

EC10E 10mm Size Through Shaft Type

A series of compact and long-life encoders with unique through shaft design



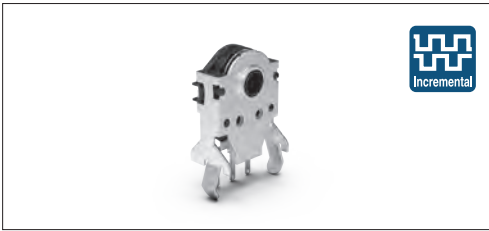
Encoders

Metal Shaft

Insulated Shaft

Through Shaft Type

Ring Type



Typical Specifications

Items	Specifications
Rating	1mA 5V DC
Operating life	100,000 cycles
Operating temperature range	-5°C to +45°C -40°C to +85°C (For Automotive)

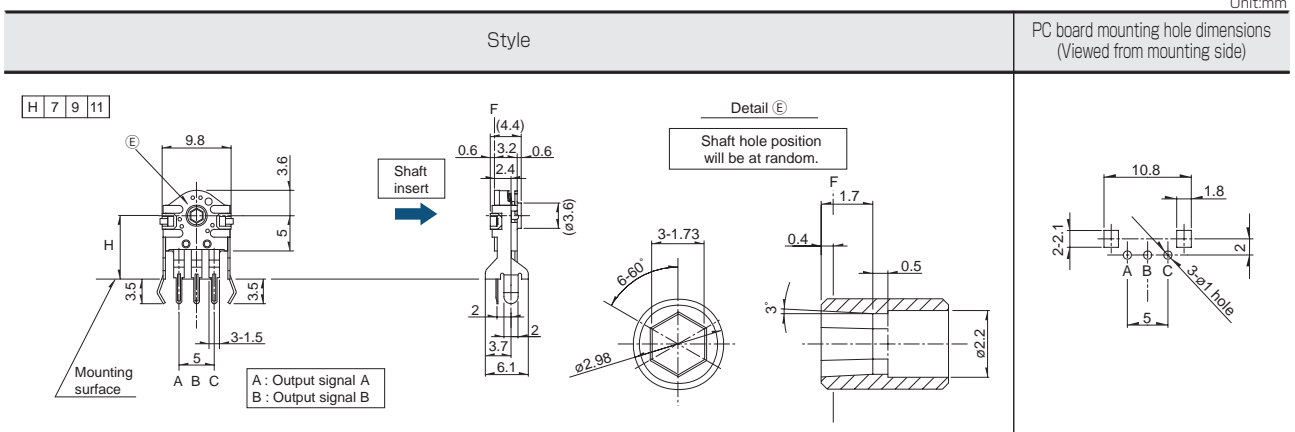
Product Line

Mount height H(mm)	Detent torque (mN·m)	Number of detent	Number of pulse	Minimum order unit (pcs.)		Product No.
				Japan	Export	
7	5±3	24	12	3,200	3,200	EC10E1220505
9						EC10E1220501
11						EC10E1220503
7	6±3	12	12	3,200	3,200	EC10E1260502
11		24				EC10E1260507

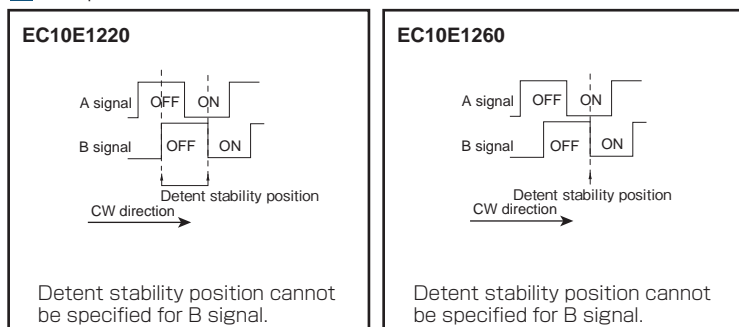
Packing Specifications

Number of packages (pcs.)		Export package measurements (mm)
1 case /Japan	1 case /export packing	
3,200	3,200	374×254×166

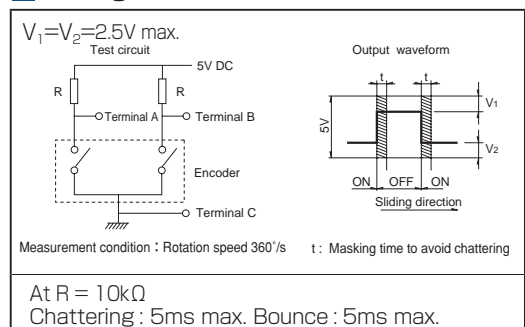
Dimensions











Output Wave



Sliding Noise



Type		Through shaft type			Ring type	
		5mm size		10mm size	21mm size	
Series		EC05E		EC10E	EC21A	EC21C
Photo						
Output		Incremental (Two phase A and B)				
Shaft types		Through shaft type			Ring type	
Control part orientation		Vertical	Horizontal	Horizontal	—	—
Number of pulse / Number of detent		12/12		12/24 12/12	9/18 15/30	15/30
Features		Surface mount type		—	—	—
Dimensions (mm)	W	5.7	7.5	9.8	21.6	22
	D	6	3.3	4.4		21.6
	H	2.7	7.25	10.6/12.6/14.6	4	
Operating temperature range		-30°C to +85°C		-5°C to +45°C -40°C to +85°C (For Automotive)	-40°C to +85°C	
Operating life		100,000 cycles			50,000 cycles	
Automotive use		—		○	●	●
Life cycle (availability)						
Electrical performance	Rating	0.55mA 5.5V DC		1mA 5V DC	10mA 5V DC	
	Max./min. operating current (Resistive load)	0.55mA / —		—	10mA / 1mA	
	Insulation resistance	50MΩ min. 50V DC			100MΩ min. 250V DC	
	Voltage proof	50V AC for 1 minute			300V AC for 1minute or 360V AC for 2s	300V AC for 1minute or 360V AC for 1s
Mechanical performance	Rotational torque (Without detent)	—		—	—	—
	Detent torque	1.6±1.3mN·m		5±3mN·m 6±3mN·m	7±5mN·m 12±5mN·m 16±7mN·m	17±8mN·m (Initial) 12±7mN·m (After reflow)
	Push-pull strength	—		—	100N	
Shaft configuration		Through shaft type			Ring type	
Terminal type		Reflow		Insertion		
Switch Specifications	Switch type	—		—	—	—
	Contact arrangement	—		—	—	—
	Travel (mm)	—		—	—	—
	Operating force (N)	—		—	—	—
	Rating	—		—	—	—
	Contact resistance	—		—	—	—
	Operating life	—		—	—	—
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Notes

- The operating temperature range for automotive applications can be raised upon request. Please contact us for details.
- Indicates applicability to all products in the series, while ○ indicates applicability to some products in the series.