



### TECHNICAL DATA

|                                       |   |
|---------------------------------------|---|
| Model                                 | from 50 to 4000 mm                                |
| Measurement taken                     | Displacement / Speed                              |
| Position read sampling time (typical) | 1 ms  |
| Speed measurement range               | min 0 .. 0,1 m/s<br>max 0 .. 10 m/s               |
| Accuracy speed                        | < 2% (in all F.S. )                               |
| Shock test DIN IEC68T2-27             | 100g - 11ms - single shock                        |
| Vibrations DIN IEC68T2-6              | 12g / 10...2000Hz                                 |
| Displacement speed                    | ≤10 m/s   |
| Max. acceleration                     | ≤ 100 m/s <sup>2</sup> displacement               |
| Resolution                            | INFINITE (only limited from the electrical noise) |
| Cursor (see note)                     | Sliding cursor<br>Floating separate cursor        |
| Working temperature                   | -30...+75°C                                       |
| Storage temperature                   | -40...+100°C                                      |
| Coefficient of temperature            | 0.005% F.S. / °C                                  |
| Protection                            | IP67  |

Note: 1) For strokes > 2500 mt use sliding or floating cursors with max. distance of 4mm  
2) For multi-cursor versions, the cursors have to work under the same distance and temperature conditions

### ELECTRICAL DATA

|                                       |                   |                 |
|---------------------------------------|-------------------|-----------------|
|                                       | 0,1...10,1V (W/Z) |                 |
|                                       | 0...10V (N)       |                 |
|                                       | -10...+10V (T)    | 4...20mA (E)    |
|                                       | -5...+5V (L)      | 0...20mA (B)    |
| Output signal                         | 24 Vdc ±20%       | 24 Vdc ±20%     |
| Nominal power supply                  | (opt. 15V ±10%)   | (opt. 15V ±10%) |
| Max. power ripple                     | 1Vpp              | 1Vpp            |
| Max. input                            | 70mA              | 90mA            |
| Output load                           | 2KΩ               | < 500Ω          |
| Max. output ripple                    | < 5 mV pp         | < 5 mV pp       |
| Max. output value                     | 10.6 V            | 25 mA           |
| Electrical isolation                  | 500 V             | 500 V           |
| Protection against polarity inversion | Yes               | Yes             |
| Protection against overvoltage        | Yes               | Yes             |
| Self-resetting internal fuse          | Yes               | Yes             |

### Main characteristics

- Absolute transducer
- Contactless transducer for longer lifetime
- Strokes from 50 to 4000mm
- Quick plug-in through stainless steel connectors
- Sliding or floating magnetic cursor
- Direct analog output (mA/V) for displacement and speed
- Cursor position: single or double (minimal distance 75mm)
- Work temperature: -30...+75°C
- Resistance to vibration (DIN IEC68T2/6 12g)
- IP67 protection
- EMI CE compatibility (EN 50081-2 50082-1)
- Power supply 24Vdc ±20%
- Improved internal structure with security set screws

Contactless linear position transducer with magnetostrictive technology.

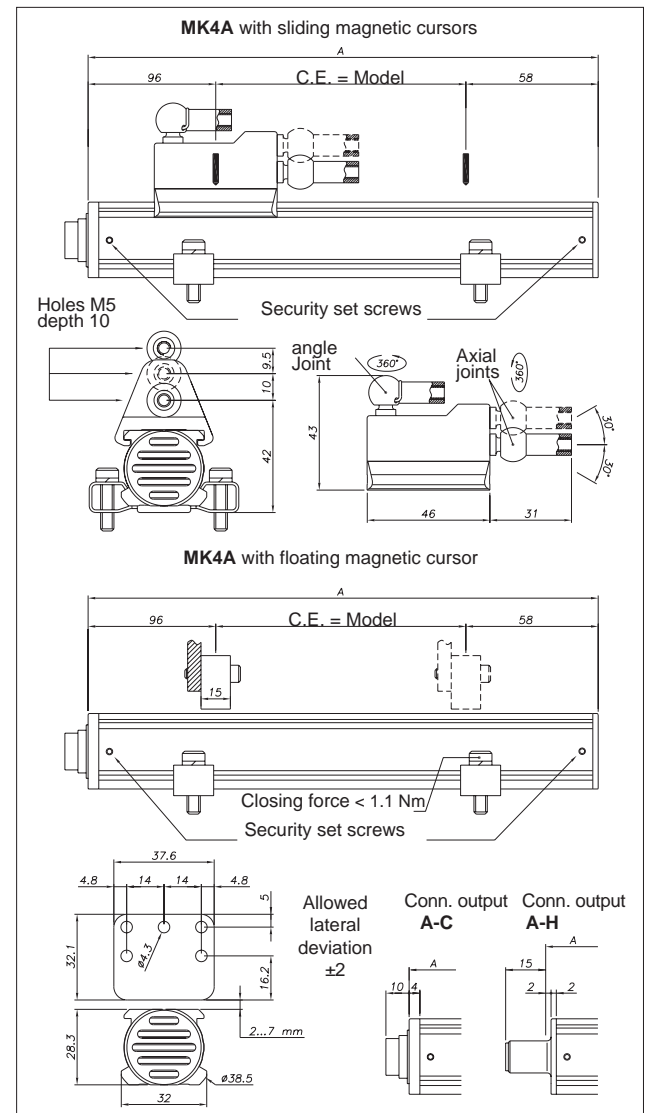
The absence of electrical contact on the cursor eliminates all wear and guarantees almost unlimited life.

Compact size for simple installation.

Full protection against outside agents for use in harsh environments with high contamination and presence of dust.

Excellent linearity, repeatability, resistance to mechanical vibrations and shocks.

### MECHANICAL DIMENSIONS

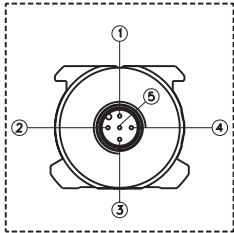


## ELECTRICAL / MECHANICAL DATA

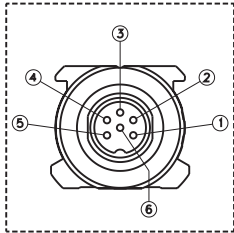
|                          |        |   |    |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |      |  |  |  |  |  |
|--------------------------|--------|---|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|--|--|--|--|--|
| <b>Model</b>             |        | 50  | 75 | 100 | 130 | 150 | 175 | 200 | 225 | 250 | 300 | 350 | 360 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850  | 900  | 950  | 1000 | 1100 | 1200 | 1250 | 1300 | 1400 | 1500 |  |  |  |  |  |
|                          |        |   |    |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 1750 | 2000 | 2250 | 2500 | 2750 | 3000 | 3250 | 3500 | 3750 | 4000 |  |  |  |  |  |
| Electrical stroke (E.S.) | mm     | <b>Model</b>  |    |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |      |  |  |  |  |  |
| Independent linearity    | ± % FS | typical 0,02 (Max. 0,04)  |    |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |      |  |  |  |  |  |
| Max. dimensions (A)      | mm     | <b>Model + 152</b>  |    |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |      |  |  |  |  |  |
| Repeatability            | mm     | < 0,01  |    |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |      |  |  |  |  |  |
| Hysteresis               | mm     | < 0,01  |    |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |      |  |  |  |  |  |
| Sampling time            | ms     | <b>0,5</b> (1 for stroke from 300 to 1100) ( <b>1,5</b> for stroke from 1100 to 2000) ( <b>2</b> for stroke >2000) ( <b>3</b> for stroke >3000) |    |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |      |  |  |  |  |  |

## ELECTRICAL CONNECTIONS

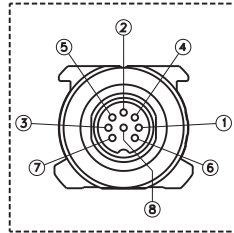
OUTPUT MK4A A



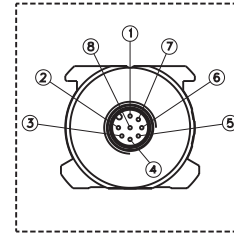
OUTPUT MK4A B



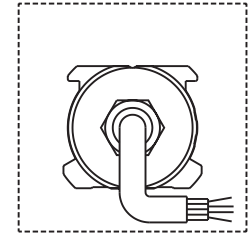
OUTPUT MK4A C



OUTPUT MK4A H



OUTPUT MK4A F

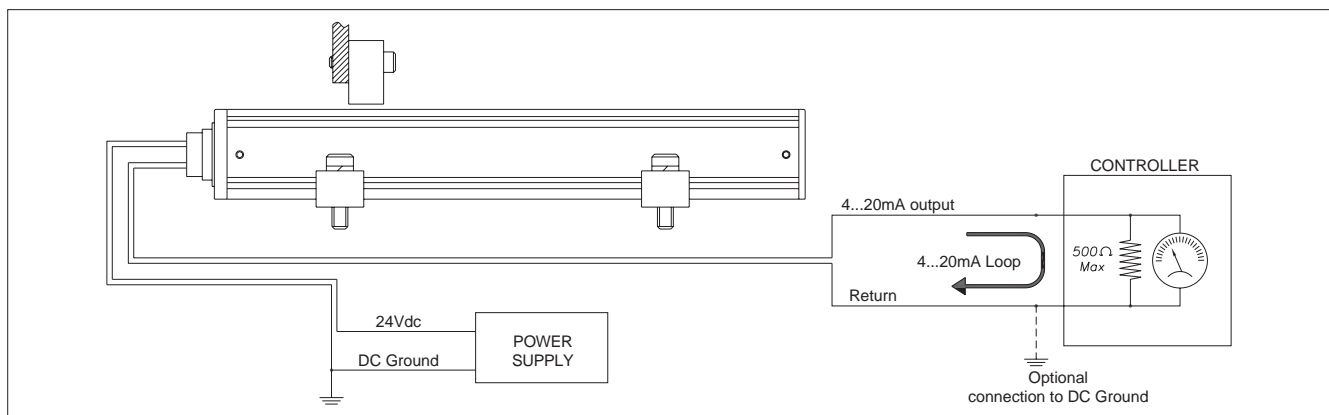


| Function   | CONNECTORS |           |           |           | CABLES         | OPTIONAL CABLES FOR |                     |
|--|------------|-----------|-----------|-----------|----------------|---------------------|---------------------|
|  | MK4A-A     | MK4A-B    | MK4A-C    | MK4A-H    | MK4A-F         | MK4A-A              | MK4A-H              |
|  | 5 pin M12  | 6 pin M16 | 8 pin M16 | 8 pin M12 | Standard cable | pre-assembled 5 pin | pre-assembled 8 pin |
| <b>Output cursor 1</b><br>0...10V<br>4...20mA<br>0...20mA<br>-10...+10V<br>-5...+5V  | 1          | 1         | 5 (1*)    | 5         | Grey           | Brown               | Green               |
| <b>GND</b><br><b>Output cursor 1</b><br>(0V)   | 2          | 2         | 2         | 1         | Pink           | White               | Yellow              |
| <b>Inverse output cursor 1</b><br><b>Output cursor 2</b><br><b>Output speed</b><br>0...10V<br>4...20mA<br>0...20mA<br>-10...+10V<br>-5...+5V | 3          | 3         | 3         | 3         | Yellow         | Blue                | Pink                |
| <b>GND</b><br><b>Output cursor 1</b><br><b>Output cursor 2</b><br><b>Output speed</b><br>(0V)  | 2          | 4         | 6         | 2         | Pink           | White               | Grey                |
| <b>Power supply+</b>   | 5          | 5         | 7         | 7         | Brown          | Grey                | Brown               |
| <b>Power supply GND</b>  | 4          | 6         | 8         | 6         | White          | Black               | Blue                |
| <b>n.c.</b>  | -          | -         | 4         | 4         | -              | -                   | Red                 |
| <b>n.c.</b>  | -          | -         | 1(5*)     | 8         | -              | -                   | White               |

(\*) = for version I 4...20mA / 0...20mA

The transducer case must be grounded with the cable sheathing on the control system side only.

## CURRENT OUTPUT CONNECTION

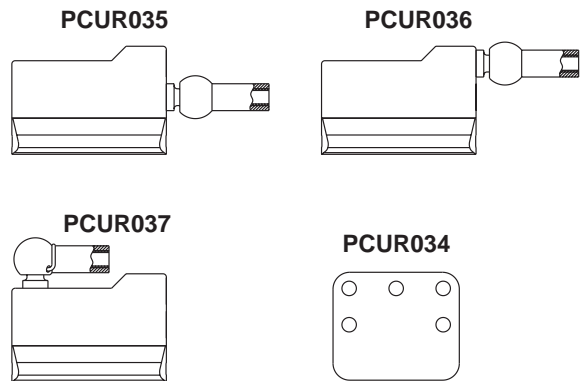




## CURSORS ON REQUEST

P C U R    0 1

| Cursors                                       |     |
|---|-----|
| Sliding cursor , axial joint (low) (STANDARD) | 035 |
| Sliding cursor, axial joint (high)            | 036 |
| Sliding cursor, angled joint                  | 037 |
| Floating Cursor                               | 034 |
| Number of cursors                             |     |

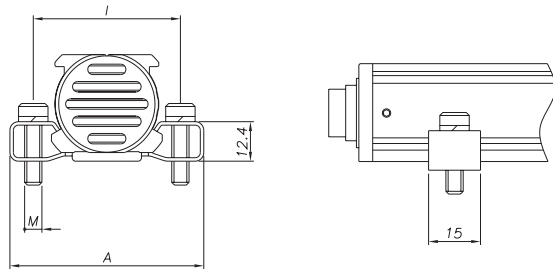


## BRACKET S ON REQUEST



P K I T

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



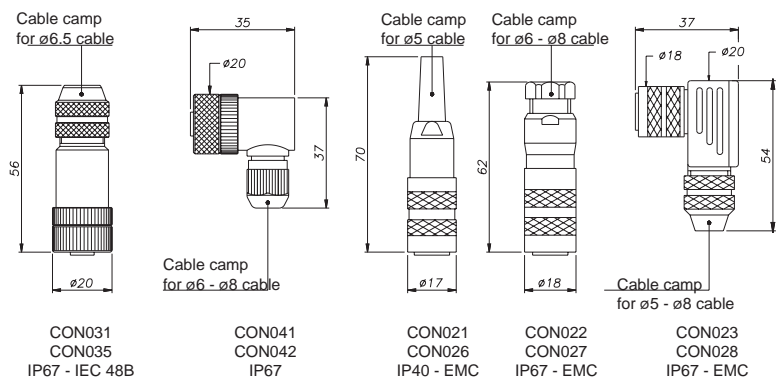
| Brackets code | Interaxis (i) | Screw (V) | Dimension (A) |
|---------------|---------------|-----------|---------------|
| PKIT090       | 42.5          | M4        | 56            |
| PKIT091       | 50            | M5        | 63.5          |

## OPTIONAL FEMALE CONNECTORS

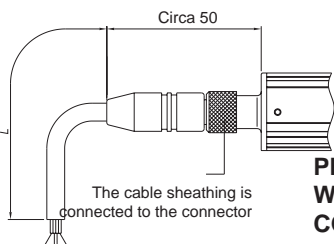
For A-H outputs, M12 thread connector  
 Code: **CON031** for 5-pin output (MK4A A)  
**CON041** for 5-pin output (MK4A A)  
**CON035** for 8-pin output (MK4A H)  
**CON042** for 8-pin output (MK4A H)

For B-C outputs, M16 thread connector  
 Code: **CON021** for 6-pin output (MK4A B)  
**CON022** for 6-pin output (MK4A B)  
**CON023** for 6-pin output (MK4A B)  
**CON026** for 8-pin output (MK4A C)  
**CON027** for 8-pin output (MK4A C)  
**CON028** for 8-pin output (MK4A C)

Connector extraction length: 10mm

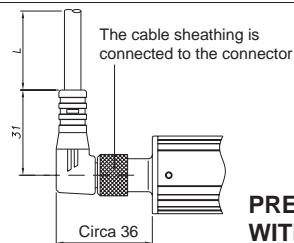


## OPTIONAL CABLES OUTPUT



**PRE-ASSEMBLED CABLE WITH STRAIGHT CONNECTOR**

| 5-pin cable code |    | MK4A - A       |              |
|------------------|----|----------------|--------------|
| Length "L"       |    | CODE           |              |
|                  |    | straight cable | Cable to 90° |
| 2                | mt | CAV011         | CAV021       |
| 5                | mt | CAV012         | CAV022       |
| 10               | mt | CAV013         | CAV023       |
| 15               | mt | CAV015         | CAV024       |



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

| 8-pin cable code |    | MK4A - H       |              |
|------------------|----|----------------|--------------|
| Length "L"       |    | CODE           |              |
|                  |    | straight cable | Cable to 90° |
| 2                | mt | CAV002         | CAV005       |
| 5                | mt | CAV003         | CAV006       |
| 10               | mt | CAV004         | CAV007       |
| 15               | mt | CAV009         | CAV008       |

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