

KS PRESSURE TRANSDUCER



Main Features

- Ranges: from 1 to 1000 bar
- Nominal Output Signal 0...10V (3 wire) / 4...20 mA (2 wire)
- Small dimension
- 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 transducers 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	Fluid compatible with Stainless Steel	
Housing	Stainless Steel	
Power supply	12...32Vdc	10...32Vdc
Dielectric strenght	350 Vdc	
Zero output signal	0 V (nominal)	4 mA (nominal)
Full scale output signal	10 V (nominal)	20 mA (nominal)
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)	±0.15% FSO/10K typical (±0.25%FSO/10K 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	1000g according to IEC 68-2-32	
Vibrations	20g according to IEC 68-2-6 and IEC 68-2-36	
Ingress protection	sealed to IP65/IP67	
Output short circuit and reverse polarity protection	YES	
CE conformity	EC Directive 89/336/EWG	

FSO = Full Scale Output

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

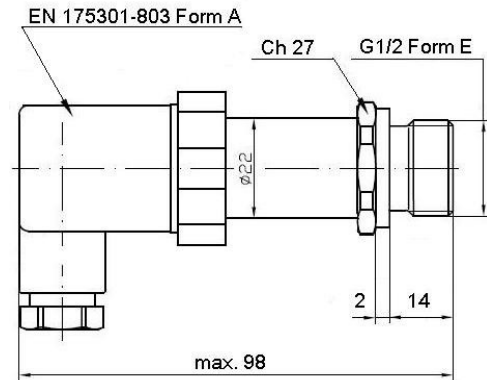
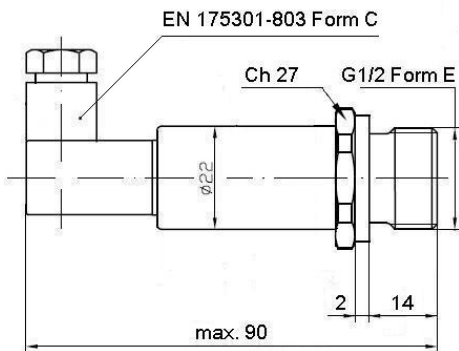
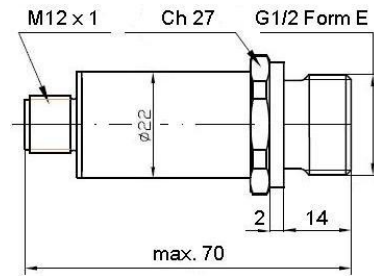
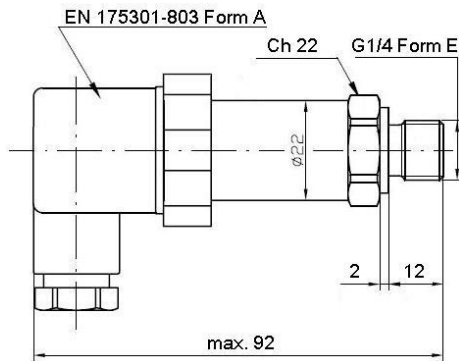
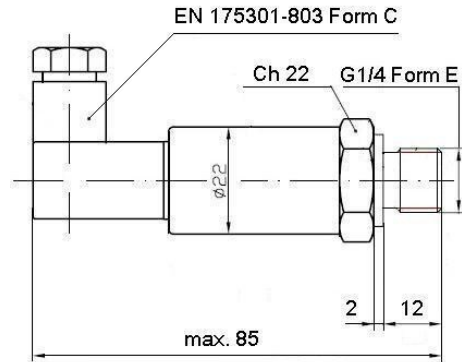
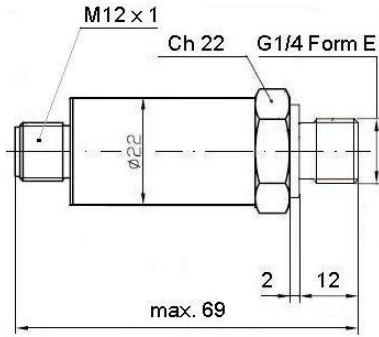
2 The operating pressure range is intended from 0.5% to 100% FS

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	40	40	100	100	200	200	400	400	750	750	840	1200
Burst Pressure (Bar)	9	9	9	15	15	30	30	60	60	150	150	300	300	600	600	1000	1000	1050	1500

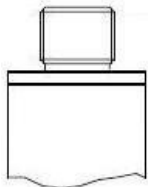
INSTALLATION DRAWINGS

Dimensions: mm

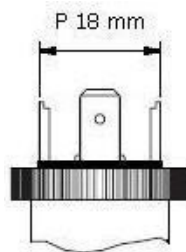


ELECTRICAL CONNECTION

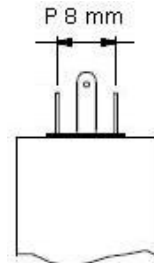
**Z - 4 pin connector
M12 x 1**



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

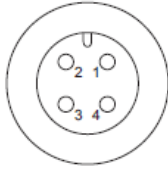


**C – EN 175301-803
4 pin MicroDIN Form C**



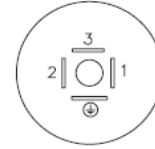
ELECTRICAL CONNECTION - Connectors

Z – 4 pin male connector M12 x 1



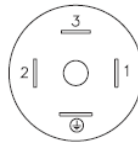
4 pin series 713 male connector
Protection IP67

C – EN 175301-803



4 pin MicroDIN Form C
Protection IP65

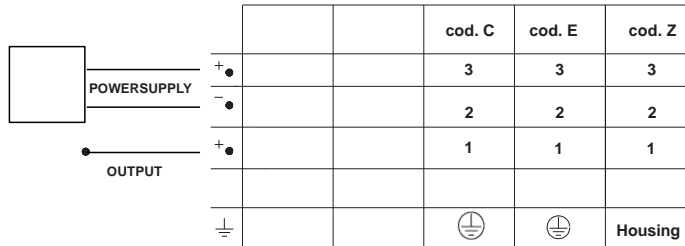
E – EN 175301-803



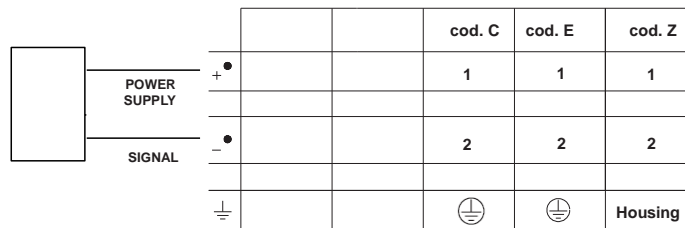
4 pin DIN Form A
Protection IP65

ELECTRICAL CONNECTION - connection diagrams

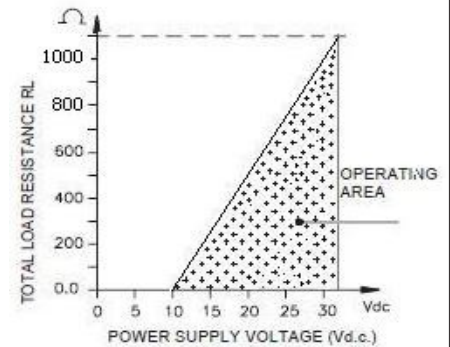
VOLTAGE AMPLIFIED OUTPUT – mod. N



CURRENT AMPLIFIED OUTPUT - mod. E



LOAD DIAGRAM (Current output)



$$RL = < (PSV - 10 V) / 0.02 A$$

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	E
0...10 Vdc	N

PRESSURE CONNECTION	
Standard	
G 1/4 gas male (DIN 3852-E)	E
On Request	
G 1/2 gas male (DIN 16288)	3

Other Option On Request

ELECTRICAL CONNECTION	
Standard	
4-pin connector microDIN (P 8)	C
4 pin connector M12 x 1	Z
On Request	
4-pin connector DIN (P 18)	E

Other Option On Request

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

Pressure transmitter TK 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

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

MEASUREMENT RANGE

bar		bar	
		B16U	16
		B02D	20
		B25U	25
		B04D	40
		B06D	60
B01U	1	B01C	100
B1V6	1.6	B16D	160
B02U	2	B02C	200
B2V5	2.5	B25D	250
B04U	4	B04C	400
B06U	6	B06C	600
B01D	10	B01M	1000

CALIBRATION STANDARDS

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

Note: Alternative outputs, pressure connections, electrical connectors and pressure ranges are available, please consult Factory.

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

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