

# MXYx **3 axes / ZFH**

● Moving arm type ● Cable carrier ● Z-axis: clamped table / moving base type (200W)

## Ordering method

<b>MXYx - C</b>				<b>ZFH</b>			<b>RCX240</b>		<b>R</b>			<b>BB</b>	
Model	Cable	Combination	X-axis stroke	Y-axis stroke	ZR-axis	Z-axis stroke	Cable length	Controller	Usable for CE	Regenerative unit	Option I/O <sup>Note 1</sup>	Network option	Battery
M1		M1	25 to 125cm	15 to 55cm		15 to 35cm	No entry: Standard 5L: 5m 10L: 10m		No entry: Standard E: CE marking	R: RGU-2	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 <sup>Note 2</sup>	BB: 4 pcs

Note 1. N to N4 if NPN was selected, or P to P4 if PNP was selected for the I/O board.  
Note 2. Available only for the master.

## Specification

	X-axis	Y-axis	Z-axis
Axis construction <sup>Note 1</sup>	F17	F14H	F10-BK equivalent guide-reinforced model
AC servo motor output (W)	400	200	200
Repeatability <sup>Note 2</sup> (mm)	+/-0.01	+/-0.01	+/-0.01
Drive system	Ball screw (Class C7)	Ball screw (Class C7)	Ball screw (Class C7)
Ball screw lead (Deceleration ratio) (mm)	20	20	10
Maximum speed <sup>Note 3</sup> (mm/sec)	1200	1200	600
Moving range (mm)	250 to 1250	150 to 550	150 to 350
Robot cable length (m)	Standard: 3.5 Option: 5,10		

Note. The standard types are ZFH with higher rigidity as compared with ZF types which are conventional standard types. When you need the ZF type, please consult YAMAHA.

Note 1. Use caution that the flame machining (installation holes, tap holes) differs from single-axis robots.

Note 2. Positioning repeatability in one direction.

Note 3. When the X-axis stroke is longer than 850mm, resonance of the ball screw may occur depending on the operation conditions (critical speed). In this case, reduce the speed setting on the program by referring to the maximum speeds shown in the table below.

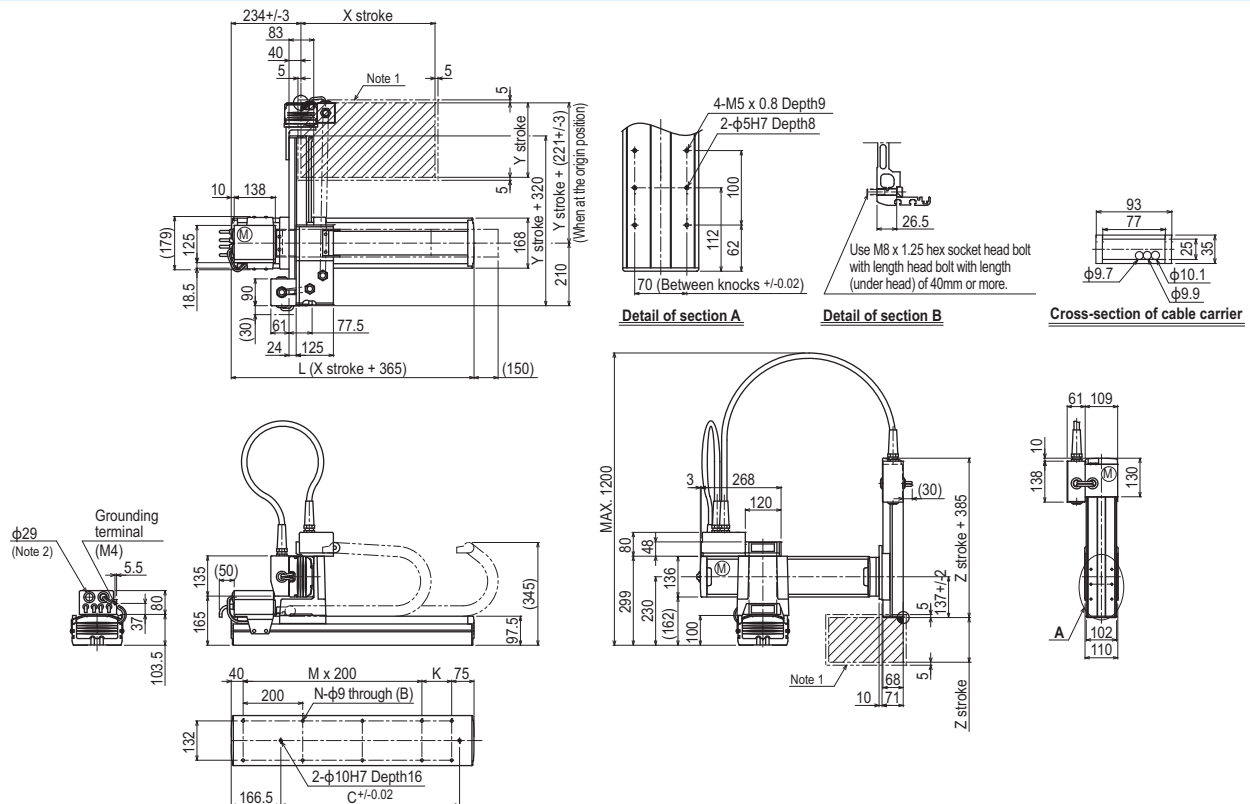
## Maximum payload (kg)

	Z stroke (mm)		
Y stroke (mm)	150	250	350
150 to 550	12	11	10

## Controller

Controller	Operation method
RCX240-R	Programming / I/O point trace / Remote command / Operation using RS-232C communication

## MXYx 3 axes / ZFH **M1**



X stroke <sup>Note 3</sup>	250	350	450	550	650	750	850	950	1050	1150	1250	
L	615	715	815	915	1015	1115	1215	1315	1415	1515	1615	
K	100	200	100	200	100	200	100	200	100	200	100	
D	240	420	600	600	780	780	960	960	1140	1140	1320	
M	2	2	3	3	4	4	5	5	6	6	7	
N	8	8	10	10	12	12	14	14	16	16	18	
Y stroke <sup>Note 3</sup>	150	250	350	450	550							
Z stroke	150	250	350									
Maximum speed for each stroke (mm/sec) <sup>Note 4</sup>	X-axis	1200				960	840	720	600	480		
Speed setting		-				80%	70%	60%	50%	40%		

Note 1. The moving range when returning to origin and the stop position when stopping by the mechanical stopper.  
Note 2. User cable extraction port.

Note 3. The total of the Y and Z strokes should be 800mm or less.  
Note 4. When the X-axis stroke is longer than 850mm, resonance of the ball screw may occur depending on the operation conditions (critical speed). In this case, reduce the speed setting on the program by referring to the maximum speeds shown in the table at the left.

APPLICATION  
Compact  
single-axis robots  
TRANSERO  
Single-axis robots  
FLIP-X  
Linear motor  
single-axis robots  
PHASER  
Cartesian  
robots  
XY-X  
SCARA  
robots  
YK-XG  
Pick & place  
robots  
YP-X  
CLEAN  
CONTROLLER  
INFORMATION  
Arm type  
Gantry type  
Moving arm  
type  
Pole type  
XZ type