

CANlink 310: Power Distribution

Powerful I/O + Circuit Capabilities

Designed for the Vocational market, HED's Power Distribution Module (PDM) combines fusing, high current output and all I/O controls into a single module.

Total Vehicle Control

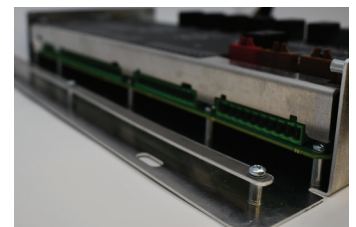
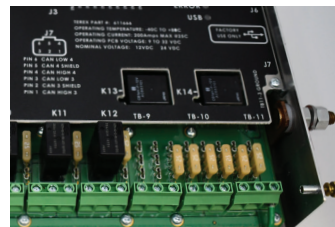
Relays, fuses, solid-state outputs and configurable inputs are combined in single module with a powerful microcontroller offering the ability to minimize components and support a centralized vehicle master control.

Powerful & Capable

Delivering reliability and high-performance, our PDM provides up to 200 amps through a combination of high current relays and solid-state outputs. Speed and memory combined with a variety of I/O and up to 4 CAN ports offer additional communication options.

Configurable & Customizable

- Terminal block wiring enables easy customization.
- Relays and fuses offer power output configuration.
- Software configurable I/O.
- Onboard USB provides quick software updates.



Contact your Sales
Team today!

CL 310 Power Distribution Module | Specifications

COMPUTING CORE	
MCU	S32K344
Flash	4MB
RAM	512KB
INTERFACES	
CAN	2x CAN-FD ports (Up to 4x CAN-FD optional)
USB	1x USB-A (for USB flash drive)
MECHANICAL	
Housing Material	Aluminum- Base and Inner Cover Black Power Coat Aluminum- Outer Cover
Connectors	2x Lugs for +Battery and Ground 1x Molex for CAN 11x Screw Terminal Blocks for Relay Outputs 4x Degson/Phoenix for I/O 1x USB-A for USB
Dimensions (mm)	403.35 x 270.00 x 55.5
Indicators	4x LEDs
Degree of Protection	IP10
Bolt/Torque	Bolt: 1/4" - 20 or M6 Button Head Screw w/ Washer Torque: 90-97 in-lbs
ELECTRICAL	
Operating Voltage	8-32VDC
Key Switch	Standard for Start/Shutdown
Inputs	4x STB/STG/VTD1/VTD2/FREQ/20mA/RTD 15x STB/STG/VTD1/VTD2
Outputs	2x 40A with inline replaceable or re-settable fuse 6x 24A with inline replaceable or re-settable fuse 1x 10A with inline replaceable or re-settable fuse 3x 8A with inline replaceable or re-settable fuse 2x 24A with 4x inline replaceable or re-settable fuses per output *optional wiring configuration for fuse driven relay output or direct fused power connection output
Conducted Transient Immunity	ISO 7637-2, Pulse 1, 2a, 2b, 3a, 3b
Starting Profile	ISO 16750-2, Section 4.6.3
Load Dump	ISO 16750-2, Section 4.6.4, 40V clamped

ENVIRONMENTAL SPECIFICATIONS	
IP Class	IP10
EMC Conformity	FCC Part 15 (b) and ISED Canada. 2014/30/EU – CE Mark Radiated Emissions: ISO 13766-1, EN 13309, ISO 14982 Conducted Emissions: CISPR 25, Section 6.3 (Voltage Method) Radiated Immunity: ISO 11452-2 Conducted Immunity: ISO 11452-4 (BCI method), 20-200MHz at 100mA ESD: ISO 10605, IEC 61000-4-2
Vibrations	IEC 60068-2-64 Random Vibration Test VII Test: Random Vibe, Freq. Range: 10-2000Hz, Level: 57.9m/s ² per Figure 11 / Table 12 Duration/axis: 8hrs (32Hrs total exposure)
Shock	IEC 60068-2-27 Mechanical Shock Level: 500 m/s ² - 6ms, Shape: Half-sinusoidal # Pulses: 100 per direction/axis (600 total shock pulses) Level: 500 m/s ² - 11ms, Shape: Half-sinusoidal # Pulses: 6,000 per direction/axis (18,000 total shock pulses)
Temperature Range	Operating: -40C to +80C (see Derating Curves) Storage: -40C to +85C
SOFTWARE FRAMEWORK & TOOLS	
Development	NXP Design Studio or CODESYS (CODESYS in 2025)
Programming	C / C++ or CODESYS
CAN Protocol	J1939 and CANopen
OPERATING SYSTEM	
Operating System	FreeRTOS
Startup Time	150msec (approximate)



CL 310 Power Distribution Module | Pinouts

Pin	Connector J1	Comments
1	Relay K1-COM IGN IN	10A
2	Relay K1-NC IGN OUT	10A
3	Relay K2-COM	8A
4	Relay K2-NO	8A
5	Relay K2-NC	8A
6	Relay K3-COM	8A
7	Relay K3-NO	8A
8	Relay K3-NC	8A
9	Relay K4-COM	8A
10	Relay K4-NO	8A

Pin	Connector J2	Comments
1	High Side Output / Diagnostics STB/STG	10A
2	High Side Output / Diagnostics STB/STG	10A
3	High Side Output / Diagnostics STB/STG	10A
4	High Side Output / Diagnostics STB/STG	10A
5	High Side Output / Diagnostics STB/STG	10A
6	High Side Output / Diagnostics STB/STG	10A
7	High Side Output / Diagnostics STB/STG	10A
8	High Side Output / Diagnostics STB/STG	10A
9	High Side Output / Low Side Output / Diagnostics STB/STG	10A / 2A
10	High Side Output / Low Side Output / Diagnostics STB/STG	2A / 2A
11	High Side Output / Low Side Output / Diagnostics STB/STG	2A / 2A
12	High Side Output / Diagnostics STB/STG	10A

Pin	Connector J4	Comments
1	CAN HI 1	
2	CAN LO 1	
3	CAN2 Shield	
4	CAN HI 2	
5	CAN LO 2	

Pin	Connector J5 & J6	Comments
1	CAN HI 1	
2	Ground	
3	SW Ignition: High Side Output	2A
4	CAN LO 1	
5	CAN1 Shield	
6	Pass Thru to J6	

Pin	Terminal Block TB1	Comments
1	Relay K5-NO	40A
2	Relay K5-NO	40A
3	Relay K5-COM	40A

Pin	Terminal Block TB2	Comments
1	Relay K6-NO	40A
2	Relay K6-NO	40A
3	Relay K6-COM	40A

Pin	Terminal Block TB3	Comments
1	Relay K7-NO	24A
2	Relay K7-NO	24A
3	Relay K7-COM	24A

Pin	Terminal Block TB4	Comments
1	Relay K8-NO	24A
2	Relay K8-NC	24A
3	Relay K8-COM	24A

Pin	Terminal Block TB5	Comments
1	Relay K9-NO	24A
2	Relay K9-NO	24A
3	Relay K9-COM	24A

Pin	Terminal Block TB6	Comments
1	Relay K10-NO	24A
2	Relay K10-NO	24A
3	Relay K10-COM	24A

Pin	Terminal Block TB7	Comments
1	Relay K11-NO	24A
2	Relay K11-NO	24A
3	Relay K11-COM	24A

Pin	Terminal Block TB8	Comments
1	Relay K12-NO	24A
2	Relay K12-NC	24A
3	Relay K12-COM	24A

Pin	Terminal Block TB9	Comments
1	Battery OR Relay K13	13A
2	Battery OR Relay K13	13A
3	Battery OR Relay K13	13A

Pin	Terminal Block TB10	Comments
1	Battery OR Relay K13	13A
2	Battery OR Relay K14	13A
3	Battery OR Relay K14	13A

Pin	Terminal Block TB11	Comments
1	Battery OR Relay K14	13A
2	Battery OR Relay K14	13A
3	Ground	24A

Pin	Connector J3	VTD Range	RTD Range
1	STB/STG/VTD1/VTD2/TRI-STATE	0-5.5V / 0-36V	N/A
2	STB/STG/VTD1/VTD2/TRI-STATE	0-5.5V / 0-36V	N/A
3	STB/STG/VTD1/VTD2/TRI-STATE	0-5.5V / 0-36V	N/A
4	STB/STG/VTD1/VTD2/TRI-STATE	0-5.5V / 0-36V	N/A
5	STB/STG/VTD1/VTD2/TRI-STATE	0-5.5V / 0-36V	N/A
6	STB/STG/VTD1/VTD2/TRI-STATE	0-5.5V / 0-36V	N/A
7	STB/STG/VTD1/VTD2/TRI-STATE	0-5.5V / 0-36V	N/A
8	STB/STG/VTD1/VTD2/FREQ/20mA/RTD/TRI-STATE	0-5.5V / 0-36V	0-500 ohms
9	STB/STG/VTD1/VTD2/TRI-STATE	0-5.5V / 0-36V	N/A
10	STB/STG/VTD1/VTD2/TRI-STATE	0-5.5V / 0-36V	N/A
11	STB/STG/VTD1/VTD2/TRI-STATE	0-5.5V / 0-36V	N/A
12	STB/STG/VTD1/VTD2/TRI-STATE	0-5.5V / 0-36V	N/A
13	STB/STG/VTD1/VTD2/TRI-STATE	0-5.5V / 0-36V	N/A
14	STB/STG/VTD1/VTD2/TRI-STATE	0-5.5V / 0-36V	N/A
15	STB/STG/VTD1/VTD2/TRI-STATE	0-5.5V / 0-36V	N/A
16	STB/STG/VTD1/VTD2/FREQ/20mA/RTD/TRI-STATE	0-5.5V / 0-36V	0-2K ohms
17	STB/STG/VTD1/VTD2/FREQ/20mA/RTD/TRI-STATE	0-5.5V / 0-36V	0-500 ohms
18	STB/STG/VTD1/VTD2/FREQ/20mA/RTD/TRI-STATE	0-5.5V / 0-36V	0-2K ohms
19	Sensor Supply: 5Vdc 250mA Max	0-5.5V	N/A
20	STB/STG/VTD1/VTD2/TRI-STATE	0-5.5V / 0-36V	N/A
21	Sensor Ground	0-5.5V	N/A
22	10Vdc Analog output	N/A	N/A

Pin	Connector J7 (Optional)	Comments
1	CAN HI 3	
2	CAN3 Shield	
3	CAN LO 3	
4	CAN HI 4	
5	CAN4 Shield	
6	CAN LO 4	

Item	Peripheral	Status
1	USB Host	Populate
2	External Memory MX25L6433FM2I-08G	Populate

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DWG NO	PM-04W-201-G
DWG TITLE	Title Sheet
SIZE	B
SCALE	1 : 1
SHT	0 OF 41

