



Main features

- Absolute type transducer
- Displacements from 100 to 4000mm
- Working temperature range: -40...70°C
- Vibration resistant (DIN IEC68T2/6 12g)
- Rod, nipple, exagonal flange AISI 316
- IP67 Protection
- EMI CE compatible (EN 50081-2 50082-1)
- Power supply 24Vdc ±20%
- Start/Stop and PWM digital output
- Optional galvanic isolation between the power supply and the output

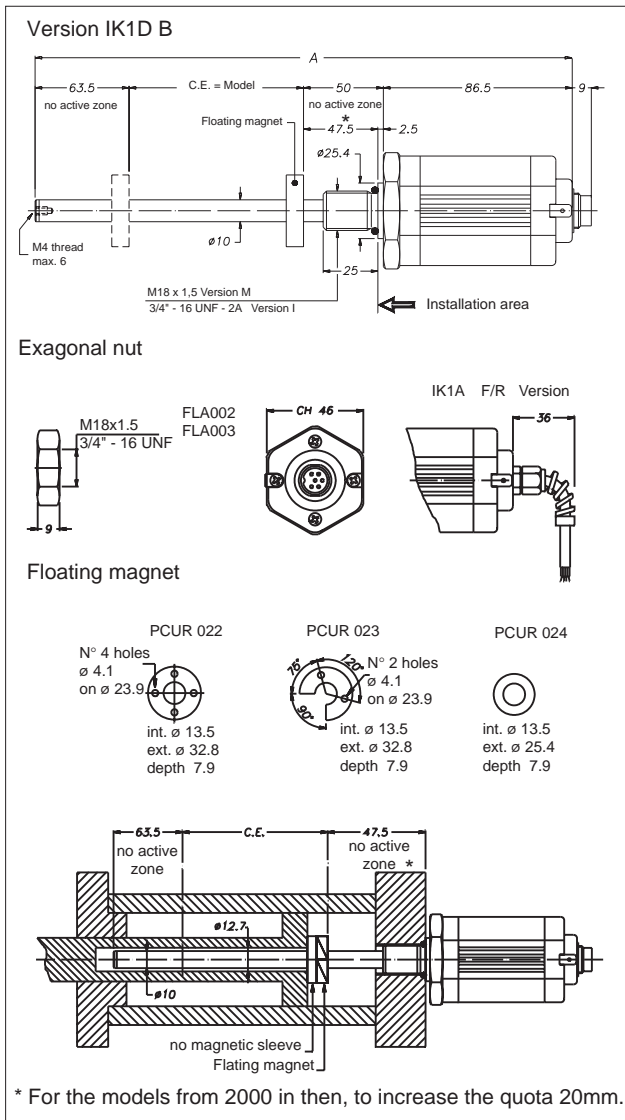
Contactless linear displacement transducers that use the principle of magnetostriction: the absence of a cursor type of electromechanical contact eliminates the problem of wear and guarantees an almost unlimited lifetime. Two types of magnet are offered: a sliding magnetic cursor or a floating magnet cursor. IK is been projected to an internal mounting with high pressure conditions (static 350Bar; over pressure 700Bar) as the internal cylinder. A high level of performance for linearity, repeatability, resistance to vibration and mechanical shock are among its most important features.

TECHNICAL SPECIFICATION

Model	From 100 to 4000 mm
Measurement	Displacement
Frequency of position measurement	From 3kHz to 1kHz ranges from 100 to 2000mm
Shock test DIN IEC68T2-27	100g - 11ms - single blow
Vibration DIN IEC68T2-6	12g / 10...2000Hz
Force required to move the sliding cursor	≤ 1 N
Displacement speed	≤ 10 m/s
Max. acceleration	≤ 100 m/s ² displacement
Resolution	≤ 10 μm
Type of magnet	Separate floating magnet
Nominal power supply	24Vdc ± 20%
Max. power supply ripple	1 Vpp
Max. Consumption	100mA typical
Output signal (with respect to connection side)	Start/Stop (compatible RS422) Pulse Width Modulated (up to 15 recycle)
Output load	≥ 5KΩ
Electrical isolation	500V (D.C. supply / ground)
Optional	500V (D.C. supply / output)
Prot. against polarity inversion	YES
Overvoltage protection	Protection varistor
Protection	IP67
Working temperature	-40...+70°C
Storage temperature	-40...+100°C
Temperature stability	≤ 0,01% F.S. / °C

F.S. = Full Scale

MECHANICAL DIMENSIONS



MECHANICAL / ELECTRICAL DATA

Model		100	130	150	200	225	300	400	450	500	600	700	750	800	900	1000	1250	1500	1750	2000	2250	2500	2750	3000	3250	3500	3750	4000	
Electrical stroke (C.E.)	mm	Model																											
Independent linearity	± %	0,03	0,025	≤ 0,02 of the C.E.																									
Max. length (A)	mm	Model + 200 (+220mm. from 2000 in then)																											
Repeatability	± %	0,001 of the C.E.																											
Hysteresis	mm	< 0,01																											

ORDER CODE

Displacement transducer	IK1	D			X	1
Digital output	D					
6pole output conn. DIN 45322	B					
7pole PVC output cable 7x0,25	F					
7pole PUR high flexibility output cable 7x0,14	R					
Model						
Number of cursors	1					

If request, it is possible to supply models with non-standard mechanical and/or electrical features.

► Included in the standard supply

- Displacement transducer of the IK series
- O - Ring 15.4x2.1 M18x1.5 thread code: **GUA064**
- O - Ring 16.36x2.21 3/4" - 16 UNF thread code: **GUA065**

► The magnetic cursors must be ordered separately

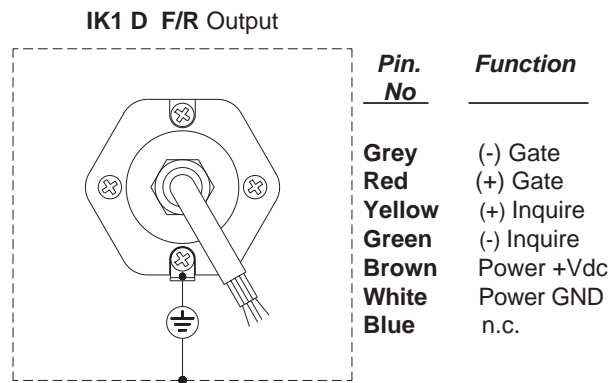
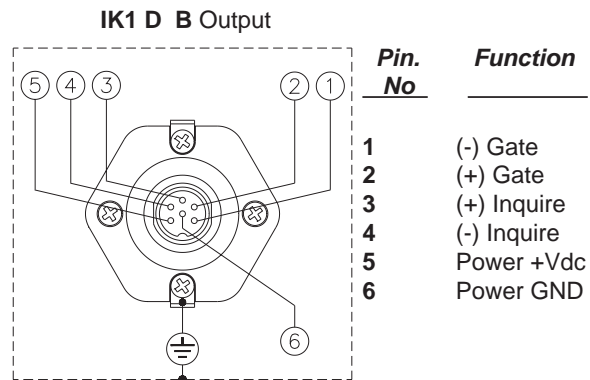
- see diagram code: **PCUR022**
- code: **PCUR023**
- code: **PCUR024**

Eg.: **IK1 - D - B - 400 - X - 1 0000 R0 - 00 - S - 00 - M**
 Model IK1 transducer, digital output, B connector model 400, 1 cursor, start/stop output, without isolation, M18x1,5 thread

ORDER CODE EXTENSION

0	0	0	0			0	0					0	X	X
Output													Power supply/output	
RE = Start/Stop External Inquire														
RI = Start/Stop Internal Inquire														
PE = PWM External Inquire														
PI = PWM Internal Inquire														
Electrical isolation														
S = Without isolation (standard)														
NB: For connections isolated version see complementary data														
Cable length (version F/R standard 1mt)														
Output F/R	00=1mt	02=2mt	03=3mt	04=4mt	05=5mt									
Output B	00	10=10mt	15=15mt											
Output C	00													
Thread														
M = M18x1,5 (standard)														
I = 3/4" - 16UNF														

ELECTRICAL CONNECTIONS (Version S without isolation)



WARNING

- 1) In case of single interrogation, the interrogation not used must be connected to d.c. Ground.
- 2) In case of PWM with internal interrogation, both interrogation must be connected to the d.c. Ground.

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

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