Magnetic Torquer VMT-35

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The VMT-35 device is a magnetic Torquer designed specifically for small satellites attitude control. It produces a magnetic field, which is used to interact with the earth magnetic field and thus produce a torque on the satellite. This way the angular momentum of the satellite can be changed.

The VMT-35 consists of a core, made of magnetically soft material with a high permeability, with a coil made of copper wire wound around it. The coil with its core is located in a black anodized aluminium tube and encapsulated in resin to ensure isolation. The coil has a direct connection to the connector so that current and thus the magnetic field can be directly controlled.

Parameters such as geometry, number of windings, wire diameter or ohmic resistance of the torquer can be customized as needed.

The key features the VMT-35 magnetic torquer offers are

- High reliability
- Custom definable parameters
- Low hysteresis
- High linearity
- Resin encapsulated coil
- Low cost
- Compact layout

Mechanical	
Dimensions (with baffle)	374 mm x 25.5 mm x 50 mm
Mass	~0.60 kg
Mounting pattern	4 x M4 216 mm x 40 mm

Electrical	
28 V Version	
Resistance	280 Ohm @ 20°C ± 10%
Maximum current	150 mA
Magnetic moment	35 Am^2 @ 100 mA
Linearity	1% @ 20 Am^2
16 V Version	
Resistance	100 Ohm @ 20°C ± 10%
Maximum current	250 mA
Magnetic moment	25 Am^2 @ 150 mA
Connector type	MDM-9 male

Environmental	
Operating temp.range	-20°C to + 65°C
Storage temp. range	-40°C to + 80°C
Vibration	20g rms random 3 axis
Radiation tolerance	> 20 krad