



Ezi-STEP II EtherCAT is stepping motor control system using EtherCAT, high speed ethernet (100Mbps Full-Duplex) based fieldbus. Ezi-STEP II EtherCAT is EtherCAT slave module which support CAN application layer over EtherCAT (CoE). CiA 402 Drive profile implemented. Supported modes are Profile Position Mode, Homing Mode, Cyclic Synchronous Position Mode

Their main characteristics are :

- CiA 402 Drive Profile Support
- Micro Stepping
- Software Damping
- 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	g.cm ²	g	mm	N				
BM-20	20M	EzT2-EC-20	2	2,75	0,5	5,5	2,0	0,016	2,5	53	28	18	30	-	-
	20L		2	3,0	0,5	6,0	2,6	0,025	3,3	78	38	18	30	-	-
BM-28	28S	EzT2-EC-28	2	3,0	0,95	3,2	2,0	0,069	9,0	115	32	30	38	53	-
	28M		2	3,0	0,95	3,2	2,7	0,098	13	174	45	30	38	53	-
	28L		2	3,0	0,95	3,2	3,2	0,118	18	202	50	30	38	53	-
BM-42	42S	EzT2-EC-42	2	3,36	1,2	2,8	5,4	0,32	35	238	34	22	26	33	46
	42M		2	4,32	1,2	3,6	7,2	0,44	54	303	40	22	26	33	46
	42L		2	4,56	1,2	3,8	8,0	0,5	77	374	48	22	26	33	46
	42XL		2	7,2	1,2	6,0	15,6	0,65	114	508	60	22	26	33	46
BM-56	56S	EzT2-EC-56	2	1,56	3,0	0,52	1,2	0,64	180	548	46	52	65	85	123
	56M		2	1,62	3,0	0,54	2,0	1,0	280	726	55	52	65	85	123
	56L		2	2,64	3,0	0,88	4,0	1,5	520	1159	80	52	65	85	123
BM-60	60S	EzT2-EC-60	2	1,32	4,0	0,33	0,75	0,88	240	616	47	70	87	114	165
	60M		2	1,48	4,0	0,37	1,1	1,28	490	793	56	70	87	11	165
	60L		2	2,2	4,0	0,55	2,7	2,4	690	1349	85	70	87	114	165

SPECIFICATIONS

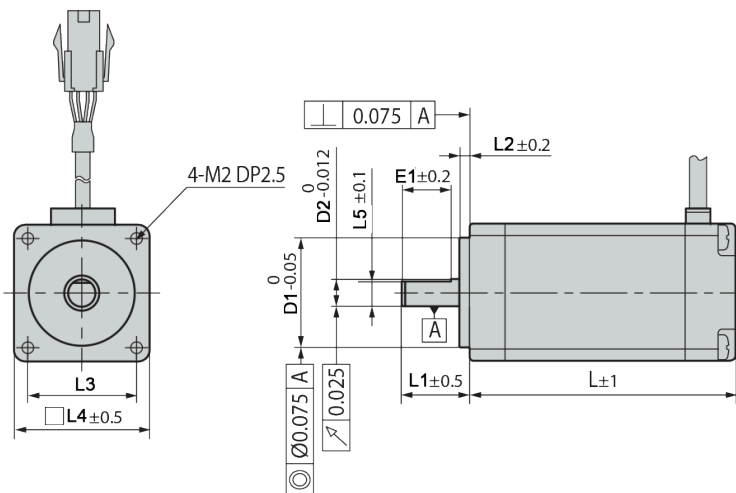
SPECIFICATIONS OF MOTOR

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

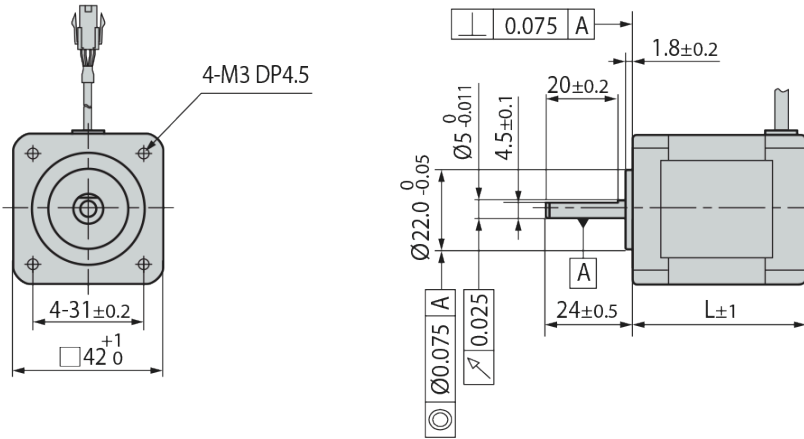
Input Voltage	24 VDC \pm 10%	
Control Method	Closed loop control with 32bit MCU	
Curent Consumption	Max 500mA (Except motor current)	
Operating Condition	Ambient Temperature	In use : 0 - 50°C / In storage : -20 - 70°C
	Humidity	In use : 35 - 85% RH (Non-Condensing) / In storage : 10 -90% RH (Non-Consending)
	Vib.Resist	0,5g
Function	Rotation Speed	0 - 3,000 (rpm)
	Resolution (ppr)	500 1,000 1,600 2,000 3,200 3,600 4,000 5,000 6,400 8,000 10,000 20,000 25,000 36,000 40,000 50,000 (Selectable by parameter) *Default: 10,000
	Protection Functions	Over Current Error, Over Speed Error, Over Temperature Error, Over Regenerated Voltage Error, Motor Connect Error, ROM Error
	LED Display	Power Status, Alarm Status, Run Status, STEP On Status
EtherCAT	Supported Protocol	CoE (CiA402 Drive Profile), FoE (Firmware Download)
	Supported Mode	Profile Position Mode, Homing Mode, Cyclic Synchronous Position Mode
	Synchronization	Free Run, SM Event, DC SYNC Event
I/O Signal	Input Signals	3 dedicated inputs (LIMIT+, LIMIT-, ORIGIN), 7 user inputs
	Output Signals	6 user outputs (Photocoupler), Brake

DRAWING

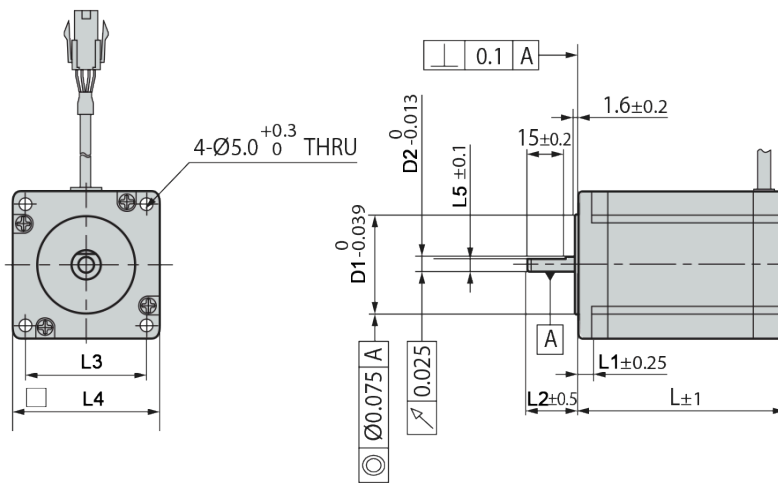


Dimensions	L	L1	L2	L3	L4	L5	D1	D2	E1
BM-20M	28	10	1.5	4-16 \pm 0,1	20	3,5	Ø16	Ø4	7
BM-20L	38								
BM-28S	32	15	2	4-23 \pm 0,15	28	4,5	Ø22	Ø5	10
BM-28M	45								
BM-28L	50								

DRAWING



Dimensions	L
EzM2-28SM	32
EzM2-28MM	45
EzM2-28LM	50
EzM2-35MM	32



Dimensions	L	L1	L2	L3	L4	L5	D1	D2
BM-56S	46							
BM-56M	55	5	20	4-47,14±0,2	57,15±0,25	5,8	Ø38,1	Ø6,35
BM-56L	80							
BM-60S	47							
BM-60M	56	6,3	20,6	4-50±0,25	60±0,5	2-75	Ø8,36	Ø8,0
BM-60L	85							

PART NUMBER COMPOSITION

Ezi-STEP II EC-42S-BK-X

1 2 3 4 5

1 Drive Series Type
EC : EtherCAT

2 Motor Flange Size
20 : 20mm
28 : 28mm
35 : 35mm
42 : 42mm
56 : 56mm
60 : 60mm

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

4 Brake
Blank : Without Brake
BK : Brake

5 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