Interpolator

MJ500/ 600/700

Can be connected to commercially available analog output encoders

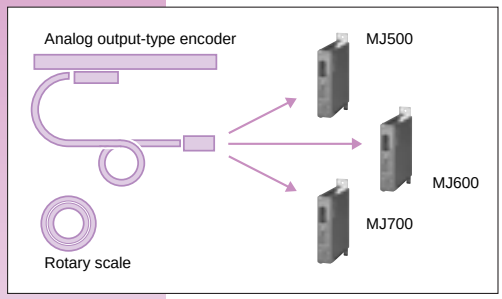
- Capable of 80 to 4000 divisions.
- Number of divisions
  MJ500: 80 to 400 divisions
  MJ600: 500 to 1024 divisions
  MJ700: 1200 to 4000 divisions
- The MJ500/600/700 also allow DC offset compensation, gain compensation and phase difference compensation.

Specifications

Model		MJ500	MJ600	MJ700
Power supply		5 V (4.5 V to 8 V)		
Power consumption		4 W		
Output interface		Line driver (EIA-422)		
Outputs		A/B phases, Z phase, U/V/W phases, alarms		
Number of divisions		400,360,300,240,120,100,80; 1/2 of each of these (which does not satisfy the synchronized reference point specifications.)	1024,1000,960,800,720,640,512,500; 1/2 of each of these (which does not satisfy the synchronized reference point specifications.)	4000,3600,2560,2400,2000,1800,1280,1200; 1/2 of each of these (which does not satisfy the synchronized reference point specifications.)
Maximum response frequency		400 divisions: 20 KHz (24.0 m/min on a scale where λ = 20 µm) 300 divisions: 28 KHz (33.6 m/min on a scale where λ = 20 µm) 200 divisions: 42 KHz (50 m/min on a scale where λ = 20 µm) 120 divisions or less: 70 KHz (84 m/min on a scale where λ = 20 µm)	1024 divisions: 6 KHz (7.2 m/min on a scale where λ = 20 µm) 800 divisions: 8 KHz (9.6 m/min on a scale where λ = 20 µm) 640 divisions: 10 KHz (12.0 m/min on a scale where λ = 20 µm) 500 divisions: 15 KHz (18.0 m/min on a scale where λ = 20 µm)	4000 divisions: 1 KHz (1.2 m/min on a scale where λ = 20 µm) 3600 divisions: 1.1 KHz (1.3 m/min on a scale where λ = 20 µm) 2400 divisions: 1.8 KHz (2.1 m/min on a scale where λ = 20 µm) 1200 divisions: 4.7 KHz (5.6 m/min on a scale where λ = 20 µm)
Minimum phase difference		100 ns		
Input level	Sin, Cos signal	0.6 Vp-p to 1.2 Vp-p with 120 Ω load		0.8 Vp-p to 1.2 Vp-p with 120 Ω load
	Compensation range	0.75 Vp-p to 1.2 Vp-p		0.9 Vp-p to 1.2 Vp-p
	Reference point signal	0.2 V to 1 Vp-p with 120 Ω load		0.2 V to 1 Vp-p with 120 Ω load
Alarms *1		Speed alarm (minimum phase difference time or maximum response frequency) Level alarm (0.6 Vp-p or less) Minimum alarm time: approximately 400 ms		Speed alarm (minimum phase difference time or maximum response frequency) Level alarm (0.7 Vp-p or less) Minimum alarm time: approximately 400 ms
Hysteresis		λ / 2048		
Linearity		± λ / 1024*2		
System startup time		Within 0.5 seconds after the power comes on line		
External dimensions		138 x 93 x 26 (mm) / 5.43" x 3.66" x 1,024" including protrusions		
Operating temperature		0 ˚C to 45 ˚C / 32 ˚F to 114 ˚F		
Storage temperature		-20 ˚C to 60 ˚C / -4 ˚F to 140 ˚F		
Mass		350g/ 0.772 lbs		
Supplied accessories		Manual, output connector, connector cap, mounting screws		
Options		SET-P15-1 (for external reference point) Scale extension cable, external reference point extension cable Output connector with cable		

*1: The alarm function may not operate when the head output signal hes an abnormal offset voltage generated due to a broken wire, etc.
*2: Only applies under ideal signal conditions.
*Contact us directly if you have special requirements for the specifications.

System configuration



Dimensions