

# POWERKEY PRO

1600-SI  
2200-SI  
2300-SI  
2400-SI  
2500-SI  
2600-SI

AUTOMOTIVE - MARINE



CANopen  
J1939



DESIGN YOUR OWN  
PROTOTYPE ONLINE

## FLEXIBLE - SMART - RUGGED

PKP-2200-SI, PKP-2300-SI, PKP-2400-SI, PKP-2500-SI and PKP-2600-SI, are compact keypads based on CAN protocol. They come equipped with keys with interchangeable 15 mm inserts. The keypads are water and dust resistant, and can be installed both inside and outside the cockpit. RGB led lights and the ease with which icons can be switched in and out make it possible for the user to customize each key in a wide range of variations.



Icons shown on this keypad are for visual demonstration only.

## SOFTWARE FEATURES

**CAN and RS485 Keypad Addresses** – Assign any valid CAN and RS485 address to the keypad. Communicate on either BUS simultaneously.

**J1939 Address Claim Transmission** – Keypads no longer have to be pre-programmed to a specific address. This enables customers that work in applications in the field without access to a GUI to use any replacement keypad on-hand. The keypad can be configured to automatically announce its address and accept a new address assignment as appropriate.

**Event Status Transmission** – The keypad can send messages to the BUS indicating a button press or a button release event has occurred. This confirmation allows digital systems to have the same input acknowledgements as that of the latching position of a mechanical switch.

**Periodic Status Transmission** – The keypad sends a continuous broadcast of messages indicating the press or release status of each button at that instance. The frequency of these messages can be adjusted in a wide range.

**Online Set-up** – An online set-up system makes it possible to select and design your own prototype, then order it directly on [blinkmarine.com](http://blinkmarine.com).

**Periodic Heartbeat** – The keypad sends a continuous broadcast of messages indicating it is functioning correctly. The frequency of these messages can be adjusted in a wide range.

**CANopen Communications Protocol** – Fully compliant with Device Profile 401d.

## HARDWARE FEATURES

**IP67/IP69K waterproof rating** – Guaranteed to be dust tight and sealed against water immersion to a depth of 1 meter for up to 1 hour. The IP69K rating provides protection against high pressure water at high temperature spray downs.

**UV Protected** – UVB 400 hours: Keypad is highly resistant to deterioration caused by exposure to sunlight.

**Customizable inserts** – The replacement system for individual inserts makes modifying the keypad layout simpler and more economical. Hundreds of different stock inserts can be viewed at [blinkmarine.com](http://blinkmarine.com), and it is possible to order customized ones.

**A membrane compensation valve** which self compensate the internal pressure within the keypad, alleviating mechanical stresses that can be produced by shifts in external temperatures.

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**The keypad's symmetrical design** and spacing between keys makes it easier to install multiple keypads alongside one another.

## STANDARD FEATURES

- Reconfigurable keys
- Relegendable buttons
- LED state & status configurable
- Vertical or horizontal mount
- LED backlit icons
- Multicolor indicator rings
- Laser etched icons
- ON/OFF, momentary, toggle & scroll
- Hundreds of stock icons to choose from

## SOFTWARE FEATURES

- Change CAN or RS485 keypad addresses independently
- Periodic status transmission
- Heartbeat
- Event status transmission
- LED acknowledgement
- Address claim transmission
- RS485, CANopen and J1939

## OTHER BENEFITS

- Programmer's manual available to help support
- plug-and-play reconfigurability
- Available in fixed legends

## SPECIFICATIONS FOR STANDARD KEYPADS



PKP-2200-SI



PKP-2300-SI



PKP-2400-SI



PKP-2500-SI

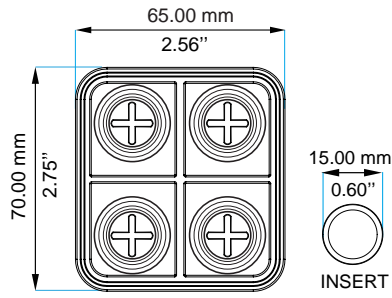


PKP-2600-SI

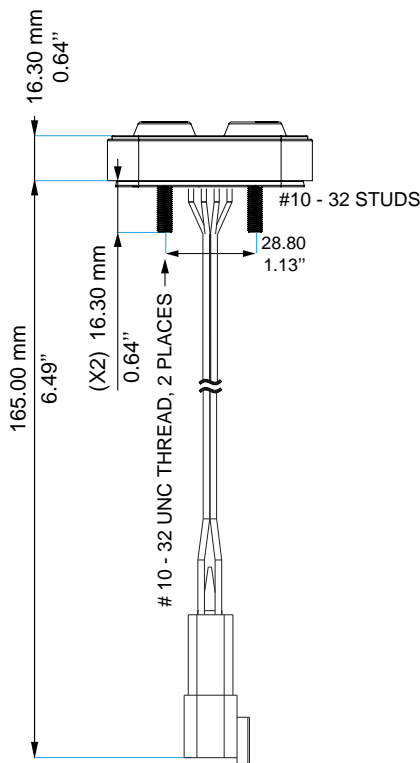
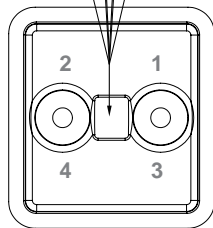
ELECTRICAL	PKP-2200-SI	PKP-2300-SI	PKP-2400-SI	PKP-2500-SI	PKP-2600-SI
Supply Voltage	12-24Vdc Nominal (8-32VDC)				
Standby Current	<50 mA				
Communication BUS	RS485, CANopen, J1939				

MECHANICAL					
Connector	Deutsch DT04-4P				
Switch Life	3 million operations				
Mounting Studs	# 10-32 Steel				
Keypad	Silicone rubber with polyurethane hardcoat				
PC Board	1,6mm thick, Nema Grade FR-4, double clad with 1oz copper				
Operating Temperature	-40°C to +70°C				
Storage Temperature	-40°C to +85°C				
Thermal Shock	-40°C to +85°C According to table 2 of ISO16750-4				
Humidity	0 to 98% (no condensation)				
UV Protection	UVB 400 hours				
Salt Spray	Per ASTM B117				
Chemical Resistance	Deet, Engine Cleaner, Isopropyl Alcohol, Suntan Lotion, Multi-Purpose Cleaner, Orange Citrus Cleaner, Muriatic Acid				
Ingress Protection Rating	IP67/IP69K				
Weight*	110 gr	140 gr	170 gr	196 gr	220 gr

PKP-2200-SI



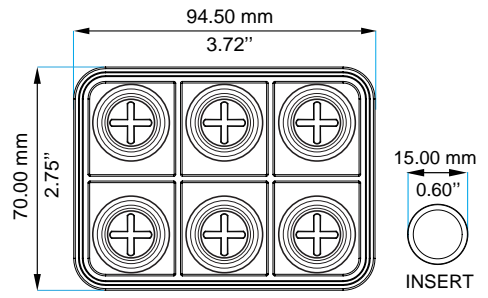
GREEN= TxRx-(RS485)      ORANGE= TxRx+(RS485)  
 BLACK=GROUND      WHITE=CAN HIGH  
 RED=POWER      BLUE=CAN LOW



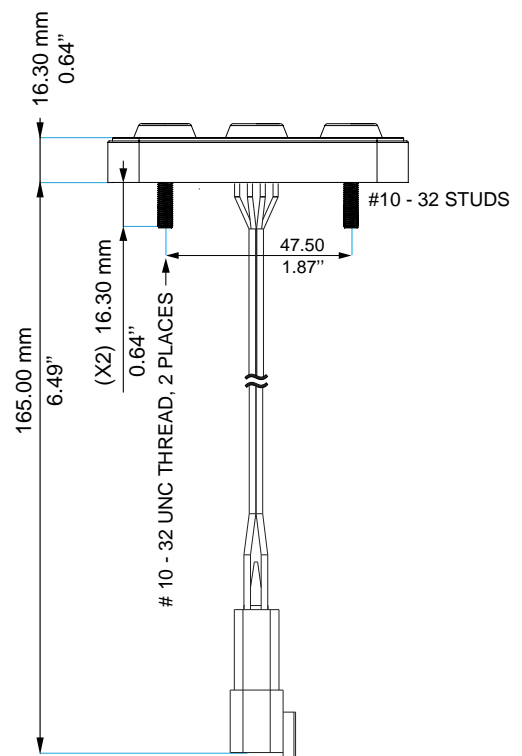
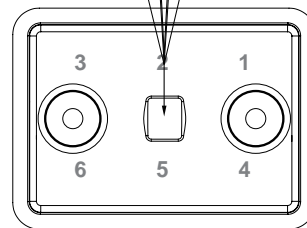
MOUNTING NOTES:  
 Nuts thread: #10-32  
 Maximum torque: 0,8Nm

Note: all connection wires are the same length

PKP-2300-SI



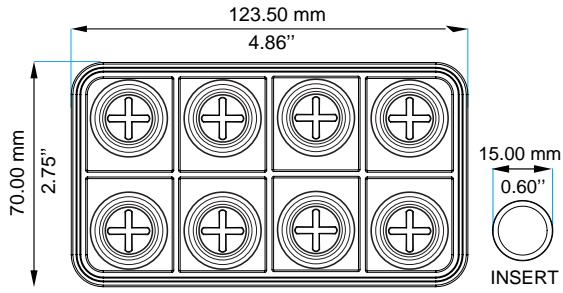
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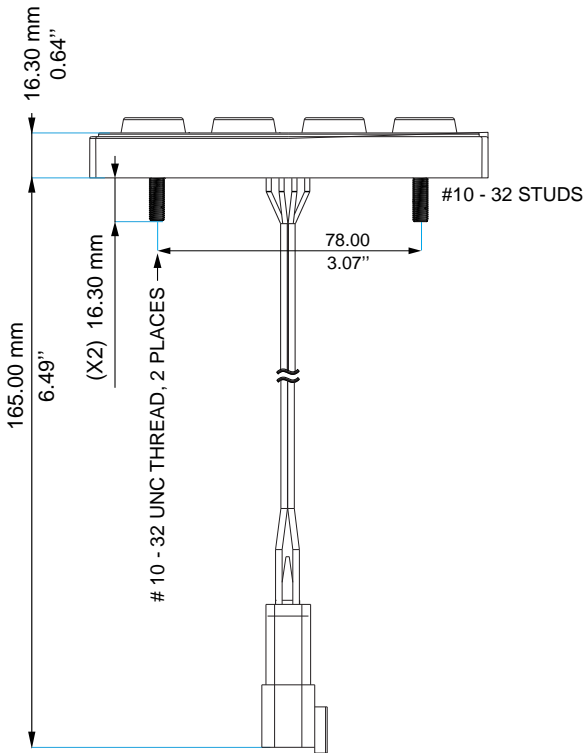
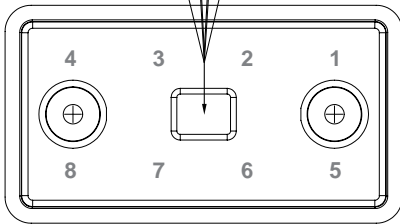
MOUNTING NOTES:  
 Nuts thread: #10-32  
 Maximum torque: 0,8Nm

Note: all connection wires are the same length

PKP-2400-SI



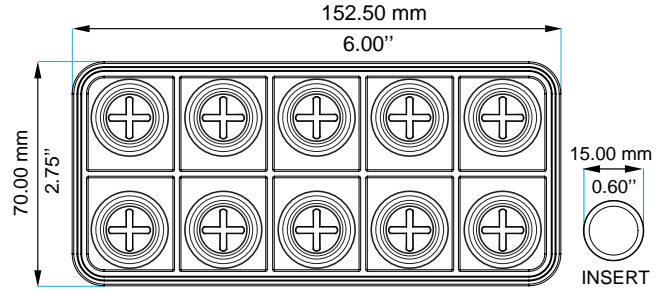
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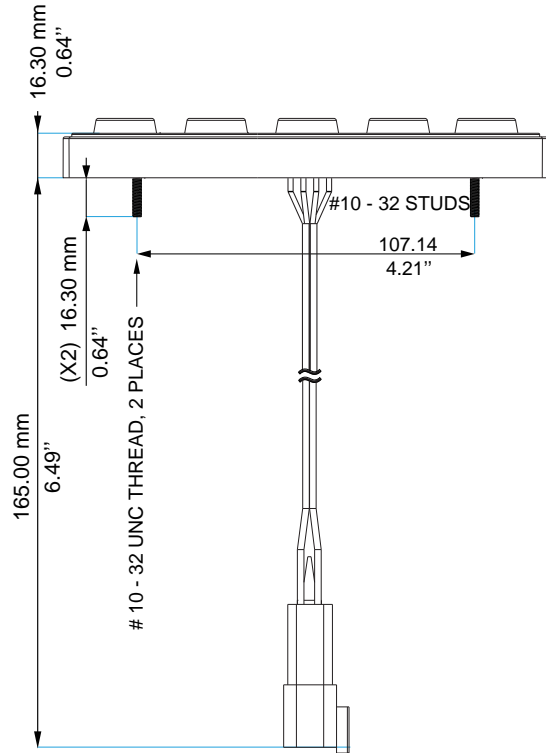
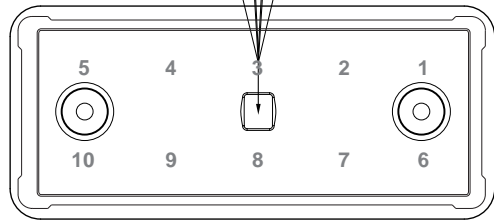
MOUNTING NOTES:  
 Nuts thread: #10-32  
 Maximum torque: 0,8Nm

Note: all connection wires are the same length

PKP-2500-SI



GREEN= TxRx-(RS485)      ORANGE= TxRx+(RS485)  
 BLACK=GROUND          WHITE=CAN HIGH  
 RED=POWER              BLUE=CAN LOW



MOUNTING NOTES:  
 Nuts thread: #10-32  
 Maximum torque: 0,8Nm

Note: all connection wires are the same length



**blink**  
MARINE

Blink S.r.l.

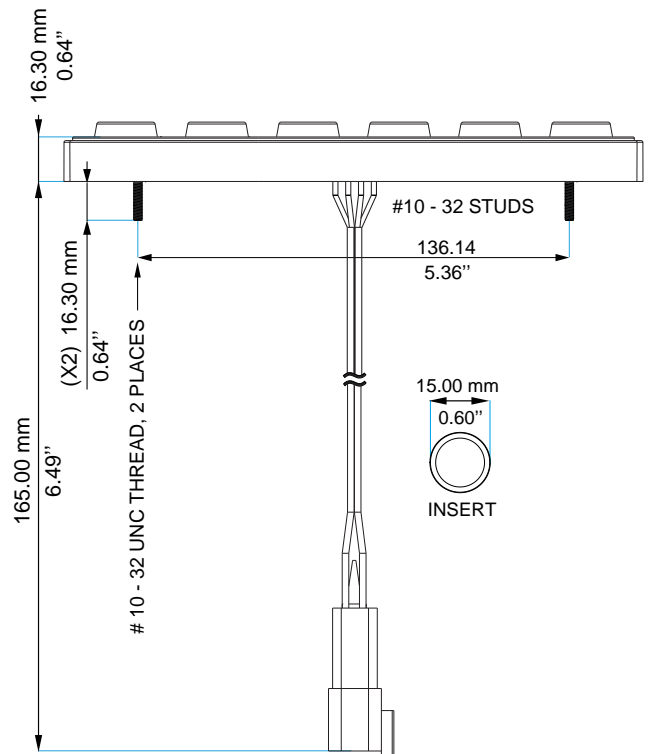
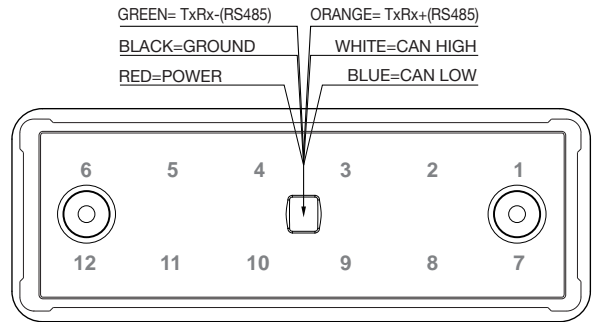
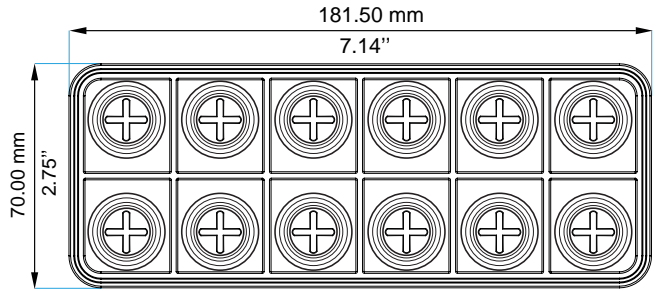
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PKP-2600-SI



**MOUNTING NOTES:**  
Nuts thread: #10-32  
Maximum torque: 0,8Nm

Note: all connection wires are the same length



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# PKP-1600-SI



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PROTOTYPE ONLINE



CANopen  
J1939



## FLEXIBLE - SMART - RUGGED

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**Periodic Heartbeat** – The keypad sends a continuous broadcast of messages indicating it is functioning correctly. The frequency of these messages can be adjusted in a wide range.

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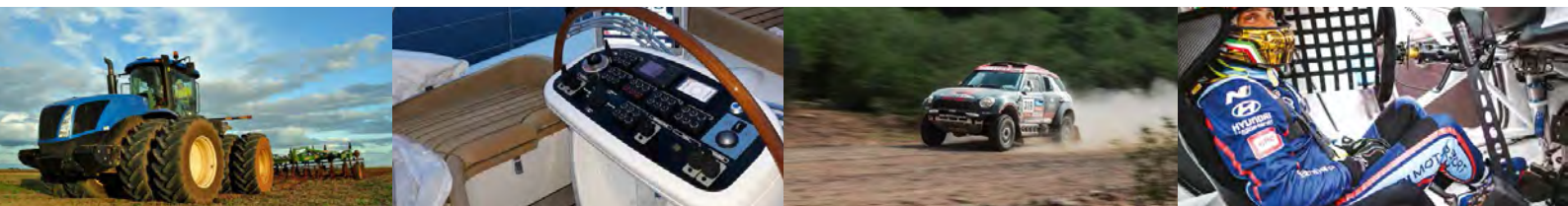
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**A membrane compensation valve** which self compensate the internal pressure within the keypad, alleviating mechanical stresses that can be produced by shifts in external temperatures.

**The keypad's symmetrical design** and spacing between keys makes it easier to install multiple keypads alongside one another.

**The rubber is molded on the backside** in such a way that it acts as a gasket, blocking liquids and preventing them from leaking in through the attachment holes located on the support upon which the keypad is installed.



## STANDARD FEATURES

- Reconfigurable keys
- Relegendable buttons
- LED state & status configurable
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## OTHER BENEFITS

- Programmer's manual available.
- Plug-and-play reconfigurability

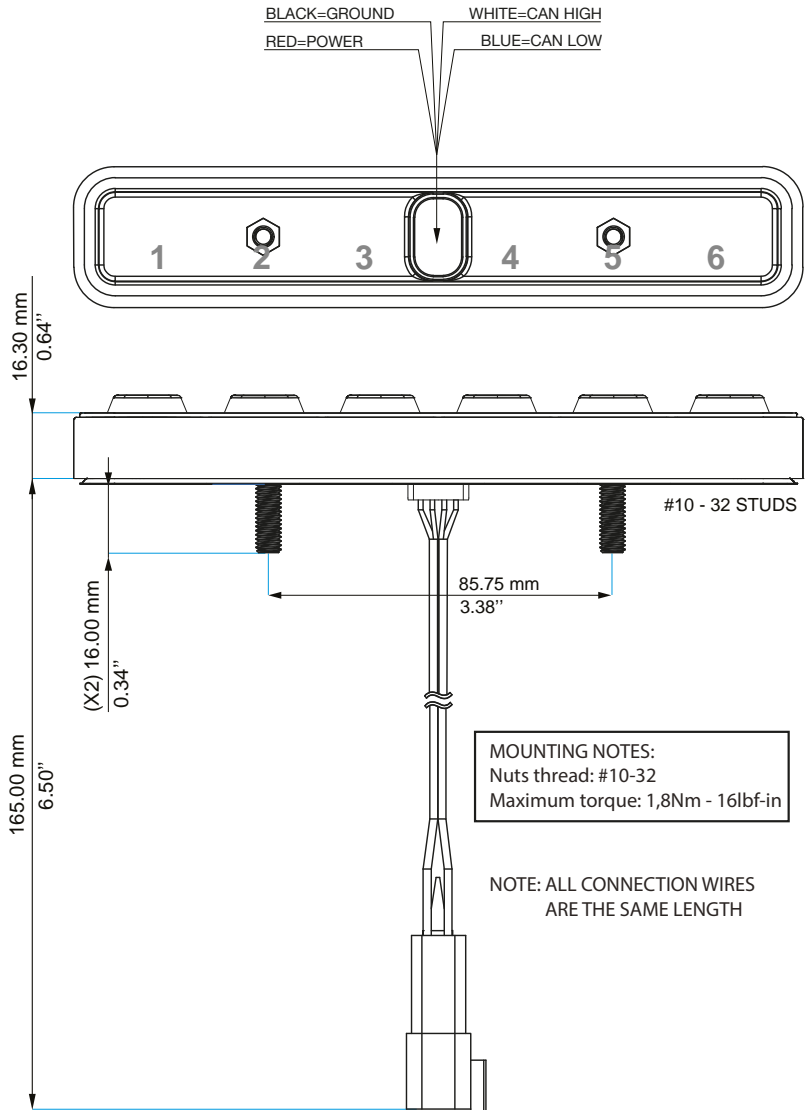
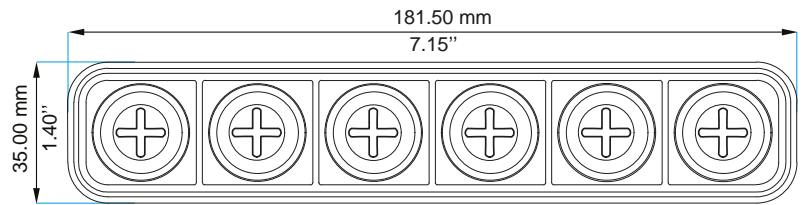
## SPECIFICATIONS FOR STANDARD KEYPADS

### ELECTRICAL

Supply Voltage	12-24Vdc Nominal (8-32VDC)
Standby Current	<50 mA
Communication BUS	CANopen, J1939
MTBF	240512 hours (in accordance with MIL-HDBK-217 - operating environment ground mobile)

### MECHANICAL

Connector	Deutsch DT04-4P
Switch Life	3 million operations
Mounting Studs	#10-32 Steel
Keypad	Silicone rubber with polyurethane hardcoat
PC Board	1,6mm thick, Nema Grade FR-4, double clad with 1oz copper
Operating Temperature	-40°C to +70°C
Storage Temperature	-40°C to +85°C
Thermal Shock	-40°C to +85°C According to table 2 of ISO16750-4
UV Protection	UVB 400 hours
Salt Spray	Per ASTM B117
Chemical Resistance	Deet, Engine Cleaner, Isopropyl Alcohol, Suntan Lotion, Multi-Purpose Cleaner, Orange Citrus Cleaner, Muriatic Acid
Ingress protection Rating	IP67/IP69K
Weight	130 gr (Inserts excluded)



**blink**

M A R I N E

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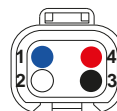
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## CONNECTOR STANDARD PINOUT



WIRE SIDE

PIN	COLOUR	FUNCTION
1	Blue	CAN L
2	White	CAN H
3	Black	Negative battery
4	Red	Vbatt. (12-24V)

The one illustrated above is the standard pinout; however, some keypads may be supplied with alternative pinouts or connectors.