

AVA Series

Rectangular Voice Coil Motors



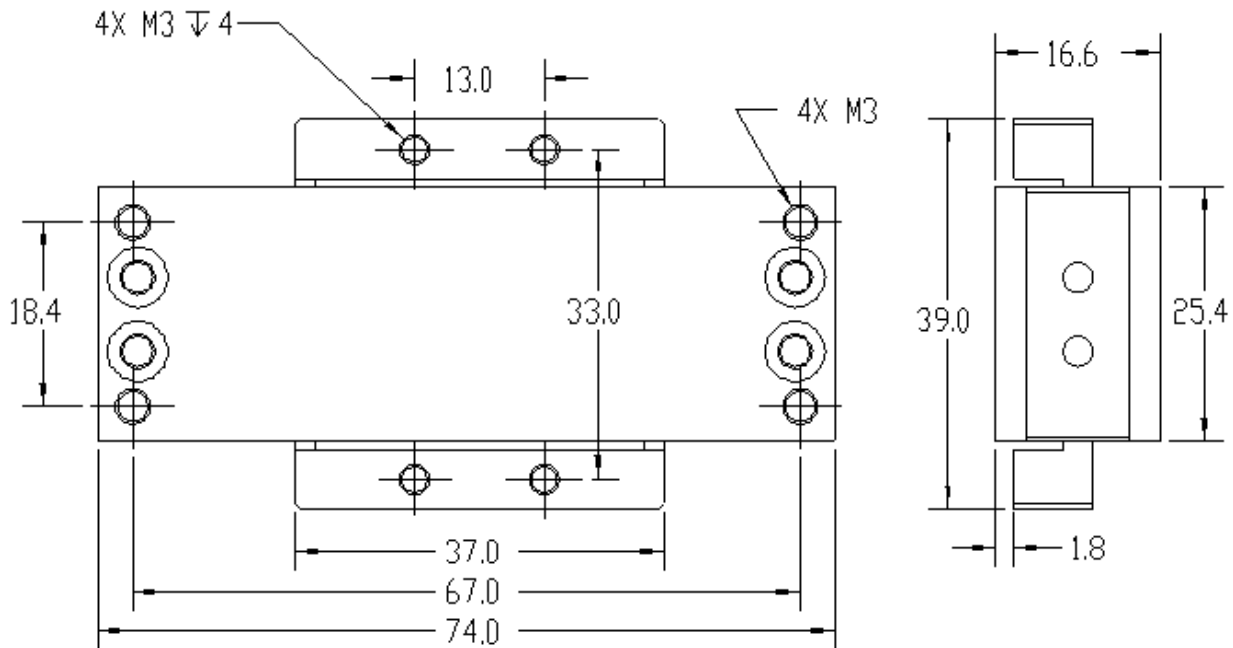
- Direct drive, zero cogging, zero backlash voice coil motors
- Low coil mass with very fast response and bandwidth
- No contact between coil and core movement (no wear and tear)
- Smooth motion at low speeds with limitless resolution
(depends on feedback device)

Motor Parameter

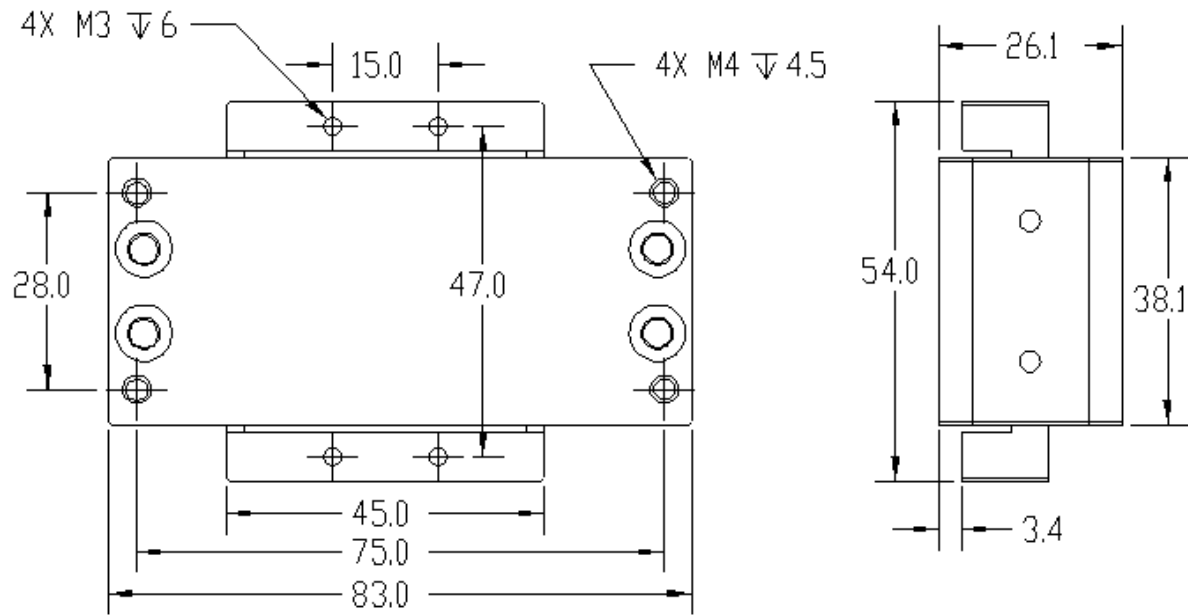
| Model | Units | AVA 1-20 | AVA 2-20 | AVA 3-20 |
|---|-----------|----------|----------|----------|
| Stroke | mm | 20 | 20 | 20 |
| Force sensivity (at mid stroke) | N/A | 1.37 | 7.20 | 6.40 |
| Back EMF constant | V/m/s | 1.37 | 7.20 | 6.40 |
| Continuous force (at 100 °C) ¹ | N | 2.74 | 10.08 | 17.92 |
| Peak force | N | 8.2 | 30.2 | 53.8 |
| Resistance ² | ohms | 1.4 | 3.4 | 1.5 |
| Inductance ² | mH | 0.26 | 1.60 | 0.68 |
| 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 |
| Actuator constant | N/SqRt(W) | 1.16 | 3.90 | 5.23 |
| Continuous power (at 100 °C) | W | 5.60 | 6.66 | 11.76 |
| Electrical time constant | ms | 0.2 | 0.5 | 0.5 |
| Mechanical time constant | ms | 12.7 | 3.0 | 2.6 |
| Clearance of coil | mm | 0.60 | 0.60 | 0.60 |
| Power at peak force | W | 50.4 | 60.0 | 105.8 |
| Thermal dissipation constant | W/°C | 0.075 | 0.089 | 0.157 |
| Max coil temperature | °C | 155.0 | 155.0 | 155.0 |
| Coil assembly mass | g | 17.0 | 45.0 | 72.0 |
| Total 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

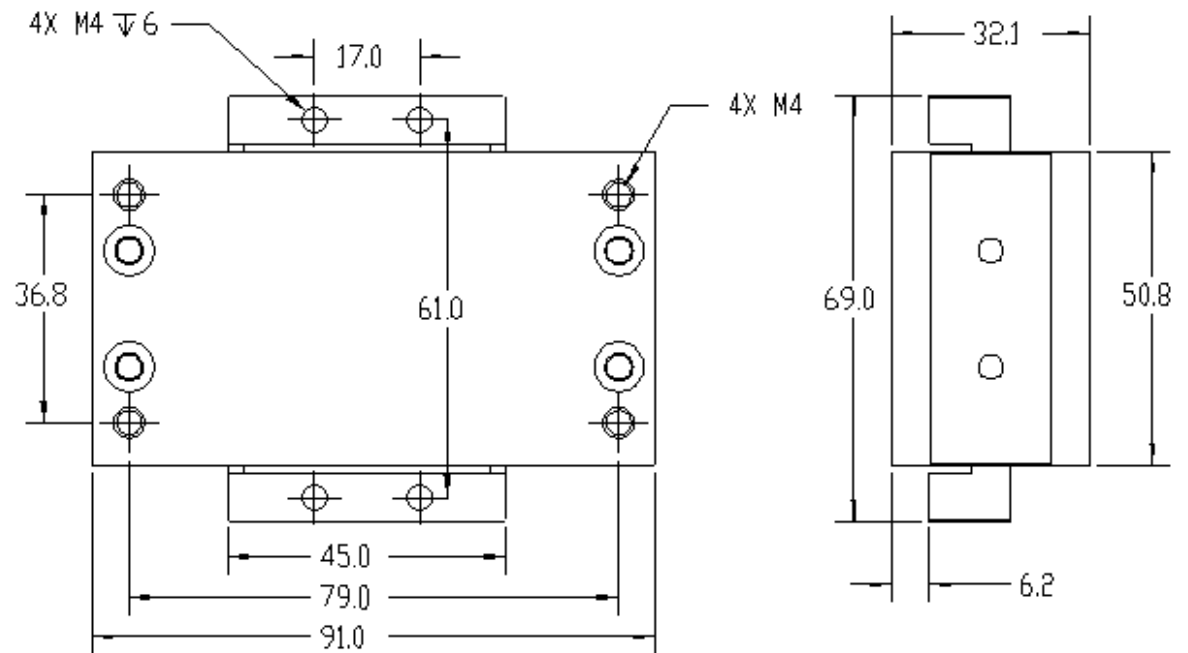
AVA 1



AVA 2



AVA 3



Part Numbering

| Standard Models | |
|-----------------|------------------|
| Model & Stroke | Cable Length (m) |
| AVA1-20 | 0.5 |
| AVA2-20 | |
| AVA3-20 | |

Example: **AVM 30-15-0.5**