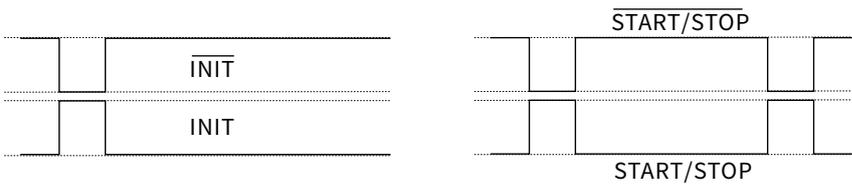




# T3H, T3P - Start/Stop

## T-Series III Data Sheet



- + Updated new generation: stronger performance
- + Start/Stop digital pulse output
- + The highest temperature endurance of electronics housing up to 120°C , adaptable in coking industry



## THE NEW GENERATION



Double anti-interference



High performance chip



Wide operating voltage  
9VDC...36VDC



Reverse polarity protection



Shock/vibration resistant

## TECHNICAL PARAMETER

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<b>Input</b>	Measured data	Position
	Measurement range	T3H 25mm...7650mm T3P 25mm...5600mm
<b>Output</b>	Digital	Start/Stop pulse, DPI/IP mode supportive
<b>Resolution</b>	Resolution	Depends on controller
	None-Linearity	< ±0.02%F.S. (min. ±50µm)
	Repeatability	< ±0.001%F.S.
	Update time	Depends on controller
	Temperature coefficient	< 30ppm/°C
<b>Mounting</b>	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
<b>Design/ Material</b>	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)
<b>Electrical connection</b>	Wiring connection	Straight out cable or aviation plug
	Operating voltage	9VDC...36VDC
	Polarity protection	Up to -36VDC
	Overvoltage protection	Up to +36VDC
	Power consumption	< 80mA (varies with range size)
	Dielectric strength	500 VDC (DC ground to machine ground)
<b>Operating conditions</b>	Magnet velocity	Slider magnet ≤ 10m/s; magnetic ring, any; suspension magnet, any.
	Operating temperature	-40...120°C (DPI mode only)/-40...105°C (DPI/IP mode)
	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

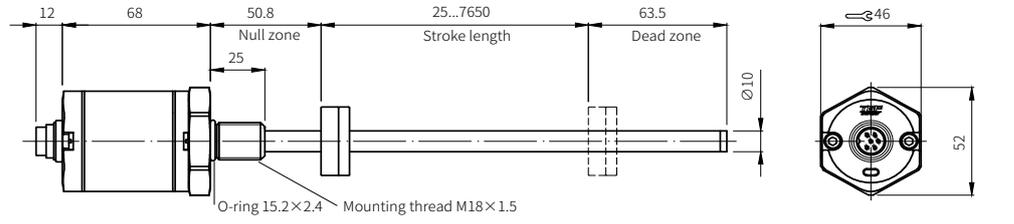
CATEGORY

PARAMETER

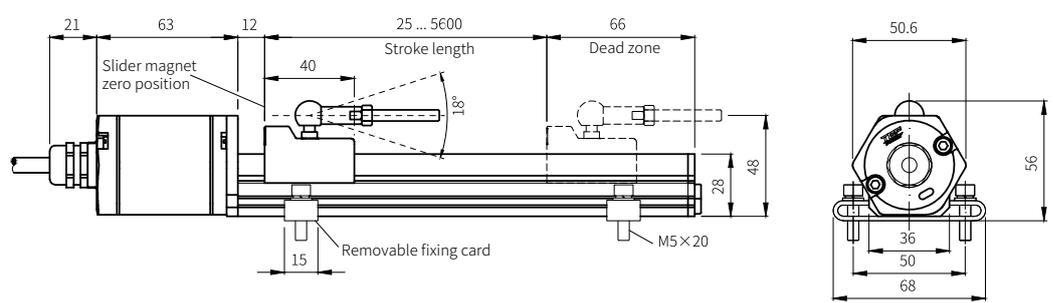
T3H/P- \_\_\_\_\_ - **RP** - \_\_\_\_\_ Straight out cable

T3H/P- \_\_\_\_\_ - **RT** - \_\_\_\_\_

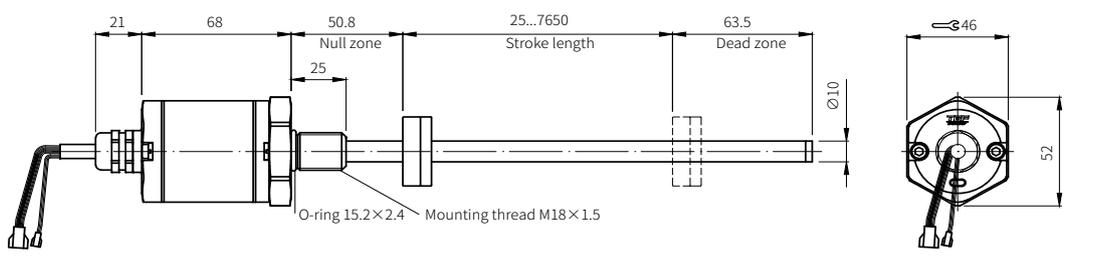
T3H



T3P



T3H- \_\_\_\_\_ - **ST** - \_\_\_\_\_ Quick plug



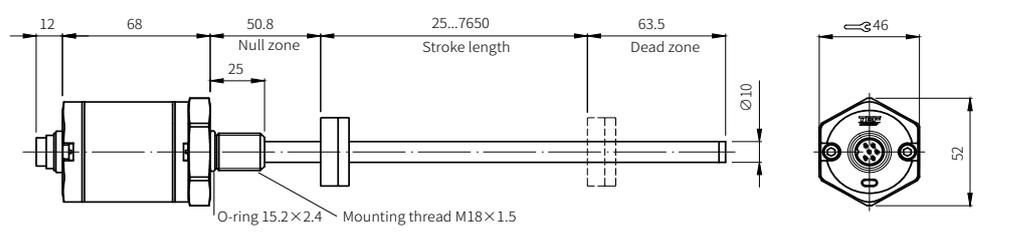
T3H/P- \_\_\_\_\_ - **D616** - \_\_\_\_\_ Aviation plug

T3H/P- \_\_\_\_\_ - **D716** - \_\_\_\_\_

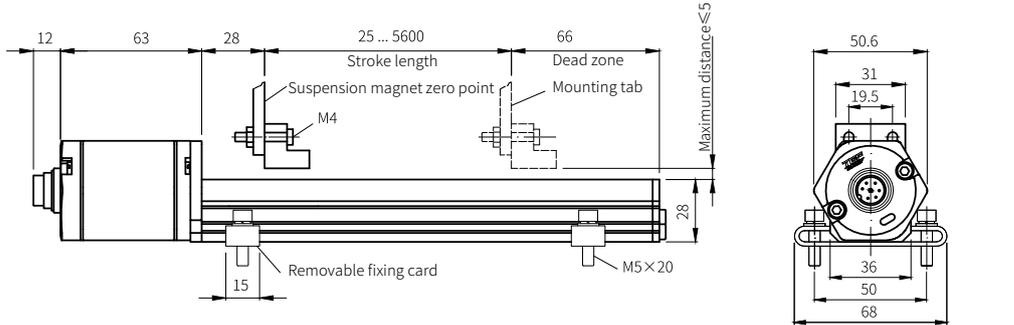
T3H/P- \_\_\_\_\_ - **D816** - \_\_\_\_\_

T3H/P- \_\_\_\_\_ - **D812** - \_\_\_\_\_

T3H



T3P



**FUNCTION**

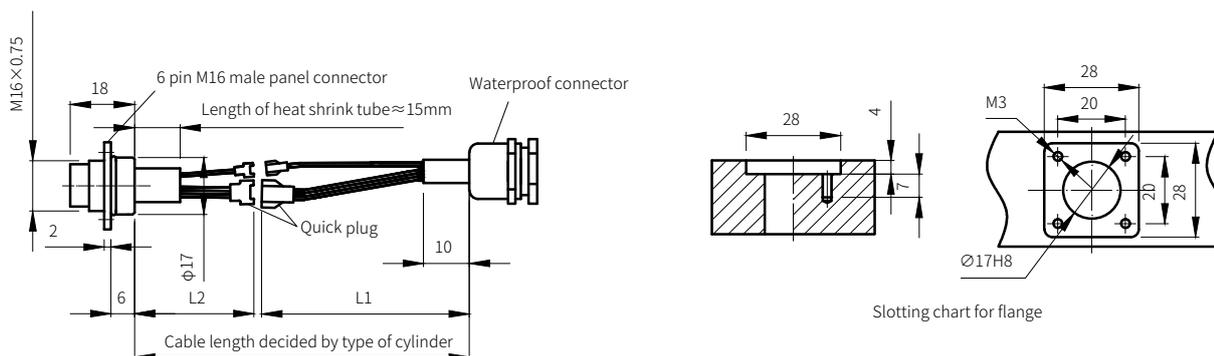
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6 pin M16 connector	D616	PIN	Function
		1	Start/Stop-
	View on sensor	2	Start/Stop+
		3	Init+
		4	Init-
		5	9VDC...36VDC
		6	0 VDC(GND)
7 pin M16 connector	D716	PIN	Function
		1	Init+
	View on sensor	2	Start/Stop+
		3	Init-
		4	NC
		5	Start/Stop-
		6	0 VDC(GND)
		7	9VDC...36VDC
8 pin M12 connector	D812	PIN	Function
		1	Init+
	View on sensor	2	Start/Stop+
		3	Init-
		4	NC
		5	Start/Stop-
		6	0 VDC(GND)
		7	9VDC...36VDC
		8	NC
8 pin M16 connector	D816	PIN	Function
		1	Init+
	View on sensor	2	Start/Stop+
		3	Init-
		4	NC
		5	Data-
		6	0 VDC(GND)
		7	9VDC...36VDC
		8	NC
Straight out cable		Color	Function
		Gray	Start/Stop-
		Pink	Start/Stop+
		Yellow	Init+
		Green	Init-
		Brown	9VDC...36VDC
		White	0 VDC(GND)

**ORDER CODE**

TECHNOLOGY PERCEIVES THE FUTURE

**Quick plug connecting definition**



ST[1][2] Electronics housing outlet high temperature wire (L1)\_ \_mm, 6 pin M16 male panel connector outlet wire (L2)\_ \_mm.

[1] L1 length	[2] L2 length
1 50mm	2 120mm
3 170mm	4 200mm
5 230mm	6 350mm
0 Customizable	

**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 (Fill in zero if less than 2 places )	(Output Code)
V Metric M20x1.5		D616 6 pin M16 connector	
S 3/4"-16UNF-3A		D716 7 pin M16 connector	
W Metric M24x1		D816 8 pin M16 connector	
R Metric M18x1.5, with M4x6 thread at tail end		D812 8 pin M12 connector	
		ST_ _ Electronics housing outlet wire (L1)_ _mm, 6 pin M16 connector outlet wire (L2)_ _mm (Quick plug connecting definition)	

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

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			

**Start/Stop Output Code [1][2]-[3][4]**

[1][2] Output	[3][4] Magnet
SS DPI mode only	01 one magnet
SD DPI/IP mode	02 two magnets

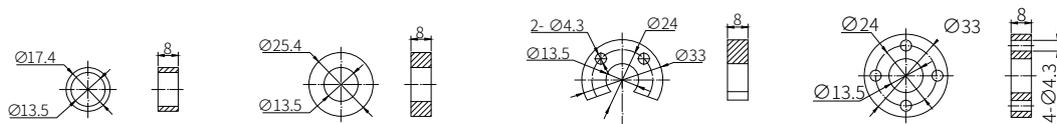
**Model selection** | Model: T3H-M-0600M-ST21-SS-01

Explanation: T series III generation, T3H pressure resistance outer tube type, mounting thread metric M18x1.5, stroke length 600mm, quick plug connected, high temperature cable, electronics housing outlet wire(L1)120mm, panel connector wire (L2) 50mm. , Start/Stop output, DPI mode only, single magnet.

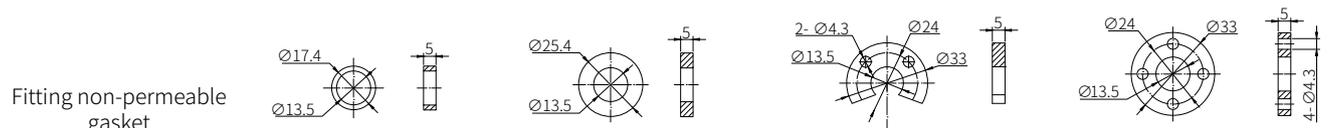
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# PARTS SELECTION

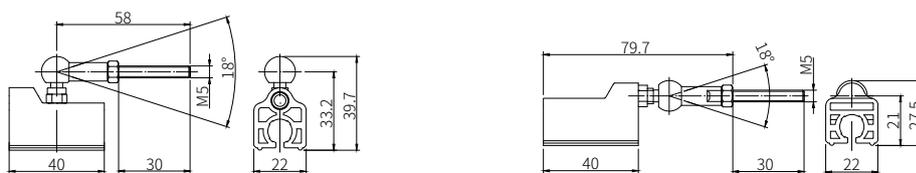
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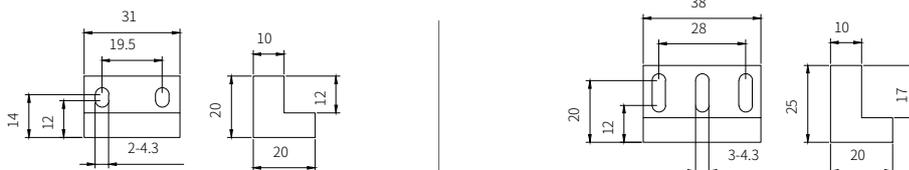
Name	Ring magnet	Ring magnet	U-magnet	Ring magnet
Operating temperature	-40...125°C			
<b>Order code</b>	<b>12-1032</b>	<b>12-1019</b>	<b>12-1017</b>	<b>12-1001</b>



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



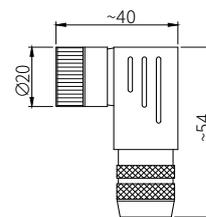
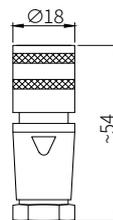
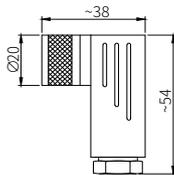
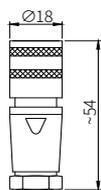
Name	Magnet slider S, joint at top	Magnet slider V, joint at front
Operating temperature	-40...105°C	
<b>Order code</b>	<b>12-1114</b>	<b>12-1115</b>



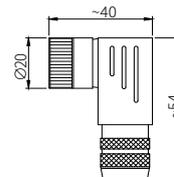
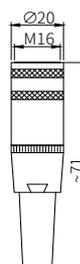
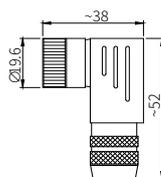
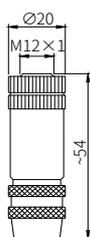
Name	Suspension magnet 31x20	Suspension magnet 38x25
Operating temperature	-40...105°C	
<b>Order code</b>	<b>12-1010</b>	<b>12-1009</b>



Name	Removable fixing card	Removable fixing card
<b>Order code</b>	<b>11-1003</b>	<b>11-1004</b>

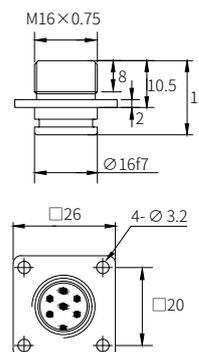


Name	6 pin M16 female connector	6 pin M16 female connector (90 degree angle)	7 pin M16 female connector	7 pin M16 female connector (90 degree angle)
End view drawing				
Material	Galvanized nickel			
Fitting diameter	6...8mm			
Connection	Welding			
<b>Order code</b>	<b>18-3001</b>	<b>18-3003</b>	<b>18-4001</b>	<b>18-4002</b>



Name	8 pin M12 female connector	8 pin M12 female connector (90 degree angle)	8 pin M16 female connector	8 pin M16 female connector (90 degree angle)
End view drawing				
Material	Galvanized nickel			
Fitting diameter	8...10mm	6...8mm	6...9mm	6...8mm
Connection	Threaded		Welding	
<b>Order code</b>	<b>18-5004</b>	<b>18-5005</b>	<b>18-5002</b>	<b>18-5003</b>

Name	6 pin M16 male panel connector
End view drawing	
Material	Galvanized nickel
Connection	Welding
<b>Order code</b>	<b>18-3006</b>



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