

DCS30/31 Series

Hall-Effect DC Current Sensor 400, 500 and 600 Amps

“Electronic Shunt” Battery Current Sensor Supports Standard 50 or 100 Millivolt Ammeters.



The DCS30/31 Series is a family of highly accurate electronic sensors for measuring dc current, and are available in maximum capacities of 400, 500 and 600 amps. The current sensor consists of a Hall-effect based sensor unit with an electronic interface circuit that operates conventional 50 or 100 millivolt ammeter meter movements. The non-intrusive design allows the sensors to be installed without the need to cut and re-terminate the high current dc cables as required with the installation of mechanical meter shunts. Also, the DCS30/31 sensors occupies less space, do not generate heat, and have no exposed electrical potentials as with mechanical meter shunts.

The sensor's opening is 1.23 inches, which will accommodate typical battery cables. It utilizes a four-pin Packard Metri-Pak 150 sealed connector.

The DCS30/31 sensors are designed to operate with standard 50 or 100 millivolt ammeters with internal resistance of 20 ohms or greater. They require a power source of +12 volts @ 8.1 milliamps. The DCS30 models measure bi-directional current (e.g., -400 to +400 amps). The DCS31 models measure unidirectional current (e.g., Zero to 400 amps).

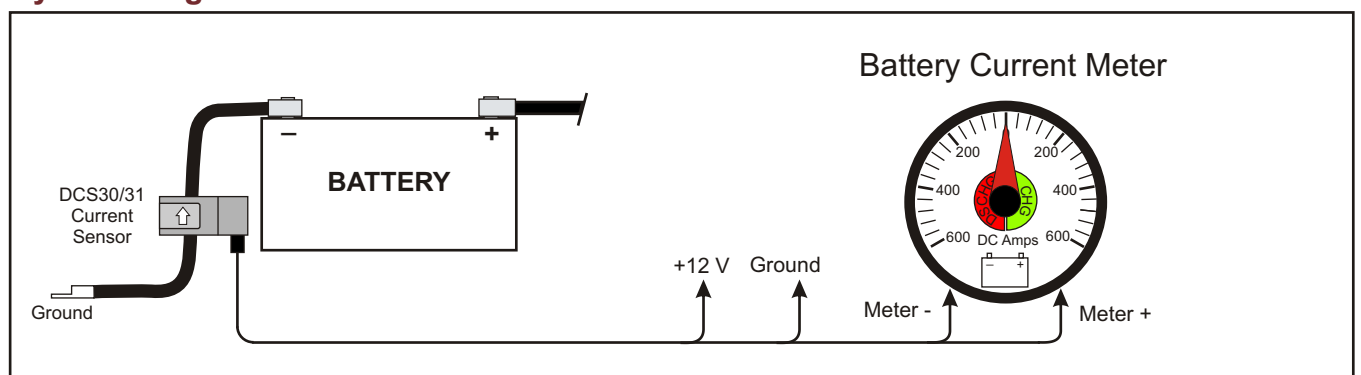
Key Features

- *Electronic Hall-Effect Sensor Design* - Eliminates the need for heat-producing mechanical shunts.
- *Sealed Construction* - No exposed electrical potentials as in mechanical meter shunts.
- *Non-Intrusive* - No need to cut and re-crimp battery cables.
- *Operates Common Ammeters* - Industry standard 50 and 100 millivolts meter movements.
- *Fits Most Vehicle and Marine Applications* - Available in 400 through 600 Amp Capacities.
- *Weather Resistant Connector* - Allows use in severe environments.

DC Current Sensor Models

Model	Current Range	Sensor Output
DCS30-400-1	± 400 Amps	± 50 Millivolts
DCS30-500-1	± 500 Amps	± 50 Millivolts
DCS30-600-1	± 600 Amps	± 50 Millivolts
DCS30-400-2	± 400 Amps	± 100 Millivolts
DCS30-500-2	± 500 Amps	± 100 Millivolts
DCS30-600-2	± 600 Amps	± 100 Millivolts
DCS31-400-2	0 to 400 Amps	0 to 100 Millivolts
DCS31-500-2	0 to 500 Amps	0 to 100 Millivolts
DCS31-600-2	0 to 600 Amps	0 to 100 Millivolts

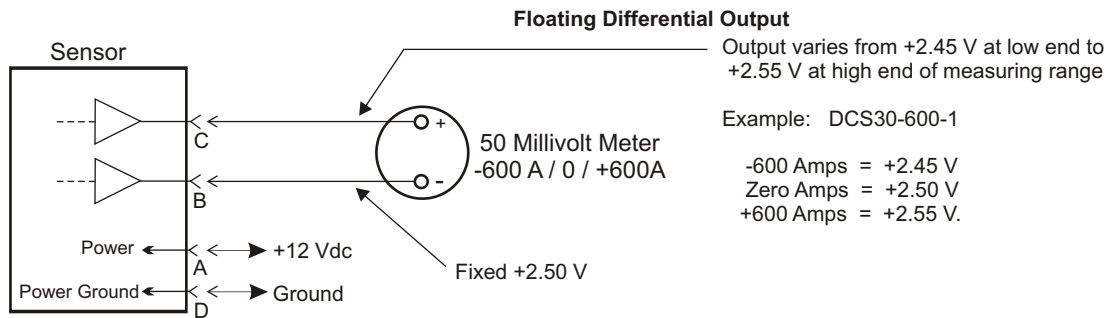
System Diagram



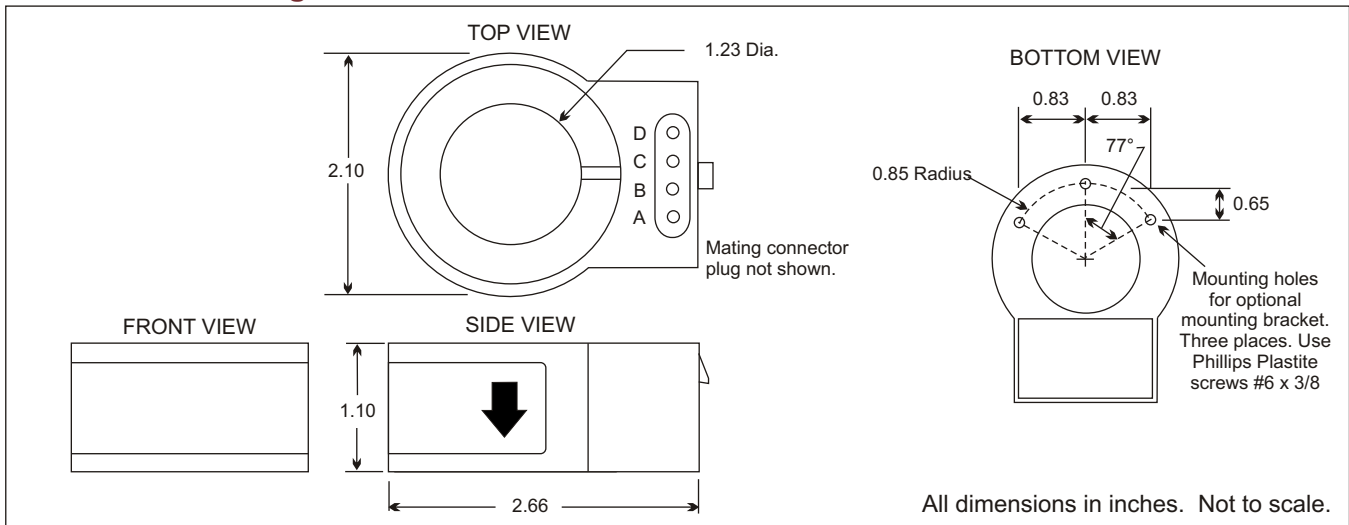
DCS30/31 Series Hall-Effect DC Current Sensor

Specifications

Sensor Type:	Open loop Hall-effect			
Linearity:	1.5%			
Supply Voltage Range:	+7 to + 20 Vdc			
Current Consumption:	8.1 milliamps maximum			
Output to Meter:	Models DCS30/31-XXX-1	±50 millivolts		
	Models DCS30/31-XXX-2	±100 millivolts		
	Note - Meter internal resistance must be 20 ohms or greater.			
Operating Temperature:	-40° C to +125° C			
Storage Temperature:	-40° C to +125° C			
Aperture Size:	1.23 inches			
Weight:	0.30 lbs			
Connector System:	Packard Sealed Metri-Pak 150. Note - Mating plug not supplied with sensor. See InPower Technical Bulletin TB-31 for details and purchasing source.			
Connector Interface:	Pin A	+ Vdc Supply	Pin C	Output to Meter (+)
	Pin B	Output to Meter (-)	Pin D	Ground
Sensor Wiring:				



Mechanical Drawing



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Offered by: