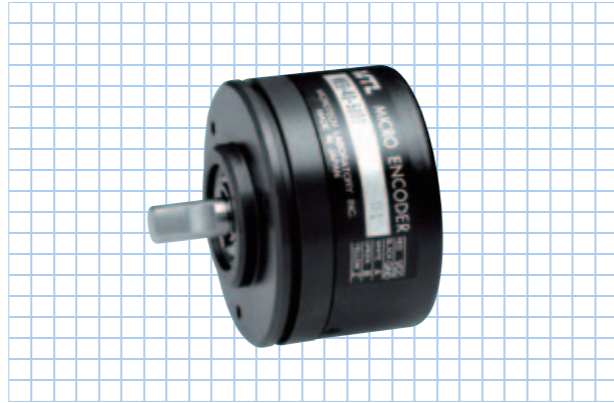


# MES-40-P series

[Square Wave/Incremental]

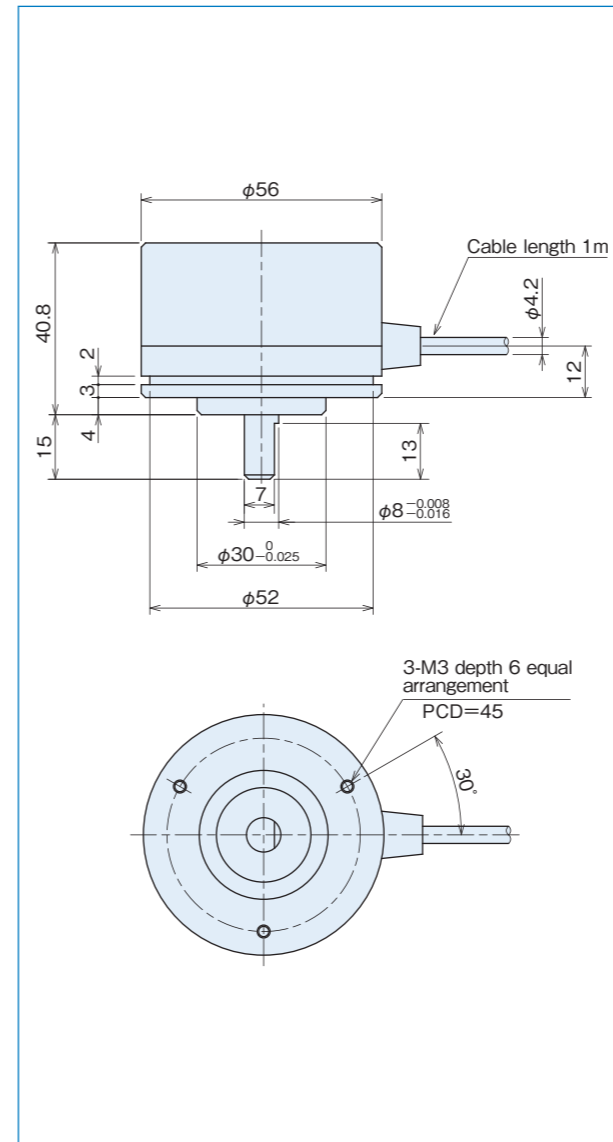


## Specifications

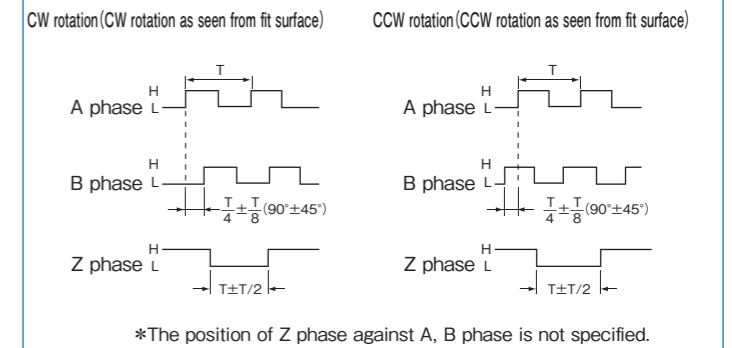
Item	Type name		
	MES-40-□P□	□	
	Pulse number Output circuit ●No entry=voltage output ●C=open collector output ●C4=open collector output DC24V	●E=line driver output ●ST□(2·4·5·8·10·16·20)	
	<b>Square wave</b>	<b>Built-in multiplication circuit (x2·x4·x5·x8·x10·x16·x20)</b>	
Supply voltage	Voltage/Open collector:DC5V-5%~12V+10% Open collector DC24V:DC24V±10% Line driver:DC5V±10%	Voltage:DC5V-5%~12V+10% Open collector:DC5V-5%~24V+15% Line driver:DC5V±5%	
Current consumption	50mA or less (under no load)	100mA or less (under no load)	
Detection system	Incremental	Incremental	
Output pulse number (Standard) [Pulse number/rotation]	100 200 250 256 300 360 400 500 512	600 720 800 1,000 1,024 1,200 1,500 1,800 2,000(*)	2,048 2,500 3,000 3,600(*) 4,000(*) 4,096(*) 5,000(*) 5,400(*) 6,000(*)
			EX 10,000×2(20,000) 10,000×4(40,000) 10,000×5(50,000) 10,000×8(80,000) 10,000×10(100,000) 10,000×16(160,000) 10,000×20(200,000)
Output phase	A, B, Z phase	A, B, Z phase	
Output form	Square wave	Square wave	
Output capacity	Sink current:20mA Residual voltage:0.5V or less (at 10mA)	-	
Maximum response frequency (response pulse number)	100kHz	Line driver output:50kHz×(by multiplication) Open collector output:100kHz	
Output phase difference	A, B phase difference 90°±45°(T/4±T/8) Z phase T±T/2 (see Output Waveform)	Refer to the figure on the right	
Waveform rise/fall time	2μs or less (output cable 1m or less)	-	
Allowable load of shaft (electrical)	Radial	49N (5kgf)	49N (5kgf)
	Thrust	29.4N (3kgf)	29.4N (3kgf)
Maximum allowable revolutions (mechanical)	6,000r/min	6,000r/min	
Working ambient temperature/humidity	-10°C~70°C RH35%~90% no dewing	-10°C~70°C RH35%~90% no dewing	
Storing ambient temperature	-20°C~80°C	-20°C~80°C	
Vibration resistance	Durability 55Hz, double amplitude 1.5mm 2 hours each in X, Y, and Z directions	Durability 55Hz, double amplitude 1.5mm 2 hours each in X, Y, and Z directions	
Impact resistance	Durability 500m/s <sup>2</sup> (about 50G) 3 times each in X, Y, and Z directions	Durability 500m/s <sup>2</sup> (about 50G) 3 times each in X, Y, and Z directions	
Cable	Outside diameter φ4.2 5-core vinyl wire AWG28 Insulated shield cable (length 1m)	Outside diameter φ4.2 5-core vinyl wire AWG28 Insulated shield cable (length 1m)	
Mass	200g	200g	

\*Handled by built-in multiplier circuit

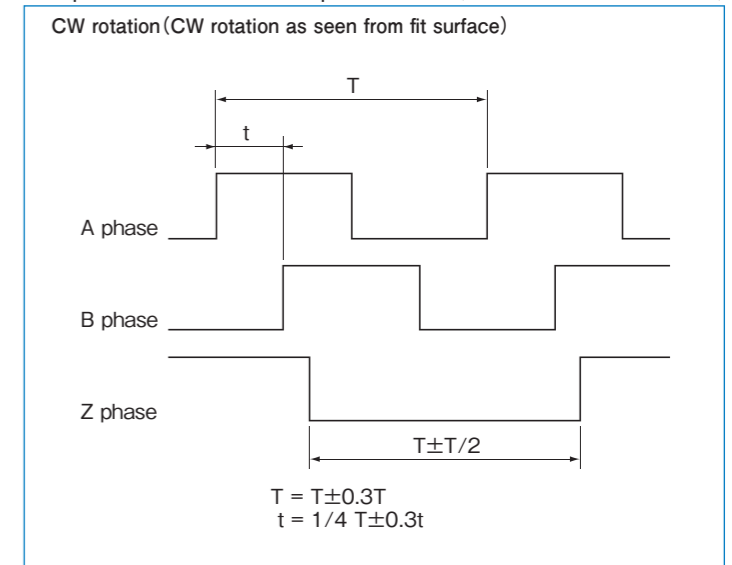
## Outside dimensions



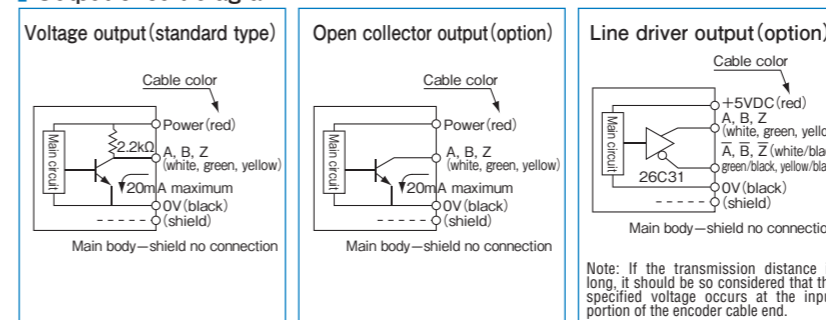
## Output waveform (Square wave)



## Output waveform/Built-in multiplication circuit (x2·x4·x5·x8·x10·x16·x20)



## Output circuit diagram



A capacitor (0.1μF) is connected between 0V and FG (frame ground).