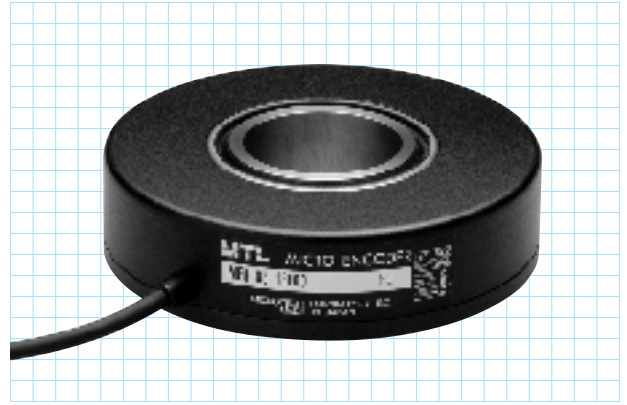


# MEH-85 series

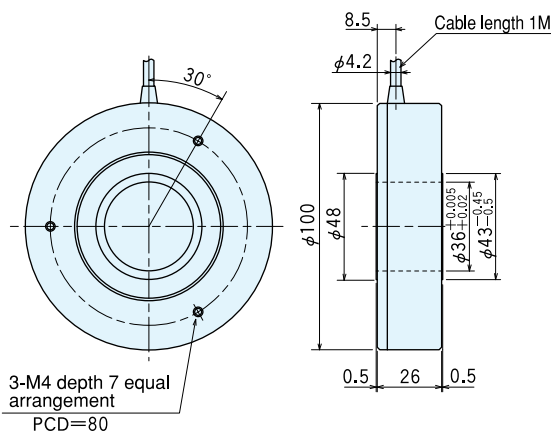
[Square Wave/Incremental]



## Outside dimensions

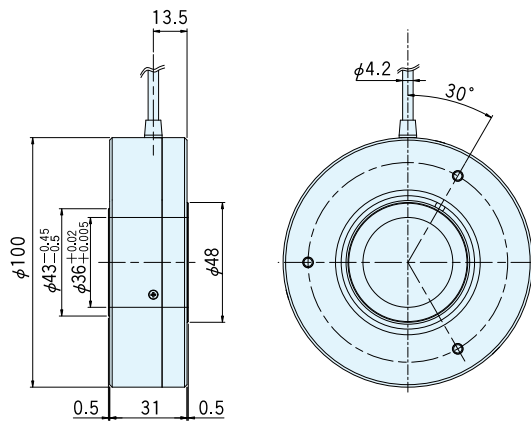
### MEH-85

※1,024 pulse or less



### MEH-85P,PS,PST

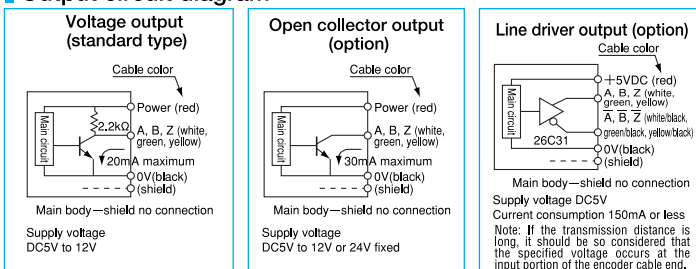
※3,600 pulse or more



## Specifications

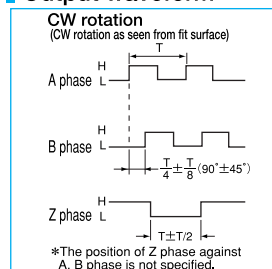
Type name		MEH-85- <input type="text"/> - <input type="text"/>	
Item	Pulse number	<ul style="list-style-type: none"> <li>●No entry=voltage output</li> <li>●C=open collector output</li> <li>●C4=open collector output DC24V</li> <li>●E=line driver output</li> <li>●S=sine wave output</li> <li>●S1=built-in multiplication circuit</li> <li>●P2=Two head detection</li> </ul>	
	Output circuit		
Supply voltage	DC5~12V $\pm 10\%$ DC24V $\pm 10\%$ (option)		
Current consumption	60mA or less(under no load)		
Detection system	Incremental		
Output	Output pulse number (Standard)	200	4,500
	[Pulse number/rotation]	500 1,000 1,024 3,600	5,400 7,200 10,800 11,250
Output phase	A, B, Z phase		
Output form	Square wave		
Output capacity	Sink current: 20mA Residual voltage: 0.5V or less (at 10mA)		
Maximum response frequency (response pulse number)	100kHz In case of voltage output, load resistance shall be 2.2k $\Omega$ . (Refer to the output circuit diagram.)		
Output phase difference	A, B phase difference $90^\circ \pm 45^\circ$ (T/4 $\pm$ T/8) Z phase T $\pm$ T/2 (see Output Waveform)		
Waveform rise/fall time	2 $\mu$ s or less (output cable 1m or less)		
Starting torque	40 $\times 10^{-3}$ N $\cdot$ m(400gf $\cdot$ cm) or less(no oil seal)		
Allowable load of shaft (electrical)	Radial	9.8N (1kgf)	
	Thrust	4.7N (0.5kgf)	
Maximum allowable revolutions (mechanical)	3,000r/min		
Working ambient temperature/humidity	0 $^\circ$ C~60 $^\circ$ C RH35%~90% no dewing		
Storing ambient temperature	-20 $^\circ$ C~80 $^\circ$ C		
Vibration resistance	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		
Cable	Outside diameter $\phi 4.2$ 5-core vinyl wire Insulated shield cable (length 1m)		
Mass	520g		

## Output circuit diagram



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

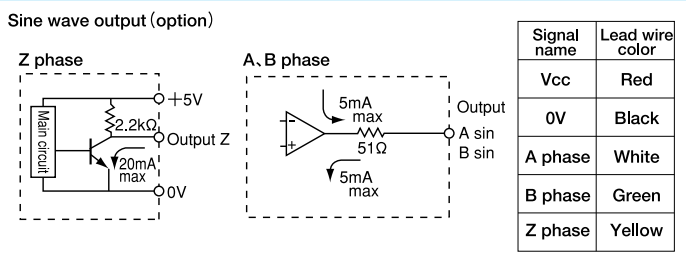
## Output waveform



## Specifications/Sine wave

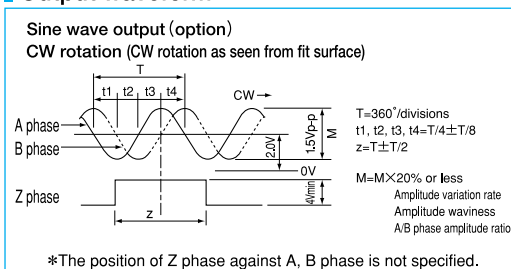
Supply voltage	DC5V ±5%		
Current consumption	40mA or less (under no load)		
Detection system	Sine wave·Incremental		
Output	Output pulse number (Standard) [Pulse number/rotation]	18,000	
	Output phase	A, B, Z phase	
	Output form	A, B phase SIN wave, Z phase square wave	
	A, B, Z phase output	SIN wave 1.5 V <sub>p-p</sub> ±0.3 V offset 2.0V±0.2V	
		Opamp output current 5mA Max.	
		Harmonic distortion factor to be within 10% (Measuring condition to be within 20 kHz, effective value mean distortion factor measuring instrument)	
	Maximum response frequency	50kHz	
Output phase difference	A, B phase difference 90°±45° (T/4±T/8) Z phase T±T/2 (see Output Waveform)		
Starting torque	40×10 <sup>-3</sup> N·m (400gf·cm) or less		
Allowable load of shaft (electrical)	Radial	9.8N (1kgf)	
	Thrust	4.9N (0.5kgf)	
Maximum allowable revolutions (mechanical)	3,000r/min		
Working ambient temperature/humidity	0°C~50°C RH35%~90% no dewing		
Storing ambient temperature	-20°C~80°C		
Vibration resistance	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		
Cable	Outside diameter φ4.2 5-core vinyl wire Insulated shield cable (length 1m)		
Mass	520g		

## Output circuit diagram



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

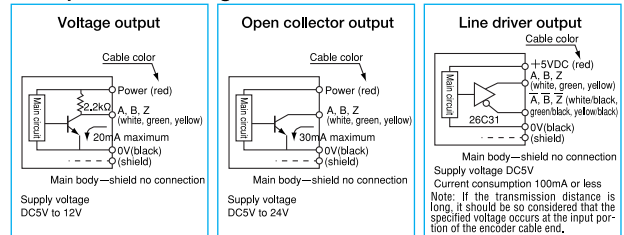
## Output waveform



## Specifications Built-in multiplication circuit (X2·X4·X8·X16)

Supply voltage	Voltage:DC5V-5%~12V+10% Open collector:DC5V-5%~24V+10% Line driver:DC5V±5%	
Current consumption	140mA or less (under no load)	
Detection system	Incremental	
Output	Output pulse number (Standard) [Pulse number/rotation]	EX 18,000×2 (36,000) 18,000×4 (72,000) 18,000×8 (144,000) 18,000×16 (288,000)
	Output phase	A, B, Z phase
	Output form	Square wave
	Maximum response frequency	Line driver output:75kHzX (by multiplication) Voltage output·Open collector output:100kHz
Output phase difference	See the diagram below.	
Starting torque	40×10 <sup>-3</sup> N·m (400gf·cm) or less	
Allowable load of shaft (electrical)	Radial	9.8N (1kgf)
	Thrust	4.9N (0.5kgf)
Maximum allowable revolutions (mechanical)	3,000r/min	
Working ambient temperature/humidity	0°C~60°C RH35%~90% no dewing	
Storing ambient temperature	-20°C~80°C	
Vibration resistance	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	
Cable	Outside diameter φ4.2 5-core vinyl wire Insulated shield cable (length 1m)	
Mass	1,300g	

## Output circuit diagram



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

## Output waveform

