

AVA Series Rectangular Voice Coil Motors



- ✚ Direct drive, zero cogging, zero backlash voice coil motors
- ✚ Low coil mass with very fast response and bandwidth
- ✚ No contact between coil and core movement (no wear and tear)
- ✚ Smooth motion at low speeds with limitless resolution (depends on feedback device)

AVA Series Rectangular Voice Coil Actuators

Specifications

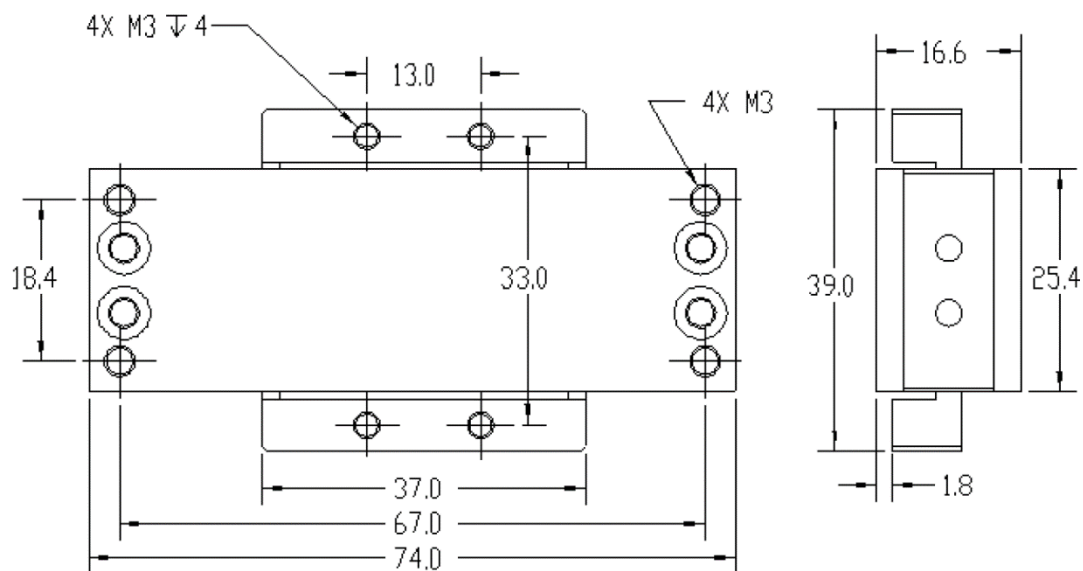
Model	Units	AVA1-20	AVA2-20	AVA3-20
Stroke	mm	20.0	20.0	20.0
Force sensitivity (at mid stroke)	N/A	1.92	8.35	9.40
Back EMF constant	V/m/s	1.92	8.35	9.40
Continuous force (at 100 °C)*	N	3.84	11.69	26.32
Peak force	N	11.5	35.1	79.0
Resistance**	ohms	1.4	3.7	1.6
Inductance**	mH	0.27	1.24	0.70
Voltage at peak force	V	24.0	24.0	24.0
Continuous current (coil at 100°C)*	A	2.0	1.40	2.80
Peak current	A	6.0	4.2	8.4
Max. voltage	VDC	60	60	60
Actuator constant	N/SqRt (W)	1.61	4.37	7.43
Continuous power (at 100°C)	W	5.68	7.15	12.54
Electrical time constant	ms	0.2	0.3	0.4
Mechanical time constant	ms	6.5	2.4	1.3
Clearance of coil	mm	0.60	0.60	0.60
Power at peak force	W	51.1	64.4	112.9
Thermal dissipation constant	W/°C	0.076	0.095	0.167
Max coil temperature	°C	155.0	155.0	155.0
Coil assembly mass	g	17.0	45.0	72.0
Core assembly mass	g	186.0	496.0	930.0

* Continuous force measured without any additional mounting plate or heat sink on coil.

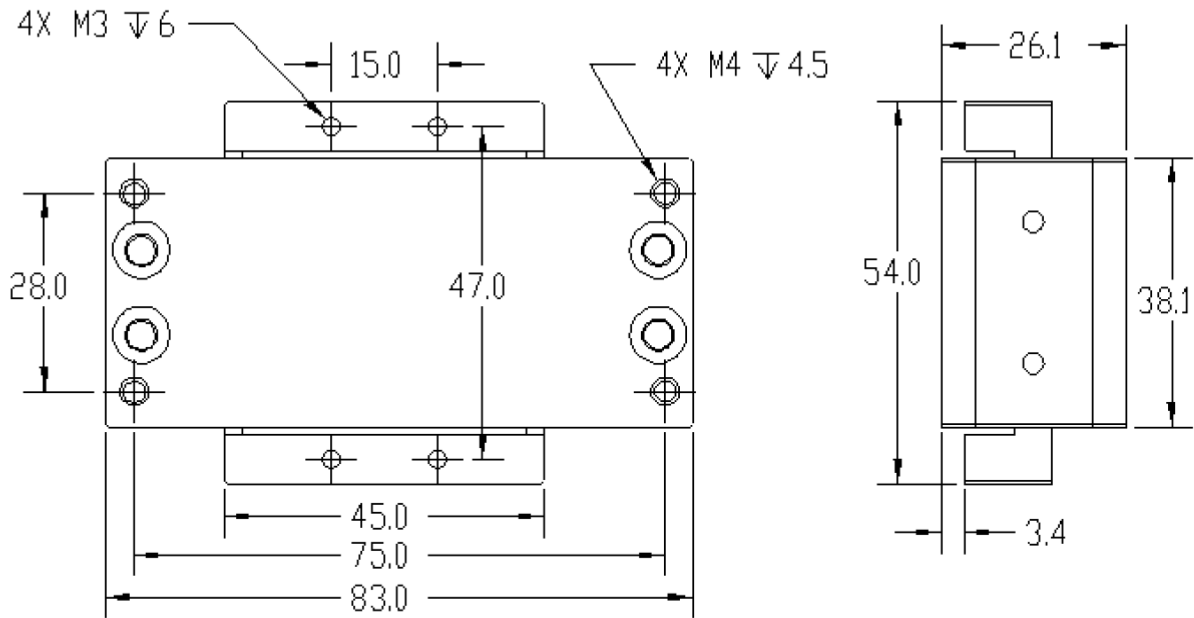
** Measured at 25°C

Dimensions (mm)

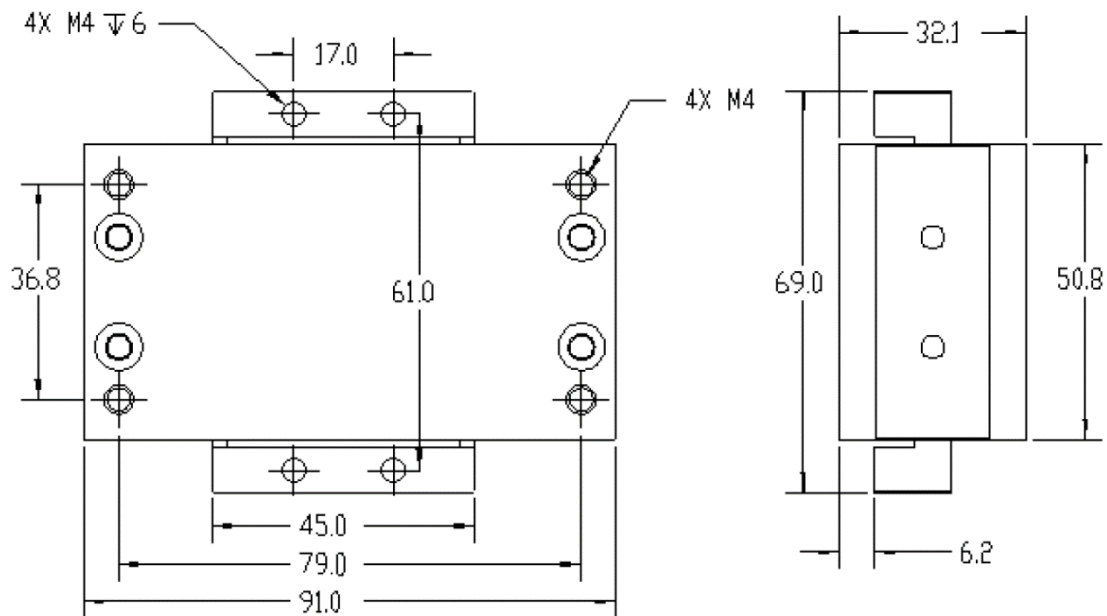
AVA 1



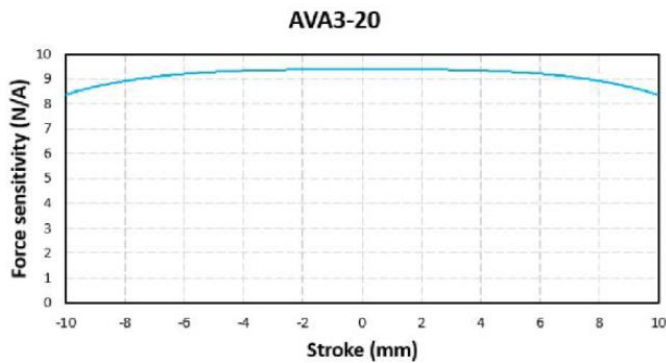
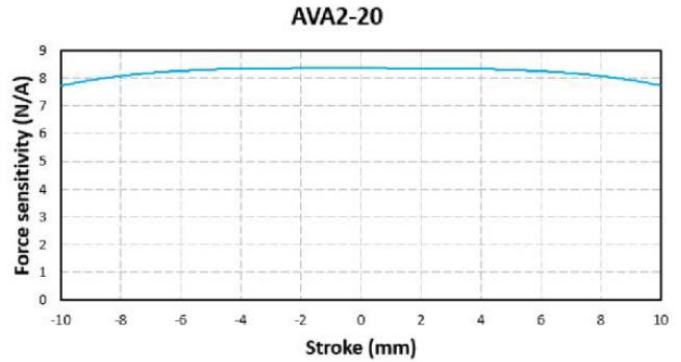
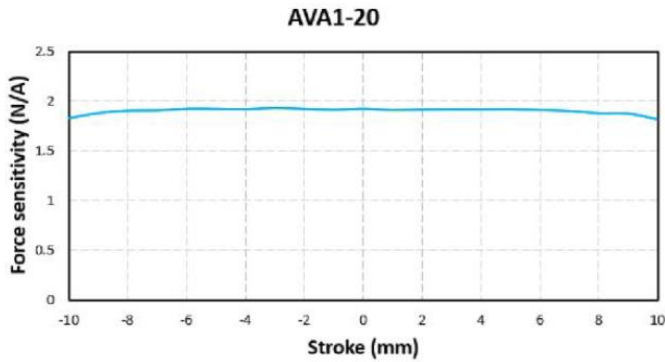
AVA 2



AVA 3



Force Constant Curve



Part Number Break-down

Model and stroke	Cable length (m)
AVA1-20	0.5
AVA2-20	
AVA3-20	

Part No. Example: AVM2-20-0.5

Matching Drives: DDP21, DDP51, ADL41