

YK180X

Standard type: Tiny type

- Arm length 180mm
- Maximum payload 1kg

Ordering method

YK180X - 100			RCX240				BB
Model	Z axis stroke	Cable length	Controller	Usable for CE	Expansion I/O ^{Note 1}	Network option	Battery
	100: 100mm	3L: 3.5m (Standard) 5L: 5m 10L: 10m		No entry: Standard E: CE marking	N, P: Standard I/O 16/8 N1, P1: 40/24 N2, P2: 64/40 N3, P3: 88/56 N4, P4: 112/72	No entry: None CC: CC-Link DN: DeviceNet PB: Profibus EN: Ethernet YC: YC-Link ^{Note 2}	BB: 4 pcs

Note 1. Use N to N4 when NPN is selected on the I/O board, and P to P4 when PNP is selected.
Note 2. Available only for the master.

Specifications

		X-axis	Y-axis	Z-axis	R-axis
Axis specifications	Arm length (mm)	71	109	100	-
	Rotation angle (°)	+/-120	+/-140	-	+/-360
AC servo motor output (W)		50	30	30	30
Deceleration mechanism	Speed reducer	Harmonic drive	Harmonic drive	Ball screw	Harmonic drive
	Transmission method	Direct-coupled			
	Motor to speed reducer Speed reducer to output	Direct-coupled			
Repeatability ^{Note 1} (XYZ mm) (R °)		+/-0.01		+/-0.01	+/-0.004
Maximum speed (XYZ m/sec) (R °/sec)		3.3		0.7	1700
Maximum payload (kg)					1.0
Standard cycle time with 0.1kg payload ^{Note 2} (sec)					0.39
R-axis tolerable moment of inertia ^{Note 3} (kgm ²)					0.01
User wiring (sq × wires)					0.1 × 6
User tubing (Outer diameter)					φ3 × 2
Travel limit		1.Soft limit 2.Mechanical stopper (X,Y,Z axis)			
Robot cable length (m)		Standard: 3.5 Option: 5,10			
Weight (kg) (Excluding robot cable) ^{Note 4}					5.5
Robot cable weight		1.5kg (3.5m)	2.1kg (5m)	4.2kg (10m)	

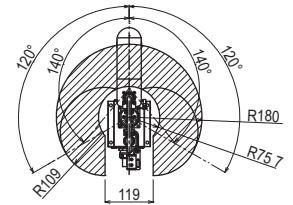
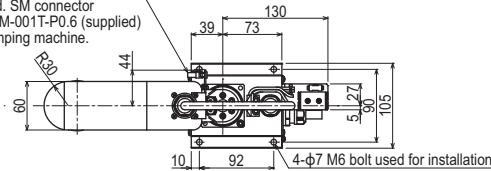
Note 1. This is the value at a constant ambient temperature.
Note 2. When reciprocating 100mm in horizontal and 25mm in vertical directions.
Note 3. There are limits to acceleration coefficient settings. See P.430.
Note 4. The total robot weight is the sum of the robot body weight and the cable weight.

Controller

Controller	Power capacity (VA)	Operation method
RCX240	500	Programming / I/O point trace / Remote command / Operation using RS-232C communication

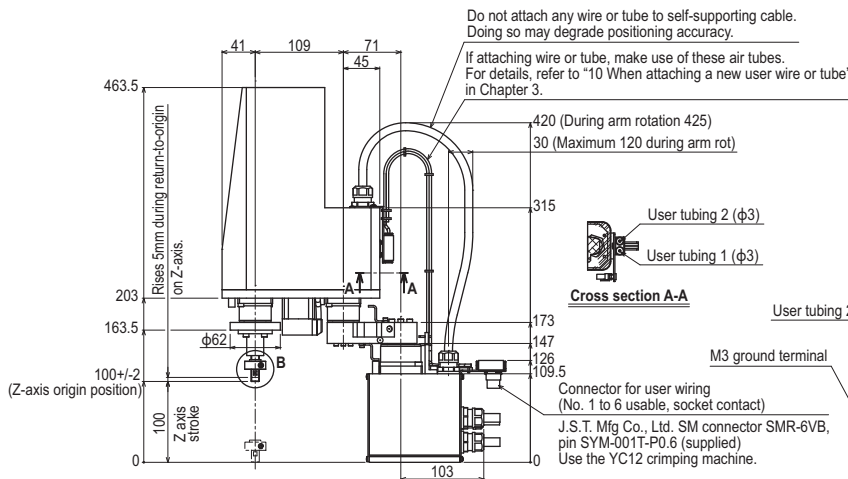
YK180X

Connector for user wiring
(No. 1 to 6 usable, socket contact)
J.S.T. Mfg Co., Ltd. SM connector
SMR-6VB, pin SYM-001T-P0.6 (supplied)
Use the YC12 crimping machine.



Working envelope

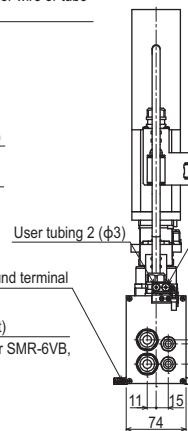
X-axis origin is at 0°±5° with respect to front of robot base



Cross section A-A

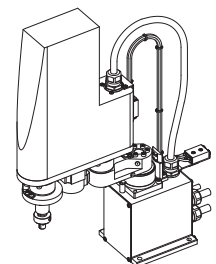
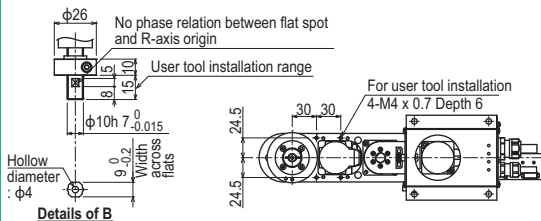
User tubing 2 (φ3)
User tubing 1 (φ3)

Connector for user wiring
(No. 1 to 6 usable, socket contact)
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X, Y-axis origin position

When performing return-to-origin, move the axes counterclockwise in advance from the position shown above.



APPLICATION
Compact
single-axis robots
TRANSERVO

Single-axis robots
FLIP-X

Linear motor
single-axis robots
PHASER

Catenaion
robots
XY-X

SCARA
robots
YK-XG

Pick & place
robots
YP-X

CLEAN

CONTROLLER INFORMATION

Tiny

Small type

Medium type

Large type

Ceiling-mount / Inverse type

Dust-proof & drip-proof type