

# Non-Contact Magnetostrictive Position Sensor In Cylinder Applications

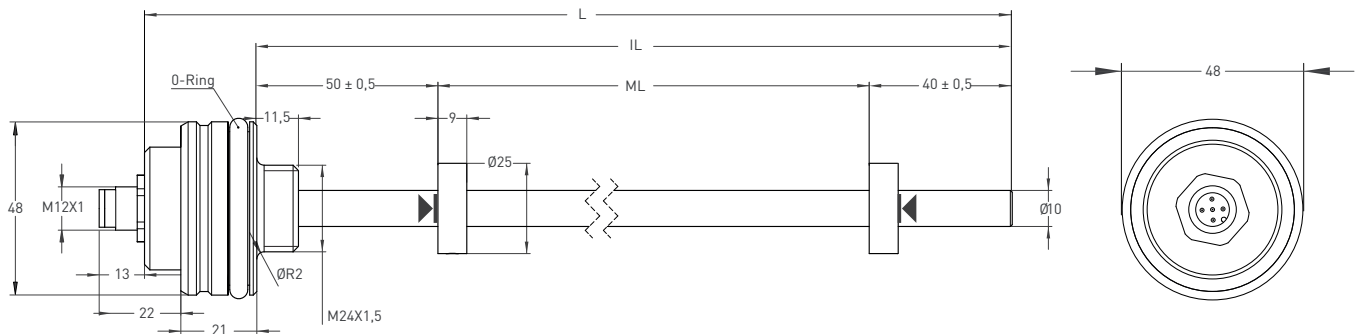
**ANALOG 4-20 mA**

- Measuring length 50 - 3000 mm
- 15 bit resolution
- 0 - 20 mA, 4 - 20 mA output
- 24 VDC power supply



| Technical Specifications    |  |
|-----------------------------|--|
| Measurement stroke          | 50 to 3000 mm  |
| Resolution                  | 15 bit DAC output  |
| Repeatability               | 100 μm   |
| Output                      | 0-20mA, 4-20mA   |
| Power supply                | 24 VDC ±10%  |
| Displacement speed          | max. <5 m/s  |
| Linearity                   | 100 mm %1  |
|                             | 100 - 500 mm %0,8  |
|                             | 500 - 1000 mm %0,5   |
|                             | 1000 - 2500 mm %0,2  |
| Sampling rate               | Up to 2 kHz (depending on stroke length)   |
| Vibration                   | EN 60068-2-6 , 5-200 Hz<br>200 m/s <sup>2</sup> (20g) , 2h 30min each axis (x,y,z) |
| Shock                       | EN 60068-2-2:2007  |
|                             | 500 m/s <sup>2</sup> (50g) , 11ms. (x,y,z axis)                                    |
| Update time                 | 0-600mm, 0,5ms   |
|                             | 600-1500mm, 1ms  |
|                             | 1500-3000mm, 2ms   |
| Max. consumption            | < 50 mA - 90 mA (depending on stroke length)                                       |
| Max. output noise           | < 5 mVpp   |
| Load resistance             | max. 500 Ohm   |
| Reverse polarity protection | Up to -30 VDC  |
| Overvoltage protection      | Up to 30 VDC   |
| Pressure rating             | < 500 bar  |
| Sealing                     | O-ring: NBR  |
|                             | Backup Ring: PTFE  |
| Mounting                    | M18 x 1.5 or 3/4" -16 UNF  |
|                             | O-ring or Flat   |
| Case material               | Profile :Anodized aluminium  |
|                             | Tube: Stainless steel  |
|                             | Caps: Stainless steel  |
| Protection level            | IP 67  |
| Operating temperature       | -10°C ... +70°C  |
| Storage temperature         | -30°C ... +90°C  |

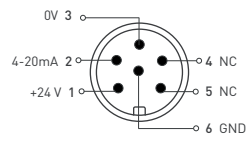
## Mechanical Specifications



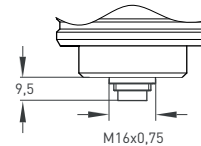
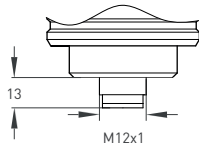
| MSP (mm)                 | 50      | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900  | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 | 1750 | 2000 | 2250 | 2500 | 3000 |      |
|--------------------------|---------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|
| ML (Measuring Length)    | 50      | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900  | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 | 1750 | 2000 | 2250 | 2500 | 3000 |      |
| IL (Installation Length) | 149     | 199 | 249 | 299 | 349 | 399 | 449 | 499 | 549 | 599 | 649 | 699 | 749 | 799 | 849 | 899 | 949 | 999  | 1099 | 1199 | 1299 | 1399 | 1499 | 1599 | 1849 | 2099 | 2349 | 2599 | 3099 |      |
| L (Total Length)         | 179     | 229 | 279 | 329 | 379 | 429 | 479 | 529 | 579 | 629 | 679 | 729 | 779 | 829 | 879 | 929 | 979 | 1029 | 1129 | 1229 | 1329 | 1429 | 1529 | 1629 | 1729 | 1979 | 2229 | 2479 | 2729 | 3229 |
| Dead Zone Calculation    | 50 / 40 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |      |      |      |      |

## Round Connector

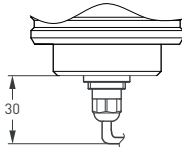
### 6 pin Female Connector Configuration



CN6 M12 [A] / M16 [B]  
6 pin



## Cable



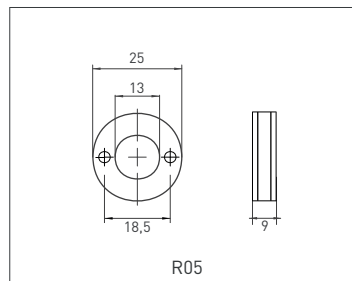
### Current Output

+V : Brown  
0V : Blue  
0V sense : Black  
Output 1 : White (out)  
Earth : Shield

### Cable Length

1 M : 1 meter (standard)  
(other cable lengths available)

## Cursor



## Ordering Procedure

| Model | Measuring range | Rod & Thread   | Sealing surface      | Resolution | Cursor     | Output   | Connector/Cable   | Dead zone |
|-------|-----------------|--|----------------------|------------|------------|--|---|-----------|
| MSP   | 300             | E10  | S                    | B          | 1R05       | V10  | CN5A  | 50/40     |
| MSP   | 50 - 3000 mm    | E10 : Ø10 M18x1,5<br>U10 : Ø10 3/4"-16 UNF<br>E010 : Ø10 M24x1,5<br>EA10 : Ø10 M24x1,5<br>EB10 : Ø10 M30x2 | S: O-ring<br>F: Flat | B : 15 bit | R05: 25 mm | I40 :4-20mA<br>I04 :20-4mA<br>I20 :0-20mA<br>I02 :20-0mA | CN5A : M12<br>CN5B : M16<br>CN6A : M12<br>CN6B : M16<br>CN8A : M12<br>CN8B : M16<br><br>1M: 1 meter<br>(standard) | 50/40     |

## ООО "РусАвтоматизация"

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