

PROD1182

LV PCU

Light Vehicle Power & Control Unit with battery backup



The Power & Control Unit provides an interface between the vehicle power, inputs, outputs and the Light Vehicle CAS-GPS system.

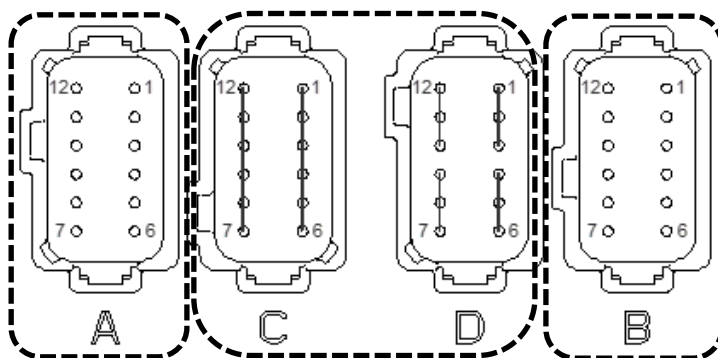
Features

- Rugged power supply compliant with ISO 7637-2 & ISO 16750-2 for 12V automotive systems
- 4 Digital inputs, 2 Digital outputs
- Switchable conditioned and battery-backed power for CAS-GPS Light Vehicle Display (PROD1185)
- Switchable conditioned and battery-backed power for CAS-GPS Nodes (PROD1116 family) and CAS-GPS Integrated Communications Units (PROD1187 family)
- Convenient inbuilt bridging links for looping vehicle wiring and ease of installation
- CAN or Serial communications variants for node interface
- Rugged Deutsch enclosure

Use

- Power conditioning, battery backup and signal distribution of LV CAS-GPS systems

Wiring Pinouts



A VEHICLE	
12 INPUT 1	1 +Vin
11 INPUT 2	2 +Vin
10 INPUT 3	3 0Vin
9 INPUT 4	4 0Vin
8 OUTPUT 1	5 CAN H
7 OUTPUT 2	6 CAN L

C BRIDGE		D BRIDGE	
12	1	12	1
11	2	11	2
10	3	10	3
9	4		
8	5	9	4
7	6	8	5
		7	6

B DISPLAY, NODE (CAN VARIANTS)	
12 (reserved)	1 Vbus
11 (reserved)	2 Node CAN H
10 +0Vdisplay	3 Node CAN L
9 PCU Rx / Display Tx	4 0V
8 PCU Tx / Display Rx	5 Node Aux +
7 +Vdisplay	6 Node Aux -

B DISPLAY, NODE (SERIAL VARIANTS)	
12 (reserved)	1 Vbus
11 (reserved)	2 PCU Tx / Node Rx
10 +0Vdisplay	3 PCU Rx / Node Tx
9 PCU Rx / Display Tx	4 0V
8 PCU Tx / Display Rx	5 Node Aux +
7 +Vdisplay	6 Node Aux -

Specifications

Standard configurations	PROD1182-1DSX (Serial node communications variant, one internal battery) PROD1182-2DSX (Serial node communications variant, two internal batteries) PROD1182-1DCX (CAN node communications variant, one internal battery) PROD1182-2DCX (CAN node communications variant, two internal batteries)
Power Supply	
Input voltage	12V _{DC} automotive system voltage, 6~16V continuous operation (≥11V required for internal battery charging)
Undervoltage lockout	5V _{DC}
Power	70W, 6.4A max (Including Maximum Loads) <25μA in vehicle battery isolation mode. Low-power mode when ignition OFF and vehicle battery voltage <13V (consumption depends on connected devices). Up to 17W per charging internal battery.
Oversvoltage	ISO 7637-2 Level III (Alternator load dump) compliant for 12V systems & ISO 16750-2
Vehicle Interface	
CAN Bus	CAN 2.0, controlled slew rate, up to 1Mbps (user configurable) with programmable termination
Digital outputs	×2, sink to system ground, 16V/0.4A continuous, V _{OL} <0.1V, overload protected (24V stand-off)
Analog/Digital Inputs	×4, system ground referenced, 0~15V, programmable digital threshold with hysteresis, ±1% analog accuracy, <5mV resolution, >1kHz bandwidth, 12kΩ input impedance, overload protected (24V stand-off)
CPU/Display Interface	
Display power	Selectable 5.1V _{DC} or 9V _{DC} , 13W _{cont} , switched, battery-backed and overload protected
Digital communication	2-wire full-duplex RS232, system ground referenced, up to 250kbps
Node Interface	
Node power	5.5V~VIN (depends on power state), 15W _{cont} , switched, battery-backed and overload protected
Digital communication	2-wire half-duplex RS485
CAN (PROD1182-nDCX)	CAN 2.0, controlled slew rate, 500kbps with programmable termination
Serial (PROD1182-nDSX)	2-wire full-duplex RS232, system ground referenced, up to 250kbps
Battery Backup	
Capacity	18Wh per battery, 3000 cycle, increased safety Lithium Phosphate battery system.
Charge time	2.0hrs for moderate cell temperatures (10°C to 40°C). Charge times may increase at extreme cold & hot temperatures or to limit vehicle input current to 10A, and at cell temperatures less than 0°C or above 60°C charging is paused.
Holdup time	Up to 14 days (for 2-battery variants) Depends on connected devices, system architecture, application and configuration
Environmental	
Operating Temp	-20 to 70°C
Storage Temp	-20 to 80°C Not Recommended to store in high temperatures for extended periods
Operating Humidity	5% to 95% RH
Weight	0.9kg (including mount)
Size (HxWxD)	63x180x204mm (including mount)
IP Rating	IP66
Vibration/shock	IEC60068

Accessories

Item #	Description
BATT0034	Replacement battery
KITSCL66	Wiring kit (Includes Deutsch connectors and pins)
KITSCL86	Magnetic mounting kit

Contact

Web	www.wabteccorp.com
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