

Tool length measurement and tool breakage detection



Tool Setter TS40 series

High repeatability
1 μm or less

High repeatability ensures
quality machining

**High environmental
resistance**
IP67

New air-actuated lift
mechanism (Patent pending)
Prevent failures caused
by coolant and metal chips

Long operating life
5 million
strokes

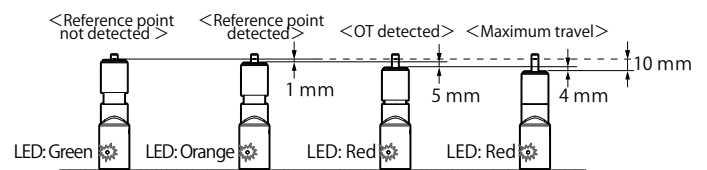
Reliable non-contact magnetic
detection principle

Low measuring force
0.6 $\pm$ 0.2 N

Low measuring force allows
small diameter tools to be used

► Tool length measurement and tool breakage detection

Can be used for both tool length
pre-setting and tool breakage detection.
Avoid scrap and increase productivity.

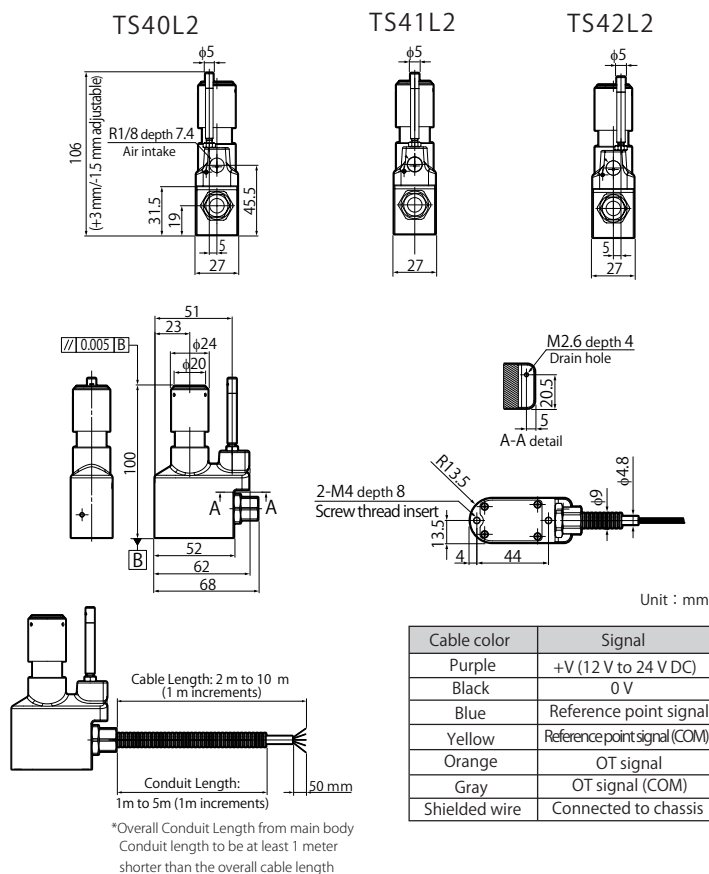


Damage may occur when moved more than 4mm after detection of OT signal*
Take measures to stop the machine immediately after detection of the OT signal
*OT signal=Over travel signal

Specification

Model name	TS40L2	TS41L2	TS42L2
Stroke length	10.5±0.5 mm		
Reference point	1.0±0.5 mm		
Reference point repeatability (at 20°C)	1 μm or less		
Response speed range	5 to 3,000 mm/min		
Number of strokes*1	5 million strokes		
Protection grade	IP67(Main unit only)		
Measuring force(at 20°C, reference point position)	0.6±0.2 N		
Power consumption	0.5 W		
Inrush current	0.5 A max.(Start up time after power on: 10 ms)		
Output specifications	Transistor output (Photo coupler isolation) Between output - COM MAX200 V 0.5 mA - 0.1 A		
OT position (Over travel)	5.0±0.5 mm from reference point position		
Operating voltage range	12 V to 24 V DC		
Air pipe position*2	Right	Center	Left
Operating temperature	0 to +50 °C (No condensation)		
Storage temperature and humidity	-15 to +65 °C (90%RH max.)		

Dimensions



Model name

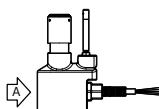
TS4□L2-○▽1G

▽	Conduit length
1	1 m
2	2 m
3	3 m
4	4 m
5	5 m

○	Cable length
2	2 m
3	3 m
4	4 m
5	5 m
6	6 m
7	7 m
8	8 m
9	9 m
A	10 m

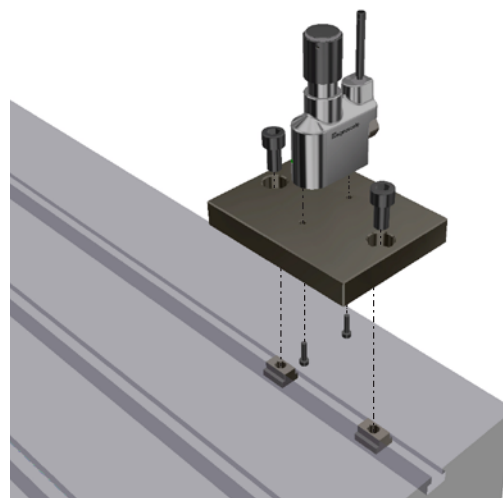
□	Air pipe position *Please refer to the specification
0	Right
1	Center
2	Left

Attention: Select a conduit length that is shorter than the cable length



*1: Under specific conditions defined by Magnescale Co., Ltd.(Refer to the dimensions)
*2: When seen from the A direction in the above figure

Mounting example/Accessories



Optional Accessories

<Replacement parts>

• TZ40 tip set	Replacement tip for tool surface measurement	1
	Fixing screw HSS2x2(Conical tip)	3
	Hex wrench(Opposite side 0.9 mm)	1
• TZ41 pipe set	Replacement air pipe	1
	Fixing nut N4(mounted on the air pipe)	1

⚠ To use this product safely, please read the instruction manual carefully and thoroughly prior to usage. •Magnescale reserves the right to change products and specifications without prior notice.

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