



### Main features

- Absolute transducer
- Stroke: 50 to 2500mm
- Direct analog output (RK-5 N/K/E)
- Inverse analog output (RK-5 O/I/R)
- Operating temperature: -40...+105°C
- Vibration-resistant (DIN IEC68T2/6 25g)
- Power range 10VDC...32VDC current output
- Power range 8VDC...32VDC voltage output

Linear position transducer with GEFran's innovative ONDA magnetostrictive technology for long life.

The absence of electrical contact on the cursor eliminates wear and guarantees almost unlimited life.

Gefran's patented ONDA technology achieves a compact, modular structure for simple installation. RK-5 is a magnetostrictive position transducer with flanged connection that installs completely inside oil-pressure cylinders.

Its unique design, plus a wide range of cursor configurations, ensures easy installation and total compatibility with cylinder manufacturer specifications. Working temperature from -40 to +105°C, working pressures up to 350 bar, high resistance to vibration (25 g) and shock (100g) give the sensor the indispensable strength needed for heavy-duty use (for example: mobile hydraulics). High performance in terms of transduction of measurement defined as linearity, hysteresis and repeatability. The signal is analog in models with current or voltage output



### TECHNICAL DATA

Model	from 50 to 2500 mm
Measurement taken	Displacement
Sampling time (typical)	1 ms
Shock test DIN IEC68T2-27	100g - 11ms - single shock
Vibrations DIN IEC68T2-6	25g / 10...2000Hz
Shift speed	≤ 10 m/s
Maximum acceleration	≤ 100 m/s <sup>2</sup> displacement
Resolution	12 bit (min 50 μm)
Working pressure	350 bar

### ENVIRONMENTAL DATA

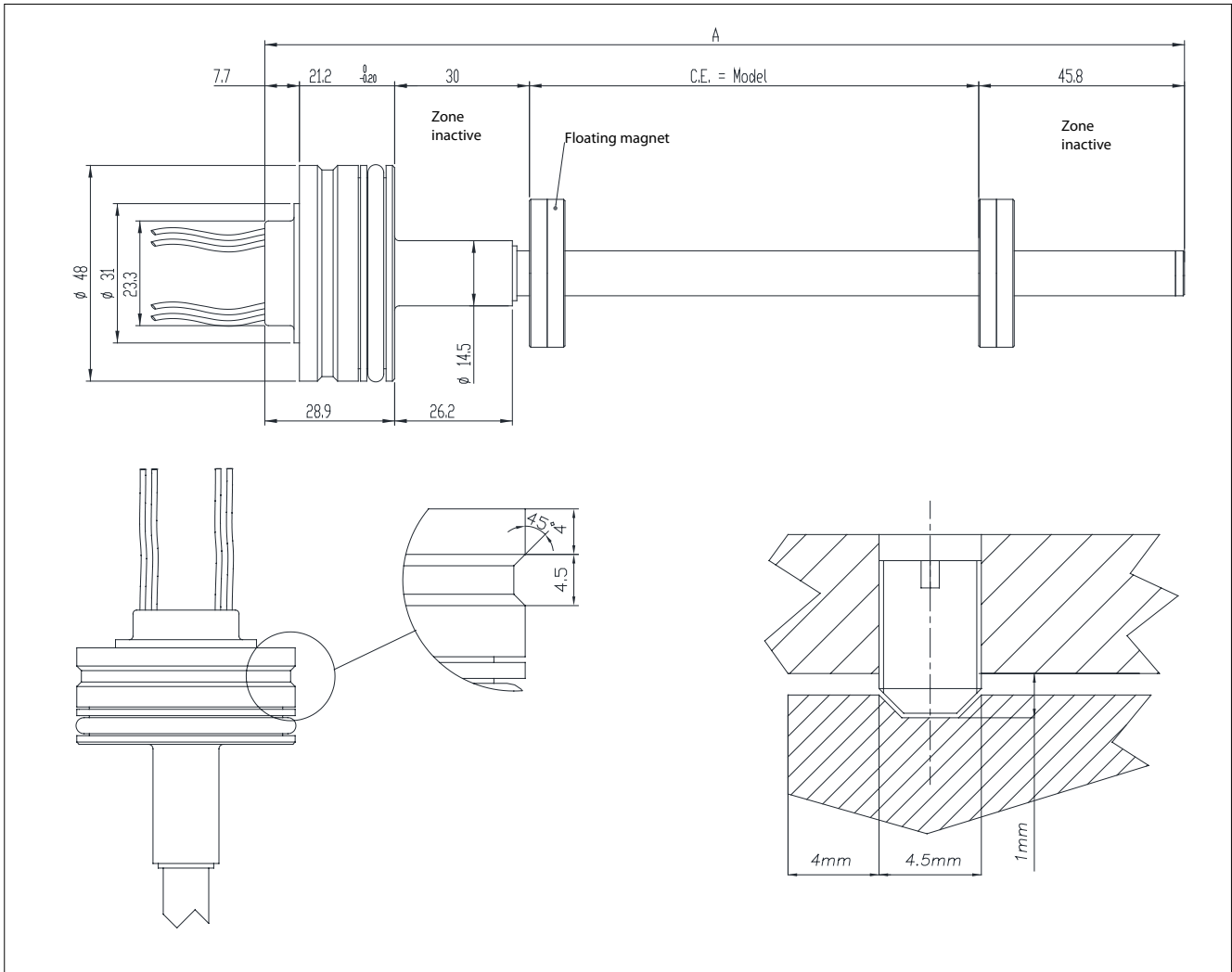
Hydraulic circuit area protection	IP 67/ IP69 with connector
Work temperature	-40°...+105°C
Storage temperature	-30°...+100°C
Coefficient of temperature	0.01% FS / °C

### ELECTRICAL DATA

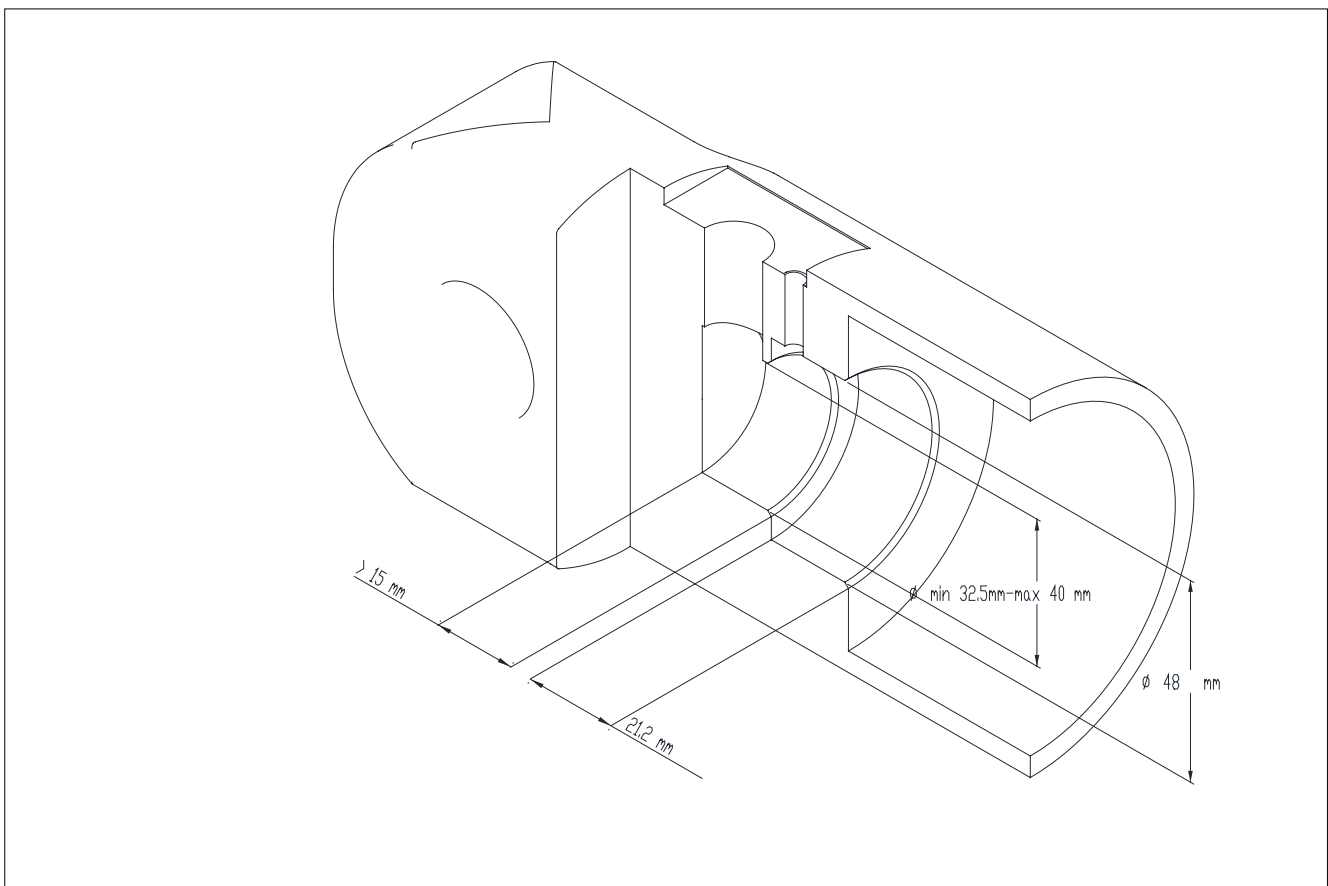
Nominal power supply	10...32 Vdc ( E/R) 8...32Vdc (N/O/K/I outputs)
Max. power ripple	1Vpp
Output signal	0,5...9,5Vdc (RK-5 N) 9,5...0,5Vdc (RK-5 O) 0,5...4,5Vdc (RK-5 K) 4,5...0,5Vdc (RK-5 I) 4...20mA (RK-5 E) 20...4mA (RK-5 R)
Max. analog output load	5kΩ voltage output 500Ω Current output
Isolamento elettrico	500V (*) (D.C. Power supply/ground))
Protection against polarity inversion	Yes
Protection against overvoltage	Yes

(\*) Uses 50V 2J Voltage suppressor

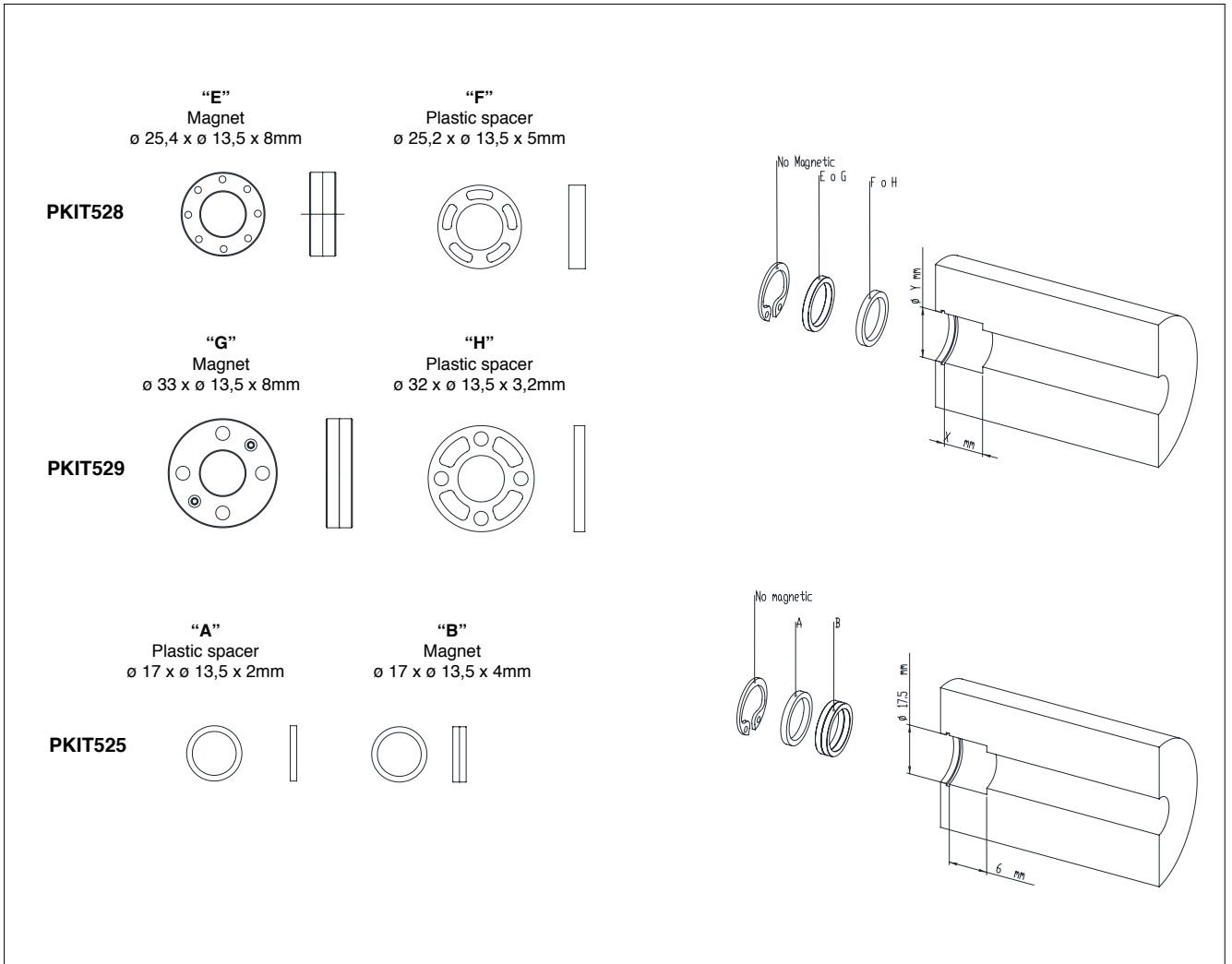
## MECHANICAL DIMENSIONS



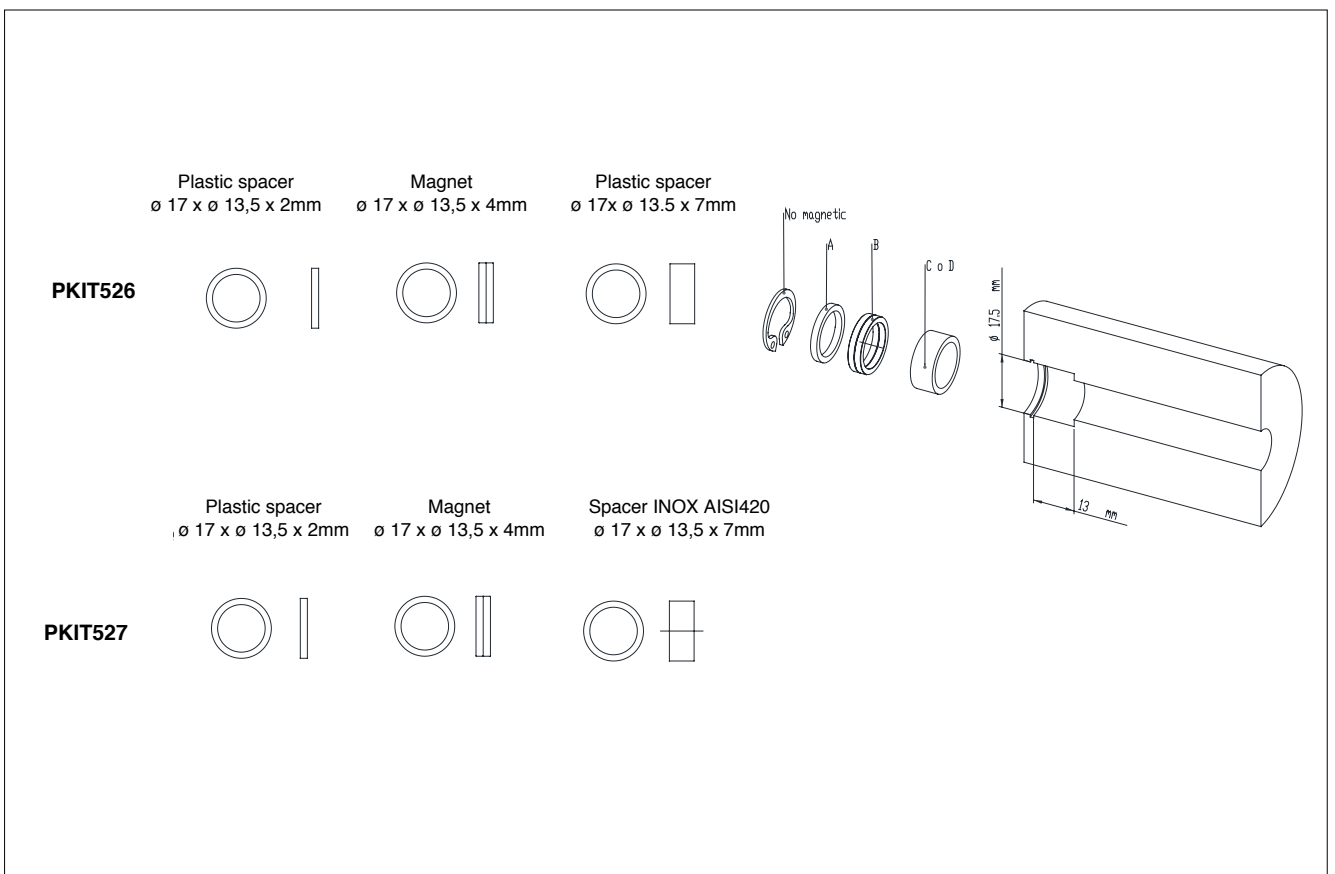
## SENSOR HOUSING (detail of head)



## INSTALLATION AND CURSOR KIT (to be ordered separately)



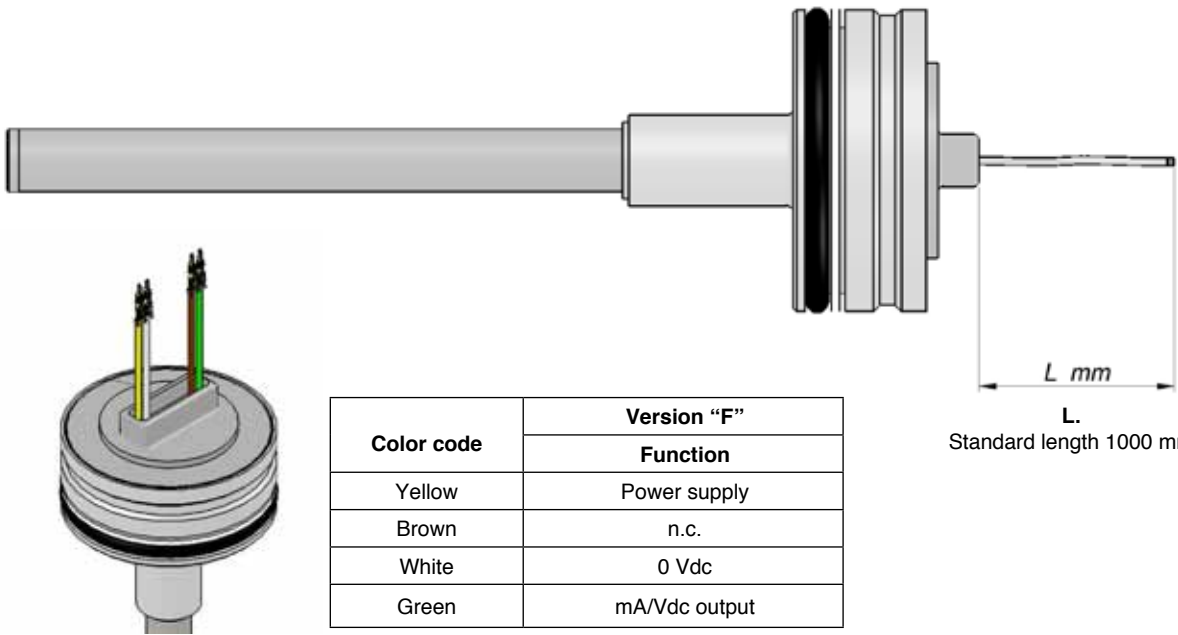
## INSTALLATION AND CURSOR KIT FOR 13mm HOUSINGS (to be ordered separately)



## ELECTRICAL / MECHANICAL DATA

Model		50	100	130	150	200	225	300	400	450	500	600	700	800	900	1000	1250	1500	1750	2000	2250	2500	
Electrical Stroke (E.S.)	mm	Model																					
Independent linearity		< ±0.04% F.S. (±0.10 mm minimum)																					
Max. length (A)	mm	Model +104.7 (excluding cable)																					
Repeatability	mm	< 0.01																					
Hysteresis		< ±0.005% F.S.																					
Sampling time	msec	1 per stroke up to 600 / 2 up to 2500																					

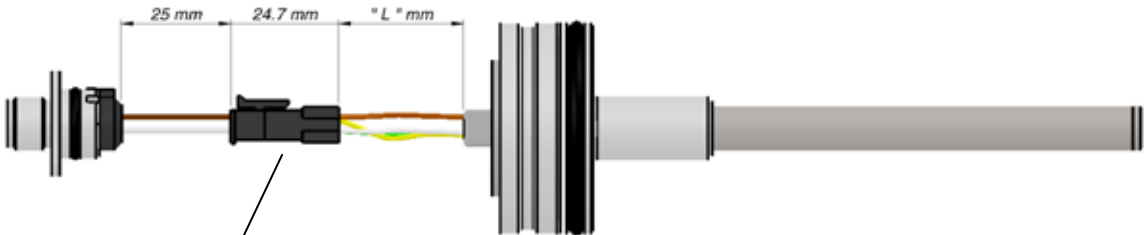
## CONNECTION TO FREE TINNED WIRES (OPTION F)



Color code	Version "F"
	Function
Yellow	Power supply
Brown	n.c.
White	0 Vdc
Green	mA/Vdc output

L.  
Standard length 1000 mm

## CONNECTION TO CRIMPED CABLES (options A and B)

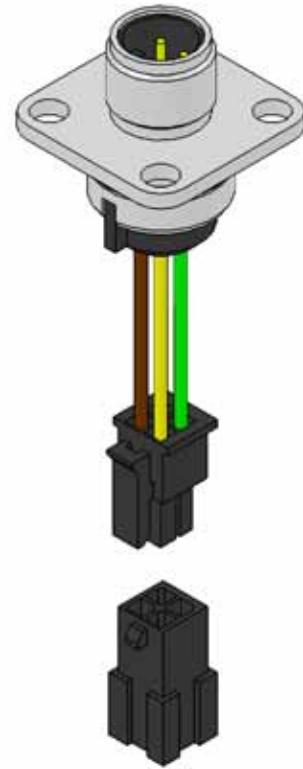
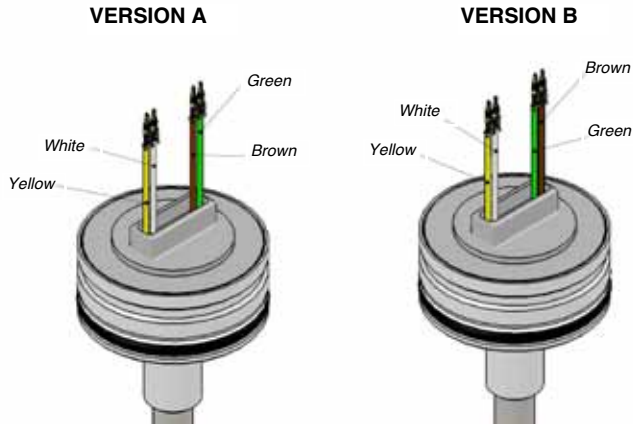


Intermediate connector

"L" as indicated in order code

Code	Length
60	60 mm
100	100 mm
150	150 mm
240	240 mm

## ELECTRICAL CONNECTIONS (options A and B)

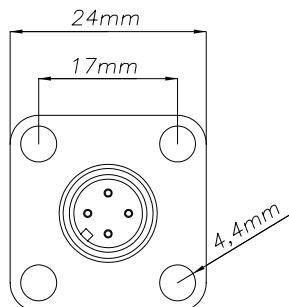
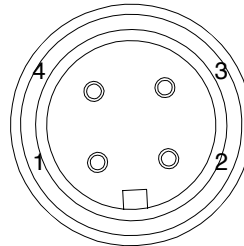
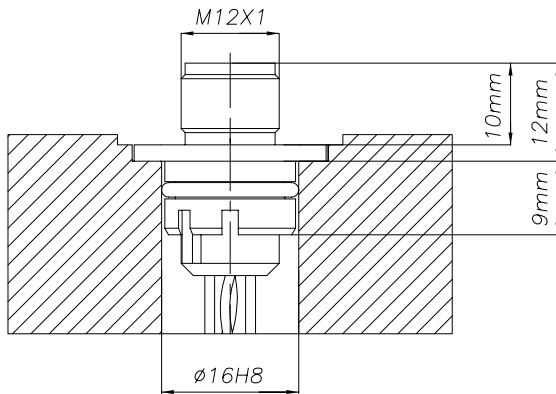


### PKIT 615

Accessory extractor for intermediate connector

Insert prewired pin into connector according to color code

## CONNECTOR ASSEMBLY (options A and B)



PIN	VERSION "A"	VERSION "B"
	FUNCTION	FUNCTION
1	Power supply	Power supply
2	n.c.	mA/Vdc output
3	0 Vdc	0 Vdc
4	mA/Vdc output	n.c.

## CE CONFORMITY ACCORDING TO DIRECTIVE 2004/108/CE

STANDARD	TITLE
ISO 13766	Earthmoving Machinery
ISO 11451-5	Road vehicles - Components test methods for electrical disturbances from narrowband radiated electromagnetic energy. part 5: stipline 200V/m
EN61326_1; EN61326_2_3	Electrical equipment for measurement, control and laboratory use

## ORDER CODE

Position  
transducer

**R** **K** **5** **A**       **0** **0** **0** **0** **X**     **X** **0** **0** **X** **0** **X** **X**

OUTPUT CONFIGURATION	
Pin1 Power Pin2 N.C. Pin3 0Vdc Pin4 Output	<b>A</b>
Pin1 Power Pin2 Output Pin3 0Vdc Pin4 N.C.	<b>B</b>
Free contacts	<b>F</b>

CABLE LENGTH (for connections A and B only)	
<b>060</b>	60 mm
<b>150</b>	150 mm
<b>240</b>	240 mm
<b>000</b>	F output

Model (0050-2500)

OUTPUT CONFIGURATION		
Analog	0.5...9.5 VDC	<b>N</b>
Analog	9.5...0.5 VDC	<b>O</b>
Analog	0.5...4.5 VDC	<b>K</b>
Analog	4,5...0.5 VDC	<b>I</b>
Analog	4...20 mA	<b>E</b>
Analog	20...4 mA	<b>R</b>

Mechanical and/or electrical characteristics differing from those in the standard models can be ordered on request.

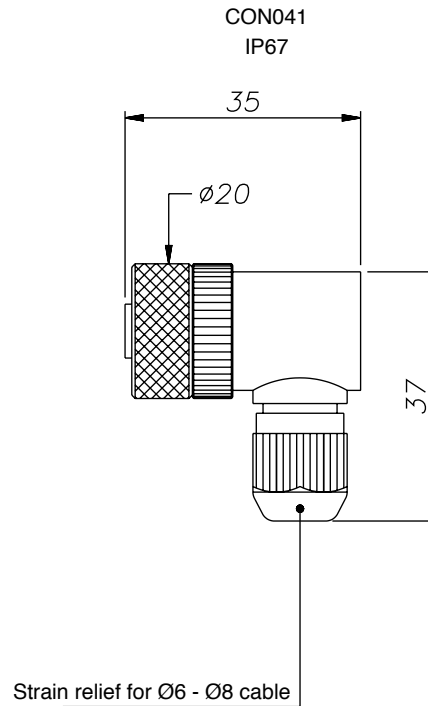
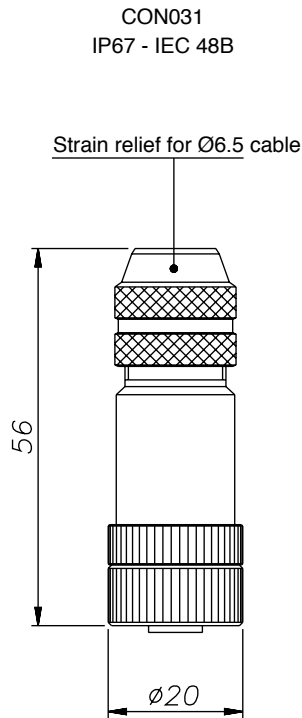
## CURSOR KIT (to be ordered separately)

CODE	Ø HOUSING	HOUSING DEPTH	PISTON MATERIAL	MAGNET	PLASTIC SPACER	AMAGNETIC SPACER	MAGNETIC SPACER
<b>PKIT528</b>	Ø 25,4 mm	13 mm	magnetic/ amagnetic				
<b>PKIT529</b>	Ø 33 mm	13 mm	magnetic/ amagnetic				
<b>PKIT525</b>	Ø 17 mm	6 mm	magnetic/ amagnetic				
<b>PKIT526</b>	Ø 17 mm	13 mm	amagnetic				
<b>PKIT527</b>	Ø 17 mm	13 mm	magnetic				

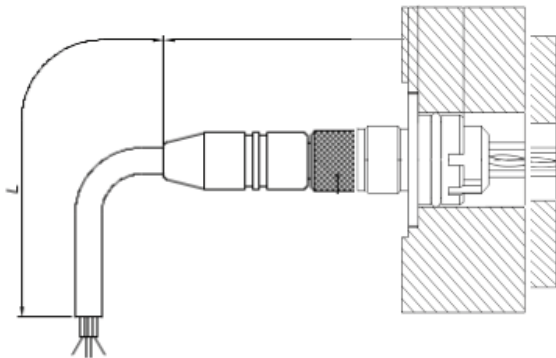
## OPTIONAL CONNECTORS

**CON031** for 5-pin output

**CON041** for 90° 5-pin output



## OPTIONAL CABLES (to be ordered separately)



### PREWIRED CABLE WITH STRAIGHT CONNECTOR

The cable braiding is connected to the connector

Length "L"		CODE	
		Straight cable	90° cable
2	mt	<b>CAV011</b>	<b>CAV021</b>
5	mt	<b>CAV012</b>	<b>CAV022</b>
10	mt	<b>CAV013</b>	<b>CAV023</b>
15	mt	<b>CAV015</b>	<b>CAV024</b>

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