

# ME-20-P series

[Square Wave/Incremental]

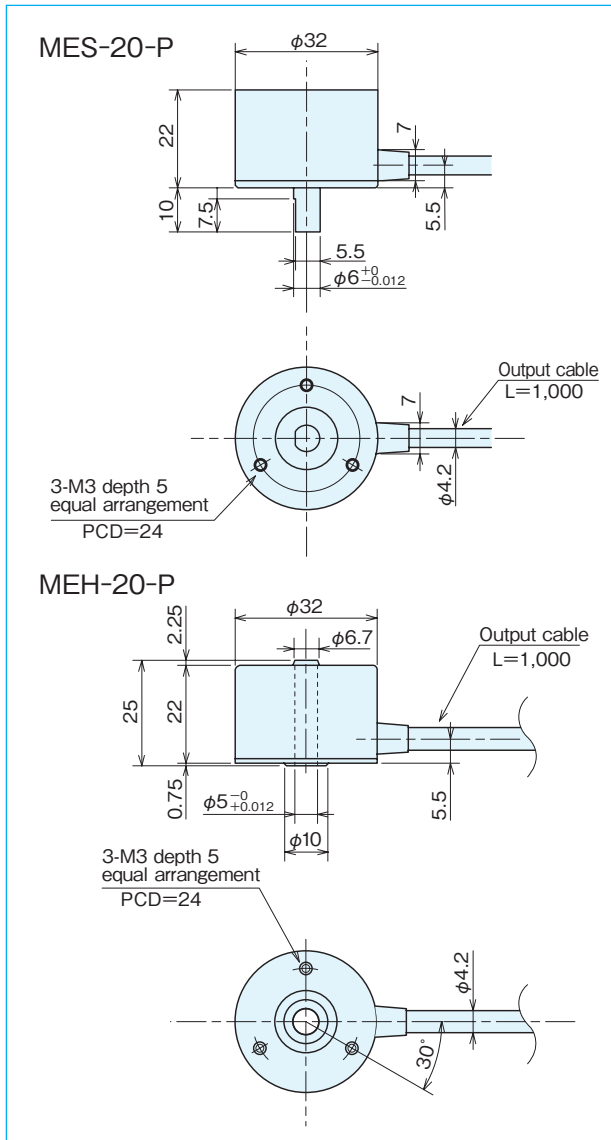


## Specifications

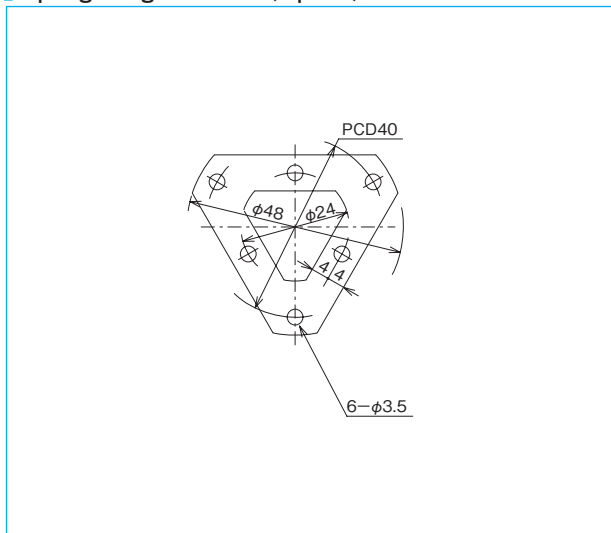
Type name		ME□-20-□P□				
Item	Shaft shape		Output circuit			
	●S=single shaft	●H=hollow shaft	●No entry=voltage output			
		Pulse number	●C=open collector output			
		●D=double shaft	●C4=open collector output DC24V			
		●E=line driver output				
		●S=sine wave output				
		●ST□(2·4·5·8·10·16·20)				
		<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 C4: DC24V±10% Line driver: DC5V-5%~5V+10%		Voltage / Open collector: DC5V-5%~12V+10% Line driver: DC5V±5%		
Current consumption		70mA or less (under no load)		100mA or less (under no load)		
Detection system		Incremental		Incremental		
IndiNO	Output pulse number (Standard) [Pulse number/rotation]		40 250 512 50 256 60 300 100 360 125 400 200 500	600 1,800(※) 800 2,000(※) 1,000 2,048(※) 1,024 2,500(※) 1,200 3,600(※) 1,500 5,400(※) 7,200(※)	EX 7,200x2(14,400) 7,200x4(28,800) 7,200x5(36,000) 7,200x8(57,600) 7,200x10(72,000) 7,200x16(115,200) 7,200x20(144,000)	
	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)		Sink current: 20mA 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·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	19.6N (2kgf)	14.7N (1.5kgf)	14.7N (1.5kgf)	
		Thrust	9.8N (1kgf)	4.9N (0.5kgf)	4.9N (0.5kgf)	
	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 Insulated shield cable (length 1m)		Outside diameter φ4.2 5-core vinyl wire Insulated shield cable (length 1m)		
Mass		70g		70g		

※Handled by built-in multiplier circuit

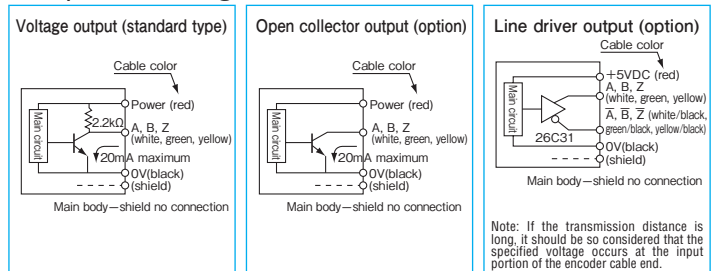
**Outside dimensions**



**Spring flange MEH-20 (Option)**

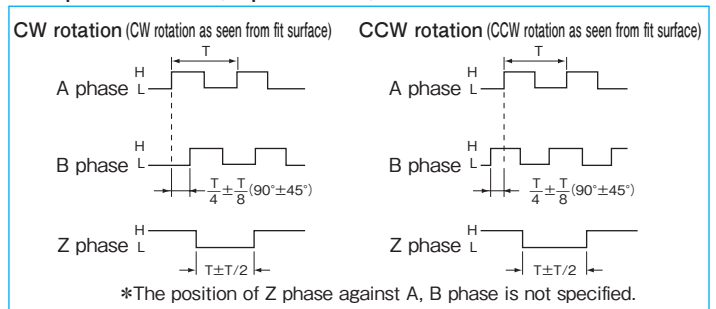


**Output circuit diagram**



A capacitor (0.1 $\mu$ F) is connected between 0V and FG (frame ground).

**Output waveform (Square wave)**



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

