

# RF03-N

## Rotary type / Limit rotation specification

- CE compliance
- Rotation range : 320°

### Ordering method

<b>RF03</b>	<b>N</b>						<b>S2</b>	
<b>Model</b>	<b>Return-to-origin method</b> N: Stroke end (Limit rotation)	<b>Bearing</b> N: Standard H: High rigidity	<b>Torque</b> N: Standard torque H: High torque	<b>Cable entry location</b> R: From the right L: From the left	<b>Rotation direction</b> N: CCW Z: CW	<b>Cable length</b> <sup>Note 1</sup> 1K: 1m 3K: 3m 5K: 5m 10K: 10m	<b>Robot positioner</b> S2: TS-S2 <sup>Note 2</sup>	<b>I/O</b> NP: NPN PN: PNP CC: CC-Link DN: DeviceNet™ EP: EtherNet/IP™ PT: PROFINET GW: No I/O board <sup>Note 3</sup>
							<b>SH</b>	
							<b>Robot positioner</b> SH: TS-SH	<b>I/O</b> NP: NPN PN: PNP CC: CC-Link DN: DeviceNet™ EP: EtherNet/IP™ PT: PROFINET GW: No I/O board <sup>Note 3</sup>
							<b>SD</b>	<b>1</b>
							<b>Robot driver</b> SD: TS-SD	<b>I/O cable</b> t: 1m

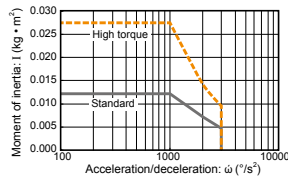
Note 1. The robot cable is flexible and resists bending.  
 Note 2. See P.498 for DIN rail mounting bracket.  
 Note 3. Select this selection when using the gateway function. For details, see P.60.

### Basic specifications

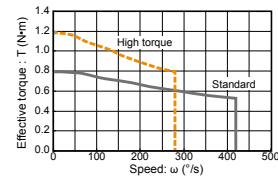
<b>Motor</b>	28 □ Step motor
<b>Resolution (Pulse/rotation)</b>	4096
<b>Repeatability</b> <sup>Note 1</sup> (°)	+/-0.05
<b>Drive method</b>	Special warm gear + belt
<b>Torque type</b>	Standard High torque
<b>Maximum speed</b> <sup>Note 2</sup> (°/sec)	420 280
<b>Rotating torque (N·m)</b>	0.8 1.2
<b>Max. pushing torque (N·m)</b>	0.4 0.6
<b>Backlash (°)</b>	+/-0.5
<b>Max. moment of inertia</b> <sup>Note 3</sup> (kg·m <sup>2</sup> )	0.012 0.027
<b>Cable length (m)</b>	Standard: 1 / Option: 3, 5, 10
<b>Rotation range (°)</b>	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.604.

### Moment of inertia Acceleration/deceleration



### Effective torque vs. speed



### Allowable load

Allowable radial load (N)		Allowable thrust load (N)				Allowable moment (N·m)	
Standard model	High rigidity model	(a)		(b)		Standard model	High rigidity model
196	233	Standard model	High rigidity model	Standard model	High rigidity model	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
TS-SH	Pulse train control
TS-SD	Pulse train control

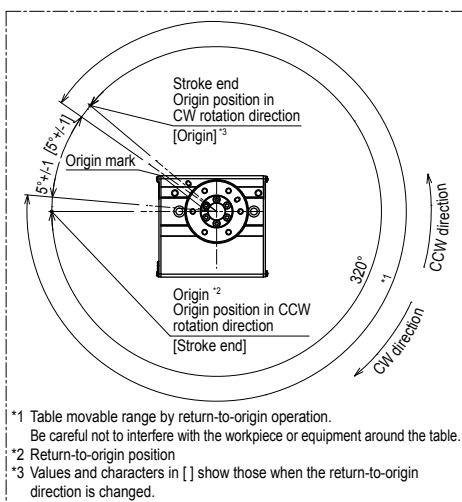
### RF03-NN Limit rotation specification – Standard model

**Weight (kg)** 1.1

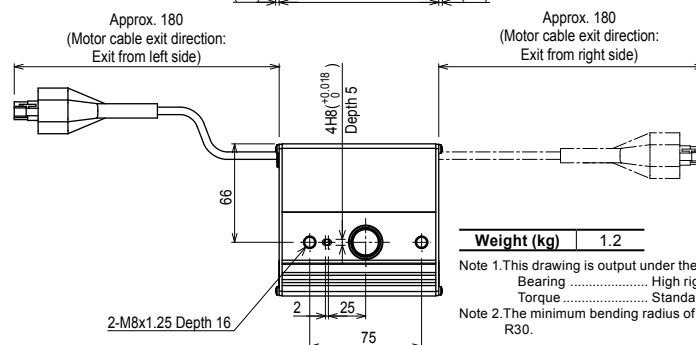
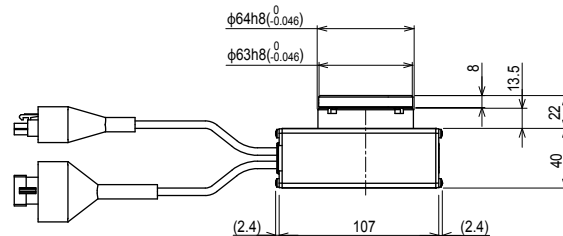
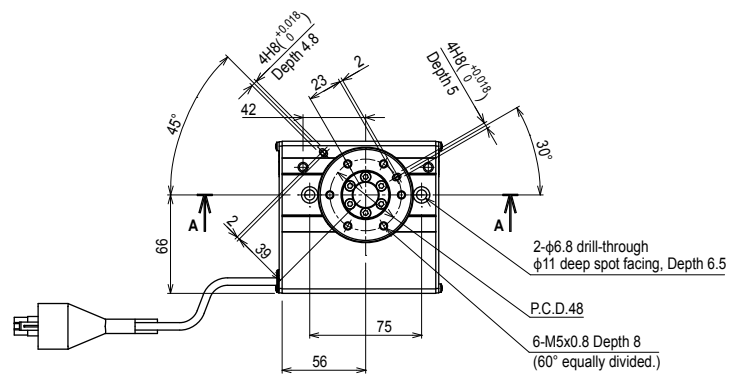
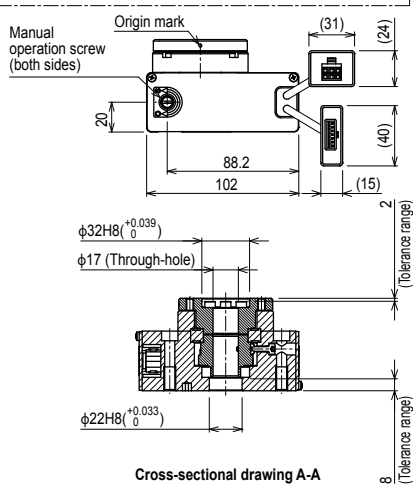
Note 1. This drawing is output under the conditions below.  
 Bearing... Standard  
 Torque... Standard/High torque  
 Note 2. The minimum bending radius of the motor cable is R30.

**Cross-sectional drawing A-A**

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.



<b>Weight (kg)</b>	1.2
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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 radius of the motor cable is R30.