

FEATURE

Flight and crash test applications.
360° 2-axis mounting · encoder output

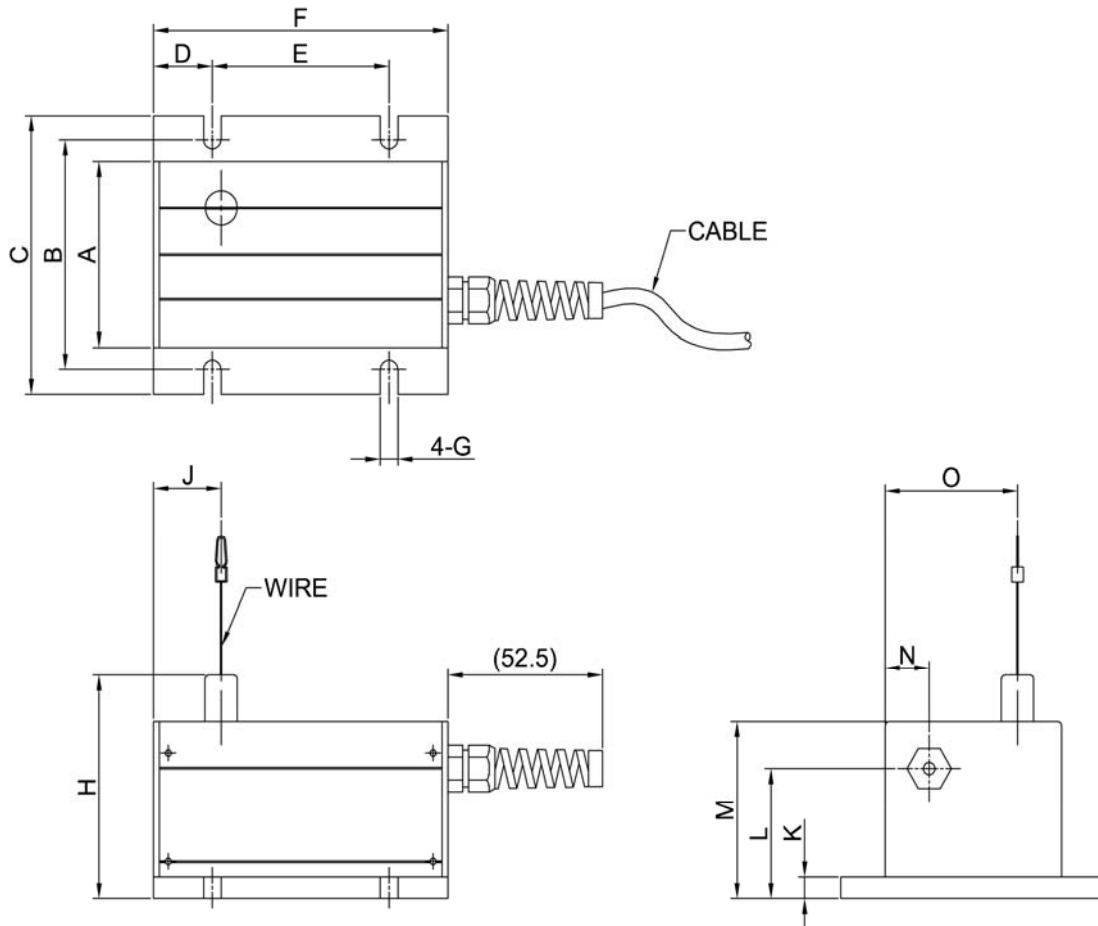


SPECIFICATION

MODEL	CTE
Full stroke ranges	0.5, 1, 2m
Output signal	voltage divider (encoder)
Accuracy	±0.05% full stroke
Repeatability	±0.02% full stroke
Measuring cable	φ0.45 stainless steel
Power supply	5V, 12V, 24V, DC+5~+24V (Ripple: P-P Max 5%)
Current consumption	less than 80mA (at no load condition) less than 150mA (line driver output at no load condition)
Operation temperature	-10°C ~ +70°C (line driver 0°C ~ 70°C)
Operating humidity	35 ~ 85% RH
Cable	4P(AWG26) Shield cable

◆ WIRING INFORMATION

CABLE COLOR	Voltage Output	Line Driver
	Open Collector	
RED	DC+5~12V, 24V	DC+5V
BLACK	Ground	Ground
GREEN	A	A
BLUE	—	A
WHITE	B	B
PINK	—	B
YELLOW	Z	Z
ORANGE	—	Z
SHIELD	Case Shield	



DIMENSION

Stroke	A	B	C	D	E	F	G	H	J	K	L	M	N	O
0.5m ~ 1m	60	74	90	20	60	100	6	72	23	7	42	57	15	45
2m	100	119	135	25	65	115	8.5	120.8	26.5	9	74	106	25	87

< Ordering Information >

E40	H	8	5000	3	N	24	
Series	Shaft type	Hollow type	Pulse/1Revolution	Output phase	Control output	Power supply	Cable
S: Shaft type H: Hollow type HB: Hollow built-in type	External 6: Ø6mm 8: Ø8mm	Inner 6: Ø6mm 8: Ø8mm 10: Ø10mm 12: Ø12mm	Refer to resolution	2: A, B 3: A, B, Z 4: A, \bar{A} , B, \bar{B} 6: A, \bar{A} , B, \bar{B} , Z, \bar{Z}	T: Totem pole output N: NPN open collector output V: Voltage output L: Line driver output	5: 5VDC ±5% 24: 12-24VDC ±5%	No mark: Cable type C: Connector cable type (※)
※Standard: E40S6- <u>PULSE</u> -3-N-24, E40H8- <u>PULSE</u> -3-N-24			※Standard: A, B, Z			※Cable length : 250mm	
E40HB8- <u>PULSE</u> -3-N-24							

Item	Diameter Ø40mm shaft/hollow shaft/hollow built-in type of incremental rotary encoder		
Resolution (P/R) ^{※1}	*1, *2, *5, 10, *12, 15, 20, 23, 25, 30, 35, 40, 45, 50, 60, 75, 100, 120, 150, 192, 200, 240, 250, 256, 300, 360, 400, 500, 512, 600, 800, 1000, 1024, 1200, 1500, 1800, 2000, 2048, 2500, 3000, 3600, 5000		
Electrical specification	Output phase	A, B, Z phase (Line driver A, \bar{A} , B, \bar{B} , Z, \bar{Z} phase)	
	Phase difference of output	Phase difference between A and B: $\frac{T}{4} \pm \frac{T}{8}$ (T=1 cycle of A phase)	
	Control output	Totem pole output	• Low - Load current: Max. 30mA, Residual voltage: Max. 0.4VDC • High - Load current: Max. 10mA, Output voltage (Power voltage 5VDC): Min. (Power voltage-2.0)VDC, Output voltage (Power voltage 12-24VDC): Min. (Power voltage-3.0)VDC
		NPN open collector output	Load current: Max. 30mA, Residual voltage: Max. 0.4VDC
		Voltage output	Load current: Max. 10mA, Residual voltage: Max. 0.4VDC
	Response time (Rise/Fall)	Line driver output	• Low - Load current: Max. 20mA, Residual voltage: Max. 0.5VDC • High - Load current: Max. -20mA, Output voltage (Power voltage 5VDC): Min. 2.5VDC, Output voltage (Power voltage 12-24VDC): Min. (Power voltage-3.0)VDC
		Totem pole output	Max. 1µs (Cable length: 2m, I sink = 20mA)
		NPN open collector output	
		Voltage output	
		Line driver output	Max. 0.5µs (Cable length: 2m, I sink = 20mA)
	Max. Response frequency	300kHz	
	Power supply	• 5VDC ±5% (Ripple P-P: Max. 5%) • 12-24VDC ±5% (Ripple P-P: Max. 5%)	
	Current consumption	Max. 80mA (disconnection of the load), Line driver output: Max. 50mA (disconnection of the load)	
Insulation resistance	Min. 100MΩ (at 500VDC megger between all terminals and case)		
Dielectric strength	750VAC 50/60Hz for 1 minute (Between all terminals and case)		
Connection	Cable type, 250mm connector cable type		
Mechanical specification	Starting torque	Shaft type: Max. 40gf·cm (0.004N·m), Hole type: Max. 50gf·cm (0.005N·m)	
	Moment of inertia	Max. 40g·cm ² (4×10 ⁻⁶ kg·m ²)	
	Shaft loading	Radial: Max. 2kgf, Thrust: Max. 1kgf	
	Max. allowable revolution ^{※2}	5000rpm	
Vibration	1.5mm amplitude at frequency of 10 to 55Hz (for 1 min.) in each X, Y, Z direction for 2 hours		
Shock	Approx. Max. 50G		
Environment	Ambient temperature	-10 to 70°C, storage: -25 to 85°C	
	Ambient humidity	35 to 85%RH, storage: 35 to 90%RH	
Protection structure	IP50 (IEC standard) ※Option type is available for IP64 (IEC standard).		
Cable	Ø5mm, 5-wire, Length: 2m, Shield cable (Line driver output: Ø5mm, 8-wire) (AWG24, Core diameter: 0.08, Number of cores: 40, Insulator out diameter: Ø1mm)		
Accessory	• Shaft type: Ø6mm coupling standard, Ø8mm coupling (Sold separately) • Hole type: Bracket		
Approval	CE (Except line driver output)		
Unit weight	Approx. 120g		

※1: '*' pulse is only for A, B phase (Line Driver output is for A, \bar{A} , B, \bar{B} phase). Not indicated resolutions are customizable.

※2: Make sure that Max response revolution should be lower than or equal to max. allowable revolution when selecting the resolution.

$$[\text{Max. response revolution (rpm)}] = \frac{\text{Max. response frequency}}{\text{Resolution}} \times 60 \text{ sec}$$

※Environment resistance is rated at no freezing or condensation.