

SolidSense II (ATEX)

Superior stability and reliability for demanding pressure measurement applications

The Brooks® SolidSense II® pressure transmitters are designed for stable, accurate, and reliable pressure monitoring in high purity and ultra-high purity (UHP) applications. A combination of optimum design and materials improves both signal stability and reliability in numerous pressure measurement applications. Pressure transmitters are widely used in high purity and ultra-high purity fluid storage and delivery systems in many industries. Unfortunately, a number of current transducers rely on technologies that have problems with zero and span drift, thermal shift, and case stress. Adjusting the transmitter to rectify errors requires ongoing maintenance that increases downtime and cost of ownership.



Features

Two Pairs of Strain Gauge Sensors

Glass Fusion Process to Bond Strain Gauge

Stress Isolation Stage

Digital Temperature Compensation

Digital Linearization and Calibration

Fully Swept Flowpath

Benefits

Precision matched sensors for improved performance

High temperature glass bonding drives off any mechanically induced build up of stress from sensor manufacturing process

Minimizes stress introduced during installation of the transducer

Improved thermal stability over entire range of temperature

Consistency of performance, improved reproducibility

Ensures contamination-free pressure measurement

Product Specifications

Performance – Operating Temperature

Storage	-20°F to 180°F (-29°C to 82°C)
Compensated	-4°F to 140°F (-20°C to 60°C)
Burst Pressure	400% F.S.
Proof Pressure	200% F.S. up to 1,000 psi, 150% F.S. for higher ranges
Accuracy	+0.25% F.S. (BFSL)
Response Time	<5 msec

Performance – Zero and Span Temperature Coefficient (each)

>100 PSI Ranges Full Scale	+0.02% F.S./°F (-40°F to 140°F, -20°C to 60°C)
<100 PSI Ranges Full Scale	+0.04% F.S./°F (-40°F to 140°F, -20°C to 60°C)

Mechanical

Housing	Stainless steel, polymer plastics
Wetted Parts	316L stainless steel, SEMI F20
Surface Finish	Compliant with SEMI F19
Cleanliness	Compliant to ASTM F1374-92 (2005)
Internal Volume	1.79cc
Process Connections	See Model Code for available options
Approximate Shipping Weight	0.70 lb. (0.32 kg)

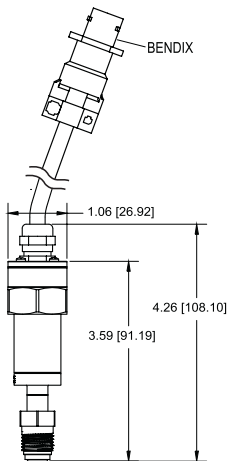
Electrical

Supply Current	Maximum 10 mA for 0.05 to 5.05 Vdc output
Power Requirements	10 to 30 Vdc for 4 to 20 mA output 11 to 30 Vdc for 0.05 to 5.05 Vdc output
Electrical Connections	See Model Code for available options
Electrical Protection	Reverse polarity for power connections

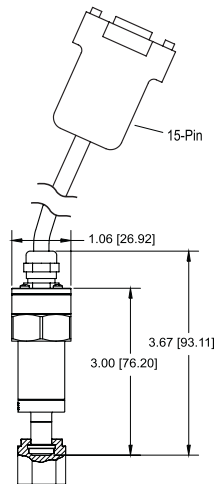
Approvals & Compliance

ATEX (for ATEX compliant units only):	II 3 G Ex ec IIC T4 Gc DEKRA 12ATEX 0043X
IECEX (for ATEX/IECEX compliant units only)	II 3 G Ex ec IIC T4 Gc IECEX DEK 12.0011X
EMC	Compliant to EU Directive 2004/108/EC
RoHS	Compliant to EU Directive 2011/65/EU
FM Approval	Non-Incendive for use in Class I, Div II Groups A, B, C and D Hazardous Applications Excludes 15-pin HD D-Sub connector configurations
NEMA	Enclosure complies to NEMA 4X
KOSHA	Ex ec IIC T4 14-AV4BO-0492
NEPSI	Ex ec IIC T4 Gc GYJ13.1329X

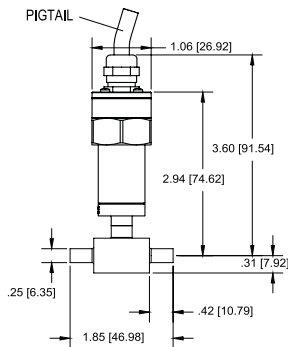
SolidSense II ATEX Series - VCR® Swivel Male Fitting



SolidSense II ATEX Series - VCR® Swivel Female Fitting



SolidSense II ATEX Series - Tube Stub / Tube Stub ThruTube



Note: Bendix, 15-pin and pigtail available on all ATEX process fittings.
Limited examples are shown above.
For all electrical connection and fitting options see the Model Code Table
Additional dimensional drawings are available on request.

Code Description	Code Option	Option Description
I. Base Model Code	GF	Pressure Transducer
II. Body Type	D	Dead End
	F	Flow Through
III. Pressure / Vacuum Range *Refer to available combinations in Range/Unit table below	00	30
	45	45
	60	60
	01	100
	02	250
	X1	150
	X2	235
	05	500
	10	1000
	25	2500
	30	3000
	15	1500 Torr
IV. Pressure / Vacuum Units (Full Scale Range) *Refer to available combinations in Range/Unit table below	A	Absolute, psi
	C	Compound, psi
	G	Gauge, psi
	B	Absolute, Bar
	P	Compound, Bar
	S	Gauge, Bar
	F	Absolute, KPa
	R	Compound, KPa/MPa
	K	Gauge, KPa
	E	Absolute, MPa
	D	Gauge, MPa
	T	Torr
V. Output	4	4 to 20 mA
	5	0.05 to 5.05 Vdc
VI. Electrical Connection	P	2m Pigtail
	Q	12" Pigtail with M12 Connector
	L	3m Pigtail
	E	9 inch Pigtail w/15-pin (standard) D-sub Connectors
	N	16.5 foot cable with Bendix® Type (Bayonet)
VII. Fittings	4S	Tube Weld Stub 1/4" O.D. (GFD Only) ¹
	CS	Surface Mount, 1.125" C-Seal, Standard (GFD Only)
	CH	Surface Mount, 1.5" C-Seal, High Flow K1H (GFD Only)
	SC	Surface Mount, 1.5" C-Seal (GFD Only)
	NT	1/4" NPT (GFD only)
	VM	Face Seal, fixed male (x2 on Duncan T for GFF)
	VS	Face Seal, fixed male/swivel female on Duncan T (GFF Only)
	SM	Face Seal, swivel male (x2 on Duncan T for GFF)
	SF	Face Seal, swivel female (x2 on Duncan T for GFF)
	4T	Duncan T, 1/4" Tube Weld Stub (GFF Only) ¹
VIII. Explosion Proof	A	FM and ATEX approved

¹ Tube stubs (4S and 4T) are not suitable for compression joint.

Sample Model Code

I	II	III	IV	V	VI	VII	VIII
GF	F	02	C	4	P	SF	A

***Range/Unit Available Combinations Table**

III. Pressure/ Vacuum Range Code		Select Range →	00	45	60	01	X1	X2	02	05	10	14	15	25	30
IV. Pressure / Vacuum Units (Full Scale Range)	A	PSI (A)	30	-	60	100	-	-	250	500	1000	-	-	2500	3000
	C	PSI (C)	30	45	60	100	150	235	250	500	1000	-	1500	2500	3000
	G	PSI (G)	30	-	60	100	-	-	250	500	1000	-	-	2500	3000
	B	BAR (A)	2	-	-	7	-	-	17	34	69	100	-	172	207
	P	BAR (C)	2	-	-	7	-	-	17	34	69	-	-	172	207
	S	BAR (G)	2	-	-	7	-	-	17	34	69	-	-	172	207
	F	KPa (A)	207	-	-	-	-	-	-	-	-	-	-	-	-
	R	KPa (C)	207	-	-	-	-	-	-	-	-	-	-	-	-
	K	KPa (G)	207	-	-	-	-	-	-	-	-	-	-	-	-
	E	MPa (A)	.29	-	-	.69	-	-	1.7	3.4	6.9	-	-	17.2	20.7
	R	MPa (C)	-	-	-	.69	1	-	1.7	3.4	6.9	-	-	17.2	20.7
	D	MPa (G)	-	-	-	.69	-	-	1.7	3.4	6.9	-	-	17.2	20.7
	T	Torr (T)	-	-	-	-	-	-	-	500	1000	-	1500	-	-

(A)=Absolute, (C)=Compound, (G)=Gauge

Brooks is committed to assuring all of our customers receive the ideal flow solution for their application, along with outstanding service and support to back it up. We operate first class repair facilities located around the world to provide rapid response and support. Each location utilizes primary standard calibration equipment to ensure accuracy and reliability for repairs and recalibration and is certified by our local Weights and Measures Authorities and traceable to the relevant International Standards.

Visit www.BrooksInstrument.com to locate the service location nearest to you.

START-UP SERVICE AND IN-SITU CALIBRATION

Brooks Instrument can provide start-up service prior to operation when required. For some process applications, where ISO-9001 Quality Certification is important, it is mandatory to verify and/or (re)calibrate the products periodically. In many cases this service can be provided under in-situ conditions, and the results will be traceable to the relevant international quality standards.

CUSTOMER SEMINARS AND TRAINING

Brooks Instrument can provide customer seminars and dedicated training to engineers, end users, and maintenance persons. *Please contact your nearest sales representative for more details.*

Due to Brooks Instrument's commitment to continuous improvement of our products, all specifications are subject to change without notice.

TRADEMARKS

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