

Ezi-Robo[®]

Actuator series Driven by Ezi-SERVO

- Ultra slim linear rotary stage (3 axes mounting height : 40mm)
- Combination between stages enables multi-axes solution creation (X,Y,Z, θ Combination)
- Provide DLL Library for PC (Windows) Interface
- Ultra slim stage enables compact machine design
- Position Accuracy Improvement than conventional 5 phase stepping motor by Ezi-SERVO Adoption

MAS

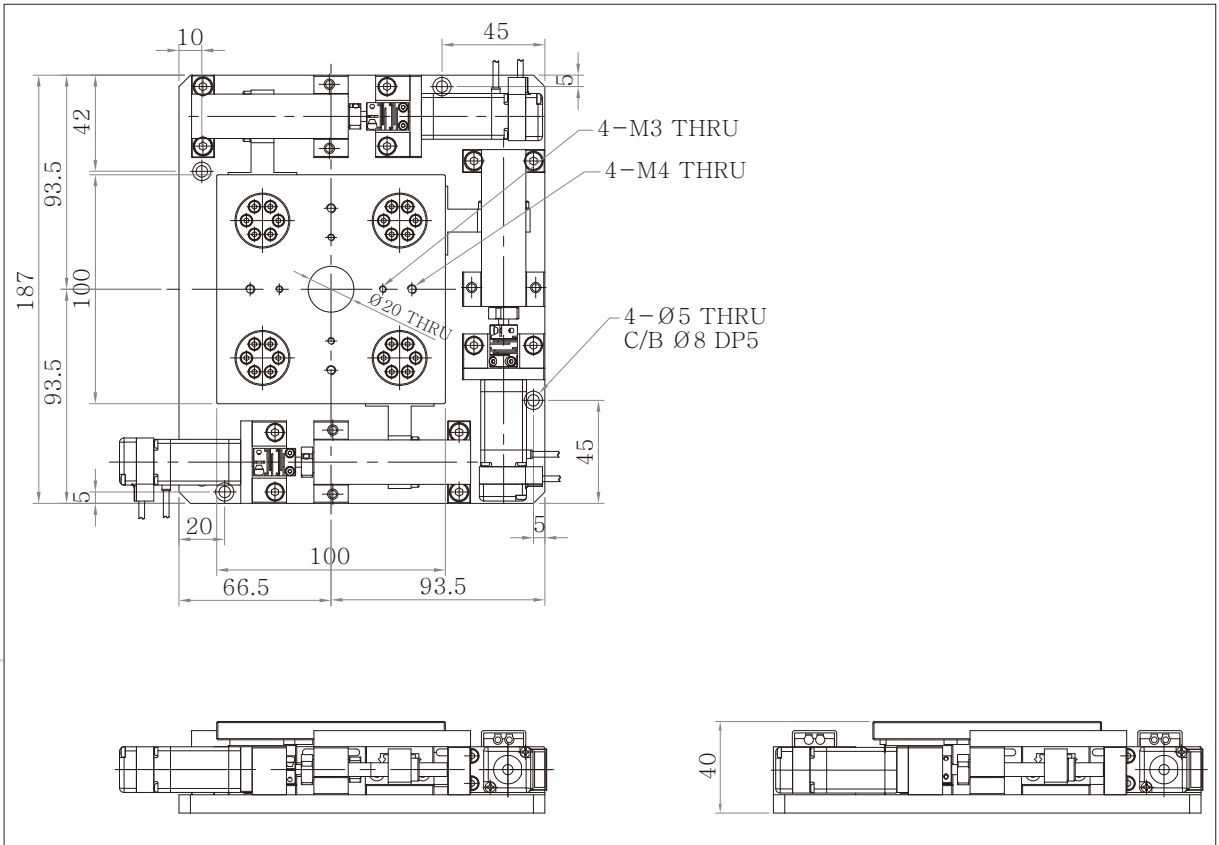


● Ultra slim UVW Alignment Stage (JAS-100)

Table Size : 100 x 100



■ Ezi-Robo-MAS-PR-MI-20L-F-JAS-100



FASTECH Ezi-Robo MAS

● Main Features

- Ultra Slim Automatic UVW Alignment Stage (Height : 40mm)
- Integrated V-Groove Rail
- Compatible with Z Axis Stage
- Closed Loop Stepping System

● Specification

Model Number	Ezi-Robo-MAS-PR-MI-20L-F-JAS-100		
Axis	X	Y	θ
Table size	100 X 100 [mm]		
Travel Range	± 5 [mm]	± 5 [mm]	± 5 [°]
Height	40 [mm]		
Guide	V-Groove Rail		
Mechanical Type	Ball Screw $\phi 6$ [mm] Lead 1 [mm] (C5 Grade)		
Resolution*1	2 [μ m]		
Repeatability	± 1 [μ m]		
Accuracy	± 5 [μ m]		
Max. Speed*2	10 [mm/sec]	-	
Load capacity	5 [kgf]		
Straightness	0,01 [mm]		
Material	Aluminum		
Motor	EzM-20L-F (Encoder Resolution 4,000[ppr])		
Cautions	<p>*1 Specification based on EzM-20L-F Motor resolution as 500[Step/rev].</p> <p>*2 Max. speed is 5[kpps] under EzM-20L-F Motor resolution as 500[Step/rev]. Please be careful not to set operation speed over Max. speed 5[kpps].</p>		

● Applications

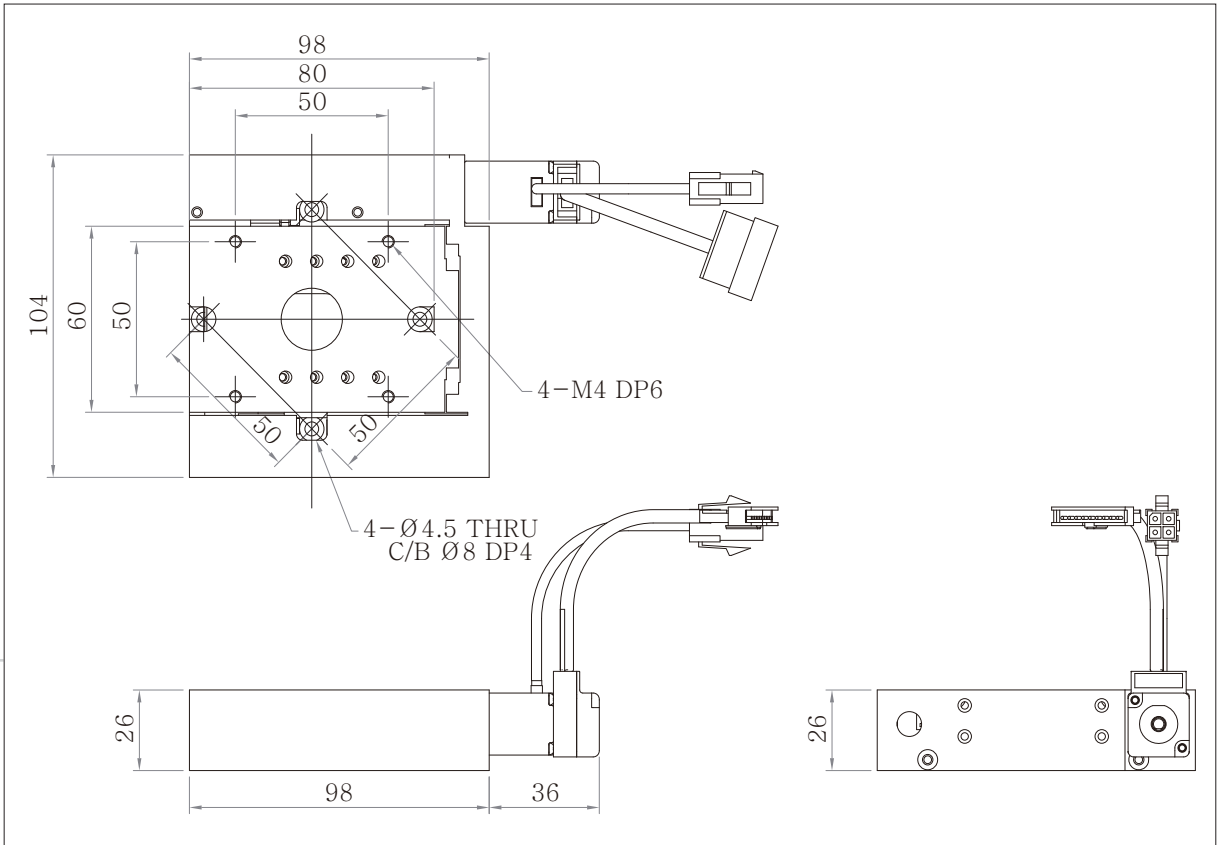
- Mini substrate alignment measurement and bonding for LCD or OLED etc
- Mark Alignment of Screen printing
- Probe Inspection Machine
- Circular Glass Cutting Process
- Optical equipment, Medical Instrument, Bio Device Alignment and Evaluation

● Ultra Slim Vertical Linear Stage (JVH-060, JVV-060)

Table Size : 60 x 60

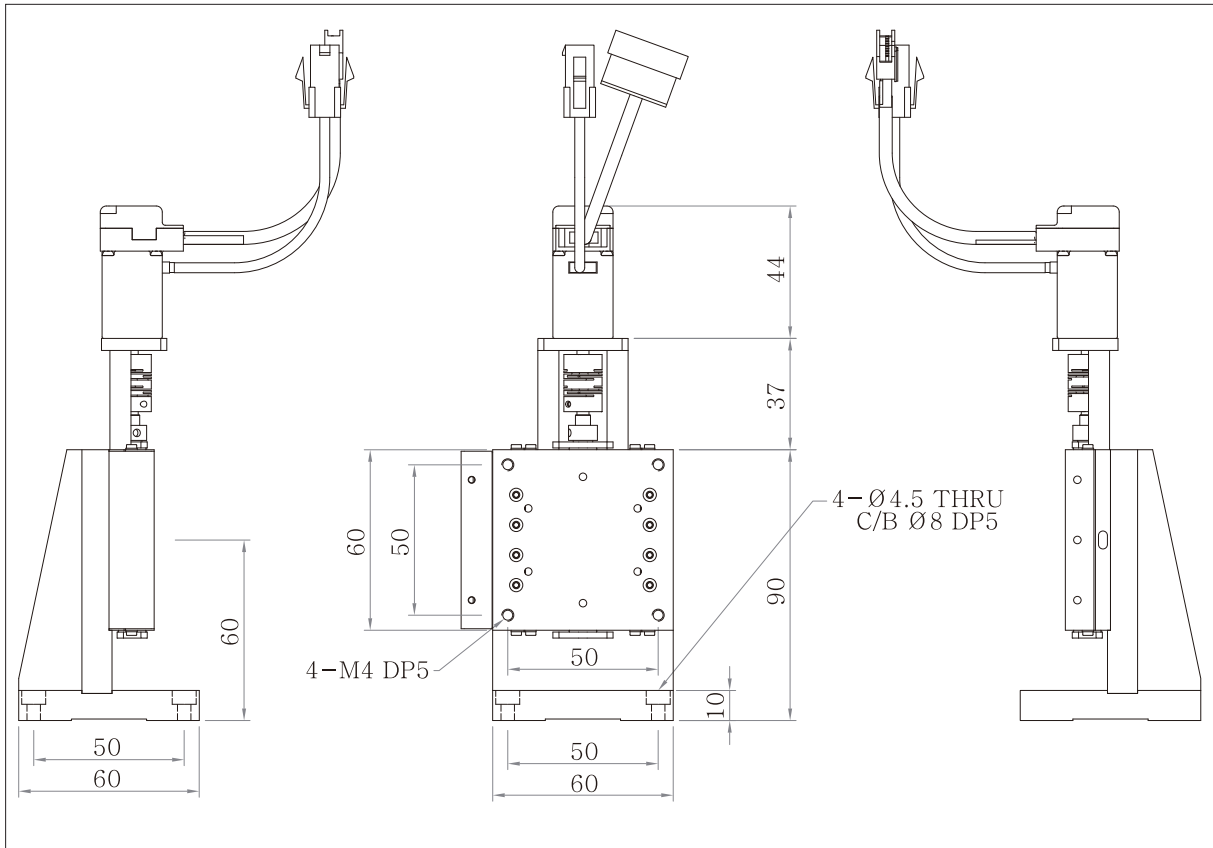


■ Ezi-Robo-MAS-PR-MI-20L-F-JVH-060



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■ Ezi-Robo-MAS-PR-MI-20L-F-JVV-060



● Main Features

- The most slim Z Axis Stage in the world (Height : 26mm)
- A Incline slide type Z Axis Stage
- Cross-Roller Guide
- Compatible with UVW Alignment stage
- Closed Loop Stepping System

● Specification

Model Number	Ezi-Robo-MAS-PR-MI-20L-F-JVH-060	Ezi-Robo-MAS-PR-MI-20L-F-JVV-060
Axis	Z	Z
Table size	60 X 60 [mm]	60 X 80 [mm]
Travel Range	±2 [mm]	±3 [mm]
Height	26 [mm]	39 [mm]
Guide	Cross Roller	
Mechanical Type	Ball Screw $\Phi 6$ [mm] Lead 1 [mm] (C5 Grade)	
Resolution*1	2 [μ m]	2 [μ m]
Repeatability	±1 [μ m]	
Accuracy	±5 [μ m]	
Max. Speed*2	3 [mm/sec]	
Load capacity	5 [kgf]	
Straightness	0,01 [mm]	
Material	Aluminum	
Motor	EzM-20L-F (Encoder Resolution 4,000[ppr])	
Cautions	*1 Specification based on EzM-20L-F Motor resolution as 500[Step/rev]. *2 Max. speed is 1,500[pps] under EzM-20L-F Motor resolution as 500[Step/rev]. Please be careful not to set operation speed over Max. speed 1,500[pps].	

● Applications

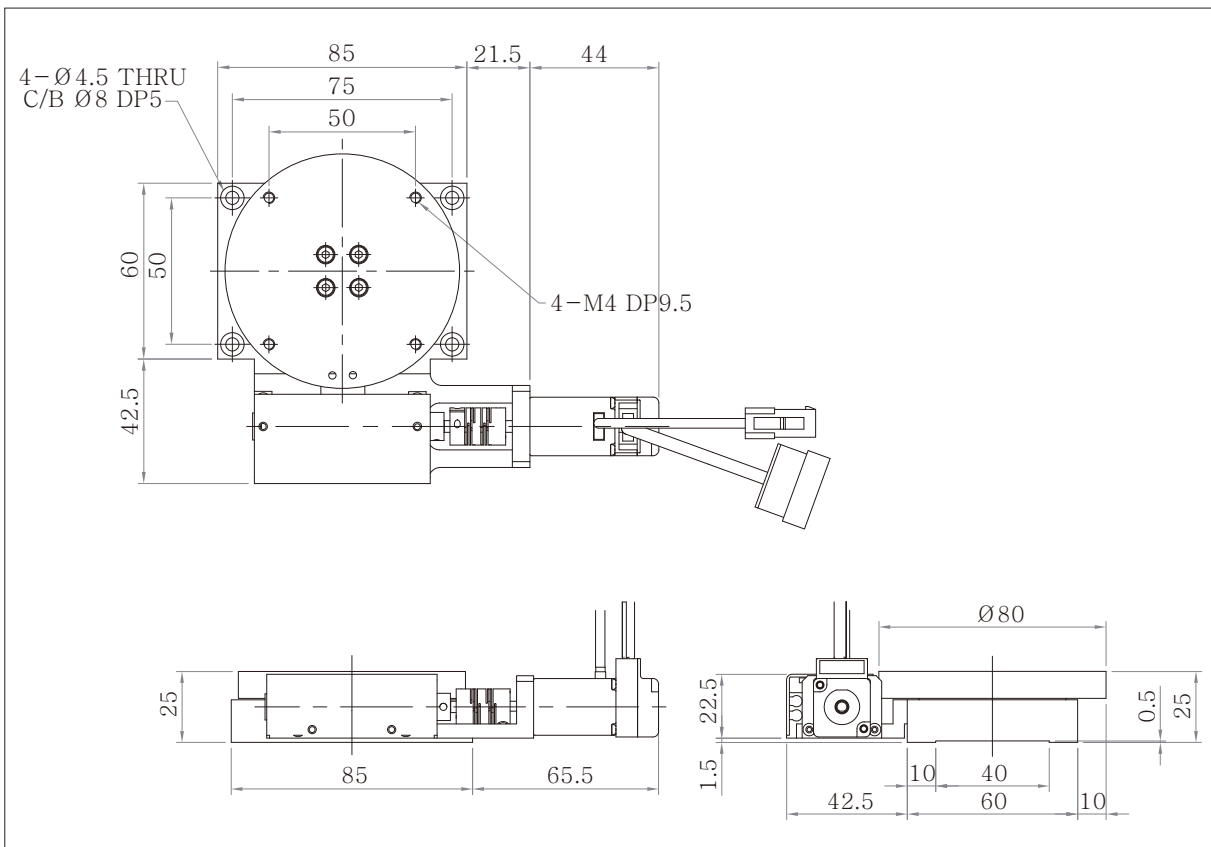
- Roll Cutting / Laser Cutting
- Viscosity liquid dispensing
- Bio slice cutting
- Film Punching Unit
- Imaging Inspection Device (Microscope Up Down Movement)
- Laser Welding
- Focusing

● Ultra Slim θ Axis Rotary Stage (JRS-060)

Table Size : $\varnothing 80$



■ Ezi-Robo-MAS-PR-MI-20L-F-JRS-060



● Main Features

- Ultra Slim Rotary Axis (θ Axis) Stage (Height : 25mm)
- Compatible with X,Y,Z Axis Stage
- Ball Screw Break Away prevent construction patent applied stage
- Closed Loop Stepping System

● Specification

Model Number	Ezi-Robo-MAS-PR-MI-20L-F-JRS-060
Axis	θ
Table size	$\varnothing 80$ [mm]
Travel Range	± 5 [°]
Height	25 [mm]
Guide	Cross Roller
Mechanical Type	Ball Screw $\varnothing 6$ [mm] Lead 1 [mm] (C5 Grade)
Resolution*1	0,00216 [°]
Repeatability	$\pm 0,003$ [°]
Max. Speed*2	10 [°/sec]
Load capacity	5 [kgf]
Backlash	$\pm 0,01$ [°]
Lost Motion	$\pm 0,003$ [°]
Material	Aluminum
Motor	EzM-20L-F (Encoder Resolution 4,000[ppr])
Cautions	*1 Specification based on EzM-20L-F Motor resolution as 500[Step/rev]. *2 Max. speed is 4,629[pps] under EzM-20L-F Motor resolution as 500[Step/rev]. Please be careful not to set operation speed over Max. speed 4,629[pps].

● Applications

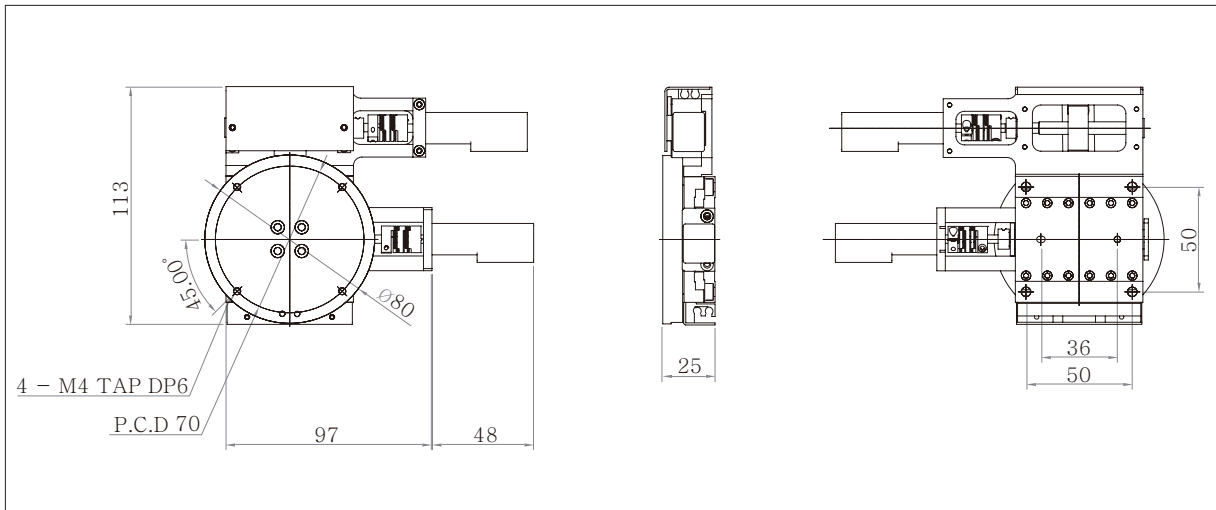
- Polarization Filter
- Laser spectrum Mirror angle control
- Pan Tilt Camera Mount
- Bio slice cutting
- Wafer Inspection
- Antenna Position Control
- Laser Welding

● Ultra Slim Yθ Axis Rotary Stage (JRY-060)

Table Size : Ø80



■ Ezi-Robo-MAS-PR-MI-20L-F-JRY-060



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● Main Features

- Ultra Slim Linear and Rotary Axis (Yθ Axis) Stage (Height : 25mm)
- Compatible with X, Z Axis Stage
- Ball Screw Break Away prevent construction patent applied stage
- Closed Loop Stepping System

● Specification

Model Number	Ezi-Robo-MAS-PR-MI-20L-F-JRY-060	
Axis	Y	θ
Table size	60 X 60 [mm]	Ø80 [mm]
Travel Range	±10 [mm]	±5 [°]
Height	25 [mm]	
Guide	Cross Roller	
Mechanical Type	Ball Screw Φ6 [mm] Lead 1 [mm] (C5 Grade)	
Resolution*1	2 [μm]	0,00216 [°]
Repeatability	±1 [μm]	± 0,003 [°]
Accuracy	±5 [μm]	-
Max. Speed*2	10 [mm/sec]	10 [°/sec]
Load capacity	5 [kgf]	
Backlash	-	± 0,01 [°]
Lost Motion	-	± 0,003 [°]
Material	Aluminum	
Motor	EzM-20L-F (Encoder Resolution 4,000[ppr])	
Cautions	<p>*1 Specification based on EzM-20L-F Motor resolution as 500[Step/rev].</p> <p>*2 Max. speed is 5,000[pps] for linear movement axis (Y Axis) and 4,629[pps] for rotary axis under EzM-20L-F Motor resolution as 500[Step/rev]. Please be careful not to set operation speed over Max. speed 5,000[pps] for linear movement axis and 4,629[pps] for rotary axis.</p>	

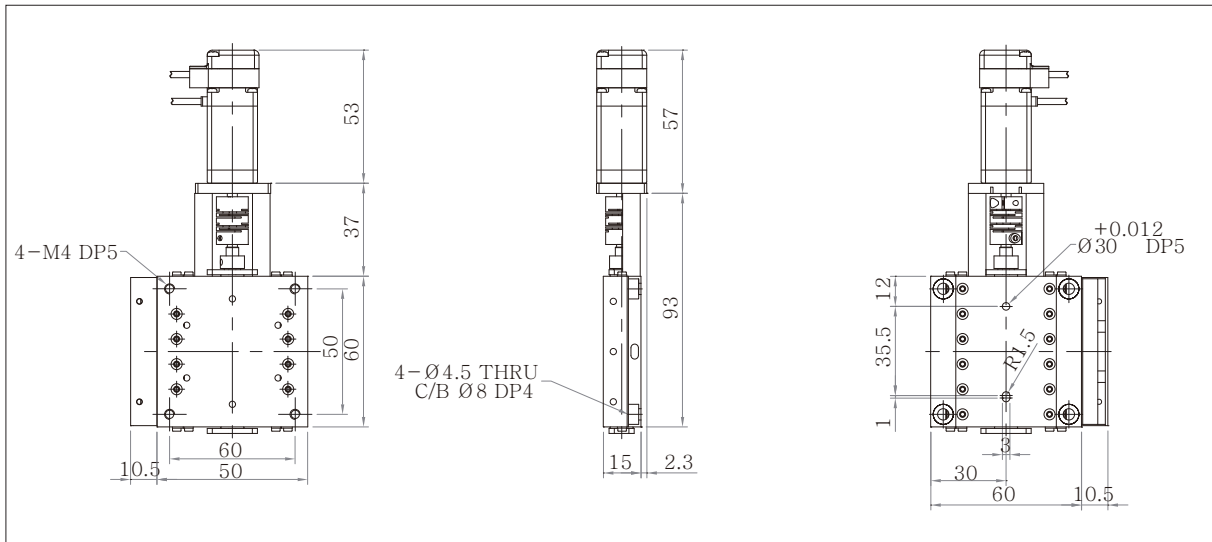
● Applications

- Polarization Filter
- Laser spectrum Mirror angle control
- Pan Tilt Camera Mount
- Bio slice cutting
- Wafer Inspection
- Antenna Position Control
- Laser Welding

● Ultra Slim Linear Stage (JLX-060, JLXY-060, JLX-070, JLXY-070)
Table Size : 60 x 60, 70 x 70

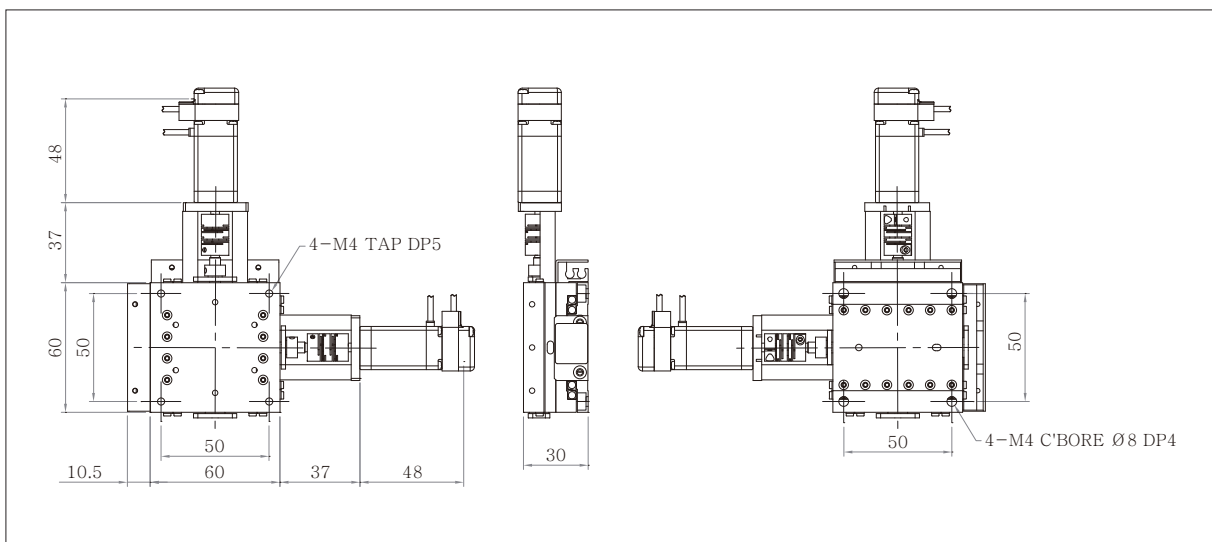


■ Ezi-Robo-MAS-PR-MI-20L-F-JLX-060

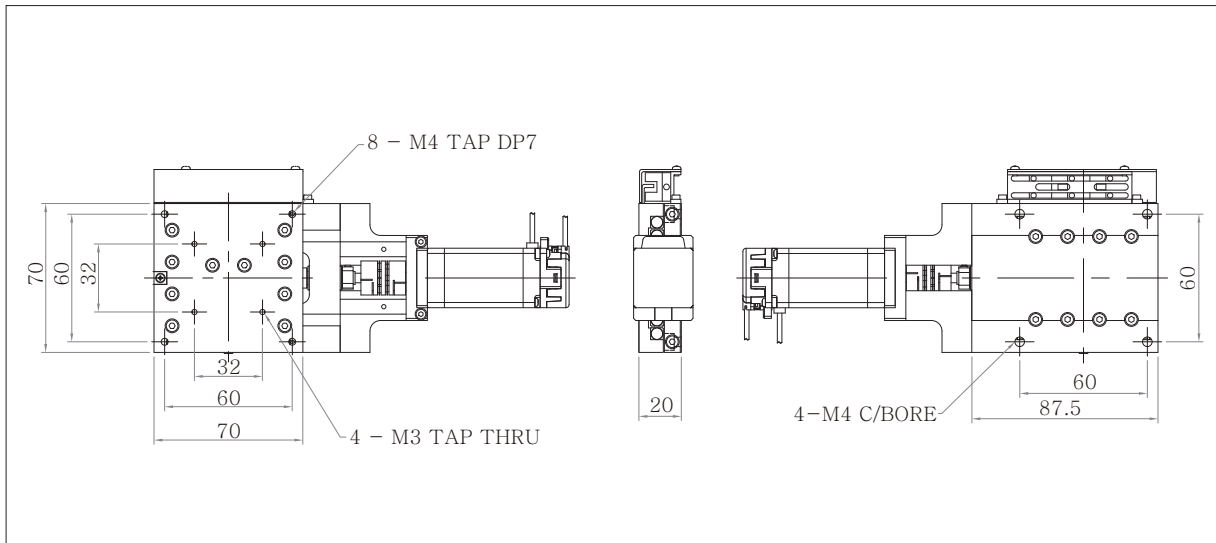


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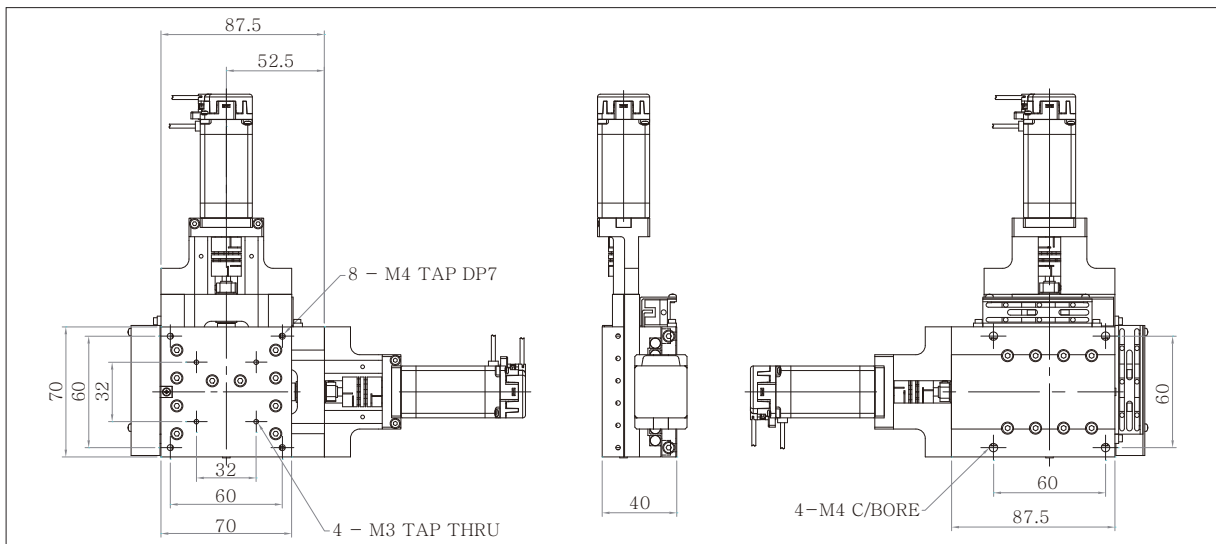
■ Ezi-Robo-MAS-PR-MI-20L-F-JLXY-060



■ Ezi-Robo-MAS-PR-MI-28L-D-JLX-070



■ Ezi-Robo-MAS-PR-MI-28L-D-JLXY-070



● Main Features

- Ultra Slim Linear (X, XY Axis) Stage (Height : 25mm)
- Compatible with X, Z Axis Stage
- Closed Loop Stepping System

● Specification

Model Number	Ezi-Robo-MAS-PR-MI-20L-F-JLX-060	Ezi-Robo-MAS-PR-MI-20L-F-JLXY-060	Ezi-Robo-MAS-PR-MI-28L-D-JLX-070	Ezi-Robo-MAS-PR-MI-28L-D-JLXY-070
Axis	X	XY	X	XY
Surface Size	60 x 60 [mm]		70 x 70 [mm]	
Travel Range	±10 [mm]		±10 [mm]	
Travel Guide	Cross Roller			
Height	15 [mm]	30 [mm]	20 [mm]	40 [mm]
Guide	Cross Roller			
Mechanical Type	Ball Screw Φ 6 [mm] Lead 1 [mm] (C5 Grade)			
Resolution	2 [μ m]		2 [μ m]	
Repeatability	±1 [μ m]		±3 [μ m]	
Accuracy	±5 [μ m]		±5 [μ m]	
Max. Speed	10[mm/sec]		10[mm/sec]	
Load capacity	5 [kgf]		9 [kgf]	
Straightness	0,01 [mm]		0,01 [mm]	
Material	Aluminum			
Motor	EzM-20L-F	EzM-20L-F	EzM-28L-D	EzM-28L-D
Cautions	<p>*1 Specification based on EzM-20L-F Motor resolution as 500[Step/rev].</p> <p>*2 Max. speed is 5[kpps] under EzM-20L-F Motor resolution as 500[Step/rev]. Please be careful not to set operation speed over Max. speed 5[kpps].</p>			

● Applications

- Imaging Inspection Device (Microscope Up Down Movement)
- Extra fine (Laser diode and etc) Alignment and Insert
- Viscosity liquid dispensing
- Roll / Laser Cutting
- Fine Laser Machining
- Laser Welding

● Optimized Ezi-SERVO Plus R series for PC based Alignment System Structure



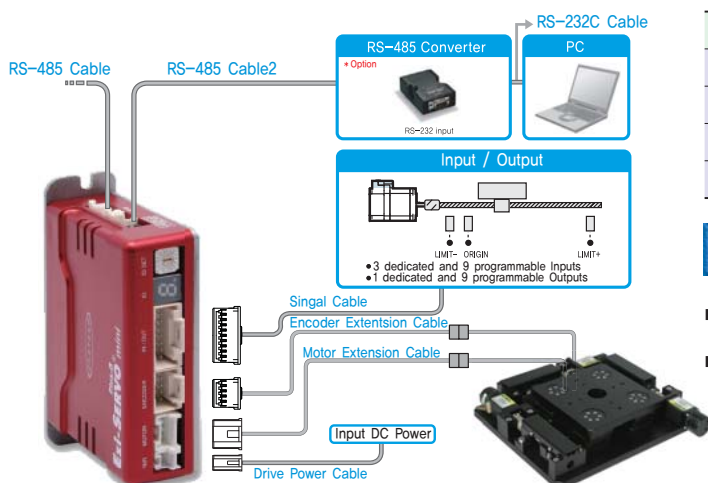
- Provide DLL Library for PC (Windows) Interface
- Positioning Control by RS-485 Network (Controller Embedded)
- PR-MI Type (controller embedded, Mini type) and ST-MI Type (Pulse input type, Mini type) is selectable
- Non-use of Motion Board simplify operation, reduce cost and wiring

● Maximize convenience for Multi-axes stage structure, S-SERVO-2X/3X Series



- S-SERVO-2X, 3X Series provides convenience of control for multi-axes structure as 2 Axes, 3 Axes, 4 Axes etc.
- Cost Reduction Effect by multi axes control system
- Perfect replacement of 5 phase step motor using as standard motor for conventional stage
- Load dependant current control function enables to minimize motor temperature and cope with external sudden load variation onto upper plate of stage
- Boost current (Max. 150%) enables improvement of Acceleration and Decelarion characteristic and generation of high torque

● System Configuration



● Applicable Product Line-up

Products	Specifications
Ezi-SERVO-PR-MI	Controller Embedded, Mini Type
Ezi-SERVO-ST-MI	Pulse Input Type, Mini Type
S-SERVO ST	Pulse Input Type
S-SERVO 2X, 3X	Pulse Input Type, Multi Axes Type

● Parts

- Power Connector
- Signal Connector
- Encoer Connector
- Motor Connector

MEMO



Fast, Accurate, Smooth Motion

FASTECH Co., Ltd.

Rm #1202, Bucheon Technopark 401 Dong, Yakdea-dong,
Wonmi-Gu, Bucheon-si, Gyeonggi-do, Rep. Of Korea (Zip)420-734
TEL : 82-32-234-6300,6301 FAX : 82-32-234-6302
E-mail : fastech@fastech.co.kr Homepage : www.fastech.co.kr