

	TCM2.5	TCM2.6	TCM3	TCM5
Heading Specifications				
Accuracy with <70° of tilt	0.8° RMS	0.8° RMS	0.5° RMS	0.3° RMS
Accuracy with >70° of tilt	N/A	N/A	0.8° RMS	0.5° RMS
Resolution	0.1°	0.1°	0.1°	0.1°
Repeatability	0.1° RMS	0.1° RMS	0.05° RMS	0.05° RMS
Max Dip Angle	85°	85°	85°	85°
Magnetometer Specifications				
Calibrated Field Measurement Range	± 80 µT	± 80 µT	± 80 µT	± 80 µT
Magnetic Resolution	± 0.05 µT	± 0.05 µT	± 0.05 µT	± 0.05 µT
Magnetic Repeatability	± 0.1 µT	± 0.1 µT	± 0.1 µT	± 0.1 µT
Tilt Specifications				
Pitch Accuracy	0.2° RMS	0.2° RMS	0.2° RMS	0.2° RMS
Roll Accuracy	0.2° RMS	0.2° RMS	0.2° for Pitch < 65° 0.5° for Pitch < 80° 1.0° for Pitch < 86°	0.2° for Pitch < 65° 0.5° for Pitch < 80° 1.0° for Pitch < 86°
Tilt Range	± 50°	± 50°	± 80°	± 80° pitch, ± 180° roll
Tilt Resolution	0.1°	0.1°	<0.1°	<0.1°
Tilt Repeatability	0.1°	0.1°	0.05°	0.05°
Calibration				
Hard Iron Calibration	Yes	Yes	Yes	Yes
Soft Iron Calibration	No	No	Yes	Yes
Mechanical Specifications				
Dimensions (L x W x H)	6.4 x 5.1 x 1.4 cm	3.4 x 4.3 x 1.3 cm	3.4 x 4.3 x 1.3 cm	3.4 x 4.3 x 1.3 cm
Weight	20 g	12 g	12 g	12 g
Mounting Options	Screw mounts/standoffs horizontal	Screw mounts/standoffs horizontal	Screw mounts/standoffs horizontal	Screw mounts/standoffs horizontal or vertical
Connector for RS-232 Interface	10-pin	9-pin	9-pin	9-pin
I/O Specifications				
Latency from Power-On	<210 ms	<210 ms	<210 ms	<210 ms
Latency from Sleep Mode	<1 ms	<1 ms	<1 ms	<1 ms
Maximum Sample Rate	8 samples/second	8 samples/second	20 samples/second	20 samples/second
RS-232 Communication Rate	300 to 115200 baud	300 to 115200 baud	300 to 115200 baud	300 to 115200 baud
Output Formats	TCM2 Protocol; NMEA0183	TCM2 Protocol; NMEA0183	Binary High Performance Protocol	Binary High Performance Protocol
Power Specifications				
Supply Voltage	5 VDC (reg.) 6 - 18 VDC (unreg.)	3.6 to 5 VDC (unreg.)	3.6 to 5 VDC (unreg.)	3.6 to 5 VDC (unreg.)
Typical Current Draw (Continuous Output) - Max.	22 mA	22 mA	22 mA	22 mA
Typical Current Draw (Continuous Output) - Typ.	< 20 mA	< 20 mA	< 20 mA	< 20 mA
Idle Mode	18 mA	18 mA	14 - 18 mA	14 - 18 mA
Sleep Mode	0.6 mA	0.6 mA	0.6 mA	0.6 mA
Environmental Specifications				
Operating Temperature	-20° to 70° C	-40° to 85° C	-40° to 85° C	-40° to 85° C
Storage Temperature	-40° to 85° C	-40° to 125° C	-40° to 125° C	-40° to 125° C
Shock	Up to 2500 G's per MIL-STD-810F	Up to 2500 G's per MIL-STD-810F	Up to 2500 G per MIL-STD-810F	Up to 2500 G's per MIL-STD-810F
Vibration	Qualified to MIL-STD-810F	Qualified to MIL-STD-810F	Qualified to MIL-STD-810F	Qualified to MIL-STD-810F
Humidity	Non-Condensing Qualified to MIL-STD-810F	Non-Condensing Qualified to MIL-STD-810F	Non-Condensing Qualified to MIL-STD-810F	Non-Condensing Qualified to MIL-STD-810F