RF03-N

Rotary type / Limit rotation specification

- CE compliance
- Rotation range : 320°

Ordering method

RF03 -	N			L			- S2 -	
Model	Return-to-origin method	Bearing	Torque	Cable entry location	Rotation direction	Cable length Note 1	Controller	I/O selection
	N: Stroke end (Limit rotation)	N: Standard H: High rigidity	N: Standard torque H: High torque	L: From the left	N: CCW Z: CW	1L: 1m 3L: 3m 5L: 5m 10L: 10m	S2: TS-S2	NP: NPN PN: PNP CC: CC-Link DN: DeviceNet EP: EtherNet/IP

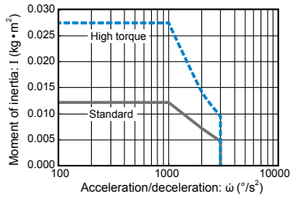
Note 1. The robot cable is flexible and resists bending.

Basic specifications

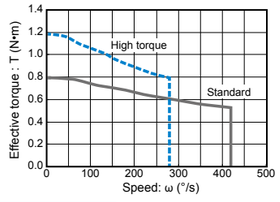
Motor	28 □ Step motor	
Resolution (Pulse/rotation)	4096	
Repeatability Note 1 (°)	+/-0.05	
Drive method	Special warm gear + belt	
Torque type	Standard	High torque
Maximum speed Note 2 (°/sec)	420	280
Rotating torque (N•m)	0.8	1.2
Max. pushing torque (N•m)	0.4	0.6
Backlash (°)	+/-0.5	
Max. moment of inertia Note 3 (kg•m²)	0.012	0.027
Cable length (m)	Standard: 1 / Option: 3, 5, 10	
Rotation range (°)	320	

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.???.

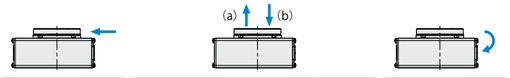
Moment of inertia Acceleration/deceleration



Effective torque vs. speed



Allowable load



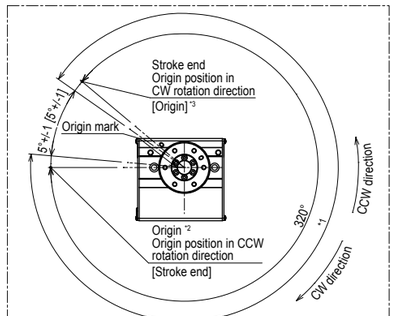
Allowable radial load (N)		Allowable thrust load (N)				Allowable moment (N•m)	
		(a)		(b)			
Standard model	High rigidity model	Standard model	High rigidity model	Standard model	High rigidity model	Standard model	High rigidity model
196	233	197		363	398	5.3	6.4

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.

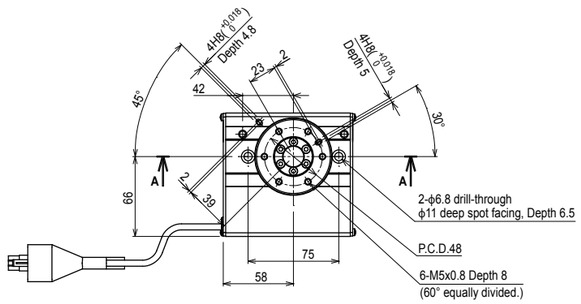
Controller

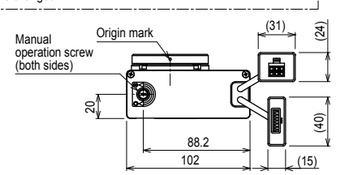
Controller	Operation method
TS-S2	I/O point trace / Remote command

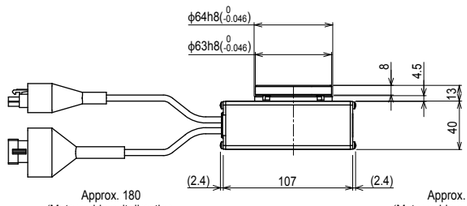
RF03-NN Limit rotation specification – Standard model

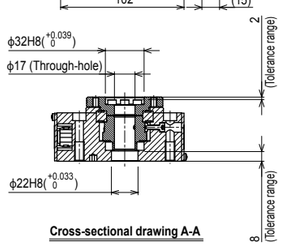


*1 Table movable range by return-to-origin operation. Be careful not to interfere with the workpiece or equipment around the table.
*2 Return-to-origin position
*3 Values and characters in [ ] show those when the return-to-origin direction is changed.

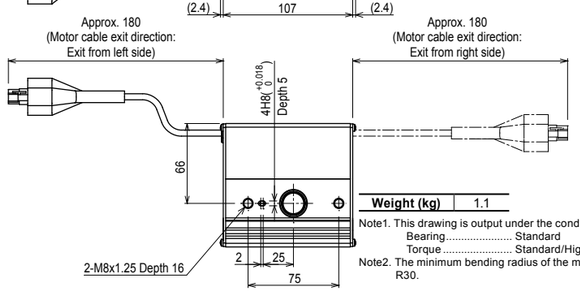








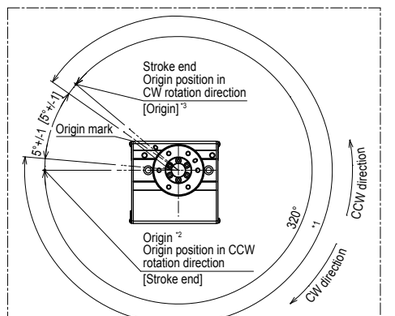
Cross-sectional drawing A-A



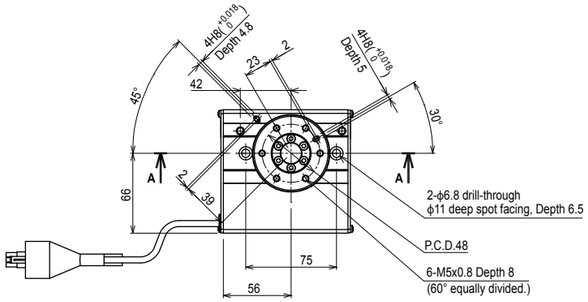
Weight (kg)	1.1

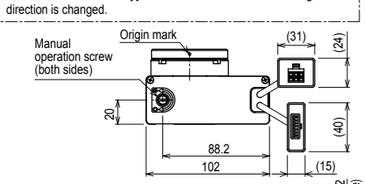
Note1. This drawing is output under the conditions below.
Bearing ..... Standard
Torque ..... Standard/High torque
Note2. The minimum bending radius of the motor cable is R30.

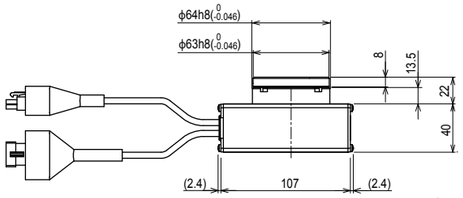
RF03-NH Limit rotation specification – High rigidity model

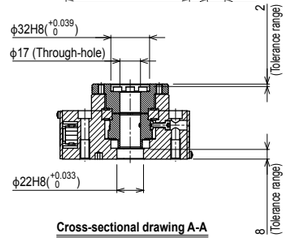


*1 Table movable range by return-to-origin operation. Be careful not to interfere with the workpiece or equipment around the table.
*2 Return-to-origin position
*3 Values and characters in [ ] show those when the return-to-origin direction is changed.

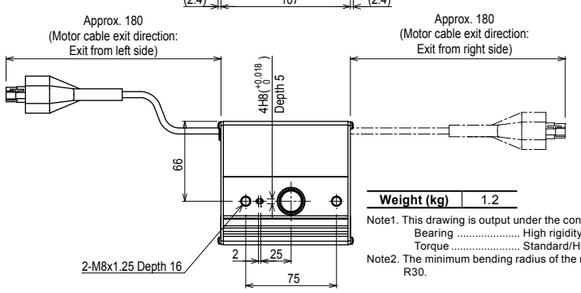








Cross-sectional drawing A-A



Weight (kg)	1.2

Note1. This drawing is output under the conditions below.
Bearing ..... High rigidity
Torque ..... Standard/High torque
Note2. The minimum bending radius of the motor cable is R30.

RF03-S

Rotary type / Sensor specification

CE compliance | Limitless rotation

Ordering method

RF03 -	S						S2	S	
Model	Return-to-origin method	Bearing	Torque	Cable entry location	Rotation direction	Cable length Note 1	Controller	Type	I/O selection
	S: Sensor (Limitless rotation)	N: Standard H: High rigidity	N: Standard torque H: High torque	R:From the right L: From the left	N: CCW Z: CW	1L: 1m 3L: 3m 5L: 5m 10L: 10m	S2: TS-S2	S: Sensor	NP: NPN PN: PNP CC: CC-Link DN: DeviceNet EP: EtherNet/IP

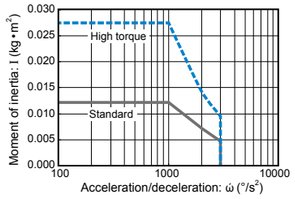
Note 1. The robot cable is flexible and resists bending.

Basic specifications

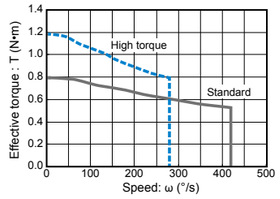
Motor	28 □ Step motor	
Resolution (Pulse/rotation)	4096	
Repeatability Note 1 **(°)**	+/-0.05	
Drive method	Special warm gear + belt	
Torque type	Standard	High torque
Maximum speed Note 2 **(°/sec)**	420	280
Rotating torque (N•m)	0.8	1.2
Max. pushing torque (N•m)	0.4	0.6
Backlash (°)	+/-0.5	
Max. moment of inertia Note 3 **(kg•m²)**	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.???.

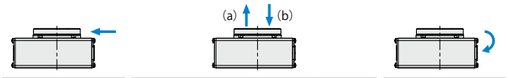
Moment of inertia Acceleration/deceleration



Effective torque vs. speed



Allowable load



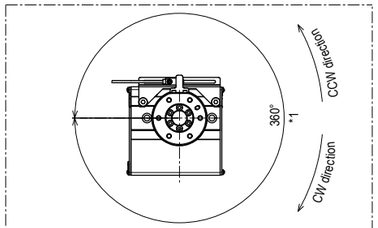
Allowable radial load (N)		Allowable thrust load (N)				Allowable moment (N•m)	
		(a)		(b)			
Standard model	High rigidity model	Standard model	High rigidity model	Standard model	High rigidity model	Standard model	High rigidity model
196	233	197		363	398	5.3	6.4

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.

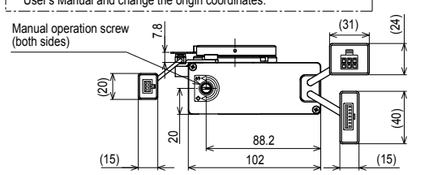
Controller

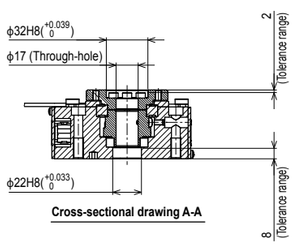
Controller	Operation method
TS-S2S	I/O point trace / Remote command

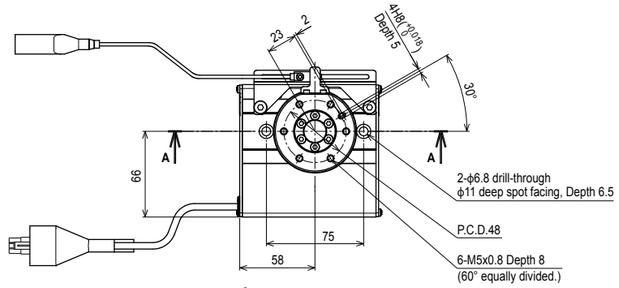
RF03-SN Sensor specification – Standard model

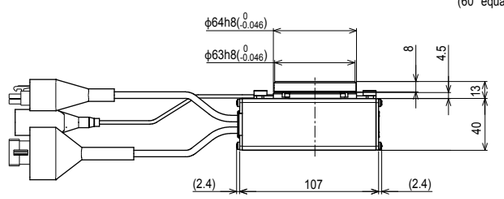


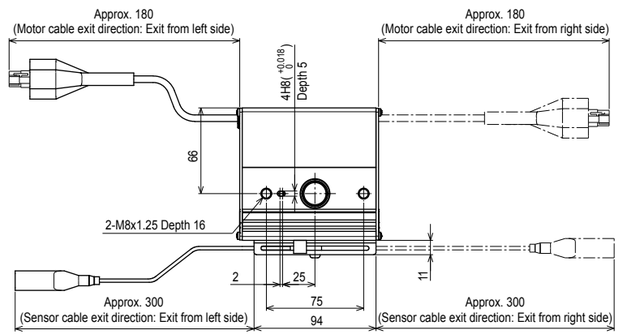
*1 Table movable range by return-to-origin operation. Be careful not to interfere with the workpiece or equipment around the table.
*2 The return-to-origin position may differ from that shown in this drawing. To align with the position shown in this drawing, refer to the TS Series User's Manual and change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







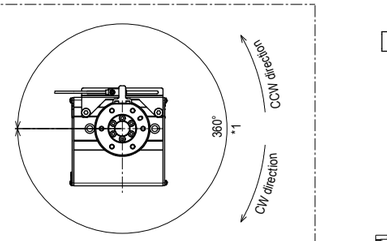




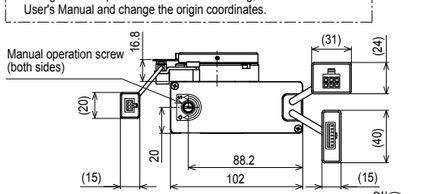
Weight (kg)	1.2

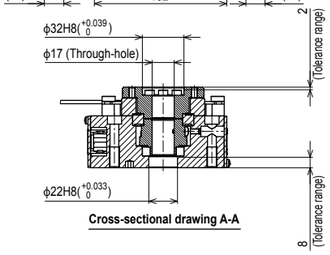
Note1. This drawing is output under the conditions below.
Bearing ..... Standard
Torque ..... Standard/High torque
Note2. The minimum bending radii of the motor cable and sensor cable are R30.

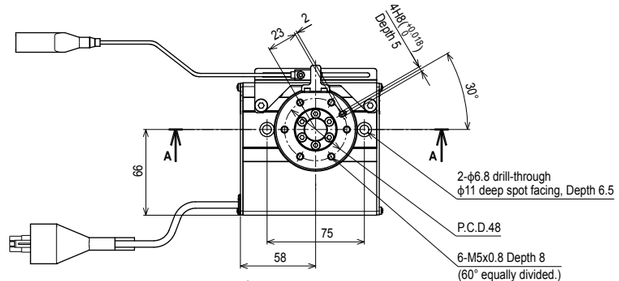
RF03-SH Sensor specification – High rigidity model

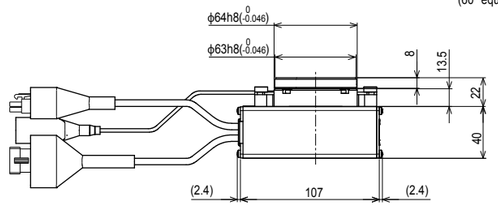


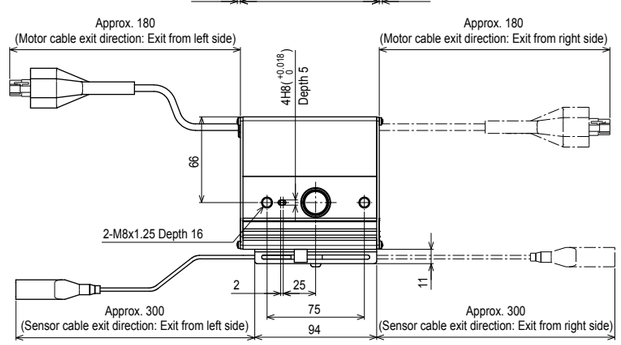
*1 Table movable range by return-to-origin operation. Be careful not to interfere with the workpiece or equipment around the table.
*2 The return-to-origin position may differ from that shown in this drawing. To align with the position shown in this drawing, refer to the TS Series User's Manual and change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











Weight (kg)	1.3

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.