

# Product Selection Guide

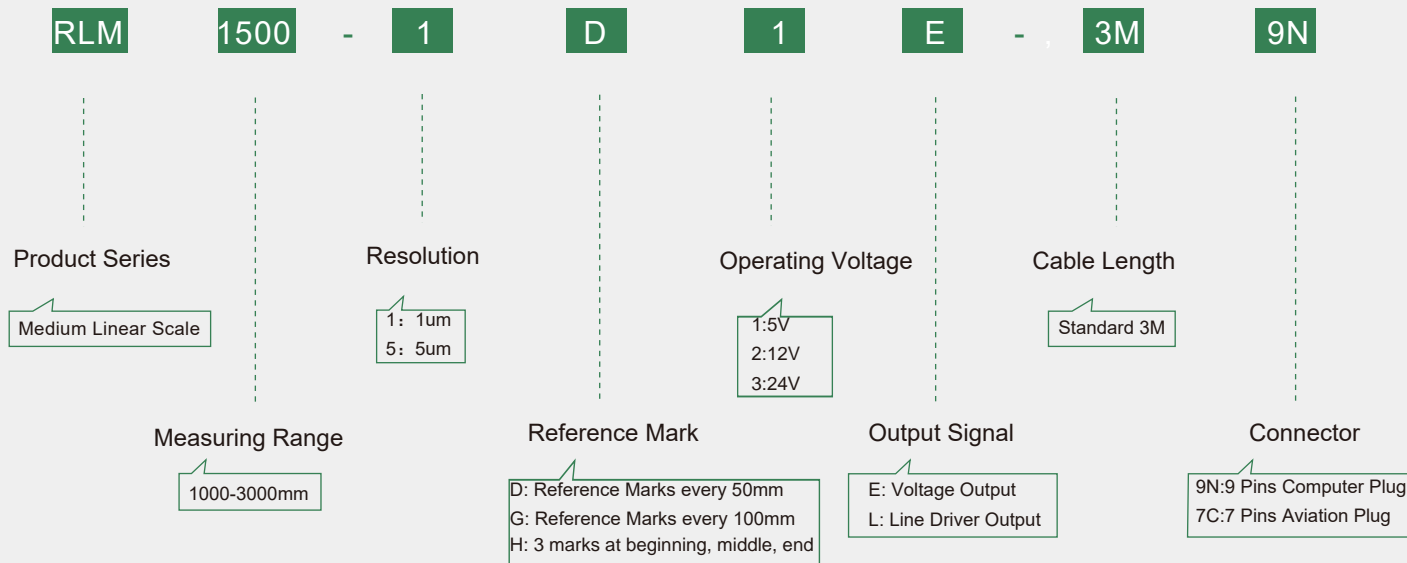


RLM Series



Optical linear scales series RLM are accurate and reliable; Measuring range from 1m to 3m; Widely applied to kinds of machine tools (Metal cutting machines, millers, lathes, grinders, spark erosion machines, optical projectors ). Sealed Sensor ensures the reliable performance and easy installation. High resolutions up to 1um.

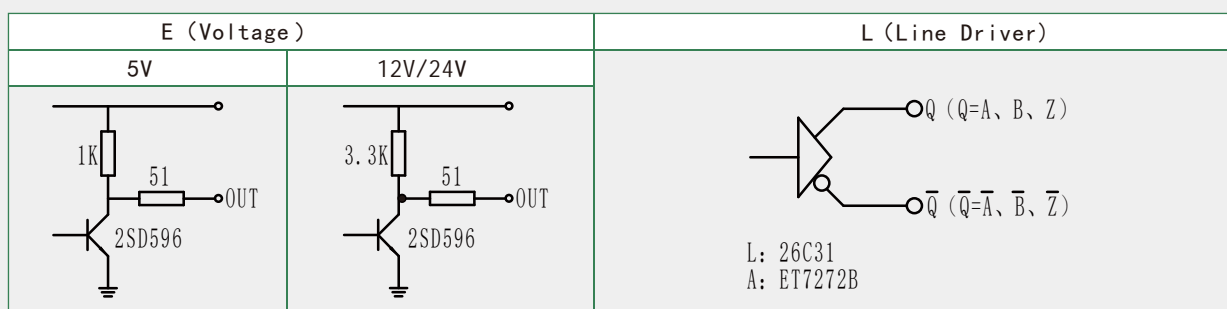
## Part Number



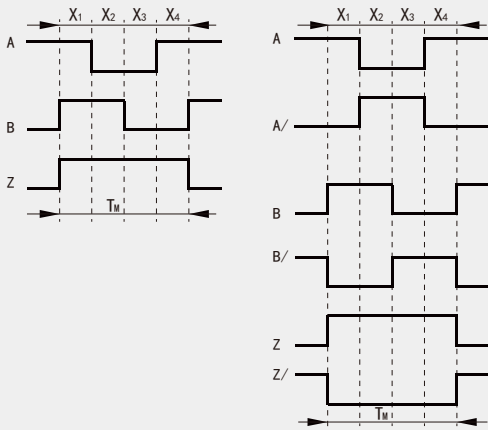
## Technical Specifications

Measuring Range	1000-3000mm
Resolution	1um, 5um
Accuracy	JB/T10080.2-2000
Reference Mark	Reference marks every 50mm or 100mm
Operating Voltage	5V, 12V, 24V
Output Signal	Voltage(A,B,Z)/Line Driver (A,B,Z,A/,B/,Z/)
Frequency Response	25m/min, 60m/min
Operating Temperature	-20 °C(-40 °C) ~ +85°C
Storage Temperature	-40 °C ~ +55°C
Protection class	IP53

## Output Circuits



# Output Waves



Phase Difference:  $X_n \geq 0.125T$  ( $n=1, 2, 3, 4$ )

Absolute Angle Error:  $\leq 0.2T$

Cycle Error:  $\leq 0.05T$

$T=360^\circ / N$  ( $N$ =lines count per revolution)

Width of Z signal

1、 $T_m=1T \pm 0.5T$

$T_m=nT \pm 0.1T$  ( $n \geq 2$ )

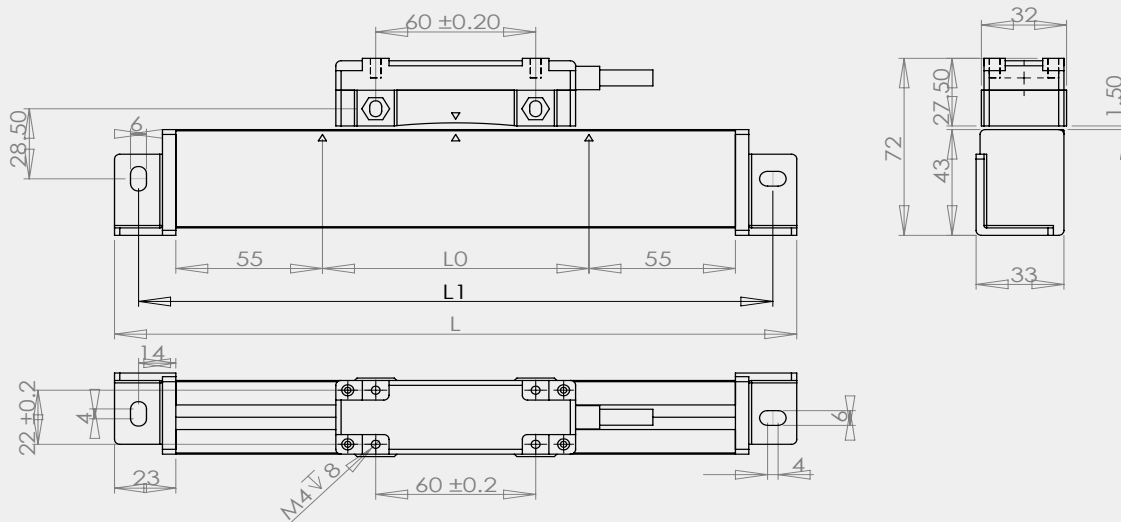
The phase relationship of Z signal and A,B signal is not stipulated.

2、 $T_m=0.5T \pm 0.25T$

$T_m=0.25T \pm 0.125T$

The rising edge of Z signal and B is aligned.

# Dimensions



Measuring Range L0 ( mm )	1000--3000mm
Mounting Length L1 ( mm )	$L1=L0+2* ( 55+14 ) =L0+138$
Total Length L ( mm )	$L=L0+2* ( 55+23 ) =L0+156$

# Connections

Connector PN	Output Signals	Pins No	1	2	3	4	5	6	7	8	9
7C	Voltage Output(TTL)	Signal	0V	/	A	B	Vcc/VDD	Z	G	/	/
		Cable Color	Black	/	Blue	Green	Red	Yellow	Shield	/	/
9N	Voltage Output(TTL)	Signal	Vcc/VDD	0V	A	B	Z	/	G	G	/
		Cable Color	Red	Black	Blue	Green	Yellow	/	Shield	Shield	/
9N	Line Driver Output	Signal	VCC	0V	A	B	Z	A/	B/	Z/	G
		Cable Color	Red	Black	Blue	Green	Yellow	Brown	Gray	White	Shield

