

Faria Beede



DESIGN: PULSE

Available in:



KEY FEATURES:

- USB Type-C Connector
 - Software Updates & User Configuration
- Wi-Fi & Bluetooth Communication
- GPS Receiver for Speedometer Applications
- Touchscreen
- 3 Physical Buttons for Additional Control
- Space Saving Instrumentation

MG5K

DIGITAL INSTRUMENTATION

Introducing the MG5K, a next-generation gauge for vehicle and marine applications. Its 3.54-inch sunlight-readable touchscreen LCD delivers 1,000 nits of brightness for clear visibility. The MG5K supports J1939, NMEA 2000®, and SmartCraft® protocols, ensuring compatibility with various engines and systems. With options for Bluetooth, WiFi, and GPS, it offers real-time data access and enhanced monitoring. The gauge features three tactile buttons for easy control in tough conditions. Built for both commercial and recreational use, the MG5K enhances performance, safety, and user experience in any environment.

TECHNICAL HIGHLIGHTS:

- IP69K Rated
- 1000 Nit Sunlight Readable Display
- 180° Viewing Angle
- CAN Bus Communication
 - J1939
 - NMEA 2000®
 - SmartCraft®
- 6 Software Configurable Inputs
 - Discrete Input (active low)
 - Discrete Input (active high)
 - PWM (input capture)
 - Analog Input
 - Resistive (sender) Input

Faria Beede

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FEATURED DESIGNS:



CLASSIC

Available in:

- 3 different color patterns
- 5 layout options



VELOCITY

Available in:

- 3 different color patterns
- 4 layout options



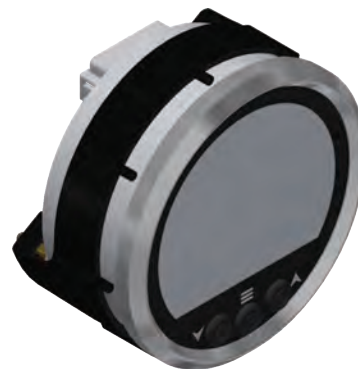
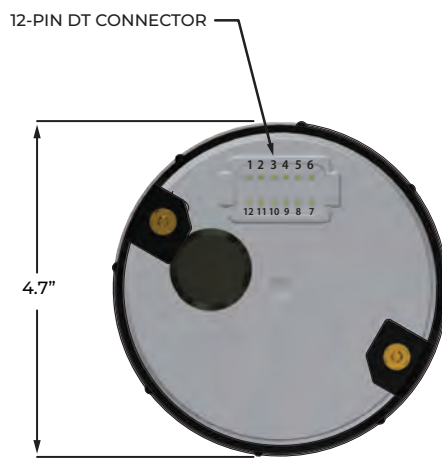
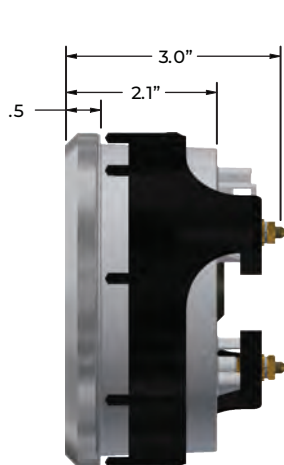
VISTA

Available in:

- 3 different color patterns
- 5 layout options



DIMENSIONS:



SYSTEM CONNECTOR PINOUT

Pin	Signal Name	Type	Notes
1	Output #1	O	Low-Side Output (1.0 A max.)
2	Output #2	O	Low-Side Output (1.0 A max.)
3	Input #6	I	General Purpose Input (Analog / Discrete / Resistive)
4	Ground	GND	
5	Battery	PWR	Power Input
6	Input #1	I	General Purpose Input (Analog / Discrete / Resistive)
7	Input #2	I	General Purpose Input (Analog / Discrete / Resistive)
8	Input #3	I	General Purpose Input (Analog / Discrete / Resistive)
9	Input #4	I	General Purpose Input (Analog / Discrete / Resistive)
10	Input #5	I	General Purpose Input (Analog / Discrete / Resistive)
11	CAN High	I/O	CAN Bus Interface
12	CAN Low	I/O	CAN Bus Interface

ENVIRONMENTAL

The MG5K was designed and tested to withstand the following chemical agents:

- Battery Fluid
- Interior Cleaner
- Glass Cleaner
- Acetone
- Ammonia
- Denatured Alcohol
- Transpiration
- Cosmetic Products
- Beverage Containing Caffeine and Sugar
- Cream, Coffee Whitener
- Diesel fuel
- Gasoline
- Engine Oil
- Sunscreen
- Bug Spray

FULL SPECIFICATIONS LIST

Feature	Criteria
Mounting Hole (Dia)	4.4" (Up to .5" Panel Thickness)
LCD	3.54" Round TFT, 800x640, Capacitive Touch, 1000 NIT
Ambient Light Sensor (ALS)	Standard
Operating Temperature	-20°C to 70°C
Storage Temperature	-30°C to 80°C
Water Intrusion	IP69K Rated
Vibration	Vibration per MIL-STD-202 Method 201
Shock	Drop per SAE J1211 & MIL-STD-202, Method 213
Salt Fog	48 hours per ASTM B117-73
Chemical Resistance	ISO 16750-5 Mounting Code B
UV Exposure	1000 hours per SAE J2527, Table 2
Input Voltage	9 to 32 VDC
Current Consumption	350 mA typical at 12 VDC (base unit)
Reverse Polarity Protection	Yes
Under/Over Voltage Protection	Indefinitely at 0 and 60 VDC
Voltage Transient Protection (Load Dump)	160 VDC Positive per MIL-DTL-10986G, 4.4.16 160 VDC Negative per MIL-DTL-10986G, 4.4.17
Wi-Fi + Bluetooth	Optional 2.4 GHz Wi-Fi (802.11 b/g/n) Bluetooth 5 (LE)
User Buttons	3x Physical Buttons Below Display Active Area
Required Mating Connector	1x Deutsch DT06-12SA or Amphenol AT06-12SA
System Type	Embedded, STM32 Micro Controller
Memory	8M Additional Flash for Graphics
Inputs	6x Software Configurable, each Capable of the Following: • Discrete (active low) • Discrete (active high) • PWM (input capture, 10 Hz to 5000 Hz, $\pm 1\%$ accuracy) • Analog (0-40 VDC, ± 0.2 VDC) • Resistive (0-1200 Ω) - o sender resistance values < 50 Ω, $\pm 1\%$ accuracy - o sender resistance values 50 Ω to 500 Ω, $\pm 2\%$ accuracy - o sender resistance values > 500 Ω, $\pm 10\%$ accuracy
Outputs	2x open/ground (low-side) @ 1A
CAN	1x CAN FD @ 250 & 500 Baud. Supports J1939, NMEA 2000® and Smartcraft®
GPS Reception	Optional
IMU (Accelerator/Gyro)	Optional
Compliance	RoHS, REACH, FCC, CE