

DUAL THREE-COMPONENTS MICROSATELLITE FLUX-GATE ATTITUDE CONTROL MAGNETOMETER LEMI-016



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This instrument is designed for the highest reliability and uses a structure with redundant equipment in cold reserve mode. It includes two independent magnetometers with corresponding sensors assembled to form a small robust monoblock. Special sensor design maintains axial alignment after extreme shock loads.

A user serial interface transmits output digital signals into the microsatellite control system. The TIA/EIA-485 (RS-485) interface is implemented with signals galvanic decoupling and maintains SSP protocol developed by Toronto University. Both main and redundant channels of communication are galvanically insulated from other satellite system circuits.

TECHNICAL SPECIFICATIONS

Measurement range, nT	$> \pm 65000$
Maximal sample rate, Hz	12
Resolution, bits	16
Axial alignment precision (calibrated)	± 5 min of arc
Maximal offset, nT	50
Gain error, % of reading	< 0.1
Zero drift over temperature, nT/ $^{\circ}$ C	< 1.5
Gain drift over temperature, % of reading / $^{\circ}$ C	< 0.005
Operation temperature range, $^{\circ}$ C	minus 40...+80
Power consumption (galvanically insulated power converter utilizes onboard power supply voltage 24..34V), W	< 0.25
Overall dimensions and weight	123x80.5x92.5 mm, 1.2 kg
Shockproof, till, g	300