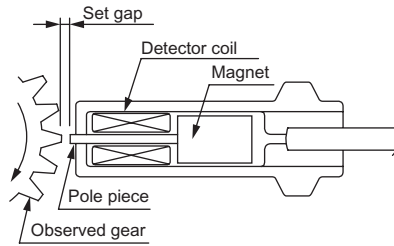


MS Series Magnetic Pickup mounted near the observed gear outputs a frequency signal (detected frequency) proportional to the rotating speed of rotating machinery. It is most suitable for controlling the number of revolutions and also for detecting overspeed of rotating machinery. M16 and M24 mounting threads as well as integral cable type and cable connector type are available.



Specifications

Model Code No.	MS-1601	MS-1602	MS-2401	MS-2402
DC Resistance	95 to 115Ω at 25°C (77°F)		220 to 260Ω at 25°C (77°F)	
Inductance	35mH (typ.)		115mH (typ.)	
Observed gear type	involute gear Module 1 to 4		involute gear Module 3 to 10	
Operating temperature range	-10 to +120°C (14 to 248°F)			
Vibration resistance	196m/s ² (20g REF.)			
Threaded size	M16x1		M24x1.5	
Cable or connector	With integral cab (With 2m Teflon [®] 2-wire twisted pair shielded cable)	With connector*1 MS3102E10SL-3P MS3108E10SL-3S	With integral cable (with 2m Teflon [®] 2-wire twisted pair shielded cable)	With connector*1 MS3102E10SL-3P MS3108E10SL-3S
Mass	Approx. 160g	Approx. 110g	Approx. 380g	Approx. 300g

*1. The upper side is a socket connector and the lower side is for an L-shaped plug. Teflon[®] is a Registered Trademark of E.I.DuPont Co.

Gear material

It should be a high permeability magnetic material(SS400 is recommended).

Gear shape

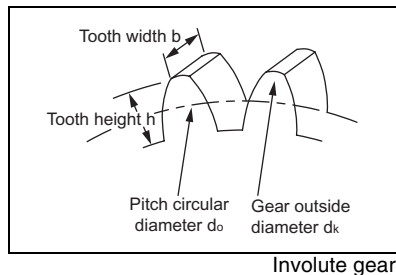
Involute gears are most suitable. Gears with large modules or different shapes may cause large waveform distortion that prevents accurate detection. If the rotating shaft moves in the axial direction, take care that the pole center is not dislocated from the gear.

Applicable module (m) MS-160□ : 1 to 4
MS-240□ : 3 to 10
Teeth width (b) MS-160□ : More than 2.5mm
MS-240□ : More than 6mm

$$m = \frac{d_o}{z} = \frac{d_k}{z+2} = \frac{p}{\pi}$$

$$h \geq 2.25 \times m$$

m : Module
z : Number of teeth
p : Circular pitch

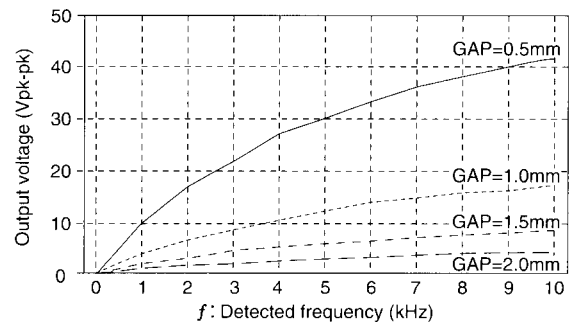


Output voltage characteristics (load resistance 10kΩ)

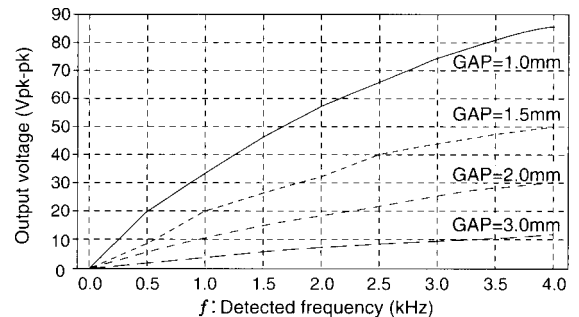
$$f = \frac{Rz}{60}$$

f : Detected frequency
R : Number of revolution (RPM)
z : Number of teeth

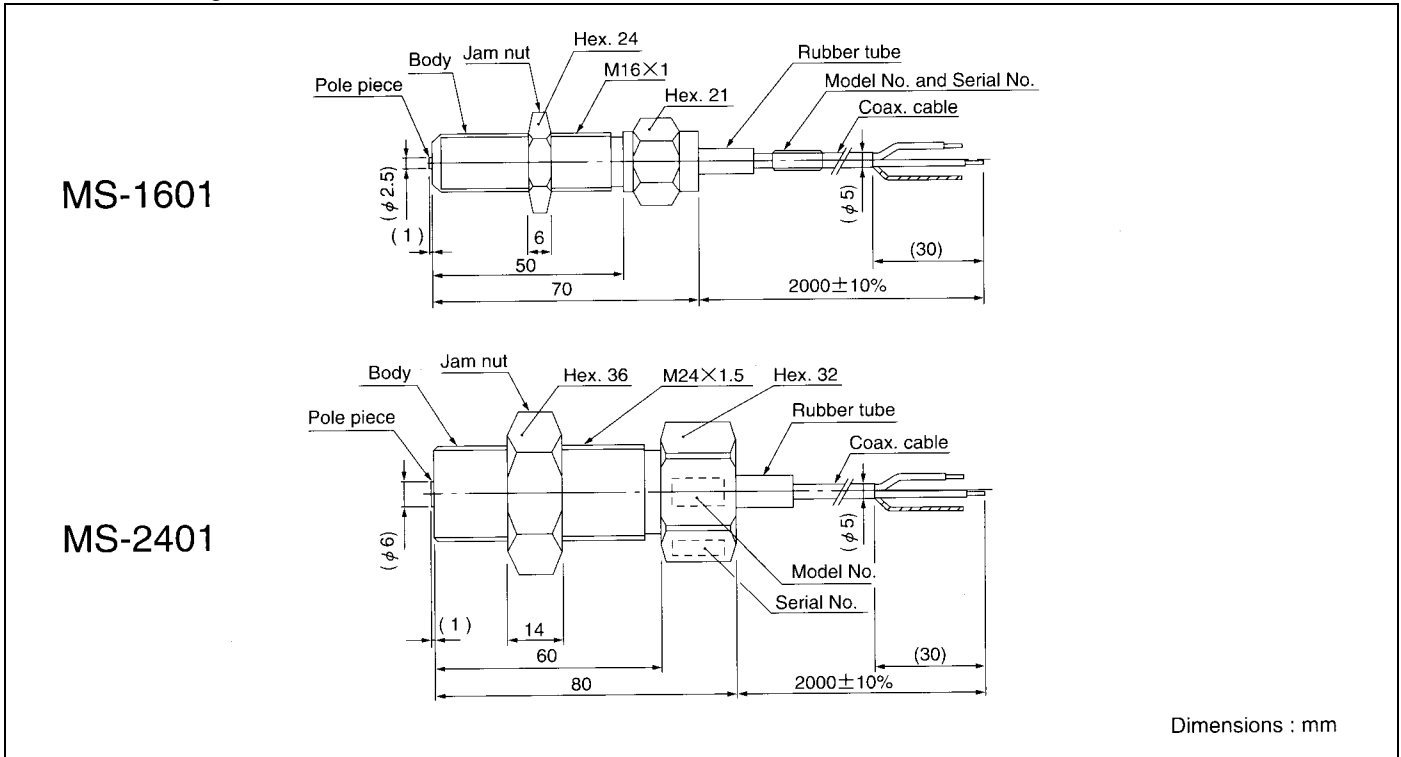
MS-160□ Module 2 (z=120)



MS-240□ Module 3 (z=60)



■ Outline Drawing MS-1601 MS-2401



■ Outline Drawing MS-1602 MS-2402

