



positioned behind the contact membrane, is realised in silicon through microprocessing techniques.

The micro structure includes the measurement membrane and piezoresistors.

The minimum deflection required by the sensitive element makes it possible to use very robust mechanics.

The process contact membrane can be up to 35 times thicker than the membrane used in traditional Melt sensors.

#### ADVANTAGES

- Total compatibility with the European RoHS Directive
- High strength
- Long life
- Working temperature: up to 350°C
- Excellent read stability over time
- Fast response time < 1ms

#### MAIN FEATURES

- Pressure ranges up to 3000 bar for dynamic applications
- Accuracy 0,5%
- Standard threading 1/2-20UNF
- Contact diaphragm with diameter reduced by 7.8 mm for installation in nozzles
- Autozero function on board / external option
- Sensor housing is smaller, with flexible diameter for easy installation in very narrow areas
- Remote electronics
- Available outputs: 0-10 V (N) or CAN Open (D)
- Software selection of Baudrate and Node-ID (option D)
- Setpoint function and 2 settable alarm setpoints (option D)
- Multi-patented product

GTP (advanced protection)

Coating is highly resistant to corrosion, abrasion, and high temperatures

#### AUTOZERO FUNCTION

All signal variations in the absence of pressure can be eliminated by using the Autozero function. Function is activated via external autozero or SDO CANopen.

The procedure is permitted only with pressure at zero".

The Autozero function should be activated ONLY when the sensor is completely installed on the system.

The "IMPACT" series of Gefran, are pressure transmitters, without transmission fluid, for using in High temperature environment (350°C).

Medium pressure is transferred directly to the sensitive silicon element via a thick diaphragm.

Strain is transduced by a micro-worked silicon structure (MEMS).

The operating principle is piezoresistive. "IMPACT" is Gefran's exclusive series of high-temperature pressure sensors that use the piezoresistive principle.

The main characteristic of "IMPACT" sensors is that they do not contain any transmission fluid. The sensitive element, directly

### TECHNICAL SPECIFICATIONS

Accuracy (1)	±0,5%FSO
Repeatability	±0,2%FSO
Measurement range	3000bar / 40000psi
Overpressure without degrading	3500 bar
Measurement principle	Piezoresistive
Power supply	15...30Vdc (N), 12...40Vdc (D)
Maximum current absorption	25mA (N) 40mA (D) (2)
Insulation resistance (at 50Vdc)	>1000 MOhm
Output signal Full Scale FSO	10Vdc (N) Depends on FSO (D)
Zero balance tolerance (tolerance ± 0.25% FSO)	0Vdc (N) 0 (D)
Zero signals adjustment (tolerance ± 0.25% FSO)	"Autozero" function
Maximum allowed load	1mA
Response time (10...90% FSO)	1ms (N) 0,5ms - 2kHz (D)
Output noise (RMS 10-400Hz)	< 0.025% FSO
Output short circuit ingress and reverse polarity protection	YES
Housing compensated temperature range	0...+85°C
Housing operating temperature range	-30...+105°C
Housing storage temperature range	-40...+125°C
Sensor compensated temperature range	+20...+350°C
Maximum diaphragm temperature	350°C / 660°F
Zero signal variation due to process temperature variation in range (100-350°C)	< ± 1%FSO
Full-scale signal variation due to process temperature variation in range (20-350°C)	< ± 1%FSO
Contact diaphragm with process	15-5 PH GTP
Protection degree	IP65
Electrical connection (0-10 V output)	6-pin / 7-pin / 8-pin connector
Tightening torque	30...45Nm
<b>CANopen OUTPUT (D)</b>	
Protocol	DP404 CANopen, with Baudrate selectable from 10k to 1MB (Default 500KB)
Electrical connection	5 pin M12, DIN EN50044 connector

FSO = Full scale output

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

(2) Connections: 24VDC power supply

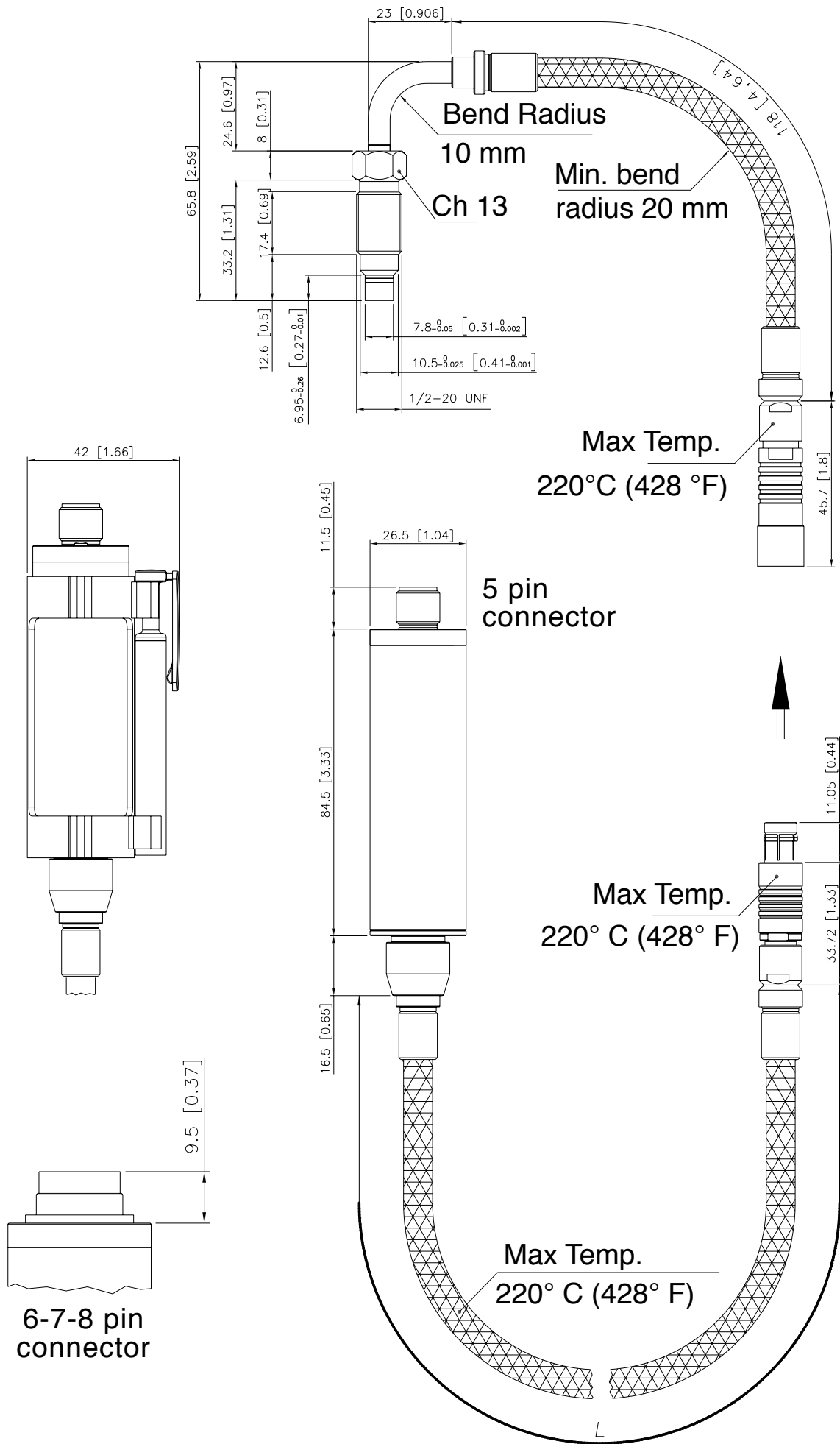
(3) Resolution: 0,01 bar da 35...500bar

0,1 bar da 700...300bar

0,1 psi da 500...5000psi

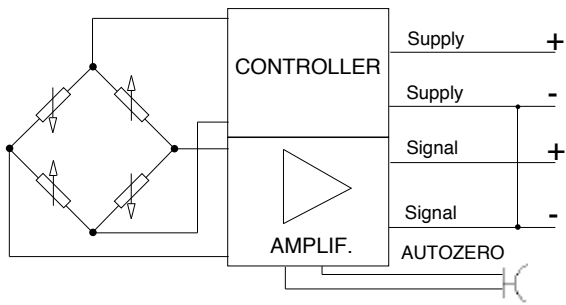
1 psi da 7500...40000psi

# MECHANICAL DIMENSIONS



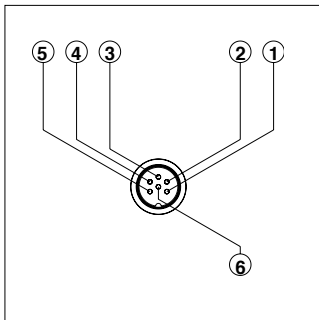
# ELECTRICAL CONNECTIONS

## OUTPUT VOLTAGE (N) 15...30VDC power supply

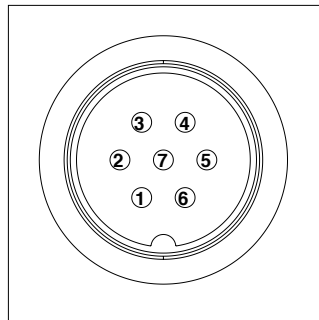


The shield is connected to the transducer body.

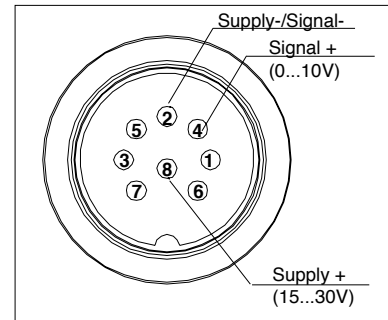
6-pin	7-pin	8-pin
4 white	4 white	8 white
5 green	5 green	2 black
6 red	6 red	4 red
1 black	1 black	2 black
2 blue autozero - 3 orange autozero +	2 blue autozero - 3 orange autozero +	1 blue 6 orange
	7 NC	3 - 5 - 7 NC



6 pin connector (Binder)  
M16 DIN/EN45322  
(09-0323-00-06)

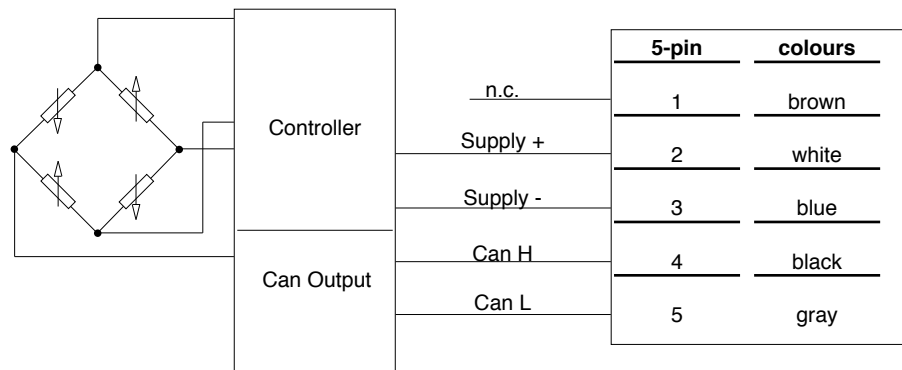


7 pin connector (Binder)  
M16 DIN/EN50044  
(09-0127-09-07)

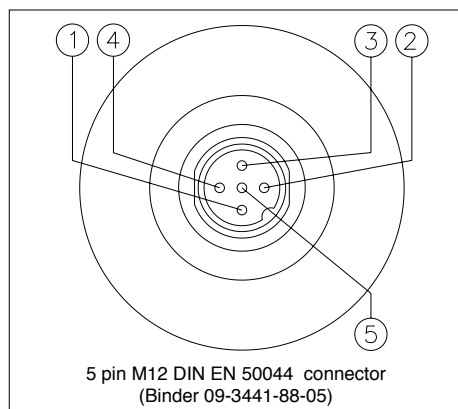


8 pin connector (Binder)  
M16 DIN/EN45326  
(09-0173-00-08)

## (D) CAN BUS DP404 DIGITAL OUTPUT

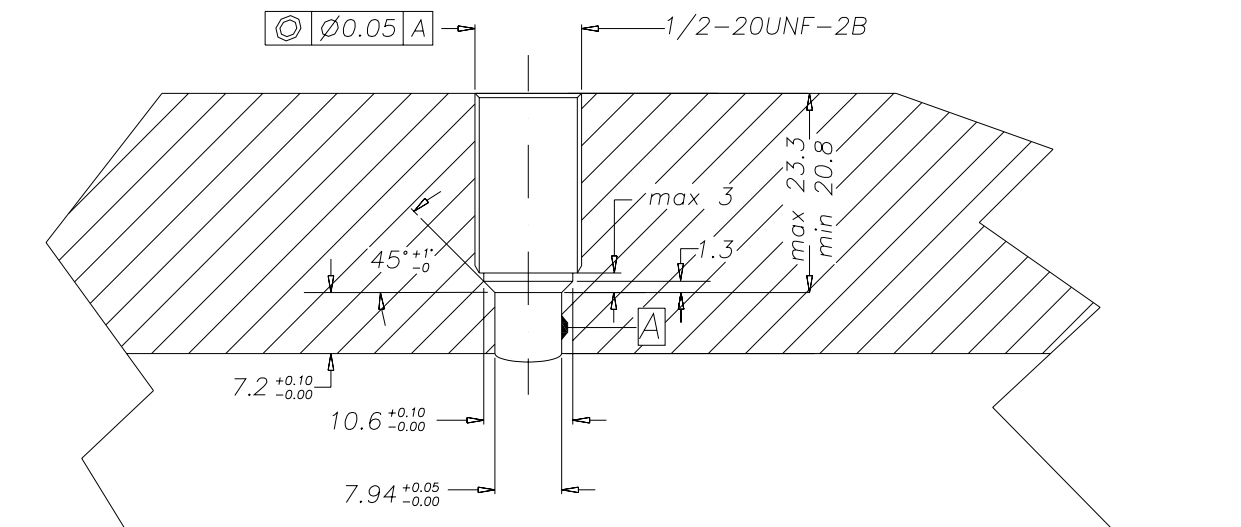


The shield is connected to the transducer body. We advise connection to mass and from instrument side.



## ASSEMBLY

### DETAIL OF HOUSINGS



## ACCESSORIES

### Connectors

- 7-pin female connector (IP40 protection degree)
- 7-pin female connector 90° (IP40 protection degree)
- 5-pin female connector M12 (IP65 protection degree)
- 6-pin female connector (IP67 protection degree)
- 8-pin female connector (IP40 protection degree)

**CON320**  
**CON322**  
**CON031**  
**CON022**  
**CON026**

### Extension cables for 0...10V output

- 7-pin connector with 3m cable
- 7-pin connector with 5m cable
- 7-pin connector with 10m cable

**PCAV151**  
**PCAV152**  
**PCAV153**

### Extension cables for CANopen output

- 5-pin M12 connector with 2m cable
- 5-pin M12 connector with 5m cable
- 5-pin M12 connector with 10m cable
- Other lengths

**CAV011**  
**CAV012**  
**CAV013**  
**on request**

### Accessories

- Mounting bracket
- Dummy plug for 1/2 - 20 UNF
- Drill kit for 1/2-20 UN F
- Cleaning kit for 1/2-20 UNF

**SF18**  
**SC12**  
**KF12**  
**CT12**

#### Option N 6-7 pin

##### Cod. cable colour

Conn.	Wire
1	Black
2	Blue
3	Orange
4	White
5	Green
6	Red
7	n.c.

#### Option D

##### Cod. cable colour

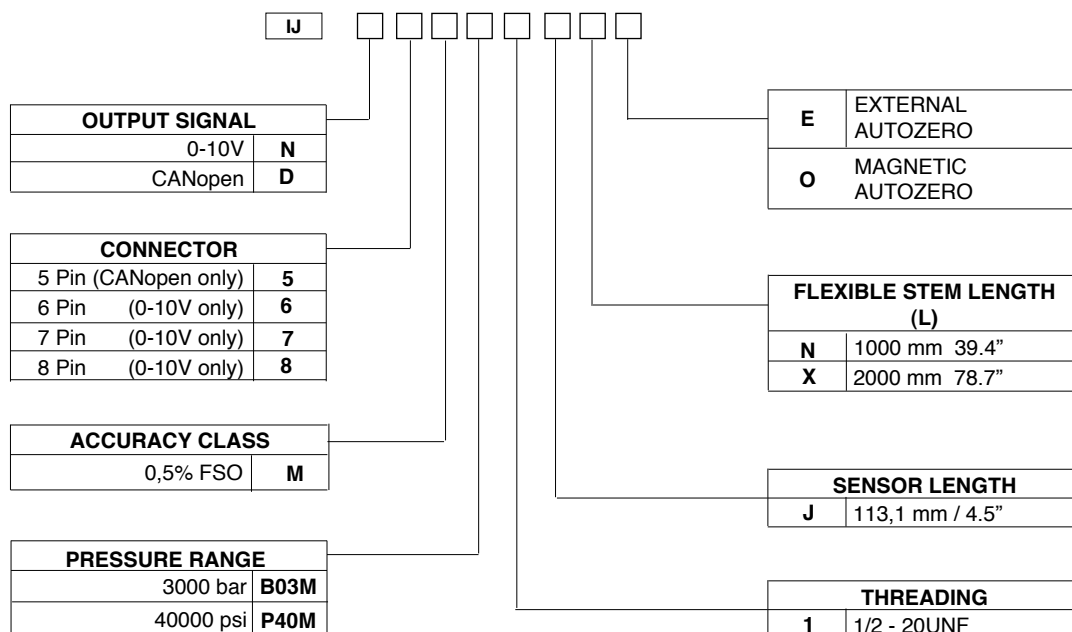
Conn.	Wire
1	n.c.
2	White
3	Blue
4	Black
5	Gray

#### Option N 8 pin

##### Cod. cable colour

Conn.	Wire
1	Blue
2	Black
3	n.c.
4	Red
5	n.c.
6	Orange
7	n.c.
8	White

## ORDER CODE



Example

### **IJ-N-6-M-B03M-1-J-N-E**

Melt pressure transducer without filling for injection, 0..10V output, 6-pin connector, accuracy class 0,5%, 3000 bar pressure range, 1/2-20 UNF threading, sensor length 113.1 mm, 1 m flexible stem, external autozero.

Sensors are manufactured in compliance with:

- EMC 2004/108/CE compatibility directive
- RoHS 2002/95/CE directive

Electrical installation requirements and Conformity certificate are available on our web site: [www.gefran.com](http://www.gefran.com)

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

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