

Aerospace and Defense Pressure Transducer SX Series



Made for the rigors of aerospace applications

Design & Application

The SX Series Pressure Transducer's design provides an economical solution to aerospace and defense pressure measurement needs. Key feature of the sensing element is its isolation from induced stresses such as mounting torque, thermal excursions and vibration/shock. The SX was developed to last in high cyclical environments with the presence of water hammer/spiking. The SX is configurable (from single piece orders to large volumes) for various outputs (current, voltage, millivolt), references (absolute/gage) & wetted materials. Available in ranges from 0-50 through 0-30k psi.

Manufacturing & Quality for Precision Measurement

The SX Series is built using an advanced modular assembly process that allows high customization and short delivery times. Automated welding procedures and extreme environmental burn-in, along with the internal protection against harsh environments, give Dylix customers the confidence of long term product reliability.

Dylix's Customer Service

Each transducer is delivered with a NIST traceable calibration certificate. Calibration in accordance with ISA-37-3-1982 (R1995). Annual re-calibration and repair/refurbishment services are available.

Standard Features

- Compact 1" Diameter
- Amplified Output
- All Stainless Steel Construction
- Shock and Vibration Resistant
- $\leq \pm 0.15\%$ FSO Static Accuracy
- $\leq \pm 0.25\%$ FSO/YR stability

Optional Features

- $\frac{3}{4}$ " Diameter
- Customer Specified Electrical Connections
- Special Calibrations
- $\leq \pm 0.1\%$ FSO Static Accuracy
- Alternate Wetted Materials
- Digital Outputs (CANbus, RS485)
- Intrinsically Safe

Contact Dylix Sales for
Other Custom Applications...
sales@dylixcorp.com • 716.773.2985

Specifications: SX Series

Aerospace and Defense Pressure Transducer
0-50 through 0-30K psi

*Baseline Configuration Specs Represented.
Modifications Encouraged - See Below
Custom Designs Available*

Electrical

Output / Excitation

	Output	Excitation
SX1	2 mV/V	2-15 Vdc
SX2	0 to 5 Vdc isolated	10-35 Vdc
SX2	0 to 10 Vdc isolated	14-35 Vdc
SX2	1 to 5 Vdc non-isolated	8-40 Vdc
SX3	4 to 20 mAdc	9-36 Vdc
SX7	4-20 mAdc Intrinsically Safe	

Zero Balance ≤1% FSO at 70° F

FSO Setting ≤1% FSO at 70° F

Resolution Infinite

Response Time

SX1 < 1 mS

SX2, SX3, SX7 < 5 mS

Insulation Resistance 100 M Ω at 50 Vdc

Reverse Polarity Protected

EMI/RFI Internal Filtering (SX2, SX3, SX7)

Surge Protection to 500 volts (Optional)

Short Circuit Protected 40 Vdc (SX2, SX3, SX7)

MTBF (electrical) 25 years at 170° F

Mechanical

Pressure Ranges 0-50 thru 0-30K psi gage/absolute
(Customer may specify any range/eng. unit)

Proof Pressure* 1.5X Full Scale

Burst Pressure* 3X Full Scale

Materials

Wetted Parts* 15-5 ss

Non-Wetted Parts 316 ss plus electrical connector

Pressure Port* 7/16-20 per AS4395E4/MS33656-4

Electrical Connector* Mil-C-26482 Class 3143H-10-6P

Dimensions Per Drawing

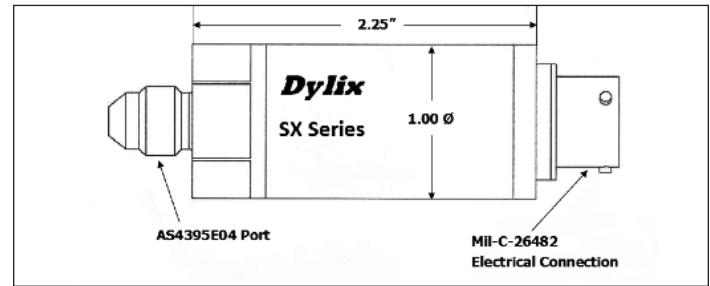
Weight* 10 oz (nominal)

Acceleration Sensitivity <±0.15% FS/G at 50 psi
±0.0015% FS/G at 30k psi

Nat. Freq. of Diaphragm 2kHz at 50 psi 347 KHz at 30k psi

MTBF (mechanical) >10⁷ full scale cycles

Product Dimensions (inches)



Performance

Static Accuracy

Non-Linearity ≤±0.2% FSO

Hysteresis ≤±0.2% FSO

Repeatability ≤±0.1% FSO

Thermal Effect

<±0.005% FSO/°F

Zero/span respectively

Long Term Stability ≤±0.15% FSO per year

Environmental

Compensated Temp Range -30° to 170° F

Operating Temp Range -65° to 250° F

Vibration Function 50 GRMS from
5 Hz to 2,500 Hz

Certifications

CSA/CUS Intrinsically Safe Class I Div. 1 Groups A,B,C,D T4

CSA/CUS Intrinsically Safe Zone 0,1&2 (A)Ex ia IIC T4 Ga

Standard Wiring

Model	Output	+ Power	- Power	+ Signal	- Signal
SX1	mV/V dc 4 wire	Red/Pin 1/Pin A	Black/Pin 2/Pin B	Green/Pin 3/Pin C	White/Pin 4/Pin D
SX2	0-5 (10) Vdc 4 wire	Red/Pin 1/Pin A	Black/Pin 2/Pin B	Green/Pin 3/Pin C	White/Pin 4/Pin D
SX2	0-5 Vdc 3 wire	Red/Pin 1/Pin A	Black/Pin 2/Pin B	Green/Pin 3/Pin C	Black/Pin 2/Pin B
SX3	4-20 mAdc 2 wire	Red/Pin 1/Pin A		Black/Pin 2/Pin B	
SX7	4-20 mAdc 2 wire	Red/Pin 1/Pin A		Black/Pin 2/Pin B	

**Options Available*

Modifications and Warranty

MODIFICATIONS: Transducer/Transmitter applications vary greatly. As such our designs are flexible. Choices such as pressure ports, electrical termination, material compatibility, and performance are a few of the many options available. Specifications on this datasheet represent standard configuration only. Product and company names that may be listed are trademarks of their respective companies. Any and all specifications subject to change without notice.

WARRANTY: Dylux Corporation warrants that its product shall be free from defective workmanship and/or material for a twelve month period from the date of shipment, provided that Dylux Corporation's obligation shall be limited to correcting any defective material. FOB our factory. No allowance will be made for any expenses incurred for correcting any defective workmanship and/or material without written consent by Dylux Corporation. This warranty is in lieu of all other warranties expressed or implied.

*Due to the nature of technology, changes are inevitable.
For latest technical specifications, see our website.*



*A US Designer and Manufacturer of
Pressure Transducers & Transmitters*

Dylux
Corporation

347 Lang Blvd. Grand Island, NY 14072 USA

Phone: 716.773.2985 | Fax: 716.773.2786

Web: dyluxcorp.com

Copyright © 2018 Dylux Corporation • All Rights Reserved
Datasheet SX-1118