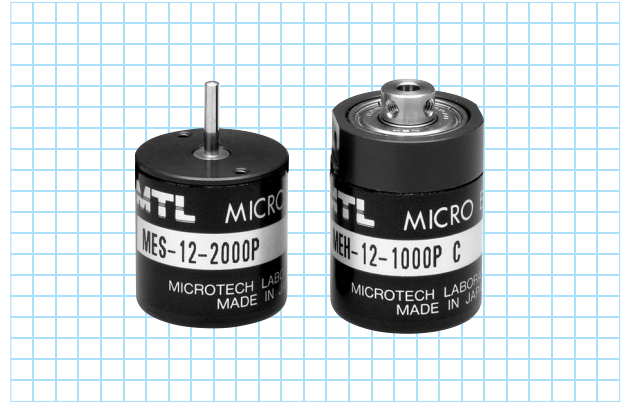


ME-12-P series

[Square Wave/Incremental]



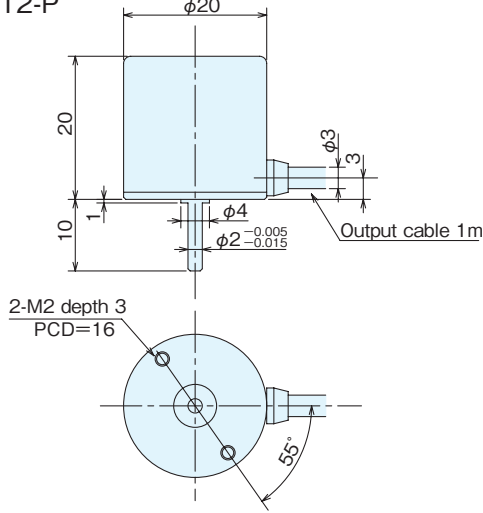
Specifications

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	●S=sine wave output
	Square wave			Built-in multiplication circuit (×2·×4·×8·×16)			
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	Output pulse number (Standard)	60 100 125(※) 200 256(※)	300 360 500 600 900	1,000(※) 1,024(※)	1,500(※) 1,800(※) 2,000(※) 2,048(※)	EX 2,000×2(4,000) 2,000×4(8,000) 2,000×8(16,000) 2,000×16(32,000)	
	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) 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 ² (about 50G) 3 times each in X, Y, and Z directions			Durability 500m/s ² (about 50G) 3 times each in X, Y, and Z directions			
Cable	Outside diameter φ3 5-core vinyl wire Insulated shield cable (length 1m)			Outside diameter φ3 5-core vinyl wire Insulated shield cable (length 1m)			
Mass	40g			40g			

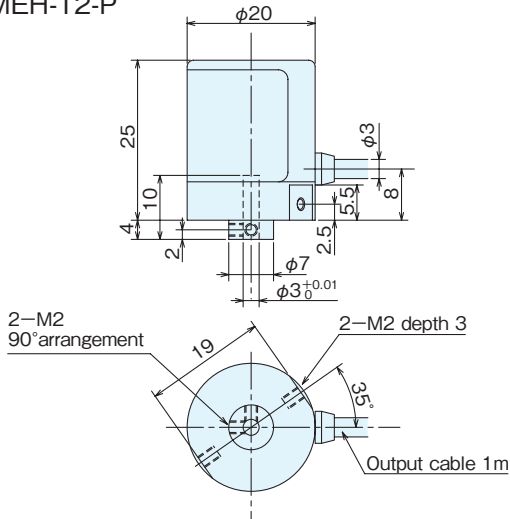
※Handled by built-in multiplier circuit

Outside dimensions

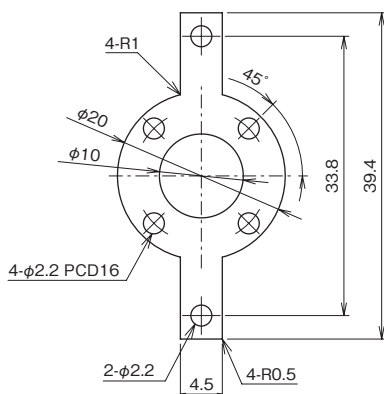
MES-12-P



MEH-12-P

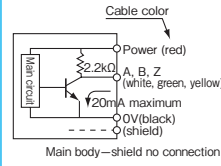


Spring flange MEH-12 (Included)

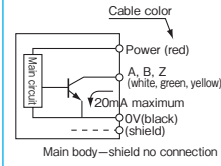


Output circuit diagram

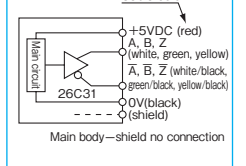
Voltage output (standard type)



Open collector output (option)



Line driver output (option)

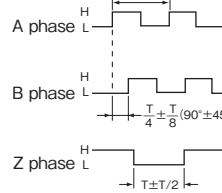


Note: If the transmission distance is long, it should be so considered that the specified voltage occurs at the input portion of the encoder cable end.

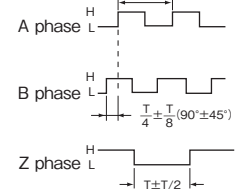
A capacitor (0.1 μ F) is connected between 0V and FG (frame ground).
Note: This capacitor is not connected to the voltage or open collector output of the built-in multiplier circuit.

Output waveform (Square wave)

CW rotation (CW rotation as seen from fit surface)



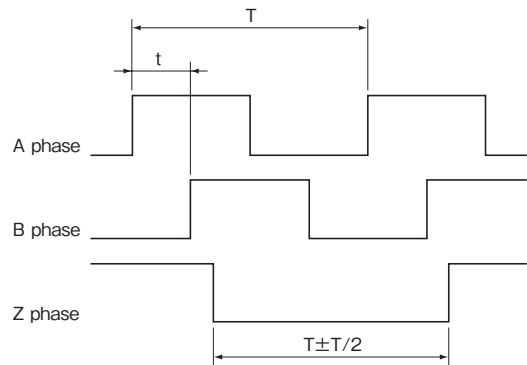
CCW rotation (CCW rotation as seen from fit surface)



*The position of Z phase against A, B phase is not specified.

Output waveform / Built-in multiplication circuit (x2·x4·x8·x16)

CW rotation (CW rotation as seen from fit surface)



$$T = T \pm 0.3T$$

$$t = 1/4 T \pm 0.3t$$