

RF03-S

Rotary type / Sensor specification

- CE compliance
- Limitless rotation

Ordering method

RF03	S						S2		
Model	Return-to-origin method S: Sensor (Limitless rotation)	Bearing N: Standard H: High rigidity	Torque N: Standard torque H: High torque	Cable entry location R: From the right L: From the left	Rotation direction N: CCW Z: CW	Cable length ^{Note 1} 1K: 1m 3K: 3m 5K: 5m 10K: 10m	Robot positioner S2: TS-S2 ^{Note 2}	I/O NP: NPN PN: PNP CC: CC-Link DN: DeviceNet™ EP: EtherNet/IP™ PT: PROFINET GW: No I/O board ^{Note 3}	
							SH		
							Robot positioner SH: TS-SH	I/O NP: NPN PN: PNP CC: CC-Link DN: DeviceNet™ EP: EtherNet/IP™ PT: PROFINET GW: No I/O board ^{Note 3}	Battery B: With battery (Absolute) N: None (Incremental)

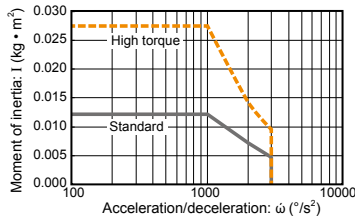
Note 1. The robot cable is flexible and resists bending.
 Note 2. See P.498 for DIN rail mounting bracket.
 Note 3. Select this selection when using the gateway function. For details, see P.60.

Basic specifications

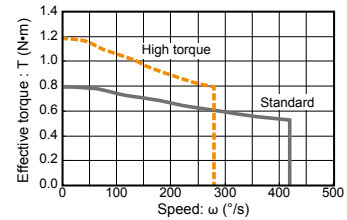
Motor	28 □ Step motor	
Resolution (Pulse/rotation)	4096	
Repeatability ^{Note 1} (°)	±0.05	
Drive method	Special warm gear + belt	
Torque type	Standard	High torque
Maximum speed ^{Note 2} (°/sec)	420	280
Rotating torque (N·m)	0.8	1.2
Max. pushing torque (N·m)	0.4	0.6
Backlash (°)	±0.5	
Max. moment of inertia ^{Note 3} (kg·m ²)	0.012	0.027
Cable length (m)	Standard: 1 / Option: 3, 5, 10	
Rotation range (°)	360	

Note 1. Positioning repeatability in one direction.
 Note 2. The maximum speed may vary depending on the moment of inertia. Check the maximum speed while referring to the "Moment of inertia vs. Acceleration/deceleration" graph and the "Effective torque vs. speed" graph (reference).
 Note 3. For moment of inertia and effective torque details, see P.604.

Moment of inertia Acceleration/deceleration



Effective torque vs. speed



Allowable load

		(a)				(b)			
		Allowable thrust load (N)				Allowable moment (N·m)			
		(a)		(b)					
Standard model	High rigidity model	Standard model	High rigidity model	Standard model	High rigidity model	Standard model	High rigidity model		
196	233	197	363	398	5.3	6.4			

Note. When purchasing the product, set the controller acceleration while carefully checking the "Moment of inertia vs. Acceleration/Deceleration" and "Effective torque vs. Speed" graphs.
 For details, please refer to the TRANSERVO Series User's Manual.

Controller

Controller	Operation method
TS-S2S	I/O point trace /
TS-SHS	Remote command

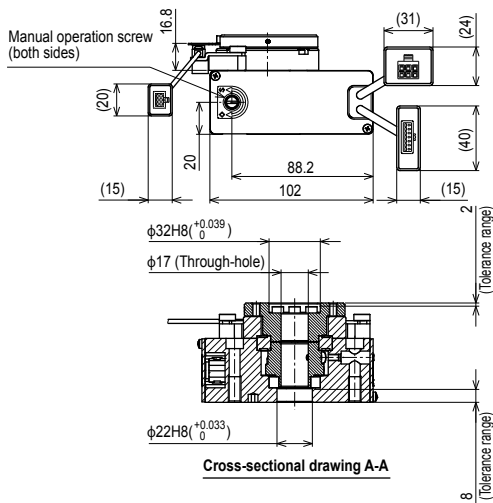
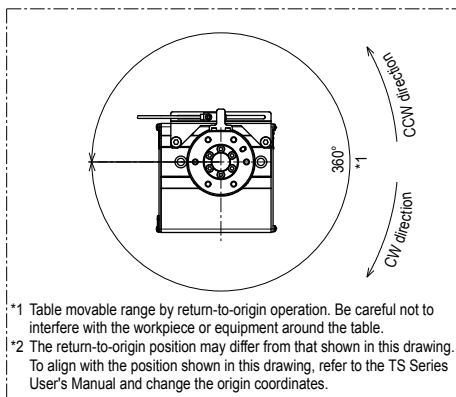
RF03-SN Sensor specification – Standard model

Weight (kg) 1.2

Cross-sectional drawing A-A

Note 1. This drawing is output under the conditions below.
 Bearing Standard
 Torque Standard/High torque
 Note 2. The minimum bending radii of the motor cable and sensor cable are R30.

RF03-SH Sensor specification – High rigidity model



Weight (kg)	1.3
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Note 1. This drawing is output under the conditions below.
 Bearing High rigidity
 Torque Standard/High torque
 Note 2. The minimum bending radii of the motor cable and sensor cable are R30.

