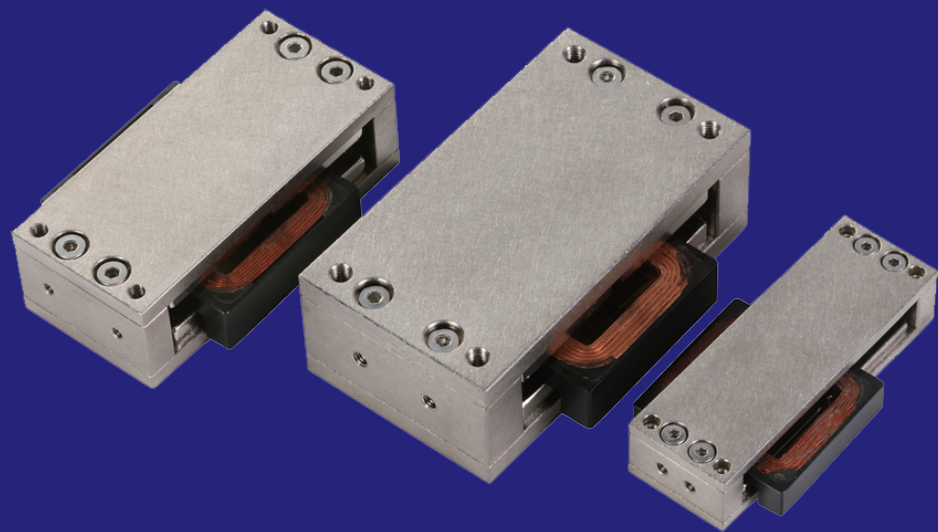




TDS Precision Products

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AVA Series



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

Specifications

Model	Units	AVA 1-20	AVA 2-20	AVA 3-20
Stroke	mm	20	20	20
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) ^①	N	3.84	11.69	26.32
Peak force	N	11.5	35.1	79.0
Resistance ^②	ohms	1.4	3.7	1.6
Inductance ^②	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	2.00	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	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

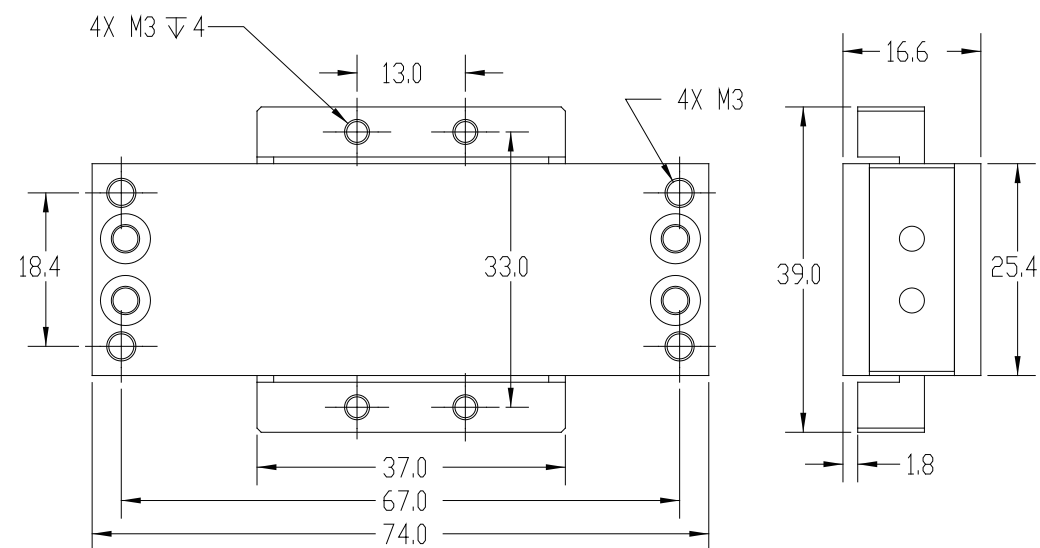
① Continuous force measured without any additional mounting plate or heat sink on coil

② Measured at 25 °C

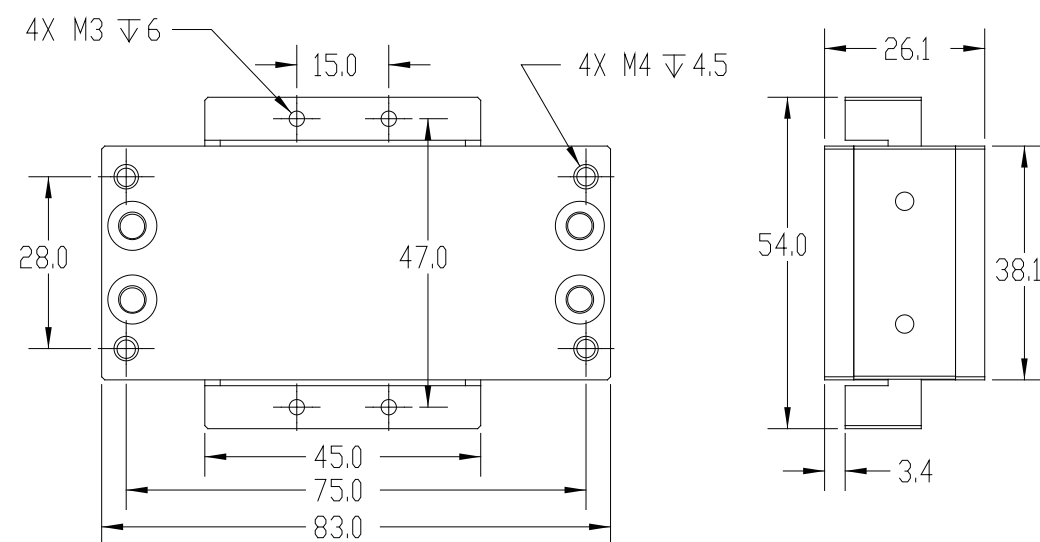
AVA

■ Dimensions

■ AVA 1–20



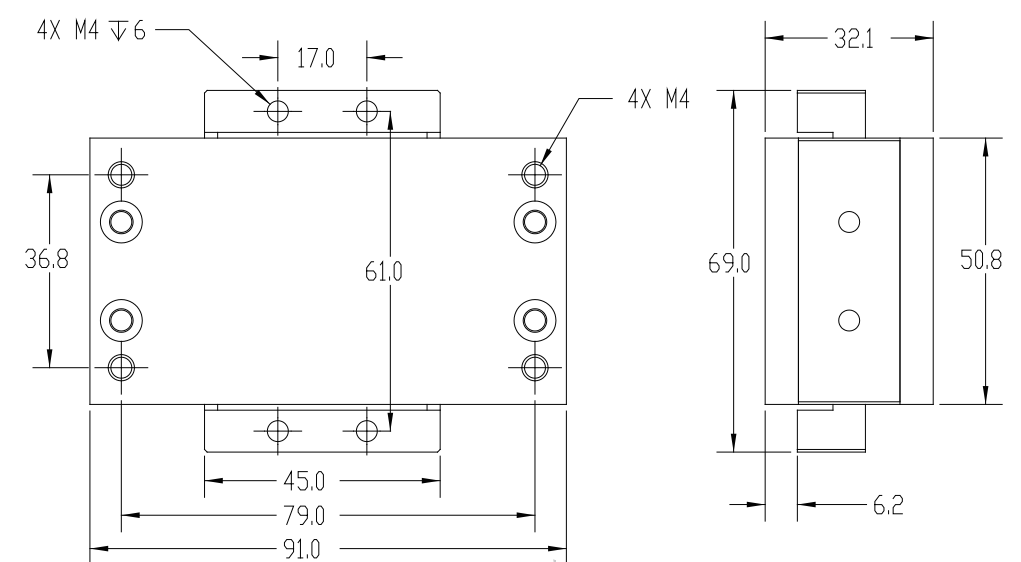
■ AVA –20



AVA

■ Dimensions

■ AVA 3–20



Part Numbering

AVA



Coil

AVA 1-20-0.5

Model & Stroke

AVA1

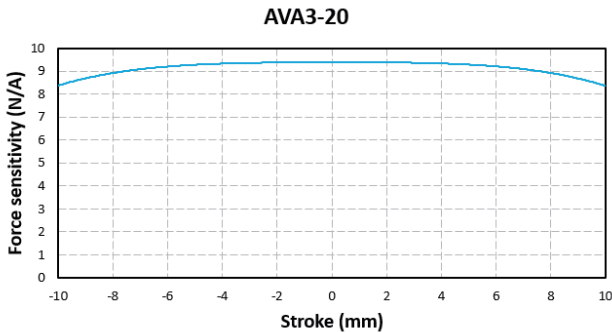
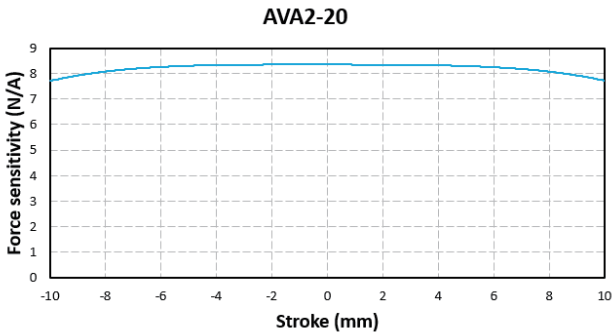
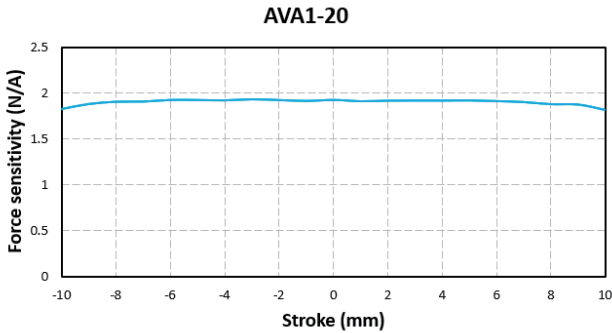
Cable Length (m)

0.5

Stroke (mm)

20

Force sensitivity



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