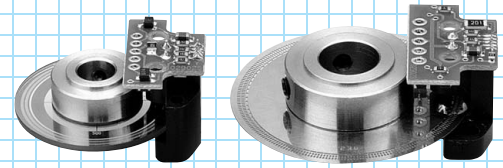


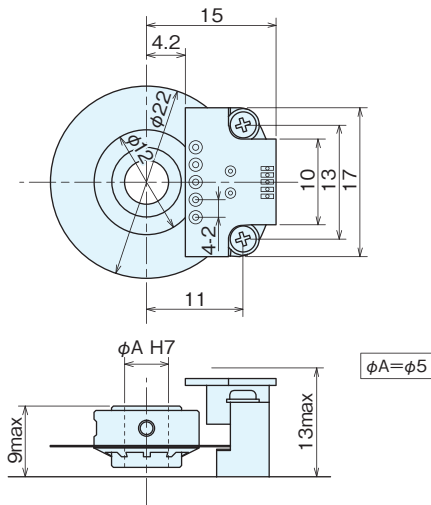
# MG series

[Module Kit]

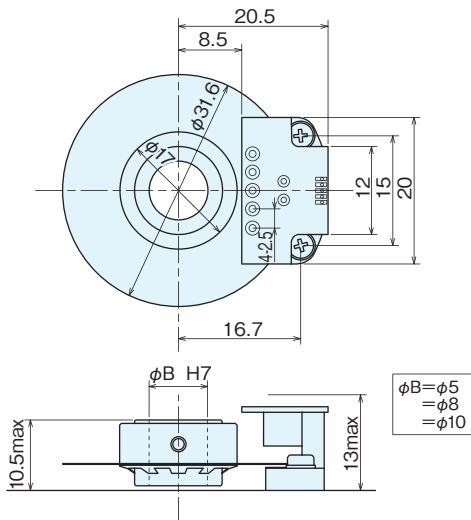


## Outside dimensions

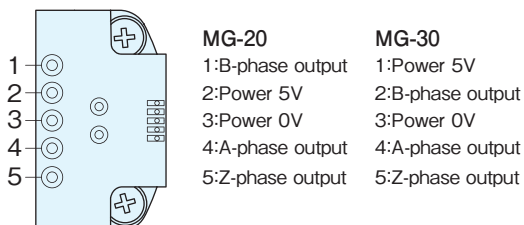
MG-20



MG-30



## Output pin position encoder



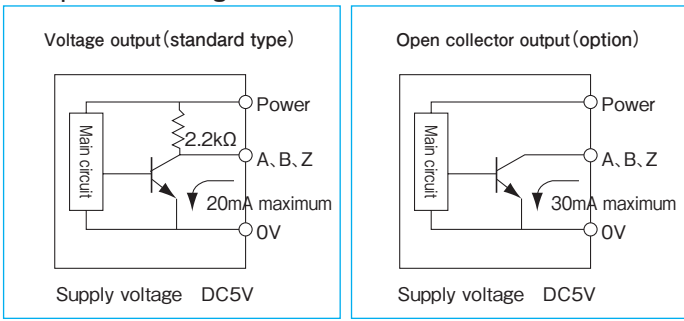
## Specifications

Item	Type name	MG-20-□□	MG-30-□□	
	Pulse number	□□	□□	
Output circuit	●No entry=voltage output	□	□	
	●C=open collector output	□	□	
Supply voltage	DC5V±10%			
Current consumption	30mA or less (under no load)			
Detection system	Incremental			
Output	Output pulse number (Standard) [Pulse number/rotation]	100	500	100 600 2,000
		200	512	200 800
		250	600	250 1,000
		256	800	300 1,024
		300	1,000	360 1,200
		360	1,024	400 1,500
		400	1,200	500 1,800
		Output phase	A, B, Z phase (Z=H)	
Output form	Square Wave			
Output capacity	Sink current:30mA Residual voltage:0.5V or less (at 10mA)			
Maximum response frequency (response pulse number)	100kHz			
Output phase difference	A, B phase difference 90° (T/4±T/8) Z phase T±T/2			
Waveform rise/fall time	2μs or less			
Maximum allowable revolutions (mechanical)	10,000r/min (such that the maximum response frequency is not exceeded)			
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 <sup>2</sup> (about 50G) 3 times each in X, Y, and Z directions			
I/O terminals	PCB through hole terminals (refer to outside dimensions diagram)			
Mass	10g or less	20g or less		

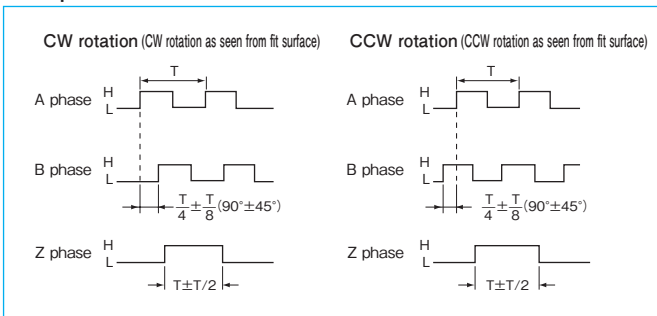
## Allowable change amount of fitting shaft

Encoder	Direction	100~200	250~600	800~1,200
MG-20	Pulse number	100~200	250~600	800~1,200
	Allowable eccentricity	Radial	±0.05mm	
MG-30	Pulse number	100~300	400~1,024	1,200~2,000
	Allowable eccentricity	Thrust	±0.2mm	±0.1mm

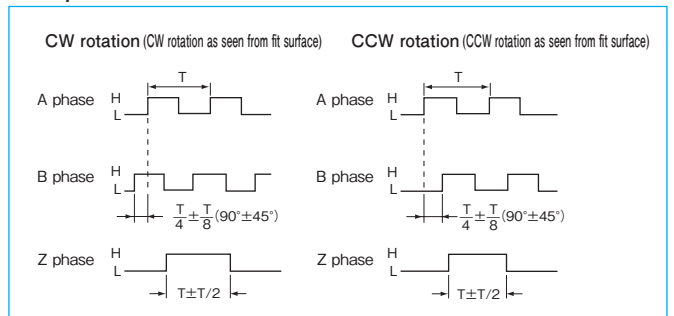
**Output circuit diagram**



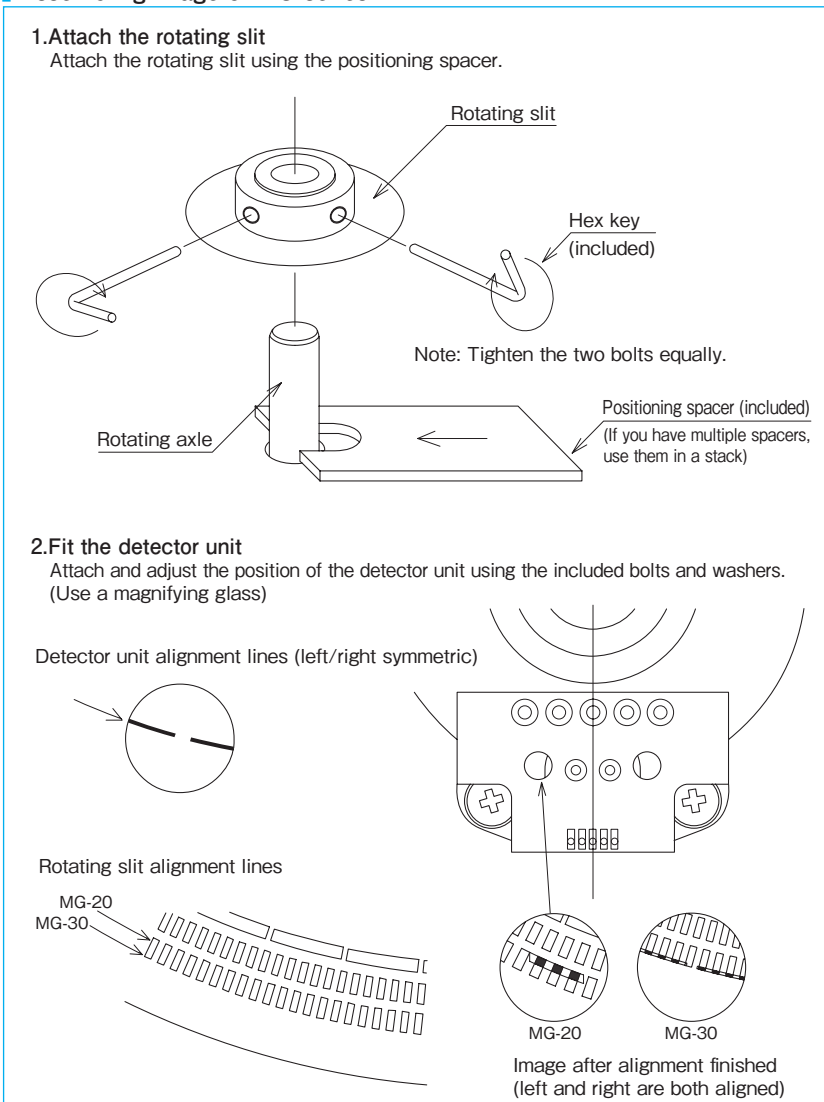
**Output waveforms MG-20**



**Output waveforms MG-30**



**Assembling image of MG series**



**Fitting shaft dimensions**

