



DPS Instrument Clusters

Catalog HY33-5012/US



ENGINEERING YOUR SUCCESS.

Application

The DPS cluster is an innovative user interface that makes complete vehicle information accessible in a single centralized location. By incorporating the new cluster, a wide range of industrial vehicles can be operated more efficiently for greater productivity.

Properties

Features

This versatile instrument cluster supports two CAN communication channels, as well as USB. The DPS has 20 digital inputs: 4 active high with wake-up, 6 active high, and 10 active low. There are 5 analog inputs (3 voltage, and 2 resistive), and 2 frequency inputs (fixed voltage threshold open collector). For outputs the DPS has 1 high-side and 2 low-side. The outputs can provide a maximum current of 2.5 A with pulse width modulation capabilities, and analog feedback provides open circuit, short to battery, and ground detection.

Reliability

The DPS cluster is ideal for various industrial vehicle applications, with 3, 4, or 5 backlit gauges, up to 26 positions for status LEDs (tell-tales), and a 256x80 pixel transfective FSTN LCD screen. The robust enclosure is designed to be used in rugged environments, and has been tested to a suitable mix of standards based on the J1455, ISO, and EP455 environmental specifications. The connectors are rugged, environmentally sealed, Molex MX150 type.

General

Weight	1.2 kg
Temperature range	
- Operating, ambient	-40 to +85°C
- Storage, ambient	-40 to +85°C
Protection	IP56 (front) and IP54
Voltage supply	8 - 32 Vdc
Current (standby)	<1 mA

Communication

SAE J1939	2
USB, B-port	1 (via separate cable)

Inputs

Voltage inputs	3
- Signal range	2 x 0 - 5 Vdc 1 x 0 - 16 Vdc
Resistive inputs	2
- Signal range	1 x 0 - 360W 1 x 600W - 100kW

Frequency inputs

- Signal range	0 - 10000 Hz
Digital inputs	20
- Signal high	3.82 Vdc - V _{BAT}
- Signal low	0 - 1.56 Vdc

Ordering part numbers

DPS4, gasoline, 6000 RPM	0928011ECD
DPS5, diesel, 4000 RPM	0928012ECD

Environmental protection

EMI

EP455 (Feb 2003) Section 5.10.2, Over-voltage
EP455 (Feb 2003) Section 5.10.3, Reverse polarity
EP455 (Feb 2003) Section 5.10.4, Short circuit
ISO7637-2,-3 (1990), EP455 (Feb 2003) Sections 5.11.X, Electrical transients
EP455 (Feb 2003) Section 5.16.3, EMC emissions
ISO11452, J1113/21, EMC susceptibility

ESD

EP455 (Feb 2003) Section 5.12, ESD (surface)
ISO TR10605 2001E Section 5, ESD (connectors)

Chemical environment

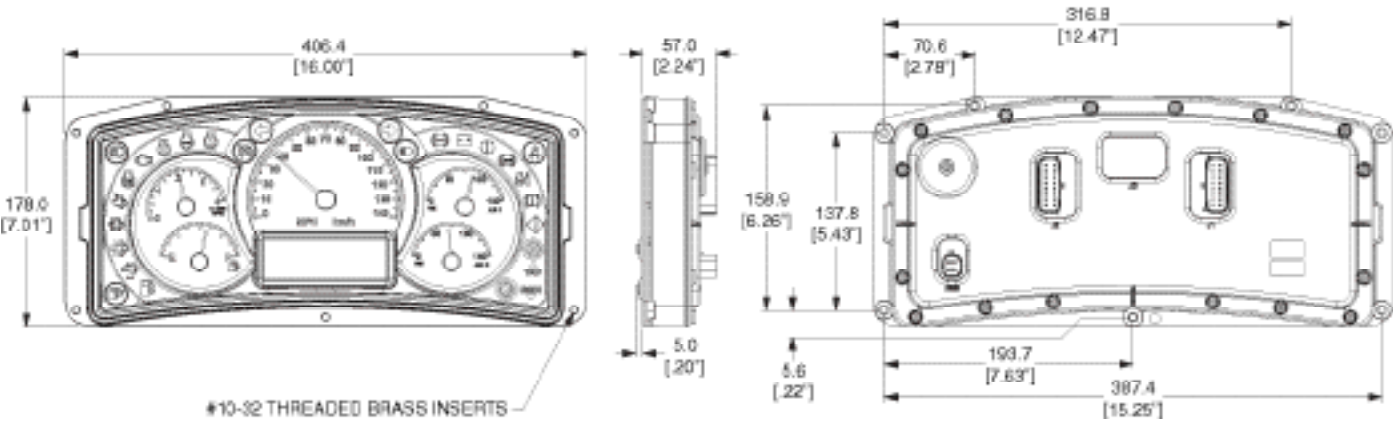
SAE J1226 (Feb 2002) Section 9.6.2, Salt mist

Mechanical environment

BS7691 Section 4.6, 6.6, Random vibration
SAE J1226 Section 9.9, Mechanical shock
J1455 (Jun 2006) Section 4.11.3.1, Handling shock

Climate environment

IEC60529 (Feb 2001) Sections 13.4, 13.5, Dust
IEC60529 (Feb 2001) Section 14.2.4, Water
EP455 (Feb 2003) Section 5.13.1, Humidity cycle
SAE J1226 Section 9.6.1, Humidity soak
EP455 (Feb 2003) Section 5.1.1, Thermal cycle
J1455 (Jun 2006) Section 4.1.3.2, Thermal shock
IEC 68-2-5 (1975), Solar radiation



units=mm [inch]



WARNING - USER RESPONSIBILITY

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