



HIGH PRECISION HIGH PERFORMANCE

The MTQ800 magnetorquers are aimed at application in 50-200 kg satellites. Offering one of the highest energy efficiencies in the industry, combined with fine-grained dipole-moment strength control, it allows for precise pointing and rapid de-saturation of any reaction wheels in the satellite. With a unique boost-mode, these magnetorquers can be pushed up to higher magnetic dipole moments for short duration manoeuvres, through sacrificing some energy efficiency. In return however, these magnetorquers will offer the fastest de-tumbling of any satellite in this mass class, allowing the users to start their operations in the shortest amount of time.

KEY HIGHLIGHTS:

- Includes drive electronics and mounting brackets
- Nominal dipole moment: 15 A.m²
- Boost mode dipole moment: up to 30 A.m²
- Mass: 489 g
- RS422/RS485 interface
- Power consumption at nominal dipole moment only 3 W, including drive electronics
- Inherently safe passive detumbling mode



COMPATIBILITY

The MTQ800 series is compatible with AAC Hyperion's portfolio of Attitude Determination and Control products.



ADAPTABLE

Dipole moment directly controllable, in steps of 1 mA.m². In addition the controller can be tuned for faster/slower operation.



HERITAGE

The MTQ800 magnetorquer series has been flying on numerous missions since 2020 and is at TRL 9. It is based on the company's experience in design and development of magnetorquers for CubeSats which have been flying since 2017.

TECHNICAL SPECIFICATIONS

Dimensions		
Torquer rods	250 x 67 x 35	mm
Driver Enclosure	60 x 70 x 14	mm

Environmental		
Operating temperature range	-45 - +45	°C
Maximum acceleration load	10 (TBC)	X-axis, g
	10 (TBC)	Y-axis, a
	10 (TBC)	Z-axis, g

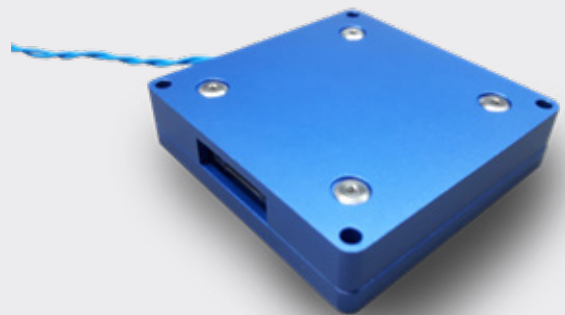
Electrical specifications		
Design dipole moment	15	Am ²
Peak dipole moment	30	Am ²
Control accuracy (Design dipole moment)	+/- 2	% (of setpoint)
Control accuracy (Peak dipole moment)	+/-10	% (of setpoint)

Supply voltage				
	Min.	Typ.	Max.	
Supply voltage	8	12	12.5	V

Power and current consumption ²				
	Min.	Typ.	Max.	
Idle	144	156	180	mW
Dipole moment of 10 Am ²	1440	1536	1632	mW
Dipole moment of 20 Am ²	4800	5040	5520	mW
Maximum dipole moment			13200	mW

¹ For standalone versions

² Measurements taken at Vsupply = 12.0V, under atmospheric conditions, including control electronics.



To make an enquiry, request a quotation or learn about AAC Clyde Space's other products and services, please contact:
enquiries@aac-clydespace.com



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