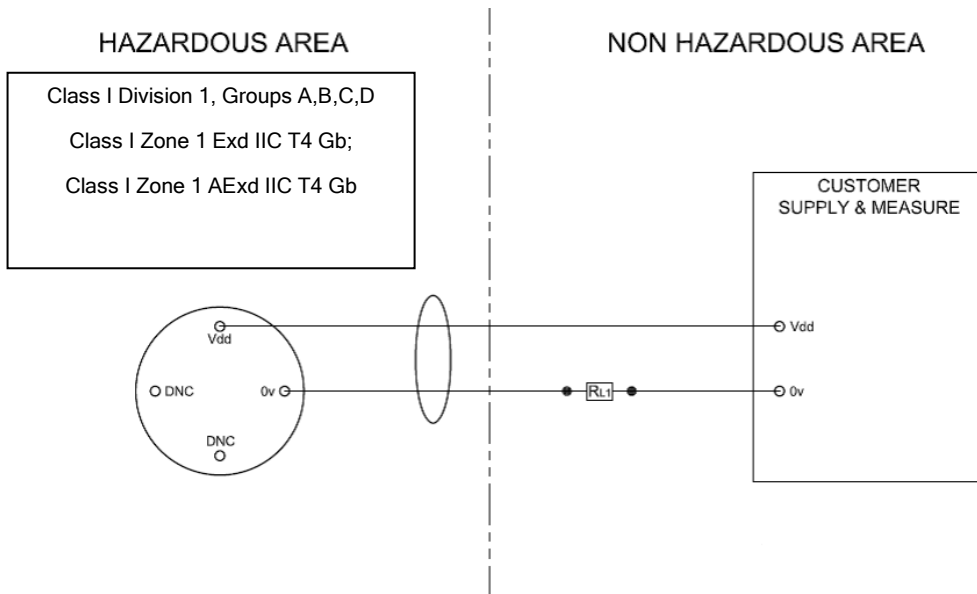
General Voltage Output Modes: (Additional Voltage Mode Specification)

Parameter	Min	Typ	Max	Units	Comments
Operating Current Draw		3.5	5.5	mA	With no external loads
Output Impedance	-10%	80	+10%	Ω	
External Load (sink/source current)			2	mA	Any external output load must not sink or source more than 2mA. Consult factory for further limitations

CURRENT APPLICATIONS

The external loop load (R_L) is optional within limits specified below and includes all connection/harness resistances. Load can be placed in either supply line.

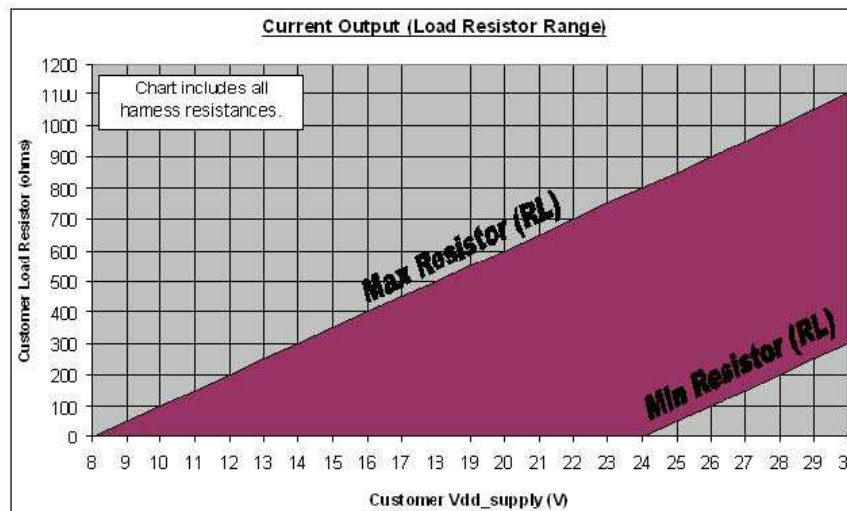
Application Schematic (Example):



Current Output Mode: (Typical output is 4-20mA)

Parameter	Min	Typ	Max	Units	Comments
Supply Voltage (Vdd)	8		30	V	Measured at the input to the transducer terminals.
Pressure Output Current	4		20	mA	Current loop will limit between 25-28mA for protection on overpressure, supply dependent.

R_L Load Limitations for Current Output Mode:



Min Resistor (RL) = $50 * (V_{dd} - 24)$: for $V_{dd} > 24V$

Max Resistor (RL) = $50 * (V_{dd} - 8)$: for $V_{dd} > 8V$

SERVICING

The transducer is not to be repaired by the user and must be replaced by an equivalent certified unit. Repairs should only be carried out by the manufacturer or an approved repairer.

RETURN TO FACTORY

PLEASE NOTE: To comply with Health and Safety requirements, the instrument must be clean and safe to handle and accompanied by a formal statement to that effect duly signed by an authorized officer of the Company.

Any instrument returned without certification will be quarantined and no action will occur until cleared. It may ultimately be returned to you and subject to a transportation charge.

MAINTENANCE

Routine Inspection: Not required except for periodic inspection of the cable and connector to ensure that these are neither damaged nor softened by incompatible liquid

STORAGE & DISPOSAL

When storing or disposing of transducer, take precautions with remaining media - it may be hazardous or toxic. Refit thread protection cap during storage periods.

Dispose of transducer and packaging materials in accordance with local waste treatment disposal regulations of the country or region to which the instrument is supplied.

CONNECTION INFORMATION

Wire Color	Voltage Mode	Current Mode
Red	Supply	Supply
Black	Ground	Return
White	V _{out}	No Connect

