



Main Features

- Ranges: from 4 to 1000 bar
- Compact size
- Wetted parts: Stainless steel



KS transmitters are based on film sensing element deposited on stainless steel diaphragm.

Thanks to the latest state of the art SMD electronics and compact all stainless steel construction, these products are extremely robust and reliable.

TECHNICAL DATA

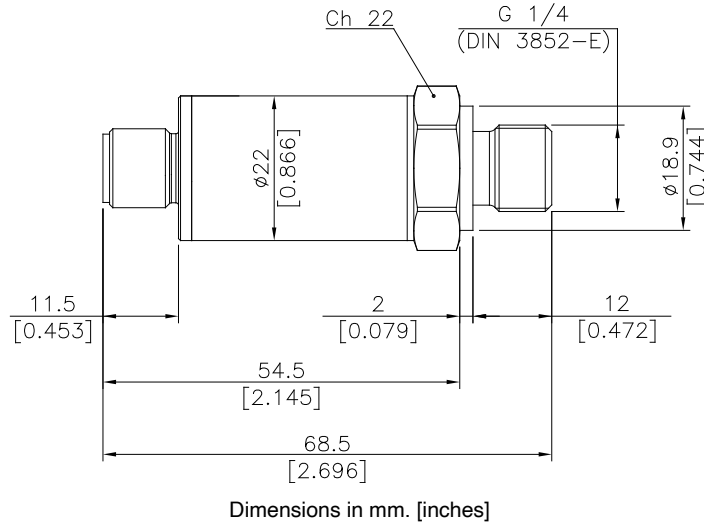
Output signal	IO-Link	Power supply polarity reverse protection	YES
Non Linearity (BFSL)	$\pm 0.15\%$ FS (typ) $\pm 0.25\%$ FS (max)	Integral temperature	Sensor on electronic board
Hysteresis	+ 0.1% FS (typ) + 0.15% FS (max)	Operating temperature range (process)	-40...+125°C (-40...+257°F)
Repeatability	$\pm 0.025\%$ FS (typ) $\pm 0.05\%$ FS (max)	Operating temperature range (ambient)	-40...+105°C (-40...+221°F)
Zero offset tolerance	$\pm 0.15\%$ FS (typ) $\pm 0.25\%$ FS (max)	Compensated temperature range	-20...+85°C (-4...+185°F)
Span offset tolerance	$\pm 0.15\%$ FS (typ) $\pm 0.25\%$ FS (max)	Storage temperature range	-40...+125°C (-40...+257°F)
Accuracy at room temperature	$< \pm 0.5\%$ FS	Temperature effects over compensated range (zero)	$\pm 0.01\%$ FS/°C typ. ($\pm 0.02\%$ FS/°C max.)
Pressure ranges	From 4 bar to 1000 bar (See table)	Temperature effects over compensated range (span)	$\pm 0.01\%$ FS/°C typ. ($\pm 0.02\%$ FS/°C max.)
Overpressure (without degrading performance)	See table	Warm-up time	< 30 sec.
Pressure containment (burst test)	See table	Mounting position effects	Negligible
Pressure Media	Fluids compatible with Stainless Steel AISI 430F and 17-4 PH	Humidity	Until 100%RH non-condensing
Housing	Stainless Steel AISI 304	Weight	80-120 gr. nominal
Power supply	18-30Vdc	Mechanical shock	100g/11msec according to IEC 60068-2-27
Maximum current absorption	1 W	Vibrations	20g max at 10...2000 Hz according to IEC 60068-2-6
Zero adjustment	"Autozero" function	Ingress protection	IP65/IP67 (M12 version) with female homologated connector mounted, tightening torque 0.6Nm + low strength threadlocker
Communication interface	IO-Link	Output short circuit and reverse polarity protection	YES
Cycle time	1 msec	EC Conformity	According to Directive 2014/30/EU
IO-Link version	1.1		
Transmission type	COM3 (230.4 kBaud)		
Profile	Smart sensor generic profile		
SIO Mode	Yes		
Required class for Master port	A		
Pressure data resolution	14 bit		
Temperature data resolution	12 bit		

PRESSURE RANGES

RANGE (Bar)	4	6	10	16	20	25	40	60	100	160	200	250	400	600	1000
Overpressure (Bar)	8	12	20	32	40	50	80	120	200	320	400	500	800	1200	1200
Burst pressure (Bar)	16	24	40	64	80	100	160	240	400	640	800	1000	1500	1500	1500

INSTALLATION DRAWINGS

Connector M12x1



ELECTRICAL CONNECTION

Z - 4 pin male connector M12 x 1	PIN	SIGNAL	FUNCTION
	1	L+	Power Supply (+), (nominal 24Vdc)
	2	I/Q	Digital Output (DO* - SSC 1.2)
	3	L-	Power Supply (-), GND
	4	C/Q	IO Link / Digital Output (DO* - SSC 1.1)

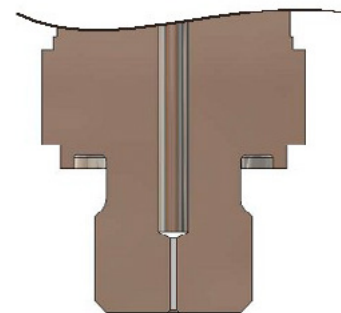
*output current limit = 200mA

PRESSURE PEAKS PROTECTION

Many industrial applications, especially in hydraulics, could present dangerous phenomena like cavitation, liquid hammer or pressure peaks, due for example to pumps start and stop or fast closing of a valve. These phenomena can be harmful to the transducer.

The KS series, upon request, is available with an integrated pressure snubber which, thanks to a 0.5 mm diameter through hole, eliminates these harmful peaks, to protect the transducer.

Contact Gefran to request the version with pressure snubber.



AUTOZERO FUNCTION

The Autozero function is activated by IO-Link command.

All zero drift caused by temperature change on the tip can be removed by using this function.

This autozero procedure must be performed at zero pressure only, when the sensor is completely installed on the system.

See operating manual for complete Autozero Function explanation

ORDERING INFORMATION

Pressure transmitter

KS M 0

2130 X X 00

000=vers. standard

OUTPUT SIGNAL	
IO-LINK	I

PRESSURE CONNECTIONS	
G 1/4 gas male (DIN 3852-E)	E
G 1/2 gas male (DIN 3852-E)	3

ELECTRICAL CONNECTIONS	
4 pin connector M12x1	Z

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

NON-LINEARITY	
M	± 0,25% FS BFSL

MEASUREMENT RANGE			
bar		bar	
B04U	4	B01C	100
B06U	6	B16D	160
B01D	10	B02C	200
B16U	16	B25D	250
B02D	20	B04C	400
B25U	25	B06C	600
B04D	40	B01M	1000
B06D	60		

Calibration Standards

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

Es: KS - I - E - Z - B04C - M - 0

Pressure transmitter KS IO-Link, G1/4 male (DIN 3852-E) pressure connection, M12x1(4 pin), 0...400 bar pressure range, ± 0.25% FS non-linearity.

Sensors are manufactured in compliance with: - EMC 2014/30/EU Compatibility Directive
- RoHS 2011/65/EU Directive

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

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

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