



Ezi-SERVO II Plus-E ALL is an innovative closed loop stepping system that utilizes a high-resolution motor mounted encoder constantly to monitor the current position. The encoder feedback allows the Ezi-SERVOII to update the current position every 50 μsec . It allows the Ezi-SERVOII drive to compensate for the loss of position, ensuring accurate positioning. For example, due to a sudden load change, a conventional stepper motor and drive could lose a step but Ezi-SERVOII automatically correct the position by encoder feedback.

Their main characteristics are :

- Motor + Encoder + Drive + Controller Integrated
- Ethernet Interface
- Closed Loop System
- No Gain Tuning
- No Hunting
- Heat Reduction
- Torque Improvement

Technical Data

Motor Model	Driver Model	Number of phases	Voltage	Current	Resistance	Inductance	Holding Torque	Rotor Inertia	Weights	Length (L)	Permissible Overhung Load (Distance from end of shaft)				
											3mm	8mm	13mm	18mm	
Units		-	VDC	A	Ohm	mH	Nm	$\text{g}\cdot\text{cm}^2$	g	mm	N				
Ezi-SERVOII-PE-ALL -42	42M	Ezi-SERVOII-PE-ALL -42	2	4,32	1,2	3,6	7,2	0,44	54	280	40	22	26	33	46
	42L		2	4,56	1,2	3,8	8,0	0,5	77	350	48	22	26	33	46
	42XL		2	7,2	1,2	6,0	15,6	0,65	114	500	60	22	26	33	46
Ezi-SERVOII-PE-ALL -56	56S	Ezi-SERVOII-PE-ALL -56	2	1,56	3,0	0,52	1,2	0,64	180	500	46	52	65	85	123
	56M		2	1,62	3,0	0,54	2,0	1,0	280	720	55	52	65	85	123
	56L		2	2,64	3,0	0,88	4,0	1,5	520	1150	80	52	65	85	123
Ezi-SERVOII-PE-ALL -60	60S	Ezi-SERVOII-PE-ALL -60	2	1,32	4,0	0,33	0,75	0,88	240	600	47	70	87	114	165
	60M		2	1,48	4,0	0,37	1,1	1,28	490	1000	56	70	87	114	165
	60L		2	2,2	4,0	0,55	2,7	2,4	690	1300	85	70	87	114	165
Ezi-SERVOII-PE-ALL -86	86M	Ezi-SERVOII-PE-ALL -86	2	2,34	6,0	0,39	3,0	4,5	1800	2300	78	270	300	350	400
	86L		2	3,6	6,0	0,6	6,5	8,5	3600	3800	117	270	300	350	400
	86XL		2	4,8	6,0	0,8	8,68	12	5400	5300	155	270	300	350	400

SPECIFICATIONS

SPECIFICATIONS OF MOTOR

Drive Method	BI-POLAR	
Permissible Thrust Load (N)	Lower than motor weight	
Insulation Resistance (Mohm)	100 MIN.(at 500 VDC)	
Insulation Class	CLASS B(130°C)	
Operating Temperature (°C)	0 to 55	

SPECIFICATIONS OF DRIVE

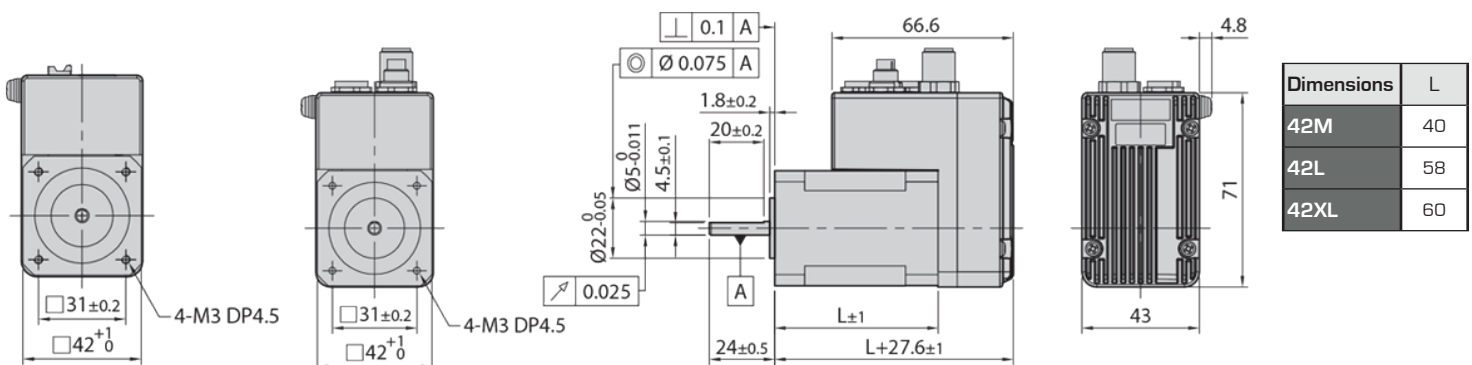
Input Voltage	24 VDC \pm 10%	40-70 VDC for Ezi-SERVOII-PE-ALL -86
Control Method	Closed loop control with 32bit MCU	
Curent Consumption	Max 500mA (Except motor current)	
Operating Condition	Ambient Temperature	In use : 0 - 50°C / In storage : -20 - 70°C
	Humidity	In use : 35 - 85% RH (Non-Condensing) / In storage : 10 -90% RH (Non-Consending)
	Vib.Resist	0,5g
Function	Rotation Speed	0 - 3,000 [rpm] *1
	Resolution (ppr)	Encoder A : 10,000(ppr) : 500 1,000 1,600 2,000 3,600 5,000 6,400 7,200 10,000 Encoder B : 20,000(ppr) : 500 1,000 1,600 2,000 3,600 5,000 6,400 7,200 10,000 20,000 (Selectable by parameter)
	Protection Functions	Over Current Error, Over Speed Error, Position Tracking Error, Over Load Error, Over Temperature Error, Over Regenerated Voltage Error, Motor Connect Error, Encoder Connect Error, In-Position Error, ROM Error, Position Overflow Error
I/O Signal	Input Signals	3 dedicated inputs (LIMIT+, LIMIT-, ORIGIN), 3 programmable inputs (Photocoupler)
	Output Signals	1 dedicated output (Compare Out), 1 programmable output (Photocoupler), Brake

* 1 : Up to the resolution of 10,000[ppr], maximum speed can be reached by 3,000[rpm] and with the resolution more than 10,000[ppr], maximum speed shall be reduced accordingly.

DRAWING

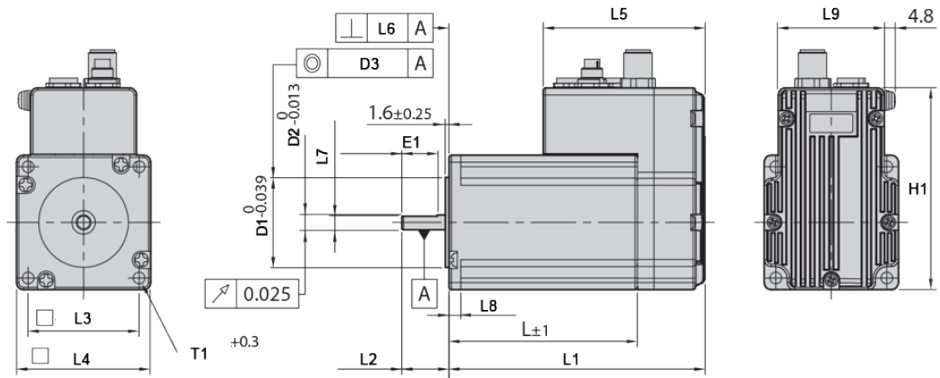
◆ R TYPE

◆ M TYPE

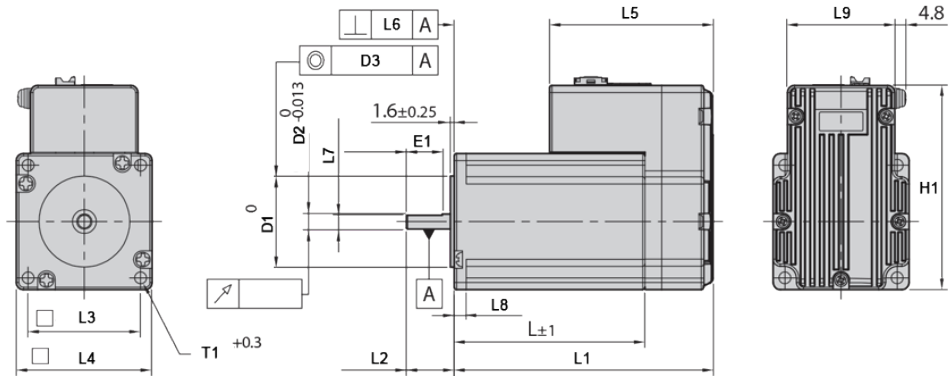


DRAWING

◆ M TYPE



◆ R TYPE



Dimensions	L	L1	L2	L3	L4	L5	L6	L7	L8	L9	H1	D1	D2	D3	T
	46														
56M	55	L+28,6±1	20±0,5	47,14±0,2	57,15±0,25	68,6	0,1	5,8±0,15	5±0,25	45	85,5	Ø38,1-0,039	Ø6,35	Ø0,075	4-Ø5-0 THRU
56L	80														
60S	47														
60M	56	L+28,6±1	20,6±0,5	50±0,25	60±0,5	68,6	0,1	5,8±0,15	2-75±0,1	45	68,6	Ø36-0,09	Ø8	Ø0,075	4-Ø5-0 THRU
60L	85														
86M	78														
86L	117	L+36,6±1	37±1	69,5±0,2	86±0,5	106,6	0,076	2-13-0,1	10±0,5	58	115	Ø73-0,05	Ø14	Ø0,076	4Ø6,5-0 THRU
86XL	155														

PART NUMBER COMPOSITION

Ezi-SERVO II PE-ALL-56L-A-BK-PN05-M-X



① Drive Series Type
PE-ALL: Ethernet ALL

② Motor Flange Size
42 : 42mm
56 : 56mm
60 : 60mm
86 : 86mm

③ Motor Length
S : Small
M : Medium
L : Large
XL : Extra Large

④ Encoder Resolution
A : 10,000(ppr)
B : 20,000(ppr)

⑤ Brake
Blank : Without
BK : Brake

⑥ Reduction Gear Ratio
Blank - Without Gear
PN03 - 1:3
PN05 - 1:5
PN08 - 1:8
PN10 - 1:10
PN15 - 1:15
PN25 - 1:25
PN40 - 1:40
PN50 - 1:50

⑦ Connector Type
M: M Connector Type
R: RJ45 Connector Type

⑧ User Code

In accordance with our policy of continual product improvement, A2V reserves the right to amend the specification of these products without prior notification