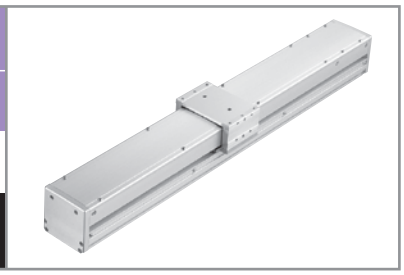
ISWA-S
Single-Axis Robot, Compact Splash-Proof Type,
Actuator Width 94 mm, 60 W, Straight Shape

ISPWA-S
Single-Axis Robot, Compact Splash-Proof Type,
Actuator Width 94 mm, 60 W, Straight Shape High-precision specification

Type: Compact splash-proof | Stroke: 100~600mm | Load capacity: 45 kg (horizontal)



■Model specification items

	Series	Type	Encoder type	Motor output	Lead	Stroke	Controller	Cable length	Options
(Example)	ISWA –	S –	A –	60 –	8 –	600 –	T1 –	S –	RT

Model/Specifications

Model	Encoder type	Motor output (W)	Lead (mm)	Stroke (in increments of 50-mm)	Speed (Note 1) (mm/s)	Load capacity (kg) (Note2)		Rated thrust (N)
						Horizontal (kg)	Vertical (kg)	
ISWA [ISPWA]-S- ①-60-16- ②- ③ - ④- ⑤	A: Absolute I: Incremental	60	16	100~600	800	7	–	63.7
ISWA [ISPWA]-S- ①-60-8- ②- ③ - ④- ⑤			8		400	20	–	127.4
ISWA [ISPWA]-S- ① -60-4-② - ③ - ④ -⑤			4		200	45	–	254.8

*①,②,③,④and⑤in the model numbers shown above respectively indicate the encoder type, stroke, applicable controller, cable length and applicable options.

Options

Name	Type	Page	Remarks
Reverse Home Specification	NM	–	
Guide with ball-retaining mechanism	RT	–	

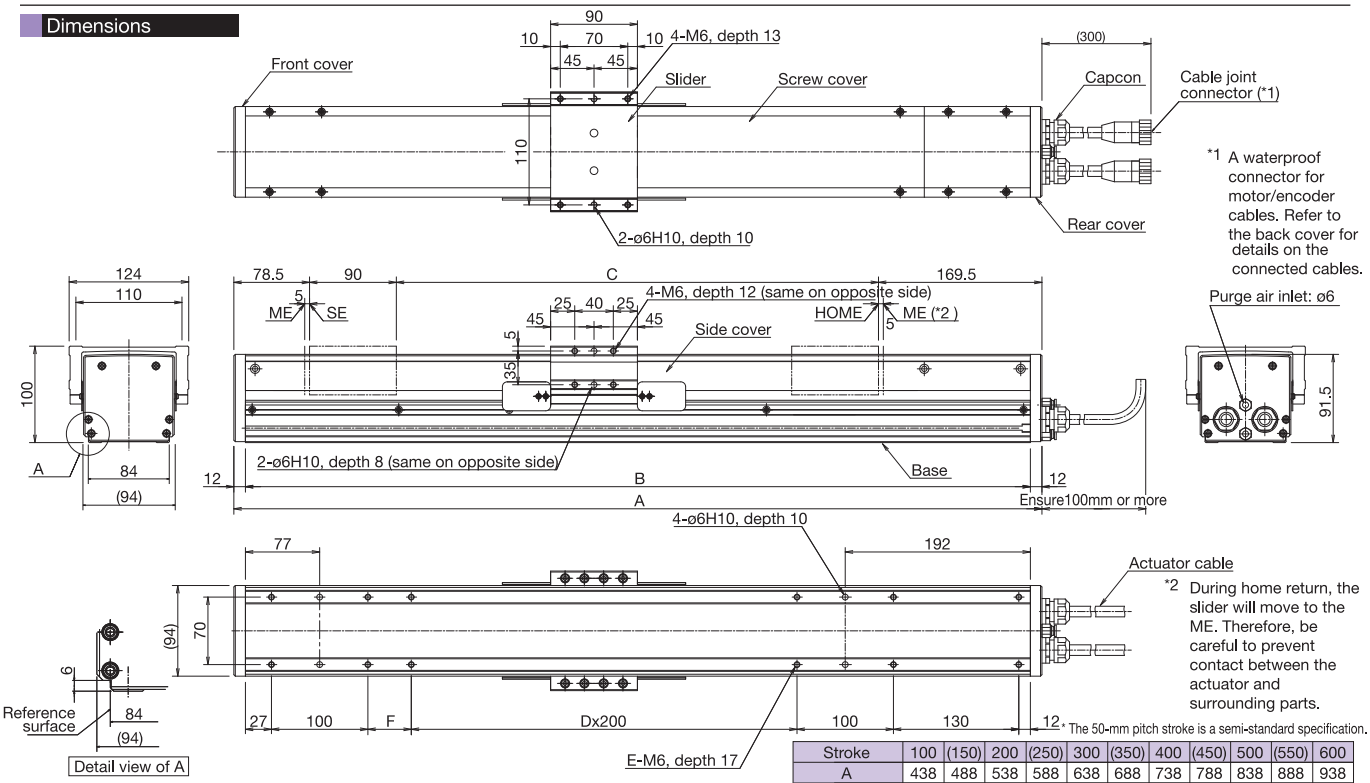
Materials of Key Components

Name	Materials
Base, slider	Aluminum (A6063S-T5 or equivalent) with white alumite treatment
Side cover, screw cover	Aluminum (A6063S-T5 or equivalent) with white alumite treatment
Front cover, rear cover	A5052 with white alumite treatment
Actuator cable	PVC
Capcon	Nylon 66

Common Specifications

Drive System (Note 3)	Ball screw, rolled C10 [rolled C5 or equivalent]
Positioning repeatability (Note 3)	±0.02mm [±0.01mm]
Backlash (Note 3)	0.05 mm or less [0.02 mm or less]
Guide	Integrated with the base
Allowable load moment	Ma: 14.2 N • m, Mb: 20.1 N • m, Mc: 32.9 N • m
Overhang load length	450 mm or less in Ma, Mb or Mc direction
Grease	Food grease (Medallion FM Grease No. 1)
Cable length (Note 4)	N: No cable, S: 3 m, M: 5 m, X□□: Specified length
Protection class (Note 5)	IP65
Operating temperature/humidity	0 ~ 40∞C, 85%RH or below (non-condensing)

Dimensions



* The 50-mm pitch stroke is a semi-standard specification.

Stroke	100	(150)	200	(250)	300	(350)	400	(450)	500	(550)	600
A	438	488	538	588	638	688	738	788	838	888	938
B	414	464	514	564	614	664	714	764	814	864	914
C	100	150	200	250	300	350	400	450	500	550	600
D	–	–	–	–	1	1	1	1	2	2	2
E	10	10	10	10	12	12	12	12	14	14	14
F	45	95	145	195	45	95	145	195	45	95	145
Weight (kg)	6.9	7.4	7.8	8.3	8.7	9.2	9.6	10.1	10.5	11.0	11.4

Maximum speed (mm/s) * Varies depending on the stroke.		
	Lead: 16	800 / 760
	Lead: 8	400 / 380
	Lead: 4	200 / 190

Applicable Controller Specifications

Applicable controller	Maximum number of controlled axes	Connectable encoder type	Operating method	Power-supply voltage
X-SEL - P/Q	6 axes	Absolute/incremental	Programming	3-Phase AC200V
XSEL - J/K	4 axes	Absolute/incremental	Programming	AC100V AC200V
SSEL	1 axis	Absolute/incremental	Programming	
SCON	1 axis	Absolute/incremental	Positioner/Pulse-train	

Caution

(Note 1) A longer stroke will result in a lower maximum speed to prevent the ball screw from reaching a dangerous speed. (Refer to the above table for the maximum speed at a given stroke.)
(Note 2) Based on an acceleration of 0.3 G.
(Note 3) The figures in square brackets apply to the ISPWA series.
(Note 4) The maximum cable length is 30 m. Specify the desired length in meters (e.g., X08 = 8 m).
(Note 5) IP65 applies when air purge is performed. Without air purge, the protection class is IP54.
The ISWA/ISPWA must be installed horizontally. If the actuator is installed on its side or oriented vertically, water may enter the interior.