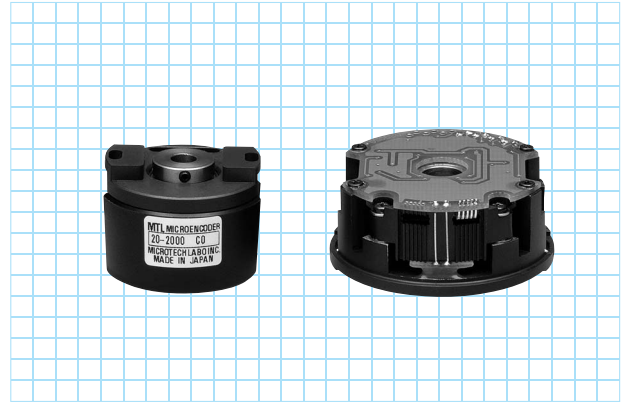


MGH series

[Square Wave/Incremental]

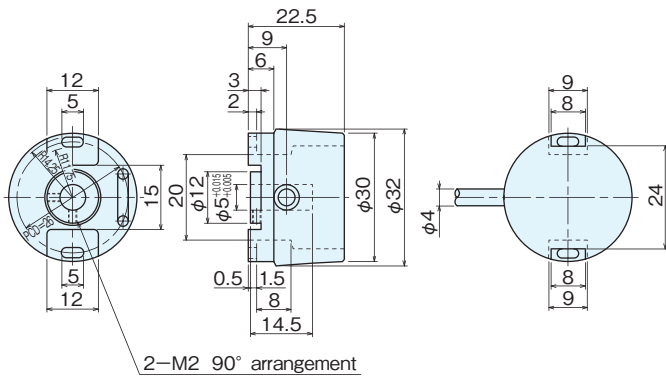
Can be easily attached to DC motors, AC motors, and stepping motors.



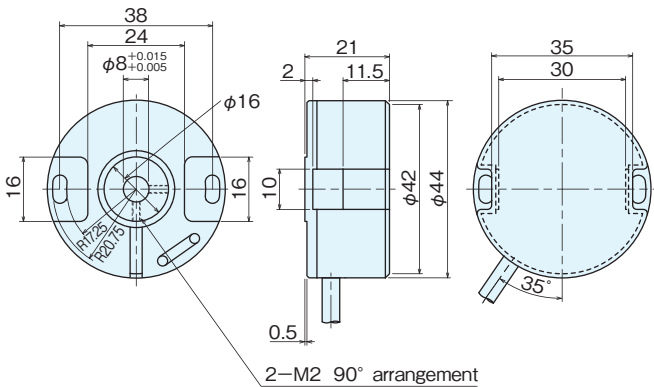
MGH-20, MGH-30

Outside dimensions

MGH-20



MGH-30



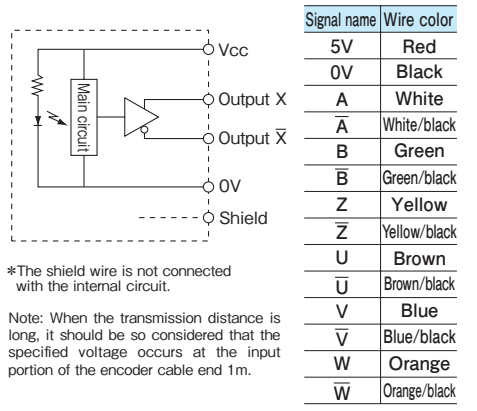
Specifications

Type name	MGH-20-□-E□	MGH-30-□-E□		
Item	Pulse number CS signal ●No entry=nil ●CS=available	Pulse number CS signal ●No entry=nil ●CS=available		
Supply voltage	DC5V±10%			
Current consumption	60mA or less (under no load)			
Detection system	Incremental			
Output pulse number (Standard) (Pulse number/rotation)	40 50 60 100 125 200 250	600 800 1,000 ※1,000 ※1,024 1,200	450 500 60 100 200 300 360 400	1,024 ※1,024 1,200 1,500 1,800 2,000 ※2,000 ※1,000 ※1,000
Output phase	A, \bar{A} , B, \bar{B} , Z, Z phase*with CS signal U, \bar{U} , V, \bar{V} , W, \bar{W} phase			
Output form	Square wave Line driver output			
Output capacity	$V_{OL}=0.5V_{max}$ $V_{OH}=2.5V_{min}$ $I_o=\pm 20mA$			
Maximum response frequency (response pulse number)	100kHz			
Output phase difference	A, B phase difference $90^\circ \pm 45^\circ$ (T/4±T/8) Z phase T±T/2 With CS signal (U, V, W) 4 poles, 60° phase difference 3 signals			
Waveform rise/fall time	1μs or less (with 0.5m cable)			
Maximum allowable revolutions (mechanical)	6,000r/min			
Working ambient temperature/ humidity	-10°C~70°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 ² (about 50G) 3 times each in X, Y, and Z directions			
Cable	Outside diameter φ4.2 (φ6.8) 8-core(19-core) vinyl wire Insulated shield cable length 1m (length 0.5m)			
Mass	60g	150g		

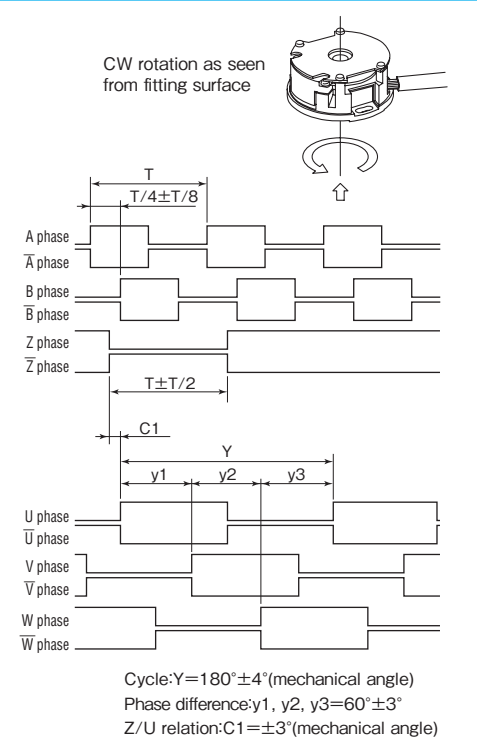
Allowable change amount of fitting shaft

MGH-20	Pulse number	100~200	250~600	800~1,200
MGH-30	Pulse number	100~300	360~1,024	1,200~2,000
Allowable eccentricity	Radial	±0.02mm		±0.01mm
	Thrust	±0.1mm	±0.05mm	±0.02mm

Output circuit diagram



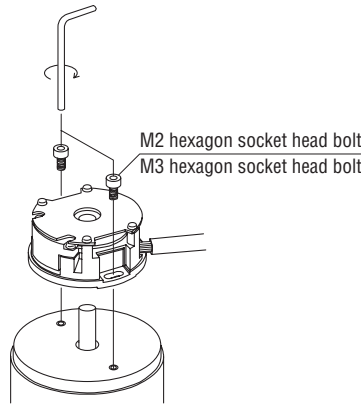
Output waveforms



Assembling image of MGH series

MGH-20, 30

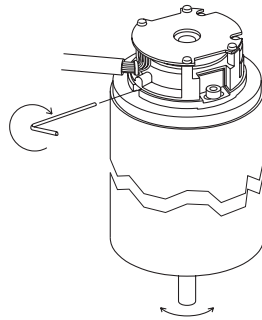
1. Fix the encoder to the base of rotating shaft.



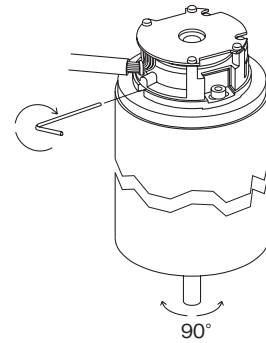
●Tools to be used

- 0.89mm hexagon wrench
- 1.5mm hexagon wrench(MGH-20)
- 2.5mm hexagon wrench(MGH-30)

2-1. Search for a screw by turning the rotating shaft and fix it.



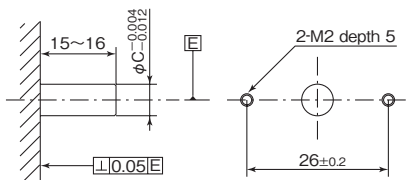
2-2. Turn the shaft 90° right or left and fix the other screw.



3. Affix encoder to base of rotating axle.

Fitting shaft dimensions

MGH-20



MGH-30

