





I/O Controllers

System Managers

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I/O Modules

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Power Distribution Modules

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I/O Controllers

System Managers



122116



119890

9V
32V

IP67

Made in North America

- SAE J1939 CAN engine message reception and Es-Key network controller.
- Digital circuit breakers on all positive outputs.
- Output 'open load' detection.
- Diagnostic LED indicators.
- Optional modem available upon request.
- Selectable polarity for digital inputs models.
- Environmentally sealed – IP67.
- Multi-voltage.
- Made in North America.

Voltage : 9–32V
 CAN : SAE J1939
 Construction : Die-cast/Polycarbonate
 Ingress Protection : IP67
 Operating Temperature : -40°C to 85°C



Integral power connectors, suits TE DEUTSCH DTHD connectors

USB port for database transfer and diagnostics

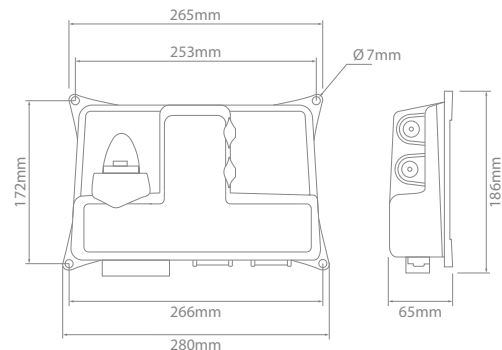


Input and output LED status indicators



Centralised Consolidation

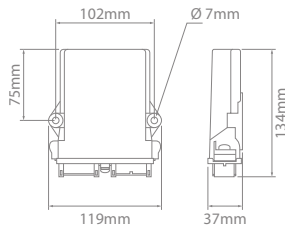
The Supernode II consolidates the functions of several modules – USM, Data Logger, Seatbelt, Vehicle Data Recorder (VDR), Climate Control, I/O Module & Power Distribution Module. This reduces node count and simplifies addressing making it well suited for applications where a centralised node location is required.



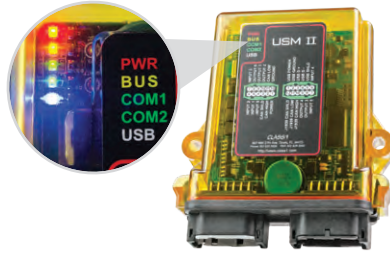
System Managers – Supernode II

Part No.	Inputs		Outputs		Current Draw (mA) *		Max. Output Current Rating (A)	
	Polarity Selectable		Positive	Negative	@ 13.8V	@ 27.6V	Positive	Negative
119890	24		18	6	500	350	13	2

* Current Draw does not include draw from outputs.



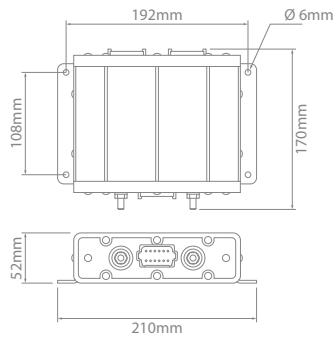
LED status indicators



System Managers – Universal System Manager 2

Part No.	Inputs		Outputs		Current Draw (mA) *		Max. Output Current Rating (A) Polarity Selectable
	Polarity Selectable		Polarity Selectable		@ 13.8V	@ 27.6V	
122116	6		5		100	125	0.5

* Current Draw does not include draw from outputs.



4 LED diagnostic indicators



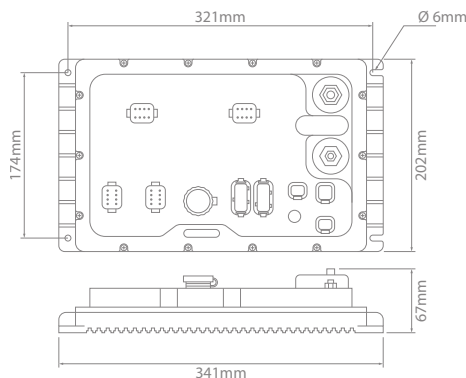
★ Featured



System Managers – 8x16 Node ★

Part No.	Inputs		Outputs	Current Draw (mA) *		Max. Output Current Rating (A)
	Digital			@ 13.8V	@ 27.6V	
6730-0000-00	8		16	50	60	13

* Current Draw does not include draw from outputs.



Field programmable via USB

★ Featured



Built-in LED network status indicators

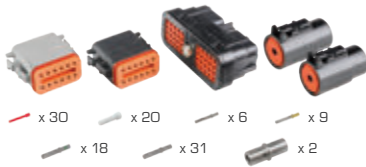
System Managers – Hercules HC ★

Part No.	Inputs		Outputs	Current Draw (mA) *		Max. Output Current Rating (A)	
	Analogue	Digital		@ 13.8V	@ 27.6V	Positive	Negative
6060-0000-00	4	16	32	69	63	13	4

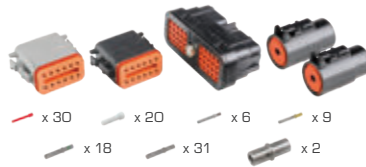
* Current Draw does not include draw from outputs.



I/O Controllers



CONNKIT-SN2



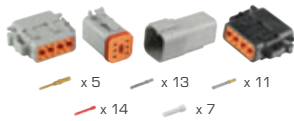
CONNKIT-SN2-PB



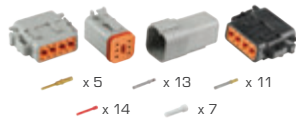
CONNKIT-DIAGSN2REM



CONNKIT-DIAGSN2



CONNKIT-USM2



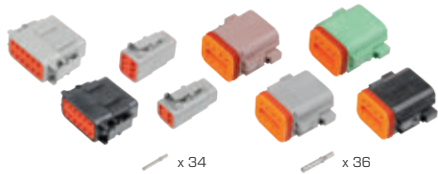
CONNKIT-USM2-PB



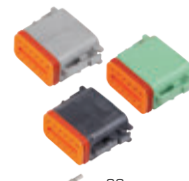
CONNKIT-DIAGUSM2



CONNKIT-DIAGUSM2REM



OK90-3462-00



OK90-2286-00

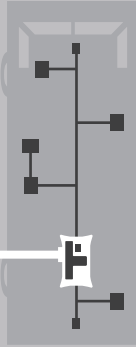
System Managers – Accessories

Part No.	Description	Suits
CONNKIT-SN2	Connection Kit	Supernode II (119890)
CONNKIT-SN2-PB	Connection Kit – Purple Band Socket	Supernode II (119890)
CONNKIT-DIAGSN2REM	Remote USB diagnostic connector	Supernode II (119890)
CONNKIT-DIAGSN2	USB Programming Cable	Supernode II (119890)
CONNKIT-USM2	Connection Kit	Universal System Manager 2 (122116)
CONNKIT-USM2-PB	Connection Kit – Purple Band Socket	Universal System Manager 2 (122116)
CONNKIT-DIAGUSM2	Programming Cables	Universal System Manager 2 (122116)
CONNKIT-DIAGUSM2REM	Remote USB diagnostic connector	Universal System Manager 2 (122116)
OK90-3462-00	Connection Kit	Hercules HC (6060-0000-00)
OK90-2286-00	Connection Kit – 3 Connectors	8x16 Node (6730-0000-00)

Crimping tools can be found on page 96.

Class 1 DTD Programming

Class 1 configurable components can be programmed to operate according to the user's specific requirements. This is done using the DTD (Digital Truck Designer) software to program the system manager, which in turn is connected to each component on the network.

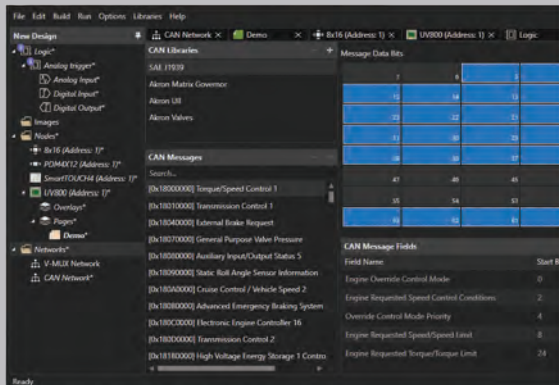


The DTD software is an all in one program allowing the user to set up and program each component of an Es-Key network in a simple, user-friendly environment.

Each component on the application is added to the list of inputs, renamed for easy reference, and programmed to operate accordingly.

Programming can be as simple or as complex as required. All this is done through a comprehensive graphical user interface.

- Highly intuitive graphical user interface
- Rename circuits for easy reference
- Nest logic to perform any interlock
- Use previously designed component nest logic simply
- Simple to highly complex logic statements – it's up to you
- Use virtual circuits to create custom program functions
- Automatically create printable system reports
- Wire vehicles the same and change their behaviour by simply changing the program
- Activate options, change flash patterns and load management settings without changing a single wire

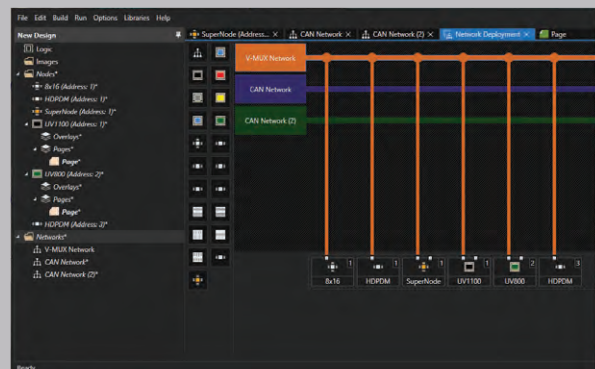


Diagnostics

The advanced diagnostic capability of the DTD program makes fault checking easier than ever. Connect to your vehicle locally or remotely, to initiate and simplify the diagnostic process.

Troubleshoot the entire system or just a single output. With the ability to force on or off any input/output, the software can assist with much of the fault diagnosis process before even opening your toolbox.

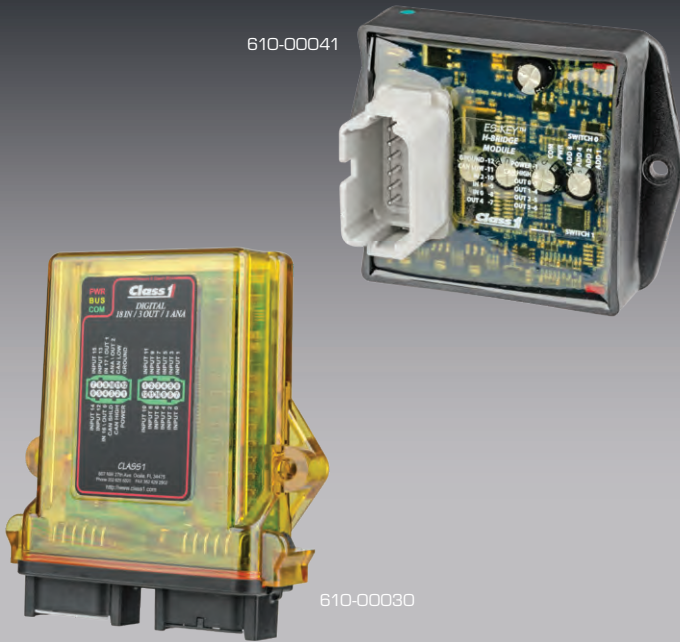
- Download reports and data logger information
- Real-time feedback
- Local or remote connection capability
- Detailed CAN information
- Fault code reporting
- Module status information
- Easy download capability
- Force on or force off any input or output



Easily see a comprehensive graphical view of the entire network

I/O Controllers

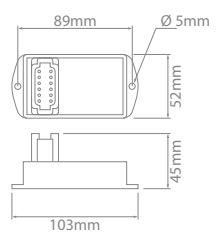
I/O Modules



- Introduces switched inputs into the Es-Key network.
- 610-00041 incorporates H-Bridge functionality.
- Up to 18 inputs and 16 outputs.
- Environmentally sealed – IP67.
- Multi-voltage.
- Made in North America.

9V 32V IP67 Made in North America

Voltage : 9–32V
 CAN : SAE J1939
 Construction : Polycarbonate
 Ingress Protection : IP67
 Operating Temperature : -40°C to 85°C



Accelerometer Input Signal

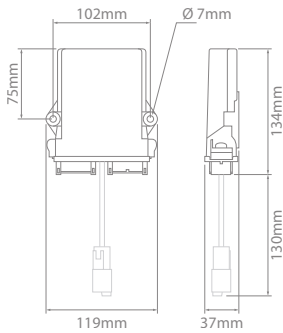
The 610-00033 can accept multiple input signal types.

Voltage – 0 to 5V/30V
 Current – 4 to 20mA
 Frequency – 5V peak to peak, or system voltage
 Resistance – 0 to 2800 Ohms

I/O Modules – Accelerometer

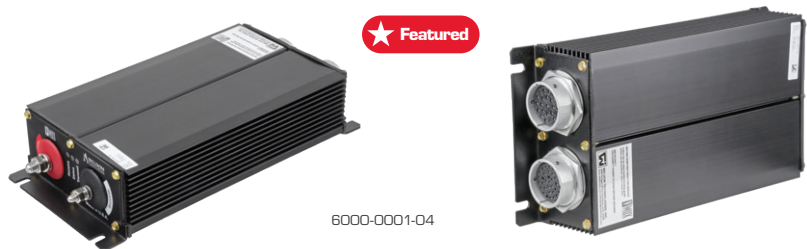
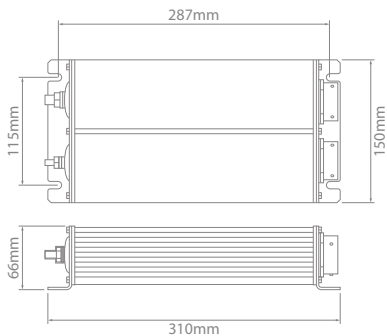
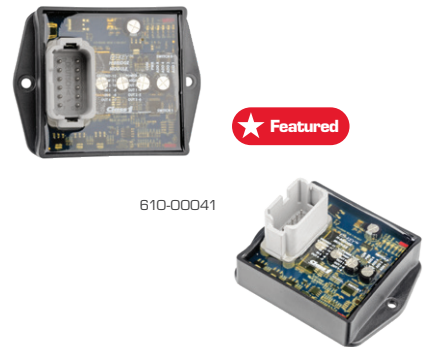
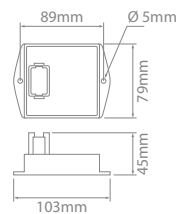
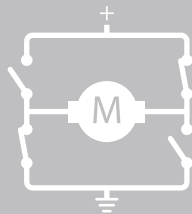
Part No.	Description	Input Signal Source		Digital Input	Digital Output	Polarity		Input Signal
		Internal	External			Input	Output	
610-00033	Accelerometer	2	2	1	1	Selectable	-0.25A	See above

I/O Controllers



H-Bridge Functionality

An H-bridge is an electronic circuit that switches the polarity of a voltage applied to a load. These circuits are often used in robotics and other applications to allow DC motors to run forwards or backwards.



I/O Modules

Part No.	Inputs		Current Draw (mA @ 13.8V)	Outputs	Max. Output Current Rating (A)		Input Polarity	Output Polarity
	Digital	Analogue			Positive	Negative		
610-00030	18	1*	62	Up to 3	0.25	0.25	Selectable	Selectable
610-00031	—	—	62	16	0.25	0.25	—	Selectable
6010-0000-00	4	1	103	12	7.5	7.5	Selectable	Positive
6020-0000-01	16	0	53	0	—	—	Selectable	—
610-00041	3	1 ^Δ	30	5	2 ^Δ x 6.0	3 x 0.5	Selectable	Selectable
6000-0001-04	16	3	45	26	16 x 10.5 8 x 4.0	2 x 4.0	Selectable	24x Positive /2x Negative

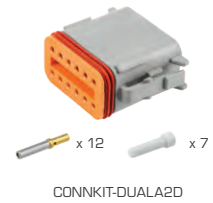
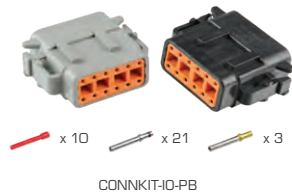
* Analogue input range: 4–20mA, 0–5V.

^Δ Analogue input range: 0–5V, 0–30V or frequency.

^Δ Outputs: 2 x 6A designated for "H" Bridge functionality.



I/O Controllers



I/O Modules – Connection Kits & Accessories

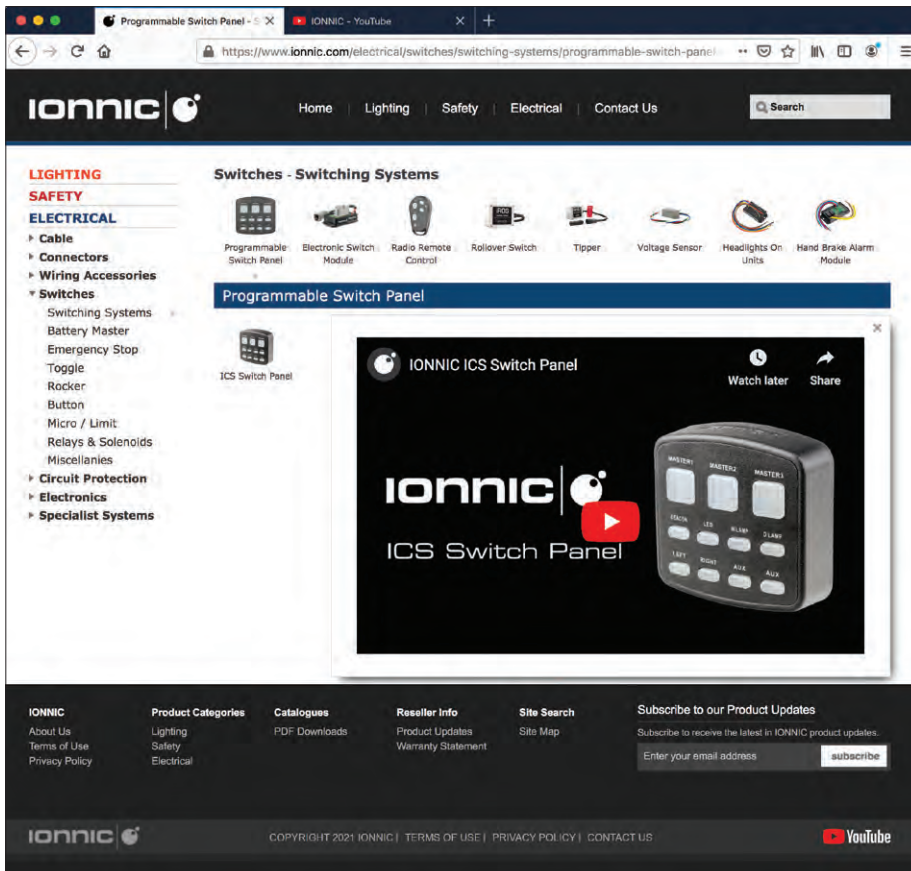
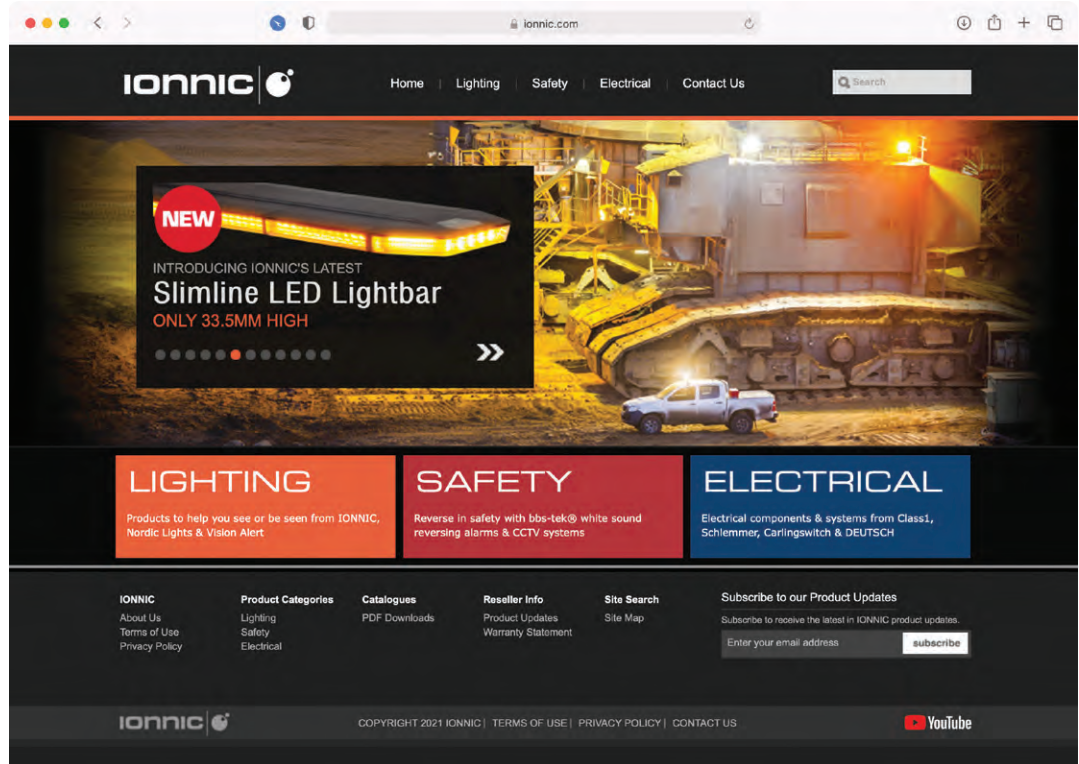
Part No.	Description	Suits
CONNKIT-IO	Connection Kit	610-00030, 610-00031
CONNKIT-IO-PB	Connection Kit – Purple Band Socket	610-00030, 610-00031
CONNKIT-DUALA2D	Connection Kit	610-00041, 610-00033
OK90-2282-00	Connection Kit	6020-0000-01
OK90-2281-00	Connection Kit	6010-0000-00
OK90-2286-00	Connection Kit	6030-0000-01
OK90-2280-00	Connection Kit	6000-0001-04

Crimping tools can be found on page 96.

ionnic.com



Visit website



Check out videos on a range of products

The IONNIC website – for all the most up to date products and info

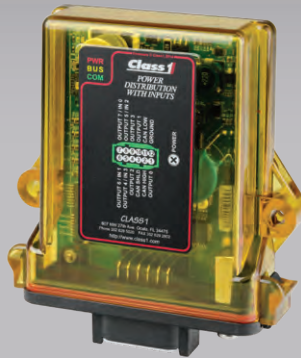
I/O Controllers

Power Distribution Modules



120727

- Supplies power to system loads, and introduces digital/analog inputs into the Es-Key network.
- Selectable polarity for digital inputs models.
- Up to 21 outputs from a single module.
- High current model features 30A continuous output current rating.
- HD PDM & HC PDM incorporate LED displays with 2 buttons for diagnostic, indication and configuration purposes.
- Environmentally sealed – IP67.
- Multi-voltage.
- Made in North America.



610-00034

9V 32V IP67 Made in North America

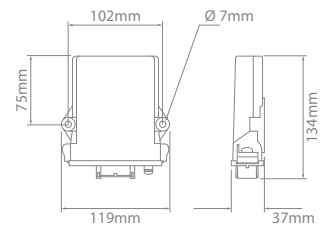
Voltage : 9-32V
 CAN : SAE J1939
 Construction : Polycarbonate & Aluminium
 Ingress Protection : IP67
 Operating Temperature : -40°C to 85°C



610-00034



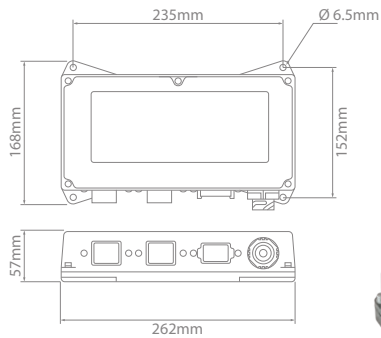
610-00035



Power Distribution Modules

Part No.	Description	Inputs	Input Type	Outputs	Max. Output (A)	Current Draw (mA) *	
						@ 13.8V	@ 27.6V
610-00034	PDM	0 - 4	Digital	4 - 8	7.5	65	85
610-00035	PDM	0 - 4	MFI	8 - 12	7.5	65	85

* Current Draw does not include draw from outputs.



★ **Featured**

120727
HD PDM



LED display with 2 buttons for diagnostic, indication and configuration purposes

610-00046
HC PDM

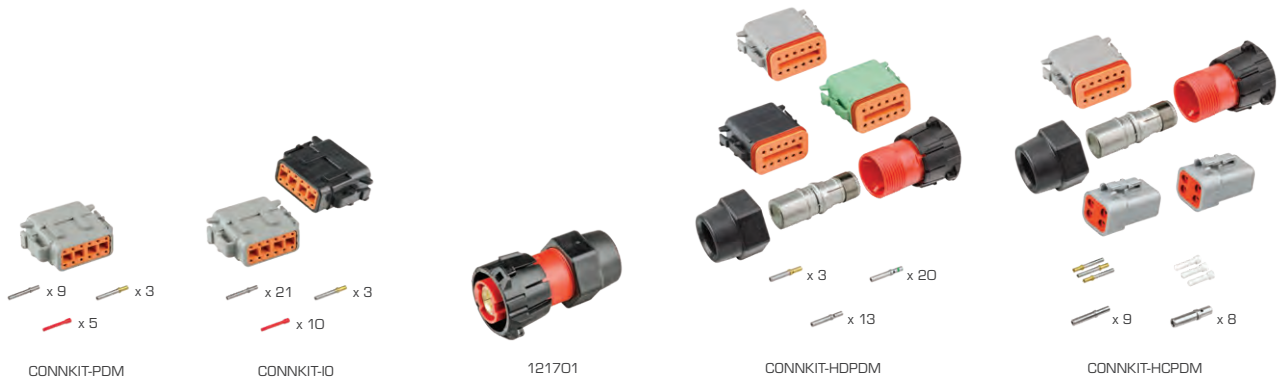


Power Distribution Modules – High Density/High Current

Part No.	Description	Inputs	Input Type	Outputs	Max. Output (A)	Current Draw (mA) *	
						@ 13.8V	@ 27.6V
120727	High Density Power Distribution Module (HD PDM)	10	MFI	21	13	73	82
610-00046 ★	High Current Power Distribution Module (HC PDM)	8	4 x Digital 4 x MFI	8	30	73	82

MFI inputs – Selectable 0-30V, 0-5V, 4-20mA, Digital, Resistive, Frequency. Refer to data sheet for individual product specifications.

* Current Draw does not include draw from outputs.



Power Distribution Modules – Accessories

Part No.	Description	Suits
CONNKIT-PDM	Connection Kit	PDM (610-00034)
CONNKIT-PDM-PB	Connection Kit – Purple Band Socket	PDM (610-00034)
CONNKIT-ID	Connection Kit	PDM (610-00035)
CONNKIT-ID-PB	Connection Kit – Purple Band Socket	PDM (610-00035)
121701	Power connector	HD PDM (120727) & HC PDM (610-00046)
CONNKIT-HDPDM	Connection Kit	HD PDM (120727)
CONNKIT-HCPDM	Connection Kit	HC PDM (610-00046)

Crimping tools can be found on page 96.

