MVG-1806-1

Vertical Gyroscope Unit (VGU)

A miniature, light-weight vertical gyro unit for the precise control of pitch and roll. Designed for use in aircraft, unmanned aircraft (UAV), target drones and camera stabilization. The MVG-1806-1 VGU is fully qualified and life tested to 1,000 hours (minimum).

Features: -

- 28 VDC input with internal AC inverter;
- 360° continuous roll, ±80°pitch mech. displacement;
- 0.25 degree per minute maximum drift when erection is off;
- Potentiometer outputs;
- Internal elapsed time indicator;
- Externally operated erection system.

Specifications

Parameters	Units
Mechanical Limits	
Outer Gimbal	360°, continuous
Inner Gimbal	± 80° min.
Potentiometer	
Type	Conductive Plastic
Active Range - Outer Gimbal - Inner Gimbal	 ± 90° ± 60°
Resistance	5,000 ± 5% Ohms
Resolution	Infinite
Linearity	< 1%
Wiper Contact Resistance	2 kOhms max. with current 1mA
Erection Rate	
Nominal Operation Erection Rate (Dynamic)	9° - 11° per minute
Vertical Accuracy	± 0.25°, 5 minutes after starting with low-level vibration
Drift (with Erection System Inoperative)	0.25° per minute max.

Parameters	Units
Electrical Requirements	
Current and Voltage to Spin Motor and Erection System	
Input Voltage	28 ± 4 VDC
Starting Current	750 mA max.
Maximum Current	440 mA max.
Voltage to Potentiometer	5 VDC

Environmental	
Operating Temperature	-30° C - 70° C
Altitude	50,000 ft (15,000 m)
Mechanical Shock	40 G / 2 msec
Acceleration	40° / sec / 1 Hz
Transportation Vibration	5.0 GRMS
Flight Vibration	1.0 GRMS
General	
Weight	490 gr ± 20 gr
Insulation Resistance	20 MOhms min. at 50 VDC
Operational Service Life	1,000 hours min.

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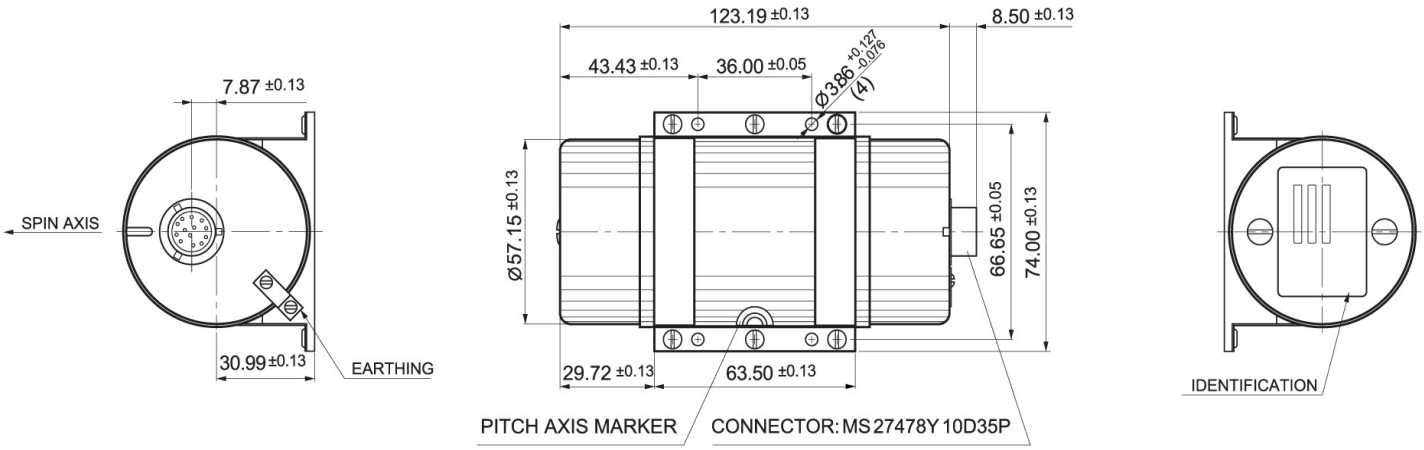
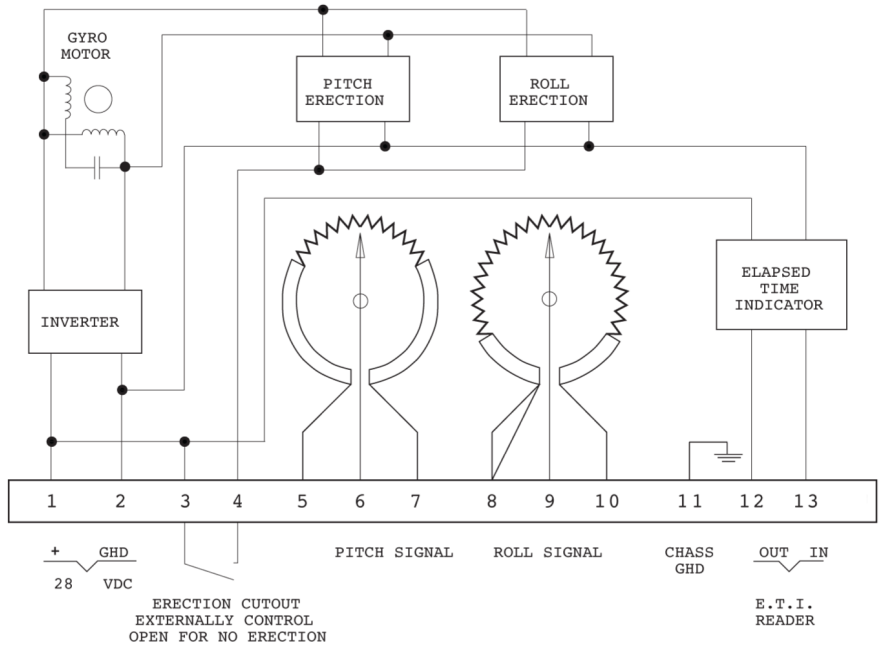
MVG-1806-1 (continued)

Drawing



Connector Pins Layout



For Additional Information

To learn more about MVG-1806-1 Vertical Gyroscope Unit (VGU) or other MTC products, contact MTC on **+972 4 998 7772** or email **marketing@mtcind.com**

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