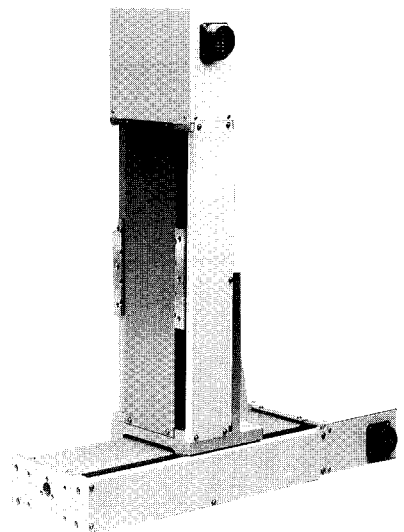
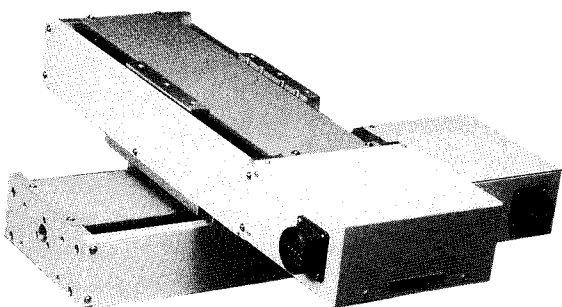
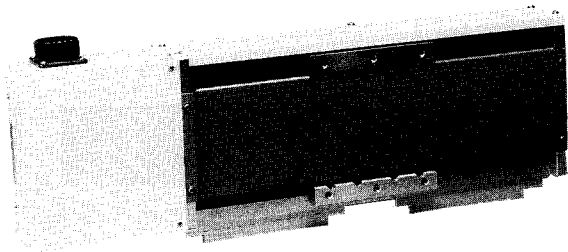


HRS Series are available as single or in sets for X, Y, Z axes combinations, for user assembly, and also offer high repeatability because of adopting DC servo motor, precision ball screw and guide rails.



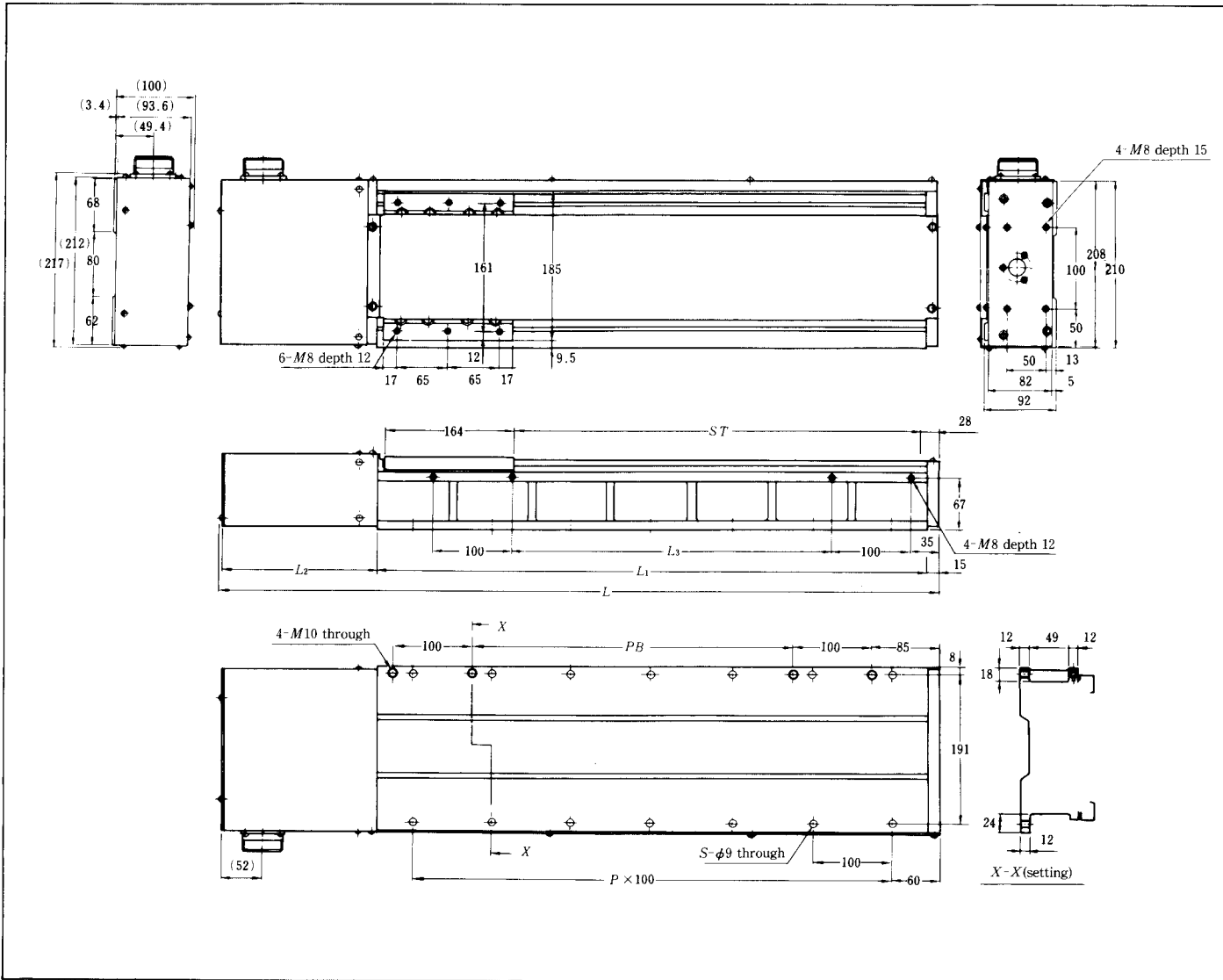


Table 174 : HRS Series Dimensions Table

Model No.	Stroke (mm) ST	Dimensions (mm)							Weight (kgf)	Ball screw lead (mm)	Resolution (mm/pulse)	Max. speed (mm/sec)	GD ² (kgf-cm ²)	Max. load (kgf)	Repeatability (±mm)			
		L	L ₁	L ₂	L ₃	L ₄	P	S							3kgf	10kgf	30kgf	60kgf
HRS-30	300	702.6	490	195	200	200	4	10	22	20	0.01	1000	4.91	60	0.01	0.01	0.01	0.02
HRS-40	400	802.6	590	195	300	300	5	12	24				5.06					
HRS-50	500	902.6	690	195	400	400	6	14	26				5.22					
HRS-60	600	1002.6	790	195	500	500	7	16	28				5.37					

Table 175 : HRS-B Series Dimensions Table (with brake for Z axis)

Model No.	Stroke (mm) ST	Dimensions (mm)							Weight (kgf)	Ball screw lead (mm)	Resolution (mm/pulse)	Max. speed (mm/sec)	GD ² (kgf-cm ²)	Max. load (kgf)	Repeatability (±mm)			
		L	L ₁	L ₂	L ₃	L ₄	P	S							3kgf	10kgf	30kgf	60kgf
HRS-30B	300	727.6	490	220	200	200	4	10	23	10	0.01	500	3.58	40	0.01	0.01	0.01	0.02
HRS-40B	400	827.6	590	220	300	300	5	12	25				3.73					
HRS-50B	500	927.6	690	220	400	400	6	14	27				3.89					
HRS-60B	600	1027.6	790	220	500	500	7	16	29				4.04					

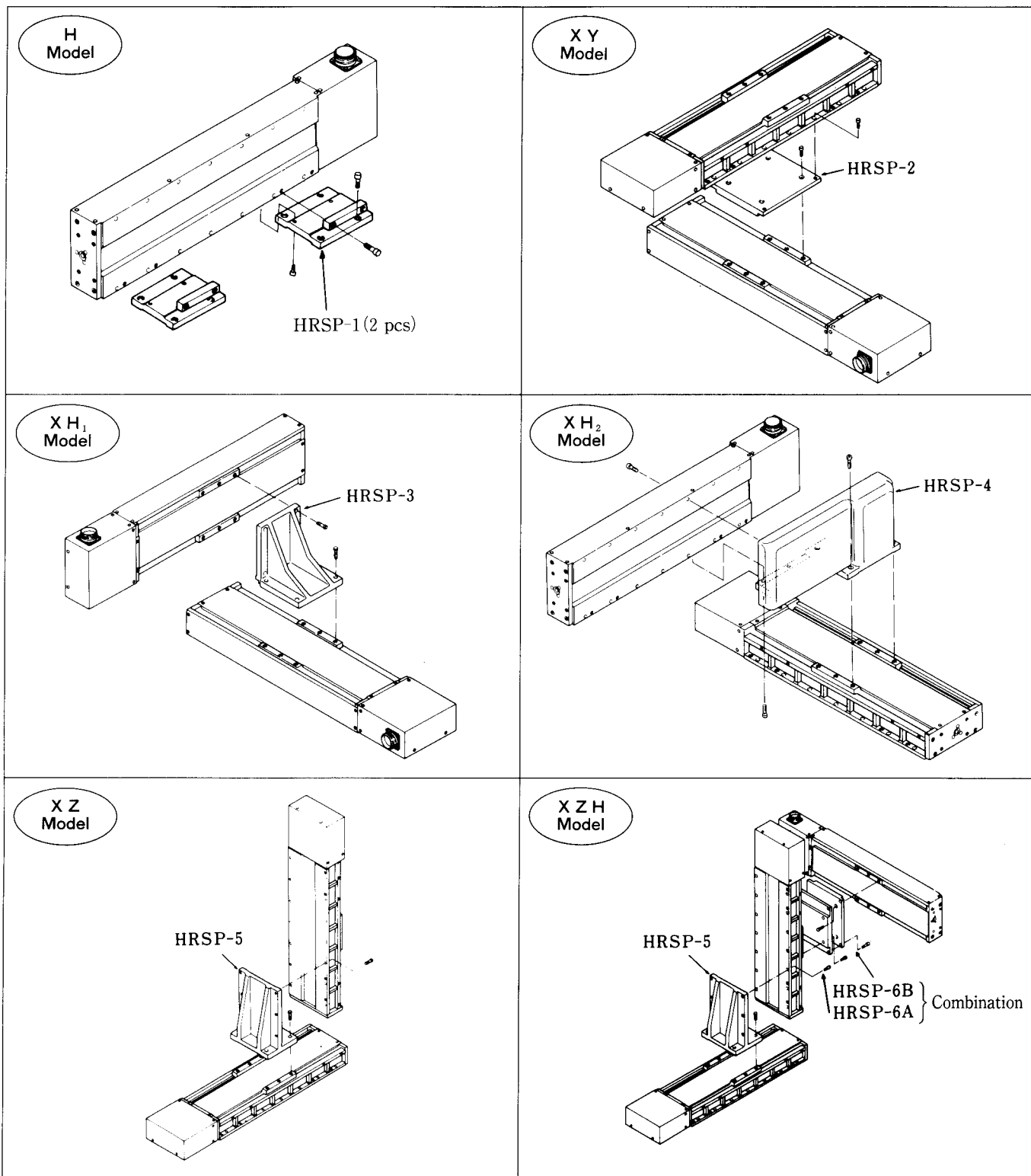
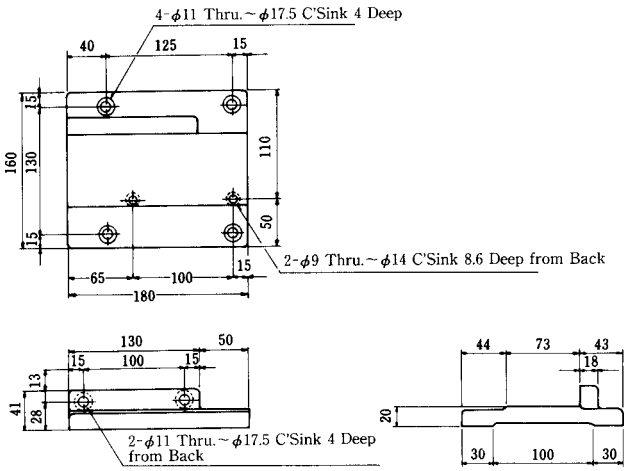


Table 176 : HRS Series Combination Part No.

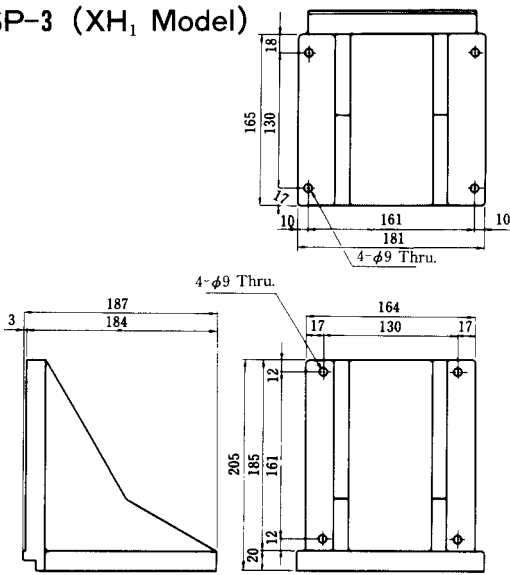
Combination Model	H model	XY model	XH ₁ model	XH ₂ model	XZ model	XZH model
Part No.	HRSP-1	HRSP-2	HRSP-3	HRSP-4	HRSP-5	HRSP-5 HRSP-6A } HRSP-6B }

Combination Parts

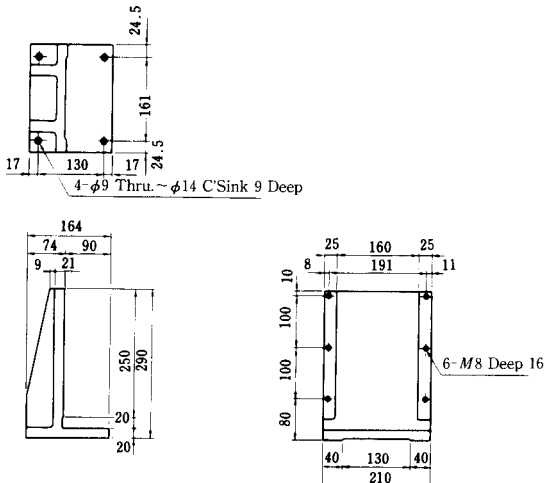
HRSP-1 (H Model)



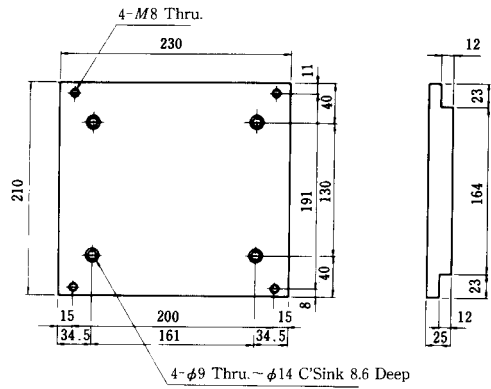
HRSP-3 (XH₁ Model)



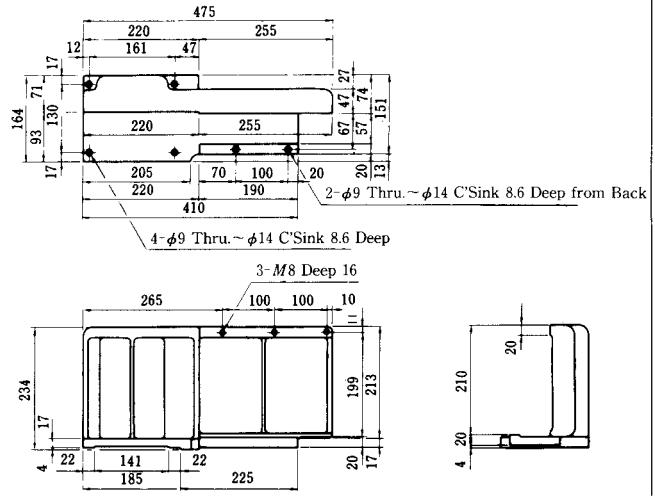
HRSP-5 (XZ Model)



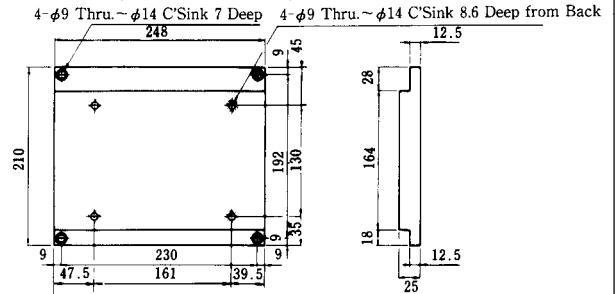
HRSP-2 (XY Model)



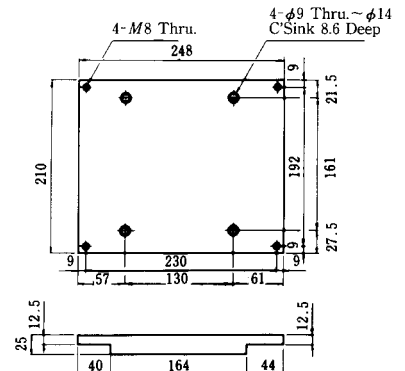
HRSP-4 (XH₂ Model)



HRSP-6A (XZH Model)



HRSP-6B



<Connector Pin Arrangement>(MS3102A32-7P(JAE))

Pin No.	Function	V	Brake+※
P	Motor+	O	Brake-※
R	Motor-	D	—
T	Frame Ground	I	—
J	Encoder+V	K	—
E	Encoder 0 V	L	—
A	Encoder Phase A	M	—
F	Encoder Phase \bar{A}	N	—
B	Encoder Phase B	S	—
G	Encoder Phase \bar{B}	X	—
C	Encoder Phase C	Y	—
H	Encoder Phase \bar{C}	Z	—
U	Encoder Sensor (Shield)	a	—
W	Sensor+V	b	—
c	Sensor 0 V	d	Sensor OTL L
h	Sensor OTL OUT	e	Sensor PROX L
i	Sensor PROX OUT	f	Sensor OTR L
k	Sensor OTR OUT	g	—

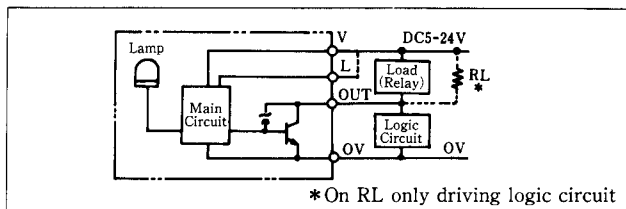
<Note> 1. * with brake motor case
 2. Prepare the plug by customer
 (Plug MS3106 B22-7S, Cable Clamp MS3057-20A(JAE))

<Sensor>

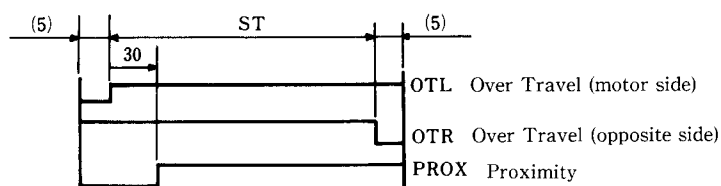
We are using photo sensor for over travel or proximity.
 EE-SX672A, Photo Micro Sensor including amplifier

Power Supply Voltage	DC5~24V±10%
Consume Current	35mA Max.
Control Power	DC5~24V, Load Current 100mA TTL Drive, Load Current 40mA
Output Condition	Detected ON Non, Detected OFF

Output Circuit



<Sensor Signal Position>



<DC Servo Motor>

Model No.	Motor
HRS-30, 40, 50, 60	DC Servo Motor (U825-012EL8)
HRS-30B, 40B, 50B, 60B	DC Servo Motor (U825BN-412EL8)

<DC Servo Motor Specification>

Motor Model number	U825-012EL8	U825BN-412EL8
Rated power (W)	250	
Rated torque (kgf·cm)	8	
Rated revolutions (rpm)	3000	
Rated current (A)	4.7	
Max.Instantaneous torque*1 (kgf·cm)	70	
Max.Instantaneous current (A)	38	
Max.Instantaneous revolutions (rpm)	4000	
Rotor inertia(GD ²) (kgf·cm ²)	11.4	
Torque constant (kgf·cm/A)	2.24	
Armature resistance (Ω)	1.8	
Mechanical time constant (ms)	13	
Electrical time constant (ms)	1.78	
Encoder resolution*3	1000	
Brake	—	DC24V
Weight (kgf)	2.45	3.25

<Driver Specification>

Driver Model number	DC16AP
Power supply voltage & cap.	AC100V 500VA
Max. output voltage (V)	80
Max.Instantaneous output current (A)	15
Max.Continuous output current (A)	6.5
Velocity control ratio	1 : 1000
Power transformer, DC reactor	unnecessary
Input pulse type	CW, CCW
Pulse voltage (V)	5V TTL
Pulse width min. (μs)	2μs Min.
Max.Pulse rate (kpps)	200
Ambient conditions	0~40°C, max80%(Non condensing)
Max.Torque*2 (kgf·cm)	24

<Note> *1 Limited performance of motors
 *2 Motor Driver Coupling
 *3 The encoder outputs of M1*61 and are Line driver function