



### Main Features

- Ranges: from 1 to 1000 bar
- Nominal Output Signal:  
0...10V (3 wires) / 4...20 mA (2 wires)
- Compact size
- Wetted parts: Stainless Steel

KS transmitters are based on film sensing element deposited on stainless steel diaphragm. Thanks to highly stable electronic and compact design these transducers can be used in applications requiring long-distance signal transmission or in smart control systems. KS pressure transmitters are designed mainly to measure pressure in oil, air, and hydraulic circuits. They can also be used in the technical and process measurement application as well as for compressors, presses and mobile hydraulic.

### TECHNICAL DATA

	VOLTAGE	CURRENT
Output signal		
Accuracy (1)	< ±0.5% FSO	
Pressure ranges (2)	From 1 bar to 1000 bar (see table)	
Resolution	Infinite	
Overpressure (without degrading performance)	see table below	
Pressure containment (burst test)	see table below	
Pressure Media	Fluids compatible with Stainless Steel AISI 430F and 17-4PH	
Housing	Stainless Steel AISI 304	
Power supply	15...30Vdc	10...30Vdc
Dielectric strenght	250 Vdc	
Zero output signal	0 V (nominal)	4 mA (nominal)
Full scale output signal	10 V (nominal)	20 mA (nominal)
Max allowed load	2 mA	see load diagram
Long term stability	< 0.2% FSO/per year	
Operating temperature range (process)	-40...+125°C (-40...+257°F)	
Operating temperature range (ambient)	-40...+105°C (-40...+221°F)	
Compensated temperature range	-20...+85°C (-4...+185°F)	
Storage temperature range	-40...+125°C (-40...+257°F)	
Temperature effects over compensated range (zero-span)	± 0.015% FSO/°C typical (± 0.02% FSO/°C max.)	
Response time (10...90%FSO)	< 1 msec.	
Warm-up time (3)	< 30 sec.	
Mounting position effects	Negligible	
Humidity	Up to 100%RH non-condensing	
Weight	80-120 gr. nominal	
Mechanical shock	100g/11 msec according to IEC 60068-2-27	
Vibrations	20g max at 10...2000 Hz according to IEC 60068-2-6	
Ingress protection	sealed to IP65/IP67	
Output short circuit and reverse polarity protection	YES	
CE Conformity	EC Directive 2004/108/CE	

FSO = Full Scale Output

1 Incl. Non-Linearity, Hysteresis, Repeatability, Zero-offset and Final-offset (acc. to IEC 61298-2)

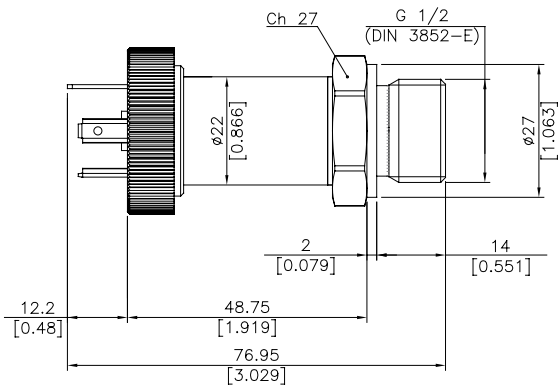
2 The operating pressure range is intended from 0.5% to 100% FS

3 Time within which the rated performance is achieved

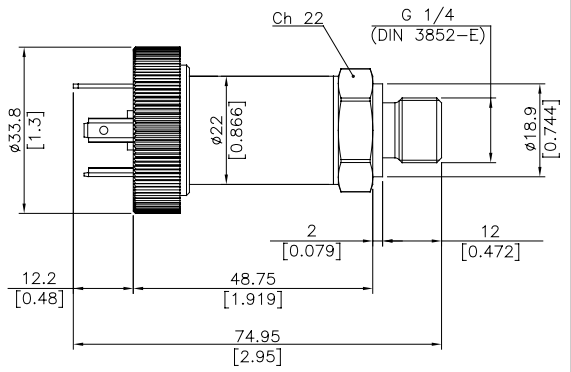
RANGE (Bar)	1	1.6	2	2.5	4	6	10	16	20	25	40	60	100	160	200	250	400	600	1000
Overpressure (Bar)	6	6	6	10	10	20	20	32	40	50	80	120	200	320	400	500	800	1200	1200
Burst pressure (Bar)	9	9	9	15	15	30	40	64	80	100	160	240	400	640	800	1000	1500	1500	1500

# INSTALLATION DRAWINGS

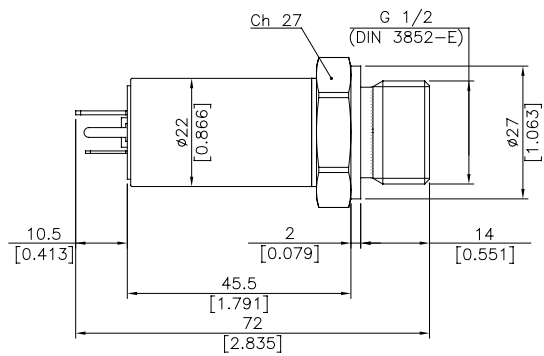
**Connector EN 175301-803 Form A**



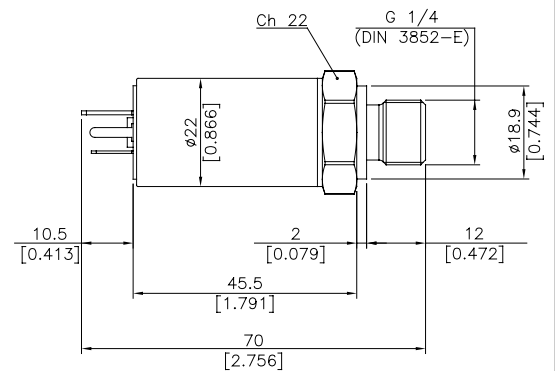
**Connector EN 175301-803 Form A**



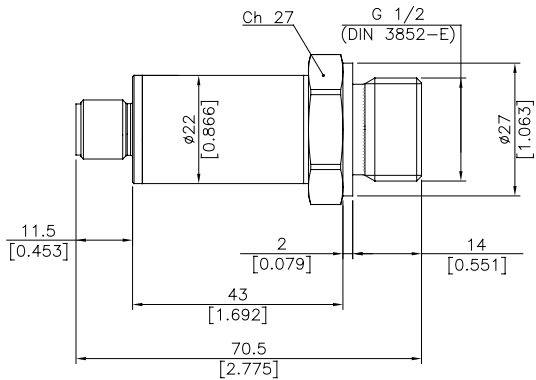
**Connector EN 175301-803 Form C**



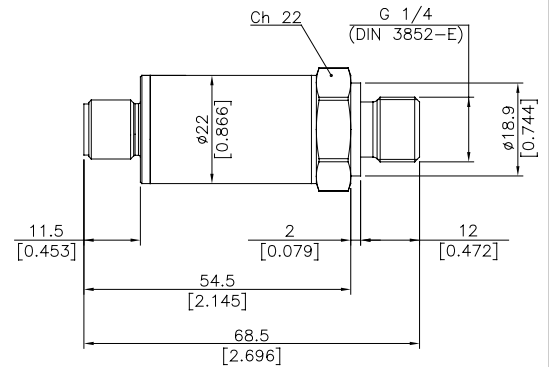
**Connector EN 175301-803 Form C**



**Connector M12x1**



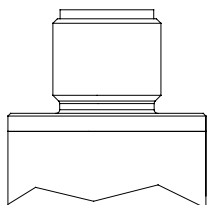
**Connector M12x1**



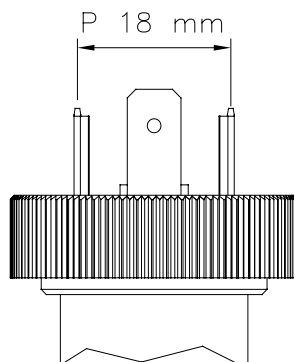
Dimensions mm. [inches]

# ELECTRICAL CONNECTION

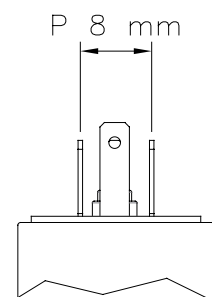
**Z - 4 pin connector  
M12 x 1**



**E - EN 175301-803  
4 pin DIN Form A**

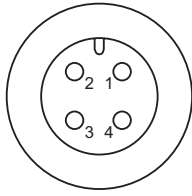


**C - EN 175301-803  
4 pin MicroDIN Form C**



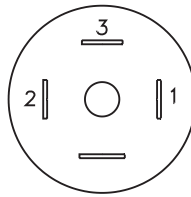
## ELECTRICAL CONNECTION - Connectors

**Z – 4 pin male connector  
M12 x 1**



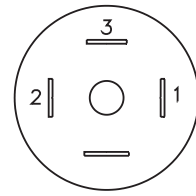
4 pin series 713  
male connector  
Protection IP67

**E - EN 175301-803**



4 pin DIN Form A  
Protection IP65

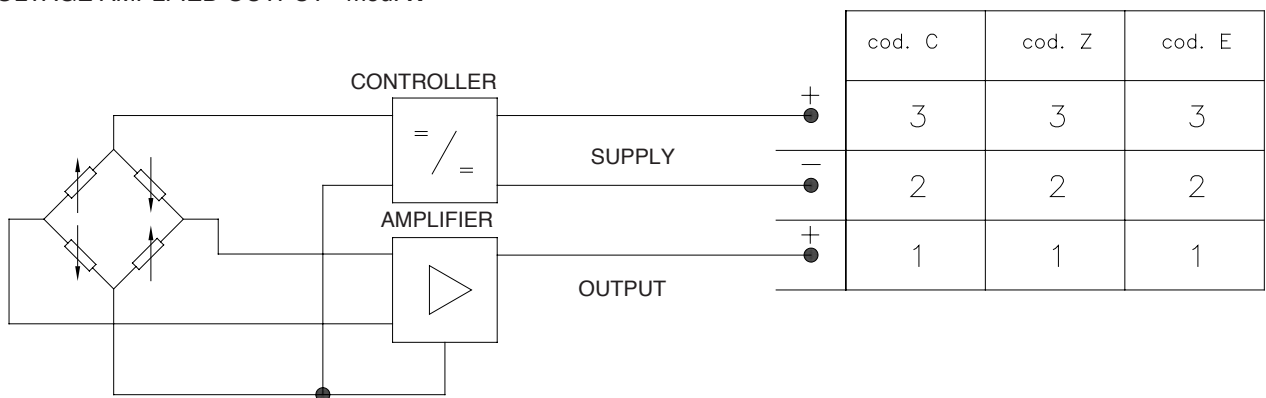
**C – EN 175301-803**



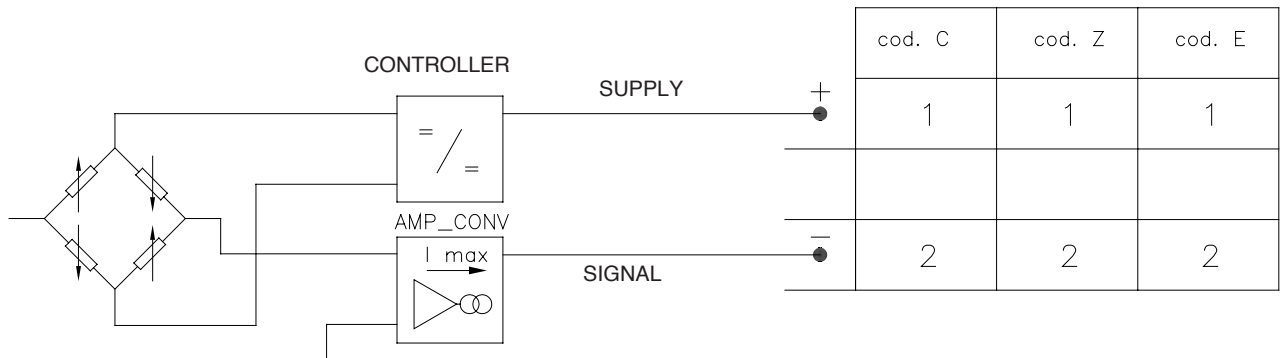
4 pin MicroDIN  
Form C  
Protection IP65

## ELECTRICAL CONNECTION - connection diagrams

VOLTAGE AMPLIFIED OUTPUT - mod. N

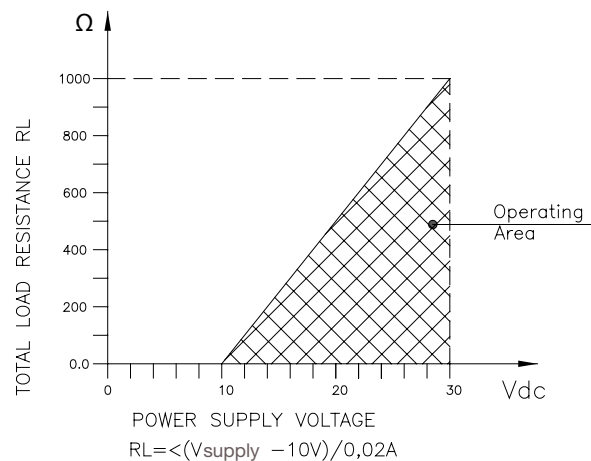


CURRENT AMPLIFIED OUTPUT - mod. E



## LOAD DIAGRAM

Current output



## ACCESSORIES ON REQUEST

### Connectors Plugs

#### Connection E

EN 175301-803 4 pin DIN Form A (P 18) - Prot. IP65

**CON 006**

#### Connection Z

4 pin connector M12 x 1 - Prot. IP67

**CON 293**

#### Connection C

EN 175301-803 4 pin MicroDIN Form C (P 8) - Prot. IP65

**CON 047**

## EXTENSION CABLES

IP67 female connector M12 x 1 + 2 m of cable

**CAV011**

IP67 female connector M12 x 1 + 5 m of cable

**CAV012**

IP67 female connector M12 x 1 +10 m of cable

**CAV013**

IP67 female connector M12 x 1 +15 m of cable

**CAV015**

### Cable color code

Pin	Wire
1	Brown
2	White
3	Blue
4	Black

## ORDERING INFORMATION

Pressure transmitter

**KS**

OUTPUT SIGNAL	
Standard	
4...20 mA	<b>E</b>
0...10 Vdc	<b>N</b>

PRESSURE CONNECTION	
Standard	
G 1/4 gas male (DIN 3852-E)	<b>E</b>
On Request	
G 1/2 gas male (DIN 3852-E)	<b>3</b>

Other Option On Request

ELECTRICAL CONNECTIONS	
Standard	
4-pin connector microDIN (P 8)	<b>C</b>
4 pin connector M12x1	<b>Z</b>
On Request	
4-pin connector DIN (P 18)	<b>E</b>

Other Option On Request

**Es: KS - E - E - C - B04C - M - V**

Pressure transmitter KS with 4 to 20 mA output signal, G1/4 male (DIN 3852-E) pressure connection, microDIN electrical connector, 0...400 bar pressure range,  $\pm 0.50\%$  FSO accuracy, 1 msec response time.

Sensors are manufactured in compliance with: - EMC2004/108/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)

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

### RESPONSE TIME

**V** Fast (< 1 msec)

### ACCURACY

**M**  $\pm 0.5\%$  FSO Typical

### MEASUREMENT RANGE

	bar		bar
<b>B01U</b>	1	<b>B04D</b>	40
<b>B1V6</b>	1,6	<b>B06D</b>	60
<b>B02U</b>	2	<b>B01C</b>	100
<b>B2V5</b>	2,5	<b>B16D</b>	160
<b>B04U</b>	4	<b>B02C</b>	200
<b>B06U</b>	6	<b>B25D</b>	250
<b>B01D</b>	10	<b>B04C</b>	400
<b>B16U</b>	16	<b>B06C</b>	600
<b>B02D</b>	20	<b>B01M</b>	1000
<b>B25U</b>	25		

### CALIBRATION STANDARD

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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