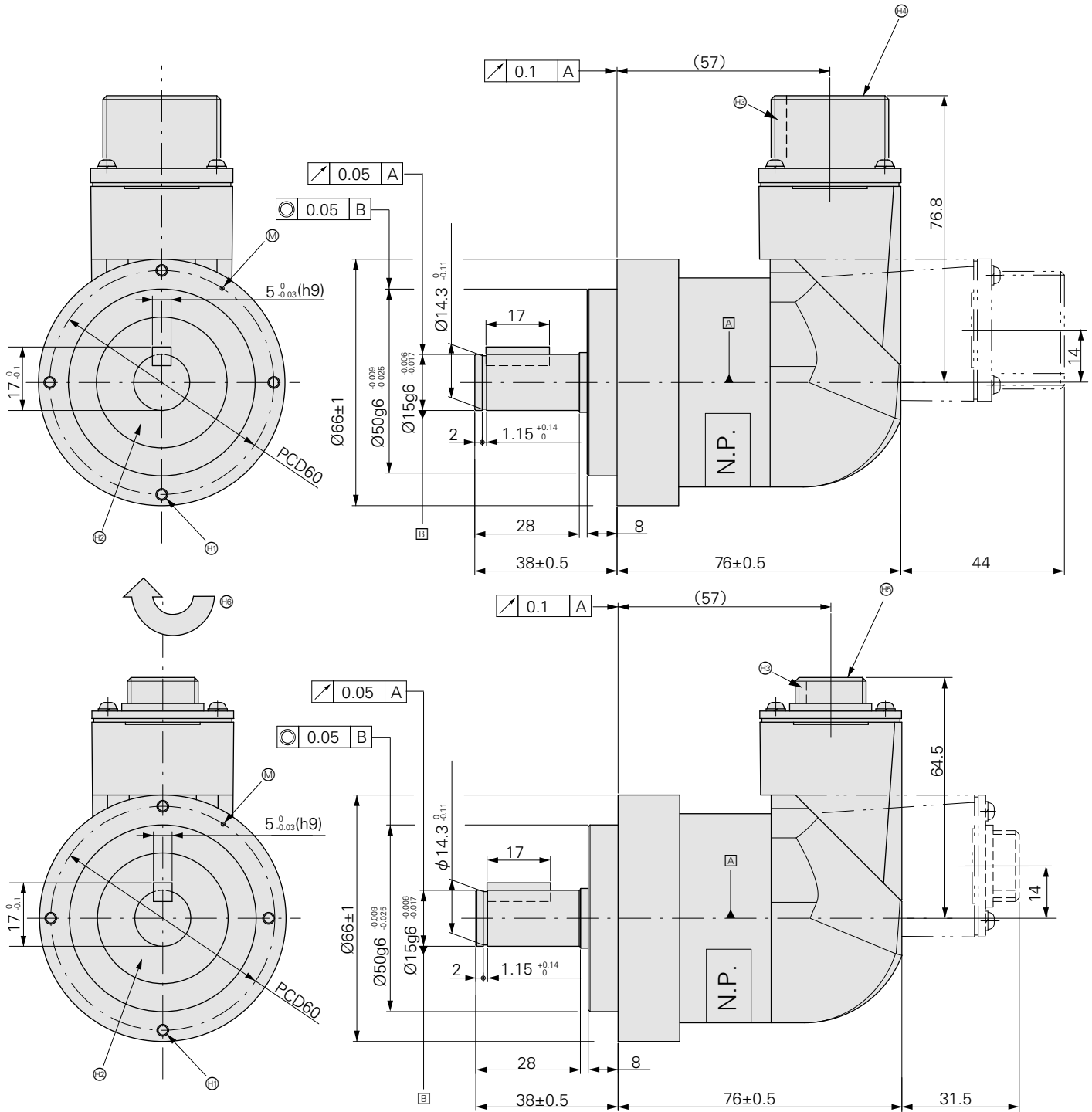
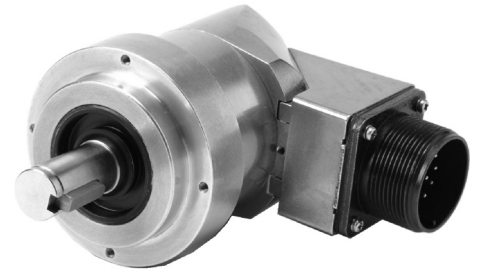


ROD 600 Series

Incremental Rotary Encoders for separate rotor coupling

- Outer Diameter 66 mm
- Length 76 mm
- Shaft Diameter 15.0 mm



Dimensions in mm



Tolerancing ISO 8015

- Ⓜ = Measuring point for operating temperature
- Ⓜ1 = 4-M3, Depth 8, Equally Spaced
- Ⓜ2 = Oil seal
- Ⓜ3 = Key
- Ⓜ4 = Flange socket MS3102E20-29P(Equivalent)
- Ⓜ5 = Flange socket RM15WTRZ-10P(71)
- Ⓜ6 = Direction of shaft rotation for output signals as per the interface description

Flange socket	Type	Mating connector
10-pin RM15WTRZ-10P(71)	Non-Waterproof	Connector RM15TP-10S(71)
	Waterproof	Connector RM15WTPZ-10S(71)
	Waterproof	Clamp JR13WCC-10(72)
17-pin MS3102E20-29P	Non-Waterproof	Connector MS3106B-20-29S
	Non-Waterproof	Clamp MS3057-12A
	Waterproof	Combined Connector/Clamp unit MS3106E-20-29S

	ROD 620	ROD 630	ROD 690	
Incremental signals	 TTL- C ¹⁾	 HTLs ²⁾ - C ¹⁾	Open Collectors	
Output pulse * (Accuracy Class)	100 ^(I) 300 ^(I) 500 ^(I) 600^(II) 900 ^(I) 1000^(II) 1024^(II) 1200 ^(I) 2000^(II) 2048 ^(I) 3000 ^(I) 4096^(III) 5000 ^(III)			
Scanning frequency Edge separation <i>a</i>	≤ 300 kHz ≥ 0.41 μs	≤ 200 kHz ≥ 0.62 μs	≤ 200 kHz ≥ 0.62 μs	≤ 200 kHz ≥ 0.62 μs
System accuracy	Accuracy Class I : ±1/10 SP , Accuracy Class II: ±1/5 SP			
Power supply Current consumption without load	5V ± 10% ≤ 70 mA	10.8V ~ 26.4V ≤ 70 mA	5V ± 10% ≤ 70 mA	10.8V to 26.4V ≤ 70 mA
Output current	± 10 mA	≤ 40 mA	≤ 40 mA	≤ 40 mA
Electrical connection	• 17-pin MS3102E-20-29P flange socket, radial • 10-pin RM15WTRZ-10P(71) flange socket, radial			
Shaft	Solid shaft D = 15 mm with feather key			
Mech. permissible speed n	≤ 6000 min ⁻¹			
Starting torque (at 20°C)	≤ 0.05 Nm			
Moment of inertia of rotor	9.0 · 10 ⁻⁶ kgm ²			
Shaft load	Axial :50 N Radial: 50 N			
Vibration 25 to 2000 Hz Shock 6 ms	≤ 100 m/s ² (JIS C 60 068-2-6, EN 60 068-2-6) ≤ 1000 m/s ² (JIS C 60 068-2-27, EN 60 068-2-27)			
Max. operating temp.	70°C			
Min. operating temp.	-20°C			
Protection EN 60 529	IP66			
Mass	Approx. 0.7 kg			

Bold : preferred versions

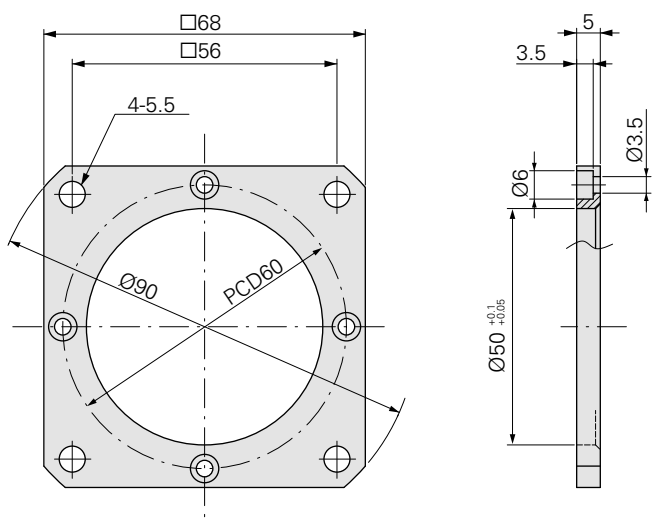
* Please select when ordering.

¹⁾ Bypass capacitor is connected to FG.

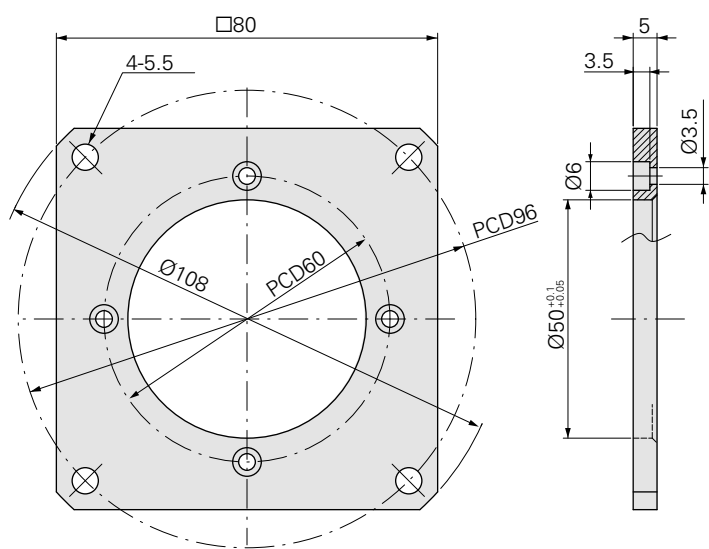
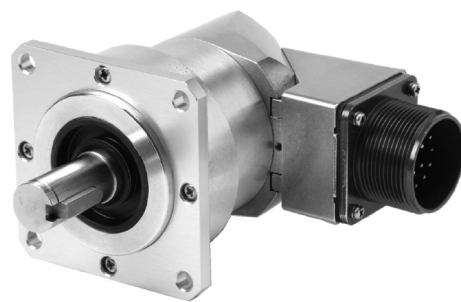
²⁾ Without inverse signal

Mounting Accessories

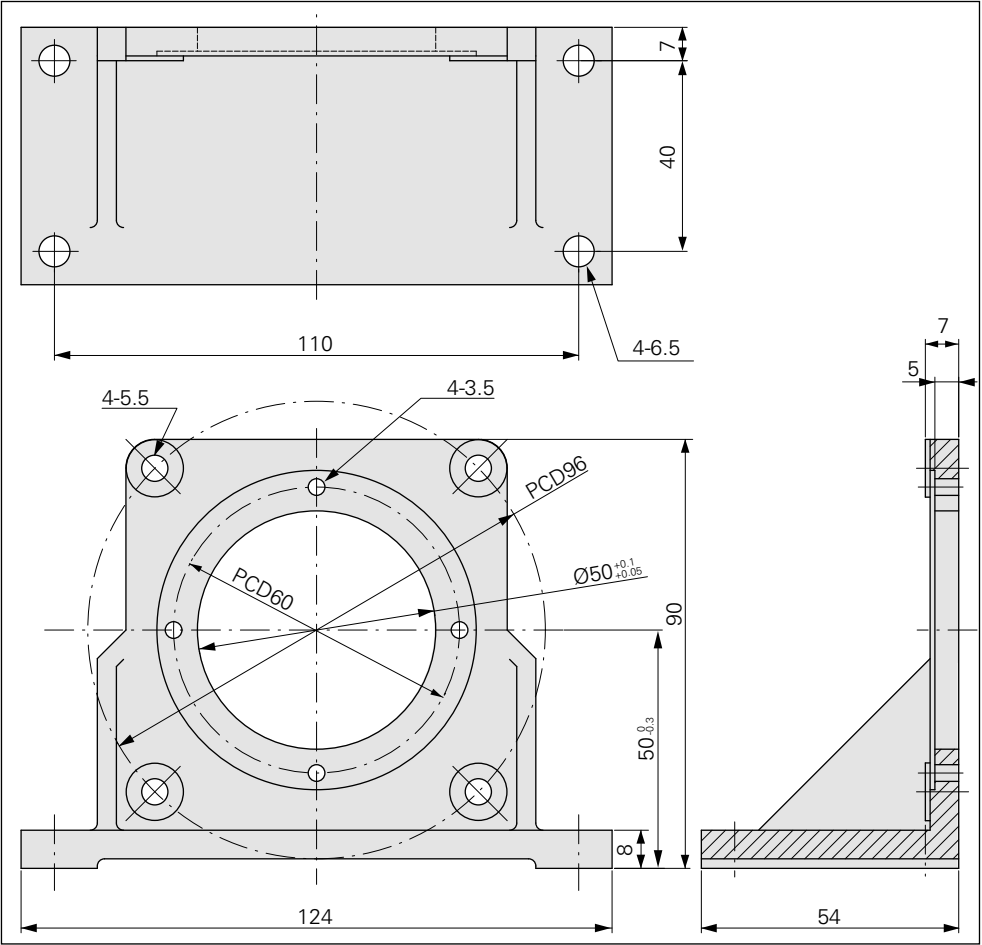
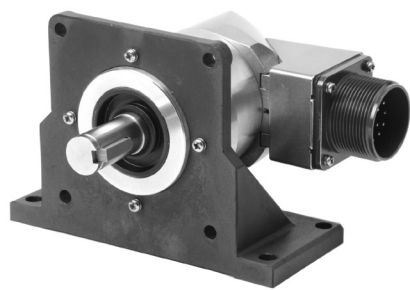
Mounting flange for ROD 600 series
ID 728 587-01



Mounting flange for ROD 600 series
ID 728 587-02

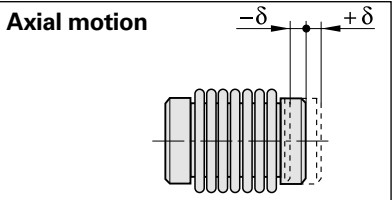
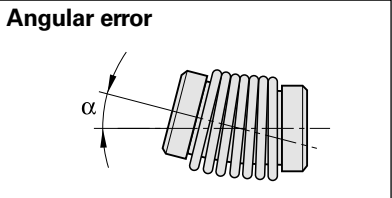
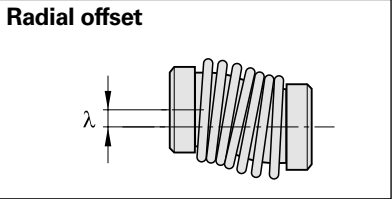


Mounting bracket for ROD 600 series
ID 728 587-03



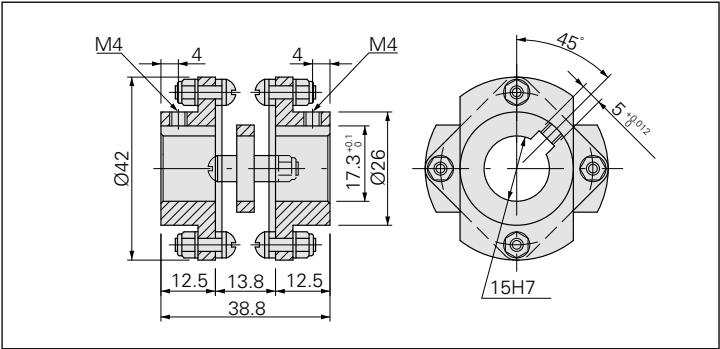
Rotor Couplings

	for ROD 600 series	
	C 19	C 212
Hub bore	15/15 mm	
Galvanic isolation	–	✓
Kinematic transfer error*	± 13"	
Torsional rigidity	1700 $\frac{\text{Nm}}{\text{rad}}$	
Max. torque	3.9 Nm	5 Nm
Max. radial offset λ	$\leq 0.3 \text{ mm}$	
Max. angular error α	$\leq 1.5^\circ$	
Max. axial motion δ	$\leq 1.7 \text{ mm}$	
Moment of inertia (approx.)	$1.5 \cdot 10^{-5} \text{ kgm}^2$	
Permissible speed	20000 min^{-1}	6000 min^{-1}
Mass	75 g	

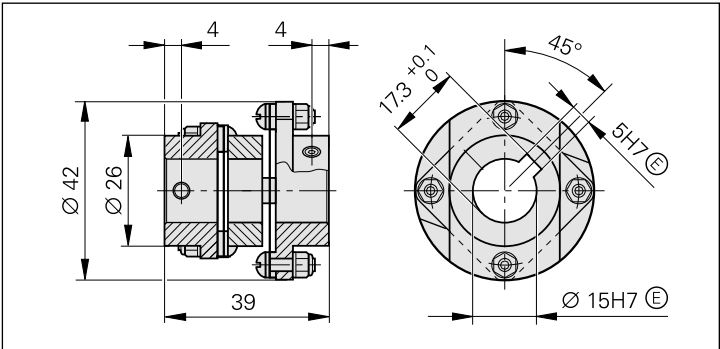


*With radial misalignment $\lambda = 0.1 \text{ mm}$, angular error $\alpha = 0.15^\circ$ over $100 \text{ mm} \pm 0.09$, valid up to 50°C

Rotor coupling C 19
for ROD 600 series
ID 731 374-01



Rotor coupling C 212
for ROD 600 series
ID 731 374-02



Connecting Elements and Cables

Connecting Cables

Cable diameter 6.5 mm		
Connector ¹⁾	Cable Specification	
10-pin RM15TP-10S(71)	4x 2x 0.18 mm ²	736 060-01 (1m) 736 060-03 (3m) 736 060-05 (5m)
17-pin MS3106B-20-29S MS3057-12A	4x 2x 0.18 mm ²	736 061-01 (1m) 736 061-03 (3m) 736 061-05 (5m)

¹⁾ With Water Proofed conecter on request

Mating Connectors

Mating connector	Type-Name	ID Number
10-pin, Connector, Non-Waterproof	RM15TP-10S(71)	721636-02
10-pin, Connector, Waterproof	RM15WTPZ-10S(71)	1105835-01
10-pin, Clamp, Waterproof	JR13WCC-10(72)	1106395-01
17-pin, Connector, Non-Waterproof	MS3106B-20-29S	721630-01
17-pin, Combined Connector/Clamp unit, Non-Waterproof	MS3057-12A	721627-01
17-pin, Connector, Waterproof	MS3106E-20-29S	1105832-01

Pin Layout

□ TTL – C / □ HTL – C

10-pin RM15WTRZ-10P(71) flange socket				17-pin MS3102B-20-29P flange socket								
												
	Power supply			Incremental signals						Other signals		
10-pin RM15WTRZ-10P(71) flange socket	1	2	10	3	4	5	6	7	8	/	9	/
17-pin MS3102B-20-29P flange socket	H	K	T	A	N	C	R	B	P	M	/	D/E/F/G/J/L/S
	U _P	0V	FG	U _{a1}	$\overline{U}_{a1}$	U _{a2}	$\overline{U}_{a2}$	U _{a0}	$\overline{U}_{a0}$	0V	Vacant	Vacant
	White	Black		Red	Pink	Olive	Blue	Yellow	Orange			

Cable shield connected to housing; U_P = power supply

□ HTLs– C / Open Collectors

10-pin RM15WTRZ-10P(71) flange socket				17-pin MS3102B-20-29P flange socket								
												
	Power supply			Incremental signals						Other signals		
10-pin RM15WTRZ-10P(71) flange socket	1	2	10	3	4	5	6	7	8	/	9	/
17-pin MS3102B-20-29P flange socket	H	K	T	A	N	C	R	B	P	M	/	D/E/F/G/J/L/S
	U _P	0V	FG	U _{a1}	0V	U _{a2}	0V	U _{a0}	0V	0V	Vacant	Vacant
	White	Black		Red	Pink	Olive	Blue	Yellow	Orange			

Cable shield connected to housing; U_P = power supply

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