



ase
ADVANCED SLOPE ENGINEERING



UNIVERSITÀ DI PARMA

tilt link HR 3D V

TECHNICAL SPECIFICATION

Sensor	3D accelerometer, 3D magnetometer 3D, thermometer; 2D electrolytic cell, thermometer
Accelerometer range	$\pm 2 \text{ g}$
Accelerometer sensitivity and stability	$0.244 \text{ mg/LSB} - \pm 0.008 \text{ \%/}^{\circ}\text{C}$
Accelerometer accuracy	$\pm 1 \text{ \%}$
Magnetometer range	$\pm 1200 \text{ } \mu\text{T}$
Magnetometer sensitivity and stability	$0.1 \text{ } \mu\text{T/LSB} - \pm 0.1 \text{ \%/}^{\circ}\text{C}$
Magnetometer hysteresis	$\pm 1 \text{ \% FS}$
Thermometer sensitivity (MEMS)	$0.96 \text{ }^{\circ}\text{C/LSB}$
Thermometer repeatability (MEMS)	$1 \text{ }^{\circ}\text{C}$
Electrolytic cell range (linear)	$\pm 25^{\circ}$
Resolution of electrolytic cell	$< 0.2 \text{ arc minutes } (.003^{\circ})$
Repeatability of electrolytic cell	$\pm 0.1^{\circ}$
Temperature coefficient (electrolytic cell) Null Scale	$20 \text{ arc seconds/}^{\circ}\text{C}$ $0.1 \text{ \%/}^{\circ}\text{C}$
Total accuracy	Depending on MUMS chain configuration and length
Operating temperature range	$-40 \text{ }^{\circ}\text{C} \div +85 \text{ }^{\circ}\text{C}$
Centre-to-centre between sensors	$50 - 100 \text{ cm (standard) } ^{*}$
Length and Diameter	$125 \text{ mm} - 37 \text{ mm}$
Borehole suggested diameter	$\geq 130 \div 150 \text{ mm}$
Node weight	0.2 kg
Kevlar cable traction strength	15 kN
Electrical cable	CEI 20-35

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MUMS is a patent system

