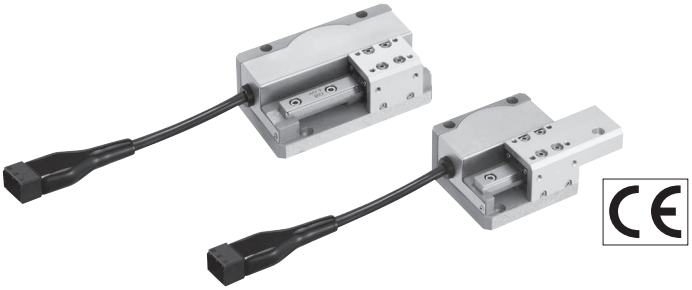
NS slider



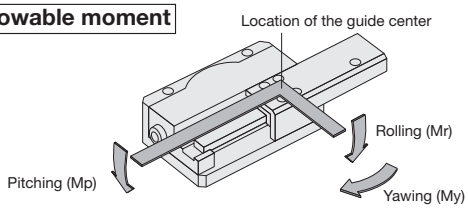
Specifications

● Main unit basic specifications

Item \ Type			EWM5HSA/EWM5HLA	EWM5SSA/EWM5SLA
Motor			Two phase stepping motor	
Maximum thrust*1		N	18 to 27	42 to 65
Maximum payload*2		kg [lb]	1 [2.205] (horizontal), 0.4 [0.882] (vertical)	2 [4.409] (horizontal), 0.8 [1.764] (vertical)
Maximum speed*3		mm/s [in/sec]	120 [4.724]	50 [1.969]
Minimum operation time		s	0.25 (st.20), 0.42 (st.40)	0.50 (st.20), 0.90 (st.40)
Minimum speed		mm/s [in/sec]	1 [0.039]	
Repeated positioning precision		mm [in.]	±0.03 [0.001]	
Operating temperature range			0 to 40 [32 to 104]	
Allowable moment	My (yawing)	N·m [in·lbf]	1 [8.9]	
	Mp (pitching)	N·m [in·lbf]	1 [8.9]	
	Mr (rolling)	N·m [in·lbf]	1.5 [13.3]	
Mass		kg [lb]	0.27 [0.595] (st.20, short table type), 0.30 [0.661] (st.20, long table type) 0.35 [0.772] (st.40, short table type), 0.40 [0.882] (st.40, long table type)	
Applicable controllers			EWHC-NH,EWHCP-NH	

*1 For details on cylinder thrust, see the graph on page ⑱.
*2 There is no retention function when the power is OFF.
*3 The maximum speed when pushing is 10 mm/s [0.394 in/sec].

Allowable moment



● See pages ⑭ and ⑮ for the controller specifications.

Order Codes

EWM5 □ □ **A** - □ - □ - □ - □

Elewave NS slider

Type
H : High-speed type
S : High thrust type

Table size
S : Short table
L : Long table

Stroke
20: 20 mm [0.787 in.]
40: 40 mm [1.575 in.]

Controller type
Not specified: Without controller
C: **With EWHC-NH**
(point input type)
CP: **With EWHCP-NH**
(pulse array input type)

DIN rail mounting plate
Not specified: Without mounting plate
DP: With mounting plate (cannot be selected without controller)

Cable length (relay cable)
Not specified: Without cable
3L: 3 m [9.843 ft.]
5L: 5 m [16.404 ft.]

● Additional parts

Point input type controller
[Accessories]
• Power cable
• I/O cable

EWHC - NH - □

DIN rail mounting plate
Not specified: Without mounting plate
DP: With mounting plate

Pulse array input type controller
[Accessories]
• Power cable
• I/O cable
• Pulse array input cable
• Conversion cable for pulse array input connector

EWHCP - NH - □

DIN rail mounting plate
Not specified: Without mounting plate
DP: With mounting plate

Cable (relay cable)*1
***1 Robot cable**

EWHKA - □

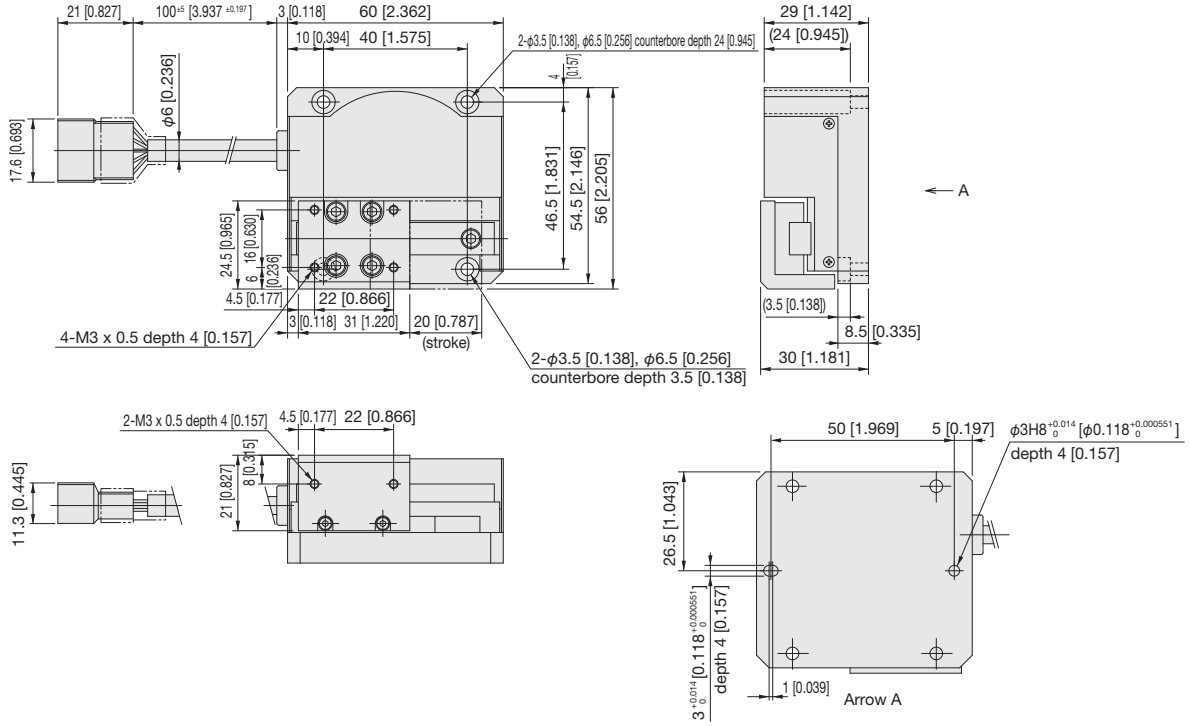
Cable length
3L: 3 m [9.843 ft.]
5L: 5 m [16.404 ft.]

Teaching*2 box **EWHTB**

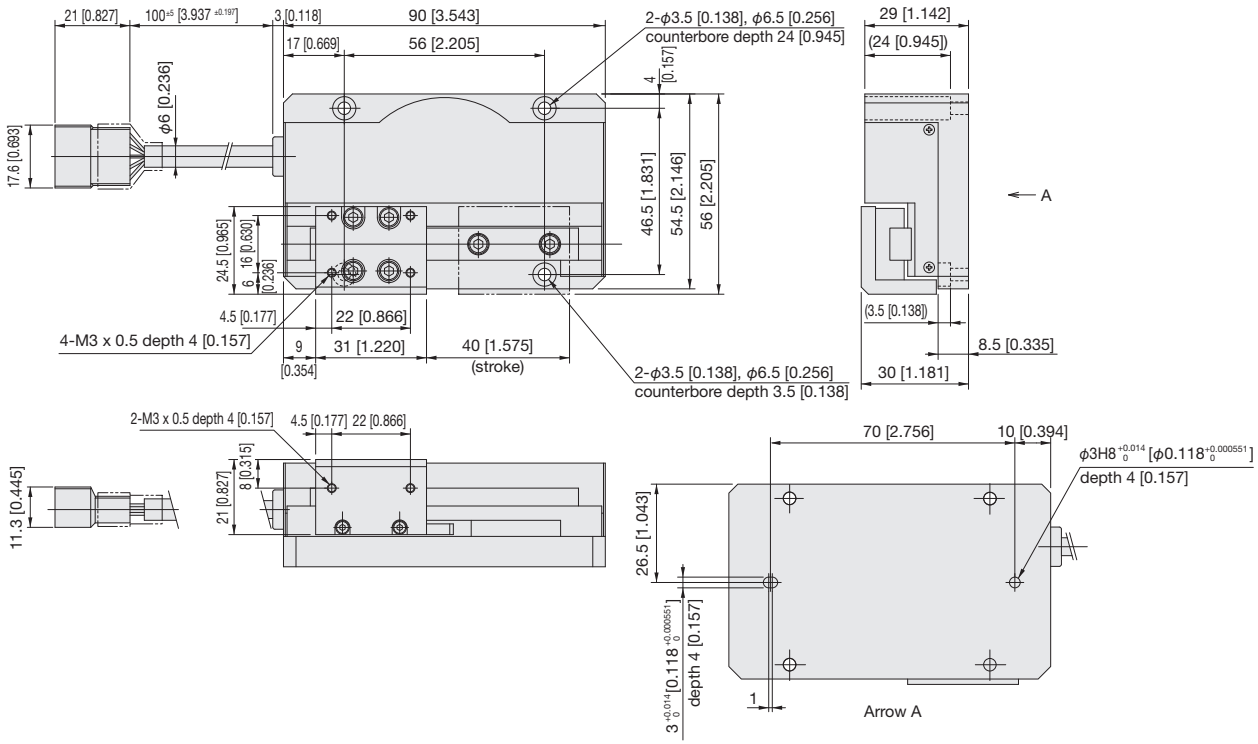
*2 See page ⑲ for the specifications and dimensions.

DIN rail mounting plate **EW2DP**

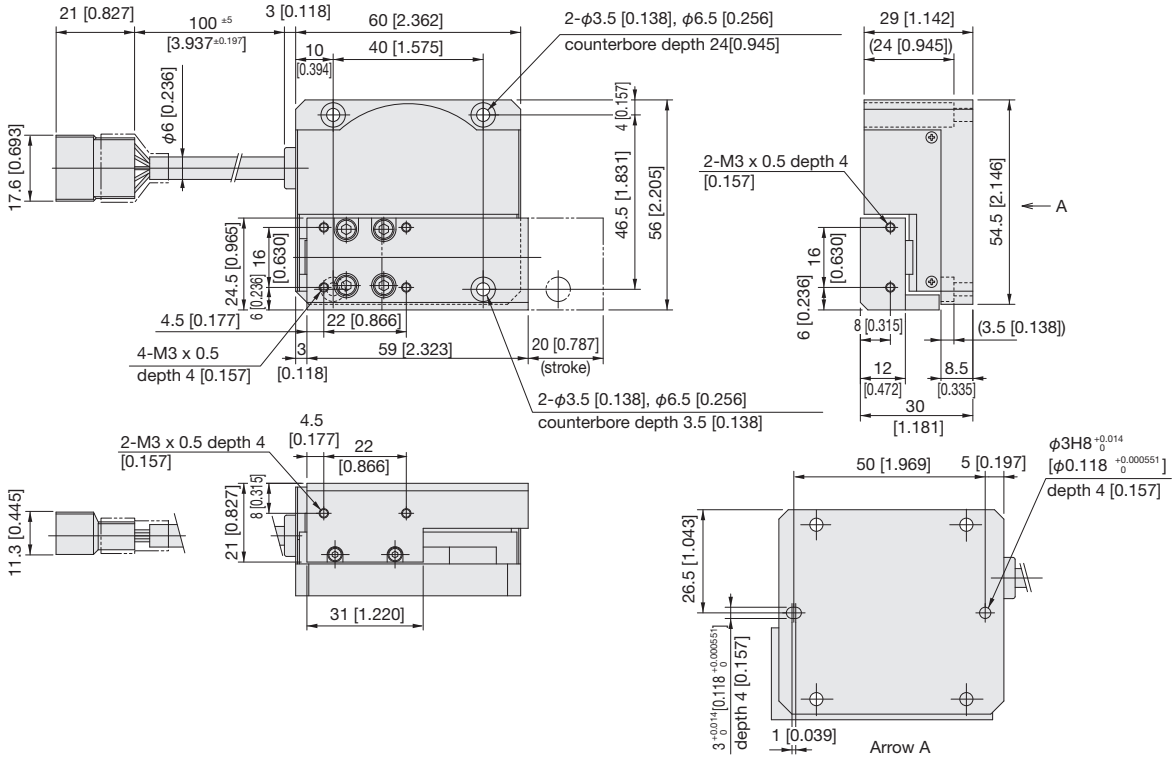
EWM5HSA-20
EWM5SSA-20



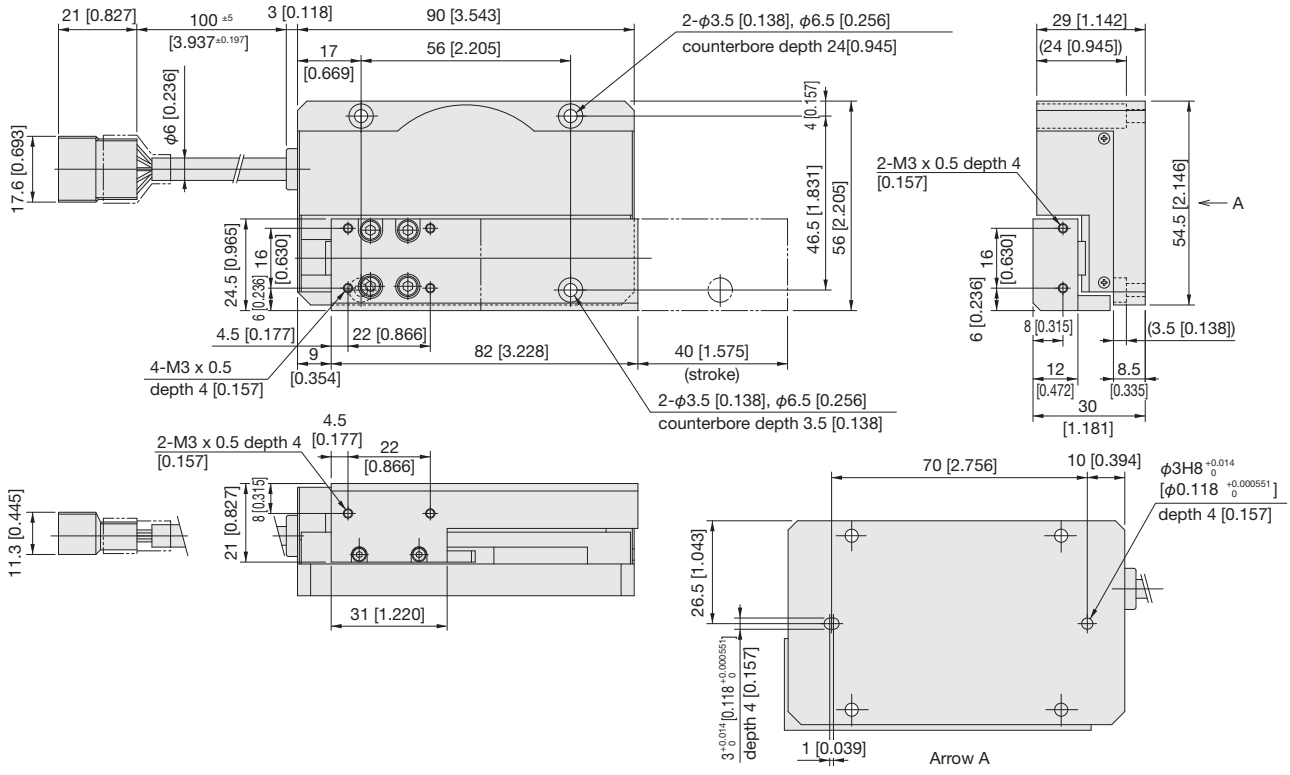
EWM5HSA-40
EWM5SSA-40



EWM5HLA-20
EWM5SLA-20



EWM5HLA-40
EWM5SLA-40



Controller

Point input type

Specifications

Item	Type	EWHC-NH
Axis control	Motor drive system	Microstep drive
	Control method	Closed loop control*1
	Operating method	PTP, force control
	Origin detection method	Stroke end detection
	Position detection method	Encoder A/B phase output
	Minimum setting distance (angle)	0.01 mm [0.000394 in.]
	Acceleration setting	1 to 100 %
	Point setting	64 points
	Point input method	Numeric input, teaching input, direct teaching
External input/output	Point setting input	6 point (POS0～POS5) photocoupler receptor 5 mA TYP/point
	Control input	3 point (ORG, START, STOP) photocoupler receptor 5 mA TYP/point
	Control output	4 point (READY, BUSY, HOLD, INPOS) 30 mA Max./point
	Error detection output	Overload, wiring disconnection, data error, system error
	External communication	RS232C 1 ch (computer, TB communication)
	Motor drive output	Dedicated cable (with F.G.)
	Encoder input	Dedicated cable (shielded)
General specifications	Mass	0.2 kg [0.441 lb]
	Power supply	DC 24 V±10 % 1.0 A Max. (motor, I/O power supply shared)*2
	Operating temperature	0 to 40 °C [32 to 104°F]
	Operating humidity	35 to 85 % RH (without condensation)
	Storage temperature	-10 to 65 °C [14 to 149 °F]
	Backup	Setting conditions retained in EEPROM
	Noise resistance	IEC61000-4-4 level 3
	Accessories	I/O cable, power cable

*1 Missed step detection and force control when gripping are performed via a rotary encoder.
*2 The maximum consumption current value differs according to the actuator. See the table below.

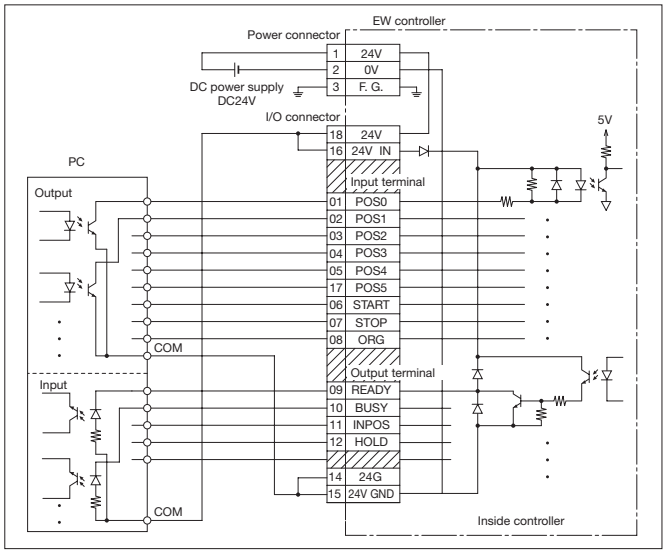
Maximum consumption current (NS slider, electric hand)

(A)

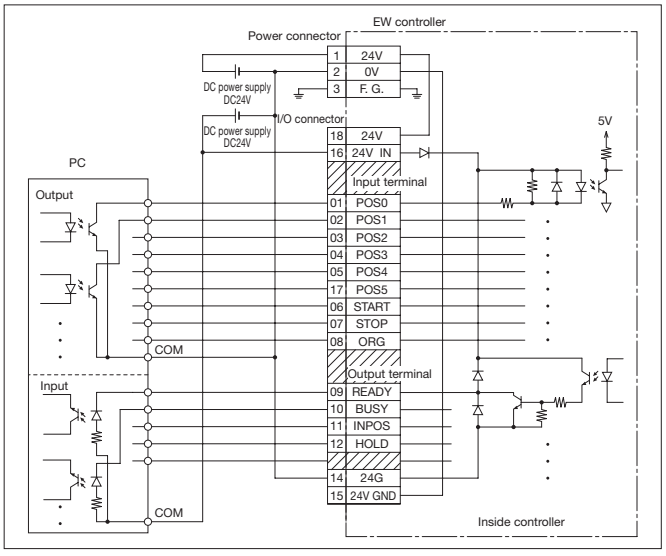
Model	EWM5□	EWHA12A	EWHA24A	EWHA36A	EWHA6H	EWHA12H	EWHA24H	EWHA36H
Maximum consumption current	0.6					1.0		

Controller Wiring Method

1. When using the internal power supply of the controller (NS slider)



2. When not using the internal power supply of the controller (NS slider)



Controller

Pulse array input type

Specifications

Item	Type	EWHCP-NH
Axis control	Motor drive system	Microstep drive
	Control method	Closed loop control*1
	Operating method	Position control and force control via pulse array input
	Origin detection method	Stroke end detection
	Position detection method	Encoder A/B phase output
	Pulse array input method	Differential line driver/open collector
	Maximum input pulse frequency*2	Max. 200 kpps (differential line driver)/Max. 60 kpps (open collector)
	Pulse array input instruction format	CW/CCW, pulse/code (positive/negative logic available)
External input/output	Control input	6 points (alarm reset, clear counter, pushing mode transfer, servo ON, pulse input prohibited/origin return stopped, origin return) 5 mA TYP/point
	Control output	4 points (preparations complete, pulse input reception available, positioning complete/pushing operation complete, zone output) 30 mA Max./point
	Error detection output	Overload, data error, system error
	External communication	RS232C 1 ch (computer, TB communication)
	Motor drive output	Dedicated cable (with F.G.)
	Encoder input	Dedicated cable (shielded)
	Pulse array input	Dedicated cable (twisted pair cable)
General specifications	Mass	0.2 kg [0.441 lb]
	Power supply	DC 24 V±10 % 1.0 A Max. (motor, I/O power supply shared)*3
	Operating temperature	0 to 40 °C [32 to 104°F]
	Operating humidity	35 to 85 % RH (without condensation)
	Storage temperature	-10 to 65 °C [14 to 149°F]
	Backup	Setting conditions retained in EEPROM
	Noise resistance	IEC61000-4-4 level 3
	Accessories	I/O cable, power cable, pulse array input cable*4, conversion cable for pulse array input connector x 2*5

*1 Missed step detection and force control when gripping are performed via a rotary encoder.
*2 The actual maximum input pulse count is regulated by the maximum speed of each actuator.
*3 The maximum consumption current value differs according to the actuator. See the table below.
*4 The length of the pulse array input cable is 1 m [3.281 ft.].
*5 Note that the method for connecting the pulse array input cable differs for the differential line driver input and open collector input (see the instruction manual for details).

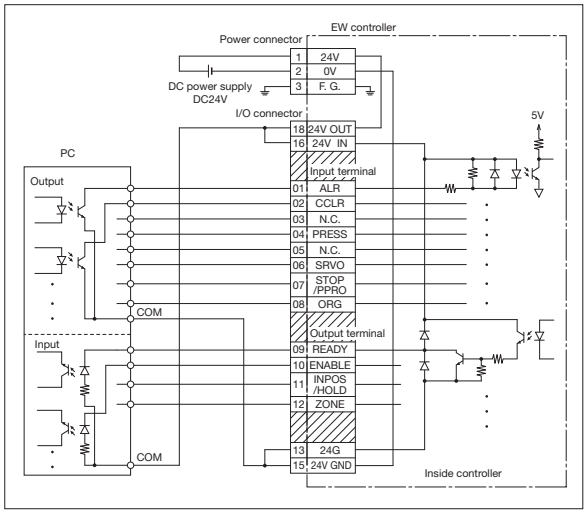
Maximum consumption current (NS slider, electric hand)

(A)

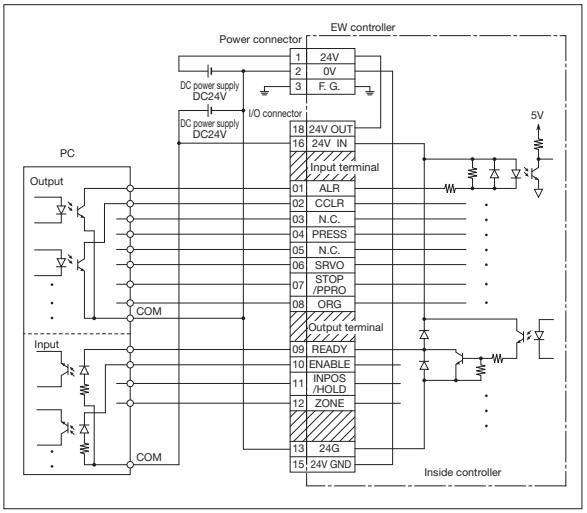
Model	EWM5 □	EWHA12A	EWHA24A	EWHA36A	EWHA6H	EWHA12H	EWHA24H	EWHA36H
Maximum consumption current	0.6	0.6				1.0		

Controller Wiring Method

1. When using the internal power supply of the controller (NS slider)



2. When not using the internal power supply of the controller (NS slider)

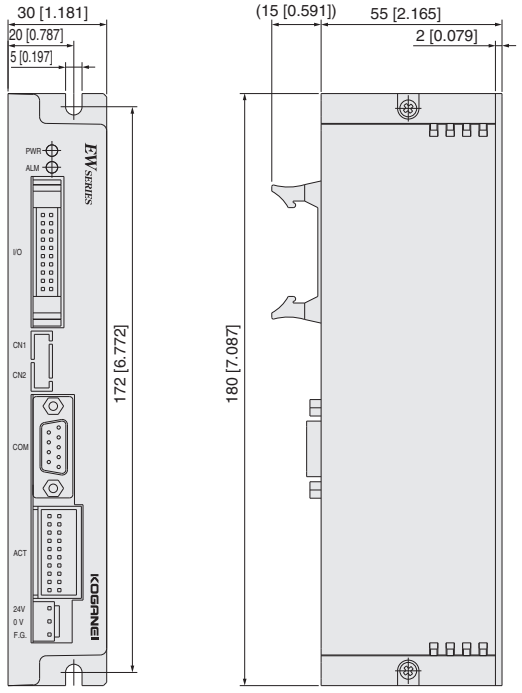


Controller dimensions mm [in.]

(point input type)

EWHC-NH-□

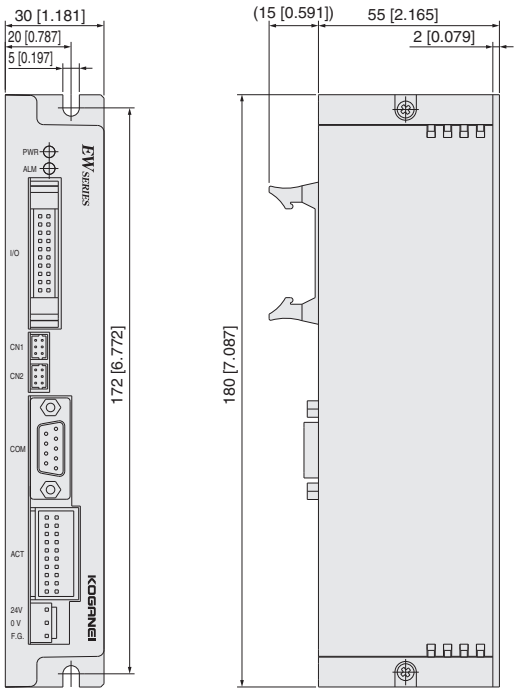
DIN rail mounting plate
Not specified: Without
DP: With (cannot be selected without controller)



(pulse array input type)

EWHCP-NH-□

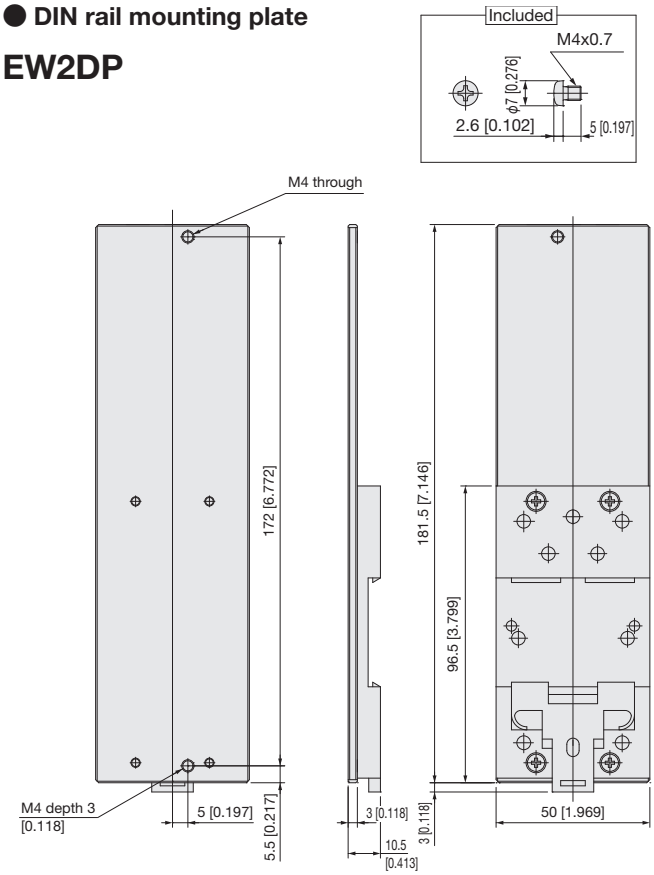
DIN rail mounting plate
Not specified: Without
DP: With (cannot be selected without controller)



Controller dimensions mm [in.]

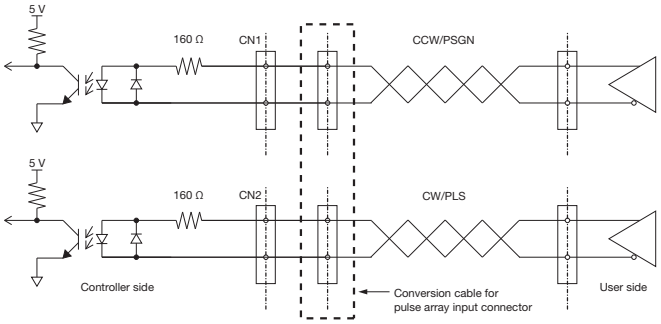
● DIN rail mounting plate

EW2DP

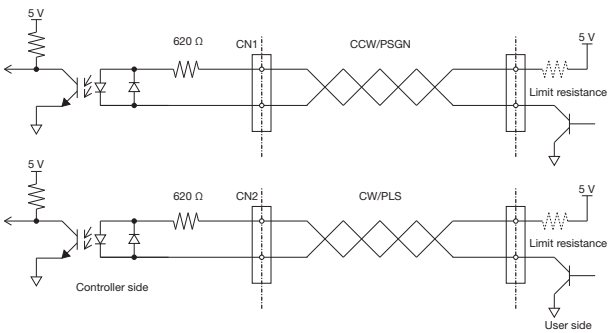


Controller wiring method (pulse array input type)

● Differential line driver input circuit



● Open collector input circuit



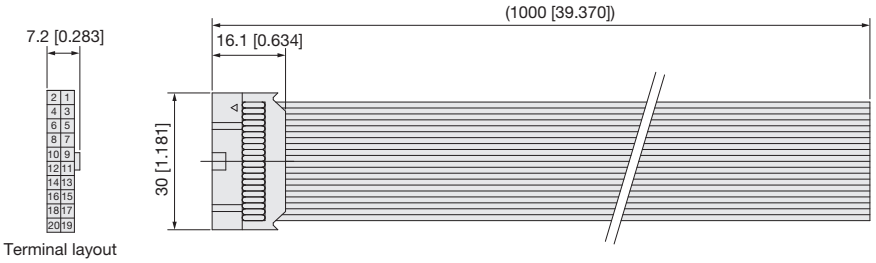
[Caution] When applying voltage of 5.5 V or higher, add current limit resistance (10 mA or less).

Controller dimensions mm [in.]

● Controller included

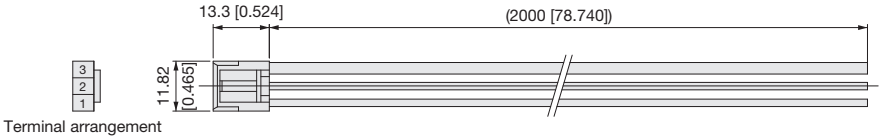
• I/O cable

EW2KI



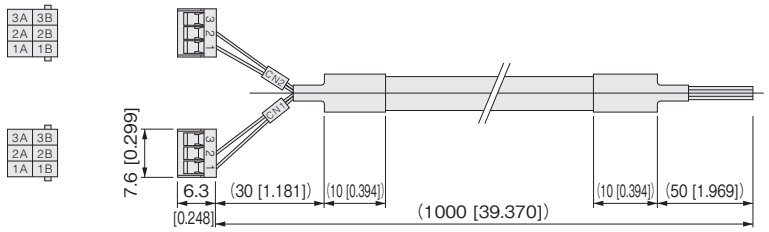
• Power cable

EW2KP



• Pulse array input cable (pulse array input type controller only)

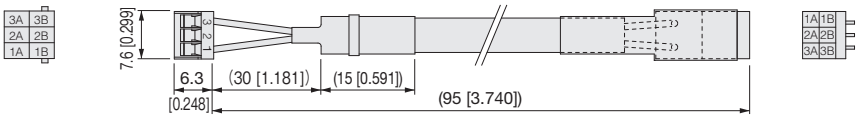
EWHKY



● Conversion cable for pulse array input connector (pulse array input type controller only)

*Make sure to use this conversion cable when the pulse array input signal is a differential line driver.

EWHKC

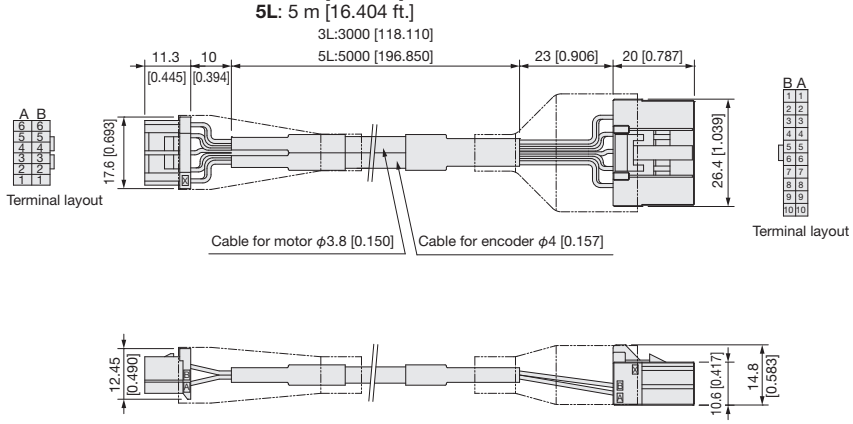


● Cable

• Relay cable (robot cable)

EWHKA-□

3L: 3 m [9.843 ft.]
5L: 5 m [16.404 ft.]



Main unit side connector

No.	Parts	Color
A1	F.G.	Brown
A2	A+	Red
A3	A-	Yellow
A4	B+	Green
A5	B-	White
A6	BRK	Black
B1	Shield	
B2	GND	Red
B3	5V	Yellow
B4	EA	Green
B5	EB	White
B6	EC	Black

Controller side connector

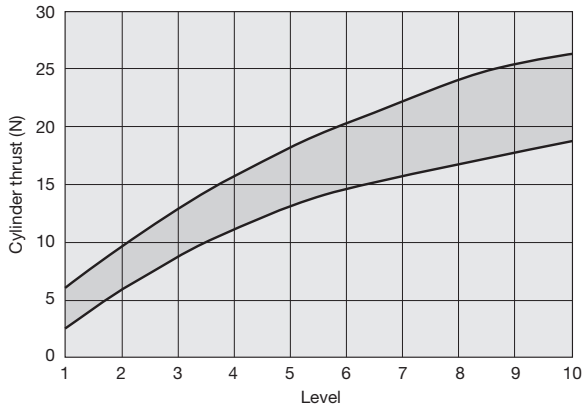
No.	Parts	Color
A1	A+	Red
B1	B+	Green
A2	A-	Yellow
B2	B-	White
A3	F.G.	Brown
B3	BRK	Black
A4	COM1	—
B4	COM2	—
A5		—
B5		—
A6	F.G.	—
B6	GND 5V	—
A7	DV+	Yellow
B7	DV-	Red
A8	EA+	—
B8	EA-	Green
A9	EB+	—
B9	EB-	White
A10	EC+	—
B10	EC-	Black

●NS slider

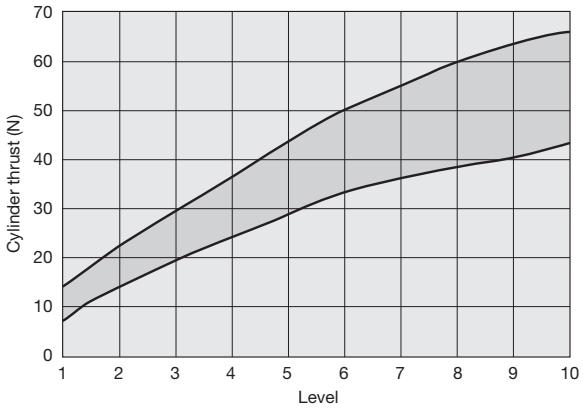
● Cylinder thrust

*The cylinder thrust range below is an estimate.

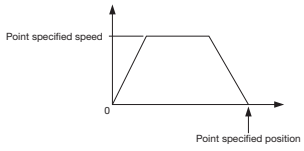
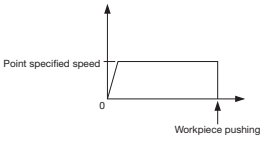
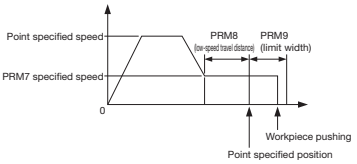
EWM5H□A



EWM5S□A



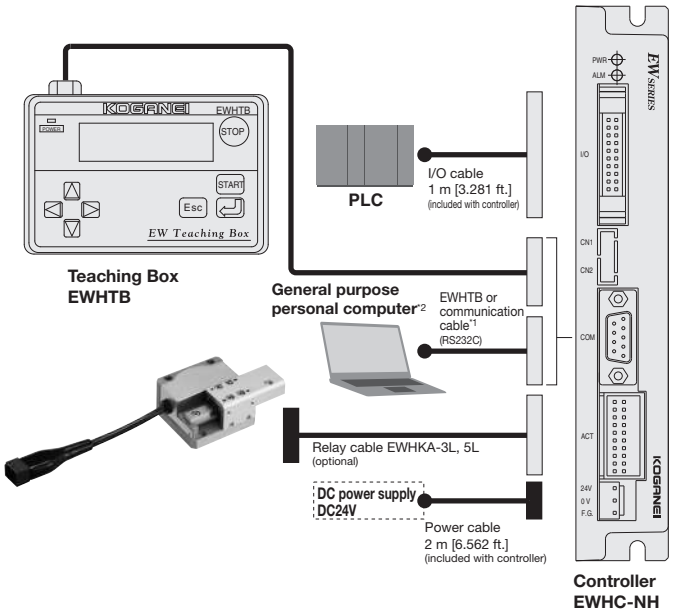
●NS slider operation mode (for the point input type controller)

Mode	Positioning Acceleration or deceleration is performed and movement is stopped at the specified point.		Pushing* Perform operation at a constant speed and pushing at the set force.		Pushing with acceleration/deceleration movement Perform acceleration/deceleration movement and add pushing operation.
Setting value	A	I	C	O	U
Description	Move to the position of the specified point with the coordinates of 0 as the origin position	Move to the position of the specified point from the current position	Operate to + side	Operate to - side	Move to the specified point and perform pushing operation at the speed of PRM7 from the distance before the point specified at PRM8
Operation pattern					
Remarks	—		—		Suitable for high-frequency soft pushing.	

*1 Do not use C to O, or O to C motion in gripping mode as it will result in malfunction.

*2 Perform workpiece pushing in the pushing mode (C, O) or pushing mode (U) with acceleration/deceleration movement. When a workpiece is pushed with the positioning mode (A, I), an alarm is output and pushing cannot be performed normally.

● System configuration (example)



*1 RS232C cable (for reference)
Specifications: D-sub 9 pin (female) ⟷ D-sub 9 pin (female)/cross cable
Type: C232R-ECO915 (1.5 m [4.921 ft.])/C232R-ECO930 (3.0 m [9.843 ft.])
Manufacturer: Elecom Co., Ltd.
The communication cable must be provided by the customer.

*2 The support software for setting the controller can be downloaded from the KOGANEI website free of charge.

Teaching Box

EWHTB

Specifications

Item	Type	EWHTB
Power supply	Power supply voltage	DC 12 V (supplied from controller)
	Consumption current	50 mA Max.
Indication	Setting display	LCD 16 characters x 2 lines
	Power supply indication	LED lit when power turned ON (internal 5 V)
General	Setting method	Key operation: 8 buttons
	Communication method	RS232C (serial communication)
	Cable length	3 m [9.843 ft.]
	Mass	Main unit: 200 g [7.055 oz.]
	Operating temperature	0 to 40 °C [32 to 104°F]
	Operating humidity	35 to 80 % RH (without condensation)
	Storage temperature	-10 to 65 °C [14 to 149°F]

Teaching box dimensions mm [in.]