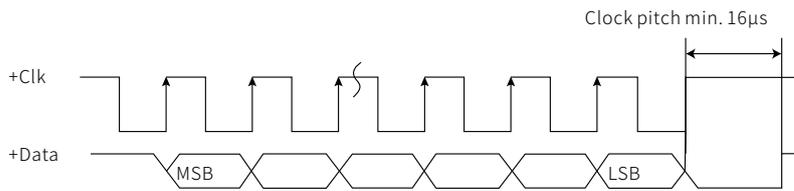




T3D Split Type

T-Series III T3D - SSI



- + Updated new generation: stronger performance
- + Quick installation: split type design, adaptable with installation in rather tight space
- + Standard SSI signal can directly replace the encoder.
- + Resolution highest up to 0.1µm



THE NEW III GENERATION



High precision



Double anti-interference



High performance chip



Reverse polarity protection



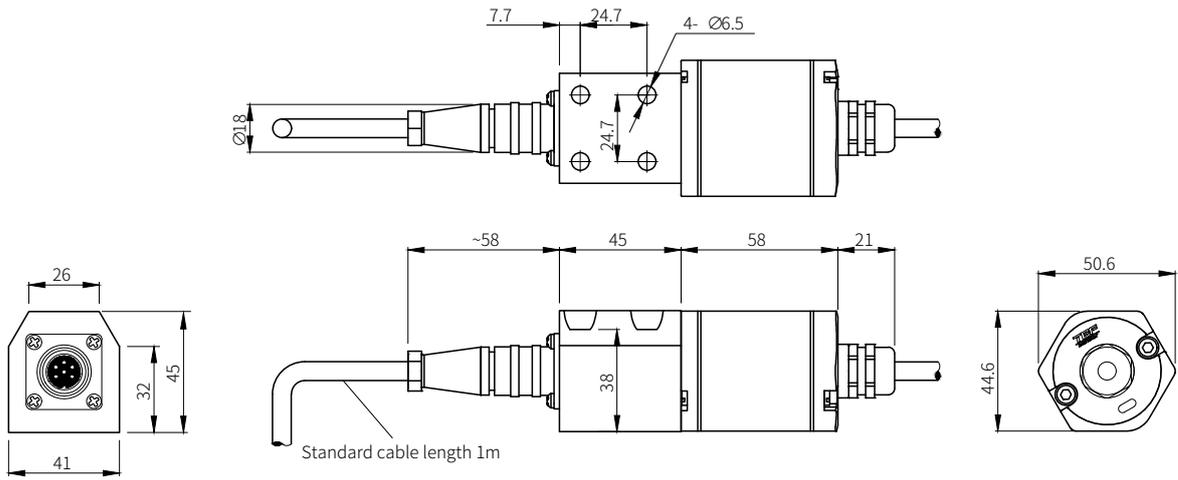
Shock/vibration resistant

Input	Measured data	Position or Velocity													
	Position measurement range	25mm...5600mm													
	Velocity measurement range	0.01...10m/s													
Output	Interface	SSI synchronous serial interface													
	Data format	Binary or gray code, parity check and alarm bit optional													
	Data length	8...32 bit													
	Data speed	70kBd...1MBd depending on cable length:													
		<table border="1"> <tr> <td>Cable length (m)</td> <td>< 3</td> <td>< 50</td> <td>< 100</td> <td>< 200</td> <td>≤ 400</td> </tr> <tr> <td>Baud rate (kBd)</td> <td>1000</td> <td>< 400</td> <td>< 300</td> <td>< 200</td> <td>< 100</td> </tr> </table>	Cable length (m)	< 3	< 50	< 100	< 200	≤ 400	Baud rate (kBd)	1000	< 400	< 300	< 200	< 100	
	Cable length (m)	< 3	< 50	< 100	< 200	≤ 400									
Baud rate (kBd)	1000	< 400	< 300	< 200	< 100										
	<table border="1"> <tr> <td>Update frequency</td> <td>Stroke length (mm)</td> <td>< 300</td> <td>< 750</td> <td>< 1000</td> <td>< 2000</td> <td>≤ 5600</td> </tr> <tr> <td></td> <td>Update frequency (kHz)</td> <td>3.7</td> <td>3.0</td> <td>2.3</td> <td>1.2</td> <td>0.5</td> </tr> </table>	Update frequency	Stroke length (mm)	< 300	< 750	< 1000	< 2000	≤ 5600		Update frequency (kHz)	3.7	3.0	2.3	1.2	0.5
Update frequency	Stroke length (mm)	< 300	< 750	< 1000	< 2000	≤ 5600									
	Update frequency (kHz)	3.7	3.0	2.3	1.2	0.5									
Resolution	Position resolution	0.1/0.5/1/2/5/10/20/50/100μm													
	Velocity resolution	0.001mm/s													
	None-Linearity	< ±0.01%F.S. (min. ±25μm)													
	Repeatability	< ±0.001%F.S. (min. ±2.5μm)													
	Temperature coefficient	< 15ppm/°C													
Mounting	Mounting position	Any													
	Electronics housing	Fixed with M6 screw													
	Pressure resistance outer tube	Embedded installation, thread metric M18×1.5, metric M16x1.5													
Design/ Material	Electronics housing	Aluminum alloy/zinc alloy													
	Measuring rod	Stainless steel 304/316L													
	Operating pressure	35MPa (continuous) ,70MPa (peak)													
Electrical connection	Wiring connection	Straight out cable, M16 connector (7 pin)													
	Operating voltage	24VDC(-15/+20%)													
	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)													
Operating conditions	Loop velocity	Any													
	Operating temperature	-40...85°C (105°C customizable)													
	Humidity	90 % relative humidity, no condensation													
	Ingress protection	Measuring rod IP68, Electronics housing IP67													
	Shock	100 g/11 ms, IEC standard 60068-2-27													
	Vibration	10 g/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													
ITEM	CATEGORY	PARAMETER													

T3D- _____ - **RP** - _____

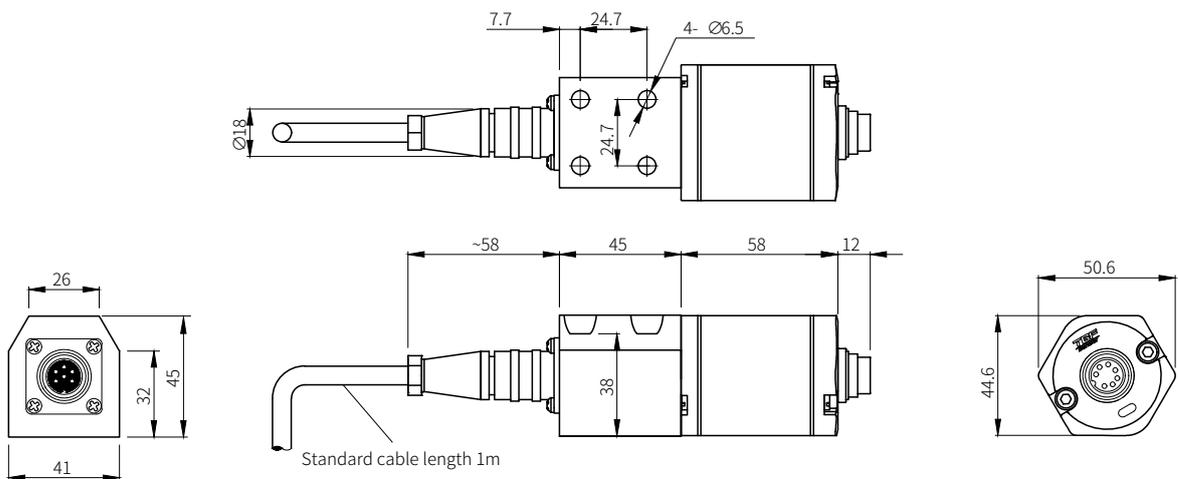
Straight out cable

T3D- _____ - **RT** - _____

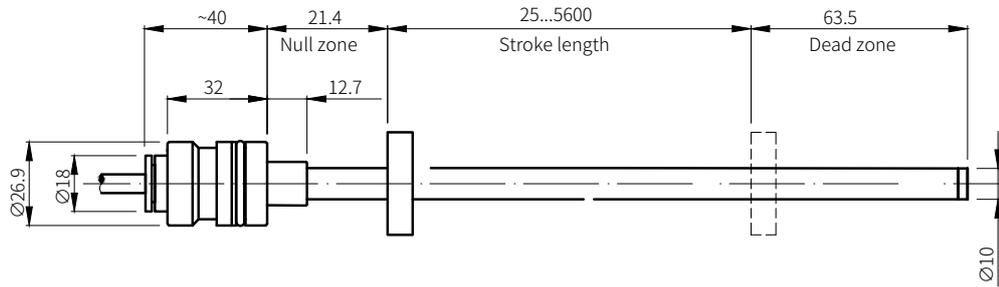


T3D- _____ - **D716** - _____

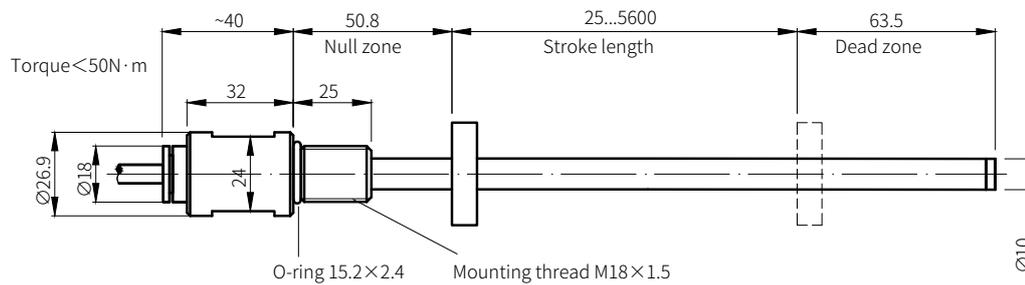
Aviation plug



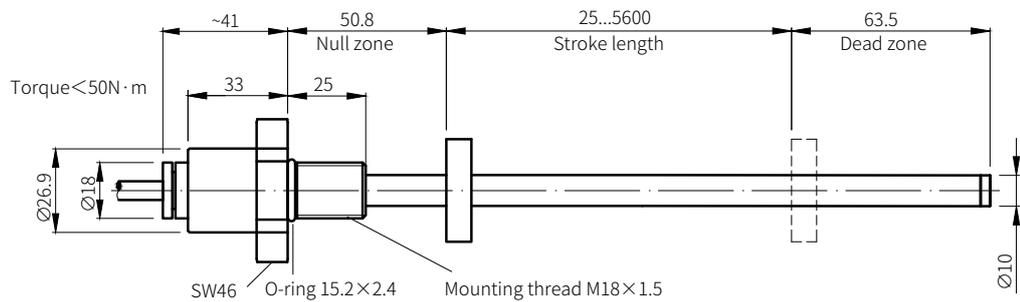
S Type



M Type



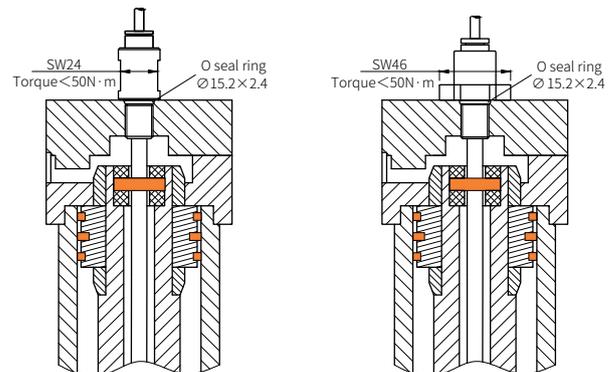
C Type



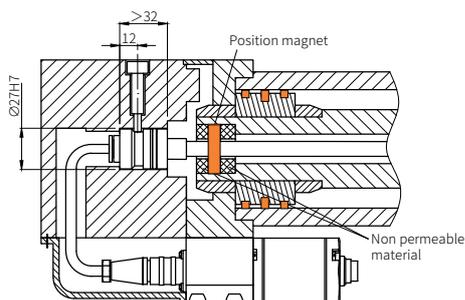
MECHANICAL MOUNTING DIAGRAM

- + 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 $\Phi 13.5$ ($\Phi 10$ measuring rod).

Mounting drawing for M and C Type

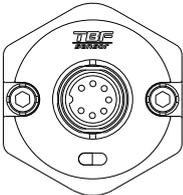


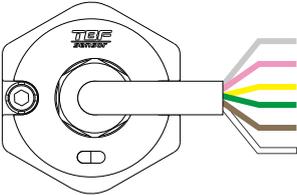
Mounting drawing for S Type



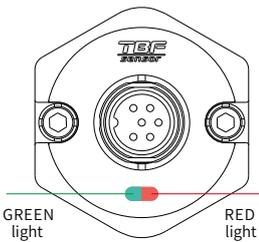
FUNCTION

TECHNOLOGY PERCEIVES THE FUTURE

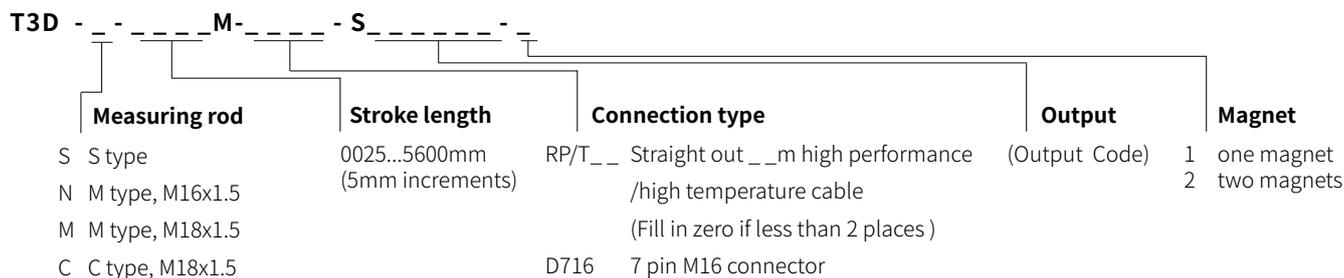
7 pin M16 connector	D716	PIN	Function
		1	Data-
	View on sensor	2	Data+
		3	Clock+
		4	Clock-
		5	+24 VDC(-15%/+20%)
		6	0 VDC(GND)
		7	NC

Straight out cable	Color	Function
	Gray	Data-
	Pink	Data+
	Yellow	Clock+
	Green	Clock-
	Brown	+24 VDC(-15%/+20%)
	White	0 VDC(GND)

Enhanced monitoring and diagnostic functions



Green light	Red light	Function
ON	OFF	Normal work
ON	ON	Magnet is out of effective range, or magnet cannot be measured, nor magnet number is correct.
FLASH	ON	Enter programming status

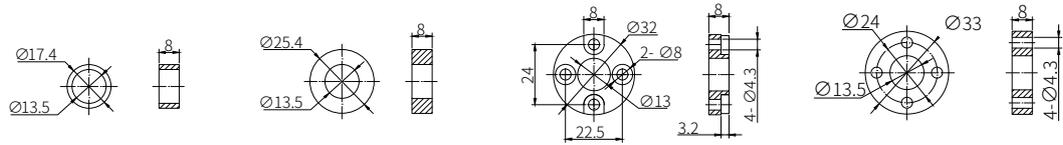


SSI Output Code	S [1][2][3][4][5][6]					
[1] Function	[2] Options	[3] Mode	[4] Data length	[5] Format	[6] Resolution	
1 Position	0 Standard	1 Forward, asynchronous mode	1 25 bit	B Binary	1 5µm	
2 Relative position (2 magnets and 1 output)	1 Internal linearization	2 Reverse, asynchronous mode	2 24 bit	G Gray	2 10µm	
3 Velocity		3 Forward, synchronous mode	3 26 bit		3 50µm	
4 Position and temperature inside the sensor electronics housing		4 Reverse, synchronous mode	A 24 bit + alarm bit + parity check bit		4 100µm	
					5 20µm	
					6 2µm	
					7 0.1µm	
					8 1µm	
					9 0.5µm	

K=Anti-vibration program(Note: for special request, fill in last digit)

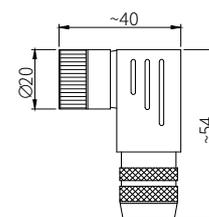
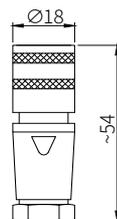
Model selection	Model: T3D-M-0600M-D716-S1011B1-1
	Explanation: T series III generation, T3D split type sensor with measuring rod M type, mounting thread metric M18x1.5, stroke length 600mm, 7 pin M16 aviation plug, position measurement, standard, forward, asynchronous mode, 25 bit, Binary, resolution 5µm, single magnet.

■ Please contact us for more customized products.



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

Fitting non-permeable gasket				
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



Name	7 pin M16 female connector	7 pin M16 female connector (90 degree angle)
End view drawing		
Material	Galvanized nickel	
Fitting diameter	6...8mm	
Connection	Welding	
Order code	18-4001	18-4002

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