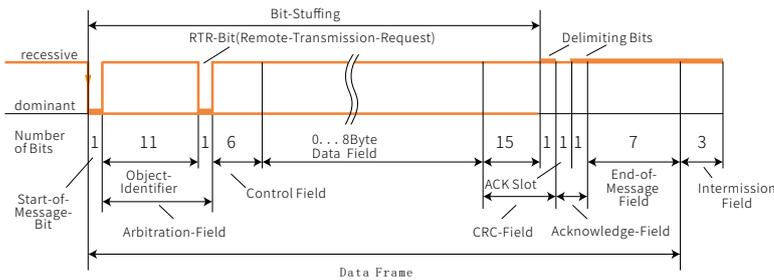




T3H, T3P - CANopen

T-Series III Data Sheet



- + Updated new generation: stronger performance
- + Repeatability up to $\pm 0.001\%$ F.S.
- + Multi-magnets position measurement: max. three measured positions



THE NEW III GENERATION



High precision



Double anti-interference



High performance chip



Wide operating voltage



Reverse polarity protection

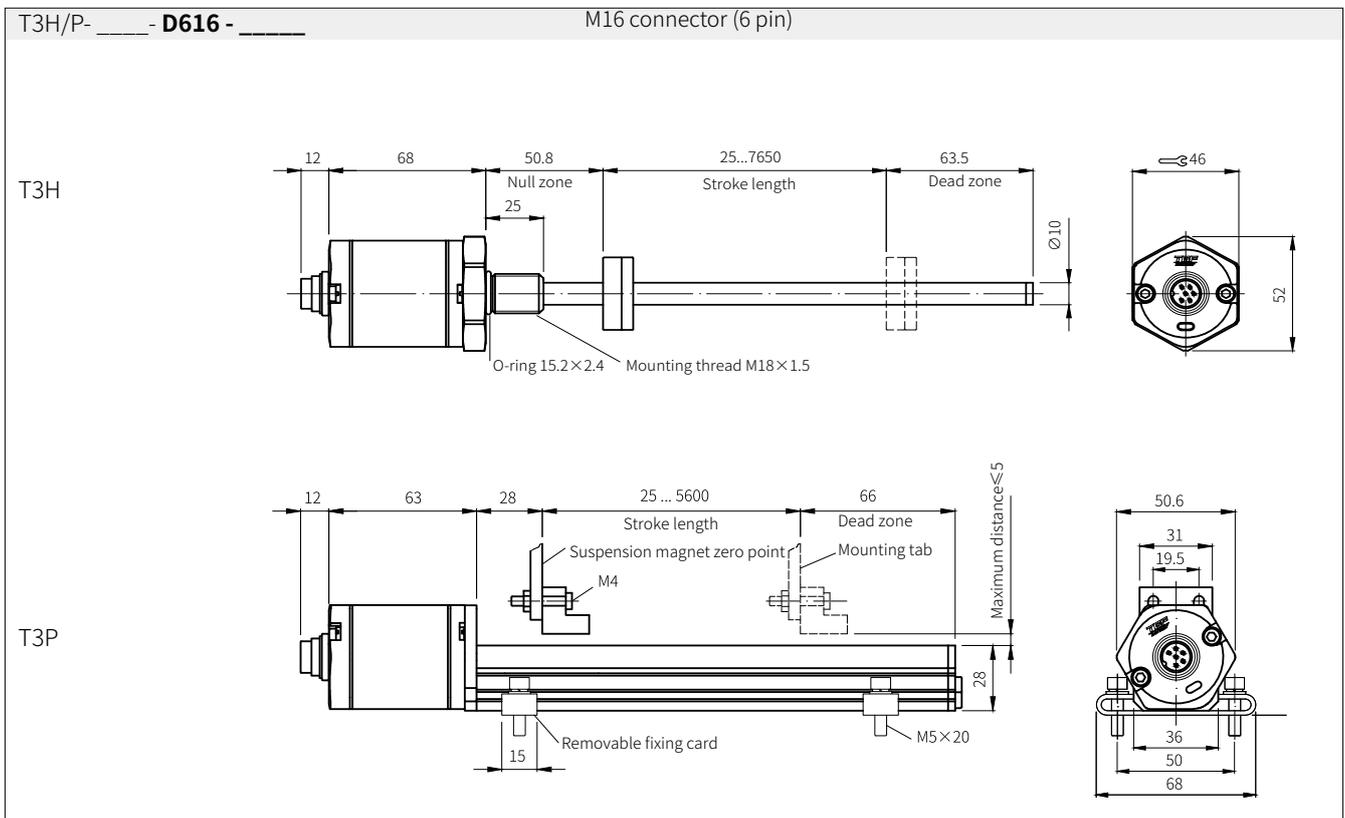
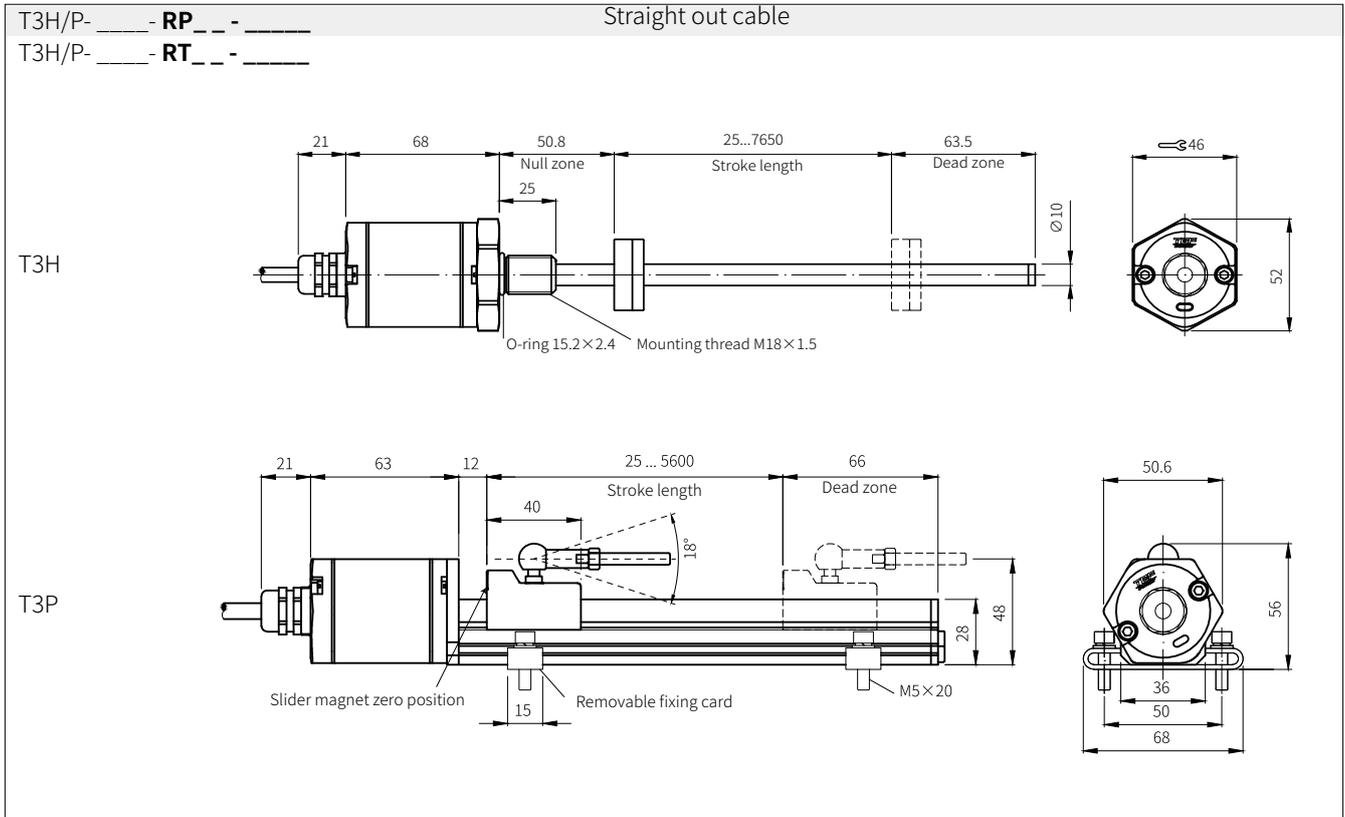


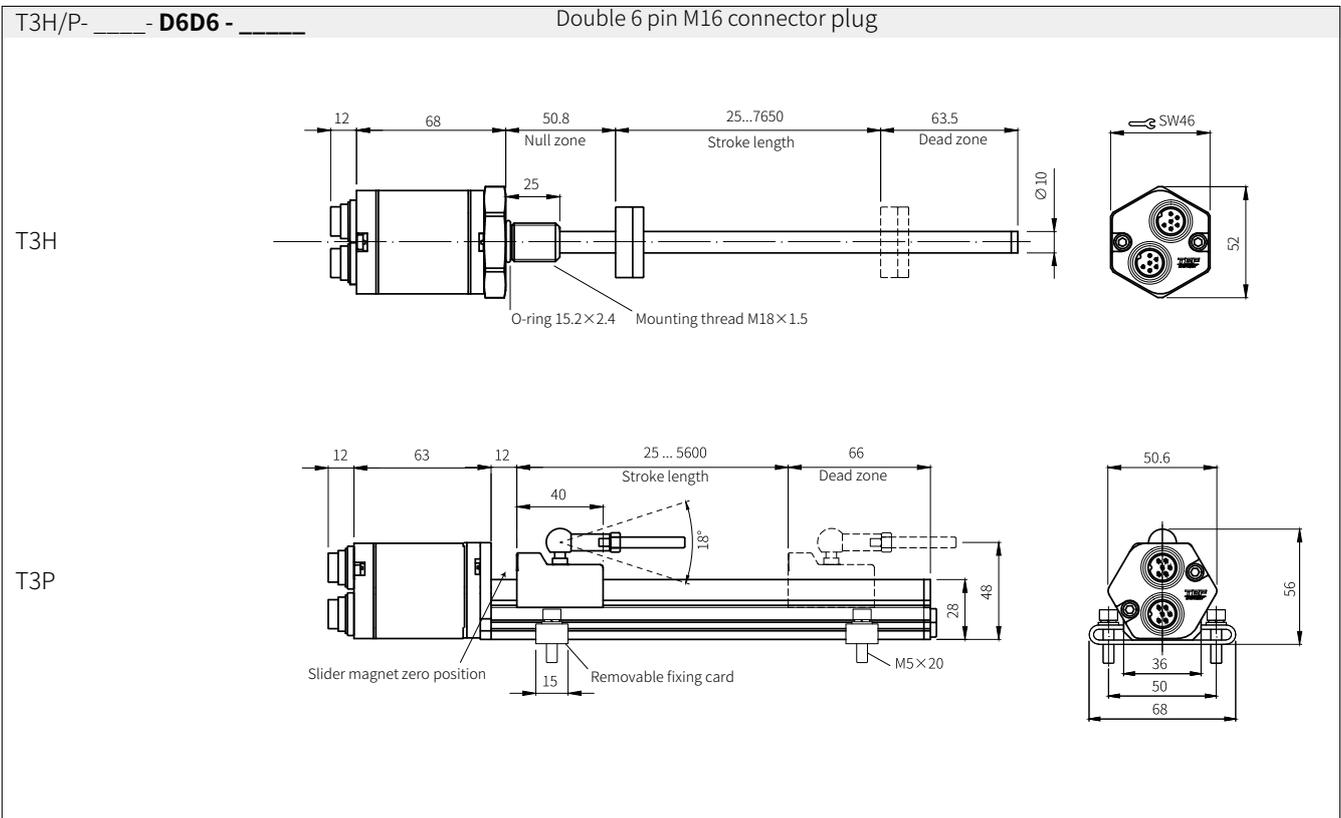
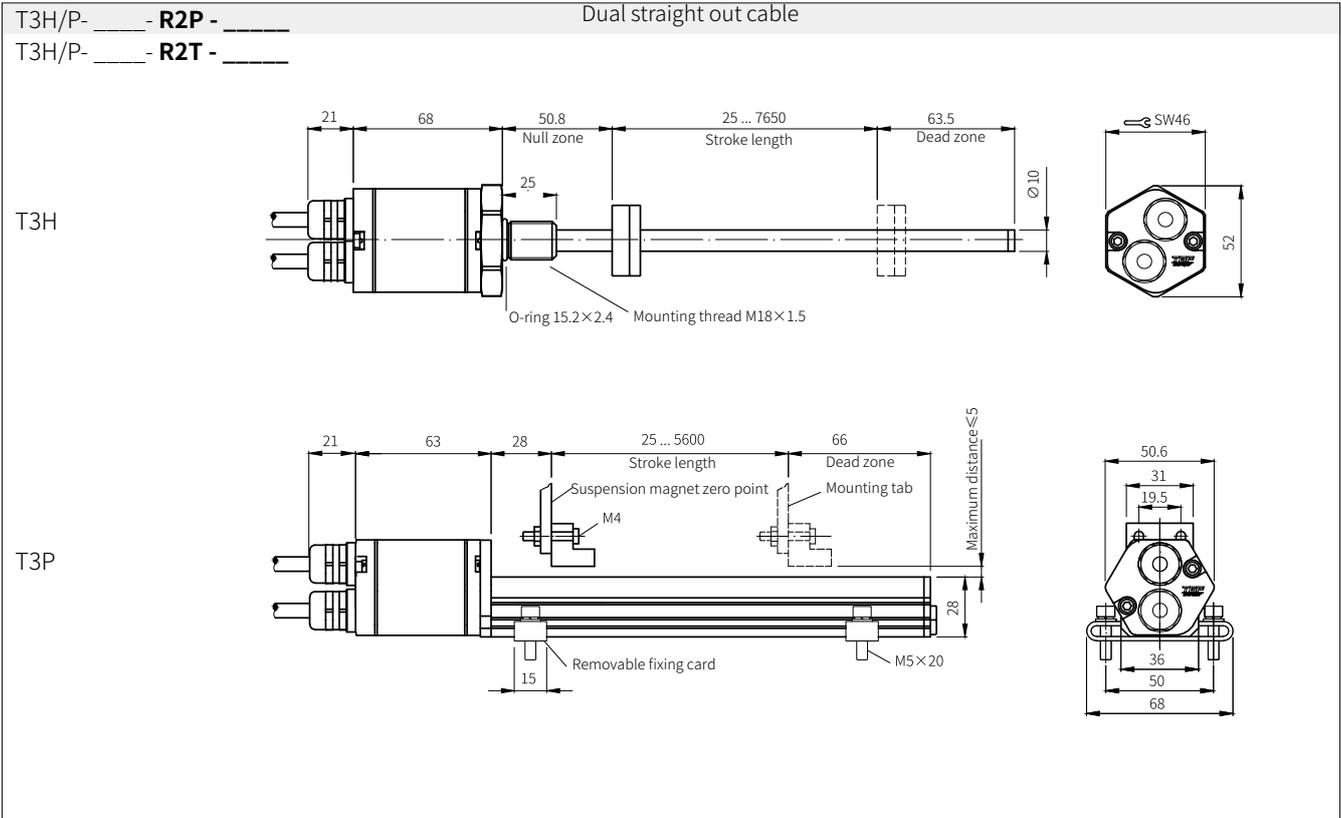
Shock/vibration resistant

TECHNICAL PARAMETER

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Input	Measured data	Position/Velocity							
	Position measurement range	T3H	25mm...7650mm						
	Velocity measurement range	T3P	25mm...5600mm						
Output	Communication protocols	CAN bus system protocol, ISO11898 CAN open CIA standard DS-301 V3.0 encoder profile DS-406 V3.1							
	Transmission rate	Rate(kbit/s)	1000	800	500	250	125	50	20
		Cable length (meter)	< 25	< 50	< 100	< 250	< 500	< 1000	< 2500
Resolution	Position resolution	1/2/5/10/20/50/100μm							
	Velocity resolution	0.2mm/s							
	None-Linearity	< ±0.01%F.S. (min. ±25μm)							
	Repeatability	< ±0.001%F.S. (min. ±2.5μm)							
	Update time	Stroke length	≤ 1200mm	≤ 2400mm	≤ 4800mm	≤ 7650mm			
		Update time	0.5ms	1ms	2ms	4ms			
Temperature coefficient	< 15ppm/°C								
Mounting	Mounting position	Any							
	T3P aluminum profile	Removable fixing card							
	T3H pressure resistant outer tube	Threaded: metric M18x1.5, metric M20x1.5, metric M24x1, 3/4"-16UNF-3A							
Design/ Material	T3H	Electronics housing: aluminum alloy/zinc alloy Measuring rod: stainless steel 304/316L Magnet: standard magnet/open magnet							
	T3P	Electronics housing: aluminum alloy/zinc alloy Profile: aluminum alloy Magnet: slider magnet/suspension magnet/U-magnet							
	Operating pressure	35MPa (continuous) ,70MPa (peak)							
Electrical connection	Wiring connection	6 pin M16 connector, double 6 pin M16 connector, single/dual straight out cable							
	Operating voltage	9VDC...36VDC							
	Polarity protection	Up to -36VDC							
	Overvoltage protection	Up to +36VDC							
	Power consumption	< 70mA (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	Slider magnet ≤ 10m/s; magnetic ring, any; suspension magnet, any.							
	Operating temperature	-40...85°C							
	Humidity	90 % relative humidity, no condensation							
	Ingress protection	IP68 T3H (Pressure resistant outer tube type) IP67 T3P (Aluminum outer tube)							
	Shock	150 g/11 ms, IEC standard 60068-2-27							
	Vibration	30 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							





FUNCTION

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6 pin M16 connector	Double 6 pin M16 connector	D616/D6D6	PIN	Function
		 View on sensor	1 2 3 4 5 6	CAN L CAN H NC NC 9VDC...36VDC 0 VDC(GND)
Straight out cable	Dual straight out cable	Color	Function	
		Brown White Yellow Green	9VDC...36VDC 0 VDC(GND) CAN H CAN L	

Enhanced monitoring and diagnostic functions

	Green light	Function	Red light	Function
	Slow flash	Pre-operating mode	ON	No magnet or slider measured
	Fast flash	LSS mode(parameter- setting mode)	OFF	Normal work
	ON	Normal communication		

ORDER CODE

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T3H - - - - **M** - - - -

	Thread	Stroke length	Connection type	Output
M	Metric M18x1.5	0025...7650mm (5mm increments)	RP/T__ Straight out __m high performance/high temperature cable	(Output Code)
V	Metric M20x1.5			
S	3/4"-16UNF-3A		R2P/T__ Dual straight out __m high performance/high temperature cable	
W	Metric M24x1		(Fill in zero if less than 2 places)	
R	Metric M18x1.5, with M4x6 thread at tail end		D6D6 Two sets of pin M16 connector D616 6 pin M16 connector	

T3P - - - - **M** - - - -

	Magnet	Stroke length	Connection type	Output
S	Magnet slider joint at top	0025...5600mm (5mm increments)	Same as above	(Output Code)
V	Magnet slider joint at front			
F	Suspension magnet			
U	U- magnet			

CANopen Output Code [1]-C[2][3][4][5][6]-[7][8] Note: "*" as default

[1]System	[2]Resolution	[3]Baud rate	[4]PDO cycle	[5][6]Node-ID	[7][8]
3 Standard*	1 5µm*	0 1000kBit/s	1 1ms	Hexadecimal	01 one magnet
4 CANopen (Internal terminal resistance)	2 2µm	1 800kBit/s	2 10ms*	01...7F*	02 two magnets
	3 10µm	2 500kBit/s	3 100ms		03 three magnets
	4 50µm	3 250kBit/s*	4 Customizable (1-65535ms)		
	5 100µm	4 125kBit/s			
	7 20µm	5 100kBit/s			
			6 50kBit/s		
		7 20kBit/s			
		8 10kBit/s			

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

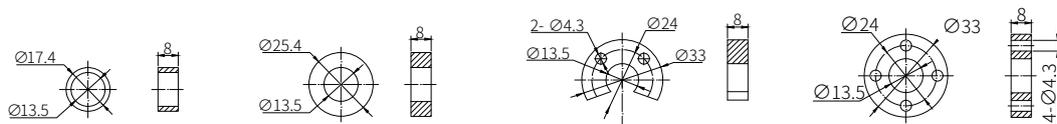
Model selection | Model: T3H-M-0600M-D616-3-C2327F-01

Explanation: T series III generation, T3H pressure resistance outer tube type, mounting thread metric M18x1.5, stroke length 600mm, 6pin M16 aviation plug, standard, CANopen output, resolution 2µm, baud rate 250kBit/s, PDO cycle 10ms, node-ID 7F, single magnet.

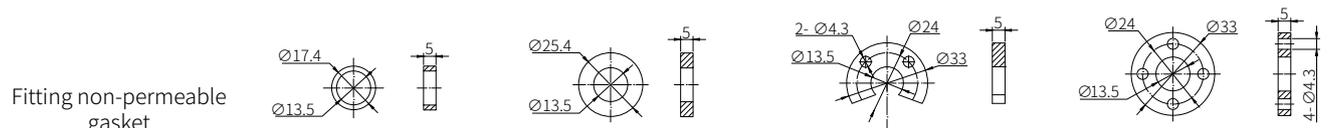
■ Please contact us for more customized products.
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PARTS SELECTION

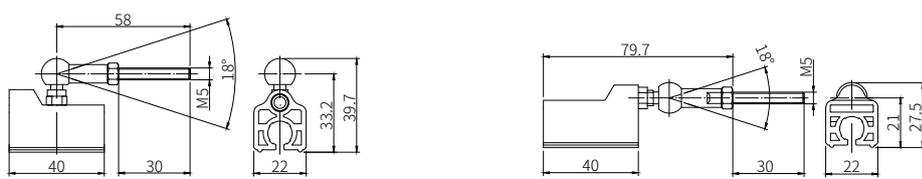
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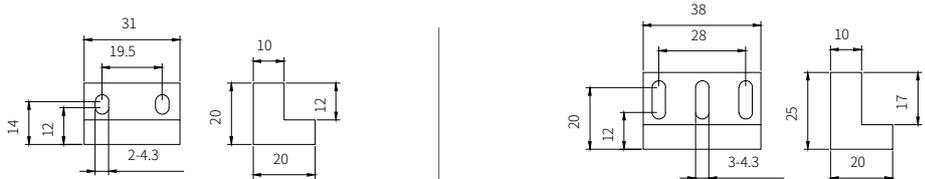
Name	Ring magnet	Ring magnet	U-magnet	Ring magnet
Operating temperature	-40...125°C			
Order code	12-1032	12-1019	12-1017	12-1001



Name	Non-permeable gasket	Non-permeable gasket	Non-permeable gasket	Non-permeable gasket
Operating temperature	-40...125°C			
Order code	12-1037	12-1021	12-1018	12-1008



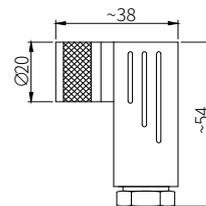
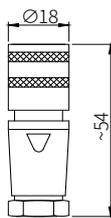
Name	Magnet slider S, joint at top	Magnet slider V, joint at front
Operating temperature	-40...105°C	
Order code	12-1114	12-1115



Name	Suspension magnet 31x20	Suspension magnet 38x25
Operating temperature	-40...105°C	
Order code	12-1010	12-1009



Name	Removable fixing card	Removable fixing card
Order code	11-1003	11-1004



Name	6 pin M16 female connector	6 pin M16 female connector (90 degree angle)
End view drawing		
Material	Galvanized nickel	Galvanized nickel
Fitting diameter	6...8mm	6...8mm
Connection	Welding	Welding
Order code	18-3001	18-3003

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