



# DPS-C Instrument Clusters

Catalog HY33-5014/US



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## Application

The DPS-C is a general purpose display for vehicle instrumentation. There is a standard electronic configuration and standard overlay. The end user can customize the DPS-C with a custom overlay and custom application software. 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-C has 18 digital inputs: 4 are active high with wake-up. There are 4 analog inputs, and 2 frequency inputs. For outputs the DPS-C has 2 high-side and 2 low-side. The outputs provide a maximum current of 2.5 A with pulse width modulation capabilities. Low-side outputs have analog feedback which provides open circuit, short to battery, and ground detection.

### Reliability

The DPS-C cluster is ideal for various industrial and off-road vehicle applications, with five backlit gauges, 28 positions for LED status indicators (tell-tales) and a 3.5", transfective color LCD, 320 x 240 pixel 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	-20 to +60°C
- Storage, ambient	-40 to +85°C
Protection	IP69 (front), IP65 (rear)
Voltage supply	8 - 32 Vdc
Current (standby)	1 mA (12V), 2 mA (24V)

## Communication

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

## Outputs

Digital out high-side	2
- Type	high-side switch
- Max load	2.5 A
- Max PWM frequency	200 Hz
Digital out low-side	2
- Type	low-side switch
- Max load	2.5 A
- Max PWM frequency	200 Hz

## Inputs

Voltage inputs	4
- Signal range	0 - 5 Vdc
- Absolute error	2%
Frequency inputs	2
- Signal range	5 - 6500 Hz
Digital inputs	18
- Signal high	2.43 Vdc - V <sub>BAT</sub>
- Signal low	0 - 0.80 Vdc

## Ordering part numbers

DPS-C	0971001ECD
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**Environmental protection**

**EMI**

J1455 Section 4.13.1, Over-voltage  
 J1455 Section 4.13.1, Reverse polarity  
 J1455 Section 4.13.1, Short circuit  
 ISO7637 Section 5.6.x, EP455 Section 5.11.x, Transients  
 EP455, ISO, J1113-41, EMC emissions  
 EP455, ISO, J1113-41, EMC susceptibility

**ESD**

EP455 Section 5.12, ESD (surface)  
 EP455 Section 5.12, ESD (connectors)

**Chemical environment**

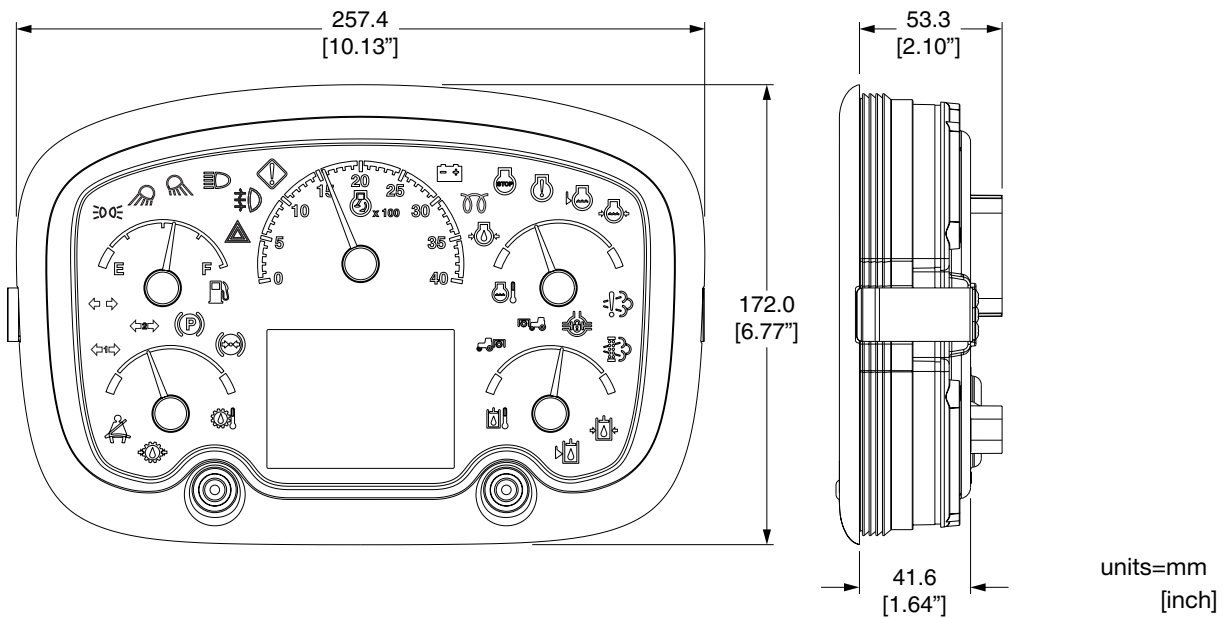
MIL\_STD 202G M101E-B, Salt spray

**Mechanical environment**

BS EN7691 Section 6.6.1, Random vibration  
 EP455 Section 5.14.2.2, Drop test

**Climate environment**

IEC 60529 Section 14.2.6, Water IP65 (rear only)  
 IEC 60529 Section 13.6.8, Water IP69 (front only)  
 IEC 68-2-2 Section 2, High temperature  
 IEC 68-2-1 Section 2, Low temperature  
 EP455 Section 5.1.1, Temperature cycle  
 J1455 Section 4.1.3.2, Temperature shock  
 EP455 Section 5.13.2, Humidity soak  
 EP455 Section 5.13.1, Humidity cycle



**WARNING - USER RESPONSIBILITY**

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# Parker Hydraulics International Sales Offices

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6035 Parkland Boulevard  
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Tel: 216-896-3000  
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Fax: 52 81 8156 6068

## Europe

### Hydraulics Group Headquarters

La Tuillière 6  
1163 Etoy - Switzerland  
Tel: 41 21 821 8500  
Fax: 41 21 821 8580

## South Africa

### Parker Hannifin Africa Pty Ltd

P.O. Box 1153  
ZA-Kempton Park 1620,  
Republic of South Africa  
Tel: 27 11 961 0700  
Fax: 27 11 392 7213

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Fax: 770-619-9806

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Fax: 973-227-2467

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Tel: 714-228-2510  
Fax: 714-228-2511

## Asia Pacific

### Parker Hannifin Shanghai Ltd

280 Yunqiao Road,  
Jin Qiao Export Processing Zone  
Shanghai 201206, China  
Tel: 86 21 2899 5000  
Fax: 86 21 6445 9917

### Parker Hannifin Hong Kong Ltd

8/F, Kin Yip Plaza  
9 Cheung Yee Street  
Cheung Sha Wan, Hong Kong  
Tel: 852 2428 8008  
Fax: 852 2425 6896

### Parker Hannifin Korea Ltd

9F KAMCO Yangjae Tower  
949-3 Dogok1-dong, Gangnam-gu  
Seoul, 135-860, Korea  
Tel: 82 2 559 0400  
Fax: 82 2 556 8187

### Parker Hannifin India Pvt Ltd

Plot No. EL-26, MIDC  
TTC Industrial Area  
Mahape, Navi Mumbai, 400 709 India  
Tel: 91 22 6513 7081  
Fax: 91 22 2768 6841

### Parker Hannifin Australia

Parker Hannifin Pty Ltd.  
9 Carrington Road  
Castle Hill, NSW 2154, Australia  
Tel: 612 9634 7777  
Fax: 612 9842 5111

## Latin America

### Parker Hannifin Ind. e Com. Ltda Hydraulics Division

Av. FredericoRitter, 1100  
94930-000 Cachoeirinha RS, Brazil  
Tel: 55 51 3470 6090  
Fax: 55 51 3470 9281

### Parker Hannifin Argentina S.A.I.C.

Stephenson 2711  
1667-Tortuguitas-Malvinas Argentinas  
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Tel: 54 3327 44 4129  
Fax: 54 3327 44 4199

### Pan American Division

7400 NW 19th Street, Suite A  
Miami, FL 33126 USA  
Tel: 305-470-8800  
Fax: 305-470-8808

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Parker Hannifin Corporation  
**Electronic Controls Division**  
850 Arthur Avenue  
Elk Grove Village, IL, 60007 USA  
phone 800 221 9257  
eccinfo@parker.com  
www.parker.com/eccd

Your Local Authorized Parker Distributor