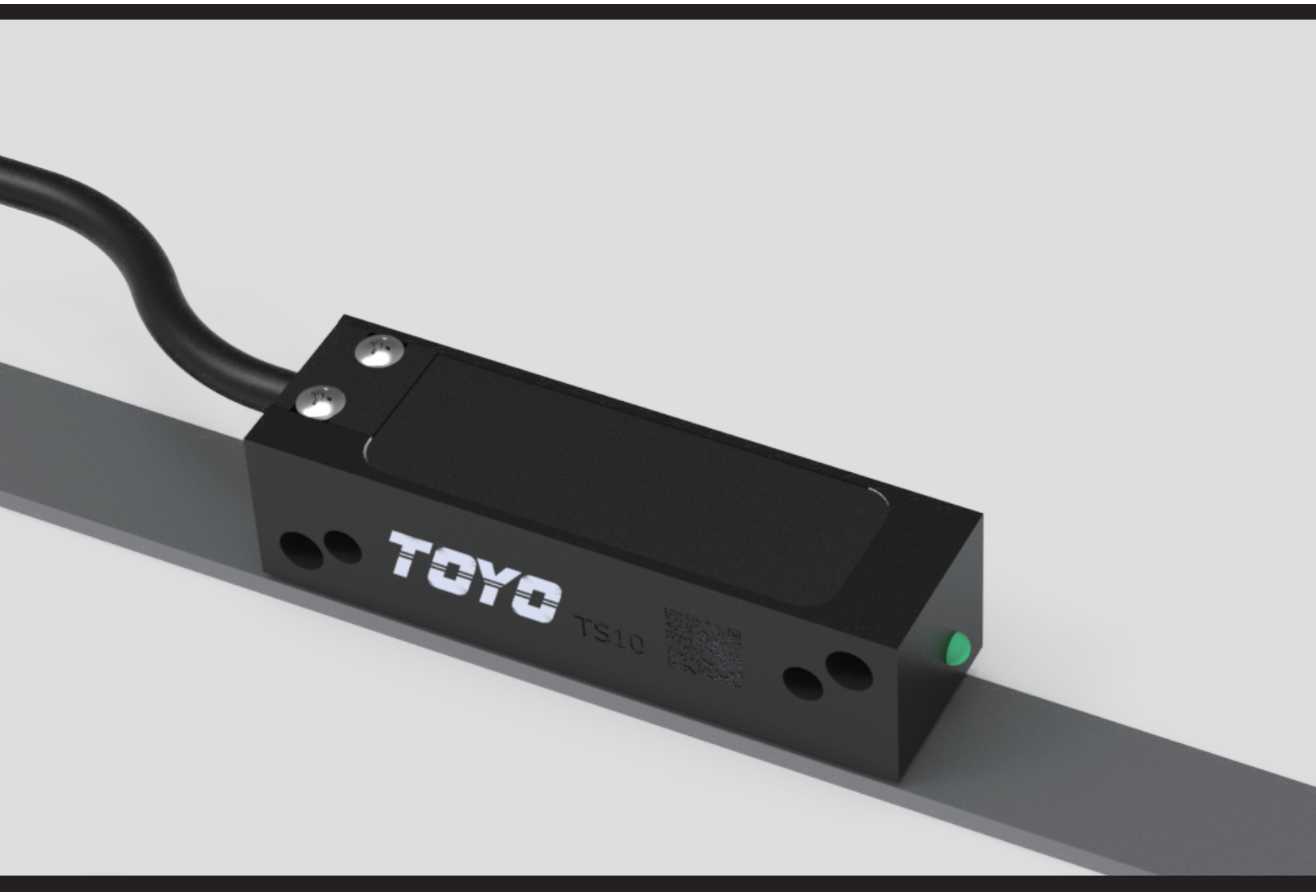
TOYO

9001 14001 18001

TOYO 2022

Incremental Magnetic Encoder TS10



TOYO AUTOMATION CO., LTD

TS10

Incremental Magnetic Encoder



High precision / High speed

Read pole position with ultra high precision by using special magnetization process. To ensure the precision.

Resolution **1 μm**

Top speed **3m/s**

Including Status Indicator

Easy to determine whether the reading status is abnormal.

Low Profile

Space saving.

Grease proof

Due to special detecting method. Don't need to worried about unable to read position by greasiness.

Simple Structure, Longevity, Vibration Resistance

Low malfunction rate. Using permanent magnetization tape. The magnetic won't easily vanish after few-years usage. It can withstand vibration, and won't easily broken like glass material.

Apply to Harsh Environment

Coefficient of expansion is close to cooper. So it will stay accurate corresponded to harsh environment from -20° C~80° C. High resistant to vibration and pressure.

▶ TS10 Magnetic reader

Dimensions	42(L)x12(W)x11(H) mm
Pitch	2 mm
Repeatability	±2 μm
Resolution	1 μm
Top Speed	3 m/s
Working Temperature	-20~80° C
▶ Digital Output	
Voltage	5VDC
Output Signal	Square wave : A, B 和 A-, B-
Reference Signal	Square wave : Z, Z-
Cable Length	0.45 m
▶ Respond Time	
Setting Time *1	≦30ms
Transfer Time *2	<250ns

*1 Setting Time : The time cost from applying power to the reader to producing position signal.
*2 Transfer Time : The time cost for transfering position signal to output signal.

▶ TS10 Magnetic reader

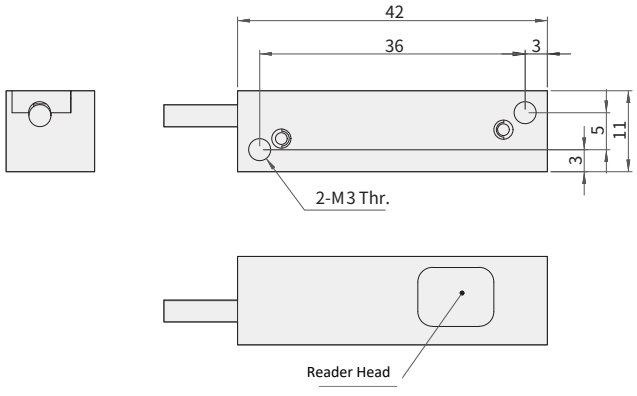
Length	50m

Ordering Method

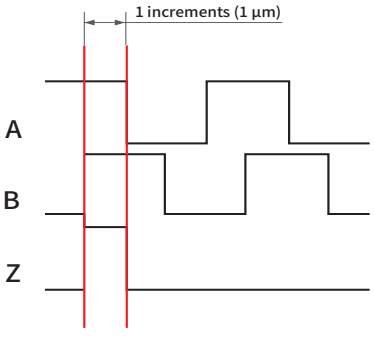
T S 10 - B X 05 H - LXXXXX (mm)

Brand	Encoder Head Model	Model	Brand	Accuracy	Cable Length	Connector Type	Length
TOYO	S Incremental Encoder		B Biss	X 1μm	05 0.5m	- 9 way D-type plug	
			P Pulse	Z 0.5μm	15 1.5m(Special version	15 way D-type plug	
				Y 0.1μm			
				H 50nm			

Size



Z pulse Z pulse Output Timing Diagram



Applications

Electronic Industry



Packing Equipment



Printing Equipment



Semi-conductor Equipment



Food processing Equipment



Machine Tools



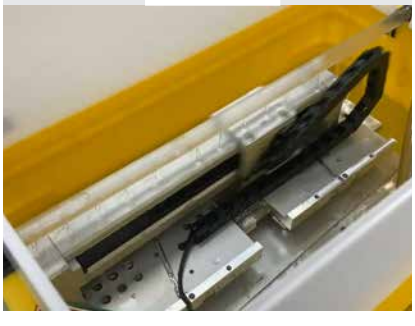
Woodworking Machinary



Grease Resistance(Added Cover Sheet)



Water Proof



Excellent Cost-Effectiveness



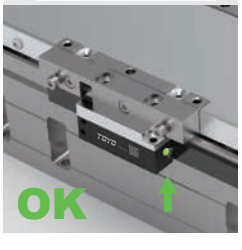
Assembly and Testing

Installation Tips

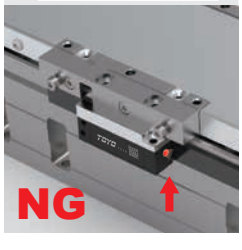


Insert the spacer between tape and reader. And push reader inward than secure the screw.

Green Indicator On



Red Indicator On



No Indicator

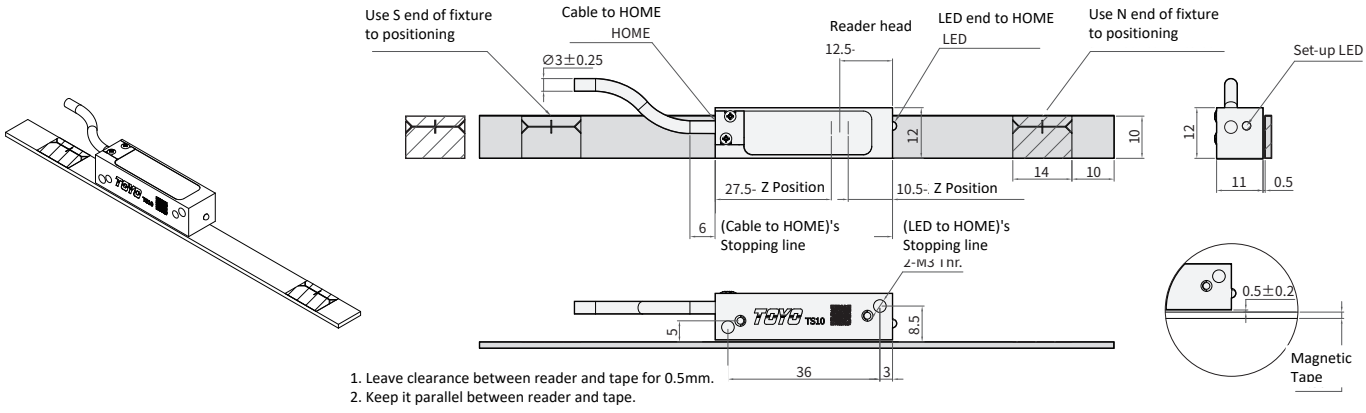


When power supplied, green indicator shows normal status.
No indicators, red indicator on or flash are all abnormal.

TS10

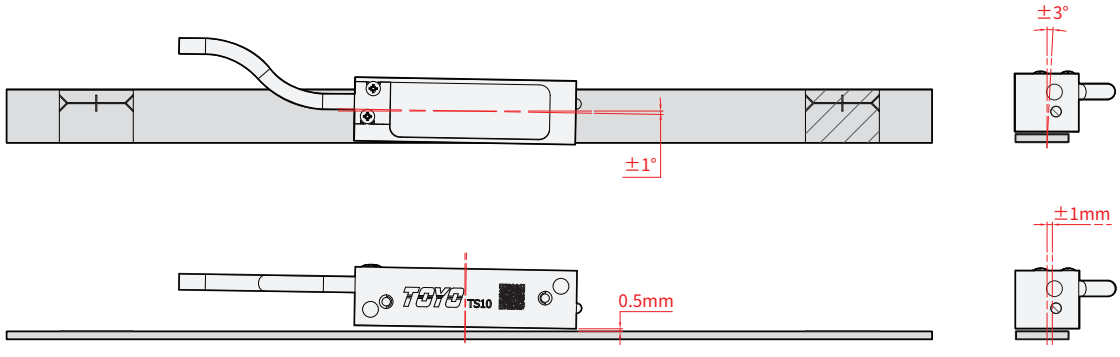


Assemblying Method



1. Leave clearance between reader and tape for 0.5mm.
2. Keep it parallel between reader and tape.

Assemblying Method

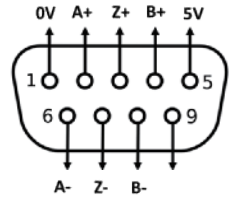


LED Assemblying Method

LED Color	Status
Green	Signal Normal
Red	Weak Magnetic Force or other error

D-Sub Assemblying Method

Color	Signal
Blue	5V
White	0V
Brown	A+
Yellow	A-
Purple	B+
Orange	B-
Green	Z+
Black	Z-



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