

ITS2026

ITS2026

ionnic Technical Systems

ionnic | 

Mission Statement

To be the preferred supplier of electrical, lighting and safety solutions for mobile plant and equipment in the mining and services industry.

We will continue to improve and expand our range of products that meet and exceed OEM standards, maintaining the latest technology and innovation available backed by technical support and supply.



CAN Controllers

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What's new in ITS2026

NEW New in CAN Controllers

10 CAN Controllers

18 Supernode III



NEW New in HMI

40 Legend Series Keypads

42 Smart Touch Rocker Switches



NEW New in Gauges & Displays

51 CAN Strip Light



NEW New in Sensors & Switches

66 Reed Switches

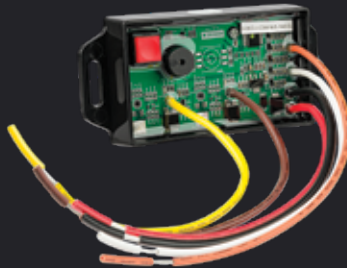
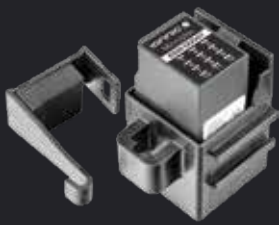
67 Contactless CAN Adaptor

68 TireCheck



What's new in ITS2026

NEW New in Standalone Systems



Minebar Integration Kits

72

NEW New in Connected Services



Captium

82

NEW New in Governors



SAM BOOST

SAM BOOST

88

NEW New in Connectors



Bussing Hubs

106

Multiplexing

Multiplexing is a smart electrical control system that uses digital communication to connect devices through a controller area network (CAN), significantly reducing wiring complexity.

Its key benefits include faster installation, improved reliability, easier diagnostics, and greater flexibility in system design and expansion.

Communication Protocols

The primary multiplexing communication protocol used by products in this catalogue is SAE J1939.

NMEA 2000, CANopen, and CAN 2.0 are also compatible with select product ranges.



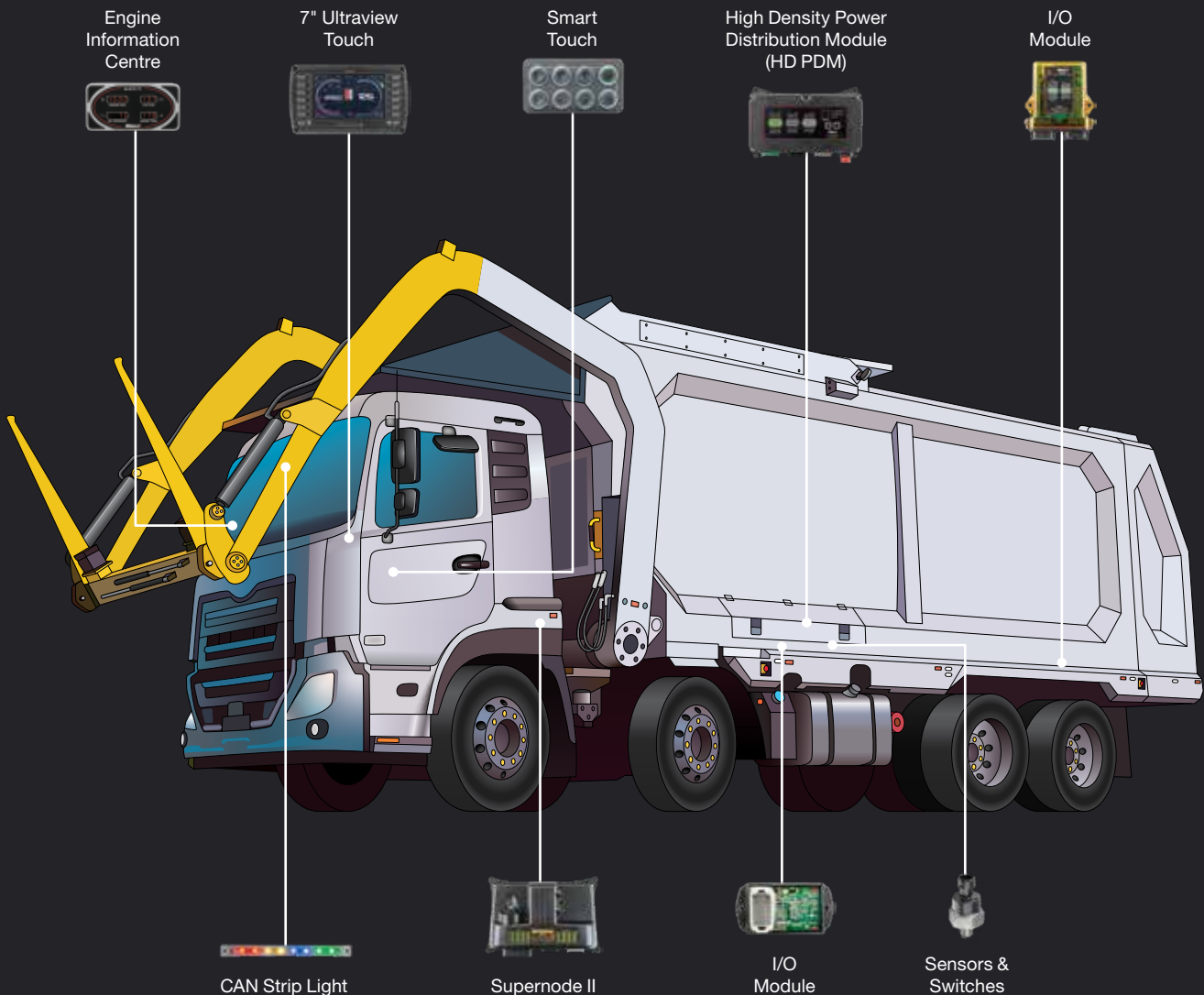
The use of these communication protocols allows seamless communication with a wide range of electronic control units (ECUs), enabling greater integration flexibility, faster data transfer rates, and support for increasingly complex applications.

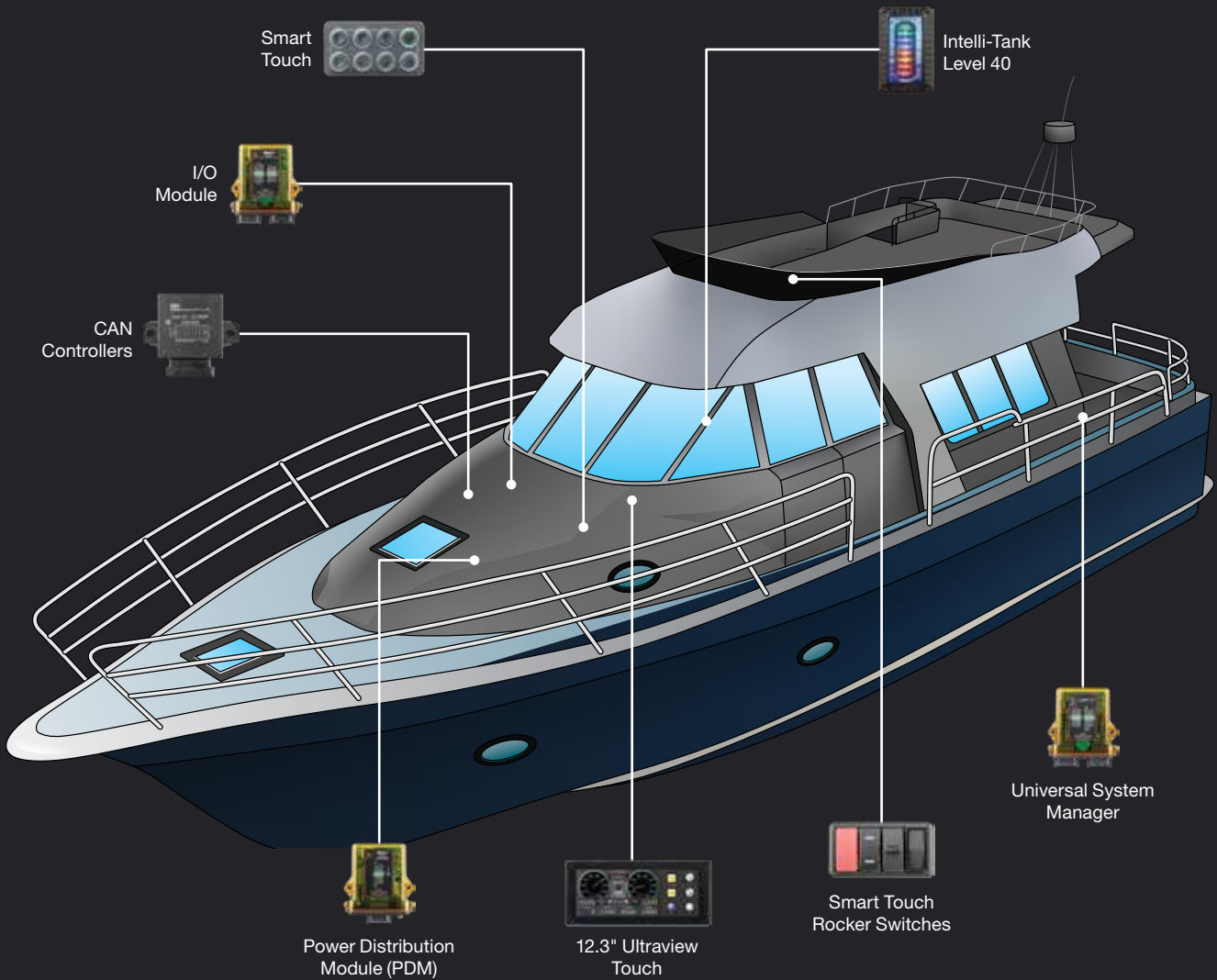
Real Solutions for Real Applications

IONNIC Technical Systems can be used in a wide range of applications, from commercial, mining and construction, to marine vessels and specialised machinery.

The following examples offer just a brief look at how products from this catalogue can be applied in specific real-world scenarios.

For further insight or project development support, the team at IONNIC offers extensive experience and expertise, and are ready to help bring your ideas to reality.





Ultraview Touch Series

A part of the HMI range, the Ultraview Touch Series is a versatile interface for monitoring and controlling various systems.

Find on page 32.



Universal System Manager

Centralise control, power distribution, and diagnostics into one programmable module for streamlined system management.

Find on page 18.



Smart Touch Switch Panels

Sealed, backlit switches with built-in diagnostics and customisable icons, preconfigured to suit the DTD network.

Find on page 38.



Sensors & Switches

Wide range of sealed, multi-voltage input devices for introducing signals into a CAN.

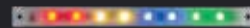
Find on page 62.



CAN Controllers

CAN Controllers are compact, programmable modules for flexible I/O control in controller area networks or standalone applications.

Find on page 10.



CAN Strip Light

Rugged, CAN-controlled LED strip ideal for visual indicators and status feedback.

Find on page 51.

CAN Controllers



CAN Controllers



CAN Controllers **10**



System Managers **18**



I/O Modules **22**



Climate Control Module **25**



Power Distribution Modules **26**

CAN Controllers

CAN Controllers

NEW



- Compact versatility – use as either as an I/O module in a CAN network or as a standalone, intelligent programmable controller.
- Ideal for applications where additional outputs are required in an existing system.
- Fully programmable using graphical software.
- Entire range can also be programmed using C.
- Environmentally sealed.
- Highly flexible multifunction inputs (MFI).
- Microplex – world's smallest CAN controllers, footprint of two micro 280 series relays.
- Holder kits specifically designed for Microplex and Micro ranges.
- Short circuit & over current protection.
- CC16WP features 2 x CAN ports. The ESW-00045 Microplex features 3 x CAN ports.
- Made in Europe.

Made in Europe

CAN : SAE J1939, CAN 2.0
 Operating Temperature : -40°C to 85°C
 Construction : PA66 Nylon/Polymer

Microplex

- World's smallest CAN controller – 24 x 30 x 26mm.
- Up to 7 outputs.
- Easy CAN Bus integration allowing system diagnostics.
- 3 x CAN ports (ESW-00045).



CC16WP

- Multiple inputs/outputs.
- 2 x CAN ports.
- 32-bit processor with 65K RAM.



PROP CAN

- Integrated TE DEUTSCH connector for harsh environmental conditions.
- Up to 4 analogue outputs.



Motor Controller

- Controls up to three DC motors with precise ramp functions.
- H-Bridge functionality.
- Multiple inputs/outputs.
- 32-bit processor with 256K RAM.
- Versatile inputs with up to 10 analogue inputs (8 MFI) available.



Micro – Gateway

- Secondary port options include RS485, LIN (Slave), CAN/FD, or an additional CAN.
- Compact design – 30 x 30 x 40mm.
- 32-bit processor with 256K RAM for the ESW-00057.



CAN Relay Box

- Potential-free relay functionality.
- Up to 12 relays can be activated.
- Can be integrated into network or as a separate standalone controller.

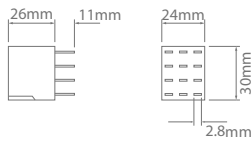


Micro – Relay

- Potential-free relay functionality.
- Compact design – 30 x 30 x 40mm.
- 32-bit processor with 32K RAM.



CAN Controllers



IP67



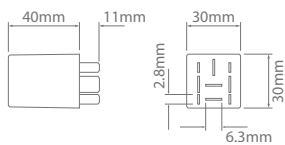
CAN Controllers – Microplex NEW

Part No.	Voltage	Inputs	Output Polarity	Outputs			Ports		Current Draw (mA) *		Max. Current Rating Per Output (A)	
				Total	PWM	Digital	Total CAN	Secondary	12V	24V		
ESW-00045	8–32	2	—	0	0	0	4	3	LIN (Master)	52	30	—
ESW-00046	9–32	—	Negative	7	6	7	1	1	—	26	26	0.7
ESW-00047	9–32	—	Positive	7	4	1	1	1	—	23	23	2.2
ESW-00049	9–32	3 (MFI)	Positive	4	4	4	1	1	—	36	36	2.0

* Current draw does not include draw from outputs.

MFI – Multi Function Input.

PWM – Pulse Width Modulation.



IP6K8



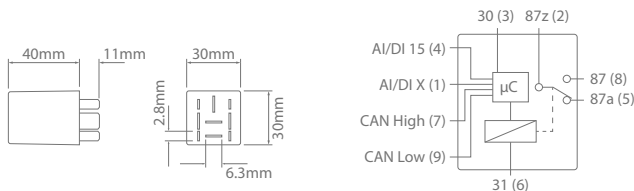
CAN Controllers – Micro – Gateway NEW

Part No.	Voltage	Description	Inputs (MFI)	Outputs			Ports		Current Draw (mA)		Max. Current Rating Per Output (A)	
				Total	PWM	Digital	Total CAN	Secondary	12V	24V		
ESW-00056	9–32	Gateway – CAN, RS485	1	2	2	2	2	1	RS485	8	8	2.3
ESW-00057	9–32	Gateway – CAN, CAN/FD	2	2	2	2	2	1	CAN/FD	70	70	0.5
ESW-00058	8–16	Gateway – CAN, LIN	2	2	2	2	2	1	LIN (Slave)	40	40	0.4

* Current draw does not include draw from outputs.

MFI – Multi Function Input.

PWM – Pulse Width Modulation.



IP6K8



CAN Controllers – Micro – Relay NEW

Part No.	Voltage	Description	Inputs (MFI)	Outputs			CAN Port	Current Draw (mA) *		Max. Current Rating Per Output (A)	
				Total	PWM	Digital		12V	24V	NO	NC
ESW-00055	9–32	PLC CAN Relay	1	1	—	1	CAN/FD	32	19	10	5

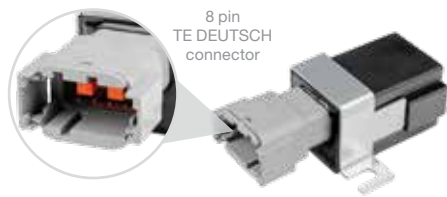
* Current Draw does not include draw from outputs.

MFI – Multi Function Input.

PWM – Pulse Width Modulation.

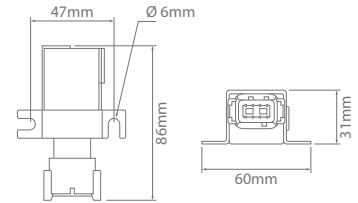


CAN Controllers



8 pin
TE DEUTSCH
connector

IP6K8



CAN Controllers – PROP CAN NEW

Part No.	Voltage	Description	Inputs (MFI)		Outputs			CAN Ports	Current Draw (mA) *		Max. Current Rating Per Output (A)
			Total	PWM	Digital	Analogue (V)	12V		24V		
ESW-11129	9–32	4 Channel Analogue	4	4	—	4	4	1	40	35	0.25
ESW-11689	7–32	2 Channel PWM	2	2	2	2	—	1	30	30	2.7

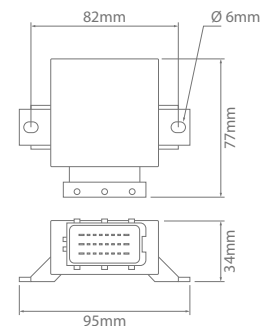
* Current Draw does not include draw from outputs.

MFI – Multi Function Input.

PWM – Pulse Width Modulation.



IP6K8



CAN Controllers – CC16WP NEW

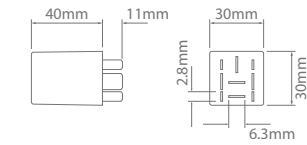
Part No.	Voltage	Inputs (MFI)	Outputs	CAN Ports	Current Draw (mA) *		Max. Current Rating Per Output (A)
					12V	24V	
ESW-00200	9–32	7	8	1 x CAN, 1 x CAN/FD	45	26	2.5
ESW-00295	9–32	7	8	1 x CAN, 1 x RS232	45	26	2.5
ESW-00296	9–32	7	8	2 x CAN FD – AEF Certified	45	26	2.5

* Current Draw does not include draw from outputs.

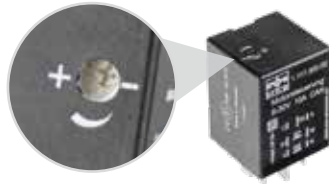
MFI – Multi Function Input.

The ESW-00296 is AEF certified for ISO bus applications.

CAN Controllers



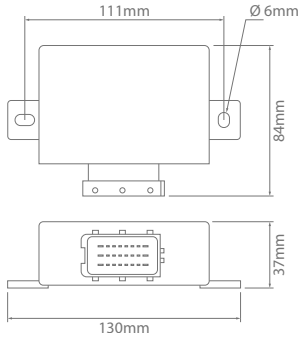
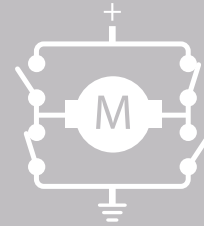
Configurable analogue input for user-defined control functions



ESW-00061

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.



ESW-00304

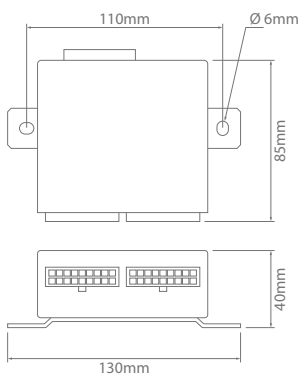
CAN Controllers – Motor Controller – H-Bridge NEW

Part No.	Voltage	Inputs (MFI)	Total	Outputs		CAN Port	Current Draw (mA) *		Max. Current Rating Per Output (A)	
				PWM	H-Bridge		12V	24V	PWM	H-Bridge
ESW-00061	9–30	2	2	2	1	CAN	25	25	6	10
ESW-00304	8–32	8	8	2	3	CAN/FD	50	33	6	10

* Current Draw does not include draw from outputs.

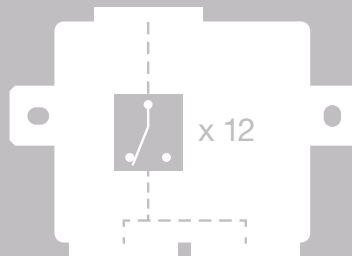
MFI – Multi Function Input.

PWM – Pulse Width Modulation.



12 x Internal Relays

The CAN Relay Box incorporates 12 potential-free relays, each of which can be configured to meet the application's needs.



CAN Controllers – CAN Relay Box NEW

Part No.	Voltage	Inputs Analogue	Outputs PFR	CAN Port	Current Draw (mA) *		Max. Current Rating Per Output (A)
					12V	24V	
ESW-00303	9–30	13 ^Δ	12	1	30	35	8

* Current Draw does not include draw from outputs.

^Δ Analogue input range: 0–11.4V.

PFR - Potential-Free Relay



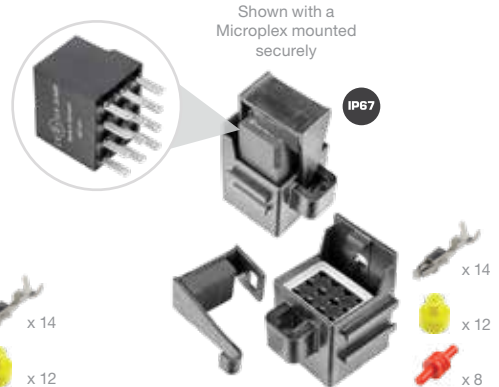
CAN Controllers



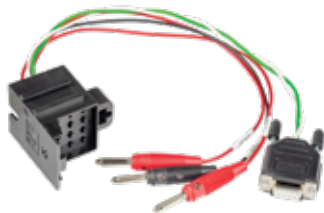
FH301



FH601-KIT



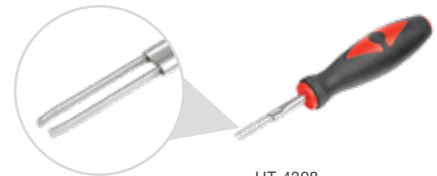
FH602-KIT



ESW-00345



HT-4300

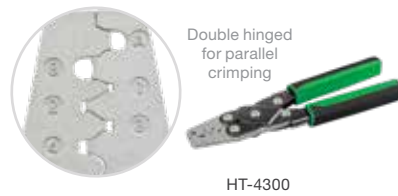
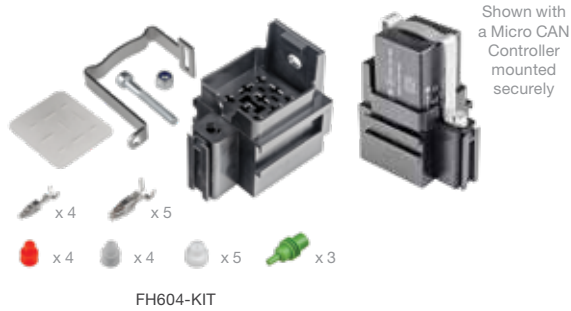


HT-4308

Accessories – Microplex NEW

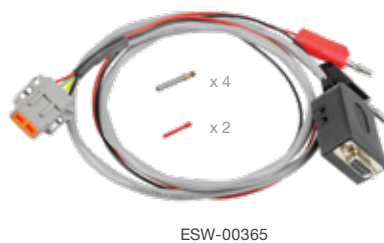
Part No.	Description	Kit Contents:		
FH301	Fuse & relay enclosure kit	1 x Housing (2304643-4) 1 x Cover (2098164-1)	1 x Mount (FHM001) 60 x Contacts (1241397-1)	60 x Wire Seals (WS1006) 20 x Cavity Plugs (WS1008)
FH601-KIT	Microplex holder kit	1 x Mounting Base 12 x Contacts (929939-3)	12 x Wire Seals (281934-2) 8 x Cavity Plugs (WS1008)	
FH602-KIT	Microplex holder kit – IP67	1 x Mounting Base 1 x Seal	1 x Locking Bracket 12 x Contacts (929939-3)	12 x Wire Seals (281934-2) 8 x Cavity Plugs (WS1008)
ESW-00345	Programming / configuration harness			
HT-4300	Crimping tool – 0.35, 0.5–0.8, 1.0–2.0, 3.0mm ²			
HT-4308	Contact removal tool			

CAN Controllers



Accessories – Micro – Gateway & Relay NEW

Part No.	Description	Kit Contents:
FH604-KIT	Micro holder base with mounting bracket and sealing gasket	1 x Mounting Base 1 x Bracket with nut & bolt 1 x Sealing Gasket 4 x Contacts – 2.8mm 5 x Contacts – 6.3mm 4 x Seal (Red) – 2.8mm 5 x Seal (White) – 6.3mm 4 x Cavity Plugs (Clear) – 2.8mm 3 x Cavity Plugs (Green) – 6.3mm
FH605-KIT	Micro holder base kit	1 x Mounting Base 4 x Contacts – 2.8mm 10 x Contacts – 6.3mm
ESW-00355	Programming / configuration harness	
HT-4300	Crimping tool – 0.35, 0.5–0.8, 1.0–2.0, 3.0mm ²	

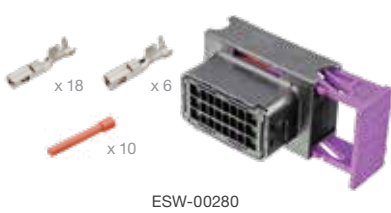


Accessories – PROP CAN NEW

Part No.	Description
CONNKIT-PROP	Connector kit
ESW-00365	Programming / configuration harness
DET20	Crimping tool – size 20 contacts
DET-RT	Multi-use hook tool



CAN Controllers



ESW-00280



ESW-00281



HT-4300

Accessories – CC16WP & Motor Controller NEW

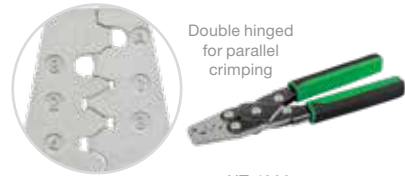
Part No.	Description
ESW-00280	Connector kit
ESW-00281	Programming / configuration harness
HT-4300	Crimping tool – 0.35, 0.5–0.8, 1.0–2.0, 3.0mm ²



ESW-00285



ESW-00286



HT-4300

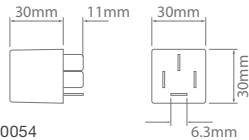
Accessories – CAN Relay Box NEW

Part No.	Description
ESW-00285	Programming / configuration harness
ESW-00286	Connector kit
HT-4300	Crimping tool – 0.35, 0.5–0.8, 1.0–2.0, 3.0mm ²

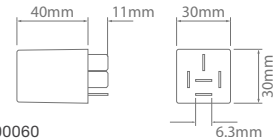
Load dump protection module used to protect against voltage peaks



ESW-00054



ESW-00060



ESW-00200



ESW-00201



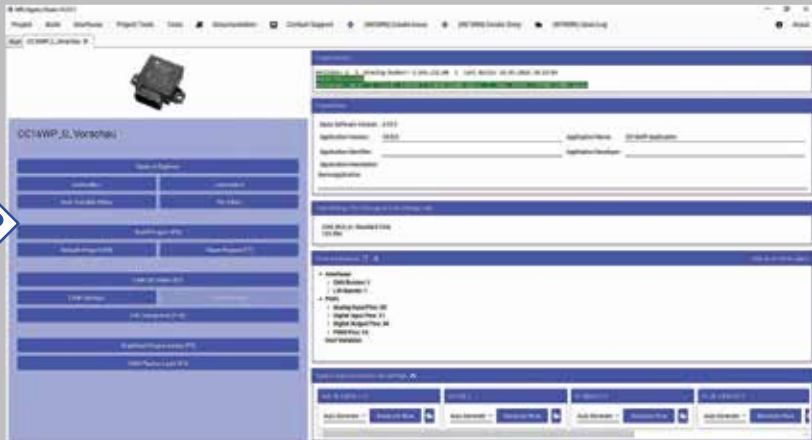
ESW-00202



ESW-00203

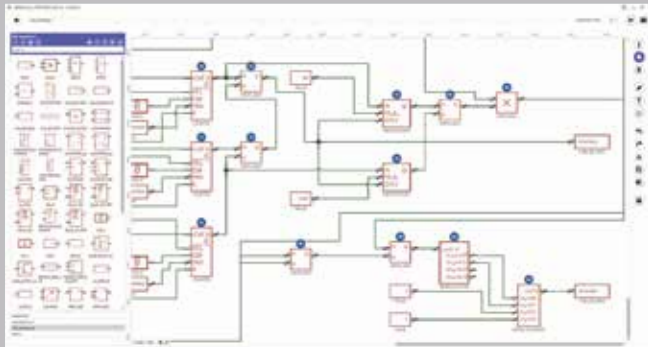
Accessories – General NEW

Part No.	Description
ESW-00054	Load dump protection module. See page 15 for holder kits
ESW-00060	PWM to Analog Converter. See page 15 for holder kits
ESW-00200	Programming cable to suit USB to CAN (D-Sub) adaptors (ESW-00201 & ESW-00202)
ESW-00201	USB to CAN (D-Sub) adaptor
ESW-00202	USB to CAN (D-Sub) adaptor. Optically isolated
ESW-00203	MRS Applics & Developer Studio software licence, required for programming CAN Controllers



One Program – All Applications

All programmable products in the MRS range (pages 10–16) use a single software tool: MRS Appls Studio. This software provides a consistent environment for configuring inputs, outputs, logic, and CAN messaging across all supported modules.



The platform is suitable for users with varying levels of programming experience, with support for both graphical configuration and C-based development.

Suitable to all Skill Levels

MRS Appls Studio features:

- Visual function block programming
- CAN & LIN configuration
- Input/output mapping
- Optional C code programming
- Live diagnostics

This single programming approach simplifies system design and reduces the time required to configure or modify control logic. It also enables users to complete projects in-house without the need for external software development support.



One platform for quick & simple setup

Want to know more?



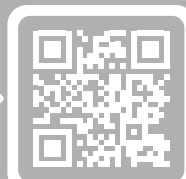
Watch videos



Take a look at this quick introduction video and then feel free to explore the rest of the MRS videos.

There is also a more detailed online documentation website available for MRS Appls Studio, the QR code below will take you there.

MRS Appls Studio Online Guide



CAN Controllers

System Managers



122116



610-00092-002

- SAE J1939 CAN engine message reception and DTD 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.

9V 32V IP67 Made in North America

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



USB port for database transfer and diagnostics



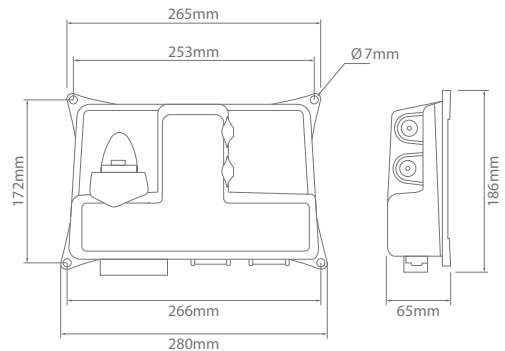
Integral power connectors, suits TE DEUTSCH DTHD connectors



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.

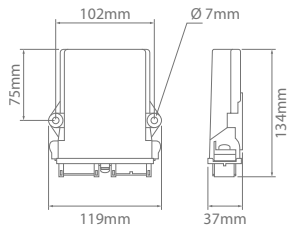


System Managers – Supernode II & III

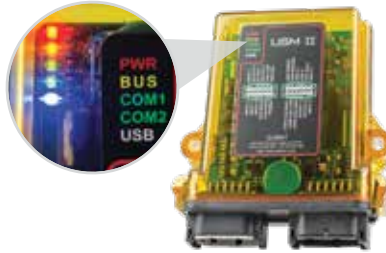
Part No.	CAN Ports	Inputs Polarity Selectable	Outputs			Current Draw (mA) *		Max. Output Current Rating (A)	
			Positive	Negative	Analogue	@ 13.8V	@ 27.6V	Positive	Negative
119890	1	24	18	6	0	500	350	13	2
610-00092-002 NEW	2	24 (2 MFI)	18	6	2	500	350	13	2

* Current draw does not include draw from outputs.

CAN Controllers



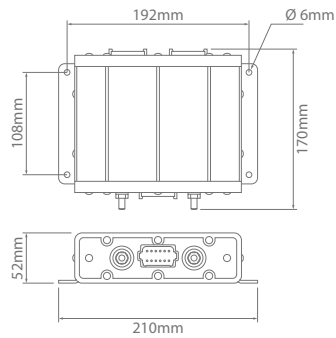
LED status indicators



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.



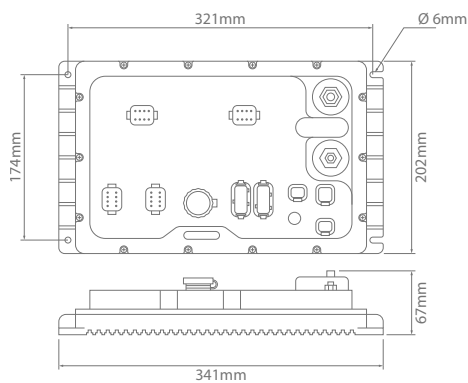
4 LED diagnostic indicators



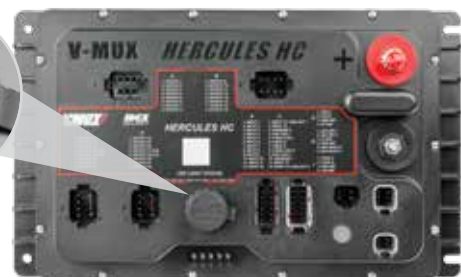
System Managers – 8x16 Node

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



Built-in LED network status indicators

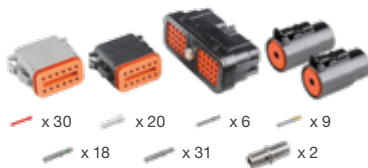
System Managers – Hercules HC

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

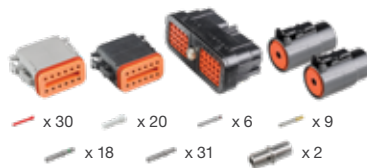
* Current draw does not include draw from outputs.



CAN Controllers



CONNKIT-SN2



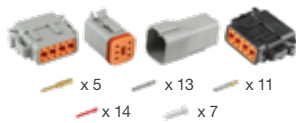
CONNKIT-SN2-PB



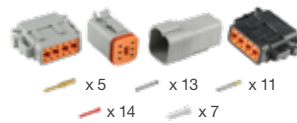
CONNKIT-DIAGSN2REM



CONNKIT-DIAGSN2



CONNKIT-USM2



CONNKIT-USM2-PB



CONNKIT-DIAGUSM2



CONNKIT-DIAGUSM2REM



OK90-2286-00



OK90-3462-00

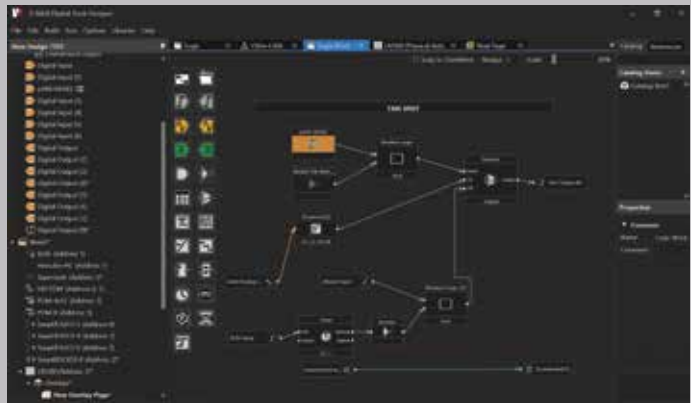
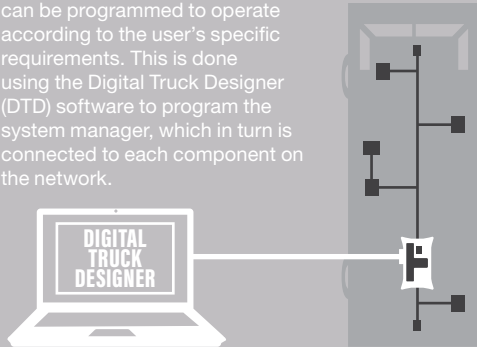
System Managers – Accessories

Part No.	Description	Suits
CONNKIT-SN2	Connector Kit	Supernode II & III (119890 & 610-00092-002)
CONNKIT-SN2-PB	Connector Kit – Purple Band Socket	Supernode II & III (119890 & 610-00092-002)
CONNKIT-DIAGSN2REM	Remote USB diagnostic connector	Supernode II & III (119890 & 610-00092-002)
CONNKIT-DIAGSN2	USB Programming Cable	Supernode II & III (119890 & 610-00092-002)
CONNKIT-USM2	Connector Kit	Universal System Manager 2 (122116)
CONNKIT-USM2-PB	Connector 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)
OK90-2286-00	Connector Kit – 3 Connectors	8x16 Node (6730-0000-00)
OK90-3462-00	Connector Kit	Hercules HC (6060-0000-00)

Crimping tools can be found on page 117.

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 Digital Truck Designer (DTD) 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 DTD 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.

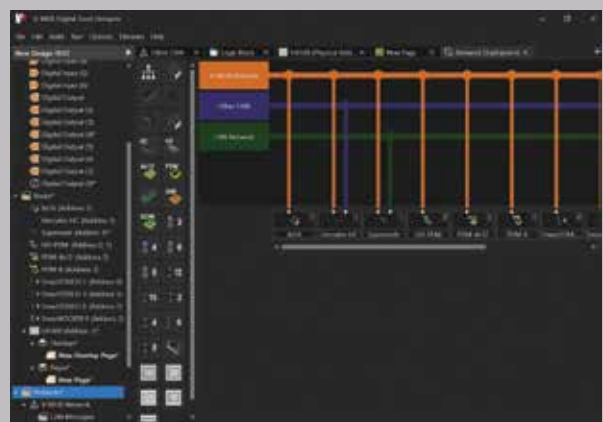


- Highly intuitive graphical user interface
- Nest logic to perform any interlock
- Use previously designed component nest logic simply
- Simple to highly complex logic statements – it's up to you
- Use virtual circuits to create custom program functions
- Automatically create printable system reports
- 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
- Rename circuits for easy reference

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.

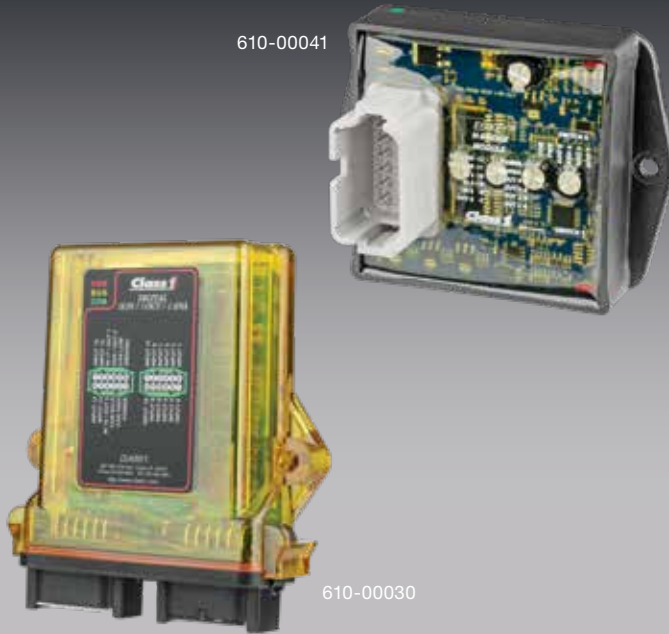
- Download reports and data logger information
- Real-time feedback
- Local or remote connection capability
- Detailed CAN information
- Fault code reporting
- Module status information
- Easy download capability
- Force on or force off any input or output



Easily see a comprehensive graphical view of the entire network

CAN Controllers

I/O Modules



- Introduces switched inputs into the DTD 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

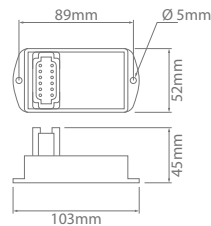
Voltage : 9–32V
 CAN : SAE J1939
 Construction : Polycarbonate
 Ingress Protection : IP67
 Operating Temperature : -40°C to 85°C



Accelerometer Input Signal

The 610-00033 can accept multiple input signal types.

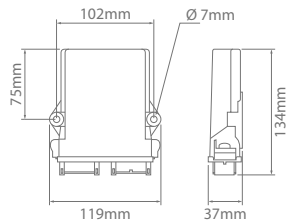
Voltage: 0 to 5V/30V
 Current: 4 to 20mA
 Frequency: 5V peak to peak, or system voltage
 Resistance: 0 to 2800 Ohms



I/O Modules – Accelerometer

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

CAN Controllers



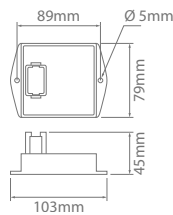
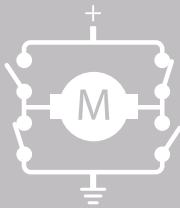
LED status indicators



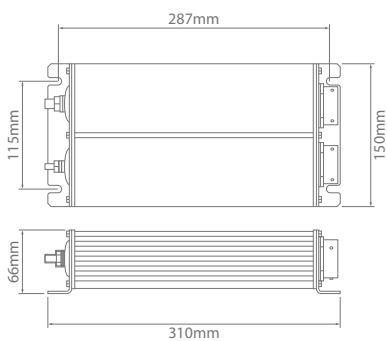
610-00030
610-00031

H-Bridge Functionality – 610-00041

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.



610-00041



6000-0001-04

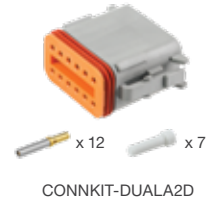
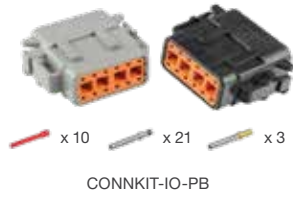


I/O Modules

Part No.	Inputs		Current Draw (mA @ 13.8V)	Outputs	Max. Output Current Rating (A)		Input Polarity	Output Polarity
	Digital	MFI			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
610-00041	3	1	30	5	2 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



CAN Controllers



I/O Modules – Connector Kits & Accessories

Part No.	Description	Suits
CONNKIT-IO	Connector Kit	610-00030, 610-00031
CONNKIT-IO-PB	Connector Kit – Purple Band Socket	610-00030, 610-00031
CONNKIT-DUALA2D	Connector Kit	610-00041, 610-00033
OK90-2280-00	Connector Kit	6000-0001-04

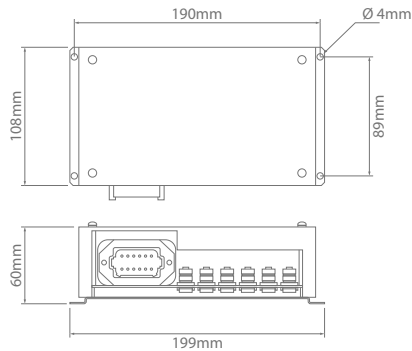
Crimping tools can be found on page 117.

- Controls a vehicle's A/C compressor clutch, heat valve and fans in an DTD network.
- High current digital outputs.
- Dedicated inputs for two analogue temperature sensors – internal and external.
- Pulsed Width Modulation (PWM) for blower fan outputs.
- Automatic and manual modes of operation.
- Integrates control with Ultraview display.
- Configurable input/output.
- Multi-voltage.
- Made in North America.



Voltage : 9–32V
 CAN : SAE J1939
 Construction : Powder-coated Steel
 Operating Temperature : -40°C to 85°C

9V 32V **Made in North America**



Climate Control Module

Part No.	Current Draw (mA) *		Max. Output Current Rating (A)			
	@ 13.8V	@ 27.6V	Fan Motors	AC Clutch	Heat Valve	Aux Output
610-00029	72	36	25	15	15	0.25

* Current draw does not include draw from outputs.

Functionality of this module is integrated into the Supernode II (page 18) with firmware version 9.05 or later.



Climate Control Module – Accessories

Part No.	Description
CONNKIT-CCMODULE	Connector Kit
115722	Temperature Sensor with mounting clip. Range -30°C – 150°C
CONNKIT-TEMPSENSOR	Connector Kit for Temperature Sensor (115722)

Crimping tools can be found on page 117.



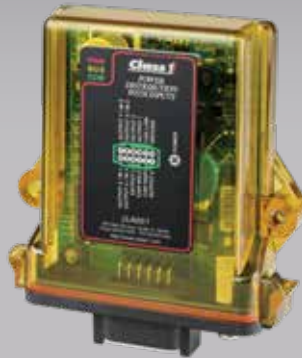
CAN Controllers

Power Distribution Modules



120727

- Supplies power to system loads, and introduces digital/analogue inputs into the DTD 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

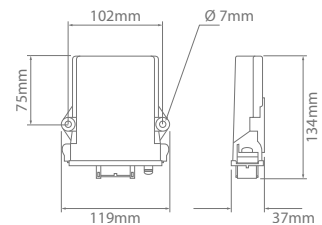
Voltage : 9-32V
 CAN : SAE J1939
 Construction : Polycarbonate/Aluminium
 Ingress Protection : IP67
 Operating Temperature : -40°C to 85°C



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.

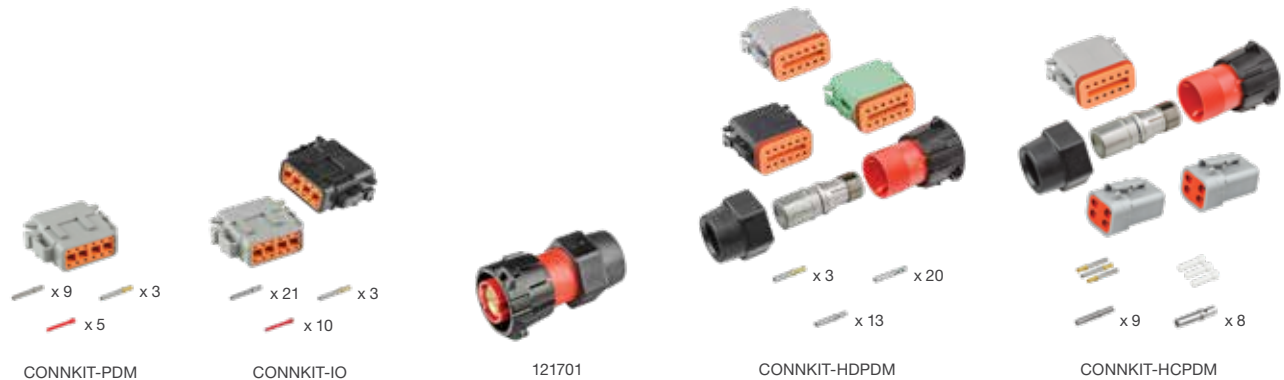


Power Distribution Modules – High Density/High Current

Part No.	Description	Inputs	Input Type		Outputs	Max. Output (A)	Current Draw (mA) *	
			MFI	Digital			@ 13.8V	@ 27.6V
120727	High Density Power Distribution Module (HD PDM)	10	1	0	21	13	73	82
610-00046	High Current Power Distribution Module (HC PDM)	8	4	4	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	Connector Kit	PDM (610-00034)
CONNKIT-PDM-PB	Connector Kit – Purple Band Socket	PDM (610-00034)
CONNKIT-IO	Connector Kit	PDM (610-00035)
CONNKIT-IO-PB	Connector Kit – Purple Band Socket	PDM (610-00035)
121701	Power connector	HD PDM (120727) & HC PDM (610-00046)
CONNKIT-HDPDM	Connector Kit	HD PDM (120727)
CONNKIT-HCPDM	Connector Kit	HC PDM (610-00046)

Crimping tools can be found on page 117.



Heavy Industry



Ultraview Touch
Series - UV700



Ultraview Touch
Series - UV500



Twister



HD PDM



USM2



I/O Modules



IONNIC Mining Service Trucks

Solid-state technology ensures there are no mechanically wearing electrical components in equipment supplied by IONNIC Technical Systems (ITS). Increased performance, added flexibility, reduced development time, and lower cost over the life of the vehicle are just some of the ITS benefits.

- Can integrate with vehicle telematics
- Fluid monitoring
- Fluid flow control
- Lighting control
- Inbuilt diagnostics
- Graphical user interface
- Multi-level password access
- Access control

IMMI





Ultraview Touch Series **32**



Smart Touch Panels **38**



Legend Series Keypads **40**



Smart Touch Rocker Switches **42**

610-00060-110

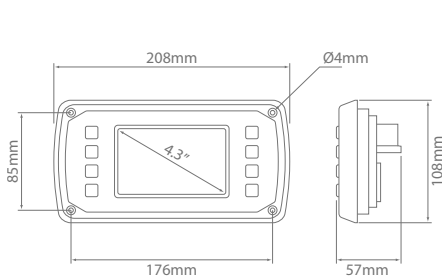


610-00060-120

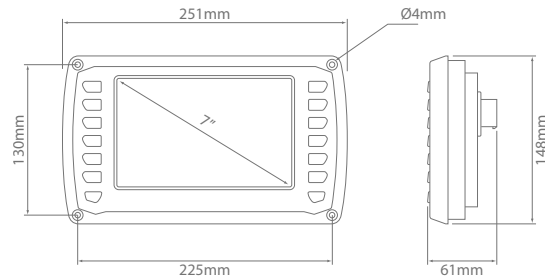
6V 36V IP67 Made in North America

- Projected capacitive touch screen on all models – can be used while wearing gloves.
- J1939 CAN based information display incorporating programmable switching.
- Infinitely customisable.
- 2 x configurable CAN ports.
- Bonded LCD screen viewable in direct sunlight and whilst wearing polarised lenses.
- Reverse polarity and EMF protected.
- Horizontal or vertical screen orientation.
- Environmentally sealed – IP67.
- Models with tactile buttons.
- Multi-voltage.
- Made in North America.

Voltage : 6–36V
Video Input : NTSC/PAL
Output : Digital 500mA
CAN : SAE J1939, NMEA 2000
Construction : Polycarbonate
Ingress Protection : IP67
Vibration : 7.86G rms 5–2000 Hz, 3 axis
Shock : +/- 50G, 3 axis
Operating Temperature : -40°C to 85°C



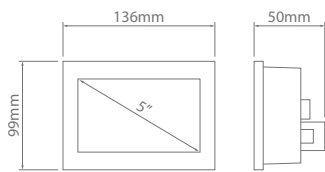
2045-052-00-CL1
"UV450"



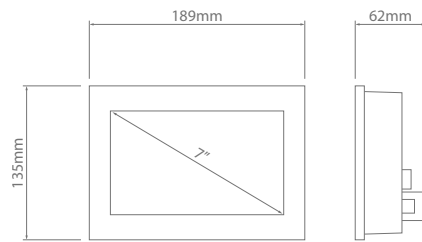
2070-053-00-CL1
"UV700"

Ultraview Touch Series – Tactile

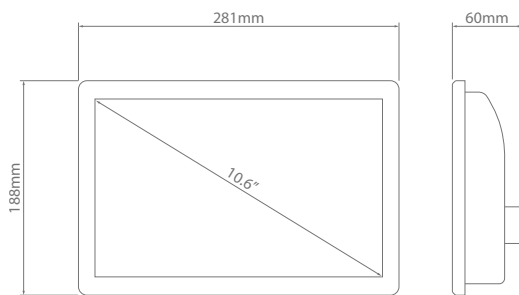
Part No.	Description	Screen Size	Resolution	Configurable Inputs	Video Inputs	Outputs	Current Draw (mA)	
							@ 14.4V	@ 28.8V
2045-052-00-CL1	UV450	4.3"	480 x 272	1	2	1	100	100
2070-053-00-CL1	UV700	7"	800 x 480	3	3	1	600	300



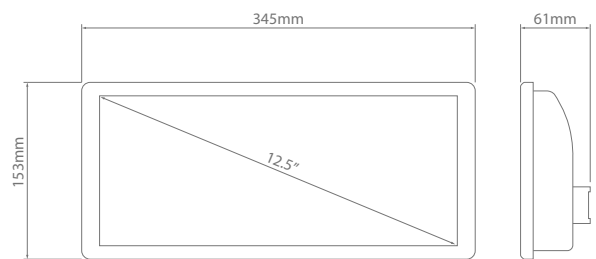
610-00060-050
"UV500"



610-00060-080
"UV800"



610-00060-110
"UV1100"

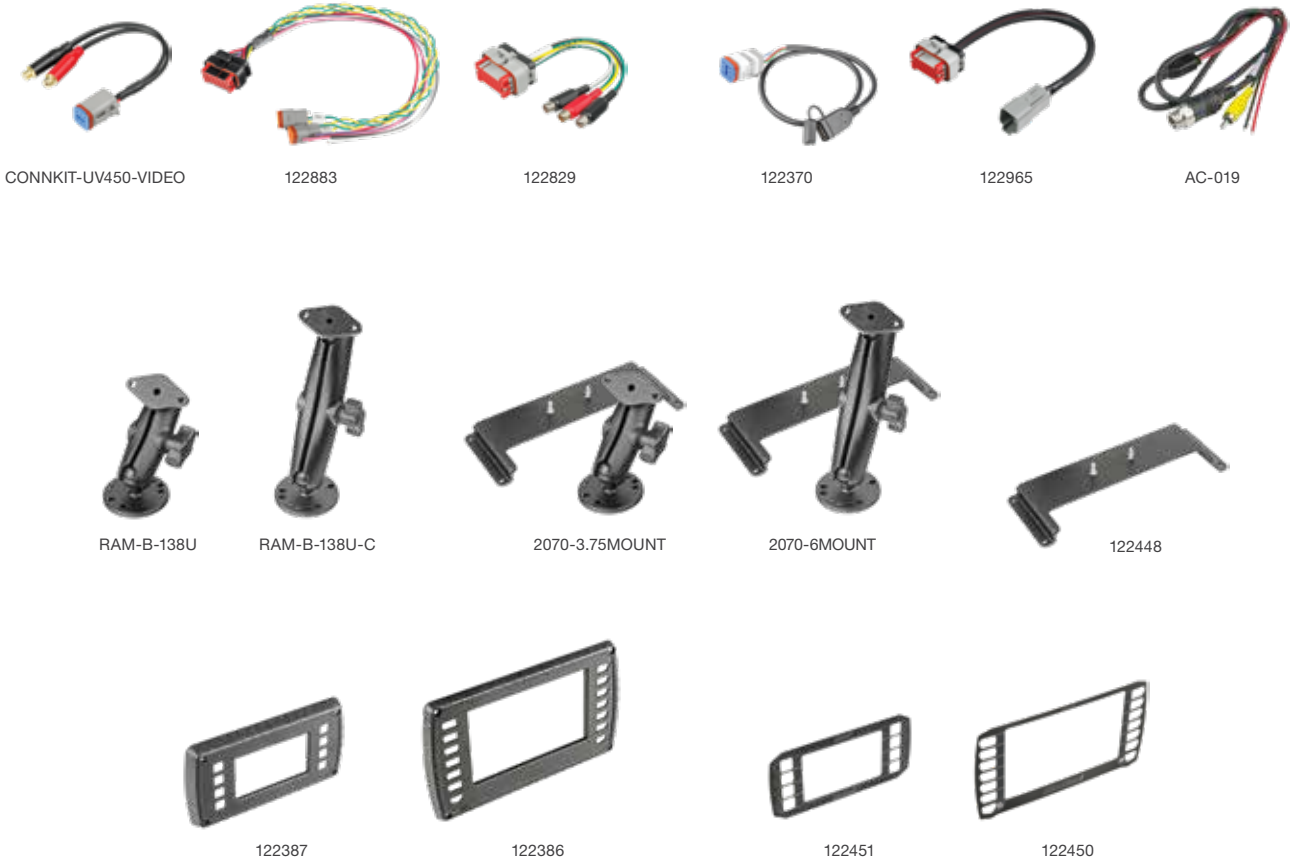


610-00060-120
"UV1200"




Ultraview Touch Series

Part No.	Description	Screen Size	Resolution	Configurable Inputs	Video Inputs	Outputs	Current Draw (mA)	
							@ 14.4V	@ 28.8V
610-00060-050	UV500	5"	800 x 480	1	2	1	400	300
610-00060-080	UV800	7"	800 x 480	8	3	2	900	600
610-00060-110	UV1100	10.6"	1280 x 480	8	3	2	1200	700
610-00060-120	UV1200	12.3"	1280 x 768	8	3	2	1300	800








Ultraview Touch Series – Accessories – UV450, UV500 & UV700

Part No.	Description	 UV450	 UV500	 UV700
CONNKIT-UV450-VIDEO	Pre-terminated connector – CCTV	•	–	–
122883	Pre-terminated connector – CAN & Power	–	–	•
122829	Pre-terminated connector – 3x RCA	–	–	•
122370	Programming cable	•	–	•
122965	Programming cable*	–	–	•
AC-019	Adaptor – Connect Backeye Elite cable to RCA connector	•	–	•
RAM-B-138U	Mounting bracket – Adjustable pedestal – 80mm	•	•	–
RAM-B-138U-C	Mounting bracket – Adjustable pedestal – 150mm	•	•	–
2070-3.75MOUNT	Mounting bracket kit – Adjustable pedestal – 80mm	–	–	•
2070-6MOUNT	Mounting bracket kit – Adjustable pedestal – 150mm	–	–	•
122448	Mounting bracket	–	–	•
122387	Bezel	•	–	–
122386	Bezel	–	–	•
122451	Decal	•	–	–
122450	Decal	–	–	•

* UV700 requires both 122370 and 122965 cables for programming.









Ultraview Touch Series – Accessories – UV800, UV1100 & UV1200

Part No.	Description			
		UV800	UV1100	UV1200
122883	Pre-terminated connector – CAN & Power	•	•	•
122829	Pre-terminated connector – 3x RCA	—	•	•
513-00144-001	Pre-terminated connector – 1x RCA	•	—	—
513-00144-005	Pre-terminated connector – 5x RCA	•	—	—
RAM-B-138U	Mounting bracket – Adjustable pedestal – 80mm	•	—	—
RAM-B-138U-C	Mounting bracket – Adjustable pedestal – 150mm	•	—	—
629-00071	Mounting bracket – Panel mount	—	•	—
610-00061-080	Bezel with tactile buttons	•	—	—
M12-CAP	Screw on cap for M12 male connector. 130mm length	•	•	•



Ultraview Touch Series – Connection Kits

Part No.						
	UV450	UV500	UV700	UV800	UV1100	UV1200
CONNKIT-UV450	•	•	—	—	—	—
CONNKIT-UV700	—	—	•	—	—	•
CONNKIT-UV800	—	—	—	•	—	—
CONNKIT-UV1100	—	—	—	—	•	—

Crimping tools can be found on page 117.
Supplied with bolts/nuts and washers.



Ultraview Interface Design & Customisation



Smart Touch Panels found on page 38.

The Ultraview Touch interface can be infinitely customised to display and interact with the user, either through physical buttons, via touch screen or both.

If a design can be imagined, then it can be created using the Class1 Digital Truck Designer (DTD) software environment. For more detail see page 21.

Once all operational requirements are determined, an interface is designed and programmed specifically for the application. All graphical elements including, colours, backgrounds, dials, gauges etc can be enhanced with real time animation.

A range of standard templates are available for less complex interface requirements.

Touch Interface

Touch Screen

Directly touching an icon or image on a screen is a popular and intuitive way to interact with a device.

Not being restricted by physical switches allows for a greater variety of actions and increased operational efficiency.

Combination

Some operators prefer physical buttons, others instinctively touch the screen.

The Ultraview series allows for both to be used, providing system designers and operators the flexibility to perform tasks in a manner best suiting their preference.



Tactile Push Buttons

Backlit push buttons are able to be configured to operate with all Ultraview displays. The switches are designed to provide positive tactile confirmation when pressed, even when wearing gloves, giving the operator confidence when actuating a switch function.

Personalisation



Splash/Intro

An initial screen shown during the power up of the Ultraview display can be customised with manufacturer/customer logo, graphic or message.

Display Video



Video

Ultraview screens can display video from either PAL or NTSC cameras. The image can be configured to the full height of the display or resized to be viewed in conjunction with other on-screen elements.

Warnings

There are several methods available to draw an operator's attention to a specific area of the Ultraview interface. The most popular are shown below.

Banner

Typically a partial overlay on the active screen, displayed briefly or until acknowledged when a trigger is activated or a parameter is out of range.



Highlights

Colour changes or simulated illumination can indicate an active function, an open door or locker, or a switched-on work lamp.



Icons

Used in a similar way to a warning lamp or status notification, icons can show if an item is activated or if a component is out of operating range.



Combination

A combination of these events may be used to illicit action by the operator. The Ultraview Series also provides an output for an audible alarm if required.

Gauges

Traditionally machine operations are represented through analogue instruments and devices, the most effective of these have been programmed to display virtually on screen in the Ultraview series.

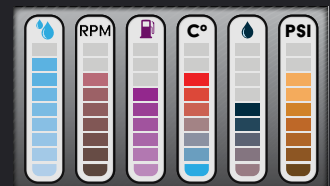
Rotary

The most common gauges viewed in equipment today. Typically a round fascia with a coloured needle to indicate the level reached by the sensor/pickup. The flexibility of the Ultraview rotary gauge is the ability to design it to whatever size, shape, colour etc the user desires.



Bar

A column of colour moving on a scale to indicate the feedback from a sensor or pickup. Orientation, colour, and triggered effects can be applied to this gauge to bring this component to life. Curving a bar graph around a gauge or graphic can add to the visual effect whilst being more space efficient.



Text/Numerical

Usually a numerical value that changes based on the feedback from the sensor or pickup. Size, colour, and update rate are configurable to suit operational needs.



Combination

Combining two or more gauges is often the best way to display multiple pieces of related information at a glance. The flexibility of the Ultraview configuration software enables this and many more creative ideas.





610-00061-008



610-00061-004

- 9V 32V
- IP68
- Made in North America

- Preconfigured to suit the Digital Truck Designer (DTD) network.
- Dimmable illumination.
- LED backlit icons.
- Built-in diagnostics.
- Illuminates in a range of colours, user selectable.
- Switch inserts can be laser etched.
- Vertical/horizontal mount.
- Low current draw.
- TE DEUTSCH compatible connector.
- Environmentally sealed – IP68.
- Made in North America.

Operational Voltage : 9–32V
 Max. Current Draw : 65mA @ 13.8V
 CAN : SAE J1939
 Connector : DT Style – 4 Pin on 300mm Fly Lead
 Construction : Silicone
 Ingress Protection : IP68
 Operating Temperature : -40°C to 85°C

Preconfigured for the DTD Network

The Smart Touch Panels have been preconfigured to specifically suit the DTD network.

- Streamline integration
- Reduced install times
- Superior usability
- Refined compatibility and troubleshooting

For detail on DTD, see page 21.



Other products designed to utilise the DTD system include:

- The Ultraview Touch & Monochrome Series
- The Smart Touch Rocker Switches
- System Managers
- I/O Modules
- Power Distribution Modules
- Climate Control Module among others

Speak to an IONNIC technical representative for more detail.



CONNKIT-SMARTTOUCH



101-00296-016

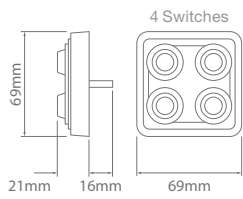
Laser Etched Inserts Available

For further information ask your local reseller or enquire online at ionnic.com



Smart Touch Switch Panels – Accessories

Part No.	Description
CONNKIT-SMARTTOUCH	Connector kit
101-00296-016	Switch Insert. Sold individually



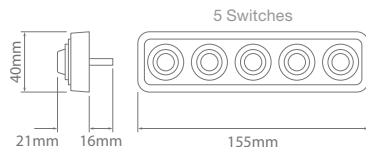
610-00061-004



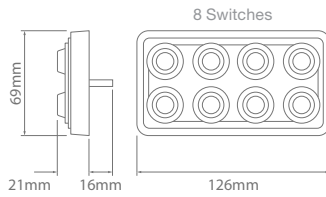
All Smart Touch Panels can be illuminated in a range of colours



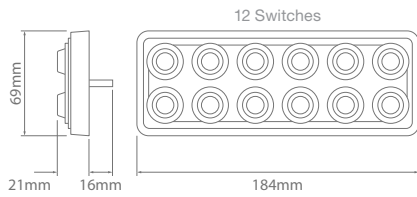
TE DEUTSCH compatible connector on all panels



610-00061-005

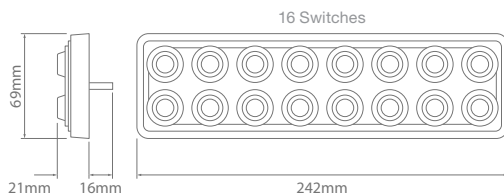


610-00061-008



Illuminated

610-00061-012



610-00061-016

Smart Touch Switch Panels

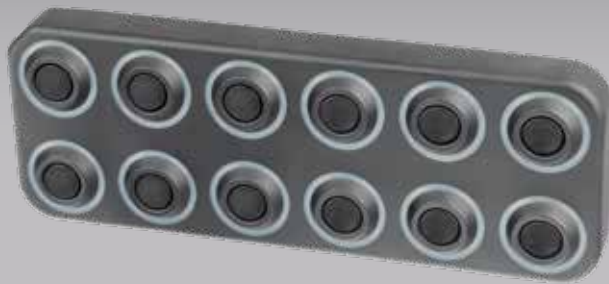
	4 Switches	5 Switches	8 Switches	12 Switches	16 Switches
Part No.	610-00061-004	610-00061-005	610-00061-008	610-00061-012	610-00061-016



NEW



ESW-M505210



ESW-M505230

- 9V 32V
- IP67
- RoHS
- Made in North America

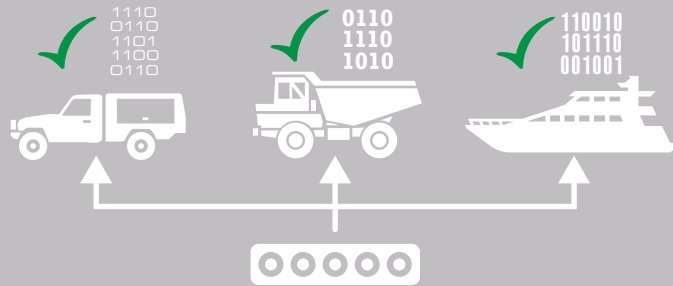
- Flexible CAN integration – configurable to any CANopen, J1939, or NMEA 2000 protocol (multiple baud rate).
- Bluetooth models available – use a smartphone to remotely control each button of the keypad.
- Illuminates in a range of colours, user selectable.
- Dimmable illumination.
- LED backlit icons.
- Switch inserts can be laser etched.
- Vertical/horizontal mount.
- Low current draw.
- TE DEUTSCH compatible connector.
- Environmentally sealed – IP67.
- Made in North America.

Operational Voltage : 9–32V
 Max. Current Draw : 1A @ 12V
 CAN : CANopen, SAE J1939, NMEA 2000
 Baud Rate : 250, 500, 1000 kbps
 Connector : TE DEUTSCH DT Style – 4 Pin
 Construction : PC PBT Alloy Plastic Resin
 Approvals : RoHS
 Ingress Protection : IP67
 Operating Temperature : -40°C to 85°C

CANopen, J1939 & NMEA 2000 Compatible

The Legend Series Keypads feature CANopen, SAE J1939 & NMEA 2000 protocol compatibility, allowing them to be integrated into almost every multiplexed system on the market today.

- Greater flexibility
- Suits most systems on the market today
- Selectable baud rate (communication speed)



Bluetooth Connectivity

The Legend Series Keypads with Bluetooth integration allow users to remotely operate keypad functions via a customised mobile app.

The app emulates physical button presses, providing greater convenience, flexibility, and control.

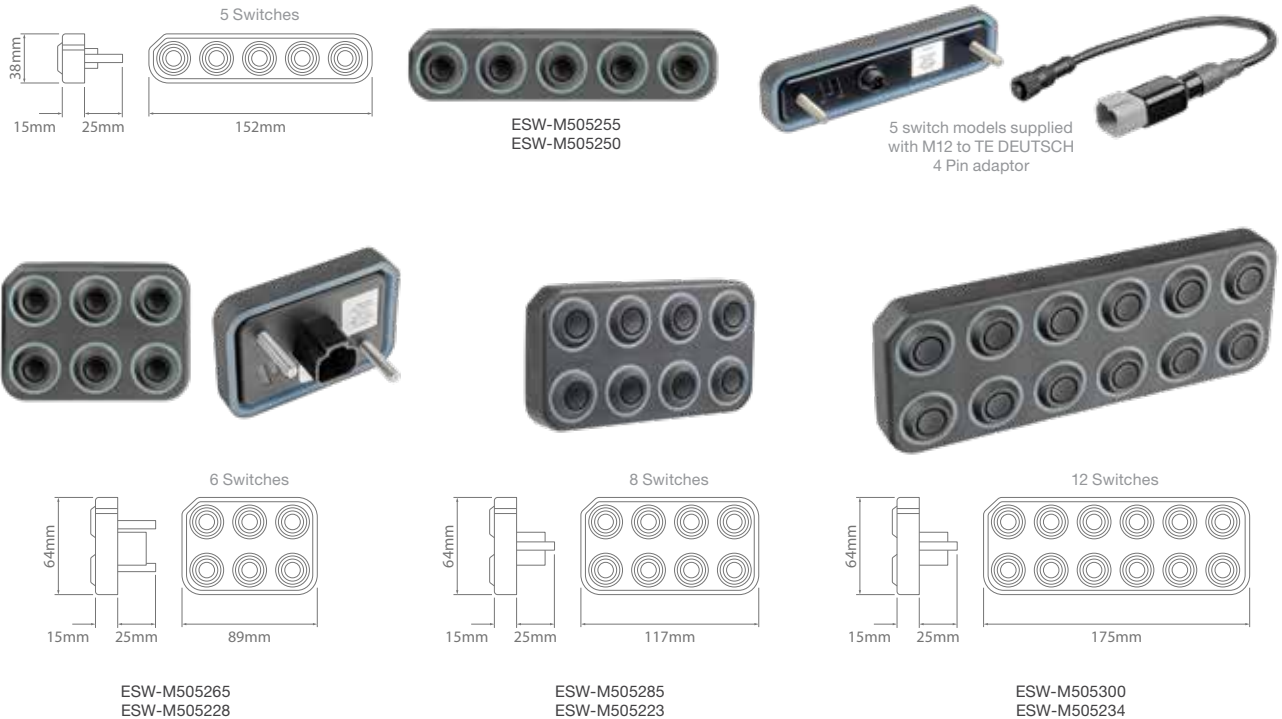


Download the Marlin Keypad app for Android or iOS, and connect via Bluetooth to the keypad.

The app sends the same CAN bus messages as a physical button press allowing full system control from a distance.

Download app from Google Play or Apple App Store





Legend Series Keypads NEW

	5 Switches	6 Switches	8 Switches	12 Switches
Standard	ESW-M505255	ESW-M505265	ESW-M505285	ESW-M505300
Bluetooth	ESW-M505250	ESW-M505228	ESW-M505223	ESW-M505234

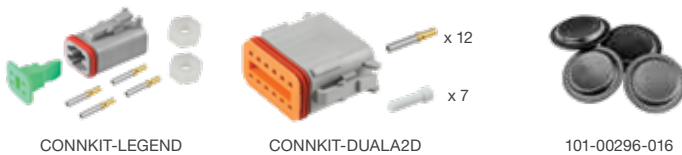


Bidirectional CAN Bridge (ESW-M505601 & ESW-M505650)

A two-channel CAN bus bridge for connecting two CAN bus networks

Laser Etched Inserts Available

For further information ask your local reseller or enquire online at ionnic.com



Legend Series Keypads – Accessories NEW

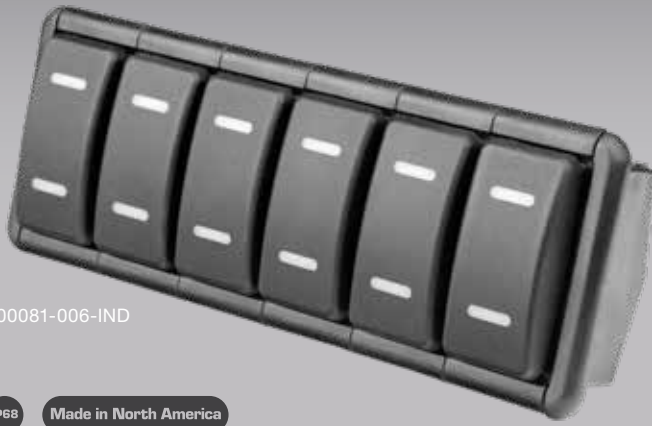
Part No.	Description
ESW-M505601	Bidirectional CAN bridge
ESW-M505650	Bidirectional CAN bridge - isolated
CONNKIT-LEGEND	Connector kit – Legend Series Keypads
CONNKIT-DUALA2D	Connector kit – Bidirectional CAN bridge (ESW-M505601 & ESW-M505650)
101-00296-016	Switch Insert. Sold individually



NEW



610-00081-004-IND



610-00081-006-IND

10V 32V IP68 Made in North America

- Designed for seamless integration into Class 1 DTD networks.
- Provide control and indication of outputs configured within the network database.
- Programmable switching and indication function.
- Rocker modules use optical interrupters – no contacts.
- Display LED pattern to indicate a variety of errors for easy diagnosis.
- TE DEUTSCH compatible connector.
- Wide range of accessories including actuator styles and CAM configurations available.
- Front face environmentally sealed – IP68.
- Made in North America.

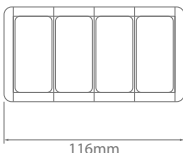
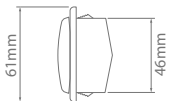
Voltage : 10–32V
 Max. Current Draw : 350 mA @ 12V
 CAN : SAE J1939
 Connector : DT Style – 6 Pin
 Construction : Polycarbonate
 Shock : MIL-STD-202 213-1
 Ingress Protection : Front Face Only IP68
 Approvals : CE
 Flame Test per Standard UL94V-0
 Operating Temperature : -40°C to 85°C



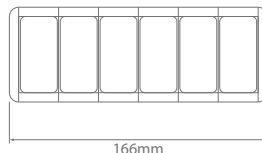
TE DEUTSCH compatible connector



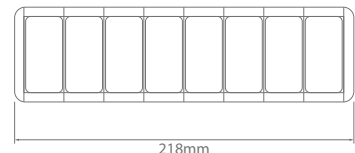
RGB status indicators for easy diagnosis



610-00081-004-IND



610-00081-006-IND



610-00081-008-IND

Smart Touch Rocker Switches **NEW**

Part No.	4 Switches 610-00081-004-IND	6 Switches 610-00081-006-IND	8 Switches 610-00081-008-IND
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All switches supplied with standard black actuators with indicator windows & 2-position momentary CAMs to suit.



200-00154-000



200-00154-004



200-00154-005



200-00154-006



200-00154-001



200-00163



200-00154-002



200-00154-007



Shown with 2 x 200-00154-001,
200-00163, 200-00154-002
& 200-00157 installed



200-00154-003



CAM Actuators



200-00155-000



200-00155-001



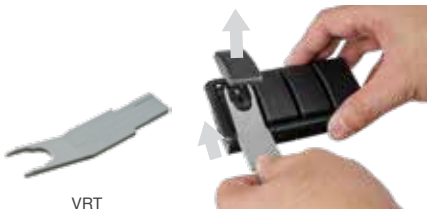
200-00155-002



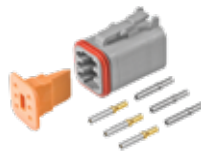
200-00155-003



200-00155-004



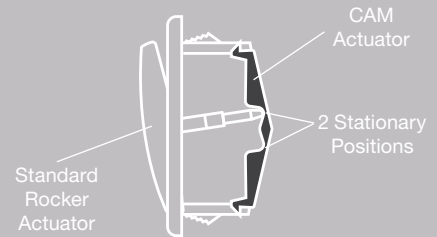
VRT



CONNKIT-TWISTER

CAM Actuators

The installation of CAM actuators at the rear of Smart Touch Rocker Switch housings can determine the switching functions, enabling the conversion of switches from momentary to stationary and from 1 position to 3 positions.



Smart Touch Rocker Switches – Actuators & Accessories NEW

Part No.	Description
200-00154-000	Standard Rocker – Black
200-00154-004	Standard Rocker – Green
200-00154-005	Standard Rocker – Red
200-00154-006	Standard Rocker – Grey
200-00154-001	Narrow Guarded Rocker – Black
200-00163	Finger Guard for Narrow Guarded Rocker
200-00154-002	Toggle Rocker – Black
200-00154-007	Standard Rocker with Indicator Windows – Black
200-00154-003	Stationary Blank – Black
200-00155-000	1-Position CAM Actuator. Momentary
200-00155-001	2-Position CAM Actuator. Momentary
200-00155-002	2-Position CAM Actuator. Stationary
200-00155-003	3-Position CAM Actuator. Stationary
200-00155-004	2-Position CAM Actuator. Stationary/Momentary
VRT	Actuator removal tool
CONNKIT-TWISTER	Connector Kit



Mining Equipment

Drilling Rigs

The mining industry demands reliability and serviceability to ensure equipment operates to capacity in harsh conditions.

Operator safety is paramount, and IONNIC Technical Systems' (ITS) ability to easily create complex safety interlocking makes this task possible.

Using next generation technology, ITS are at the forefront of industry performance in difficult environments.

- Fluid, pressure, temperature level indication
- Fluid flow control
- Lighting control
- Switch operation
- Safety interlocking
- Critical system monitoring
- Subsystem control and monitoring
- Interface with OEM engines
- Inbuilt diagnostics
- Machine angle monitoring
- Air conditioning climate control
- Multi-level password access



ent



Ultraview Touch Series - UV700



Supernode III



Ultraview Touch Series - UV1100



HD PDM



Smart Touch Panels



Climate Control Module



Motor Controller



I/O Modules

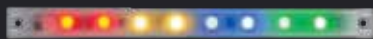
Gauges & Displays



Gauges & Displays



Intelli-Tank Level 40 **48**



CAN Strip Light **51**



Minder Series Kits **52**



Engine Information Centre **55**



Seat Belt Warning System **56**

Gauges & Displays

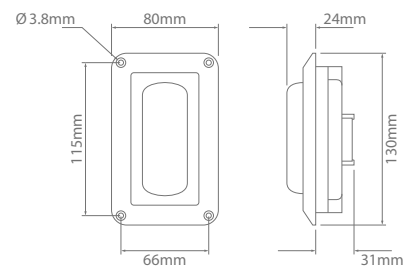
Intelli-Tank Level 40



9V 32V IP67 Made in North America

- Easy calibration (1 to 9 point) suitable for all tanks of any size or shape.
- Programmable output, typically used for auto-fill function, low/high tank level warning etc.
- CAN and one wire data link allows for unlimited optional remote displays.
- Ultra bright LEDs easily viewable from 180° to 9 tank levels.
- Custom scrolling text sequences on power up.
- Built-in self diagnostics displayed through scrolling text.
- Optional remote driver module used to control external lights, sirens etc concurrent to ITL display.
- Uses proven industrial pressure transducer.
- Multiple configurable features inbuilt, including LED dimming and anti-slosh function.
- Rocker switch sized Mini Remote Indicator available – see accessories.
- Made in North America.

Voltage : 9–32V
 Current Draw : 100mA @ 13.8V
 Output : Digital 250mA ground
 CAN : SAE J1939
 Construction : Polycarbonate
 Bezel : Die-cast Alloy
 Ingress Protection : IP67
 Operating Temperature : -40°C to 85°C



ITL-40 System Layout 1 – Simple Install

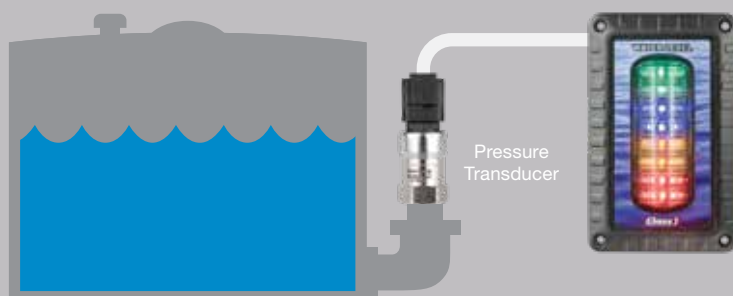


Illustration shows a typical tank monitoring system demonstrating the simplicity of installation and the use of the programmable output function.

Typically used for auto-fill function, low/high tank level warnings etc.



Gauges & Displays



ITLF-40R

Intelli-Tank Level 40 – Kits

Decal Text	Decal Colour	LED Colour				
		Green	Blue	Yellow	Red	Multi
“WATER LEVEL”	Blue	ITL-40G	ITL-40B	ITL-40Y	ITL-40R	ITL-40M
“FOAM LEVEL”	Red	ITLF-40G	ITLF-40B	ITLF-40Y	ITLF-40R	ITLF-40M
“CLASS A FOAM LEVEL”	Yellow	—	—	—	—	ITLF-40MYA
“CLASS B FOAM LEVEL”	Yellow	—	—	—	—	ITLF-40MYB

Kit contents:
 1 x ITL-40 Indicator
 1 x Indicator Decal
 1 x Harness – 3m (118485-10-DTM)
 1 x Pressure Transducer (200-00093-001)
 1 x Foam Adaptor (102219 Foam Kits only)

Multi-colour indicators feature 2 rows of Green, Blue, Yellow and Red LEDs from top to bottom.



Intelli-Tank Level 40 – Accessories

Part No.	Description
112124*	Mini Remote Indicator – 12–24V
106743	Mini Remote Indicator Decal – Blue “WATER LEVEL”
107584	Mini Remote Indicator Decal – Red “FOAM LEVEL”
106877	Driver Module 4 x 7.5A outputs – 12–24V
107585	Zero Pressure Vacuum Vent MNPT2”
CONNKIT-ITL-DTM	Connector kit. Suits ITL-40 transducer

* 112124 supplied with 1 x Water Decal, 1 x Foam Decal and 300mm harness.



Gauges & Displays

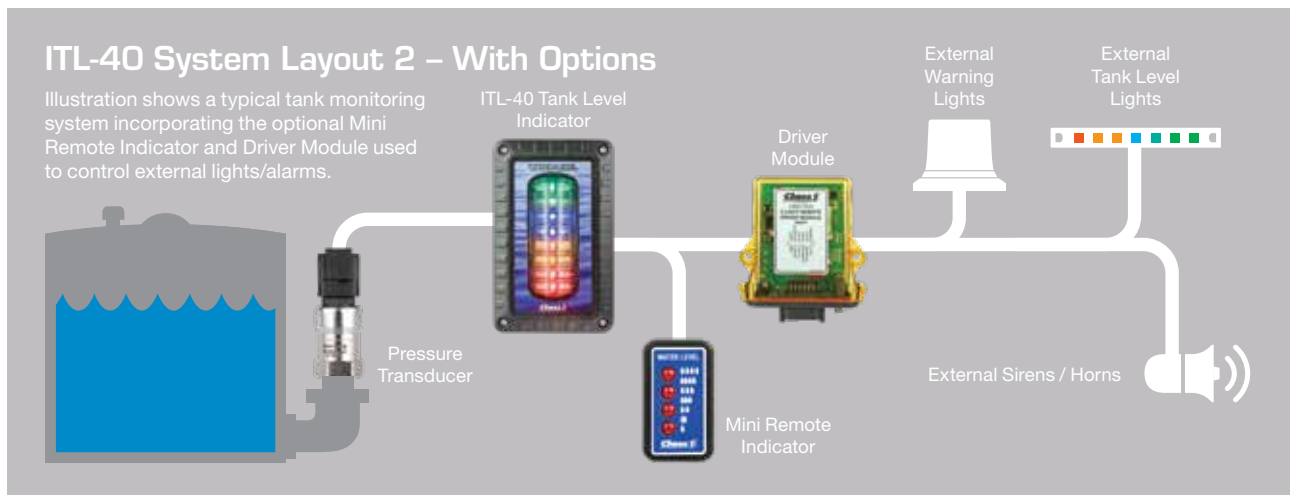


Intelli-Tank Level 40 – Individual Components

Part No.	Description	Fig
123340-01	LED Indicator, no decal – Red	1
123340-03	LED Indicator, no decal – Yellow	1
123340-04	LED Indicator, no decal – Green	1
123340-05	LED Indicator, no decal – Blue	1
123340-06	LED Indicator, no decal – Multi-colour	1
117690	Indicator decal – “WATER LEVEL” – Green	
117691	Indicator decal – “WATER LEVEL” – Blue	
117700	Indicator decal – “WATER LEVEL” – Orange	
117692	Indicator decal – “FOAM LEVEL” – Red	
117693	Indicator decal – “FOAM LEVEL” – Green	
117694	Indicator decal – “FOAM LEVEL” – Yellow	
117695	Indicator decal – “FOAM LEVEL” – Blue	
117696	Indicator decal – “CLASS A FOAM LEVEL” – Yellow	
117697	Indicator decal – “CLASS B FOAM LEVEL” – Yellow	
117698	Indicator decal – “CLASS B FOAM LEVEL” – Green	
117699	Indicator decal – “DIESEL” – Black	
200-00093-001	Pressure transducer 1/4" NPT – stainless steel	
200-00094-001	Pressure transducer 1/4" NPT – brass	
102219	Foam tank adaptor for pressure transducer	
118485-10-DTM	Harness – 3m	
118485-20-DTM	Harness – 6m	

Custom labels available upon request.

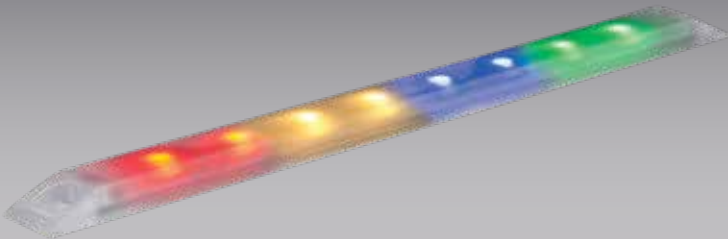
Other harness lengths available upon request.



NEW

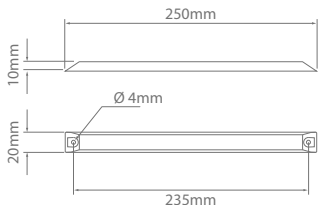
CAN Strip Light

- LEDs individually controlled via a CAN.
- Up to 7 colours including white.
- Ideal for syncing with load indicators, reversing sensors, and level displays.
- Dimming function.
- High output LEDs.
- Environmentally sealed.
- Multi-voltage.
- Polycarbonate construction.
- Frosted lens for diffused light.
- 2-year warranty.



Operational Voltage : 10–30V
 Lens : Polycarbonate
 Base : Aluminium
 Weight : 0.05kg
 Connector : 150mm Fly Lead
 Light Source : 8 x RGB LEDs
 Operating Temperature : -20°C to 60°C

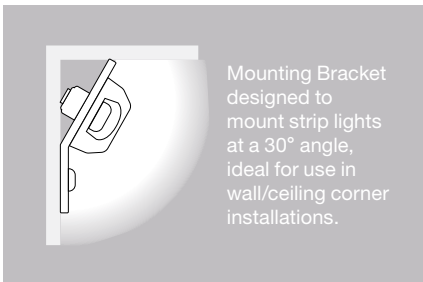
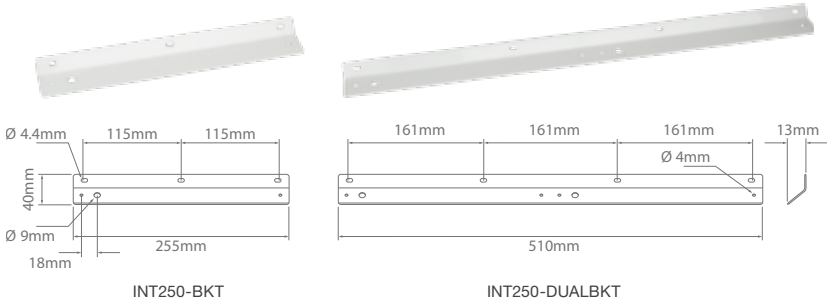
10V 30V 2Yrs



CAN Strip Light **NEW**

Part No.	Operational Voltage	No. of LEDs	Current Draw (mA) @ 12V
INT250CAN	10–30	8	100

Not recommended for mounting on synthetic surfaces.



CAN Strip Light – Mounting Brackets **NEW**

Part No.	Description
INT250-BKT	Powder coated steel. Suits 1 x INT250CAN
INT250-DUALBKT	Powder coated steel. Suits 2 x INT250CAN



Gauges & Displays

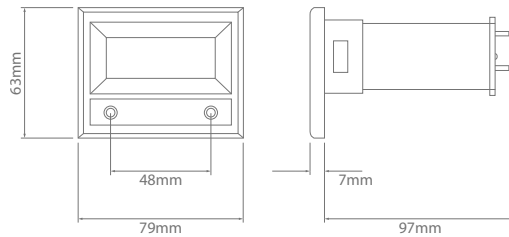
Minder Series Kits



- Super bright, easy to see display.
- 90dB warning buzzer included in selected models.
- Compact design.
- Silence button for audible alarm included.
- Environmentally sealed – IP67.
- Multi-voltage.
- Made in North America.

9V 32V IP67 Made in North America

Voltage : 9–32V
 Alarm Output Polarity : Negative
 Ingress Protection : IP67
 Operating Temperature : -40°C to 85°C



111667



103523



102161



102035



102008

Minder Series Kits – Pressure Gauge

Part No.	Description	Kit Contents
PSIS	Digital Pressure Gauge Kit	1 x Display (111667) 1 x Decal "PRESSURE" (103523) 1 x Transducer (102161) 1 x Harness – 3m (102035) 1 x Display Mounting Kit (102008)

The Pressure Gauge displays pressure or vacuum (kPa, PSI or BAR) in a numeric format.

Gauges & Displays



111663



103522



102714



102033



102008

Optional accessory
Flow Sensor
mounting boss
SFM



Minder Series Kits – Flowminder

Part No.	Description	Kit Contents
FMS	Flowminder Kit	1 x Display (111663) 1 x Decal "FLOWMINDER" (103522) 1 x Flow Sensor (102714) 1 x Harness – 3.1m (102033) 1 x Display Mounting Kit (102008)
SFM	Flow Sensor mounting boss	

Displays flow (litres per minute) in a numeric format.



111653



101995



102606



102088



100571



102671



102008

Minder Series Kits – Loadminder

Part No.	Description	Kit Contents
LMS	Loadminder Kit	1 x Display (111653) 1 x Decal "LOW LEVEL AERIAL LOADING" (101995) 1 x Pressure Transducer (102606) 1 x Silence Button (102088) 1 x Buzzer 90dB (100571) 1 x Harness – 3m (102671) 1 x Display Mounting Kit (102008)

Loadminders display the low-level load in a simple, easy-to-read LED bar style display that instantly adjusts as the ladder angle, extension or live load changes.

As the loading increases, so does the number of bars that are illuminated on the display. When the maximum low-level loading approaches (as determined by the aerial manufacturer and calibrated at the factory) the display will begin to flash.

A slight (25-50kg) additional load will cause the audible alarm to sound which alerts the operator to an overload condition.

- Display flashes when approaching maximum load
- Audible alarm when maximum reached
- Auxiliary output activates strobe (optional)



Gauges & Displays



Minder Series Kits – OxyMinder

Part No.	Description	Kit Contents
OMS	Oxygen Minder Kit	1 x Display (111654) 1 x Decal "% OXYGEN REMAINING" (101996) 1 x Pressure Transducer (102606) 1 x Silence Button (102088)
		1 x Buzzer 90dB (100571) 1 x Harness – 3m (102671) 1 x Display Mounting Kit (102008)

OxyMinder displays oxygen level in a simple, easy-to-read LED bar style display.

- Display flashes at 25% total air capacity
- Audible alarm sounds at 20% air capacity



Minder Series Kits – AirMinder

Part No.	Description	Kit Contents
AMS	Airminder Kit	1 x Display (111655) 1 x Decal "% AIR REMAINING" (101994) 1 x Pressure Transducer (102606) 1 x Silence Button (102088)
		1 x Buzzer 90dB (100571) 1 x Harness – 3m (102671) 1 x Display Mounting Kit (102008)

Airminders display breathing air level in a simple, easy-to-read LED bar style display.

- Display flashes at 25% total air capacity
- Audible alarm sounds at 20% air capacity
- Ideal for aerials, aerial platforms, air trucks and C.F.R. vehicles



Minder Series Kits – Spare Part

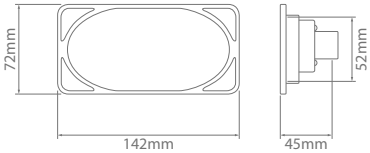
Part No.	Description	Suits
100944	Replacement display bezel	All Minder Series

- Engine RPM display.
- System voltage display & alarm.
- Engine oil pressure display & alarm.
- Engine temperature display & alarm.
- SAE J1587 & SAE J1939 compliant models.
- Super bright displays for maximum visibility in daylight.
- Output for external alarm (0.25A), input for alarm silencing.
- Environmentally sealed – IP67.
- Multi-voltage.
- Made in North America.



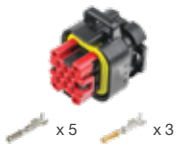
Voltage :	9–32V
Current Draw :	185mA @ 13.8V
Max Alarm Draw :	250mA
CAN :	SAE J1939
Construction :	Polycarbonate
Bezel :	Aluminium Alloy
Ingress Protection :	IP67
Operating Temperature :	-40°C to 85°C

Made in North America 9V 32V IP67



Engine Information Centre – IV

Part No.	Description
108661	Engine Information Centre IV



Engine Information Centre – Connection Kit

Part No.
CONNKIT-ENFOIV

Crimping tools can be found on page 116.



Gauges & Displays

Seat Belt Warning System



9V
32V

Made in North America

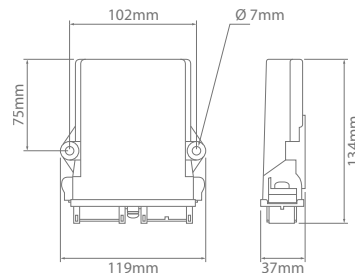
- Utilises SAE J1939 CAN standard to record NFPA required data.
- Large Seat Belt Warning System displays the status of up to 12 seats simultaneously.
- Display available in rocker size, can be integrated with Supernode.
- Input Module is environmentally sealed – IP67.
- Multi-voltage.
- Made in North America.

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

LED status indicators



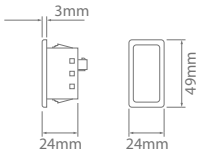
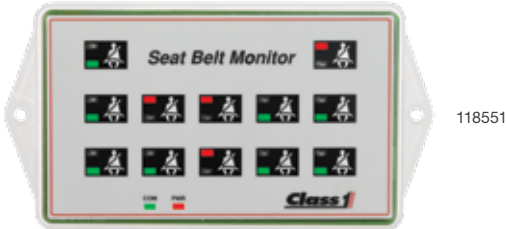
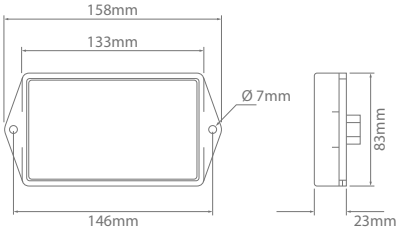
IP67



Seat Belt Warning System – Input Module

Part No.	Current Draw (mA) @ 13.8V
118093	57

Gauges & Displays



Indicates all occupied seats have seat belts engaged



Each occupied seat without a seat belt engaged is momentarily displayed until all are engaged



118620

Seat Belt Warning System – Displays

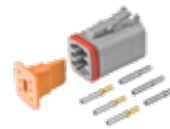
Part No.	Description	Current Draw (mA) @ 13.8V
118551	Large multi-seat belt display	75
118620	Small seat belt indicator	57



CONNKIT-IO



CONNKIT-IO-PB



CONNKIT-TWISTER

Seat Belt Warning System – Connector Kits

Part No.	Description	Suits
CONNKIT-IO	Connector Kit	Seat Belt Warning Input Module (118093)
CONNKIT-IO-PB	Connector Kit – Purple Band Socket	Seat Belt Warning Input Module (118093)
CONNKIT-TWISTER	Connector Kit	Large Seat Belt Display (118551)

Crimping tools can be found on page 117.



Emergency Services



Fire Appliances

Emergency

Class 1

For decades Class 1 systems have been the backbone of the fire appliance and allied emergency services vehicle industry.

Adoption of Class 1 multiplexing has simplified and reduced the hardware components required for the electrical system and have also increased the range of possibilities of what can be controlled.

- Pump governing
- Fluid level monitoring
- Fluid flow control
- Lighting operation
- Switch operation
- Safety interlocking
- P.T.O.
- Light mast
- Warning indication
- Interface with OEM chassis
- Emergency lighting
- Inbuilt diagnostics
- Low voltage management



Ultraview Touch Series – UV800



Supernode III



Smart Touch Panels



HD PDM



PDMs



I/O Modules



Sentry Governor Kits



Twister



Intelli-Tank System

EMERGENCY
000

Sensors & Switches



Sensors & Switches



Sensors & Switches

62



Contactless CAN Adaptor

67



TireCheck

68

Sensors & Switches

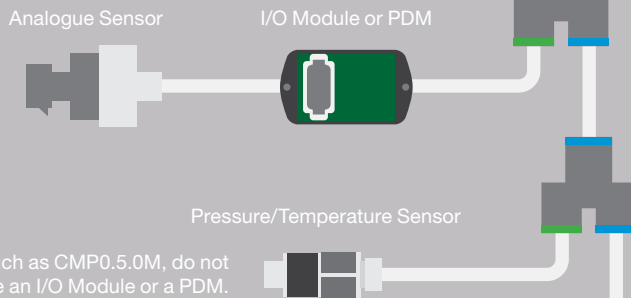
Sensors & Switches



- Wide range of sensors used to introduce input variables into the Controller Area Network (CAN).
- Side Mount Level switches are ideal for tank level applications with most liquids.
- Multi-voltage on most sensors & switches.
- An I/O Module or PDM provides a pathway for analogue signals into the network, these can be found on page 22 & 26–27.
- All sensors environmentally sealed – IP67.

Does your sensor require a module?

Analogue Sensors require an I/O Module (found on page 22) or a PDM (found on page 26–27) in order to transmit sensor data onto the Controller Area Network.



CAN Sensors, such as CMP0.5.0M, do not require an I/O Module or a PDM.

Controller Area Network



Sensors – CAN – Pressure & Temperature

Range (Bar)	0 – 0.5	0 – 4	0 – 16	0 – 25	0 – 100	0 – 400
Part No.	CMP0.5.0M	CMP4.0M	CMP16.0M	CMP25.0M	CMP100.0M	CMP400.0M

Ingress Protection: IP67
 Detection range: -30°C to 150°C
 Mounting Thread: G 1/4"
 Voltage: 9–32V

Sensors & Switches



3 pin
TE DEUTSCH
DT Series
connector.
Includes mount

115722



740114



2 Pin TE DEUTSCH
DTM Series connector.
Supplied with mating connector



MSTS-DTM-CLOSED

MSTS-DTM-OPEN



Sensors – Analogue – Temperature

Part No.	Voltage	Output Signal	Range	Mounting Thread	Notes
115722	9–32	0V to 2V	-40°C – 120°C	—	Includes mount
740114	9–32	0.05Ω to 100Ω	-40°C – 150°C	1/4" NPT	
MSTS-DTM-CLOSED	5	0V to 5V	-30°C – 150°C	1/8" NPT	Includes mating connector
MSTS-DTM-OPEN	5	0V to 5V	-30°C – 150°C	1/8" NPT	Includes mating connector

Ingress Protection: IP67



3 Pin TE DEUTSCH DTM
Series connector

102162

200-00093-001



200-00094-001



113557, 117179



102161



102606

Made in North America



3 pin
TE DEUTSCH DT
Series connector

Made in Europe



8252-G8-25-43-D3
8252-HA-25-30-D3



3 Pin TE DEUTSCH
DTM Series connector.
Supplied with mating
connector



MSPP-DTM-10BAR



Sensors – Analogue – Pressure

Part No.	Voltage	Output Signal	Range (PSI)	Mounting Thread	Notes
102162	4–8	0V to 5V	0 – 5	1/4" NPT	
200-00093-001	5	0V to 5V	0 – 5	1/4" NPT	Stainless steel
200-00094-001	5	0V to 5V	0 – 5	1/4" NPT	Brass
113557	9–32	0V to 5V	0 – 300	1/4" NPT	
102161	9–32	0V to 5V	0 – 500	1/4" NPT	
117179	9–32	0V to 5V	0 – 600	1/4" NPT	
102606	9–32	4mA to 20mA	0 – 7500	1/4" NPT	Class D compliant
8252-G8-25-43-D3	9–32	0V to 5V	0 – 150	1/8" NPT	
8252-HA-25-30-D3	9–32	0V to 5V	0 – 300	1/4" NPT	
MSPP-DTM-10BAR	5	0V to 5V	0 – 145	1/8" NPT	Includes mating connector

Ingress Protection: IP67



Sensors & Switches



102714A

IP67

Made in North America



SFM

Optional accessory
Flow Sensor Boss.
Used to facilitate mounting



Sensors – Analogue – Flow

Part No.	Voltage	Sensor Type	Output Signal	Range	Ingress Protection
102714A	9–32	Flow	±5V	Frequency	IP67
SFM	Mounting Boss. Stainless steel				



2m female to tail
M12 network
cable – 5 pin

RKT5-228-2M



CONNKIT-TEMPSENSOR



CONNKIT-THERMISTOR



CONNKIT-ITL-DTM



CONNKIT-TRANSITL



CONNKIT-TRANSHIPSI



CONNKIT-TRANSPSI

Sensors – Connector Kits

Part No.	Suits	
RKT5-228-2M	CAN – Pressure & Temperature	All
CONNKIT-TEMPSENSOR	Analogue – Temperature, Pressure	115722, 8252-G8-25-43-D3, 8252-HA-25-30-D3
CONNKIT-THERMISTOR	Analogue – Thermistor	740114
CONNKIT-ITL-DTM	Analogue – Pressure	200-00093-001
CONNKIT-TRANSITL	Analogue – Pressure	102162
CONNKIT-TRANSHIPSI	Analogue – Pressure	102606
CONNKIT-TRANSPSI	Analogue – Pressure, Flow	102714A, 113557, 117179, 102161

Crimping tools can be found on page 116–117.



5V Regulator

Pin 4
Pin 3



Pin 1
Pin 2

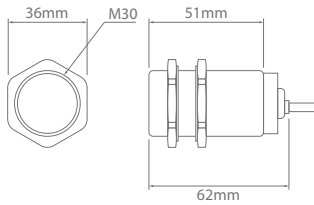
9–32VDC in.
2 x 5VDC out.
Reverse polarity
protected.

Pin 1 – Ground
Pin 2 – Output 1 (5VDC)
Pin 3 – Output 2 (5VDC)
Pin 4 – Input (9–32VDC), fused to 1A (maximum)

Sensors – Accessories – 5V Regulator

Part No.	Voltage	Max. Current Rating (mA)	Suits
DT04-4P-5V	9–32	500 per circuit	Sensors requiring a 5V supply

Sensors & Switches

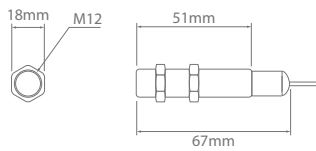


Made in Europe

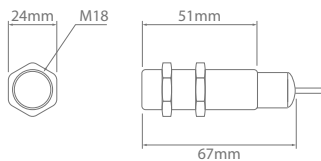


12-0001

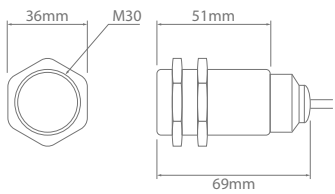
Ensure maximum current load is not exceeded. Compatible with automotive relays & electronic modules.



12-0120

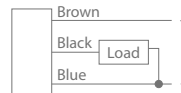


12-0180



12-0300

Made in North America



Switches – Inductive Proximity

Part No.	Voltage Type	Voltage	Output Type	Output Function	Sensing Range (mm)	Ingress Protection	Output Current Rating (mA)
12-0001	AC/DC	24–240	—	N/O	10	68, 69K	200
12-0120	DC	10–30	PNP	N/O	2	67	100
12-0180	DC	10–30	PNP	N/O	5	67	100
12-0300	DC	10–30	PNP	N/O	10	67	100

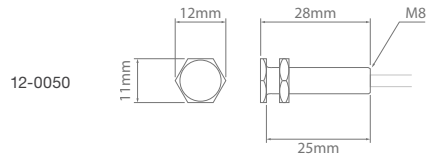
Cable Length: 2m



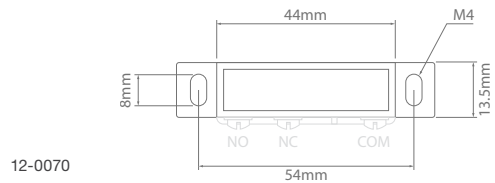
Sensors & Switches



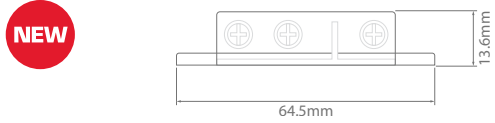
Supplied with mounting double sided tapes



12-0050



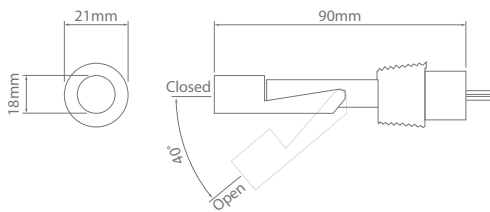
12-0070



NEW

Switches – Reed

Part No.	Contact Type	Style	Switching Distance (mm)	Contact Resistance (Ohms)	Current Rating (A)	Cable Length (mm)
12-0050	N/O	Panel	10	0.2	0.5	280
12-0070 NEW	SPDT	Surface	15	0.15	0.25	—



Made in Europe

RoHS

Switches – Side Mount Level

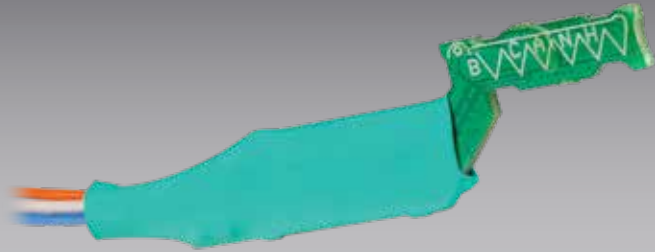
Part No.	Contact Type	Switching Angle	Mounting Size	Switching Voltage AC	Switching Voltage DC	Current Rating (A)	Cable Length (mm)	Housing
12-0030	N/O & N/C	40°	1/2" NPT	300	300	1.0	1000	Nylon

Functions as N/C or N/O dependent on fitting orientation.

Operating temperature:
-20°C to 75°C

- Non-intrusive data retrieval through wire insulation without compromising its integrity.
- Compact open-frame design enables convenient connection to the CAN bus, even in the most inaccessible areas of a vehicle.
- Ensuring dependable protection for a vehicle's electronic circuits against potential vulnerabilities through the CAN interface.
- Safe data integration from one CAN bus to another CAN bus network.
- Reverse polarity protected.
- 2-year warranty.

NEW



Contactless CAN Adaptor

Voltage : 9–36V
 CAN : SAE J1939, CAN Open, DeviceNet, NMEA 2000
 Current Draw : 12.5mA @ 24V
 Connector : 450mm fly lead
 Operating Temperature : -40°C to 85°C

9V
36V
2Yrs

Seamless CAN Data Retrieval

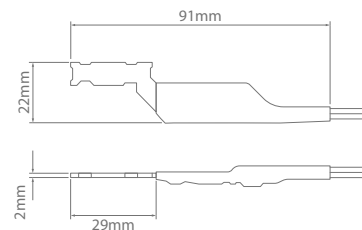
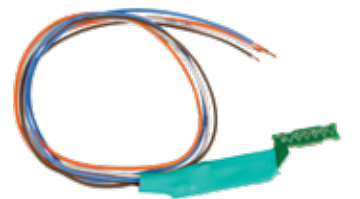
The Contactless CAN Adaptor reads the electromagnetic field when the CAN signal passes through the original insulated wires.

It generates digital output signals that mirror the data packets transmitted on the connected CAN bus.

These signals may include information about engine operating modes, fuel consumption, sensor status, and vehicle malfunctions.



See page 72 to see how the Contactless CAN Adaptor is used in the Minebar Integration Kits.



Contactless CAN Adaptor **NEW**

Part No.

ESW-00050



Sensors & Switches

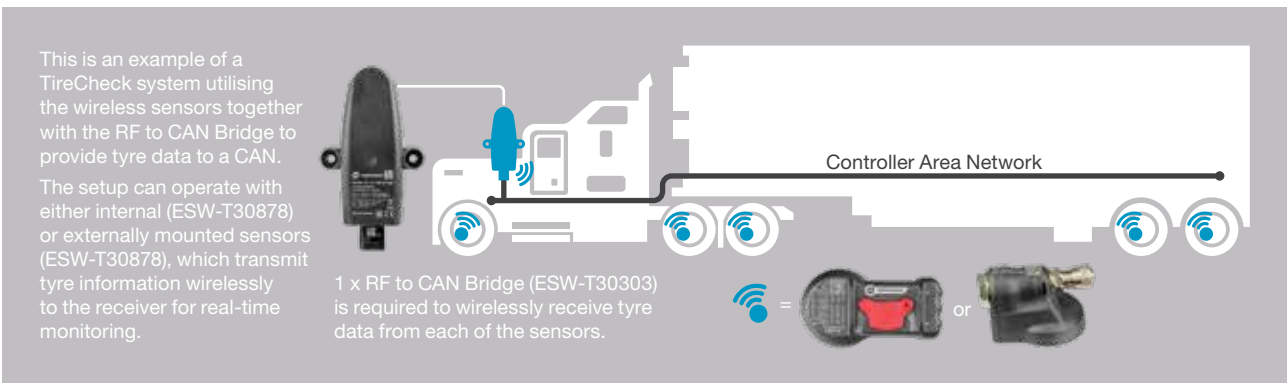
TireCheck

NEW



- Wireless tyre monitoring system with CAN-integrated receiver.
- Sensors measure tyre pressure and temperature.
- Data transmitted continuously every 40 seconds (internal model) or two minutes (external model) to the receiver.
- The external model securely attaches to the tyre valve for quick and easy installation.
- The internal sensor straps to the wheel's rim, making it more secure and reliable, ideal for OEM assembly lines or larger retrofit projects.
- Complies with European TPMS legislation ECE-R141 while integrating with existing CAN bus architecture.
- The RF to CAN Bridge can be configured using Bluetooth to monitor the correct sensor IDs, pressure and temperature thresholds.
- Once integrated into a CAN, the tyre data can be viewed on any display connected to the application's network.
- RF to CAN Bridge is environmentally sealed – IP69K.
- Suits trucks, trailers and tractor units.
- Made in Europe.

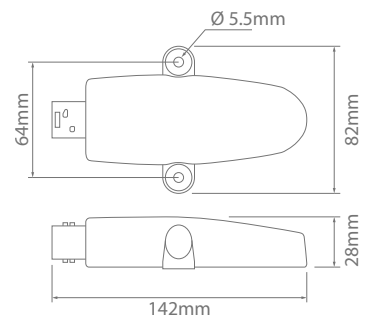
Made in Europe



IP69K 12V 24V



ESW-T30303



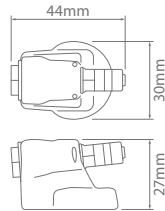
Voltage : 12-24V
 CAN : SAE J1939, 11992
 Communication : Radio Frequency, Bluetooth, CAN
 Operating Temperature : -40°C to 85°C

TireCheck – RF to CAN Bridge **NEW**

Part No.	Description
ESW-T30303	Wireless receiver kit for TireCheck sensors. Transmits tyre data from sensors to vehicle CAN

Sensors & Switches

ESW-T30839

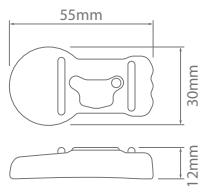


Mounts directly to tyre valve. Inbuilt valve opening allows standard tyre inflation (does not interfere with typical process)



Power Supply : 3V Battery
 Typical Battery Life : 5 Years
 Communication : Radio Frequency
 Speed Limit : Up to 130 km/h
 Operating Temperature : -40°C to 115°C

ESW-T30878



Internal sensors strap to the inside of tyre (to the rim) making it more secure and reliable, best suited for OEM assembly lines or larger retrofit projects.



TireCheck – Sensors NEW

Part No.	Description	Tyre Mounting Position	Pressure Range (Bar)	Data Transmission Interval	Weight (g)
ESW-T30839	Valve/sensor mounts directly to tyre valve. 8V1 thread	External	0 – 9	2 minutes	36
ESW-T30878	Tyre pressure sensor kit, includes strap – 19.5". Mounts inside the tyre directly to the rim	Internal	0 – 12	40 seconds	18



Standaardalone Systems



Standalone Systems



Minebar Integration Kits **72**



ESM Mini Kit **74**

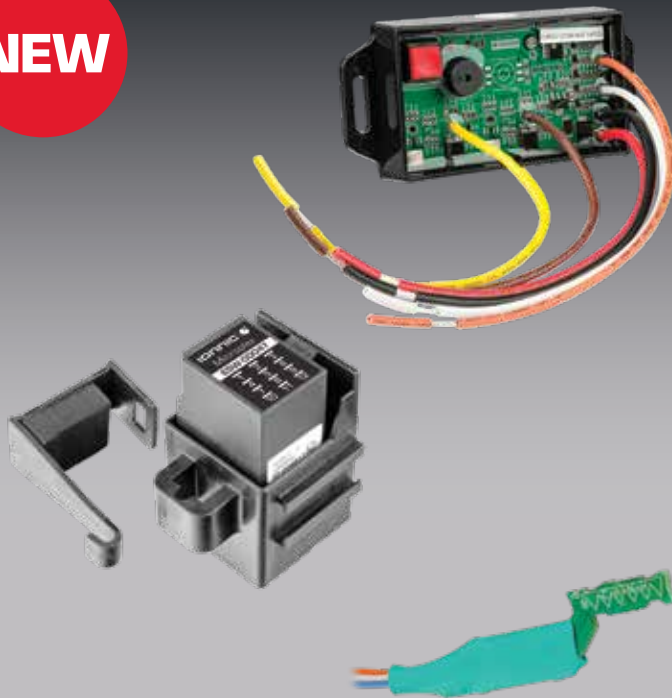


ICS Switch Panel Kit **76**

Standalone Systems

Minebar Integration Kits

NEW



12V
24V

- Significantly reduce the time required for each Minebar and Hand Brake Alarm installation.
- Connects to the CAN, providing functionality for a Hand Brake Alarm and Minebar (stop-tail/indicator/reverse lights, and reversing alarm).
- Kits utilise the non-intrusive Contactless CAN Adaptor to access OEM signals.
- Vehicle warranty concerns alleviated as no physical connection is made to existing CAN wiring.
- Ultra-compact Microplex CAN controller with holder rated to IP67.
- Microplex is preprogrammed to be compatible with the Ford Ranger, Everest, F-150, Transit & Volkswagen Amarok system.
- Suitable for other vehicle makes/models, for details contact your local reseller.

Voltage : 12-24V
 Current Draw : 35mA @ 12V
 Operating Temperature : -40°C to 70°C
 Suits : Ford Ranger, Everest, F-150, Transit & VW Amarok



MIK Vehicle Suitability

The Microplex is preprogrammed to be compatible with the:

Ford Ranger

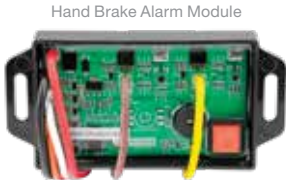
Ford Everest

Ford F-150

Ford Transit

Volkswagen Amarok

Suitable for other makes/models, contact your local reseller for details.



Minebar Integration Kits NEW

Part No.	Description	Kit Contents		
		Contactless CAN Adaptor	Microplex CAN Controller	Hand Brake Alarm Module
MIK-FR01	Base kit	•	•	—
MIK-FR02	Base kit with Hand Brake Alarm Module	•	•	•

Minebar installs



Attempting to integrate a new system into a vehicle's OEM CAN system can be difficult, time-consuming and potentially raise warranty concerns. By utilising a Minebar Integration Kit, an installation can be significantly simplified.

made easy.

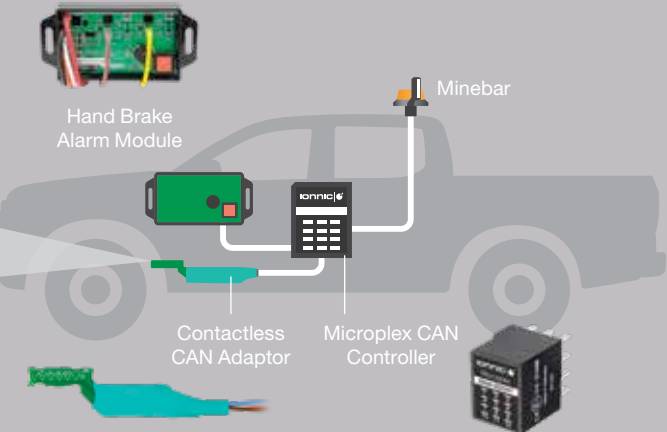
Streamline the up-fit process and maximise the value of each Minebar and Hand Brake Alarm installation with a Minebar Integration Kit.

Seamless CAN Data Retrieval

The Contactless CAN Adaptor reads signals off the existing CAN data cable by seamlessly attaching to it – no cutting or splicing into OEM wiring required.



The Adaptor then mirrors the data packets transmitted on the CAN bus, allowing them to be utilised for additional functions such as Minebar control.



Microplex CAN Controller



For details see page 11.

Contactless CAN Adaptor



For details see page 67.



Standalone Systems

ESM Mini Kit



12V
24V

- Electronically controlled switch module with inbuilt circuit monitoring and protection.
- Each output surge protected to 8A.
- 6 inputs, 6 outputs – 12V.
- 5 inputs, 5 outputs – 24V.
- Compact design.
- Save space and installation time.
- Eliminates excess wiring.
- Multi-voltage.
- Epoxy filled for enhanced moisture and vibration protection.

Voltage :	12-24V
Inputs :	6 x 12V, 5 x 24V
Outputs :	6 x 12V, 5 x 24V
Max. Output Current Rating (per output) :	7A
Max. Output Current Rating (total) :	20A
Body :	ABS
Cable Length :	120mm
Operating Temperature :	-40°C to 85°C

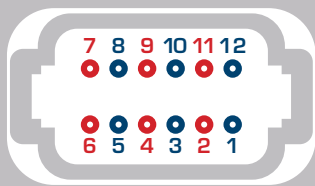
The ESM Mini is a compact, electronically controlled switch module with inbuilt circuit monitoring and protection.

The unit can be used in any application where conventional circuit protection may have been used in the past.

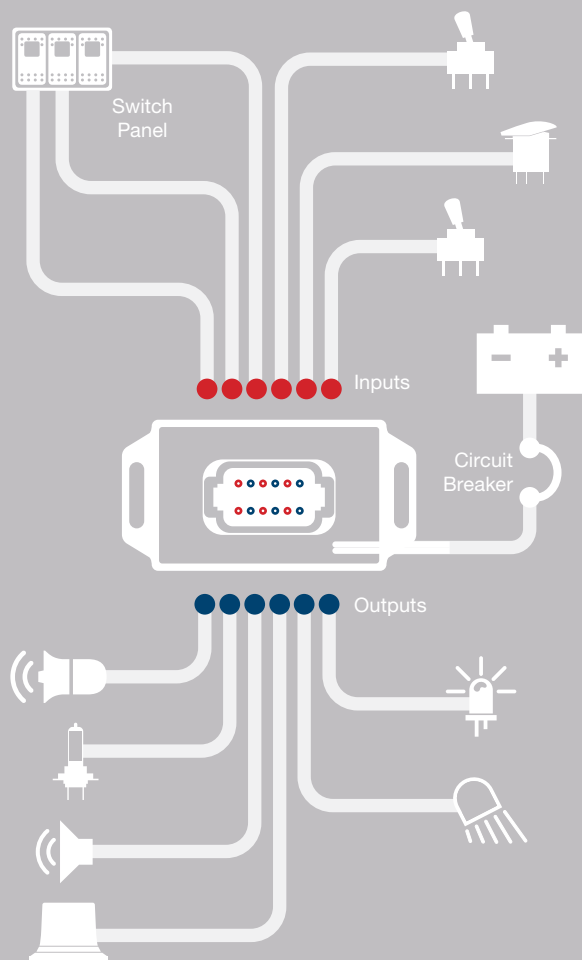
The ESM Mini can be used for any application, from connecting auxiliary lighting off original vehicle tails lights, e.g. Minebar hook up, to monitoring and protecting a range of auxiliary equipment switched off the original vehicle inputs or from after market toggle, rocker switches etc.

If a short circuit or over current condition presents on any of the outputs then the affected output will shut down. This circuit will then cycle 3 times (on/off) and if the over current situation is still present the output will then be locked in the off state until the fault is rectified and the input is reset.

Circuit 1 Input - 4 Output - 3	Circuit 2 Input - 2 Output - 1	Circuit 3 Input - 6 Output - 5
Circuit 4 Input - 11 Output - 12	Circuit 5 Input - 9 Output - 10	Circuit 6 Input - 7 Output - 8



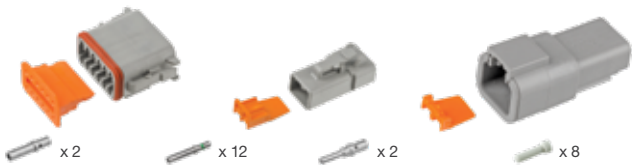
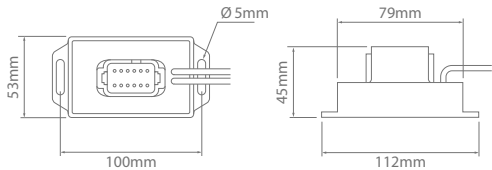
Inductive loads must not be used on the input or output circuits without additional external protection. Failure to do so may result in damage to the unit and will void warranty.



Standalone Systems



Components made redundant when using an ESM Mini Kit



ESM Mini Kit

Part No.	Voltage	Switching	Kit Contents:
ESM006	12-24	Positive	1 x ESM006 Control Module 1 x Connector – DT Series (DT06-12SA) 1 x Connector – DTP Series (DTP04-2P) 1 x Connector – DTP Series (DTP06-2S) 8 x Cavity Plug (114017)
			1 x Wedgelock – DT Series (W12S) 1 x Wedgelock – DTP Series (WP2P) 1 x Wedgelock – DTP Series (WP2S) 2 x Pin – Solid (0460-204-12141) 2 x Socket – Solid (0462-203-12141) 12 x Socket – Solid Green Band (0462-209-16141)



DET12, DET16



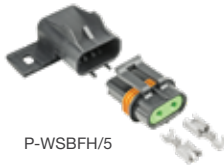
HDT48-00



DET-RT



CB255-XX



P-WSBFH/5



BFXX/10

ESM Mini – Accessories & Related Products

Part No.	Description
DET12	Crimping tool. Size 12
DET16	Crimping tool. Size 16
HDT48-00	Crimping tool. Size 12, 16, 20 & 22
DET-RT	Multi-use hook tool
CB255-XX	Circuit breaker – Panel Mount Series Replace 'XX' with desired amperage: 10, 15, 20, 25, 30, 35, 40, 50
P-WSBFH/5	ATO/ATS fuse holder kit – 30A Kit contents: 5 x Housing, 5 x Plugs, 10 x Terminals
BFXX/10	ATO/ATS blade fuses, pack of 10 Replace 'XX' with desired amperage: 1, 2, 3, 4, 5, 7.5, 10, 15, 20, 25, 30, 40



Standalone Systems

ICS Switch Panel Kit



Actual size

12V
24V

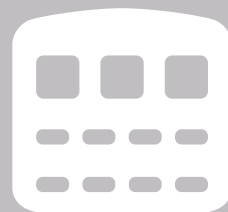
- Developed to control lighting and other electronic automotive accessories.
- Incorporates the latest in onboard circuit protection and monitoring technology.
- Each output surge protected to 6A.
- 3 user-configurable master switches.
- All switches can be set to latching or momentary.
- Mounting point on back of switch panel – use with common 1/4" thread adjustable mounts.
- Epoxy-encapsulated receiver module for enhanced moisture and vibration protection.
- Includes 4 decals.
- 8 outputs (6A each).
- Multiple outputs can be combined to allow switching of high current loads.
- Eliminates excess wiring.
- Multi-voltage.
- Compact design.

Voltage :	12–24V
Outputs :	8
Max. Output Current Rating (per output) :	6A
Max. Output Current Rating (total) :	40A
Cable Length :	4.5m
Housing :	ABS
Operating Temperature :	-40°C to 85°C

The ICS Switch Panel has been developed to control all types of lighting and other electronic automotive accessories.

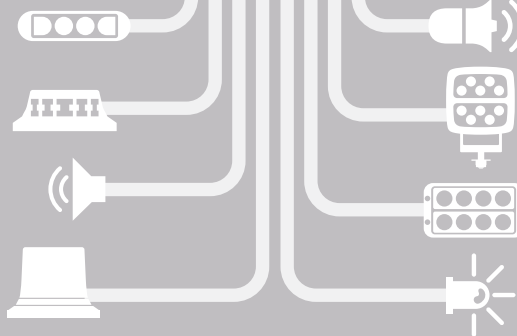
The switch panel and receiver communicate using a proprietary signal which allows the switching system to be configured using a single receiver module for typical applications, or with additional slave receiver modules on larger systems or vehicles.

The ICS Switch Panel incorporates the latest in onboard circuit protection technology. In the event of a short circuit the system immediately turns off the affected output preventing damage to the switch panel and devices controlled by it. The panel provides real-time feedback to the operator via LED's on both the panel and receiver module as to the state of each output.



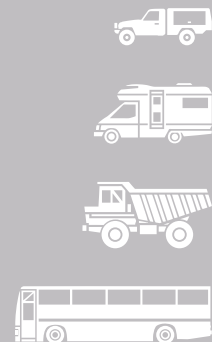
8x 6A Switches

Receiver



In the event of an intermittent short circuit the output of the affected circuit will turn off and remain off for 4 seconds. After this period of time the ICS will check the circuit, if no short is present, it will automatically turn the output back on.

All circuits are monitored and controlled independently. In the case of a short circuit, only the affected output is isolated while all others remain operational.

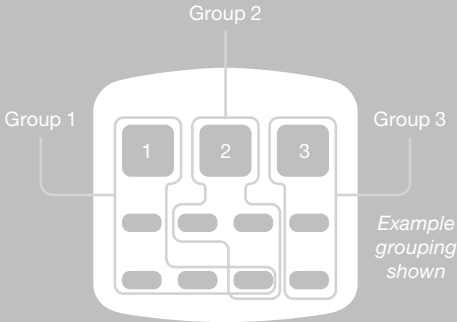


Master Switches

The ICS switch panel features 3 user-configurable master switches.

These switches can be used to link any combination of the 8 individual switches together to allow activation of multiple circuits via the switching of a single button.

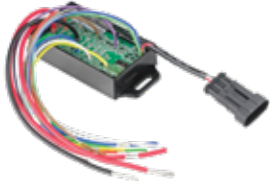
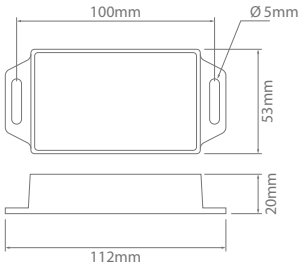
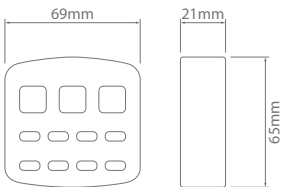
Note that individual switches can be associated with more than one master switch.



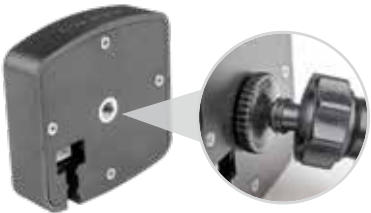
Custom assign any number of buttons to one of the three master switches



Watch video



Receiver Module

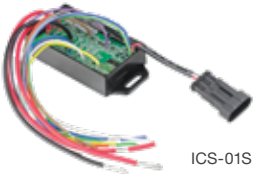


Mounting point on back of switch panel – use with common 1/4" thread adjustable mounts. Mount not supplied

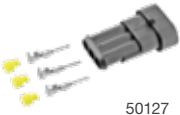


ICS Switch Panel Kit

Part No.	Voltage	Kit Contents
ICS-01	12–24	1 x Switch Panel 1 x Receiver Module 1 x 4.5m Cable (Switch Panel to Receiver) 4 x Overlay Function Decals 1 x Mounting Screws & Washers 1 x Double-sided Mounting Tape



ICS-01S



50127



50128



HT-4301

ICS Switch Panel – Accessories & Related Products

Part No.	Description
ICS-01S	Receiver module
50127	Superseal kit – 3 circuits – Receptacle. Includes contacts and seals
50128	Superseal kit – 3 circuits – Plug. Includes contacts and seals
HT-4301	Parallel crimping tool. Crimp range – 0.35–0.5, 0.75, 1.0, 1.5mm ²



ionnic |

Lighting | Safety | Electrical



CLASS1
ELECTRONICS



MULTI PERSON LIFT

LOOK UP AND LIVE

PULL FOR LADDER TO RELEASE LADDER GANTRY

0.923

0 0 0 0 0 0

6 0 0 0 0 0

000
0000
1347

FOAM INDUCTOR INLET

FOAM TANK

FOAM TANK INLET

FOAM SYSTEM

000

EMERGENCY
000

Connected Services



Connected Services



Captium 82

Connected Services

Captium

NEW



9V 32V IP67

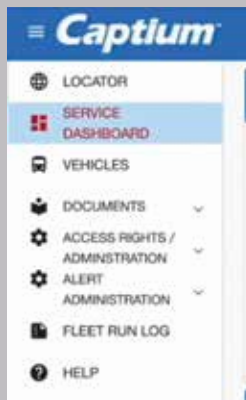
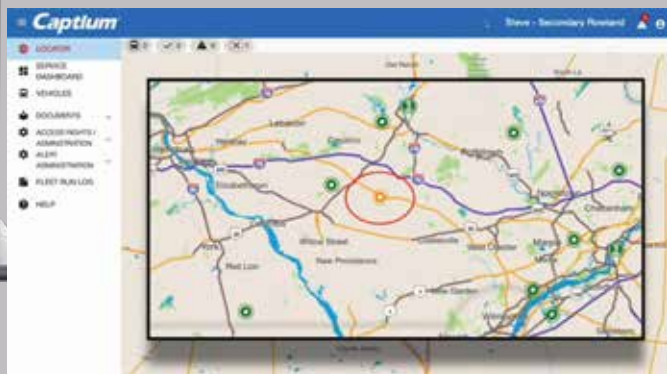
- Collect data on critical components and vehicle health providing insight to keep systems in optimal working order.
- Decrease vehicle downtime with electronics troubleshooting and support.
- Real-time notifications, run-log recording, and secure over-the-air device updates.
- Integrates with IDEX rescue tools – show current tool cycle and condition for optimal maintenance.
- When a trouble code is detected, a notification is sent to the designated recipient so they can quickly prioritise breakdown repairs.
- Vehicle comparison mode makes decisions in fleet deployment simple.
- Powered by Microsoft's cloud computing platform Azure.

Voltage : 9–32V
 Current Draw : 5A @ 13.8V
 CAN : SAE J1939
 Construction : Aluminium
 Ingress Protection : IP67
 Operating Temperature : -40°C to 85°C

Captium – Smart, Real-time, Remote Access to Asset Data



Connect to assets in the field remotely using the dedicated Captium software. View in real-time assets on a map to a precise level of accuracy. Bring up details on each vehicle showing what components are installed and what their current condition is.



Using the dashboard, track preventive maintenance schedules, identify mechanical issues before they become larger problems and detect trends associated with repairs.

Notify key people that a problem has occurred, or is happening in real time so the appropriate action can be put in place.

Monitors the health of:

- Chassis health and diagnostics
- Critical electrical controllers
- Multiplexing systems
- Water flow components

Ideal for:

- First responders
- Fire chiefs & staff
- Rescue tool distributors
- Vehicle builders & dealers

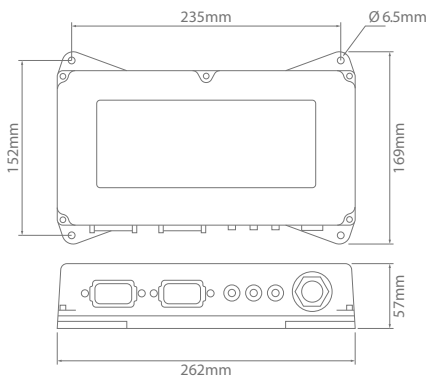


Captium™



Captium – Cloud Access Software NEW

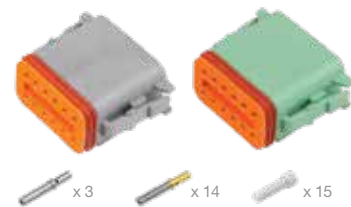
Part No.	Subscription Length
6419-0102-00	2 Months
6419-0160-00	5 Years



6420-0100-00



610-ANT-058



CONNKIT-CAPTUM

Captium – Hardware NEW

Description	Telemetry Control Unit	Antenna – Externally Mounted	Connector Kit
Part No.	6420-0100-00	610-ANT-058	CONNKIT-CAPTUM



IONNIC Technical Systems provides a wealth of control and display flexibility giving the operator feedback at a glance.

By providing flexible uniform multiplex solutions and shorter prototype development, an improved overall build process schedule is achievable.

- Lighting control
- Switch operation
- Safety interlocking
- Subsystem control and monitoring
- Interface with OEM engines
- Inbuilt diagnostics
- Air conditioning climate control
- Multi-level password access
- Interface with vehicle suspension, transmission and engine systems

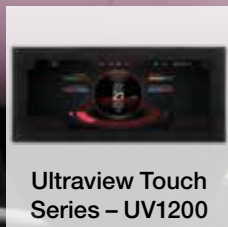


Commuter Buses

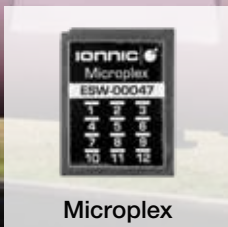




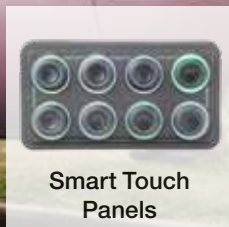
Transport Services



Ultraview Touch Series - UV1200



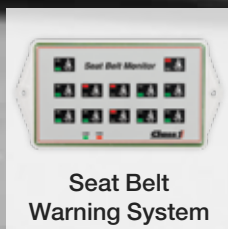
Microplex



Smart Touch Panels



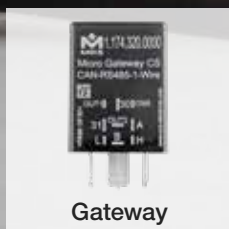
HD PDM



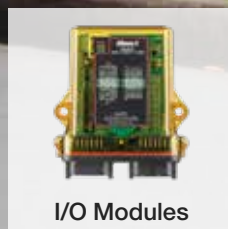
Seat Belt Warning System



PDMs



Gateway



I/O Modules

Governers



Governors



SAM BOOST 94



MatrixGOVERNOR II 93



Sentry Governor Kits 94



Twister 95

SAM BOOST

SAM BOOST manages your water flow, so you can focus on the fireground, not the side of your truck.



BOOST Governor

With just a couple of button presses from the Smart Nozzle or the BOOST Governor, you can open lines, set pressure, and monitor water supply, all without tying up comms or an extra operator.

SAM BOOST is a retrofit-ready system that automates water delivery and simplifies pump control.

Designed to work with your existing truck, adding smart automation for up to two preconnected discharges using a simplified interface and wireless Smart Nozzles.

- Automatically open tank-to-pump when the pump is engaged.
- Adjust pressures from the BOOST Governor or let the system manage them automatically.
- Support two preconnected hose lines.
- Manual or automatic pressure control.



Smart Nozzles

The SAM BOOST system integrates Smart Nozzles—wireless, pressure-sensing nozzles that let firefighters charge their own line, monitor water levels, and maintain optimal flow directly from the nozzle.

- Charge the line on-demand.
- Real-time water status at the nozzle.
- Maintains correct pressure automatically.
- Wireless communication with the truck.



Integrated Total Water Control System



Explore
and
watch
videos



www.SamFlows.com

For enquiries contact
Class 1 Australia on 1800 724 690 or
visit www.Class1Australia.com.au
for more information.



NEW



6V 36V IP67 Made in North America

- SAM BOOST automates key pump operations to simplify hose deployment, maintain pressure, and boost crew efficiency during initial attack.
- Automatically opens the tank-to-pump when the pump is engaged.
- Maintains correct discharge pressure by compensating for hose loss and elevation.
- Supports up to two Smart Nozzles.
- Allows for manual or automatic discharge pressure adjustments.
- Continues pressure regulation even if wireless connection is lost.
- Charge the hose line directly from the Smart Nozzle for faster deployment.
- LED indicators on the nozzle display real-time tank water levels.
- Wireless communication with the truck.

BOOST Governor Specifications

Voltage :	6–36V
Video Input :	NTSC/PAL
Output :	Digital 500mA
CAN :	SAE J1939, NMEA 2000
Construction :	Polycarbonate
Ingress Protection :	IP67
Vibration :	7.86G rms 5–2000 Hz, 3 axis
Shock :	+/- 50G, 3 axis
Operating Temperature :	-40°C to 85°C

Smart Nozzles

The SAM BOOST system integrates Smart Nozzles – wireless, pressure-sensing nozzles that let firefighters charge their own line, monitor water levels, and maintain optimal flow directly from the nozzle.

- Charge the hose line directly from the nozzle for faster deployment.
- LED indicators on the nozzle display real-time vital info.
- Constant wireless communication with the truck.

The Smart Nozzle has a pressure sensor that communicates with the SAM BOOST governor and sets the discharge valve to compensate for friction loss. The operating pressures are 50, 75, or 100 PSI.

The Smart Nozzles are for use on pre-connected hand lines up to 90 metres long, up to five floors above the pumper and two floors below grade.

Up to 2 x Smart Nozzles per SAM BOOST system.

At a glance quickly see:

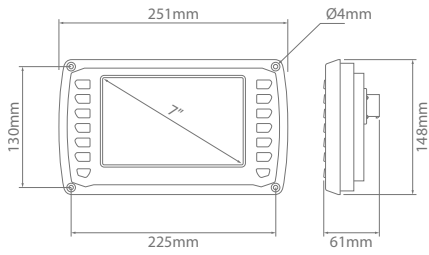
- Real-time tank water levels – green, yellow, and red LED indicators.
- Water supply connection status.



Customer specified nozzle

Function buttons on each side of nozzle, used to charge the line

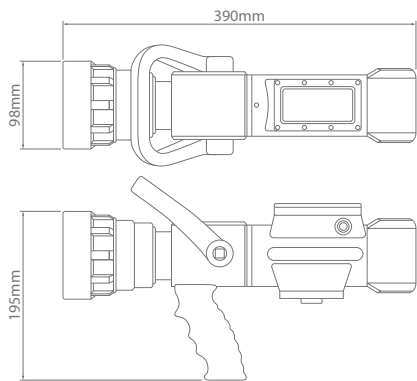
Powered by 2 lithium-ion rechargeable batteries



SAM BOOST utilises the Ultraview UV700, page 32 for more detail



BOOST Governor



Smart Nozzle

SAM BOOST Kits NEW

Part No.	Smart Nozzle in Kit	Description
SAMBOOST-SINGLE	1	Retrofit system including Governor and Smart Nozzle(s)
SAMBOOST-DUAL	2	Retrofit system including Governor and Smart Nozzle(s)



MATRIX

Pressure Governor

MatrixGOVERNOR II

Safely and confidently control your pump discharge pressure

Flexible, powerful and state-of-the-art. The MatrixGOVERNOR II monitors and controls your pump discharge pressure to maintain desired operating pressure range.

With intelligent controls, it detects conditions when water supply is reduced or cut off and reacts the way an operator would to keep engine speed from increasing out of control.

SAE J1939 compliant standalone fully functional pressure governor module maintains set pressure by reducing or increasing engine RPM.

The MatrixGOVERNOR II features self-diagnostics which sends out alerts when an error or fault conditions occurs. It saves and sends pump session data, alarms, fault codes and errors over CAN for capture and analysis.

With flexible programming options – four levels of options providing customization of pump control settings, the MatrixGOVERNOR II can do what you want when you want. Featuring advanced settings for warnings and alarms, units of measure, control ramp rates, stability settings, max pressure settings and more.

Ultraview Touch Series



Intelli-Tank Level 40



Twister

Fully networked system allows controls from multiple locations with various user interfaces



Smart Touch Switch Panels

- SAE J1939 compliant standalone fully functional pressure governor module.
- Monitors discharge pressure and maintains set pressure by reducing or increasing engine RPM.
- Hard wired interlocks (throttle ready, pump engaged, ok to pump).
- Increase, decrease, idle, mode (pressure or RPM), preset, high idle inputs.
- Programmable default mode (pressure, RPM or none).
- Self-diagnostic options – sends out alarms and warnings when error or fault conditions occur.
- Made in North America.

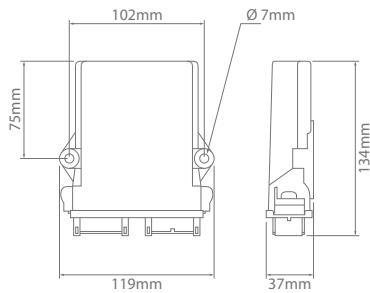


Voltage : 9–32V
 Current Draw : 50mA @ 13.8V
 Max Output Current : 250mA
 CAN : SAE J1939
 Construction : Polycarbonate
 Ingress Protection : IP67
 Operating Temperature : -40°C to 85°C

Made in North America

9V
32V

IP67



MatrixGOVERNOR II

Part No.	Description
610-00052	Pressure governor module



CONNKIT-IO



CONNKIT-IO-PB

MatrixGOVERNOR II – Connector Kits

Part No.	Description
CONNKIT-IO	Connector Kit
CONNKIT-IO-PB	Connector Kit – Purple Band Socket

Crimping tools can be found on page 117.





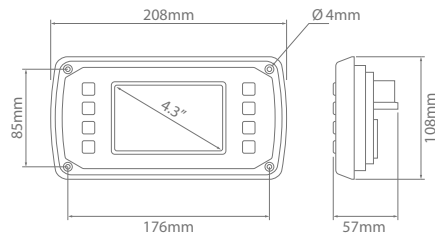
9V 32V IP67 Made in North America

- SAE J1939 CAN-based pressure governing system.
- Controls engine speed directly over J1939 network or analogue control.
- Monitors RPM and other pertinent data directly from the engine ECU.
- 4.3" full colour LCD with 8 tactile feedback buttons.
- Kits include Sentry display, Twister throttle, pressure transducers and associated wiring.
- Available in horizontal or vertical models.
- Advanced diagnostics – 2 levels, one for operator and one for maintenance technician.
- Environmentally sealed – IP67.
- Made in North America.

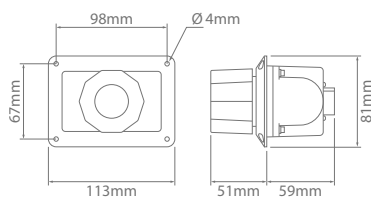
Voltage : 9–32V
 Current Draw : 240mA @ 13.8V
 Analogue Output : 0–5V
 CAN : SAE J1939
 Construction : Polycarbonate
 Ingress Protection : IP67
 Operating Temperature : -40°C to 85°C



Vertical orientation



599-00010-001



Advanced Diagnostics

The Sentry Governor pressure system has advanced diagnostic features unparalleled in the fire service industry.

It provides two levels of diagnostics; one for the operator, and one for the maintenance technician.



Error screen describing issue with suggested solution and illustration.

Sentry Governor Kits

Vertical Orientation
599-00010-001



Kit Contents:
 1 x Display (3045-101-00-CL1) 1 x Harness (513-00019)
 1 x Bezel (122387) 2 x Transducer 0-300 PSI (113557)
 1 x Decal (122482-001) 1 x Twister (119970)

Horizontal Orientation
599-00010-002



Kit Contents:
 1 x Display (3045-102-00-CL1) 1 x Harness (513-00019)
 1 x Bezel (122387) 2 x Transducer 0-300 PSI (113557)
 1 x Decal (122481-001) 1 x Twister (119970)

Optional 0-600 PSI transducer available, see page 63.

- Class 1's Twister is an electronic vernier-style throttle for controlling the speed of:
 - SAE J1939 CAN-compliant engines
 - Analogue (DC voltage) controlled engines
- Power-on state is always idle.
- Interlocked for safety.
- Clockwise or counterclockwise operation.
- Ergonomic control with tactile feedback.
- Large and easily accessible idle button.
- Bright LED indicators. "Throttle Ready" for interlock, and "Active" for active engine control.
- Environmentally sealed – IP67.
- Made in North America.

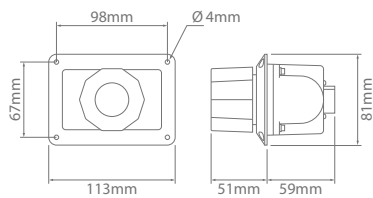


Voltage : 9–32V
Current Draw : 240mA @ 13.8V
Analogue Output : 0–5V
CAN : SAE J1939
Construction : Die-cast Alloy
Ingress Protection : IP67
Operating Temperature : -40°C to 85°C

Made in North America

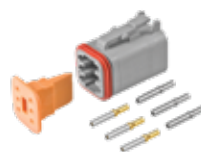
9V
32V

IP67



Twister

Part No.	Output
119970	CAN
119971	Analogue



Twister – Connector Kit

Part No.	Suits
CONNKIT-TWISTER	Both CAN & Analogue Twisters

Crimping tools can be found on page 117.



Connectors



Connectors



CAN Connectors **98**



HD30 Breakaway **102**



Bussing Hubs **106**



DT Detector Half Kits **109**

Connectors

CAN Connectors



DTM04-2P-P007



DT04-3P-P006



HD10-9-1939PE



DT04-3P-P007

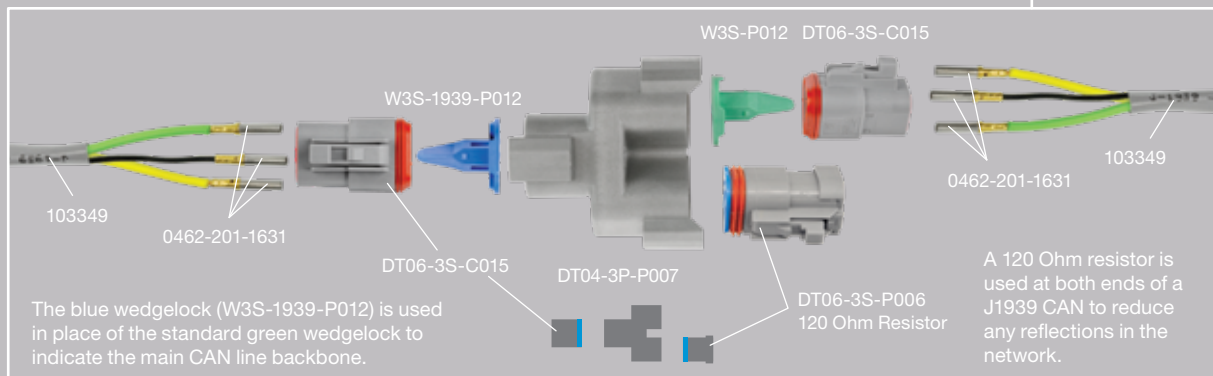
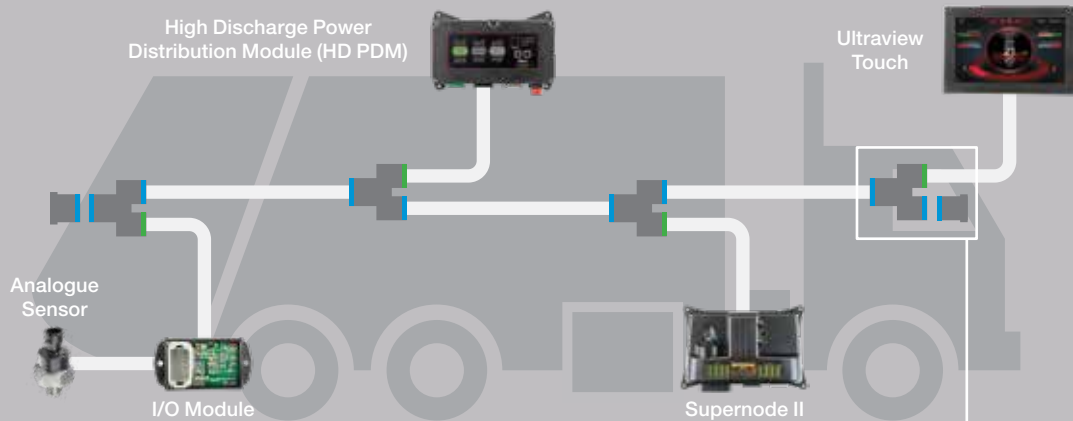


- Genuine TE DEUTSCH connectors.
- Environmentally sealed – IP68, IP6K9K, when installed to manufacturer's specifications.
- Multiple housing options available.
- Latched mating.
- Wedgelocks ensure contact alignment and retention.

Housing :	Thermoplastic
Seal :	Silicone Rubber
Wedglock :	Thermoplastic
Vibration :	20G rms 10 – 2000Hz
Approvals :	20mm Flame Test per Standard UL-94
Ingress Protection :	IP68, IP6K9K
Operating Temperature :	-55°C to 125°C

Controller Area Networks (CAN)

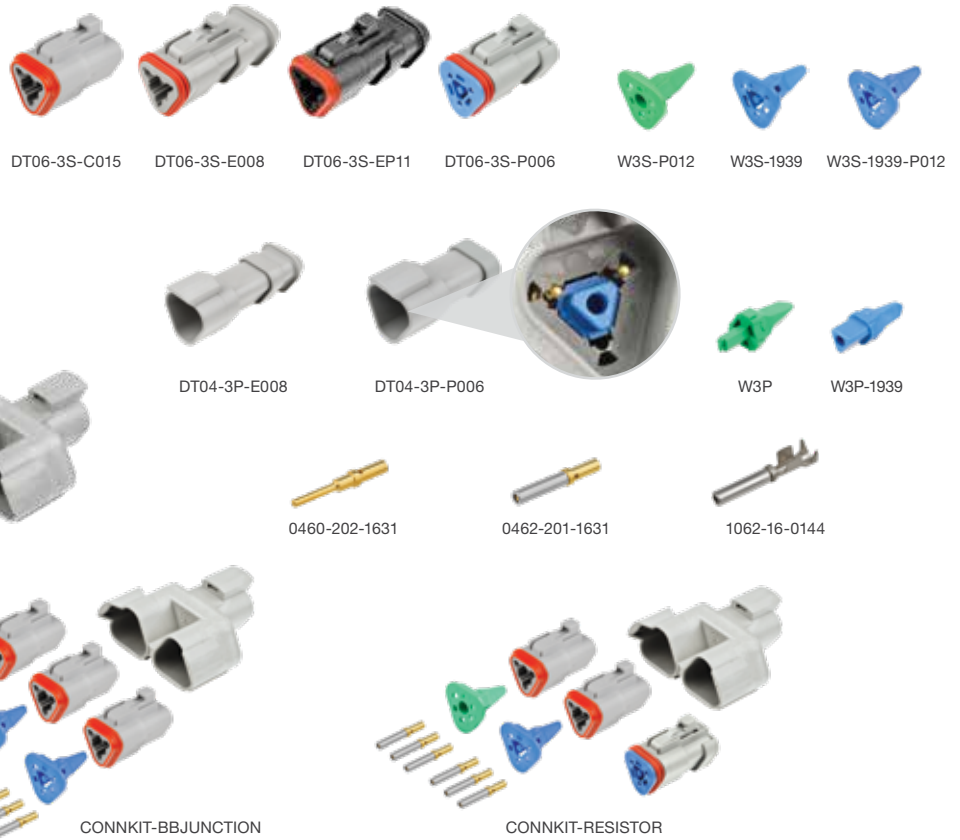
Controller Area Networks, or CAN are multiplexed control systems. Multiplexing allows multiple data signals to travel on the same wires, integrating separate electronic systems and applications to a single point of control and monitoring system.



J1939/11

J1939/11 is a 3-wire system that uses the TE DEUTSCH DT series connectors primarily for truck and bus. The DT series accepts size 16 contacts.

Connector options include in-line, bulkhead, Y splitter, and terminating resistors.



CAN Connectors – J1939/11 – Common Components

Part No.	Description	Cavities/Circuits
DT06-3S-C015	DT Series – Plug – Reduced diameter seal (E Seal)	3
DT06-3S-E008	DT Series – Plug – Heat shrink adaptor	3
DT06-3S-EP11	DT Series – Plug – Heat shrink adaptor – Black. Requires W3S-P012	3
DT06-3S-P006	DT Series – Plug – 120 Ohm Resistor. Includes wedgelock & contacts	3
W3S-P012	DT Series – Wedgelock – Plug – Green – Enhanced seal retention	3
W3S-1939	DT Series – Wedgelock – Plug – Blue	3
W3S-1939-P012	DT Series – Wedgelock – Plug – Blue – Enhanced seal retention	3
DT04-3P-E008	DT Series – Receptacle – Heat shrink adaptor	3
DT04-3P-P006	DT Series – Receptacle – 120 Ohm Resistor. Includes wedgelock & contacts	3
W3P	DT Series – Wedgelock – Receptacle – Green	3
W3P-1939	DT Series – Wedgelock – Receptacle – Blue	3
DT04-3P-P007	DT Series – Receptacle Y Piece. Includes wedgelocks & contacts	3
0460-202-1631	Contact – Pin – Solid – Gold-plated – Size 16	
0462-201-1631	Contact – Socket – Solid – Gold-plated – Size 16	
1062-16-0144	Contact – Socket – F-Crimp – Gold-plated – Size 16	
CONNKIT-BBJUNCTION	Connector Kit – CAN Splice. Used for splitting CAN Backbone	
Kit contents:		
1 x Receptacle – DT Series Y Piece (DT04-3P-P007)	9 x Contact – Socket – Gold-Plated (0462-201-1631)	2 x Wedgelock – Blue (W3S-1939-P012)
3 x Plug – DT Series – 3 Circuit (DT06-3S-C015)		1 x Wedgelock – Green (W3S-P012)
CONNKIT-RESISTOR	Connector Kit – CAN Splice with Resistor. Used for terminated CAN Backbone	
Kit contents:		
1 x Receptacle – DT Series Y Piece (DT04-3P-P007)	1 x DT Series 120 Ohm Resistor (DT06-3S-P006)	1 x Wedgelock – Blue (W3S-1939-P012)
2 x Plug – DT Series – 3 Circuit (DT06-3S-C015)	6 x Contact – Socket – Gold-Plated (0462-201-1631)	1 x Wedgelock – Green (W3S-P012)

Connectors

J1939/13

J1939/13 is a system that uses the TE DEUTSCH HD10 series connectors for on-board diagnostics. The HD10 series accepts size 16 contacts.



HD10-9-1939PE



HD16-9-1939SE



0460-202-1631



0462-201-1631



1062-16-0144

CAN Connectors – J1939/13 – Common Components

Part No.	Description	Cavities
HD10-9-1939PE	HD10 Series – Receptacle. Threaded rear – Black	9
HD16-9-1939SE	HD10 Series – Plug. Threaded rear – Black	9
0460-202-1631	Contact – Pin – Solid – Gold-plated – Size 16	
0462-201-1631	Contact – Socket – Solid – Gold-plated – Size 16	
1062-16-0144	Contact – Socket – F-Crimp – Gold-plated – Size 16	

J1939/15

SAE J1939/15 defines the requirements for reduced physical layer 2-wire CAN systems consisting of an unshielded twisted pair of wires.



CAN Connectors – J1939/15 – Common Components

Part No.	Description	Cavities/Circuits
DTM06-2S-EP10	DTM Series – Plug – 120 Ohm Resistor – Black. Includes wedgelock & contacts	2
DTM06-2S-P006	DTM Series – Plug – 120 Ohm Resistor. Includes wedgelock & contacts	2
DTM04-2P-P006	DTM Series – Receptacle – 120 Ohm Resistor. Includes wedgelock & contacts	2
DTM06-2S-E005	DTM Series – Plug – End cap – Black	2
WM-2S	DTM Series – Wedgelock – Plug – Orange	2
WM-2SB	DTM Series – Wedgelock – Plug – Black	2
DTM04-2P-P007	DTM Series – Receptacle Y Piece – Black. Includes wedgelock & contacts	2
0460-202-2031	Contact – Pin – Solid – Gold-plated – Size 20	
0460-010-2031	Contact – Pin – Solid – Gold-plated – Size 20 – Purple Band	
1060-20-0144	Contact – Pin – F-Crimp – Gold-plated – Size 20	
0462-201-2031	Contact – Socket – Solid – Gold-plated – Size 20	
0462-005-2031	Contact – Socket – Solid – Gold-plated – Size 20 – Purple Band	
1062-20-0144	Contact – Socket – F-Crimp – Gold-plated – Size 20	
CONNKIT-BDTM NEW	Connector Kit – CAN Splice. Used for splitting CAN Backbone	
Kit contents:		
1 x Receptacle – DTM Series Y Piece (DTM04-2P-P007)	6 x Contact – Socket – Gold-Plated (0462-201-2031)	
3 x Plug – DTM Series – 3 Circuit (DTM06-2S)	1 x Wedgelock – Orange (WM-2S)	
	2 x Wedgelock – Black (WM-2SB)	
CONNKIT-RDTM NEW	Connector Kit – CAN Splice with Resistor. Used for terminated CAN Backbone	
Kit contents:		
1 x Receptacle – DTM Series Y Piece (DTM04-2P-P007)	1 x Plug – DTM Series 120 Ohm Resistor (DTM06-2S-EP10)	1 x Wedgelock – Orange (WM-2S)
2 x Plug – DTM Series – 3 Circuit (DTM06-2S)	6 x Contact – Socket – Gold-Plated (0462-201-2031)	2 x Wedgelock – Black (WM-2SB)
DTM2-J1939-KIT	DTM Series – 120 Ohm Resistor Kit	
Kit contents:		
1 x Receptacle – DTM Series – 2 Circuit (DTM04-2P)	1 x DTM Series 120 Ohm Resistor (DTM06-2S-P006)	
1 x Wedgelock – Orange (WM-2P)	2 x Contact – Pin – Gold-Plated (0460-202-2031)	
	1 x Mounting Clip (1011-026-0205)	





- Breakaway coupling prevents damage to vehicle wiring or attached implement by safely disconnecting if the operator drives away without prior disconnection.
- Dust cap suits all shell size 24 HD30 and HDP20 series connectors.
- Ideal for use in agricultural equipment as well as the truck, bus, mining and construction industry.
- Environmentally sealed – IP68, IP6K9K, when installed to manufacturer's specifications.
- Resistant to most fluids in industrial applications.



Housing :	HD30 Series DT Series	Aluminium Thermoplastic
Seal :		Silicone Rubber
Shock :		50G
Vibration :		20G rms 10 – 2000Hz
Approvals :	20mm Flame Test per Standard UL-94	
Ingress Protection :	IP68, IP6K9K	
Operating Temperature :	-55°C to 125°C	

HDBOX-24-91PN – Breakaway CAN Termination Assembly

Originally designed for agricultural applications, the TE DEUTSCH HDBOX-24-91PN Breakaway CAN Termination Assembly creates a communication pathway between an on-board CAN system and the electronic components on an attached implement.

The HDBox, which holds two DT13 connectors and an HD30 Series receptacle, mounts on the vehicle and mates with an HD30 Series plug connector featuring a breakaway coupling ring.

TE DEUTSCH breakaway couplings are designed to prevent damage to the CAN wiring of the vehicle and/or the attached implement by disconnecting and separating from the vehicle in the event of an operator driving away without disconnecting beforehand.



Houses
1 x DT13-2P, 1 x DT13-4P

Mates with
DT06-2S-EP06
DT06-4S-EP06



Houses
1 x HD34-24-91PN
Mates with
HDB36-24-91SN





HD30 Breakaway

Part No.	Description	Cavities
HDBOX-24-91PN	Breakaway CAN Termination Assembly	15
HD34-24-91PN	HD30 Series – Receptacle	9
HD34-24-91PN-059	HD30 Series – Receptacle. Incorporates strain relief	9
HDB36-24-91SN	HD30 Series – Plug. Breakaway coupling. Circuits 4 & 5 are bridged	9*
HDB36-24-91SN-059	HD30 Series – Plug. Breakaway coupling incorporating strain relief. Circuits 4 & 5 are bridged	9*
* Circuit 5 is occupied with a non-removable size 16 contact and sealed with a cavity plug		
5004-001-2405	Dust cap suits shell size 24 HD34/HDP24 receptacles. Includes gasket	
DT06-4S-EP06	DT Series – Plug – Enhanced Seal Retention and End Cap – Black	4
DT06-2S-EP06	DT Series – Plug – Enhanced Seal Retention and End Cap – Black	2
W2S-P012	DT Series – Wedgelock – Plug – Green	2
W4S-P012	DT Series – Wedgelock – Plug – Green	4
0460-204-08141	Contact – Pin – Solid – Size 8	
0460-204-12141	Contact – Pin – Solid – Size 12	
0460-202-1631	Contact – Pin – Solid – Gold-plated – Size 16	
0462-203-08141	Contact – Socket – Solid – Size 8	
0462-203-12141	Contact – Socket – Solid – Size 12	
0462-201-1631	Contact – Socket – Solid – Gold-plated – Size 16	



Waste Management

IONNIC Technical Systems' (ITS) multiplex systems are well known throughout the heavy vehicle industry for improving reliability, efficiency and safety operations.

With reduced wiring and robust components readily integrated, ITS are able to reduce the complexity of the electrical system and offer the user a comprehensive control solution.

- Switch operation
- Safety interlocking
- Blade Automation
- Diagnostics
- Lighting control



Smart Touch
Panels



HD PDM



PDMs



CAN Strip Light



USM2



Pressure & Temp
Sensors

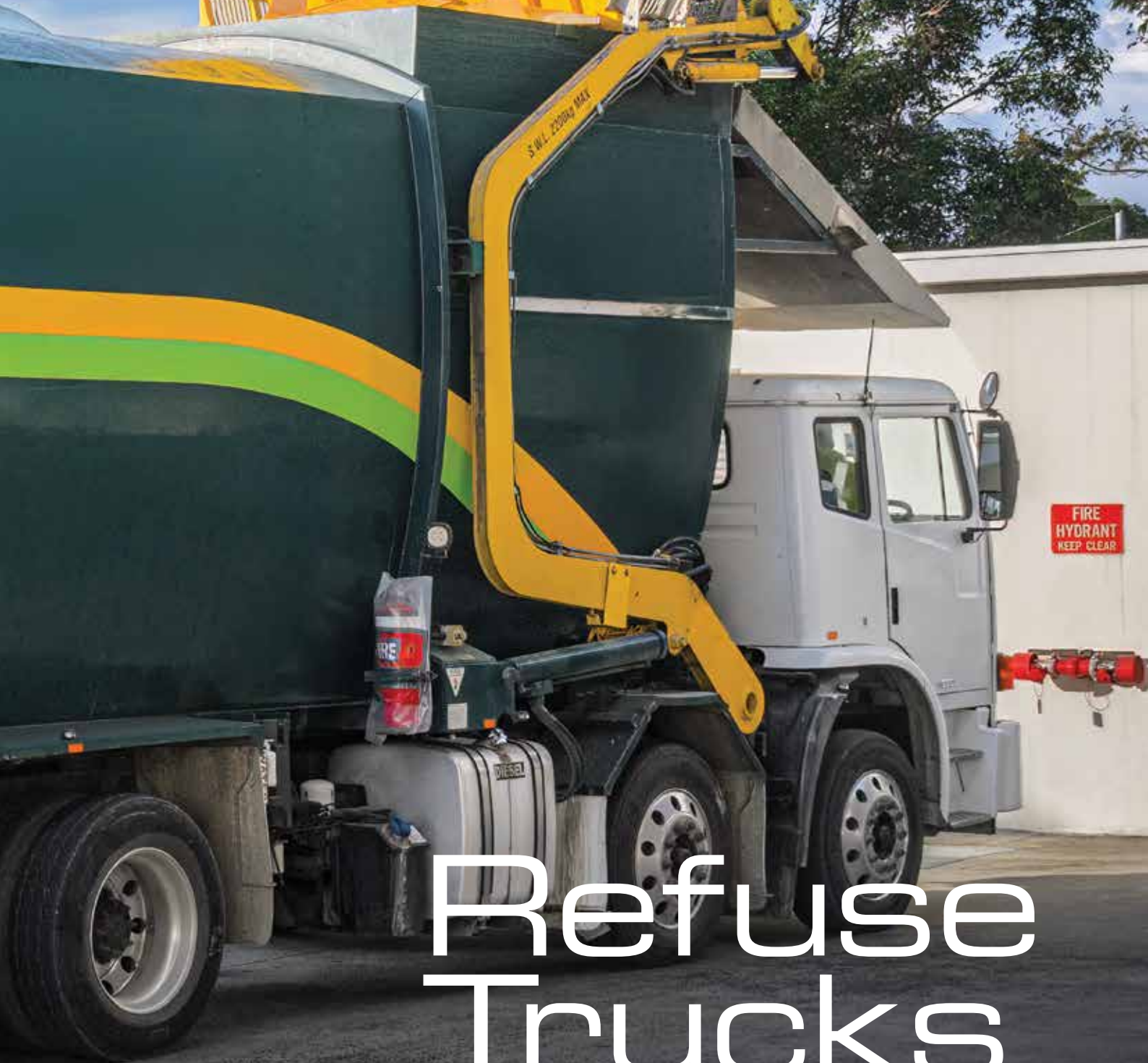


CC16WP



Ultraview Touch
Series - UV450

ement



Refuse Trucks

Connectors

Bussing Hubs



CONNKIT-3X8

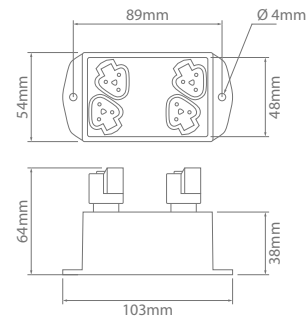
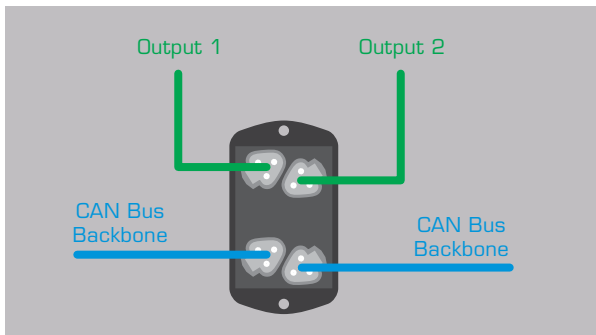


CONNKIT-6

- Designed and manufactured by IONNIC, using genuine TE DEUTSCH components.
- Compact, efficient design.
- Environmentally sealed.
- Epoxy filled ABS housing.
- J1939 models available in kits with mating connectors plus 120 Ohm terminating resistor.
- Made in Australia.

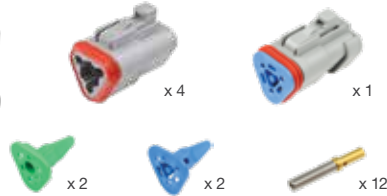
Housing :
Connector :
Operating Temperature :

ABS
Thermoplastic
-40°C to 85°C



CONNKIT-4JUNCTION

Supplied with
TE DEUTSCH 120 Ohm
Terminating Resistor
(DT06-3S-P006)



CONNKIT-4

Bussing Hubs – J1939 – 2 Branch

Part No. **CONNKIT-4JUNCTION**

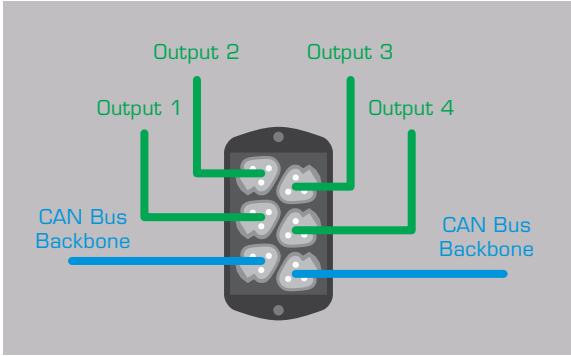
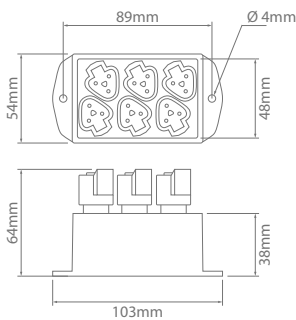
Description **CAN bus hub kit – supplied with mating connectors + 120 Ohm terminating resistor**

Kit Contents:

- 1 x CAN Bus 2 Branch Hub (CONNKIT-4)
- 4 x Plug – DT Series – 3 Circuit (DT06-3S-C015)
- 2 x Wedgelock Green (W3S-P012)
- 2 x Wedgelock Blue (W3S-1939-P012)
- 12 x Contact Gold-Plated (0462-201-1631)
- 1 x 120 Ohm Terminating Resistor (DT06-3S-P006)

CONNKIT-4

CAN bus hub only



Bussing Hubs – J1939 – 4 Branch

Part No.	CONNKIT-6JUNCTION	CONNKIT-6
Description	CAN bus hub kit – supplied with mating connectors + 120 Ohm terminating resistor	CAN bus hub only

- Kit Contents:
- 1 x CAN Bus 4 Branch Hub (CONNKIT-6)
 - 6 x Plug – DT Series – 3 Circuit (DT06-3S-C015)
 - 4 x Wedgelock Green (W3S-P012)
 - 2 x Wedgelock Blue (W3S-1939-P012)
 - 18 x Contact Gold-Plated (0462-201-1631)
 - 1 x 120 Ohm Terminating Resistor (DT06-3S-P006)



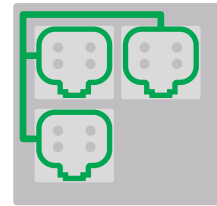
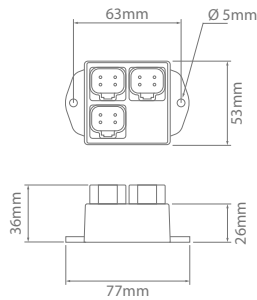
Connectors

NEW



3 x TE DEUTSCH
4 circuit receptacles
(DT04-4P)

CONNKIT-3X4

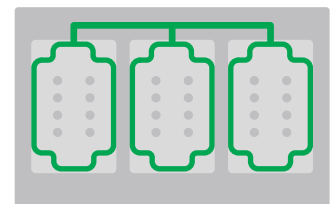
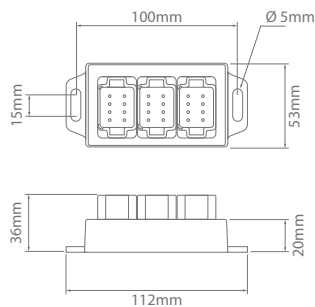


NEW



3 x TE DEUTSCH
8 circuit receptacles
(DT04-08PA)

CONNKIT-3X8

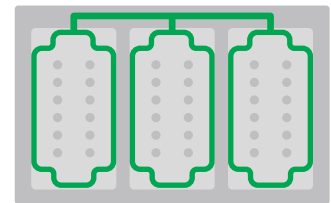
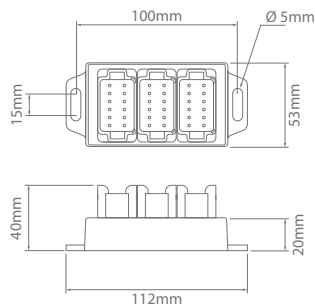


NEW



3 x TE DEUTSCH
12 circuit receptacles
(DT04-12PA)

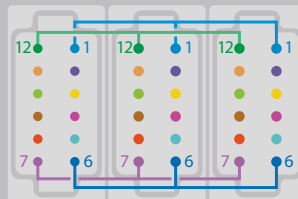
CONNKIT-3X12



Bussed Circuits

All pins are bussed to their corresponding numbers across each connector housed in the Bussing Hub.

This applies to all three Bussing Hubs.



Bussing Hubs **NEW**

Part No.	Description	Mating Components
CONNKIT-3X4	3 x 4 Bussed circuit	3 x DT06-4S, 3 x W4S
CONNKIT-3X8	3 x 8 Bussed circuit	3 x DT06-08SA, 3 x W8S
CONNKIT-3X12	3 x 12 Bussed circuit	3 x DT06-12SA, 3 x W12S

All pins are bussed to their corresponding numbers.

Current Rating per circuit: 10A

- Transparent housing with integrated LED on wedgelock for quick circuit diagnosis.
- Colour coded wedgelocks for operating voltages, 12V (yellow) and 24V (red).
- Joint retention fingers allow both contacts to be removed at the same time.
- Compatible with Pulse Width Modulated control.
- Sold as kit including nickel-plated or gold-plated contacts.
- Environmentally sealed – IP68, IP6K9K, when installed to manufacturer's specifications.
- Industry proven TE DEUTSCH DT Series.
- Latched mating.



Housing : Ultem
Seal : Silicone Rubber
Wedgelock : Thermoplastic
Contact Size : 16
Contact Rating : 13A @ 125°C
Shock : 50G
Vibration : 20G rms 10 – 2000Hz
Approvals : 20mm Flame Test per Standard UL-94
Ingress Protection : IP68, IP6K9K
Operating Temperature : -55°C to 125°C



Half Kits

Half Kits contain all components to make one half of a connection.

Each kit contains 2 x contacts and a DT Detector plug with a DT Detector Wedgelock.



W2S-SDT-24V



DTLED-24V-1



W2S-SDT-12V



DTLED-12V-4



DT06-2S-SDT-CE27

DT Detector Half Kits

Part No.	Voltage	Wedgelock Colour	Socket Type	Wire Size	
				AWG	mm ²
DTLED-12V-1	12	Yellow	0462-209-16141 – Green Band, Nickel-plated	14	1.0 – 2.0
DTLED-24V-1	24	Red	0462-209-16141 – Green Band, Nickel-plated	14	1.0 – 2.0
DTLED-12V-3	12	Yellow	0462-201-16141 – Nickel-plated	20 – 16	0.5 – 1.0
DTLED-24V-3	24	Red	0462-201-16141 – Nickel-plated	20 – 16	0.5 – 1.0
DTLED-12V-4	12	Yellow	0462-209-1631 – Green Band, Gold-plated	14	1.0 – 2.0
DTLED-24V-4	24	Red	0462-209-1631 – Green Band, Gold-plated	14	1.0 – 2.0

Kit Contents:
 1 x DT Detector Plug (DT06-2S-SDT-CE27)
 1 x DT Detector Wedgelock (W2S-SDT-12V or W2S-SDT-24V)
 2 x Solid Socket



Cable & Tools



Cable & Tools



Cable 112

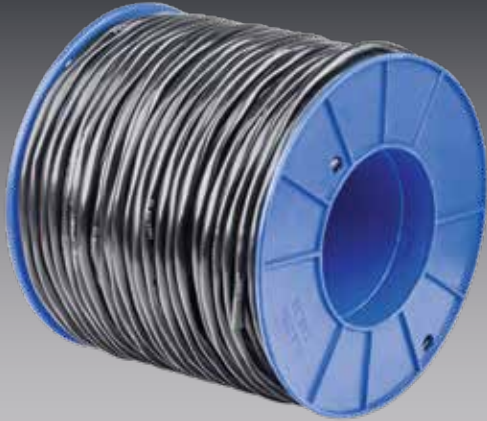


Contact Removal Tools 114

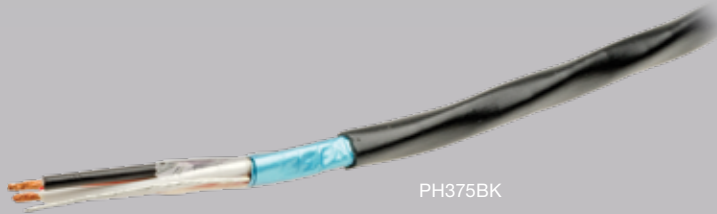


Crimping Tools 116

- Range of data cable available – Standard, Medium, Heavy Duty and Shielded.



PH275BK-100



PH375BK

103349,
103349-302



Made in North America



103349B

103349R

Cable – CAN Data

Part No.	Description	Core Colours	Roll Length (m)	Nom. Area (mm ²)	Nom. O.D. (mm)	Conductor	Max. Operating Temperature (°C)
103349	2 Core. Standard-Duty	Yel/Grn	*	0.5	6.14	7 / 0.30	125
103349-302	2 Core. Standard-Duty	Yel/Grn	302	0.5	6.14	7 / 0.30	125
103349B	2 Core. Medium-Duty	Yel/Grn	*	0.5	7.46	19 / 0.20	125
103349R	2 Core. Heavy-Duty	Yel/Grn	*	0.6	7.75	19 / 0.20	125

* These part numbers are modified/cut to customer specifications and are not returnable for credit.

Made in North America



Cable – Serial Data

Part No	Description	Core Colours	Roll Length (m)	Nom. Area (mm ²)	Nom. O.D. (mm)	Conductor	Max. Operating Temperature (°C)
0L20-1600-22	2 Core. Standard Duty	Wht/Blk	60	0.72	5.45	16 / 0.30	60

PH275BK,
PH275BK-100



PH375BK,
PH375BK-100

Cable – Shielded Drain Wire

Part No	No. of Cores	Colour	Roll Length (m)	Nom. Area (mm ²)	Nom. O.D. (mm)	Conductor	Max. Operating Temperature (°C)
PH275BK	2	Red/Blk	*	0.75	7.2	24 / 0.20	90
PH275BK-100	2	Red/Blk	100	0.75	7.2	24 / 0.20	90
PH375BK	3	Red/Blk/Wht	*	0.75	6.8	24 / 0.20	90
PH375BK-100	3	Red/Blk/Wht	100	0.75	6.8	24 / 0.20	90

* This product is modified/cut to customer specifications and is not returnable for credit.





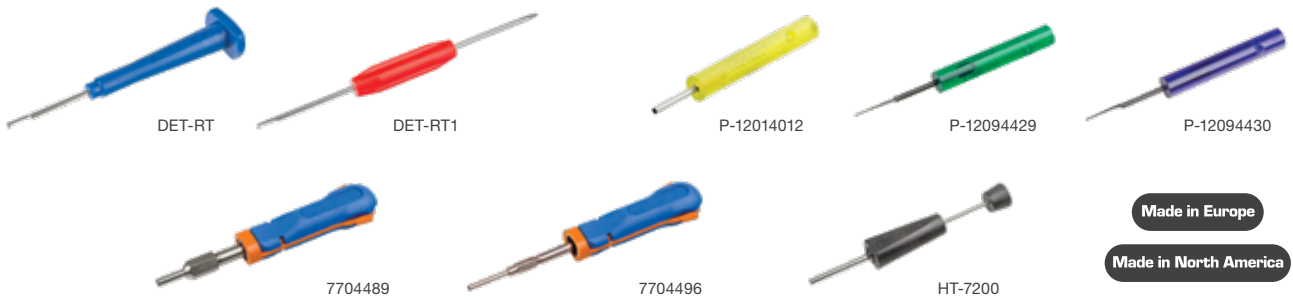
- Removes contact from connector without damage to the wire, insulation, connector seals, or connector body.
- Simplifies contact removal and field service.
- Compact and easy to use.

Made in North America



Contact Removal Tools – TE DEUTSCH

Part No.	Colour	Contact Size (TE DEUTSCH)	Wire Gauge Size (AWG)	Notes
114009	White	4	6	
114008	Green	8	10, 8	
0411-353-0805	Green	8	10, 8	Extended
114010	Yellow	12	12	
0411-337-1205	Orange	12	14, 12	Extra Thin Wall (E-Seal)
0411-291-1405	Green	16	16, 14	
0411-310-1605	Light Blue	16	18, 16	Reduced wire seal
0411-204-1605	Dark Blue	16	18, 16	
0411-336-1605	Blue	16	20, 16	Extra Thin Wall (E-Seal)
0411-240-2005	Red	20	22, 16	

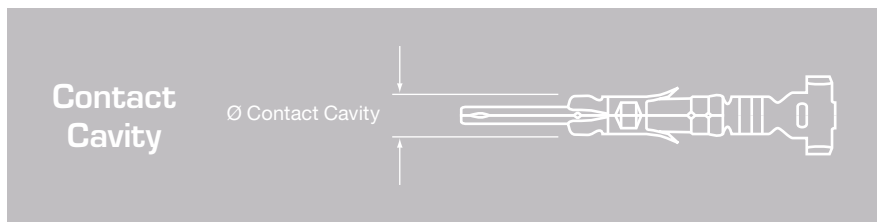


Made in Europe

Made in North America

Contact Removal Tools – Generic

Part No.	Description
DET-RT	Multi-use Hook Tool
DET-RT1	Multi-use hook tool & flat-head blade
P-12014012	Weather-Pack Pin Extraction Tool
P-12094429	Metri-Pack Removal Tool – GT150, GT280, 150, 280, 630 Pull-to-Seat
P-12094430	Metri-Pack Removal Tool – 280, 480, 630, 800 Series Pin Tangless
7704489	Ø Contact Cavity 5.2mm
7704496	Ø Contact Cavity 3.3mm
HT-7200	Ø Contact Cavity 2.9mm



Contact Removal Tools – Heavy-duty

	Size (AWG)				
	8	12	14	16	20
D08	D12	D14	D16	D20	
D2683	Removal tool set including multi-use hook tool & flat-head blade. Removal tool for sizes 4, 8, 12, 14, 16, 20				





HDT-48-00



D2682



DET12

- A wide range of crimping tools to suit popular terminals and connectors.
- Tight, complete crimp with minimal effort.
- HDT-48-00 crimps a wide range of contact sizes with no need to change out dies or locators.
- D2682 features fine blanked, high carbon steel dies.



Double hinged for parallel crimping



HT-4220



Double hinged for parallel crimping



HT-4300



Double hinged for parallel crimping



HT-4301



HT-4560



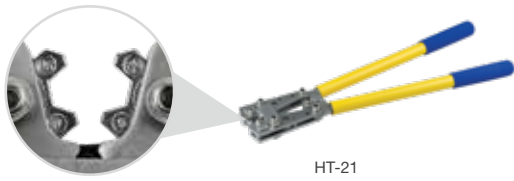
D7000

D7000 6 Removable Dies

Die 1 14, 12AWG	Die 2 10, 12AWG
Die 3 18, 16, 14AWG	Die 4 20, 18, 16AWG
Die 5 20, 18-16AWG	Die 6 16, 14, 12AWG

Crimping Tools – Stamped & Formed (F-Crimp) Contacts

Part No.	Description	Crimp Range (mm ²)
HT-4220	Parallel crimping	0.2–0.3, 0.3–0.5, 0.5–0.8, 0.8–1.3, 1.3–2.0
HT-4300	Parallel crimping	0.35, 0.5–0.8, 1.0–2.0, 3.0
HT-4301	Parallel crimping	0.35–0.5, 0.75, 1.0, 1.5
HT-4560	Ratcheting	0.5–1, 1.5–2.5, 4–6
D7000	Ratcheting crimp tool set with 6 removable dies	



HT-21



HT-22

Crimping Tools – Crimp Battery Terminals

Part No.	Description	Crimp Range (mm ²)
HT-21	Heavy-duty hex crimper. Rotating die with 6 sizes. 450mm long	6, 10, 16, 25, 35, 50
HT-22	Extra heavy-duty hex crimper. Rotating die with 7 sizes. 650mm long	25, 35, 50, 70, 95, 120, 150



DET48



HDT-04-08



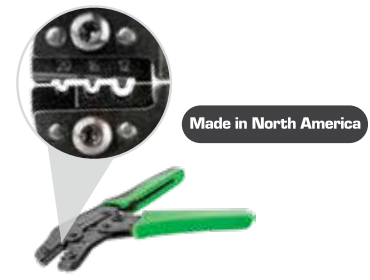
DET12, DET16, DET20



D2682



HDT-48-00



HDT-50-00

Crimping Tools – TE DEUTSCH Solid Contacts

Part No.	Description	Contact Size (TE DEUTSCH)	Notes
DET48	Two handed	8, 4	
HDT-04-08	Two handed	8, 4	Non-stocked item, lead times apply
DET12	Ratcheting	12	
DET16	Ratcheting	16	
DET20	Ratcheting	20	
D2682	Ratcheting	20, 16, 12	
HDT-48-00	Ratcheting	20, 16, 12	HDT-48-00 has a 90 day warranty
HDT-50-00	Ratcheting	20, 16, 12	



Cable & Tools





HT-4023



HT-4510

Crimping Tools – Cable Lugs

Part No.	Description	Crimp Range (mm ²)
HT-4023	 Ratcheting	0.3–2.5, 4–6, 10, 16
HT-4510	 Ratcheting	0.25–1.5, 2.5–4, 6–8, 10

AWG to mm²

American Wire Gauge (AWG)	Diameter (mm)	Nominal Area (mm ²)	American Wire Gauge (AWG)	Diameter (mm)	Nominal Area (mm ²)	American Wire Gauge (AWG)	Diameter (mm)	Nominal Area (mm ²)
4	5.19	21.14	12	2.05	3.31	20	0.81	0.52
6	4.11	13.29	14	1.63	2.08	22	0.65	0.33
8	3.26	8.36	16	1.29	1.31	24	0.51	0.20
10	2.59	5.26	18	1.02	0.82			

Part No.	Page	Part No.	Page	Part No.	Page	Part No.	Page	Part No.	Page
0		117693	50	200-00163	43	A		CONNKIT-USM2-PB	20
		117694	50	2045-052-00-CL1	32			CONNKIT-UV1100	35
0411-204-1605	114	117695	50	2070-053-00-CL1	32	AC-019	34	CONNKIT-UV450	35
0411-240-2005	114	117696	50	2070-3.75MOUNT	34	AMS	54	CONNKIT-UV450-VIDEO	34
0411-291-1405	114	117697	50	2070-6MOUNT	34			CONNKIT-UV700	35
0411-310-1605	114	117698	50			C		CONNKIT-UV800	35
0411-336-1605	114	117699	50	5					
0411-337-1205	114	117700	50			CMP0.50M	62	D	
0411-353-0805	114	118093	56	5004-001-2405	103	CMP100.0M	62		
0460-010-2031	101	118485-10-DTM	50	50127	77	CMP16.0M	62	D08	115
0460-202-1631	99	118485-20-DTM	50	50128	77	CMP25.0M	62	D12	115
0460-202-1631	100	118551	57	513-00144-001	35	CMP4.0M	62	D14	115
0460-202-1631	103	118620	57	513-00144-005	35	CMP400.0M	62	D16	115
0460-202-2031	101	119890	18	599-00010-001	94	CONNKIT-3X12	108	D20	115
0460-204-08141	103	119970	95	599-00010-002	94	CONNKIT-3X4	108	D2682	117
0460-204-12141	103	119971	95			CONNKIT-3X8	108	D2683	115
0462-005-2031	101	12-0001	65	6		CONNKIT-4	106	D7000	116
0462-201-1631	99	12-0030	66			CONNKIT-4JUNCTION	106	DET12	75
0462-201-1631	100	12-0050	66	6000-0001-04	23	CONNKIT-6	107	DET12	117
0462-201-1631	103	12-0070	66	6060-0000-00	19	CONNKIT-6JUNCTION	107	DET16	75
0462-201-2031	101	12-0120	65	610-00029	25	CONNKIT-BBJUNCTION	99	DET16	117
0462-203-08141	103	12-0180	65	610-00030	23	CONNKIT-BDTM	101	DET20	15
0462-203-12141	103	12-0300	65	610-00031	23	CONNKIT-CAPTUM	83	DET20	117
0K90-2280-00	24	120727	27	610-00033	22	CONNKIT-CCMODULE	25	DET48	117
0K90-2286-00	20	121701	27	610-00034	26	CONNKIT-DIAGSN2	20	DET-RT	15
0K90-3462-00	20	122116	19	610-00035	26	CONNKIT-DIAGSN2REM	20	DET-RT	75
0L20-1600-22	112	122370	34	610-00041	23	CONNKIT-DIAGUSM2	20	DET-RT	115
		122386	34	610-00046	27	CONNKIT-DIAGUSM2REM	20	DET-RT1	115
1		122387	34	610-00052	93	CONNKIT-DUALA2D	24	DT04-3P-E008	99
		122448	34	610-00060-050	33	CONNKIT-DUALA2D	41	DT04-3P-P006	99
100944	54	122450	34	610-00060-080	33	CONNKIT-ENFOIV	55	DT04-3P-P007	99
101-00296-016	38	122451	34	610-00060-110	33	CONNKIT-HCPDM	27	DT04-4P-5V	64
101-00296-016	41	122829	34	610-00060-120	33	CONNKIT-HDPDM	27	DT06-2S-EP06	103
102161	63	122829	35	610-00061-004	39	CONNKIT-IO	24	DT06-3S-C015	99
102162	63	122883	34	610-00061-005	39	CONNKIT-IO	27	DT06-3S-E008	99
102219	50	122883	35	610-00061-008	39	CONNKIT-IO	57	DT06-3S-EP11	99
102606	63	122965	34	610-00061-012	39	CONNKIT-IO	93	DT06-3S-P006	99
102714A	64	123340-01	50	610-00061-016	39	CONNKIT-IO-PB	24	DT06-4S-EP06	103
103349	112	123340-03	50	610-00061-080	35	CONNKIT-IO-PB	27	DTLED-12V-1	109
103349-302	112	123340-04	50	610-00081-004-IND	42	CONNKIT-IO-PB	57	DTLED-12V-3	109
103349B	112	123340-05	50	610-00081-006-IND	42	CONNKIT-IO-PB	93	DTLED-12V-4	109
103349R	112	123340-06	50	610-00081-008-IND	42	CONNKIT-ITL-DTM	49	DTLED-24V-1	109
1060-20-0144	101			610-00092-002	18	CONNKIT-ITL-DTM	64	DTLED-24V-3	109
1062-16-0144	99	2		610-ANT-058	83	CONNKIT-LEGEND	41	DTLED-24V-4	109
1062-16-0144	100			629-00071	35	CONNKIT-PDM	27	DTM04-2P-P006	101
1062-20-0144	101	200-00093-001	50	6419-0102-00	83	CONNKIT-PDM-PB	27	DTM04-2P-P007	101
106743	49	200-00093-001	63	6419-0160-00	83	CONNKIT-PROP	15	DTM06-2S-E005	101
106877	49	200-00094-001	50	6420-0100-00	83	CONNKIT-RDTM	101	DTM06-2S-EP10	101
107584	49	200-00094-001	63	6730-0000-00	19	CONNKIT-RESISTOR	99	DTM06-2S-P006	101
107585	49	200-00154-000	43			CONNKIT-SMARTTOUCH	38	DTM2-J1939-KIT	101
108661	55	200-00154-001	43	7		CONNKIT-SN2	20		
112124	49	200-00154-002	43			CONNKIT-SN2-PB	20	E	
113557	63	200-00154-003	43	740114	63	CONNKIT-TEMPSENSOR	25		
114008	114	200-00154-004	43	7704489	115	CONNKIT-TEMPSENSOR	64	ESM006	75
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