



Main features

- Ranges: from 0...50bar to 0...1000bar (from 0...750psi to 0...15000psi)
- Accuracy: $\pm 0.1\%$ FSO typical
- Current output signal
- Protection: IP65/IP67
- Wetted parts 17-4PH
- Ambient / process temperature T4 (-40°...+80°C)

The XPSA transmitters are based on the extensimetric measurement principle. The mechanical structure makes the sensor insensitive during the tightening phase. This transmitter is suitable for all those applications which require robustness as well as a high accuracy. The series can be used in applications characterized by the presence of explosive atmosphere. For this reason the probes are designed and manufactured according to the ATEX 94/9/CE Directive.

Main intrinsic safety characteristics

Transmitter designed and produced in compliance with Directive 94/9/CE ATEX and according to European standards for the Second group (II-surfaces), category 1, explosive atmosphere with presence of gases, fumes or mists (G) protection mode Ex ia T6, T5, T4.



EC-Type Examination Certificate number: CESI 04 ATEX 075
Type of protection: II 1G Ex ia IIC T6/T5/T4

TECHNICAL DATA

	Output signal	CURRENT
Accuracy (1)		$\pm 0.1\%$ FSO typical; $\pm 0.15\%$ FSO max
Resolution		Infinite
Overpressure (without degrading performance) (2)		See table
Pressure containment (Burst test) (3)		See table
Pressure media		Fluid compatible with INOX 17-4PH Stainless Steel
Body materials		Stainless Steel INOX AISI 304 and Nylon 66GF35V0
Power supply		10...30Vdc
Supply sensitivity		$< 0.0015\%$ FSO/V
Insulation resistance		$> 1000 \text{ M}\Omega @ 50\text{Volt}$
Zero output signal		4mA
Full scale output signal		20mA
Max allowed load		see diagram
Long term stability		$< 0.1\%$ FSO/year
Operating temperature range (process/ambient)		-40...+80°C (-40...+176°F)
Compensated temperature range		-10...+70°C (+14...+158°F)
Storage temperature range		-40...+125°C (-40...+257°F)
Temperature effects over compensated range (zero-span)		$\pm 0.01\%$ FSO/°C typical ($\pm 0.015\%$ FSO/°C max.)
Response time (10...90%FSO)		$< 1 \text{ msec.}$
Start-up time		$< 500 \text{ msec.}$
Mounting position effects		Negligible
Humidity		Up to 100%RH non condensing
Weight		110 gr. nominal
Mechanical shock		100 g / 1 msec. according to IEC 68-2-6
Vibrations		20 g max @ 15-2000Hz according to IEC68-2-6
Ingress protection		IP65/IP66/IP67
Output short circuit and reverse polarity protection		YES

FSO = Full Scale Output

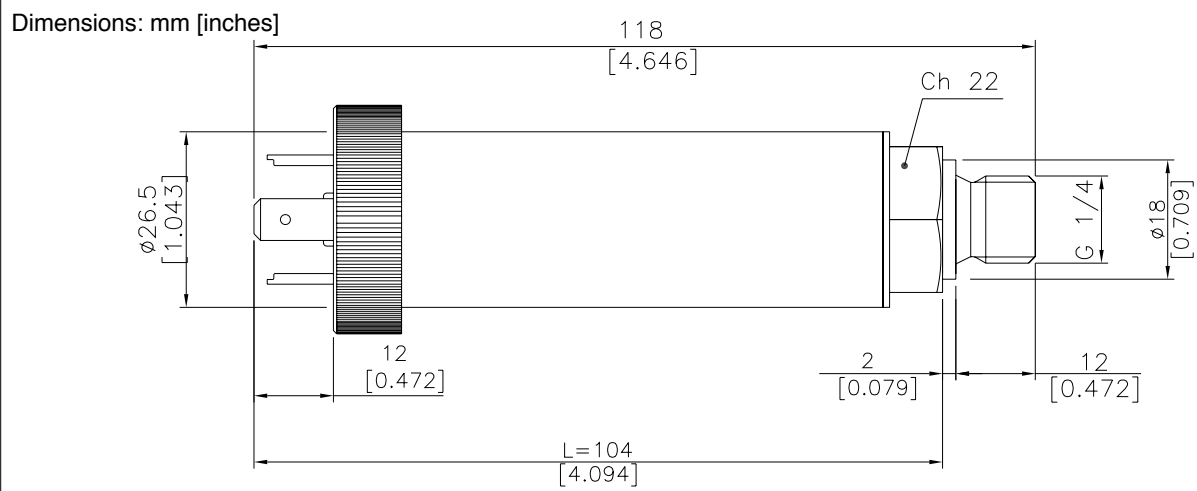
1 Includes combined effects of Non-Linearity BFSL (Best Fit Straight Line), Hysteresis and Repeatability.

2 tested for more than 1000 strokes with single duration $< 2\text{msec.}$

3 tested for more than 100 strokes with single duration $< 2\text{msec.}$

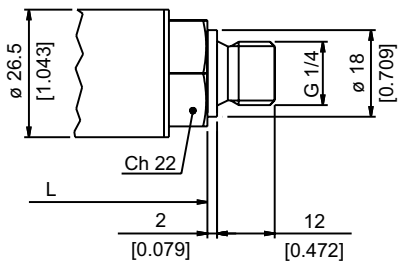
MEASUREMENT RANGE (Bar)	50	100	160	200	250	350	400	500	600	700	1000
Overpressure	150	300	480	600	750	1050	1200	1500	1800	2000	2000
Burst test	250	500	800	1000	1250	1750	2000	2500	2500	2500	2500

INSTALLATION DRAWINGS

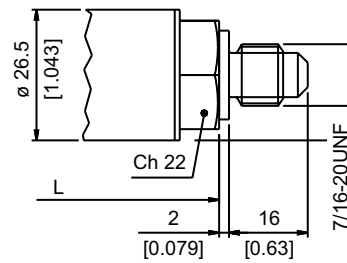


PRESSURE CONNECTION

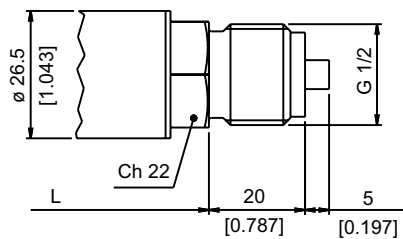
(1) G 1/4 MALE (DIN 3852-A)



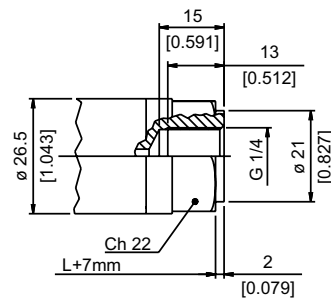
(2) SAE 04 AS4395-E



(3) G 1/2 A (DIN 16288)

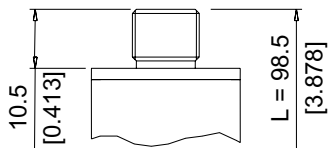


(4) G 1/4 FEMALE

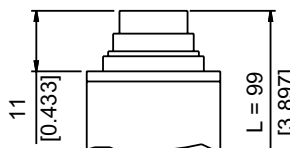


ELECTRICAL CONNECTION

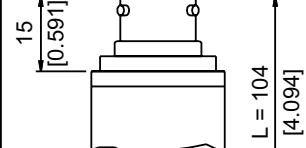
Z-4 pole connector
M12x1



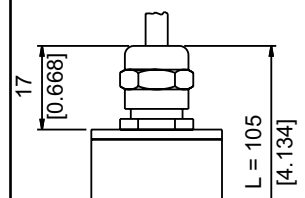
P-7 pole connector



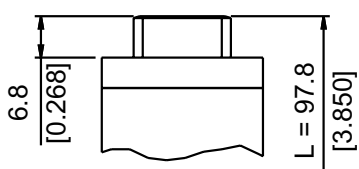
V-6 pole connector



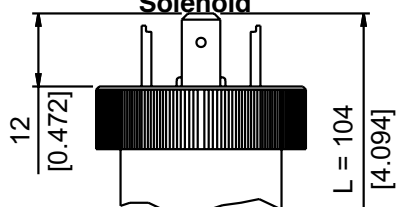
F-2 pole cable



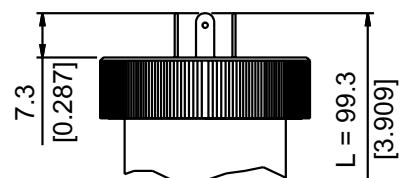
H-G4A1M 4 pole
male connector



E-4 pole connector
Solenoid



M-4 pole connector
Microsolenoid



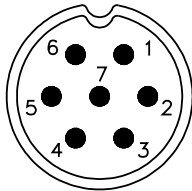
INTRINSIC SAFETY CHARACTERISTICS

		II 1G Ex ia IIC T6	II 1G Ex ia IIC T5	II 1G Ex ia IIC T4
Maximum voltage	U _i	30Vdc	30Vdc	30Vdc
Maximum current	i _i	100mA	100mA	100mA
Maximum power	P _i	0.75W	0.75W	0.75W
Maximum inductance (*)	L _i	0.25 mH	0.25 mH	0.25 mH
Maximum capacity (*)	C _i	26nF	26nF	26nF
Temperature of the fluid		-40...+60°C	-40...+70°C	-40...+80°C
Ambient temperature		-40...+60°C	-40...+70°C	-40...+80°C

(*) includes inductance levels and capacity of a cable: (typical L 1 μH/m and typical C 100 pF/m) with maximum length 15mt.

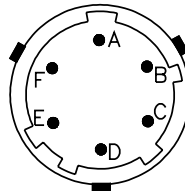
ELECTRICAL CONNECTION - Connectors

P - 7-pole connector



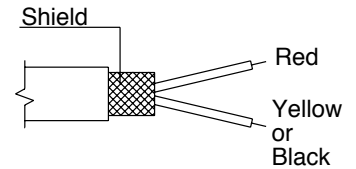
Male connector 09-127-09-07
Protection IP67

V - 6-pole connector



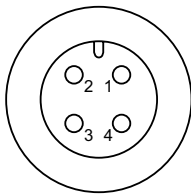
Male connector VPT02A10-6PT2
Protection IP66

F - 2 pole cable



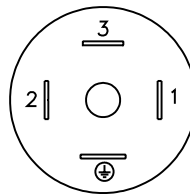
Shielded cable 2x0.25 - 2m.
Protection IP65

Z - 4 pole male connector M12 x 1



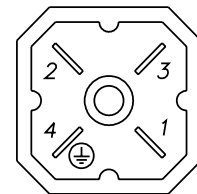
4 pole series 713 male connector
Protection IP67

E - 4 pole solenoid connector M - 4 pole microsolenoid connector



Solenoid DIN 43650A - ISO4400
Protection IP65
Microsolenoid DIN 43650C - ISO4400
Protection IP65

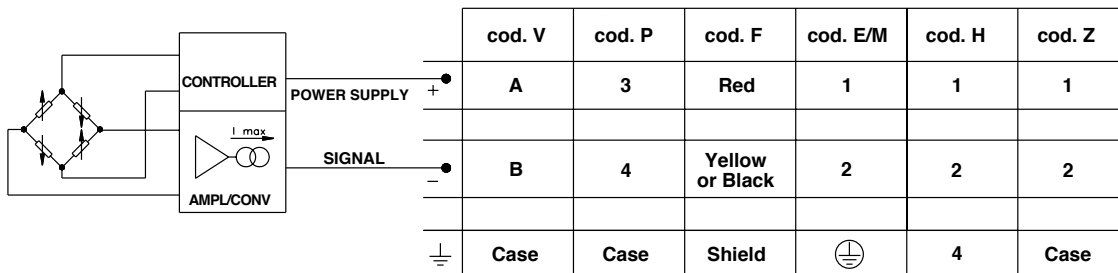
H - 4-pole connector



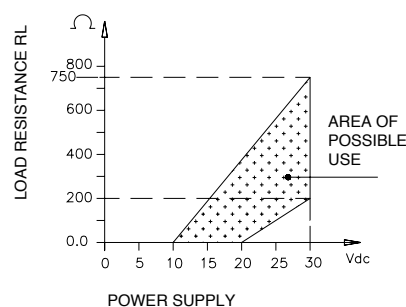
Male connector G4A1M
Protection IP65

ELECTRICAL CONNECTION - Connection diagrams

CURRENT AMPLIFIED OUTPUT - mod. E



LOAD DIAGRAM
(Current output)



ACCESSORIES ON REQUEST

Connectors

Connection E

3 poles Connector + ground DIN43650A ISO4400
Prot. IP65

Connection M

3 poles Connector + ground DIN43650C ISO4400
Prot. IP65

Connection Z

4 pole female cable connector M12x1
Prot. IP67

Connection Z

4 pole female cable connector, 90° M12x1
Prot. IP67

CON 006

CON 008

CON 293

CON 050

Connection P

7 pole female cable connector
Prot. IP67

Connection P

7 pole female cable connector
Prot. IP40

Connection P

7 pole female cable connector, 90°
Prot. IP40

Connection V

6 pole female cable connector
Prot. IP66

CON 321

CON 320

CON 322

CON 300

ORDERING INFORMATION

Pressure transmitter

XPSA



OUTPUT SIGNAL	
Standard	4 .. 20 mA E

PRESSURE CONNECTION	
Standard	G 1/4 gas male 1
On request	7/16-20UNF-2A male (SAE4 per AS4395-E) 2
	G 1/2A (DIN 16288) 3
	G 1/4 gas female 4

ELECTRICAL CONNECTIONS	
4-pole connector solenoid	E
Shielded cable	F
4 pole connector	H
4-pole connector microsolenoid	M
7 pole connector	P
6 pole connector	V
M12x1 - 4 pole connector	Z

Mechanical and/or electrical characteristics differing from standard may be arranged on request.

TEMPERATURE CLASS	
4	T4 (-40...+80°C)
5	T5 (-40...+70°C)
6	T6 (-40...+60°C)

RESPONSE TIME	
V	Fast (< 1msec)

ACCURACY	
T	± 0.1% FSO Typical

RANGE			
	bar		psi
B05D	0..50	P75D	0..750
B01C	0..100	P15C	0..1500
B16D	0..160	P20C	0..2000
B02C	0..200	P25C	0..2500
B25D	0..250	P03M	0..3000
B35D	0..350	P05M	0..5000
B04C	0..400	P75C	0..7500
B05C	0..500	P10M	0..10000
B06C	0..600	P15M	0..15000
B07C	0..700		
B01M	0..1000		

Ex.: XPSA - E - 1 - E - B35D - T - V - 4

Intrinsically safe pressure transmitter, with 4 to 20mA signal output, G 1/4 male pressure connection, DIN43650A solenoid electrical connector, 0...350bar measurement range, ± 0.1% FSO accuracy, 1msec response time T4 temperature class (-40...+80°C).

Sensors are manufactured in compliance with:

- EMC 2004/108/CE compatibility directive
- RoHS 2002/95/CE directive
- ATEX 94/9/CE

Electrical installation requirements and Conformity certificate are available on our web site: www.gefran.com

CALIBRATION STANDARDS

Instruments manufactured by Gefran are calibrated against precision pressure calibration equipment which is traceable to International Standards.

GEFRAN spa reserves the right to make any kind of design or functional modification at any moment without prior notice

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