

RF03-S

Rotary type / Sensor specification

- CE compliance
- Limitless rotation

Ordering method

RF03	S							S		
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} 1L: 1m 3L: 3m 5L: 5m 10L: 10m	Robot positioner S2: TS-S2 ^{Note 2} SH: TS-SH	Type S: Sensor	I/O selection NP: NPN PN: PNP CC: CC-Link DN: DeviceNet™ EP: EtherNet/IP™ GW: No I/O board ^{Note 3}	Battery ^{Note 4} B: With battery (Absolute) N: None (Incremental)

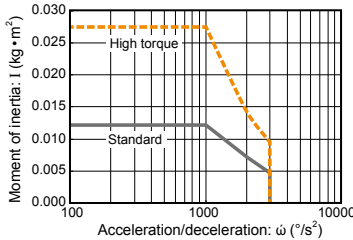
Note 1. The robot cable is flexible and resists bending.
 Note 2. See P.446 for DIN rail mounting bracket.
 Note 3. Select this selection when using the gateway function. For details, see P.439.
 Note 4. Select whether or not the battery is provided only when using the TS-SH.

Basic specifications

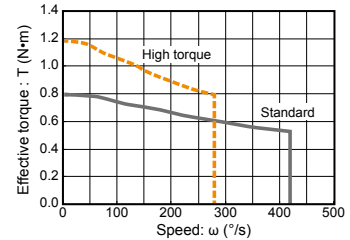
Motor	28 □ Step motor
Resolution (Pulse/rotation)	4096
Repeatability ^{Note 1} (°)	+/-0.05
Drive method	Special warm gear + belt
Torque type	Standard High torque
Maximum speed ^{Note 2} (°/sec)	420 280
Rotating torque (N·m)	0.8 1.2
Max. pushing torque (N·m)	0.4 0.6
Backlash (°)	+/-0.5
Max. moment of 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.520.

Moment of inertia Acceleration/deceleration



Effective torque vs. speed



Allowable load

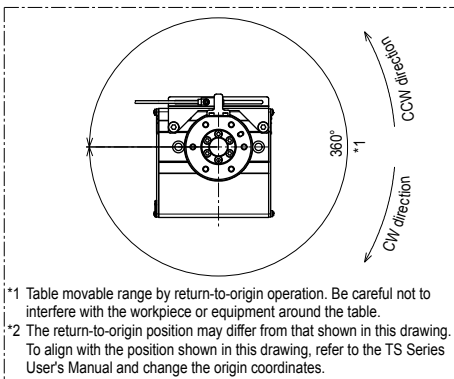
		(a)				(b)	
		Allowable radial load (N)		Allowable thrust load (N)		Allowable moment (N·m)	
Standard model	High rigidity model	Standard model	High rigidity model	Standard model	High rigidity model	Standard model	High rigidity model
196	233	197	363	398	5.3	6.4	

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 TRANSEURO Series User's Manual.

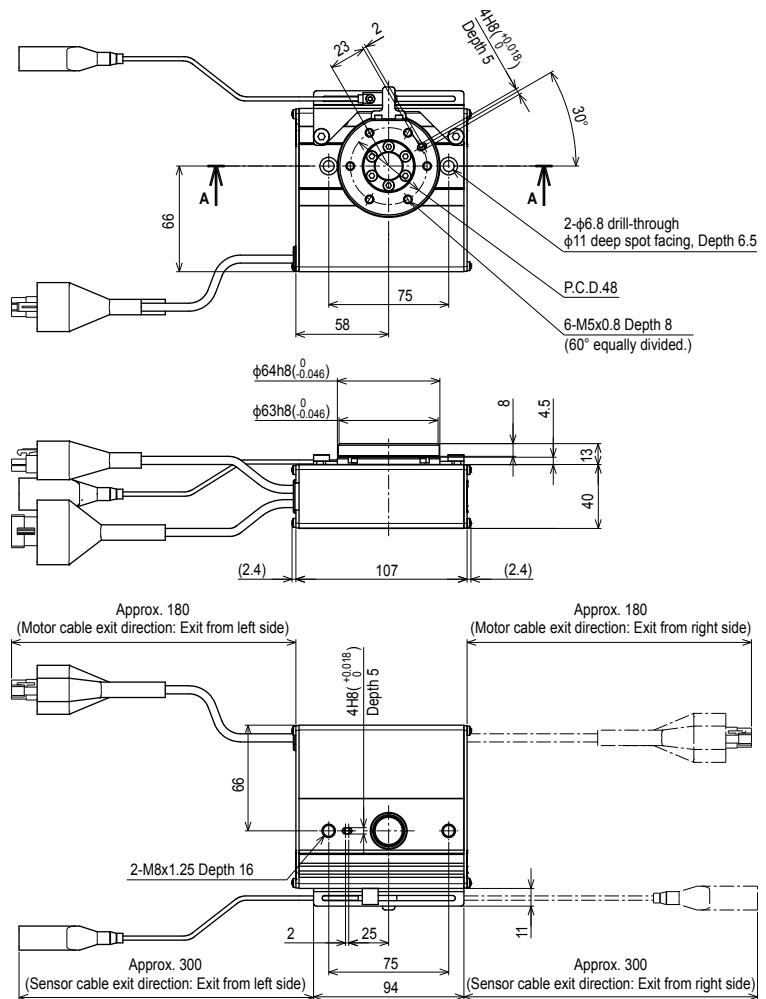
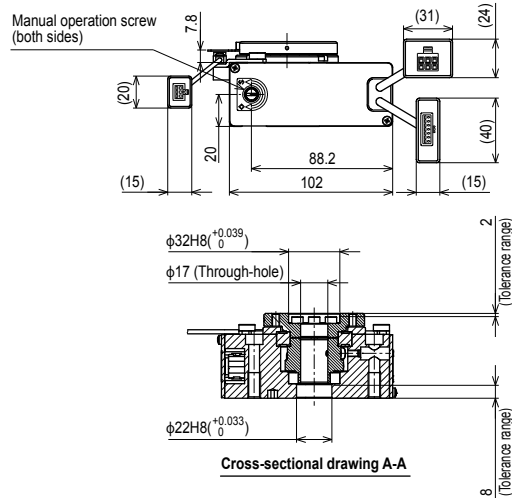
Controller

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

RF03-SN Sensor specification – Standard model



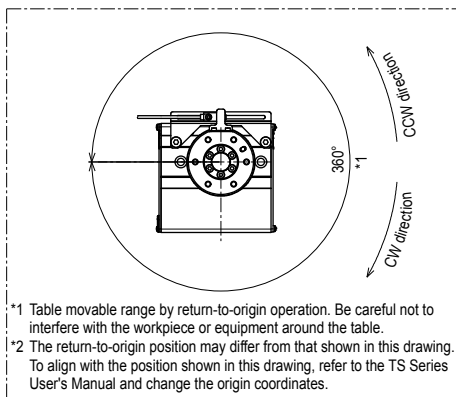
*1 Table movable range by return-to-origin operation. Be careful not to interfere with the workpiece or equipment around the table.
 *2 The return-to-origin position may differ from that shown in this drawing. To align with the position shown in this drawing, refer to the TS Series User's Manual and change the origin coordinates.



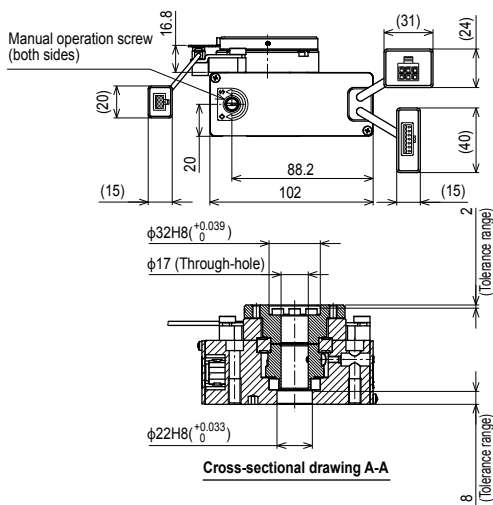
Weight (kg)	1.2
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Note1. This drawing is output under the conditions below.
 Bearing Standard
 Torque Standard/High torque
 Note2. The minimum bending radii of the motor cable and sensor cable are R30.

RF03-SH Sensor specification – High rigidity model



*1 Table movable range by return-to-origin operation. Be careful not to interfere with the workpiece or equipment around the table.
*2 The return-to-origin position may differ from that shown in this drawing. To align with the position shown in this drawing, refer to the TS Series User's Manual and change the origin coordinates.



Weight (kg)	1.3
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Note1. This drawing is output under the conditions below.
Bearing High rigidity
Torque Standard/High torque
Note2. The minimum bending radii of the motor cable and sensor cable are R30.

