



Data Bus Compass Module J1587 or J1939 CAN Communication



Features

- ◆ 360° compass functionality
- ◆ 12- through 24-volt operation
- ◆ SAE J1587 or J1939 data bus communication
- ◆ Built-in calibration routine
- ◆ Local magnetic field distortion compensation
- ◆ Accepts declination input over the vehicle data bus
- ◆ Minimal footprint (18.7 sq. in.)

Applications

- ◆ Heavy trucks
- ◆ On-and off-road construction vehicles
- ◆ Mining and material handling vehicles
- ◆ Agricultural vehicles
- ◆ Buses and coaches
- ◆ Recreational vehicles
- ◆ Marine usage

AMETEK VIS Data Bus Compass Module is a highly accurate, low-cost sender unit designed for the OEM vehicle market. Powered by the vehicle's battery, the module features a built-in two-axis magnetic sensor. Heading data from 0 to 359 degrees is broadcast over a J1587 or J1939 CAN data bus.

Designed to withstand the harsh conditions encountered in the heavy vehicle and construction industries, the compass module incorporates the same, field-proven package design found in other AMETEK vehicular interface modules. The module meets all SAE J1455 and J1113 vehicular requirements and contains one six-pin, self-locking, Packard Metri-Pack® connector.

An advanced, built-in calibration routine compensates for local magnetic field distortions such as speaker magnets, vehicle chassis, and proximity to high current conductors. The module accepts a declination angle input to provide a true geographic north heading, and the module can be mounted upright, upside down, and parallel or at right angle to forward direction of travel.

Designed for the rugged environment of vehicular applications, the compass module is the ideal solution for all vehicle compass applications.

AMETEK®
VEHICULAR INSTRUMENTATION SYSTEMS

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Specifications

Physical Characteristics

Housing material – Black mineral-filled nylon plastic

Environmental Characteristics

Temperature and humidity – meets or exceeds SAE #J1455-1994-08

Shock and vibration – meets or exceeds AE #J1455-1994-08

Salt spray – meets or exceeds SAE #J1455-1994-08

Electrical Characteristics

Operating limits – 9 to 32 VDC, reverse polarity protected

Jump-start protection:

12-volt input – withstands 24 VDC for 10 minutes

24-volt input – withstands 36 VDC for 10 minutes

Transient protection – meets or exceeds SAE #J1455-1994-08

Electrical Inputs

Input voltage – 9 to 32 VDC

Input current – 500 mA maximum at 13.8 VDC

Ground Battery – Data bus SAE #J1587 or J1939

Electrical Outputs

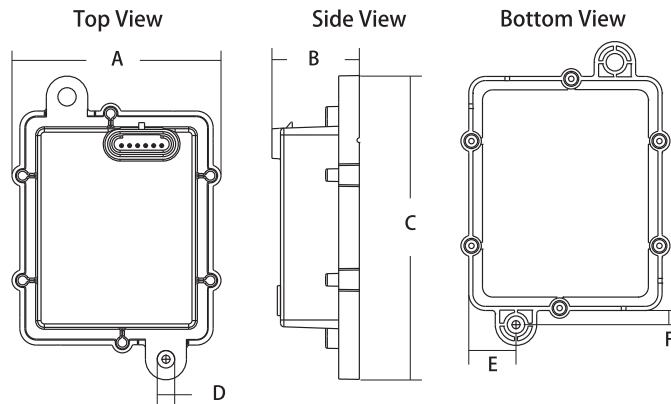
Data bus – SAE #J1587 or J1939

Accuracy

Heading accuracy – 6 degrees RMS

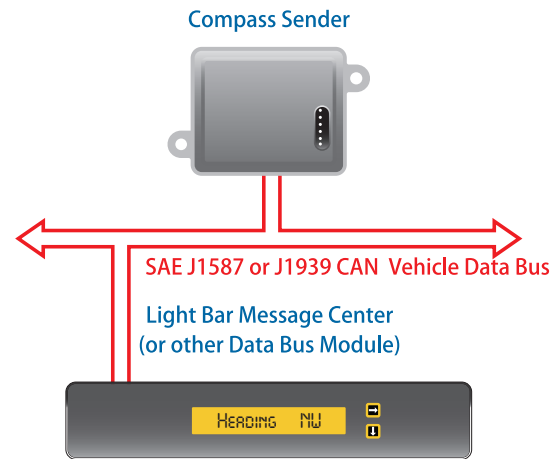
Heading resolution – 1 degree

Installation Data



Dimension	Inches	Millimeter
A	3.6	91.4
B	1.5	38.1
C	5.2	132.1
D	0.3	7.6
E	0.81	20.6
F	0.24	6.1

Functional Block Diagram



J1587 Electrical Connections

Pin	Signal	Pin	Signal
1	Ignition	4	J1587 Data Bus (-)
2	Ground	5	Ground if unit rotated , otherwise open
3	J1587 Data Bus (+)	6	Ground if unit inverted , otherwise open

J1939 Electrical Connections

Pin	Signal	Pin	Signal
1	Ignition	4	J1939 Data Bus (-)
2	Ground	5	Ground if unit rotated , otherwise open
3	J1939 Data Bus (+)	6	Ground if unit inverted , otherwise open



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