



### Main characteristics

- Absolute measurement of position and speed
- Possibility of one or two cursors simultaneously
- Local intelligence
- Interface: CANopen DS-301 V4.01 Device Profile DS-406 V2.0
- Strokes from 50 to 4000 mm
- Position resolution up to  $2\mu\text{m}$
- Speed resolution up to  $0,01\text{mm/sec}$
- Linearity error 0.02%
- Repeatability error 0.01mm
- Resistance to vibrations (DIN IEC68T2/6 12g)
- IP67 protection

Contactless linear position transducer with magnetostrictive technology. The absence of electrical contact on the cursor eliminates all wear and guarantees almost unlimited life.

The MK4 CANopen integrates a microprocessor to process the measurement and to diagnose the transducer.

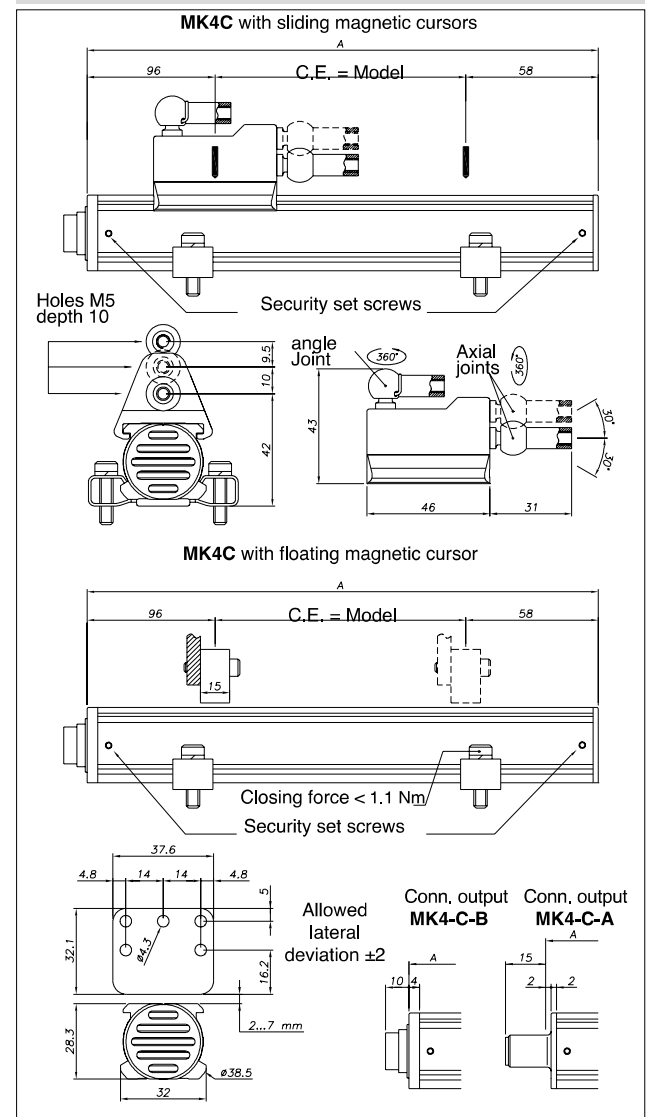
The CAN field bus communication system provides fast and safe transmission.

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

### TECHNICAL DATA

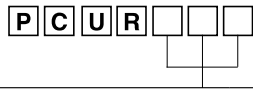
|                             |  |
|-----------------------------|--|
| Model                       | from 50 to 4000 mm                             |
| Measurement taken           | linear position and speed                      |
| Position read sampling time | from 1 to 4 ms (depending on length)           |
| Shock test DIN IEC68T2-27   | 100g - 11ms - single blow                      |
| Vibration DIN IEC68T2-6     | 12g / 10...2000Hz                              |
| Sliding cursor drag force   | $\leq 1\text{ N}$                              |
| Shift speed                 | $\leq 10\text{ m/s}$                           |
| Max. acceleration           | $\leq 100\text{ m/s}^2$ shift                  |
| Resolution                  | $5\mu\text{m}$<br>( $2\mu\text{m}$ on request) |
| Cursor                      | Floating ring with integrated magnets          |
| Rated power supply          | $24\text{Vdc} \pm 20\%$                        |
| Max. power ripple           | 1 Vpp  |
| Max. input                  | 90mA max                                       |
| Output signal               | CAN bus digital communication                  |
| Electrical isolation        | 500V (D.C. power/ground)                       |
| Reverse polarity protection | YES  |
| Overvoltage protection      | Varistors on power line                        |
| Overcurrent protection      | PTC (self-resettable fuse on power line)       |
| Environmental protection    | IP67   |
| Work temperature            | $-30\text{...}+75^\circ\text{C}$               |
| Storage temperature         | $-40\text{...}+100^\circ\text{C}$              |
| Coefficient of temperature  | Typical 20 ppm/°C                              |

### MECHANICAL DIMENSIONS



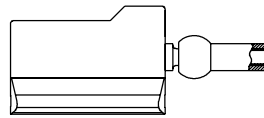


## CURSORS ON REQUEST

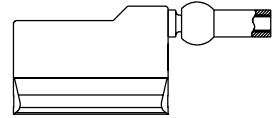


| Cursors                                       |     |
|---|-----|
| Sliding cursor , axial joint (low) (STANDARD) | 035 |
| Sliding cursor, axial joint (high)            | 036 |
| Sliding cursor, angled joint                  | 037 |
| Floating cursor                               | 039 |

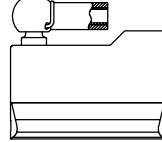
PCUR035



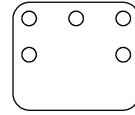
PCUR036



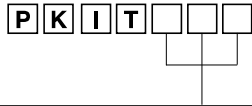
PCUR037



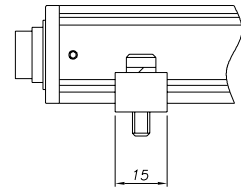
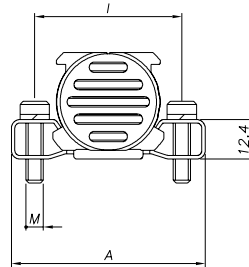
PCUR039



## BRACKET S ON REQUEST



| Brackets (2 brackets for every kit) |     |
|-------------------------------------|-----|
| Bracket in steel, interaxis 42.5mm  | 090 |
| Bracket in steel, interaxis 50mm    | 091 |



| Brackets code | Interaxis (i) | Screw (V) | Dimension (A) |
|---------------|---------------|-----------|---------------|
| PKIT090       | 42.5          | M4        | 56            |
| PKIT091       | 50            | M5        | 63.5          |

## OPTIONAL FEMALE CONNECTORS

For A outputs, M12 thread connector

Codes: **CON031** for 5-pin output (MK4C A)

**CON041** for 5-pin output (MK4C A)

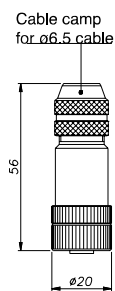
For B outputs, M16 thread connector

Codes: **CON021** for 6-pin output (MK4C B)

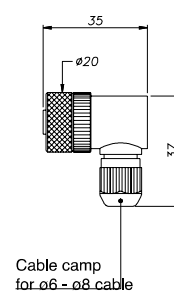
**CON022** for 6-pin output (MK4C B)

**CON023** for 6-pin output (MK4C B)

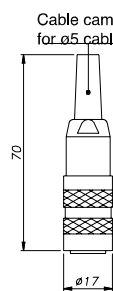
Connector extraction length: 10mm



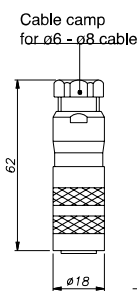
CON031  
IP67 - IEC 48B



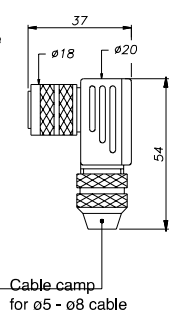
CON041  
IP67



CON021  
IP40 - EMC

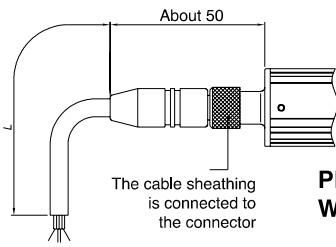


CON022  
IP67 - EMC

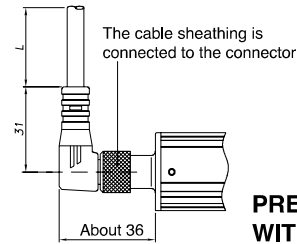


CON023  
IP67 - EMC

## OPTIONAL CABLES OUTPUT A



**PRE-ASSEMBLED CABLE  
WITH STRAIGHT CONNECTOR**



**PRE-ASSEMBLED CABLE  
WITH 90° CONNECTOR**

| 5-pin cable code |    | MK4C - A       |               |
|------------------|----|----------------|---------------|
| Lenght "L"       |    | CODE           |               |
|                  |    | straight cable | Cable to 90°  |
| 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> |

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](http://www.gefran.com)

**GEFRAN spa** reserved the right to make aesthetic or functional changes at any time and without notice.