# RCS2-TFA5N

Robo Cylinder, Mini Rod Type, Short-Length Flat type, Actuator Width 95mm, 200V Servo Motor, Ball Screw Specification

Model Specification Items

| RCS2 | — | TFA5N | — | I | — | 60 | — | □ | — | □ | — | T2 | — | □ | — | □ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Series | — | Type | — | Encoder type | — | Motor type | — | Lead | — | Stroke | — | Applicable controller | — | Cable length | — | Options |
| | | | | I: Incremental specification | | 60: 60W Servo motor | | 10 : 10mm<br>5 : 5mm<br>2.5 : 2.5mm | | 50: 50mm<br>75: 75mm | | T2: SCON-CA<br>SSEL<br>XSEL-P/Q | | N: None<br>P: 1m<br>S: 3m<br>M: 5m<br>X□□: Custom length<br>R□□: Robot cable | | See options below. |

* See page Pre-47 for details on the model descriptions.

CE RoHS

*CE compliance is optional.

Technical References Appendix P.5

POINT Notes on selection

(1) The payload is the value when the actuator is operated at an acceleration of 0.3 G (0.2G for 2.5mm-lead) horizontally and 0.2G vertically. The acceleration limit is the value indicated above.
(2) If the actuator is used vertically, pay attention to rod contact because the rod will come down when the power is turned off.
(3) See page A-71 for details on push motion.

## Actuator Specifications

### ■ Leads and Payloads

| Model number | Motor output (W) | Feed Screw | Lead (mm) | Max. Load Capacity Horizontal (kg) | Max. Load Capacity Vertical (kg) | Rated thrust (N) | Positioning repeatability (mm) | Stroke (mm) |
|---|---|---|---|---|---|---|---|---|
| RCS2-TFA5N-I-60-10-①-T2-②-③ | 60 | Ball screw | 10 | 5 | 1.5 | 89 | ±0.02 | 50<br>75 |
| RCS2-TFA5N-I-60-5-①-T2-②-③ | | | 5 | 10 | 3 | 178 | | |
| RCS2-TFA5N-I-60-2.5-①-T2-②-③ | | | 2.5 | 20 | 6 | 356 | | |

Code explanation ① Stroke ② Cable length ③ Options *See page A-71 for details on push motion.

### ■ Stroke and Maximum Speed

| Lead \ Stroke | 50 (mm) | 75 (mm) |
|---|---|---|
| 10 | 280<230> | 380<330> |
| 5 | 250<230> | 250 |
| 2.5 | 125 | |

*The values enclosed in < > apply to vertical settings. (Unit: mm/s)

## ①Stroke

| ①Stroke (mm) | Standard price |
|---|---|
| **50** | — |
| **75** | — |

## ②Cable Length

| Type | Cable symbol | Standard Price |
|---|---|---|
| Standard | **P** (1m) | — |
| | **S** (3m) | — |
| | **M** (5m) | — |
| Special length | **X06** (6m) ~ **X10** (10m) | — |
| | **X11** (11m) ~ **X15** (15m) | — |
| | **X16** (16m) ~ **X20** (20m) | — |
| Robot Cable | **R01** (1m) ~ **R03** (3m) | — |
| | **R04** (4m) ~ **R05** (5m) | — |
| | **R06** (6m) ~ **R10** (10m) | — |
| | **R11** (11m) ~ **R15** (15m) | — |
| | **R16** (16m) ~ **R20** (20m) | — |

* See page A-59 for cables for maintenance.

## ③Options

| Name | Option code | See page | Standard price |
|---|---|---|---|
| Brake | **B** | → A-42 | — |
| CE compliance | **CE** | → A-42 | — |
| Connector cable exits from the left | **K1** | → A-51 | — |
| Connector cable exits from the front | **K2** | → A-51 | — |
| Connector cable exits from the right | **K3** | → A-51 | — |

## Actuator Specifications

| Item | Description |
|---|---|
| Drive System | Ball screw, ø8mm, rolled C10 |
| Lost Motion | 0.1mm or less |
| Base | Material: Aluminum, white alumite treated |
| Allowable dynamic moment (*) | Ma: 15 N·m, Mb: 15 N·m, Mc: 7.1 N·m |
| Allowable static moment | Ma: 38.6 N·m, Mb: 38.6 N·m, Mc: 17.9 N·m |
| Overhang load length | Ma direction: 100mm or less, Mb, Mc direction: 100mm or less |
| Ambient operating temperature, humidity | 0 to 40°C, 85% RH or less (Non-condensing) |
| Service life | 5,000km or 50 million cycles |

(*) Based on 5,000km of traveling life

## Dimensional Drawings

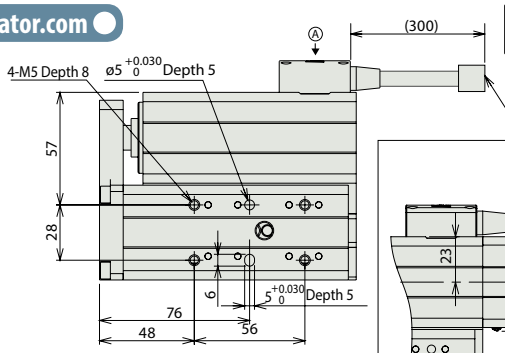
CAD drawings can be downloaded from the website. www.intelligentactuator.com

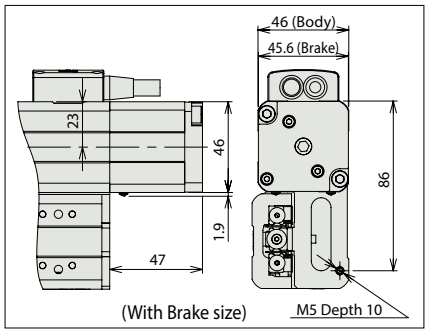
2D CAD

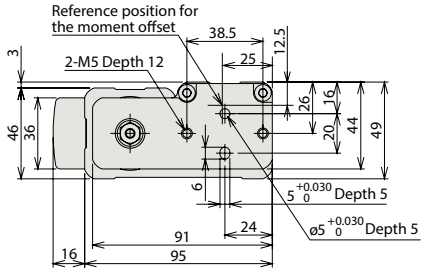
For Special Orders Appendix P.15

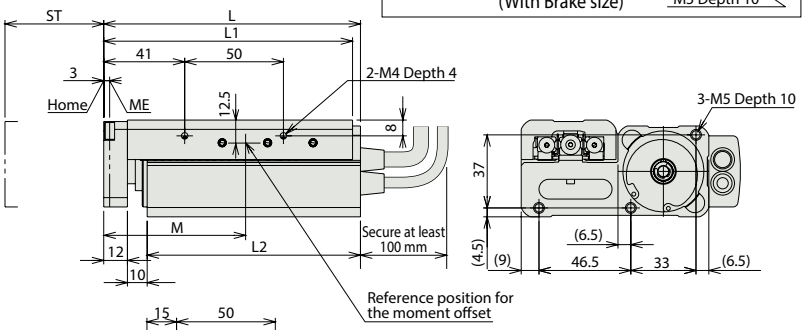
(*1) Connect the motor-encoder integrated cable here.
(*2) After homing, the slider moves to the ME, therefore, please watch for any interference with surrounding objects.

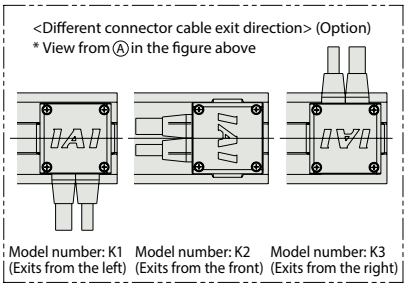
ST : Stroke
ME : Mechanical End

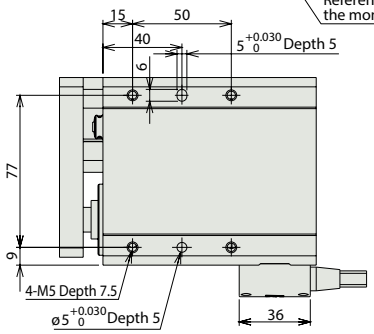



*Brake-equipped models are heavier by 0.26kg.

### Dimensions and Weight by Stroke

| Stroke | 50 | 75 |
|---|---|---|
| L | 130 | 155 |
| L1 | 126 | 151 |
| L2 | 108 | 133 |
| M | 89 | 105.5 |
| Weight (kg) | 1.4 | 1.6 |

## Applicable Controllers

RCS2 series actuators can be operated with the controllers indicated below. Select the type according to your intended application.

| Name | External view | Model number | Features | Maximum number of positioning points | Input power | Power-supply capacity | Standard price | Reference page |
|---|---|---|---|---|---|---|---|---|
| Positioner Type |  | SCON-CA-60I-NP-2-Ⓘ | Up to 512 positioning points are supported | 512 points | Single-phase 100 VAC<br>Single-phase 200 VAC<br>3-phase 200 VAC (XSEL-P/Q only) | 218 VA max.<br>*Varies depending on the controller. Refer to the operation manual for details. | — | → P643 |
| Solenoid mode | | | Can be operated with the same controls used for solenoid valves | 7 points | | | | |
| Network mode | | | Can be moved by direct numerical specification | 768 points | | | | |
| Pulse-train input control mode | | | Can be controlled using pulse trains | (—) | | | — | |
| Program control type 1 or 2 axes |  | SSEL-CS-1-60I-NP-2-Ⓘ | Program operation is supported<br>Up to two axes can be operated | 20,000 points | | | — | → P685 |
| Program control type 1 or 6 axes |  | XSEL-Ⓘ-1-60I-N1-EEE-2-3 | Program operation is supported<br>Up to six axes can be operated | 20,000 points | | | — | → P695 |

* The values of SSEL and XSEL assume a 1-axis specification. * Ⓘ indicates the type of power-supply voltage (1: 100 V/2: Single-phase 200 V). * Ⓘ indicates the XSEL type (P/Q).

Please note that this model cannot be connected to the XSEL-P/Q type (5-axis/6-axis), XSEL-R/S type, or MSCON.