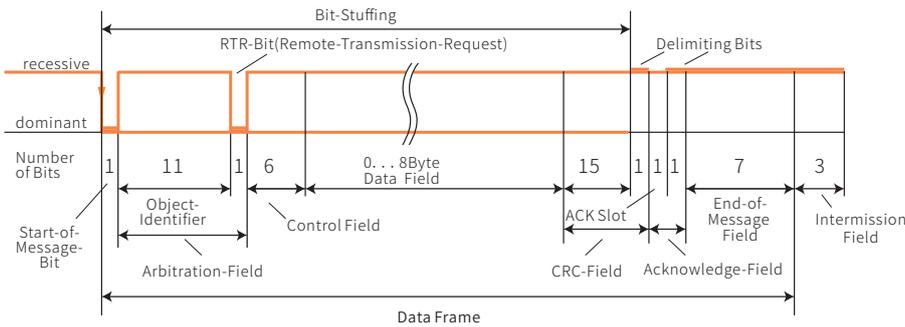


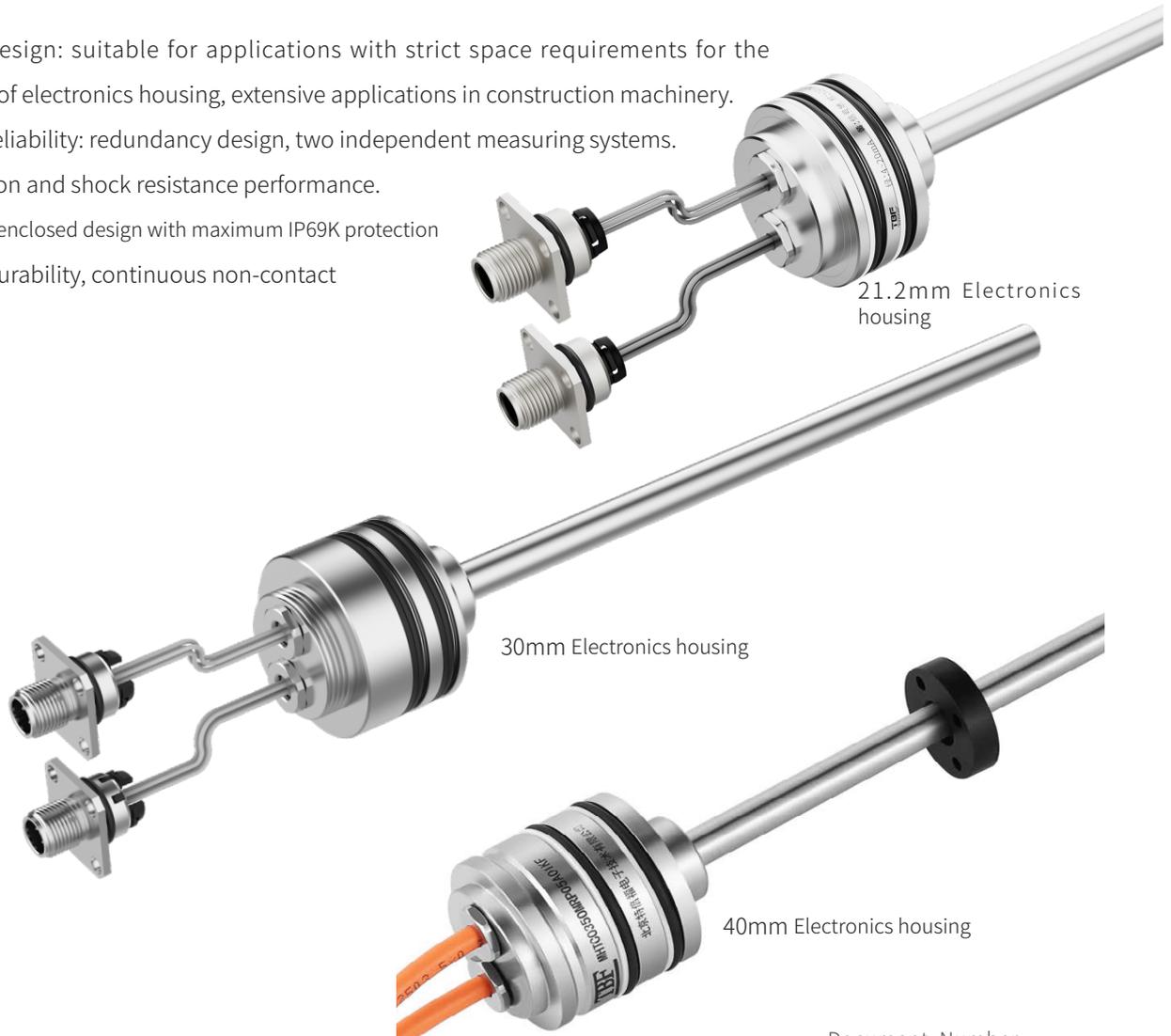


MHT Redundant displacement sensor

MHT-CANopen



- + Compact design: suitable for applications with strict space requirements for the installation of electronics housing, extensive applications in construction machinery.
- + Maximum reliability: redundancy design, two independent measuring systems.
- + High vibration and shock resistance performance.
- + Durust: fully enclosed design with maximum IP69K protection
- + Maximum durability, continuous non-contact

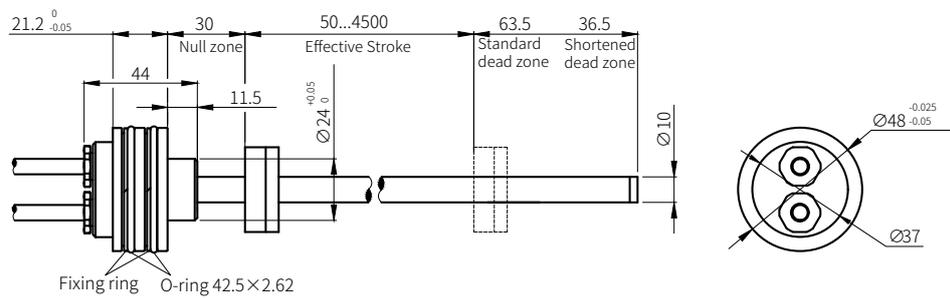


TECHNICAL PARAMETER

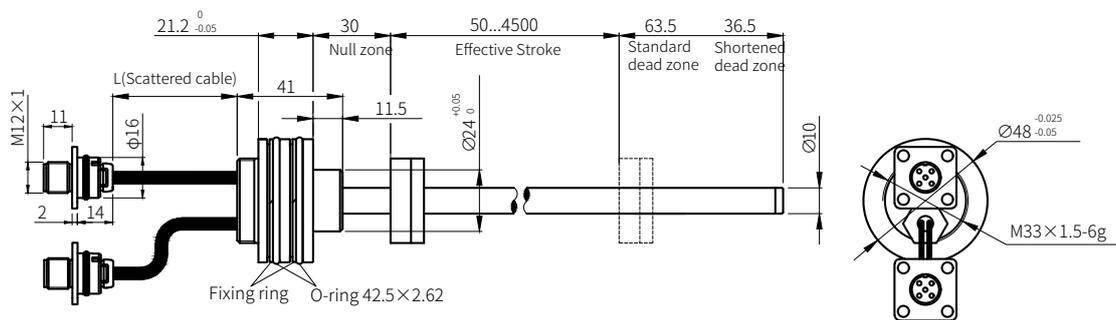
Input											
Measured data	Position/Velocity										
Measurement range	50...4500mm										
Output											
Communication protocols	CAN bus system protocol, ISO11898,CAN open CIA standard DS-301 V3.0 encoder profile DS-406 V3.1										
Transmission rate	<table border="1"> <tr> <td>Rate (kbit/s)</td> <td>1000</td> <td>500</td> <td>250</td> <td>125</td> </tr> <tr> <td>Cable length (meter)</td> <td>< 25</td> <td>< 100</td> <td>< 250</td> <td>< 500</td> </tr> </table>	Rate (kbit/s)	1000	500	250	125	Cable length (meter)	< 25	< 100	< 250	< 500
Rate (kbit/s)	1000	500	250	125							
Cable length (meter)	< 25	< 100	< 250	< 500							
Resolution											
Resolution:position	2/5/10/100µm										
Resolution: velocity	1mm/s										
None-Linearity	< ±0.04%F.S.										
Repeatability	< ±0.005%F.S										
Update time	<table border="1"> <tr> <td>Stroke length</td> <td>≤ 1200mm</td> <td>≤ 2400mm</td> <td>≤ 4500mm</td> </tr> <tr> <td>Update time</td> <td>0.5ms</td> <td>1ms</td> <td>2ms</td> </tr> </table>	Stroke length	≤ 1200mm	≤ 2400mm	≤ 4500mm	Update time	0.5ms	1ms	2ms		
Stroke length	≤ 1200mm	≤ 2400mm	≤ 4500mm								
Update time	0.5ms	1ms	2ms								
Temperature coefficient	< 30ppm/°C										
Mounting											
Mounting position	Any										
Mounting	Extrusion mounting										
Design/Material											
Electronics housing	Stainless steel 304										
Measuring rod	Stainless steel 304、 316L										
Magnet	Standard magnet										
Operating pressure ratings	Φ10 Measuring rod: 35MPa (continuous) ,70MPa (peak) Φ7 Measuring rod: 30MPa (continuous) ,45MPa (peak)										
Electrical connection											
Wiring connection	Straight out cable, aviation plug										
Operating voltage	9...36VDC										
Polarity protection	Up to -36VDC										
Overvoltage protection	Up to +36VDC										
Power consumption	< 90mA (varies with range size)										
Dielectric strength	500 VDC (DC ground to machine ground)										
Terminal resistance	120Ω (Software-adjustable on and off)										
Operating conditions											
Magnet velocity	Any										
Operating temperature	-40...105°C (customizable)										
Humidity	90 % relative humidity, no condensation										
Ingress protection	IP68 / IP69K (Straight out cable)										
Shock	100 g (single shock) IEC standard 60068-2-27										
Vibration	15g/10...2000 Hz, IEC standard 60068-2-6 (resonant frequencies excluded)										
EMC	Electromagnetic emission according to EN 61000-6-3 Electromagnetic immunity according to EN 61000-6-2										

21.2mm Electronics housing
Double seal type

Straight-out cable

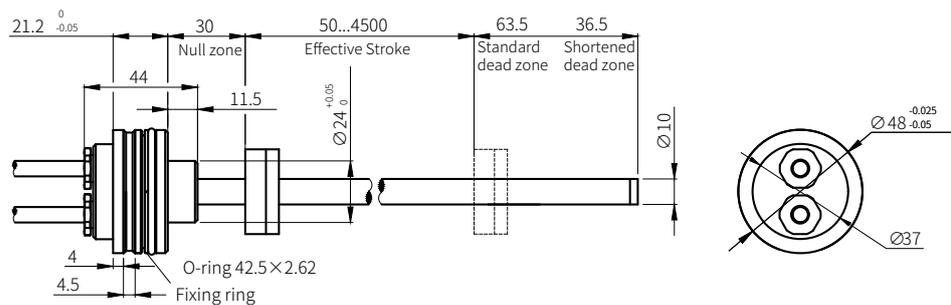


Aviation plug

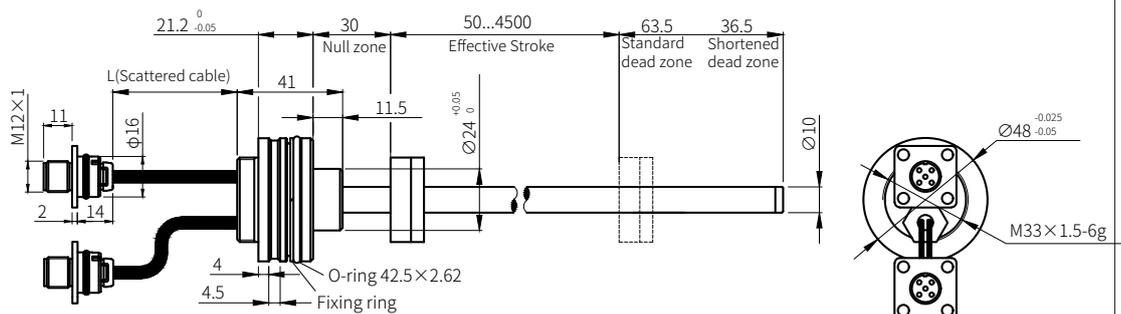


21.2mm Electronics housing
Thimble type

Straight-out cable

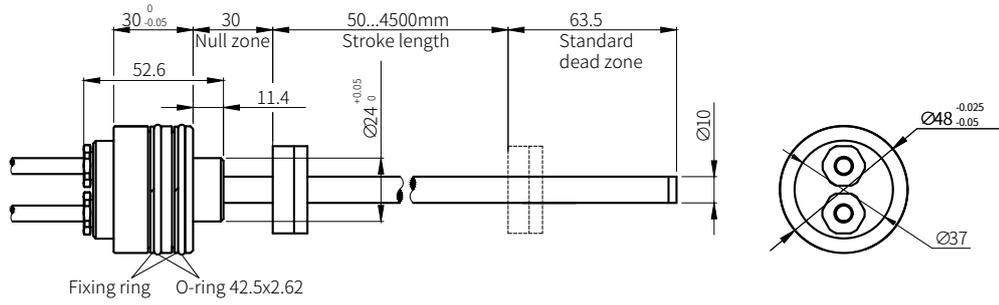


Aviation plug

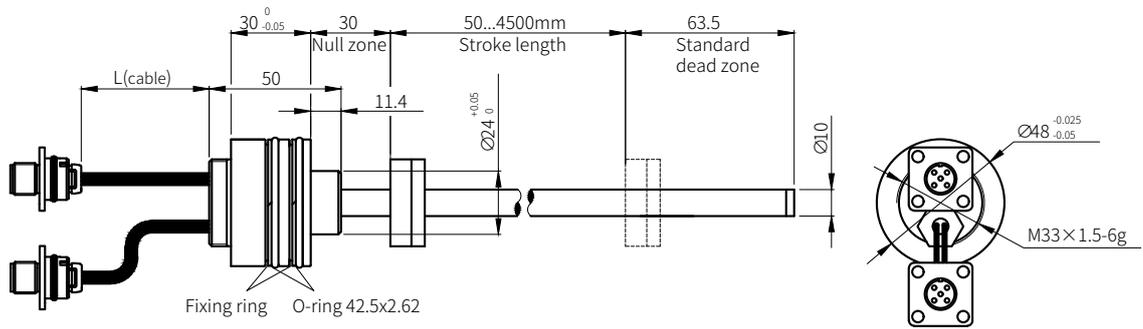


30mm Electronics housing Double seal type

Straight-out cable

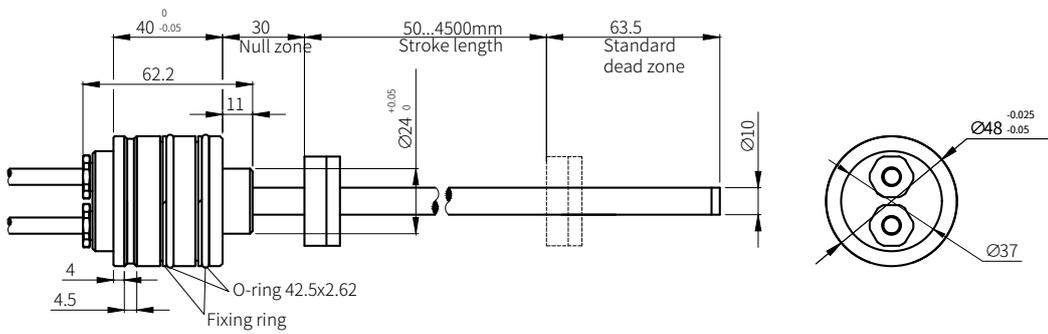


Aviation plug

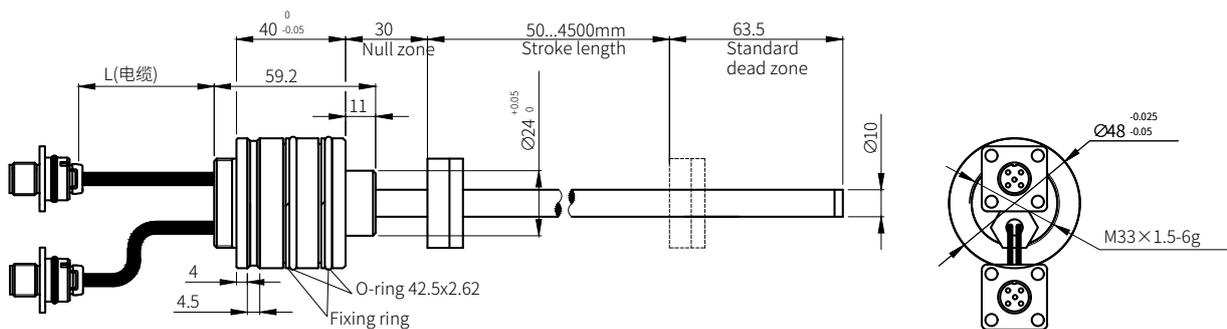


40mm Electronics housing Double seal type

Straight-out cable



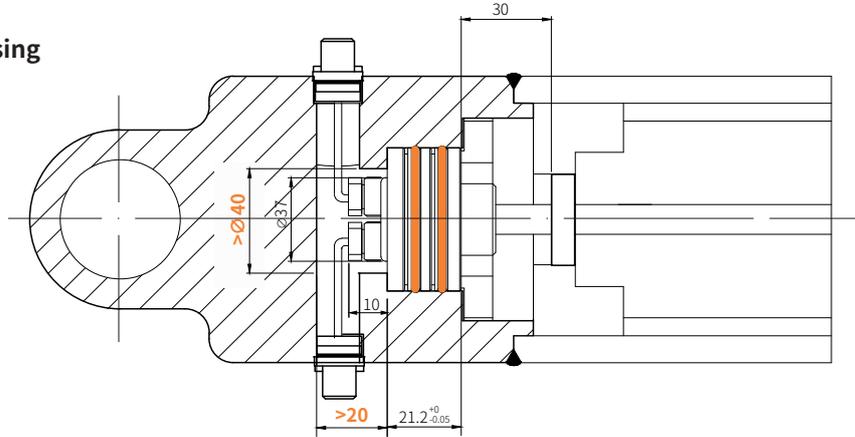
Aviation plug



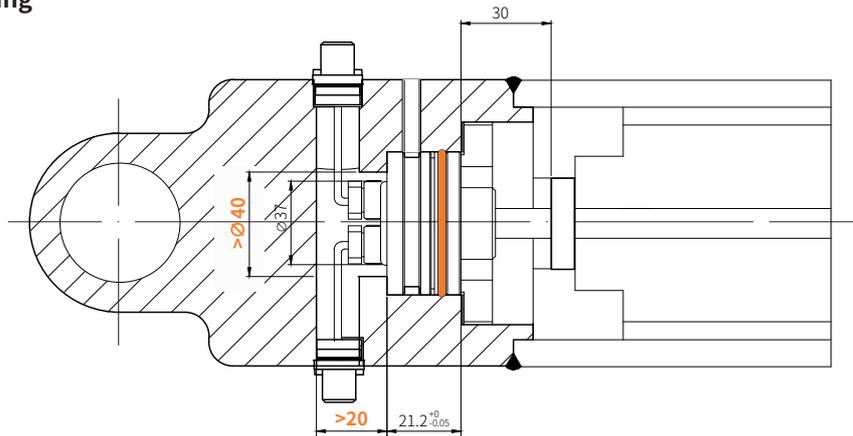
MECHANICAL MOUNTING DIAGRAM

- + Secure the magnet with non-permeable gasket.
- + The size of hole in the piston rod depends on factors such as hydraulic pressure and piston speed. The minimum hole size is $\Phi 10$ ($\Phi 7$ measuring rods) or $\Phi 13.5$ ($\Phi 10$ measuring rods).
- + The top mounting hole of the cylinder is greater than 40mm in diameter and 20mm in depth.
- + The thimble is made of flat head top wire, and the force distance is $< 0.5\text{N.m}$.

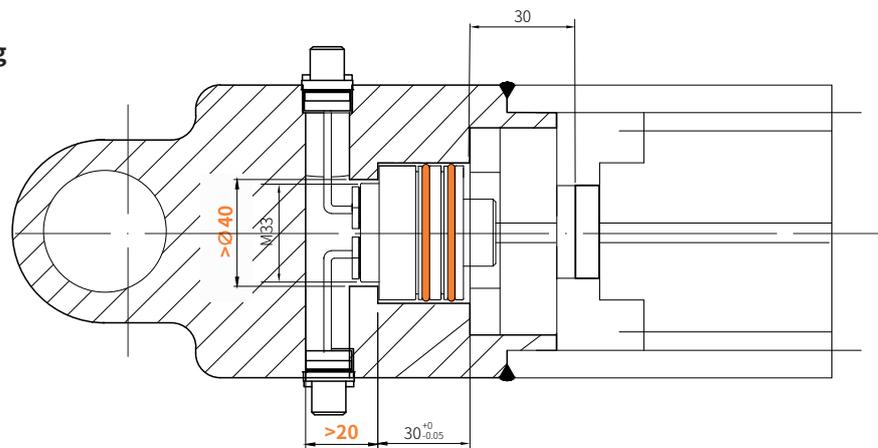
21.2mm Electronics housing Double seal type



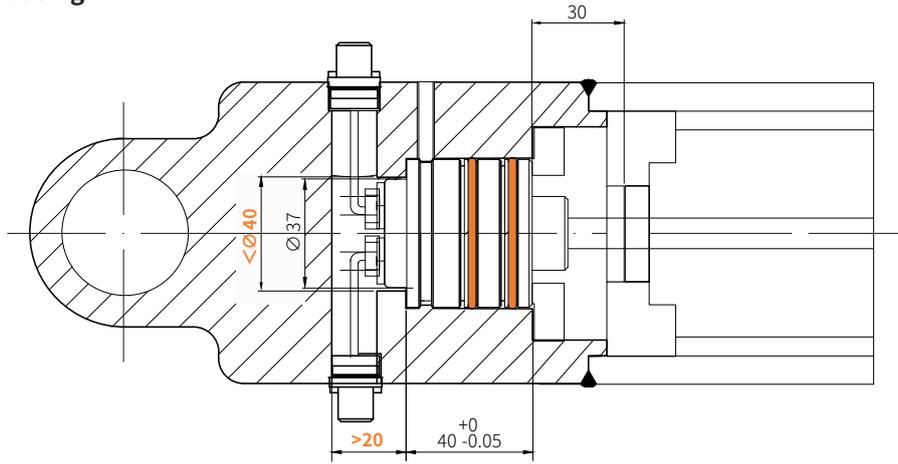
21.2mm Electronics housing Thimble type



30mm Electronics housing Double seal type

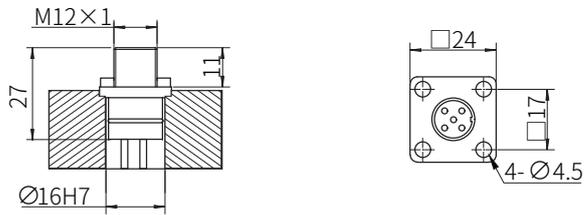


**40mm Electronics housing
Double seal type**



5 pin M12 connector

4 single lines, 0.5mm²

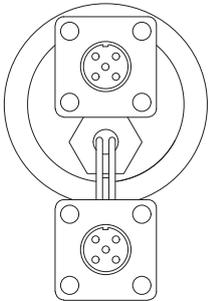


Wiring

5 pin M12 connector

PIN

Function



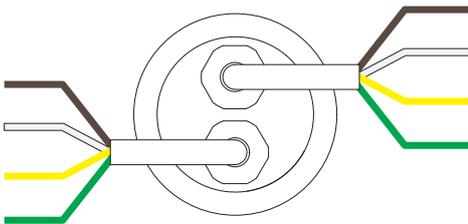
View on sensor

1	NC
2	+24VDC(-15/+20%)
3	0 VDC(GND)
4	CAN-H
5	CAN-L

Straight-out cable

Color

Function



Brown	+24VDC(-15/+20%)
White	0 VDC(GND)
Yellow	CAN-H
Green	CAN-L

ORDER CODE

MHT - [] - [] - [] [] [] M - [] [] [] [] - []

Mounting type

- G** Double seal type (21.2mm Electronics housing)
- K** Thimble type (21.2mm Electronics housing)
- I** Double seal type (30mm Electronics housing)
- N** Double seal type (40mm Electronics housing)

(In this case, if this item is left blank, the default is 40 electronic warehouses.)

Rod

- C** Rod Φ 10mm (dead zone 63.5mm)
- D** Rod Φ 7mm (dead zone 63.5mm)
- E** Rod Φ 10mm (shortened dead zone 36.5mm)
- R** Rod Φ 10mm with M4x6 thread (dead zone 63.5mm)

Stroke _ _ _ _ M

M=mm (5mm increments)

Connection type

Fill: [1] [2] [3] [4] [5]

[1] and [2]: Cable connection

- R** straight-out cable
- DF** 5 pin aviation plug

[3]: Cable performance

- P** high performance cable
- T** high temperature cable

[4] and [5]: Cable length

- _ _ unit: meter(R)
Fill in zero if less than 2 places
- _ _ unit: 10 millimetre(DG)

Output signal mode

Fill: [1][2][3] - [4] - [5][6]

[1][2][3] Resolution ratio

- C01** 100 μ m
- C11** 5 μ m
- C21** 2 μ m
- C31** 10 μ m

[4] Baud rate

- 0** 1000kBit/s
- 1** 800kBit/s
- 2** 500kBit/s
- 3** 250kBit/s
- 4** 125kBit/s
- 5** 100kBit/s
- 6** 50kBit/s
- 7** 20kBit/s
- 8** 10kBit/s

[5][6]Node-ID

- 01** Hexadecimal 01...7F
- .
- .
- .
- 7F**

KF= waterproof and anti-vibration program (Note: for special request, fill in last digit.)

Model | MHT-K-C-0390M-DFP10-C11-3-7F

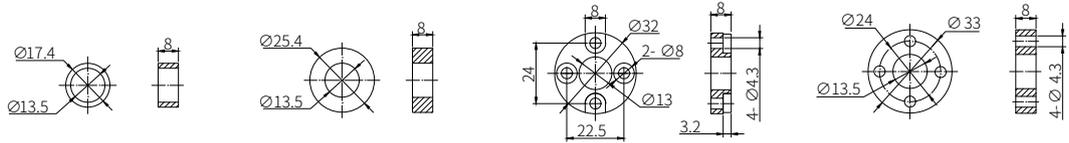
Explanation: MHT redundancy design thimble type (electronics housing thickness 21.2mm) with measuring rod diameter of 10mm (dead zone 63.5mm), range 390mm, straight out 100mm scattered cable with 5 pin aviation plug, CANopen protocol, resolution 5 μ m, baud rate 250kBit, node ID 7F.

Please contact us for more customized products.

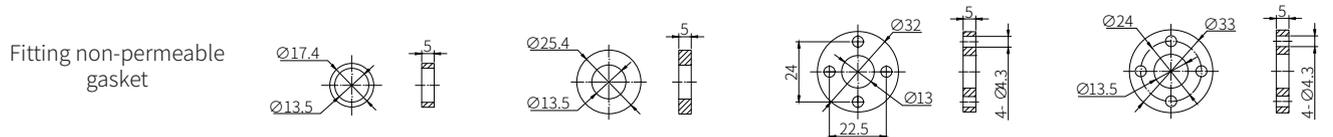


ACCESSORIES

CANopen



Name	Ring magnet	Ring magnet	Ring magnet	Ring magnet
Operating temperature	-40...125°C			
Order code	12-1032	12-1019	12-1024	12-1001



Name	Non-permeable gasket	Non-permeable gasket	Non-permeable gasket	Non-permeable gasket
Operating temperature	-40...125°C			
Order code	12-1037	12-1021	12-1025	12-1008

Building 6, Dazu Enterprise Bay,
8th yard of Liangshuihe 2nd street, BDA Beijing P.R.China

Tel: +86 10-67948976 67948916
Fax: +86 10-67948979
Technical support: +86 (0)13370126657

Beijing Tebeifu Electronic Technology Co., Ltd.