



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

The absence of electrical contact on the cursor eliminates wearing 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.

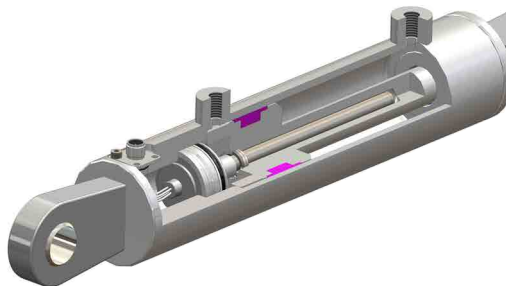
Its unique design, plus a wide range of cursor configurations, ensures easy installation and total compatibility with cylinder manufacturer specifications.

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 communication system of CAN bus allows a fast and safe transmission.

The implementation of the CANopen DS-301 protocol and Device Profile DS-406 provides quick and easy integration of the transducer in the control system and automation.



TECHNICAL DATA

Model

from 50 to 2500 mm

Measurement given

Displacement and speed

Sampling time (typical)

1 ms

Shock test DIN IEC68T2-27

100g - 11ms - single shock

Vibrations DIN IEC68T2-6

25g / 10...2000Hz

Displacement speed

≤ 10 m/s

Maximum acceleration

≤ 100 m/s² displacement

Displacement resolution

0,1mm

Speed resolution

1 mm/s

Working pressure

350 bar

Nominal power supply

8...32Vdc

Max. power ripple

1Vpp

Output signal

CAN bus digital communications

Electrical insulation

500V (*) (D.C. Power supply/ground)

Protection against polarity inversion

Yes

Protection against overvoltage

Yes

Power consumption

1 W

Hydraulic circuit area protection

IP67/ IP69K with female connector

Working temperature

-40°...+105°C

Storage temperature

-30°...+100°C

Coefficient of temperature

0.01% FS / °C

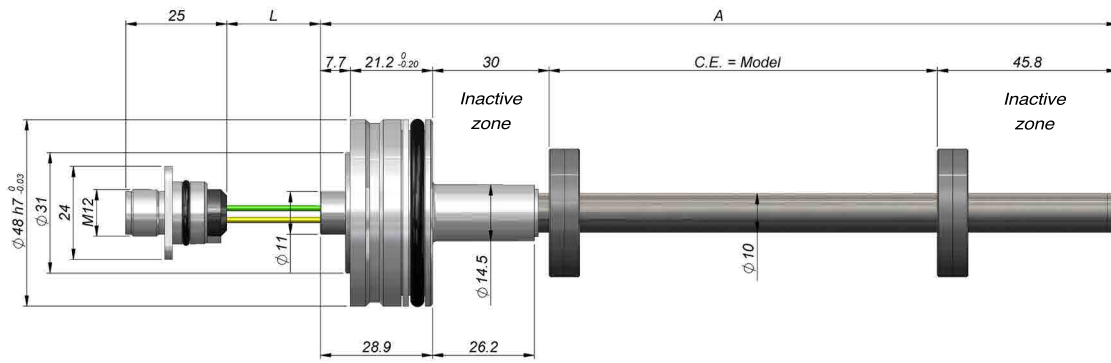
Humidity dew point EN60068-2-30

90% non-condensing humidity

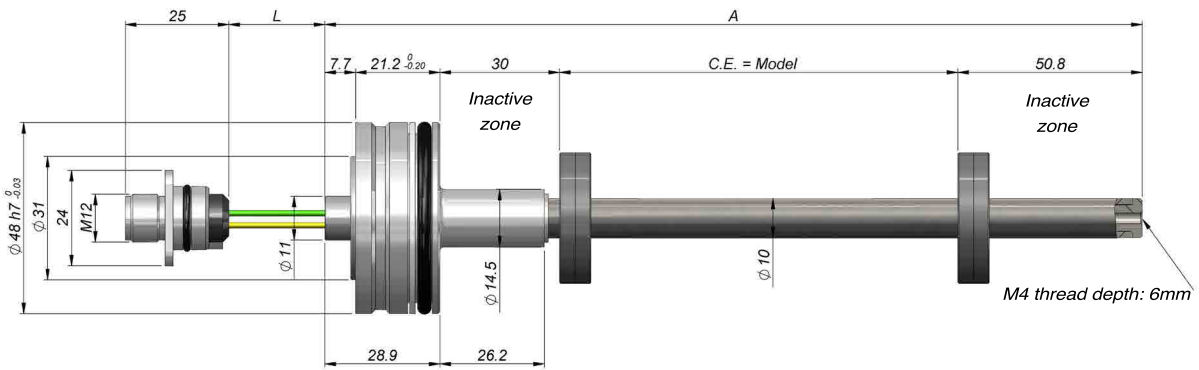
(*) Uses 50V 2J Voltage suppressor

MECHANICAL DIMENSIONS

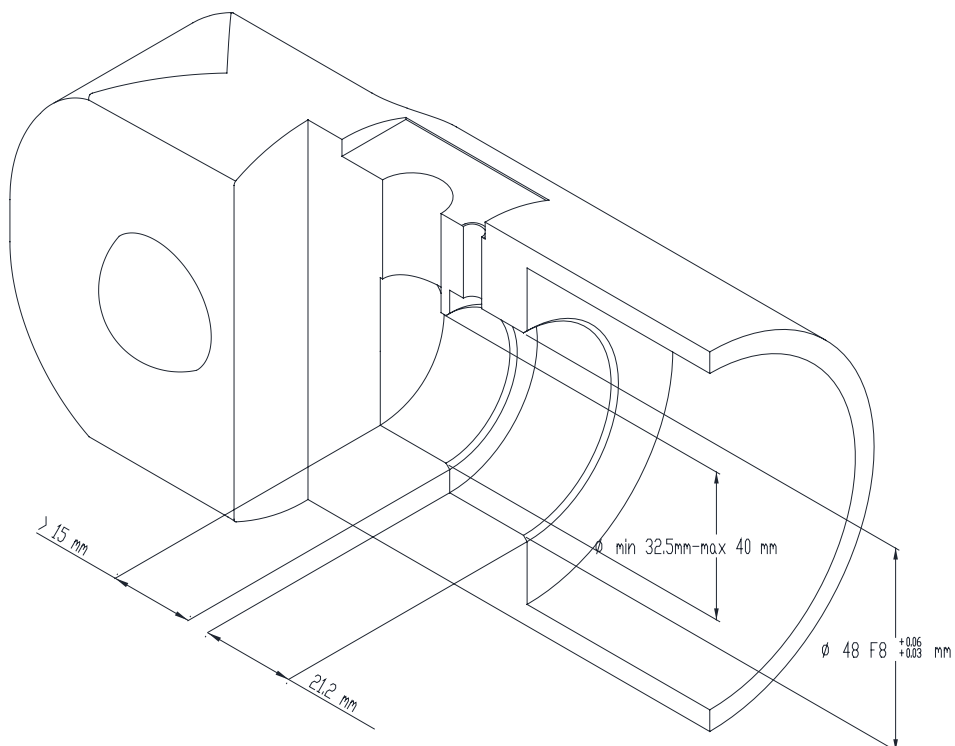
Stroke 50 to 1000 mm



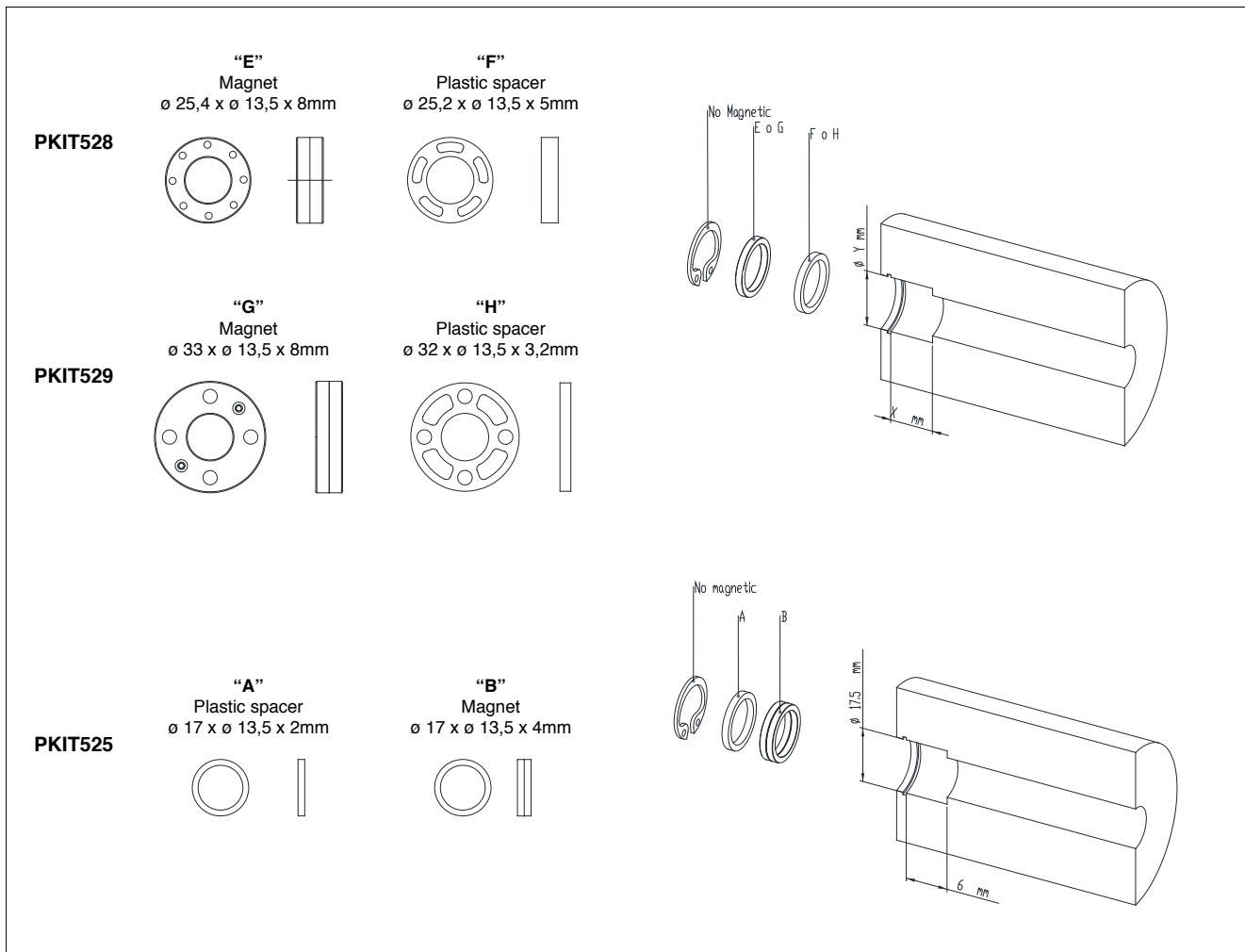
Stroke 1250 to 2500 mm



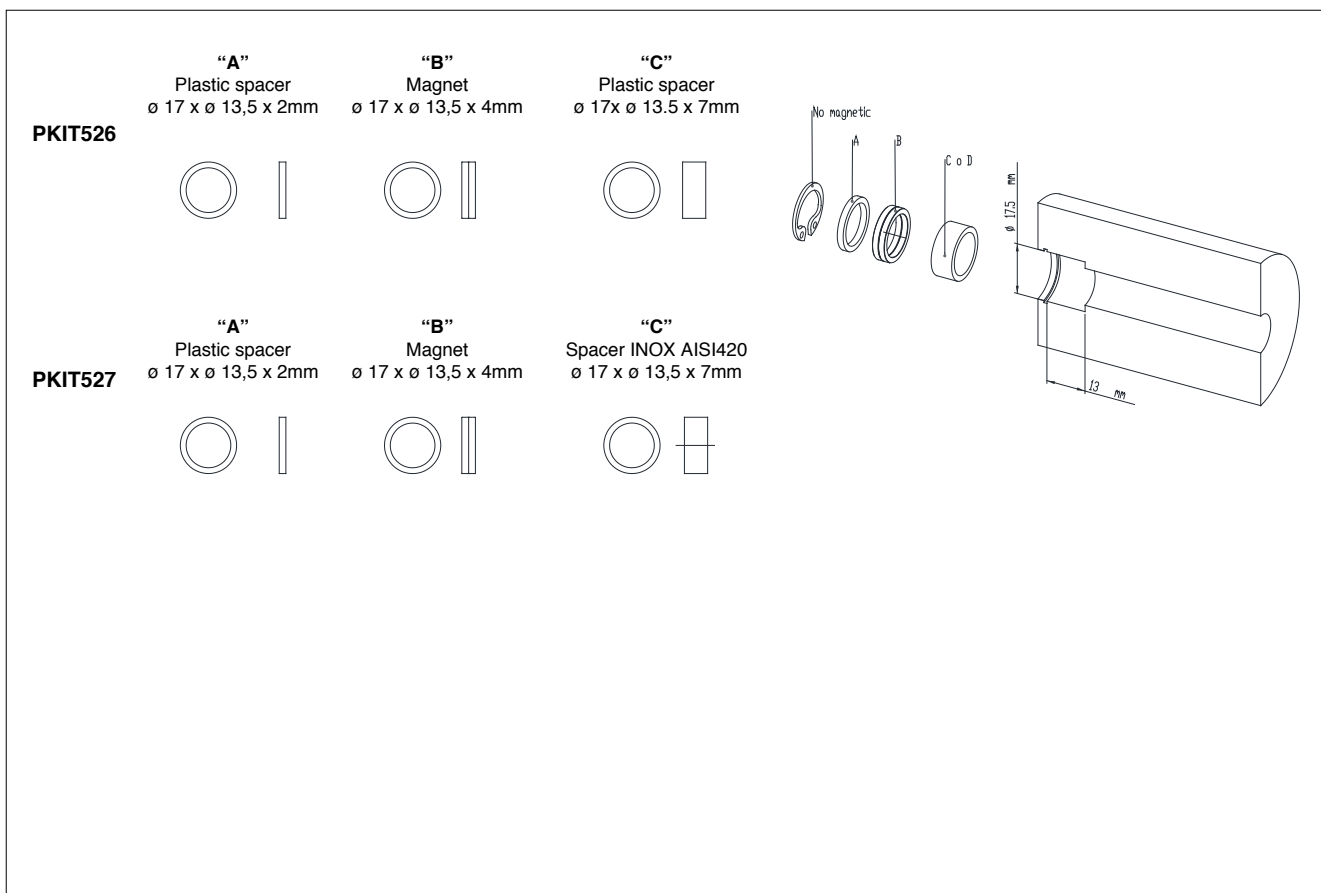
SENSOR HOUSING (detail of head)



INSTALLATION AND CURSOR KIT (to be ordered separately)



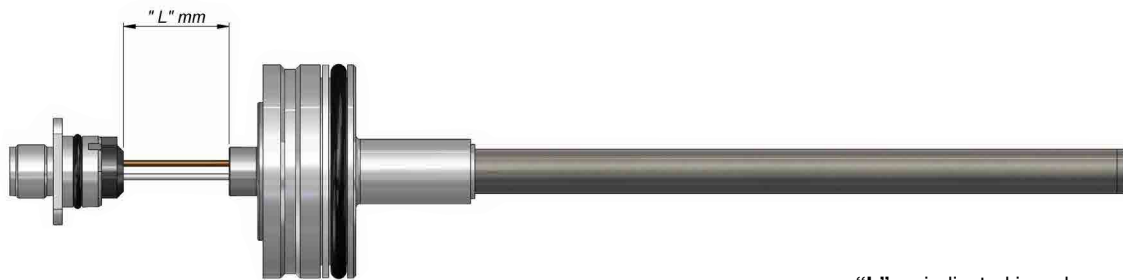
INSTALLATION AND CURSOR KIT FOR 13mm HOUSINGS (to be ordered separately)



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 (C.E.)	mm	Model																			
Independent linearity		< ±0.04% F.S. (±0.10 mm minimum)																			
Max. length (A)	mm	Model +104,7 (excluding cable)										Model +109,7 (excluding cable)									
Repeatability	mm	< 0.01 *																			
Hysteresis		< ±0.005% F.S. *																			
Sampling time	msec	1 up to 600mm stroke / 2 up to 2500 mm																			
* Resolution limited (0.1mm)																					

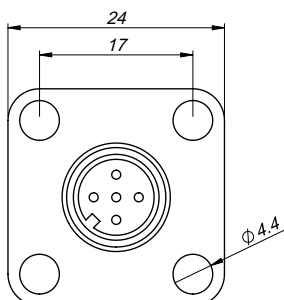
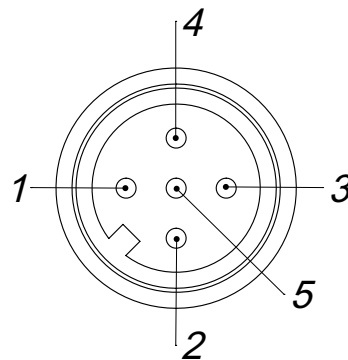
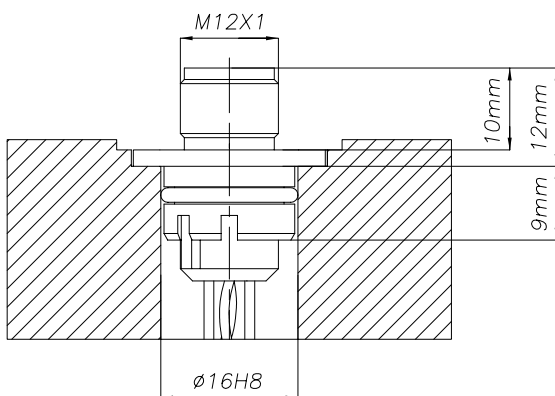
CABLE LENGTH (option A)



"L" as indicated in order code













Code	Length
060	60 mm
100	100 mm
150	150 mm
240	240 mm

ELECTRICAL CONNECTIONS AND CONNECTOR ASSEMBLY



PIN	FUNCTION	CABLE COLOR
1	NC	
2	VDC	BROWN
3	GND	WHITE
4	CAN HI	GREEN
5	CAN LO	GRAY

CURSOR KIT (to be ordered separately)

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

CE CONFORMITY ACCORDING TO DIRECTIVE 2014/30/EU

STANDARD	TITLE
ISO 13766	Earthmoving Machinery
ISO 14982	Agriculture and forest machinery
ISO 13309	Construction machinery
ISO 11452-5	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

ORDERING CODE

OUTPUT CONFIGURATION	
M12 STD CANopen	A

MODEL	
(0050-2500)	XXXX

CURSOR NUMBER	
1	A

BAUDRATE	
1 MBaud	1
800KBaud	2
500kBaud	3
250kBaud	4
125kBaud	5
Riservato	6
50kBaud	7
20kBaud	8
10kBaud	9

POSITION RESOLUTION	
0.1mm	7

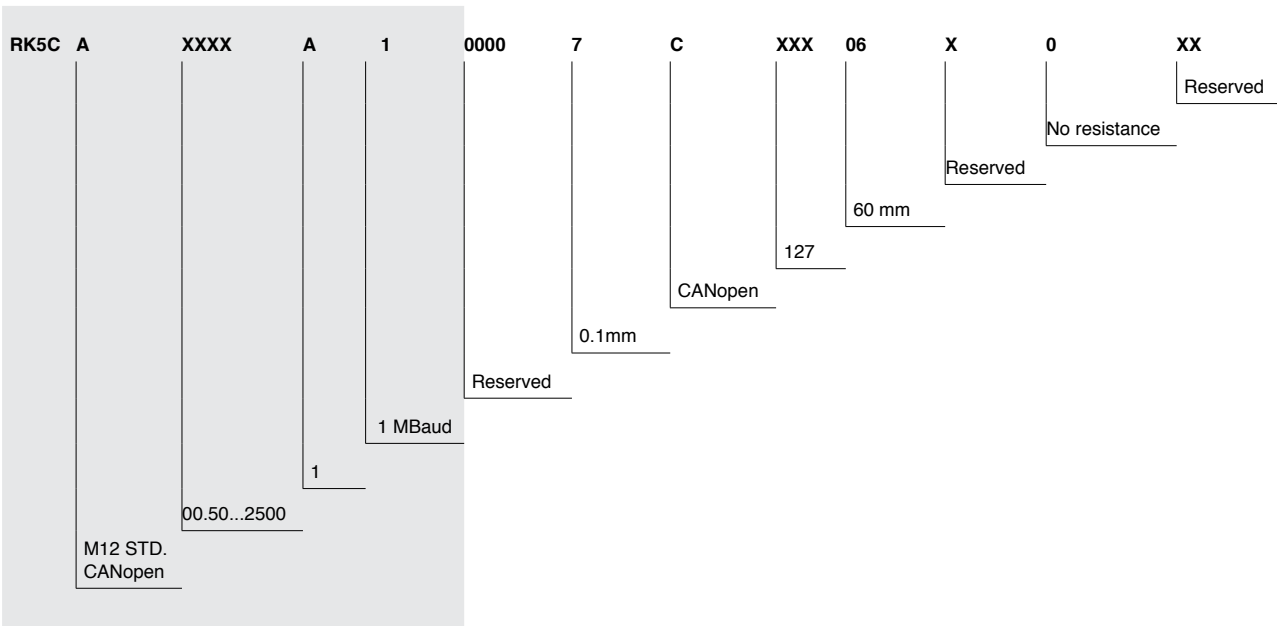
PROTOCOL	
CANopen	C

ADDRESS	
127 (default)	XXX
1...126 (specified by customer)	nnn

CABLE LENGHT	
60mm	06
150mm	15
240mm	24

TERMINATION RESISTANCE	
No resistance (default)	0
Resistance 120 ohm	1

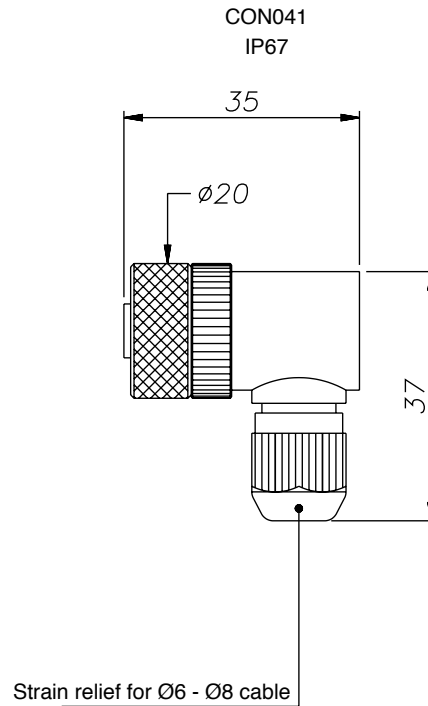
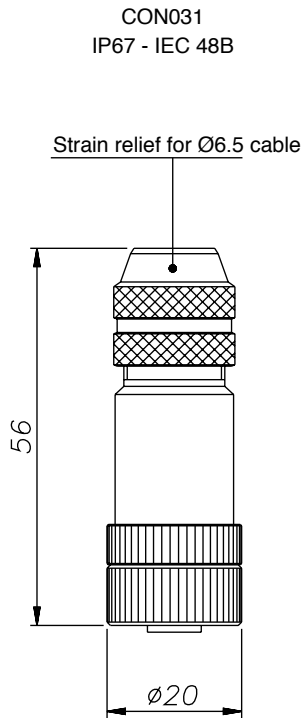
Example of description



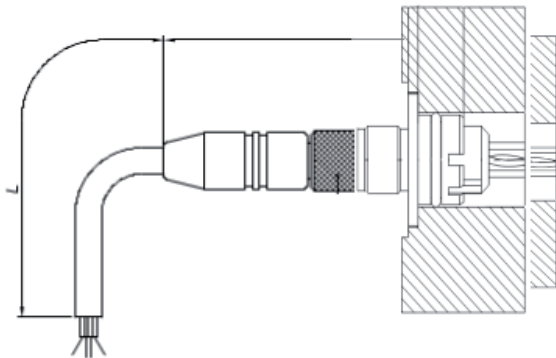
OPTIONAL CONNECTORS

CON031 for 5-pin output

CON041 for 90° 5-pin output



OPTIONAL CABLES (to be ordered separately)



PREWIRED CABLE WITH STRAIGHT CONNECTOR

The cable shield is connected to the connector

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

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

