

# ME-12-P series

[Square Wave/Incremental]

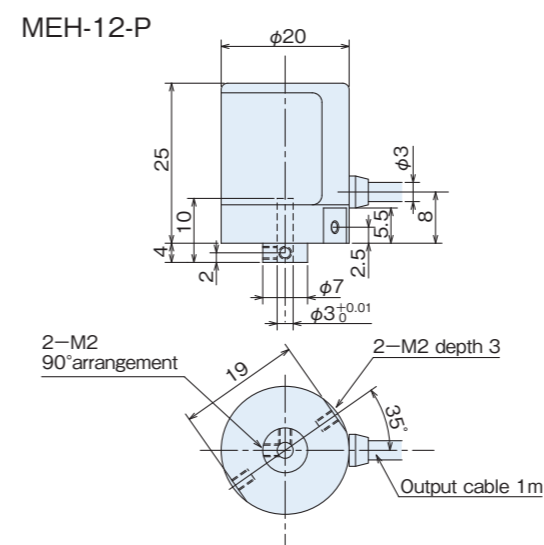
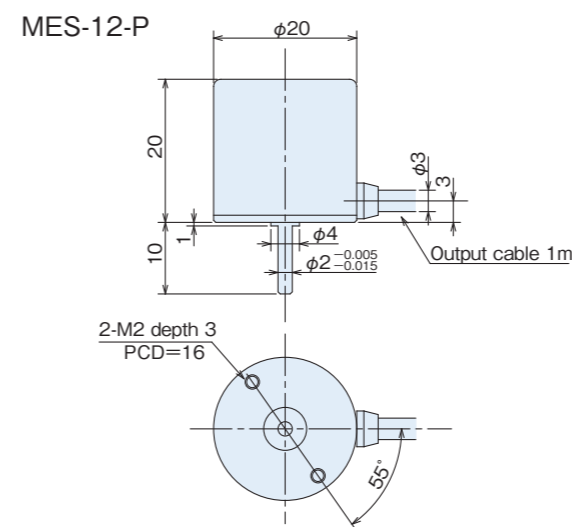


## Specifications

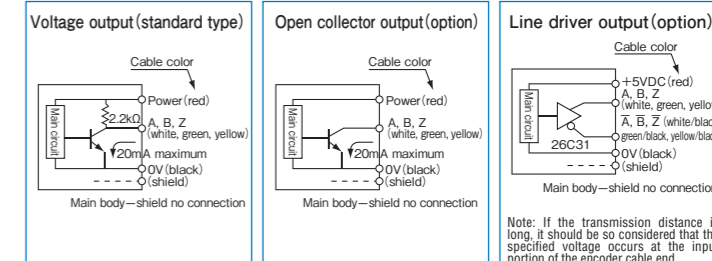
Type name		ME□-12-□P□			
Item	Shaft shape		Pulse number		Output circuit
	●S=single shaft	●H=hollow shaft	●Noentry=Voltage output	●C=open collector output	●E=line driver output
		●ST□(2·4·8·16)			
		<b>Square wave</b>		<b>Built-in multiplication circuit (×2·×4·×8·×16)</b>	
Supply voltage	DC5V ±10%		DC5V ±5%		
Current consumption	40mA or less (under no load)		60mA or less (under no load)		
Detection system	Incremental		Incremental		
Output pulse number (Standard) [Pulse number/rotation]	60	300	1,000(*)	1,500(*)	EX 2,000×2(4,000) 2,000×4(8,000) 2,000×8(16,000) 2,000×16(32,000)
	100	360	1,024(*)	1,800(*)	
	125(*)	500		2,000(*)	
	200	600		2,048(*)	
256(*)	900				
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) Open collector output:Load voltage DC13.2V max		Sink current:20mA max. Residual voltage:0.5V or less (at 10mA) Open collector output:Load voltage DC13.2V max		
Maximum response frequency (response pulse number)	100kHz		Line driver output:50kHz× (by multiplication) Voltage output·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)		2μs or less (output cable 1m or less)		
Allowable load of shaft (electrical)	Radial	1.9N (200gf)	0.98N (100gf)	0.98N (100gf)	
	Thrust	1.9N (200gf)	0.98N (100gf)	0.98N (100gf)	
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 φ3 5-core vinyl wire AWG28 Insulated shield cable (length 1m)		Outside diameter φ3 5-core vinyl wire AWG28 Insulated shield cable (length 1m)		
Mass	40g		40g		

\*Handled by built-in multiplier circuit

## Outside dimensions

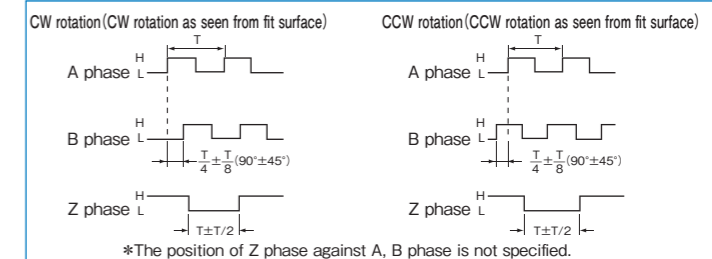


## Output circuit diagram

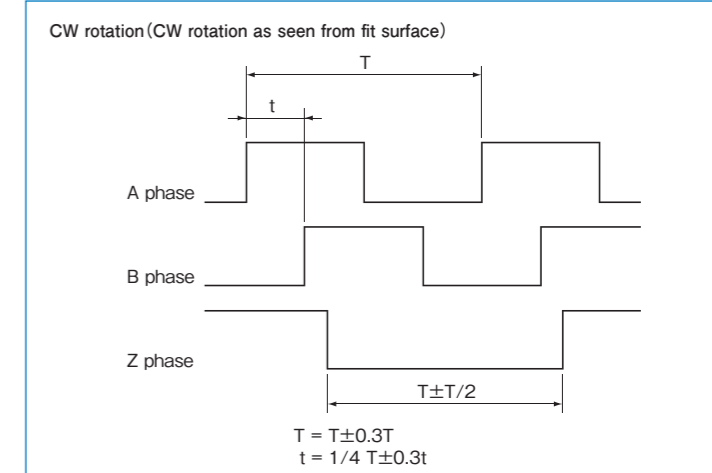


A capacitor (0.1μF) is connected between 0V and FG (frame ground).  
Note: This capacitor is not connected to the voltage or open collector output of the built-in multiplier circuit.

## Output waveform (Square wave)



## Output waveform / Built-in multiplication circuit (×2·×4·×8·×16)



## Spring flange MEH-12 (Included)

