Professional Electronics for Automotive and Motorsport

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PDUX3B (12V) Datasheet

The PDUX3B (12V) is a high-performance solid-state power distribution unit with a total of 34 powered output channels and maximum current capacity of 350A.

This includes ten flexible 40A output drivers which may be configured as half-bridge, high side or high side PWM (configurable frequency) outputs, with the ability to soft start electrical loads with closed loop current limitation.

In addition, two 40A capable output drivers, high side and high side PWM (configurable frequency) with the ability to soft start electrical loads and eight 15A capable output drives, high side and high side PWM (configurable frequency) with the ability to soft start electrical loads.

Using digitised, voltage, or linearised values from its 16 analogue inputs and from any of three CAN buses, the PDUX3B is calibrated using a clear graphical interface with full logic simulation and live monitoring capabilities.

The PDUX3B is able to operate in a low-power standby state, drawing <2mA, with configurable activation based on physical or CAN input.

Additionally, the PDUX3B may be used to expand input and output functionality of any Life Racing ECU.

The PDUX3B is available in 12V, 24V and 48V variants as well as an internal IMU option as detailed in the 'Ordering Information' section.



Features:

- Schematic based calibration including logic simulation tool.
- Custom CAN across 3 buses including mux frames and retransmission (gateway) features, configured with a graphical display and import/export tool.
- Low power state woken on either a physical input, CAN activity or specific CAN frame
- Configurable evaluation frequency operation of schematic components in circuitry "Expert Frequency Mode"
- Optional internal IMU (Inertial Measurement Unit) feature offers a six-axis gyro and accelerometer which can be used within PDU schematic or transmitted over CAN.

Outputs:

- 34 main power outputs:
 - 10 multifunction outputs configurable as either half-bridge, high side, low side, high side PWM (100Hz-20kHz) outputs.
 - (40A continuous, soft-start inrush limiting 60A, hard-start inrush 60A)
 - 10 high side, two of which can be high side PWM (100Hz-20kHz) outputs. (40A continuous, hard-start inrush 60A)
 - 14 high side, eight of which can be high side PWM (100Hz-20kHz) outputs. (15A continuous, hard-start inrush 17.5A)
- Output linking ('teaming') to support very high current devices.
- Four additional low side outputs with configurable PWM (10Hz-10kHz).
- All outputs short circuit and thermally protected with multi-stage in-rush control.
- All outputs additionally protected by physical fuses as required by worldwide regulations.
- Combined diagnostic output with reset input.
- 128 scalable CAN ('soft') outputs.
- Custom CAN datastream— i.e., customisable channel current, channel state and device information

Inputs:

- 16 physical 0-5V inputs, including software selectable 3k Ohm pull-up resistors.
- Four inputs capable of programmable "wake" functionality.
- Comparing and manipulating real numbers (floating point decimal) in schematic using configurable logic blocks.
- Analogue inputs can be linearised, viewed as raw voltage or Boolean values.
- Dedicated wake pin.
- 128 CAN 'soft' inputs with configurable scaling.

Interfaces:

- 2x 100Mbit/s full duplex Ethernet (Ethernet switch functionality).
- 3x CAN 2.0B fully flexible.
- Option for one galvanically isolated CAN bus (CAN3 custom projects only).
- RS232C serial interface (custom projects only).
- LIN Bus (custom projects only).



Power Supply:

- 6V to 20V input voltage (12V), 6V to 30V input voltage (24V), 6V to 60V (48V).
- Dedicated logic power input.
- Regulated 5V sensor supply output with full circuit protection.

Sleep State:

- Low power standby state with configurable wake options:
 - Wake by voltage signal (1.6mA).
 - Wake by any CAN activity (CAN-1 only) (2mA).
 - Wake by specific CAN frame or content (two frames required, CAN-1 only) (2mA).
 - Wake by specific CAN frame or content with low latency (one frame required, CAN-1 only) (10mA).

ECU Slaving:

- Allows a Life Racing ECU to "claim" unused pins across a dedicated CAN bus utilising the following PDU I/O:
 - Outputs 1-10 with additional functionality including full-bridge pairing and configurable PWM frequencies.
 - Low outputs 11-14 with configurable PWM frequencies and internal pull up resistors.
 - All 16 inputs, including eight frequency capable (four optionally bipolar), and all with software selectable 3k Ohm pull-up resistors.

Physical:

- Two LEAVYSEAL connectors with a total of 113 pins.
- Amphenol SurLok power stud.
- Machined Aluminium enclosure.
- 210x130x57mm (including connectors).
- 1090 grams.
- Operating Temperature -40°C to +85°C.

Ordering Information:

Description	Part number	
PDUX3B 350A (10mm main power stud)	PDU-C01	
PDUX3B 200A (8mm main power stud)	PDU-C04	
PDUX3B 350A 24V (10mm main power stud)	PDU-E01	
PDUX3B 200A 24V (8mm main power stud)	PDU-E04	
PDUX3B 350A 48V (10mm main power stud)	PDU-F01	
PDUX3B 200A 48V (8mm main power stud)	PDU-F04	
PDUX 350A Connector Kit	CON-B10	
PDUX 200A Connector Kit	CON-B11	
3-axis accelerometer and 3-axis gyroscope	PDU-FEAT-IMU	
Two pin wheel speed sensor inputs	PDU-BTC-WS	



Wiring Information:

Power Stud

Mating connector (350A): Surlok SLPPCxxBSR Mating connector (200A): Surlok SLPPBxxBSR (xx=size: 35 150A, 50 200A, 70 300A, 85 350A)

Pin	Gauge	Signal Name	Signal Notes
1	-	+12V Supply	Positive battery supply

Connector 1

Mating connector: 1-1534127-1, Hood: 9-1394050-1

Pin	Gauge	Signal Name	Signal Notes
1	20-12AWG	Power Ground	Negative battery supply
2	20-12AWG	Output 20	High Side 40A
3	20-12AWG	Output 19	High Side 40A
4	20-12AWG	Output 18	High Side 40A
5	20-12AWG	Output 17	High Side 40A
6	20-12AWG	Output 16	High Side 40A
7	20-12AWG	Output 15	High Side 40A
8	20-12AWG	Output 14	High Side 40A
9	20-12AWG	Output 13	High Side 40A
10	20-12AWG	Output 12	High Side/High Side PWM (configurable Hz), Soft start, 40A ⁽¹⁾
11	20-12AWG	Output 11	High Side/High Side PWM (configurable Hz), Soft start, 40A ⁽¹⁾
12	20.424040	Output 10	High Side/Low Side/High Side PWM (configurable Hz), Soft start, 40A ⁽¹⁾
12	20-12AWG	Output 10	SLAVED: Half Bridge, Full Bridge paired with Output 9, Low Side, PWM
13	20-12AWG	Output 9	High Side/Low Side/High Side PWM (configurable Hz), Soft start, $40A^{(1)}$
15	20 12/100		SLAVED: Half Bridge, Full Bridge paired with Output 10, Low Side, PWM
14	20-12AWG	0-12AWG Output 8	High Side/Low Side/High Side PWM (configurable Hz), Soft start, $40A^{(1)}$
			SLAVED: Half Bridge, Full Bridge paired with Output 7, Low Side, PWM
15	20-12AWG	Output 7	High Side/Low Side/High Side PWM (configurable Hz), Soft start, 40A ⁽¹⁾
		•	SLAVED: Half Bridge, Full Bridge paired with Output 8, Low Side, PWM
16	20-12AWG	Output 6	High Side/Low Side/High Side PWM (configurable Hz), Soft start, 40A ⁽¹⁾
			SLAVED: Half Bridge, Full Bridge paired with Output 5, Low Side, PWM
17	20-12AWG	Output 5	High Side/Low Side/High Side PWM (configurable Hz), Soft start, 40A ⁽¹⁾
			SLAVED: Half Bridge, Full Bridge paired with Output 6, Low Side, PWM
18	20-12AWG	Output 4	High Side/Low Side/High Side PWM (configurable Hz), Soft start, 40A ⁽¹⁾
			SLAVED: Half Bridge, Full Bridge paired with Output 3, Low Side, PWM High Side/Low Side/High Side PWM (configurable Hz), Soft start, 40A ⁽¹⁾
19	20-12AWG	Output 3	SLAVED: Half Bridge, Full Bridge paired with Output 4, Low Side, PWM
			High Side/Low Side/High Side PWM (configurable Hz), Soft start, 40A ⁽¹⁾
20	20-12AWG	Output 2	SLAVED: Half Bridge, Full Bridge paired with Output 1, Low Side, PWM
	20-12AWG		High Side/Low Side/High Side PWM (configurable Hz), Soft start, 40A ⁽¹⁾
21		20-12AWG Output 1	SLAVED: Half Bridge, Full Bridge paired with Output 2, Low Side, PWM



Connector 2

Mating Connector: 1703998-1, Hood 1703997-1

Pin	Gauge	Signal Name	Signal Notes
1	-	DO NOT CONNECT	LR Internal use only
2	-	DO NOT CONNECT	LR Internal use only
3	-	DO NOT CONNECT	LR Internal use only
4	-	DO NOT CONNECT	LR Internal use only
5	-	DO NOT CONNECT	LR Internal use only
6	-	DO NOT CONNECT	LR Internal use only
7	-	DO NOT CONNECT	LR Internal use only
8	-	DO NOT CONNECT	LR Internal use only
9	-	DO NOT CONNECT	LR Internal use only
10	-	DO NOT CONNECT	LR Internal use only
11	-	DO NOT CONNECT	LR Internal use only
12	-	DO NOT CONNECT	LR Internal use only
13	-	DO NOT CONNECT	LR Internal use only
14	-	DO NOT CONNECT	LR Internal use only
15	-	DO NOT CONNECT	LR Internal use only
16	24-16AWG	Output 34	High Side 15A
17	24-16AWG	Output 32	High Side 15A
18	24-16AWG	Output 30	High Side 15A
19	24-16AWG	Output 28	High Side, High Side PWM (configurable Hz), Soft Start, 15A ⁽²⁾
20	24-16AWG	Output 26	High Side, High Side PWM (configurable Hz), Soft Start, 15A ⁽²⁾
21	24-16AWG	Output 24	High Side, High Side PWM (configurable Hz), Soft Start, 15A ⁽²⁾
22	24-16AWG	Output 22	High Side, High Side PWM (configurable Hz), Soft Start, 15A ⁽²⁾
23	24-16AWG	24-16AWG Low Output 11	Low Side, Low Side PWM (configurable Hz) ⁽³⁾
			SLAVED: Low Side PWM configurable frequency
24	-	DO NOT CONNECT	LR Internal use only
25	-	DO NOT CONNECT	LR Internal use only
26	-	DO NOT CONNECT	LR Internal use only
27	-	DO NOT CONNECT	LR Internal use only
28	-	DO NOT CONNECT	LR Internal use only
29	-	DO NOT CONNECT	LR Internal use only
30	-	DO NOT CONNECT	LR Internal use only
31	-	DO NOT CONNECT	LR Internal use only
32	-	DO NOT CONNECT	LR Internal use only
33	-	DO NOT CONNECT	LR Internal use only
34	-	DO NOT CONNECT	LR Internal use only
35	-	DO NOT CONNECT	LR Internal use only
36	-	DO NOT CONNECT	LR Internal use only
37	-	DO NOT CONNECT	LR Internal use only
38	-	DO NOT CONNECT	LR Internal use only
39	24-16AWG	Output 33	High Side 15A
40	24-16AWG	Output 31	High Side 15A



Connector 2

Continued...

41 14.1500 Output 29 High Side 15A 42 24.1600 Output 25 High Side, High Side PWM (configurable Hz), Soft Start, 15A ⁽²⁾ 43 24.1600 Output 23 High Side, High Side PWM (configurable Hz), Soft Start, 15A ⁽²⁾ 44 24.1600 Output 23 High Side, High Side PWM (configurable Hz), Soft Start, 15A ⁽²⁾ 45 24.1600 Output 21 High Side, High Side PWM (configurable Hz), Soft Start, 15A ⁽²⁾ 46 24.1600 Low Side, High Side PWM (configurable Hz), Soft Start, 15A ⁽²⁾ 47 24.1600 Input 01 Analogue C-5V, 34D programmable pullup to SV 48 24.1600 Input 03 Analogue C-5V, 34D programmable pullup to SV 49 24.1600 Input 05 Analogue C-5V, 34D programmable pullup to SV 50 24.1600 Input 05 Analogue C-5V, 34D programmable pullup to SV 51 34.1600 Input 05 Analogue C-5V, 34D programmable pullup to SV 52 24.16000 Input 07 Analogue C-5V, 34D programmable pullup to SV 53 34.1400 Analogue C-5V, 34D programmable pullup to SV 54 14.0401 Analogue C-5V, 34D programmable pullup to SV 55 24.16000 Input 11 Analogue C-5V, 34D programmable pullup to SV 54 14.16001 An	Pin	Gauge	Signal Name	Signal Notes	
43 24-164/0 Output 25 High Side, High Side PMM (configurable Hz), Soft Start, 15A ⁽²⁾ 44 24-364/6 Output 23 High Side, High Side PMM (configurable Hz), Soft Start, 15A ⁽²⁾ 45 24-364/6 Output 21 High Side, High Side PMM (configurable Hz), Soft Start, 15A ⁽²⁾ 46 24-364/6 Low Output 21 Low Side FVM (configurable Hz), Soft Start, 15A ⁽²⁾ 47 24-364/6 Low Output 12 SUVED: Adapted FVM (configurable Hz), Soft Start, 15A ⁽²⁾ 48 24-364/6 Input 03 Analogue 0-5V, 3AD programmable pullup to 5V 54/464/6 Input 03 Analogue 0-5V, 3AD programmable pullup to 5V 54/464/6 Input 05 Analogue 0-5V, 3AD programmable pullup to 5V 54/464/6 Input 05 Analogue 0-5V, 3AD programmable pullup to 5V 54/464/6 Input 07 Analogue 0-5V, 3AD programmable pullup to 5V 54/464/6 Input 07 Analogue 0-5V, 3AD programmable pullup to 5V 51/2 24-364/6 Input 07 Analogue 0-5V, 3AD programmable pullup to 5V 51/2 24-364/6 Input 13 Analogue 0-5V, 3AD programmable pullup to 5V 52 24-364/6	41	24-16AWG	Output 29	High Side 15A	
44 24-156/WG Output 23 High Side, High Side PWM (configurable Hd), Soft Start, 15A ²³ 45 24-356/WG Output 21 High Side, HWM (configurable Hd) ²⁰ 46 24-356/WG Low Output 12 Low Side PWM (configurable Hd) ²⁰ 47 24-366/WG Input 01 Analogue 0-5V, 3KD programmable pullup to 5V 48 24-366/WG Input 03 Analogue 0-5V, 3KD programmable pullup to 5V 54/WD . Analogue 0-5V, 3KD programmable pullup to 5V StAVED. Analogue 0-5V, 3KD programmable pullup to 5V 59 24-366/WG Input 05 StAVED. Analogue 0-5V, 3KD programmable pullup to 5V 50 24-366/WG Input 05 StAVED. Analogue 0-5V, 3KD programmable pullup to 5V 50 24-366/WG Input 07 Analogue 0-5V, 3KD programmable pullup to 5V 51 24-366/WG Input 07 Analogue 0-5V, 3KD programmable pullup to 5V 51 24-366/WG Input 07 Analogue 0-5V, 3KD programmable pullup to 5V 52 24-366/WG Input 13 Analogue 0-5V, 3KD programmable pullup to 5V 53 32-366/WG StRDEG RDD Protected sorreground 54	42	24-16AWG	Output 27	High Side, High Side PWM (configurable Hz), Soft Start, 15A ⁽²⁾	
45 24-164/05 Output 21 High Side, High Side PWM (configurable Hz) ⁶⁷ 46 24-26/06 Low Output 12 Low Side PWM configurable Hz) ⁶⁷ 47 24-164/05 Low Output 12 Low Side PWM configurable Hz) ⁶⁷ 48 24-164/05 Input 01 SUVED Analogue or Side PWM configurable Pullup to SV 48 24-164/05 Input 03 Analogue 0-5V, 3KD programmable pullup to SV 50 24-164/05 Input 05 SUVED Analogue or Side PWM configurable Pullup to SV 51 24-164/05 Input 05 Analogue 0-5V, 3KD programmable pullup to SV 50 24-164/05 Input 07 SUVED Analogue 0-5V, 3KD programmable pullup to SV 51 24-164/05 Input 07 SUVED Analogue 0-5V, 3KD programmable pullup to SV 52 24-164/05 Input 07 SUVED Analogue 0-5V, 3KD programmable pullup to SV 53 24-164/05 Input 13 Analogue 0-5V, 3KD programmable pullup to SV 54 24-164/05 Input 13 Analogue 0-5V, 3KD programmable pullup to SV 55 2-164/05 Input 13 Analogue 0-5V, 3KD programmable pullup to SV 54 24-264/05 Input 13 Analogue 0-5V, 3KD programmable pullup to SV 55 2-164/05 KADD Analogue 0-5V, 3KD programmable pullup to SV 56 <t< td=""><td>43</td><td>24-16AWG</td><td>Output 25</td><td>High Side, High Side PWM (configurable Hz), Soft Start, 15A⁽²⁾</td></t<>	43	24-16AWG	Output 25	High Side, High Side PWM (configurable Hz), Soft Start, 15A ⁽²⁾	
46 24-16XWG Low Output 12 Low Side, Low Side PWM (configurable Hz) ¹⁰⁰ SLATD: Low Side PWM configurable frequency 47 24-16XWG Input 01 Analogue 0-5V, 3KD programmable pullup to SV SLAVED: Analogue 0-5V, 3KD programmable pullup to SV 48 24-16XWG Input 03 Analogue 0-5V, 3KD programmable pullup to SV SLAVED: Analogue 0-5V, 3KD programmable pullup to SV 49 24-16XWG Input 03 Analogue 0-5V, 3KD programmable pullup to SV SLAVED: Analogue 0-5V, 3KD programmable pullup to SV 50 24-16XWG Input 05 Analogue 0-5V, 3KD programmable pullup to SV SLAVED: Analogue 0-5V, 3KD programmable pullup to SV 50 24-16XWG Input 07 Analogue 0-5V, 3KD programmable pullup to SV Freed frequency: 0-5V, 3KD programmable pullup to SV 51 24-16XWG Input 10 Analogue 0-5V, 3KD programmable pullup to SV 52 24-16XWG Input 11 Analogue 0-5V, 3KD programmable pullup to SV 53 24-16XWG Input 13 Analogue 0-5V, 3KD programmable pullup to SV, Make ⁴⁴ 54 24-16XWG Input 15 Analogue 0-5V, 3KD programmable pullup to SV, Make ⁴⁴ 54 24-16XWG Input 15 Analogue 0-5V, 3KD programmable pullup to SV, Wake ⁴⁴	44	24-16AWG	Output 23	High Side, High Side PWM (configurable Hz), Soft Start, 15A ⁽²⁾	
46 X=15AV0 Low Output 12 SLAVED: Low Side PWM configurable frequency 47 X=15AV0 Input 01 SLAVED: Low Side PWM configurable frequency 48 Z=15AV0 Input 03 SLAVED: Analogue of SV, SVD 9V,	45	24-16AWG	Output 21	High Side, High Side PWM (configurable Hz), Soft Start, 15A ⁽²⁾	
Image: Control State PMA configurable frequency 47 24-154/WG Input 01 SulVED. Low Side PMA configurable pullup to 5V SLAVED. Analogue 0 5V, 3KD programmable pullup to 5V 48 24-156/WG Input 03 SulVED. Analogue 0 5V, 3KD programmable pullup to 5V 49 24-156/WG Input 05 SulVED. Analogue 0 5V, 3KD programmable pullup to 5V 50 24-156/WG Input 05 SulVED. Analogue 0 5V, 3KD programmable pullup to 5V 51 24-156/WG Input 05 SulVED. Analogue 0 5V, 3KD programmable pullup to 5V 52 24-156/WG Input 07 SulVED. Analogue 0 5V, 3KD programmable pullup to 5V 52 24-156/WG Input 07 SulVED. Analogue 0 5V, 3KD programmable pullup to 5V 53 24-156/WG Input 11 Analogue 0 5V, 3KD programmable pullup to 5V 54 24-156/WG Input 13 Analogue 0 5V, 3KD programmable pullup to 5V 55 24-156/WG Input 13 Analogue 0 5V, 3KD programmable pullup to 5V 55 24-156/WG Store 0 Protected sensor ground 56 24-156/WG Store 0 Protected sensor ground 57 24-156/WG <td>40</td> <td></td> <td></td> <td>Low Side, Low Side PWM (configurable Hz)⁽³⁾</td>	40			Low Side, Low Side PWM (configurable Hz) ⁽³⁾	
47 24-36/WG Input 01 SJAVED Analogue of requery, 0.5V, 5V to +SV, 3kQ programmable pullup to SV, configurable frequency voltage thresholds: 48 24-56/WG Input 03 Analogue 0-SV, 3kQ programmable pullup to SV 49 24-56/WG Input 05 SJAVED Analogue of requery, 0-SV, 5V to +SV, 3kQ programmable pullup to SV, configurable frequency, 0-SV, 3kQ programmable pullup to SV 50 24-56/WG Input 07 SJAVED Analogue 0-SV, 3kQ programmable pullup to SV 51 24-56/WG Input 07 SJAVED Analogue 0-SV, 3kQ programmable pullup to SV 52 24-56/WG Input 07 SJAVED Analogue 0-SV, 3kQ programmable pullup to SV 53 32-456/WG Input 11 Analogue 0-SV, 3kQ programmable pullup to SV 54 24-56/WG Input 13 Analogue 0-SV, 3kQ programmable pullup to SV 55 24-56/WG Input 13 Analogue 0-SV, 3kQ programmable pullup to SV 56 24-56/WG Input 13 Analogue 0-SV, 3kQ programmable pullup to SV 57 24-456/WG Input 13 Analogue 0-SV, 3kQ programmable pullup to SV 58 10-11 Analogue 0-SV, 3kQ programmable pullup to SV 59 24-456/WG Input 13 Analogue 0-SV, 3kQ programmable pullup to SV 51 24-456/WG Input 13 Analogue 0-SV, 3kQ programmable pullup to SV 52	46	24-16AWG	Low Output 12	SLAVED: Low Side PWM configurable frequency	
Image: Control Analogue (Control (Contro) (Contro)(Cont))))))))))))))))))))))))))))))))))))				Analogue 0-5V, $3k\Omega$ programmable pullup to 5V	
48 24-164WG Input 03 SUVED Availague or frequency 05V, 5V to +5V, 3kD programmable pullup to 5V, configurable frequency 05W, 3kD programmable pullup to 5V 49 24-164WG Input 05 SUVED. Availague or frequency, 05V, 3kD programmable pullup to 5V 50 24-164WG Input 07 Analogue 0-5V, 3kD programmable pullup to 5V 51 24-164WG Input 07 Analogue 0-5V, 3kD programmable pullup to 5V 52 24-164WG Input 09 Analogue 0-5V, 3kD programmable pullup to 5V 52 24-164WG Input 11 Analogue 0-5V, 3kD programmable pullup to 5V 53 24-164WG Input 13 Analogue 0-5V, 3kD programmable pullup to 5V 54 24-164WG Input 13 Analogue 0-5V, 3kD programmable pullup to 5V, Wakel [®] 54 24-164WG Input 15 Analogue 0-5V, 3kD programmable pullup to 5V, Wakel [®] 55 24-164WG SENSOR GND Protected sensor ground SE 57 24-164WG SENSOR GND Protected sensor ground Second se	47	24-16AWG	Input 01		
Instrume Instrume Instrume Instrume Instrume 49 24-164WG Input 05 Analogue 0-5V, 3KD programmable pullup to 5V 50 24-164WG Input 07 Analogue 0-5V, 3KD programmable pullup to 5V 51 24-164WG Input 07 Analogue 0-5V, 3KD programmable pullup to 5V 52 24-164WG Input 07 Analogue 0-5V, 3KD programmable pullup to 5V 52 24-164WG Input 09 Analogue 0-5V, 3KD programmable pullup to 5V 53 24-164WG Input 11 Analogue 0-5V, 3KD programmable pullup to 5V 53 24-164WG Input 13 Analogue 0-5V, 3KD programmable pullup to 5V 54 24-164WG Input 13 Analogue 0-5V, 3KD programmable pullup to 5V 55 24-164WG Input 15 Analogue 0-5V, 3KD programmable pullup to 5V, Wake ⁴⁴ 56 24-164WG KD OUT Regulated 5V sensor reference supply 57 24-164WG WARNING AND RESET SW Warning output for an LED to ground. 58 24-164WG CAN #03 HI CAN communication port 1200 software selectable termination 61 <	40			Analogue 0-5V, $3k\Omega$ programmable pullup to 5V	
49 24-36.WG Input 05 SUVED: Analogue or frequency: 60X, 30D argaramable pullup to 5V Fixed frequency voltage thresholds at 1.25 and 3.75V 50 24-164.WG Input 07 SLAVED: Analogue or trequency, 6VX, 30D programmable pullup to 5V Fixed frequency voltage thresholds at 2.35 and 3.75V 51 24-164.WG Input 09 Analogue 0-5V, 3KD programmable pullup to 5V Fixed frequency voltage thresholds at 1.25 and 3.75V 51 24-164.WG Input 11 Analogue 0-5V, 3KD programmable pullup to 5V 53 24-164.WG Input 13 Analogue 0-5V, 3KD programmable pullup to 5V 54 24-164.WG Input 13 Analogue 0-5V, 3KD programmable pullup to 5V, Wake ⁴⁰ 55 24-164.WG SKDSOR GND Protected sensor ground 56 24-164.WG LOGIC POWER IN +12V Battery supply; recommended independent logic supply <0.5A	48	24-16AWG	Input 03		
State State <th< td=""><td>40</td><td></td><td></td><td>Analogue 0-5V, $3k\Omega$ programmable pullup to 5V</td></th<>	40			Analogue 0-5V, $3k\Omega$ programmable pullup to 5V	
50 24.164WG Input 07 Analogue 0-5V, 3&D programmable pullup to 5V SLAVED: Analogue 0-5V, 3&D programmable pullup to 5V Fixed frequency voltage thresholds at 1.25 and 3.75V 51 24.164WG Input 09 Analogue 0-5V, 3&D programmable pullup to 5V 52 24.164WG Input 11 Analogue 0-5V, 3&D programmable pullup to 5V 53 24.164WG Input 13 Analogue 0-5V, 3&D programmable pullup to 5V 54 24.164WG Input 13 Analogue 0-5V, 3&D programmable pullup to 5V, Wake ⁴⁰ 54 24.164WG Input 15 Analogue 0-5V, 3&D programmable pullup to 5V, Wake ⁴⁰ 54 24.164WG Input 15 Analogue 0-5V, 3&D programmable pullup to 5V, Wake ⁴⁰ 55 24.164WG Input 15 Analogue 0-5V, 3&D programmable pullup to 5V, Wake ⁴⁰ 56 24.164WG SK OUT Regulated 5V sensor reference supply 57 24.164WG RS232 RX RS232 receive 60 24.164WG RAY0 HI CAN communication port 1200 software selectable termination 61 24.164WG ETHERNET2 RX+ Ethernet communication port 1200 software selectable termination 62 24.164WG <	49	24-16AWG	Input 05		
FirstSLAVEDSLAVEDAnalogue of requency output (b SV5124-16AWGInput 09Analogue 0-SV, 3KD programmable pullup to SV5224-16AWGInput 11Analogue 0-SV, 3KD programmable pullup to SV5324-16AWGInput 13Analogue 0-SV, 3KD programmable pullup to SV, Wake ⁽⁴⁾ 5424-16AWGInput 15Analogue 0-SV, 3KD programmable pullup to SV, Wake ⁽⁴⁾ 5524-16AWGInput 15Analogue 0-SV, 3KD programmable pullup to SV, Wake ⁽⁴⁾ 5624-16AWGSV OUTRegulated SV sensor reference supply5724-16AWGLOGIC POWER IN+12V Battery supply; recommended independent logic supply <0.SA					
5224-t6AWGInput 11Analogue 0-5V, 3kΩ programmable pullup to 5V5324-t6AWGInput 13Analogue 0-5V, 3kΩ programmable pullup to 5V, Wake ⁽⁰⁾ 5424-t6AWGInput 15Analogue 0-5V, 3kΩ programmable pullup to 5V, Wake ⁽⁰⁾ 5524-t6AWGSENSOR GNDProtected sensor ground5624-t6AWG5V OUTRegulated 5V sensor reference supply5724-t6AWGSV OUTRegulated 5V sensor reference supply5824-t6AWGSV OUTRegulated 5V sensor reference supply5924-t6AWGRS232 RXRS232 receive6024-t6AWGCAN #03 HICAN communication port 120Ω software selectable termination6124-t6AWGCAN #03 HICAN communication port 120Ω software selectable termination6224-t6AWGCAN #01 HICAN communication port 120Ω software selectable termination6324-t6AWGCAN #01 HICAN communication port 120Ω software selectable termination6424-t6AWGETHERNET2 RX+Ethernet communication port 26424-t6AWGETHERNET1 RX+Ethernet communication port 16624-t6AWGETHERNET1 TX+Ethernet communication port 16724-t6AWGETHERNET1 TX+Ethernet communication port 16824-t6AWGEthernet TX+Ethernet communication port 16724-t6AWGLow Output 13Low Side PWM (configurable Hz) ⁽³⁾ 6824-t6AWGLow Output 14Low Side PWM (configurable Hz) ⁽³⁾ 7024-t6AWGLow Output 14	50	24-16AWG	Input 07		
101Imput 13Analogue 0-SV, 3kD programmable pullup to SV, Wake ⁽⁴⁾ 5324-16AWGInput 13Analogue 0-SV, 3kD programmable pullup to SV, Wake ⁽⁴⁾ 5424-16AWGSENSOR GNDProtected sensor ground5624-16AWGSV OUTRegulated 5V sensor reference supply5724-16AWGSV OUTRegulated 5V sensor reference supply5824-16AWGLOGIC POWER IN+12V Battery supply; recommended independent logic supply <0.5A	51	24-16AWG	Input 09	Analogue 0-5V, $3k\Omega$ programmable pullup to 5V	
54 24-16AWG Input 15 Analogue 0-5V, 3kΩ programmable pullup to 5V, Wake ⁽⁶⁾ 55 24-16AWG SENSOR GND Protected sensor ground 56 24-16AWG 5V OUT Regulated 5V sensor reference supply 57 24-16AWG LOGIC POWER IN +12V Battery supply; recommended independent logic supply <0.5A	52	24-16AWG	Input 11	Analogue 0-5V, $3k\Omega$ programmable pullup to 5V	
55 24-16AWG SENSOR GND Protected sensor ground 56 24-16AWG SV OUT Regulated 5V sensor reference supply 57 24-16AWG LOGIC POWER IN +12V Battery supply; recommended independent logic supply <0.5A	53	24-16AWG	Input 13	Analogue 0-5V, $3k\Omega$ programmable pullup to 5V, Wake ⁽⁴⁾	
5624-16AWG5V OUTRegulated 5V sensor reference supply5724-16AWGLOGIC POWER IN+12V Battery supply; recommended independent logic supply <0.5A	54	24-16AWG	Input 15	Analogue 0-5V, $3k\Omega$ programmable pullup to 5V, Wake ⁽⁴⁾	
57 24-16AWG LOGIC POWER IN +12V Battery supply; recommended independent logic supply <0.5A	55	24-16AWG	SENSOR GND	Protected sensor ground	
5824-16AWGWARNING AND RESET SWWarning output for an LED to ground. Short to ground for manual reset.5924-16AWGRS232 RXRS232 receive6024-16AWGCAN #03 HICAN communication port 1200 software selectable termination6124-16AWGCAN #02 HICAN communication port 1200 software selectable termination6224-16AWGCAN #01 HICAN communication port 1200 software selectable termination6324-16AWGETHERNET2 RX+Ethernet communication port 1200 software selectable termination6424-16AWGETHERNET2 TX+Ethernet communication port 26524-16AWGETHERNET2 TX+Ethernet communication port 16624-16AWGETHERNET1 TX+Ethernet communication port 16724-16AWGETHERNET1 TX+Ethernet communication port 16824-16AWGETHERNET1 TX+Ethernet communication port 16724-16AWGLow Output 13Low Side, Low Side PWM (configurable Hz) ⁽³⁾ 6824-16AWGLow Output 14Low Side, Low Side PWM (configurable Hz) ⁽³⁾ 6924-16AWGInput 02SLAVED: Analogue or frequency7024-16AWGInput 02SLAVED: Analogue or frequency; 0-SV, -SV to +SV, 3kΩ programmable pullup to SV, configurable frequency7124-16AWGInput 04Analogue 0-SV, 3kΩ programmable pullup to SV	56	24-16AWG	5V OUT	Regulated 5V sensor reference supply	
5924-16AWGRS232 RXRS232 receive6024-16AWGCAN #03 HICAN communication port 120Ω software selectable termination6124-16AWGCAN #02 HICAN communication port 120Ω software selectable termination ECU Slave – when paired with LR ECU (terminated)6224-16AWGCAN #01 HICAN communication port 120Ω software selectable termination ECU Slave – when paired with LR ECU (terminated)6324-16AWGETHERNET2 RX+Ethernet communication port 26424-16AWGETHERNET2 TX+Ethernet communication port 16524-16AWGETHERNET1 RX+Ethernet communication port 16624-16AWGETHERNET1 TX+Ethernet communication port 16724-16AWGETHERNET1 TX+Ethernet communication port 16824-16AWGLow Output 13Low Side PWM (configurable Hz) ⁽³⁾ SLAVED: Low Side PWM configurable Hz) ⁽³⁾ SLAVED: Conside PWM configurable Hz) ⁽³⁾ SLAVED: Low Side PWM configurable Hz) ⁽³⁾ SLAVED: Low Side PWM configurable Hz) ⁽³⁾ SLAVED: Low Side PWM configurable Hz) ⁽³⁾ SLAVED: Analogue 0-5V, 3KΩ programmable pullup to 5V SLAVED: Analogue or frequency: 0-5V, -5V to +5V, 3kΩ programmable pullup to 5V SLAVED: Analogue or frequency: 0-5V, -5V to +5V, 3kΩ programmable pullup to 5V SLAVED: Analogue or frequency: 0-5V, -5V to +5V, 3kΩ programmable pullup to 5V S	57	24-16AWG	LOGIC POWER IN	+12V Battery supply; recommended independent logic supply <0.5A	
6024-16AWGCAN #03 HICAN communication port 120Ω software selectable termination6124-16AWGCAN #02 HICAN communication port 120Ω software selectable termination ECU Slave – when paired with LR ECU (terminated)6224-16AWGCAN #01 HICAN communication port 120Ω software selectable termination6324-16AWGETHERNET2 RX+Ethernet communication port 26424-16AWGETHERNET2 TX+Ethernet communication port 16524-16AWGETHERNET1 RX+Ethernet communication port 16624-16AWGETHERNET1 TX+Ethernet communication port 16724-16AWGETHERNET1 TX+Ethernet communication port 16824-16AWGPower GroundNegative battery supply6824-16AWGLow Output 13Low Side PWM (configurable Hz) ⁽³⁾ SLAVED: Low Side PWM configurable Hz) ⁽³⁾ SLAVED: Analogue 0-5V, 3KΩ programmable pullup to 5V SLAVED: Analogue 0-5V, 3KΩ programmable pullup to 5V, SLAVED: Analogue 0-5V, 3KΩ progra	58	24-16AWG	WARNING AND RESET SW	Warning output for an LED to ground. Short to ground for manual reset.	
61 24-16AWG CAN #02 HI CAN communication port 120Ω software selectable termination ECU Slave – when paired with LR ECU (terminated) 62 24-16AWG CAN #01 HI CAN communication port 120Ω software selectable termination 63 24-16AWG ETHERNET2 RX+ Ethernet communication port 2 64 24-16AWG ETHERNET2 TX+ Ethernet communication port 1 65 24-16AWG ETHERNET1 RX+ Ethernet communication port 1 66 24-16AWG ETHERNET1 TX+ Ethernet communication port 1 67 24-16AWG Power Ground Negative battery supply 68 24-16AWG Low Output 13 Low Side, Low Side PWM (configurable Hz) ⁽³⁾ SLAVED: Low Side, PWM configurable Hz) ⁽³⁾ 69 24-16AWG Low Output 14 Low Side, Low Side PWM configurable Hz) ⁽³⁾ SLAVED: Low Side PWM configurable Hz) ⁽³⁾ 70 24-16AWG Input 02 Analogue 0-5V, 3KΩ programmable pullup to 5V SLAVED: Analogue or frequency: 0-5V, -5V to +5V, 3KΩ programmable pullup to 5V, sLAVED: Analogue or SV, SLAVED: Analogue or frequency: 0-5V, -5V to +5V, 3KΩ programmable pullup to 5V, configurable 71 24-16AWG Input 04 Analogue or SV, SLAVED: Analogue or frequency: 0-5V, -5V to +5V, 3KΩ programmable pullup to 5V, configurable	59	24-16AWG	RS232 RX	RS232 receive	
6124-16AWGCAN #02 H1ECU Slave – when paired with LR ECU (terminated)6224-16AWGCAN #01 H1CAN communication port 1200 software selectable termination6324-16AWGETHERNET2 RX+Ethernet communication port 26424-16AWGETHERNET2 TX+Ethernet communication port 16524-16AWGETHERNET1 RX+Ethernet communication port 16624-16AWGETHERNET1 TX+Ethernet communication port 16724-16AWGETHERNET1 TX+Ethernet communication port 16824-16AWGPower GroundNegative battery supply6824-16AWGLow Output 13Low Side, Low Side PWM (configurable Hz) ⁽³⁾ SLAVED: Low Side, Low Side PWM (configurable Hz) ⁽³⁾ SLAVED: Low Side, Low Side PWM (configurable frequency6924-16AWGLow Output 14SLAVED: Low Side PWM (configurable frequency7024-16AWGInput 02Analogue 0-5V, 3K0 programmable pullup to 5V SLAVED: Analogue or frequency; 0-5V, -5V to +5V, 3k0 programmable pullup to 5V, slAVED: Analogue or SV, SkO programmable pullup to 5V SLAVED: Analogue or frequency; 0-5V, -5V to +5V, 3k0 programmable pullup to 5V, slAVED: Analogue or frequency; 0-5V, -5V to +5V, 3k0 programmable pullup to 5V, slAVED: Analogue or frequency; 0-5V, -5V to +5V, 3k0 programmable pullup to 5V, slAVED: Analogue or frequency; 0-5V, -5V to +5V, 3k0 programmable pullup to 5V, slAVED: Analogue or frequency; 0-5V, -5V to +5V, 3k0 programmable pullup to 5V, slAVED: Analogue or frequency; 0-5V, -5V to +5V, 3k0 programmable pullup to 5V, slAVED: Analogue or frequency; 0-5V, -5V to +5V, 3k0 programmable pullup to 5V, slAVED: Analogue or frequency; 0-5V, -5V to +5V, 3k0 programmable pullup to 5V, conf	60	24-16AWG	CAN #03 HI	CAN communication port 120Ω software selectable termination	
6324-16AWGETHERNET2 RX+Ethernet communication port 26424-16AWGETHERNET2 TX+Ethernet communication port 26524-16AWGETHERNET1 RX+Ethernet communication port 16624-16AWGETHERNET1 TX+Ethernet communication port 16724-16AWGPower GroundNegative battery supply6824-16AWGLow Output 13Low Side, Low Side PWM (configurable Hz) ⁽³⁾ SLAVED: Low Side PWM configurable frequency6924-16AWGLow Output 14Low Side, Low Side PWM (configurable Hz) ⁽³⁾ SLAVED: Low Side PWM configurable frequency7024-16AWGInput 02Analogue 0-5V, 3kΩ programmable pullup to 5V SLAVED: Analogue or frequency: 0-5V, -5V to +5V, 3kΩ programmable pullup to 5V, configurable7124-16AWGInput 04Analogue 0-5V, 3kΩ programmable pullup to 5V, sLAVED: Analogue or frequency; 0-5V, -5V to +5V, 3kΩ programmable pullup to 5V, configurable	61	24-16AWG	CAN #02 HI	•	
6424-16AWGETHERNET2 TX+Ethernet communication port 26524-16AWGETHERNET1 RX+Ethernet communication port 16624-16AWGETHERNET1 TX+Ethernet communication port 16724-16AWGPower GroundNegative battery supply6824-16AWGLow Output 13Low Side, Low Side PWM (configurable Hz) ⁽³⁾ SLAVED: Low Side PWM configurable frequency6924-16AWGLow Output 14Low Side, Low Side PWM (configurable Hz) ⁽³⁾ SLAVED: Low Side PWM configurable frequency7024-16AWGInput 02Analogue 0-5V, 3kΩ programmable pullup to 5V SLAVED: Analogue or frequency: 0-5V, -5V to +5V, 3kΩ programmable pullup to 5V, configurable frequency voltage thresholds7124-16AWGInput 04Analogue 0-5V, 3kΩ programmable pullup to 5V SLAVED: Analogue or frequency; 0-5V, -5V to +5V, 3kΩ programmable pullup to 5V, configurable	62	24-16AWG	CAN #01 HI	CAN communication port 120 software selectable termination	
6524-16AWGETHERNET1 RX+Ethernet communication port 16624-16AWGETHERNET1 TX+Ethernet communication port 16724-16AWGPower GroundNegative battery supply6824-16AWGLow Output 13Low Side, Low Side PWM (configurable Hz) ⁽³⁾ SLAVED: Low Side PWM configurable frequency6924-16AWGLow Output 14Low Side, Low Side PWM (configurable frequency7024-16AWGInput 02Analogue 0-5V, 3kΩ programmable pullup to 5V SLAVED: Analogue or frequency: 0-5V, -5V to +5V, 3kΩ programmable pullup to 5V, configurable frequency voltage thresholds7124-16AWGInput 04Analogue 0-5V, 3kΩ programmable pullup to 5V SLAVED: Analogue or frequency: 0-5V, -5V to +5V, 3kΩ programmable pullup to 5V, configurable	63	24-16AWG	ETHERNET2 RX+	Ethernet communication port 2	
6624-16AWGETHERNET1 TX+Ethernet communication port 16724-16AWGPower GroundNegative battery supply6824-16AWGLow Output 13Low Side, Low Side PWM (configurable Hz) ⁽³⁾ SLAVED: Low Side PWM configurable frequency6924-16AWGLow Output 14Low Side, Low Side PWM (configurable Hz) ⁽³⁾ SLAVED: Low Side PWM configurable frequency7024-16AWGInput 02Analogue 0-5V, 3kΩ programmable pullup to 5V SLAVED: Analogue or frequency: 0-5V, -5V to +5V, 3kΩ programmable pullup to 5V, configurable frequency voltage thresholds7124-16AWGInput 04Analogue 0-5V, 3kΩ programmable pullup to 5V, sLAVED: Analogue or frequency: 0-5V, -5V to +5V, 3kΩ programmable pullup to 5V, configurable	64	24-16AWG	ETHERNET2 TX+	Ethernet communication port 2	
6724-16AWGPower GroundNegative battery supply6824-16AWGLow Output 13Low Side, Low Side PWM (configurable Hz) ⁽³⁾ SLAVED: Low Side PWM configurable frequency6924-16AWGLow Output 14Low Side, Low Side PWM (configurable Hz) ⁽³⁾ SLAVED: Low Side PWM configurable frequency7024-16AWGInput 02Analogue 0-5V, 3kΩ programmable pullup to 5V SLAVED: Analogue or frequency; 0-5V, -5V to +5V, 3kΩ programmable pullup to 5V, configurable frequency voltage thresholds7124-16AWGInput 04Analogue 0-5V, 3kΩ programmable pullup to 5V, configurable	65	24-16AWG	ETHERNET1 RX+	Ethernet communication port 1	
68 24-16AWG Low Output 13 Low Side, Low Side PWM (configurable Hz) ⁽³⁾ 69 24-16AWG Low Output 14 Low Side, Low Side PWM (configurable Hz) ⁽³⁾ 70 24-16AWG Input 02 Analogue 0-5V, 3kΩ programmable pullup to 5V 71 24-16AWG Input 04 Analogue 0-5V, 3kΩ programmable pullup to 5V	66	24-16AWG	ETHERNET1 TX+	Ethernet communication port 1	
68 24-16AWG Low Output 13 SLAVED: Low Side PWM configurable frequency 69 24-16AWG Low Output 14 Low Side, Low Side PWM (configurable frequency 70 24-16AWG Input 02 Analogue 0-5V, 3kΩ programmable pullup to 5V SLAVED: Analogue or frequency; 0-5V, -5V to +5V, 3kΩ programmable pullup to 5V, configurable frequency voltage thresholds 71 24-16AWG Input 04 Analogue 0-5V, 3kΩ programmable pullup to 5V SLAVED: Analogue or frequency; 0-5V, -5V to +5V, 3kΩ programmable pullup to 5V, configurable	67	24-16AWG	Power Ground	Negative battery supply	
Generation SLAVED: Low Side PWM configurable frequency Generation Low Output 14 Low Side, Low Side PWM (configurable Hz) ⁽³⁾ SLAVED: Low Side PWM configurable frequency 70 24-16AWG Input 02 Analogue 0-5V, 3kΩ programmable pullup to 5V SLAVED: Analogue or frequency; 0-5V, -5V to +5V, 3kΩ programmable pullup to 5V, configurable frequency voltage thresholds 71 24-16AWG Input 04 Analogue 0-5V, 3kΩ programmable pullup to 5V SLAVED: Analogue or frequency; 0-5V, -5V to +5V, 3kΩ programmable pullup to 5V SLAVED: Analogue or frequency; 0-5V, -5V to +5V, 3kΩ programmable pullup to 5V	60	24 16 4140	Low Output 12	Low Side, Low Side PWM (configurable Hz) ⁽³⁾	
69 24-16AWG Low Output 14 70 24-16AWG Input 02 71 24-16AWG Input 04	80	24-16AWG		SLAVED: Low Side PWM configurable frequency	
Constraint SLAVED: Low Side PWM configurable frequency 70 24-16AWG Input 02 Analogue 0-5V, 3kΩ programmable pullup to 5V SLAVED: Analogue or frequency; 0-5V, -5V to +5V, 3kΩ programmable pullup to 5V, configurable frequency voltage thresholds 71 24-16AWG Input 04 Analogue 0-5V, 3kΩ programmable pullup to 5V SLAVED: Analogue or frequency; 0-5V, -5V to +5V, 3kΩ programmable pullup to 5V SLAVED: Analogue or frequency; 0-5V, -5V to +5V, 3kΩ programmable pullup to 5V, configurable	69	24-16AWG	Low Output 14	Low Side, Low Side PWM (configurable Hz) ⁽³⁾	
70 24-16AWG Input 02 SLAVED: Analogue or frequency; 0-5V, -5V to +5V, 3kΩ programmable pullup to 5V, configurable frequency voltage thresholds 71 24-16AWG Input 04 Analogue 0-5V, 3kΩ programmable pullup to 5V SLAVED: Analogue or frequency; 0-5V, -5V to +5V, 3kΩ programmable pullup to 5V SLAVED: Analogue 0-5V, 3kΩ programmable pullup to 5V		2.10000			SLAVED: Low Side PWIM configurable frequency
71 24-16AWG Input 04 SLAVED: Analogue of frequency; 0-5V, -5V to +5V, 3kΩ programmable pullup to 5V SLAVED: Analogue of frequency; 0-5V, -5V to +5V, 3kΩ programmable pullup to 5V SLAVED: Analogue of frequency; 0-5V, -5V to +5V, 3kΩ programmable pullup to 5V, configurable	70	24-16AWG	24-16AWG Input 02		
71 24-16AWG Input 04 SLAVED: Analogue or frequency; 0-5V, -5V to +5V, 3kΩ programmable pullup to 5V, configurable	/0				
· SLAVED. Analogue of nequency, 0-5V, 5V to +5V, 5K2 programmable pullup to 5V, comigurable	_			Analogue 0-5V, 3kΩ programmable pullup to 5V	
	71	24-16AWG	24-16AWG Input 04	SLAVED: Analogue or frequency; 0-5V, -5V to +5V, $3k\Omega$ programmable pullup to 5V, configurable frequency voltage thresholds	



Connector 2

Continued...

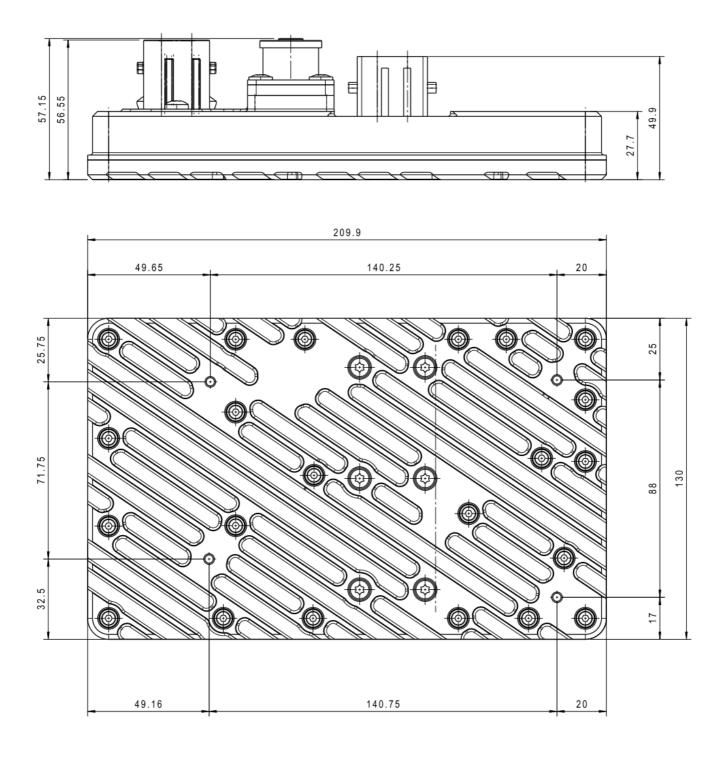
Pin	Gauge	Signal Name	Signal Notes
		Input 06	Analogue 0-5V, $3k\Omega$ programmable pullup to 5V
72	72 24-16AWG		SLAVED: Analogue or frequency; 0-5V, 3k Ω programmable pullup to 5V Fixed frequency voltage thresholds at 1.25 and 3.75V
		Input 08	Analogue 0-5V, $3k\Omega$ programmable pullup to 5V
73	24-16AWG		SLAVED: Analogue or frequency; 0-5V, 3kΩ programmable pullup to 5V Fixed frequency voltage thresholds at 1.25 and 3.75V
74	24-16AWG	Input 10	Analogue 0-5V, $3k\Omega$ programmable pullup to 5V
75	24-16AWG	Input 12	Analogue 0-5V, $3k\Omega$ programmable pullup to 5V
76	24-16AWG	Input 14	Analogue 0-5V, $3k\Omega$ programmable pullup to 5V, $Wake^{(4)}$
77	24-16AWG	Input 16	Analogue 0-5V, $3k\Omega$ programmable pullup to 5V, $Wake^{(4)}$
78	24-16AWG	SENSOR GND	Protected sensor ground
79	24-16AWG	Power Ground	Negative battery supply
80	24-16AWG	WAKEUP	Dedicated wake ⁽⁴⁾
81	24-16AWG	LIN	NOT CURRENTLY IN USE
82	24-16AWG	RS232 TX	RS232 transmit
83	24-16AWG	CAN #03 LO	CAN communication port 120 $\!\Omega$ software selectable termination
84	24-16AWG	CAN #02 LO	CAN communication port 120 Ω software selectable termination ECU Slave – when paired with LR ECU (terminated)
85	24-16AWG	CAN #01 LO	CAN communication port 120 $\!\Omega$ software selectable termination
86	24-16AWG	ETHERNET2 RX-	Ethernet communication port 2
87	24-16AWG	ETHERNET2 TX-	Ethernet communication port 2
88	24-16AWG	ETHERNET1 RX-	Ethernet communication port 1
89	24-16AWG	ETHERNET1 TX-	Ethernet communication port 1
90	24-16AWG	Power Ground	Negative battery supply
91	24-16AWG	Power Ground	Negative battery supply
92	24-16AWG	Output 21D	Duplicate of output 21 with Diode - intended for wiper operation 15A

Footnotes:

⁽¹⁾Default PWM frequency for Outputs 1-12 is 10kHz.
 ⁽²⁾Default PWM frequency for Outputs 21-28 is 10kHz.
 ⁽³⁾Default PWM frequency for Low Side Outputs 11-14 is 125Hz.
 ⁽⁴⁾Can be calibrated to bring unit out of sleep mode.



Dimensions:



Warranty and Servicing:

• One year limited warranty when used within supplied specification.