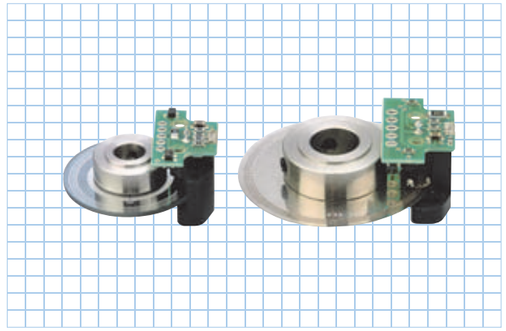
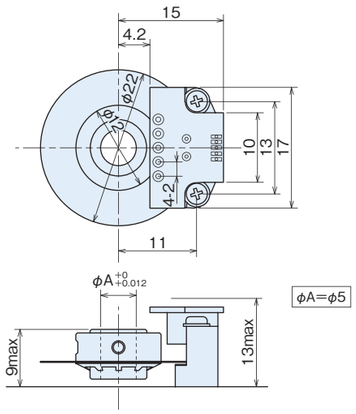
MG series

[Module Kit]

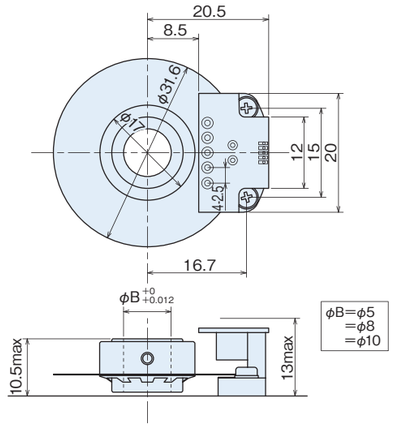


Outside dimensions

MG-20



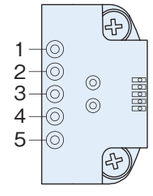
MG-30



Specifications

Item		MG-20-□□ (Pulse number; Output circuit ●No entry=voltage output ●C=open collector output)	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]	100 500 200 512 250 600 256 800 300 1,000 360 1,024 400 1,200	100 600 2,000 200 800 250 1,000 300 1,024 360 1,200 400 1,500 500 1,800
Output	Output phase	A, B, Z phase (Z=H)	
Output	Output form	Square Wave	
Output	Output capacity	Sink current:30mA Residual voltage:0.5V or less (at 10mA)	
Output	Maximum response frequency (response pulse number)	100kHz	
Output	Output phase difference	A, B phase difference 90°(T/4±T/8) Z phase T±T/2	
Output	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/s²(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

Output pin position encoder

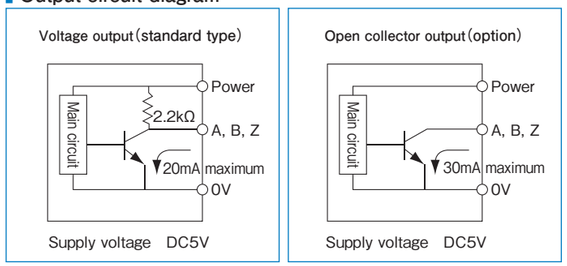


	MG-20	MG-30
1	1:B-phase output	1:Power 5V
2	2:Power 5V	2:B-phase output
3	3:Power 0V	3:Power 0V
4	4:A-phase output	4:A-phase output
5	5:Z-phase output	5:Z-phase output

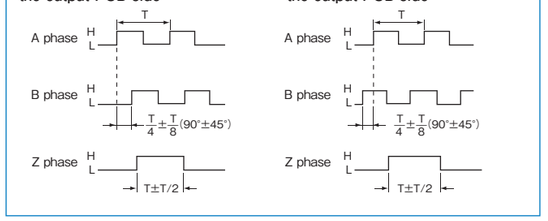
Allowable change amount of fitting shaft

MG−20	Pulse number	100~200	250~600	800~1,200
MG−30	Pulse number	100~300	400~1,024	1,200~2,000
Allowable eccentricity	Radial	±0.05mm		±0.02mm
	Thrust	±0.2mm	±0.1mm	±0.05mm

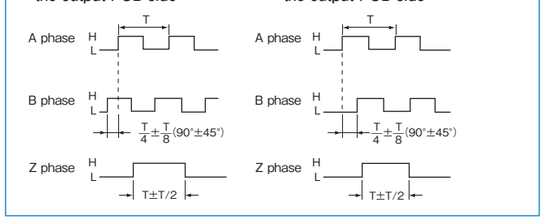
Output circuit diagram



Output waveforms MG-20



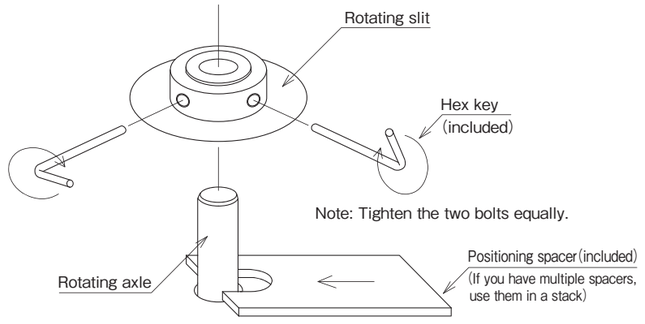
Output waveforms MG-30



Assembling image of MG series

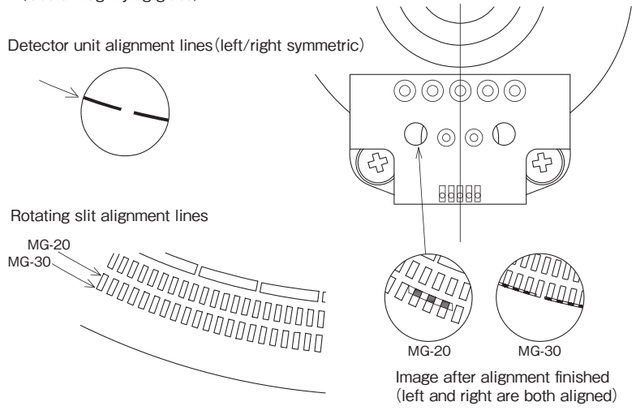
1.Attach the rotating slit

Attach the rotating slit using the positioning spacer.



2.Fit the detector unit

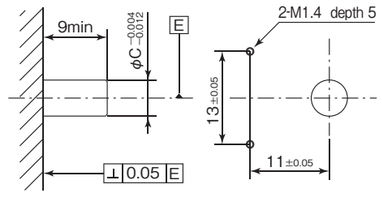
Attach and adjust the position of the detector unit using the included bolts and washers.
(Use a magnifying glass)



Fitting shaft dimensions

MG-20

Note: Refer also to the axle variation tolerance



MG-30

Note: Refer also to the axle variation tolerance