

# ME-20-P series

[Square Wave/Incremental]

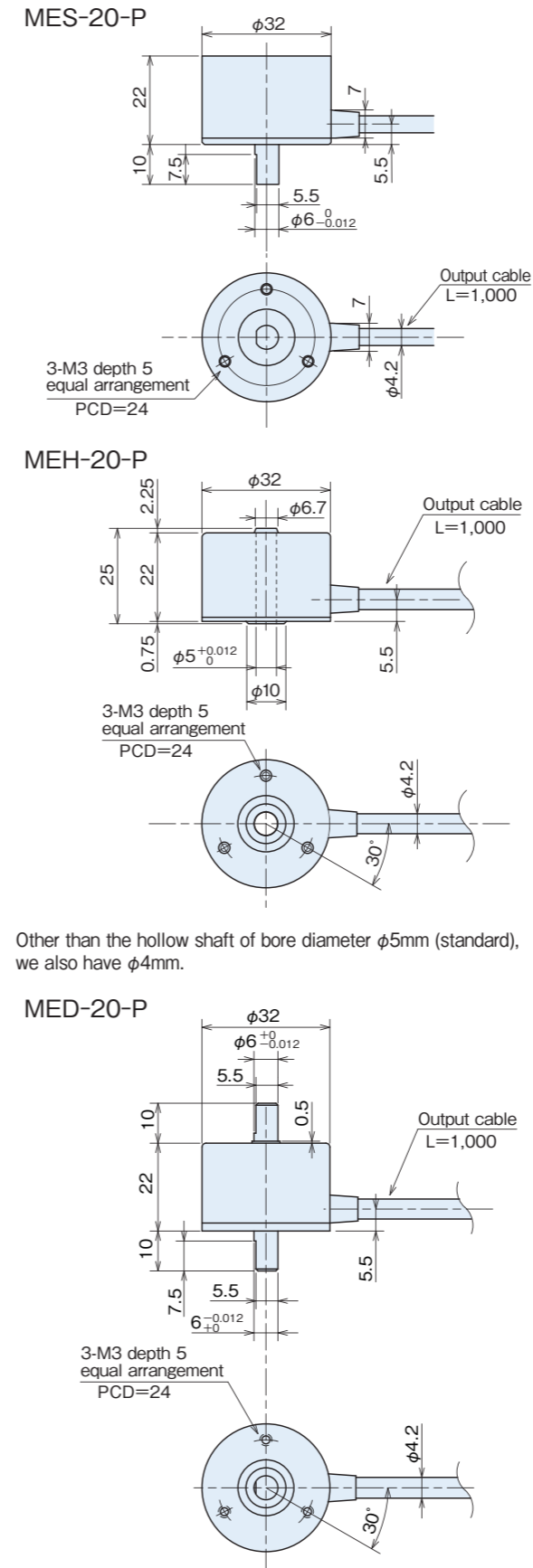


## Specifications

Item	Type name	ME□-20-□P□	Output circuit
	Shaft shape	●S=single shaft ●H=hollow shaft ●D=double shaft	●No entry=voltage output ●C=open collector output ●C4=open collector output DC24V
	Pulse number		●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 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
Output pulse number (Standard)	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(*) 2,000 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)
	Thrust	9.8N(1kgf)	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 AWG28 Insulated shield cable (length 1m)		Outside diameter φ4.2 5-core vinyl wire AWG28 Insulated shield cable (length 1m)
Mass	70g		70g

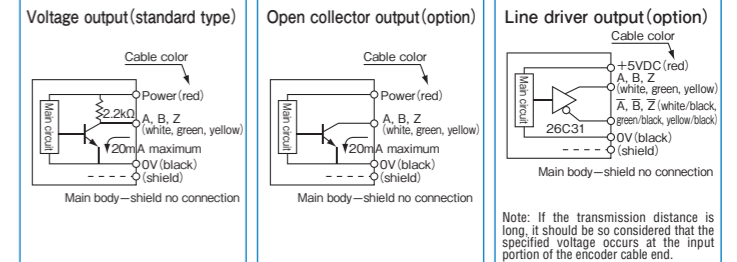
\*Handled by built-in multiplier circuit

## Outside dimensions



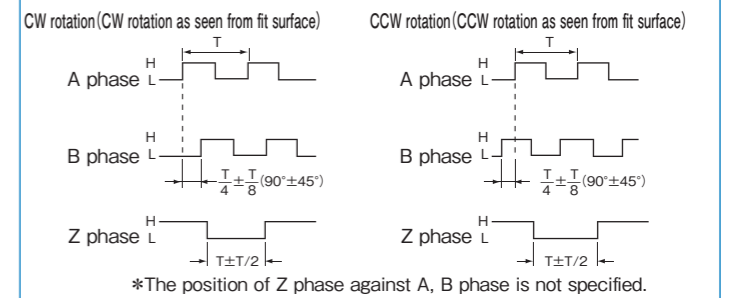
Other than the hollow shaft of bore diameter φ5mm (standard), we also have φ4mm.

## Output circuit diagram

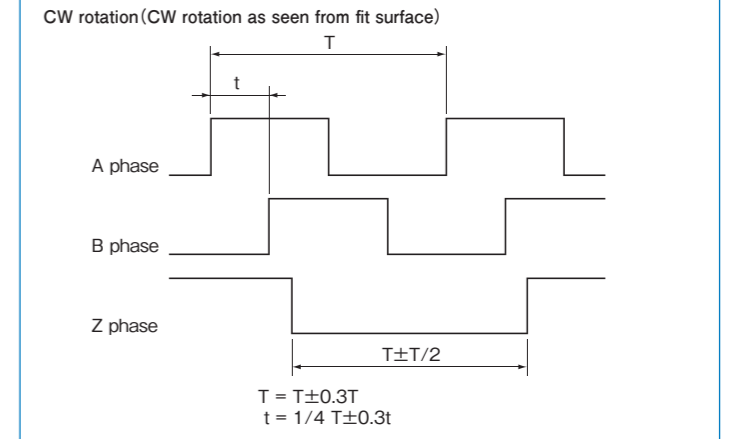


A capacitor (0.1μF) is connected between 0V and FG (frame ground).

## Output waveform (Square wave)



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



## Spring flange MEH-20 (Option)

