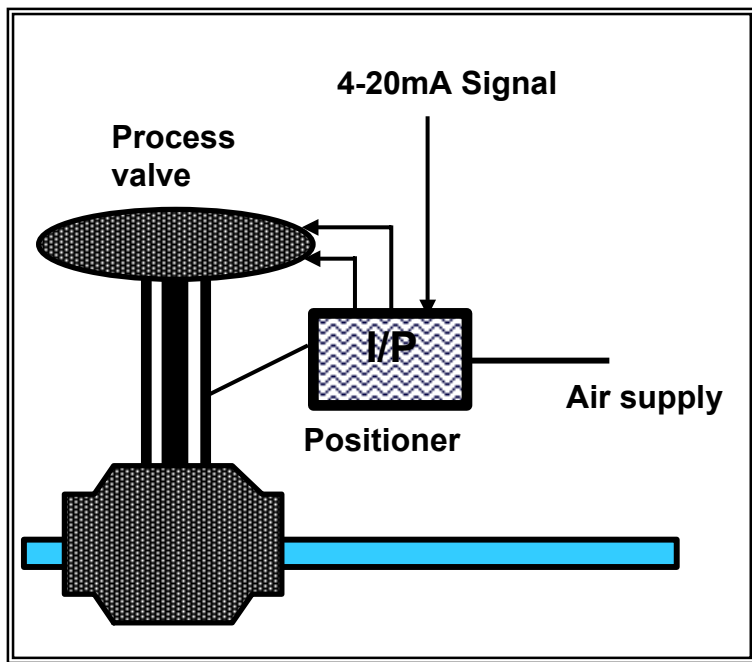


The Type 122E Explosion Proof I/P converter designed for positioner integration, which can typically convert a pneumatic positioner to operate as an electro-pneumatic positioner using proven moving coil and flapper/nozzle technology, with a built in flow regulator to minimize supply pressure effects.

- *Low Cost OEM I/P*
- *Valve Positioner Pilot*
- *Compact and Rugged*
- *Specific Application Customising*
- *Wide Supply Range Available*
- *ATEX Certified*
- *IP66*

TYPICAL APPLICATIONS



Industry:

Any industry requiring higher flows or pressures, i.e Pulp and Paper, Water treatment, Chemical and Power Plant

Solution:

Accurate control of the position of motion control valves via an actuator with accurate positioner control



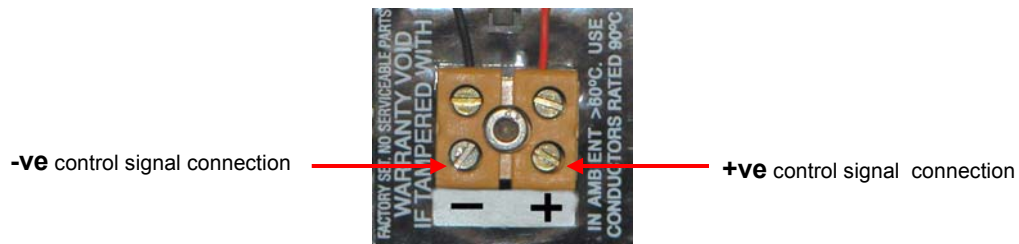
Technical Data

Pneumatic

- Output Pressure 3-15psig;
- Air Supply Oil free, dry air, filtered to <5 microns;
20-150 psig (1.4 –10bar)
- Air Consumption <1.5 nl/min typical
- Response Time $\leq 650\text{msecs}$ from 10 to 90% or
$\leq 350\text{ms}$ from 90 to 10% of output pressure into a 5cc load)
- Linearity $\pm 0.5\%$ of span
- Hysteresis $\pm 0.3\%$ of span
- Temperature Effect Typically less than 0.2% span/deg °C between -40°C to +85°C
- Supply Sensitivity Less than $\pm 0.15\%$ of span for supply pressure change
- Connections Customised to suit customers requirements

Electrical

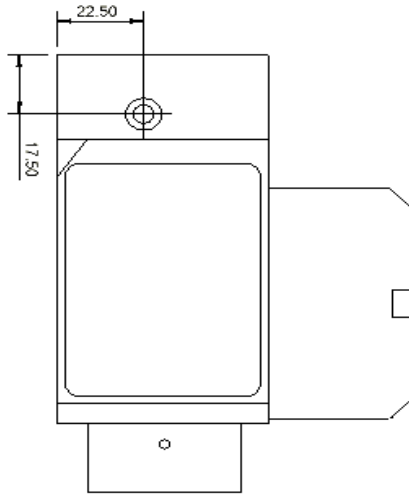
- Electrical Signal 4-20mA (two wire);
- Loop Resistance <250 Ohm
- Failure Mode Signal falls to below 1.7psig (0.12 bar) in <2sec, when input signal fails
- Insulation Resistance >100M Ohm at 850Vdc, electrical terminals to case
- Connections Clamping screw connector terminals.



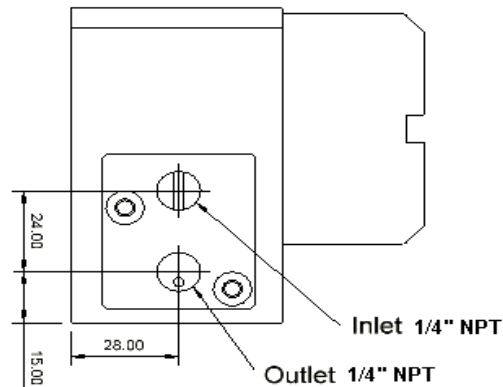
Physical

- Operating Temperature -40°C to +85°C
- Weatherproofing IP66
- Vibration Output pressure changes less than 2% for 2g sine 20-100Hz,
- Electromagnetic Compatibility Compliant with EC requirements
EN 50081-1:1994 (Emissions) and EN50082 2:1995 (Immunity)
- Material of Construction Aluminium housing with nitrile diaphragms, customer specific enclosures available
- Mounting Position Any orientation (re-calibration may be required)

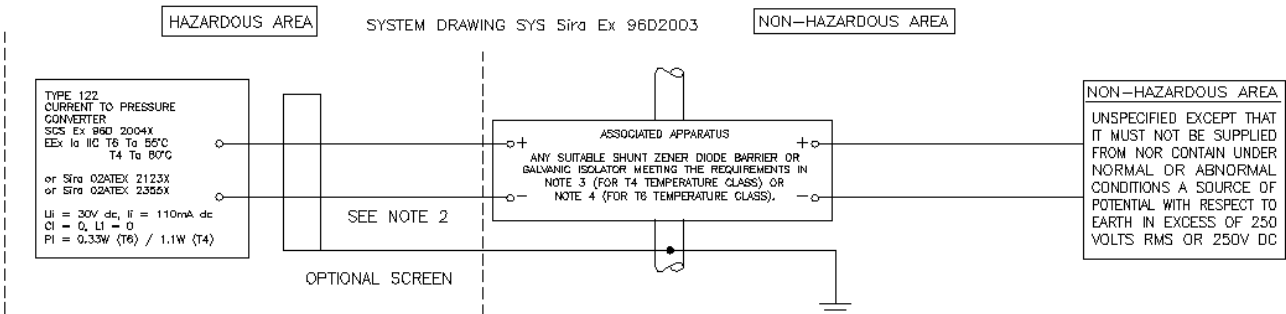
MOUNTING POSITION



PNEUMATIC INSTALLATION



INTRINSICALLY SAFE SYSTEM INSTALLATION



NOTES

1. THE ELECTRICAL CIRCUIT IN THE HAZARDOUS AREA MUST BE CAPABLE OF WITHSTANDING AN A.C. TEST VOLTAGE OF 500 VOLTS R.M.S. TO EARTH OR FRAME OF THE APPARATUS FOR 1 MINUTE.
2. THE CAPACITANCE AND INDUCTANCE OR INDUCTANCE/RESISTANCE (L/R) RATIO OF THE HAZARDOUS AREA CABLES MUST NOT EXCEED THE VALUES SPECIFIED IN TABLE 1.

HAZARDOUS AREA

3. ONE CHANNEL OF A POSITIVE POLARITY, 28V BARRIER OR ISOLATOR, CERTIFIED [EEx ia] IIC OR [EEx ib] IIC, WITH OUTPUT PARAMETERS AS FOLLOWS:

U_o NOT GREATER THAN 28V, I_o NOT GREATER THAN 110mA,
A SOURCE RESISTANCE OF 255 OHMS MINIMUM
 C_o AT LEAST 83nF, L_o AT LEAST 2.9mH, L_o/R_o AT LEAST 46 μ H/OHM
EXAMPLE: MTL 728

4. ONE CHANNEL OF A POSITIVE POLARITY, 28V BARRIER OR ISOLATOR, CERTIFIED [EEx ia] IIC OR [EEx ib] IIC, WITH OUTPUT PARAMETERS AS FOLLOWS:

U_o NOT GREATER THAN 28V, I_o NOT GREATER THAN 110mA,
A SOURCE RESISTANCE OF 600 OHMS MINIMUM
 C_o AT LEAST 83nF, L_o AT LEAST 2.9mH, L_o/R_o AT LEAST 46 μ H/OHM

5. THE INSTALLATION INCLUDING THE BARRIER EARTHING ARRANGEMENTS (IF APPLICABLE), SHALL COMPLY WITH THE INSTALLATION REQUIREMENTS IN THE COUNTRY OF USE, E.G. IEC/EN 60079-14.
INSTALLATION SHALL ALSO BE IN ACCORDANCE WITH THE MANUFACTURER'S GUIDELINES.

TABLE 1.

| GROUP | MAXIMUM CABLE CAPACITANCE FROM EN 50020: 2002 TABLE A2 | MAXIMUM CABLE INDUCTANCE | MAXIMUM CABLE L/R RATIO |
|-------|--|--------------------------|-------------------------|
| IIC | 83 nF | 2.9 mH | 46 μ H/ Ω |
| IIB | 650 nF | 11.7 mH | 185 μ H/ Ω |
| IIA | 2150 nF | 23.5 mH | 370 μ H/ Ω |

Dwg No. 96-133E

CERTIFIED PRODUCT
No modifications are permitted without the approval of the
SIRA

HAZARDOUS AREA CERTIFICATION

The Type 122E is supplied certified for use in Explosion Proof, Intrinsically Safe and Type nL applications, to ATEX requirements.

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ds122E_c_04/07
Controlled Doc. No. 2007-036a

All instruments are tested on the Watson Smith Automatic Testing System and an individual test certificate is provided at no extra charge. Each unit is tested for linearity, hysteresis, total error, air consumption, response time and supply sensitivity.

Our policy is one of continuous research and development. We therefore reserve the right to amend without notice the specifications given in this document. Customers are responsible for ensuring that the product is used only for the purpose for which it is intended. In case of doubt Norgren will be pleased to advise.