



Power Distribution Panel

8 Selectable Functions per Channel

7 Selectable Current Settings per Channel

Fully protected power distribution

Fully electronic with status LEDs and back illumination

CK-PDP-08

CK-PDP-08-R

CK-PDP-16

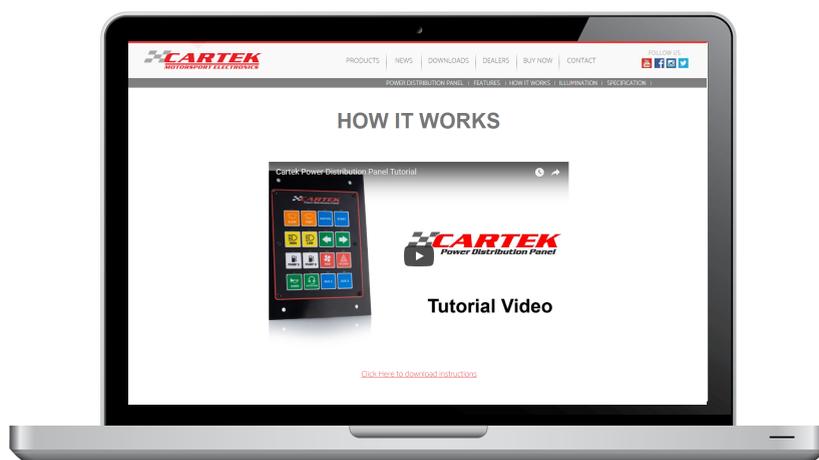
CK-PDP-16-R

USER GUIDE and INSTRUCTIONS

CONTENTS

Mounting	Page 1
Specification	Page 2-3
Pin Out Diagram/Description	Page 4-7
System Overview	Page 8
Error Detection + Over current	Page 9
Outputs and Inputs	Page 10
Battery Isolator Connection	Page 11
Wiring	Page 12
Wiper Motor Control	Page 13
Wiring Options	Page 14
Function Choice	Page 15
Special Functions	Page 16
Channel Amperage Adjustment	Page 17-18
Channel Function Adjustment	Page 19
User Configuration Notes	Page 20-21

VIDEO TUTORIAL



For a step by step guide to program the Power Distribution Panel please go to:

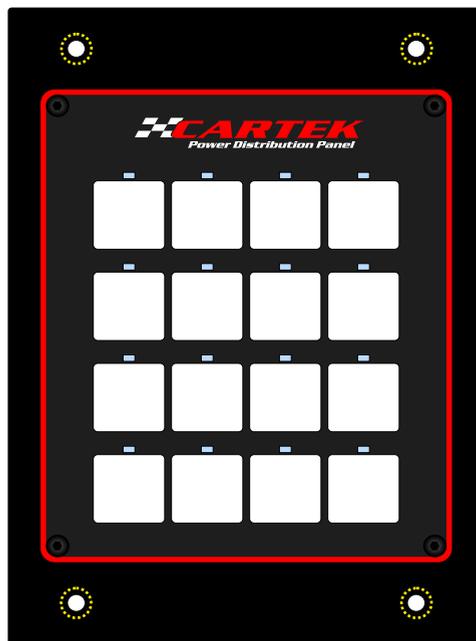
www.CARTEKMOTORSPORT.com

MOUNTING

The Power Distribution Panel should either be mounted away from any heat sources (such as exhaust tunnel) or should have sufficient ventilation to allow the Power Distribution Panel to dissipate any heat generated.

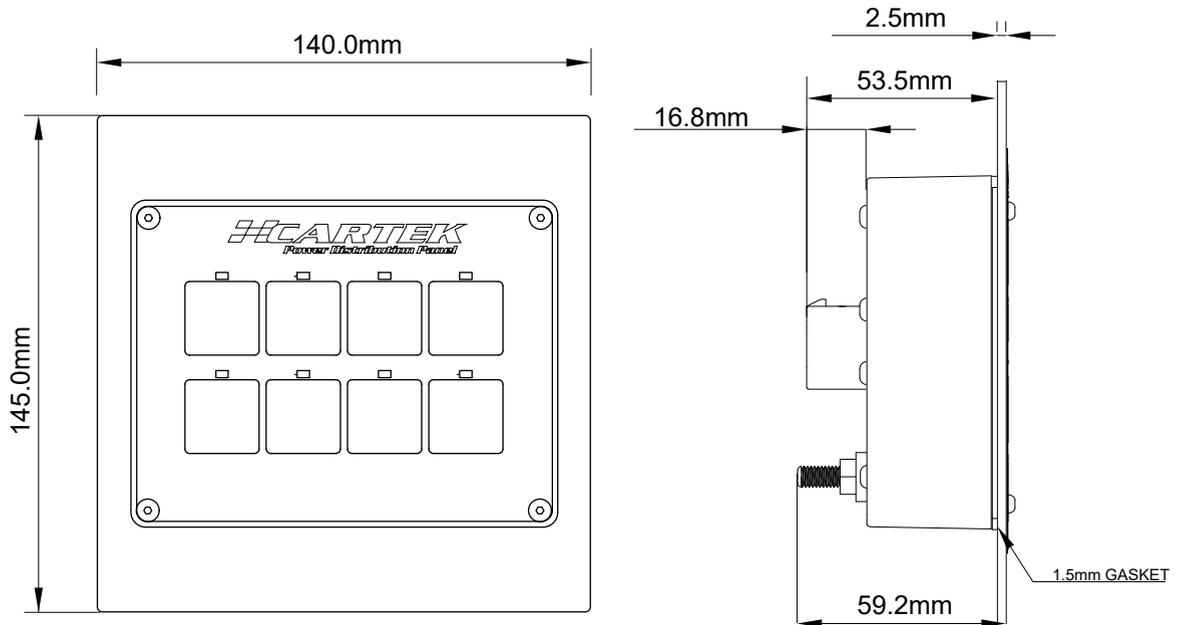
If the Power Distribution gets too hot from its environment then it will shut down. If the Power Distribution Panel is mounted on top of the exhaust tunnel then make sure it is well insulated from the heat.

If required, additional holes can be drilled through the upper and lower areas of the Front Panel for installing additional switches, e.g. Battery Isolator or Fire Extinguisher pushbuttons. Alignment holes have been included on the rear of the Power Distribution Panel to assist with this. **Do not drill into the metal enclosure.**



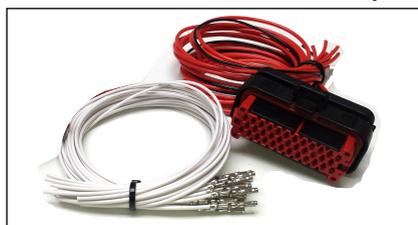
Alignment holes on rear of Power Distribution Panel

8 CHANNEL SPECIFICATION



Part No:	CK-PDP-08 / CK-PDP-08-R
Size:	L = 145mm, W = 140mm.
Weight:	450g.
Battery positive terminal:	M6 stud.
Mating Connectors:	AMPSEAL 776164-1 (Black)
Total Output Current	80A Continuous
Outputs	8
Switch Inputs/Outputs	8
ECU Inputs	8
Battery Isolator XR Ignition Inputs	1
Dedicated Wiper Park Position Input	1
Operating temperature:	-10°C - +85°C.

Connector options from CARTEK for PDP-08

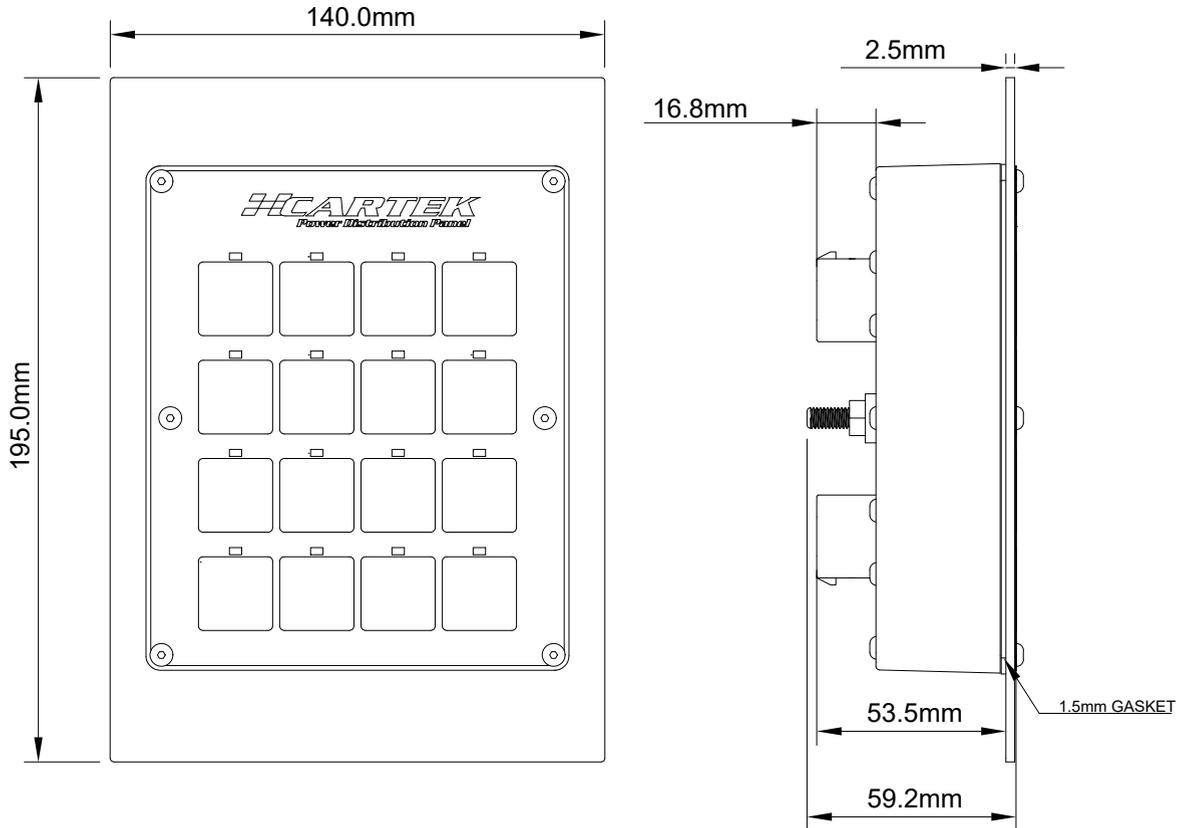


CK-PDP-CA
Part assembled connectors with wires. No crimping required.



CK-PDP-LD
Connectors supplied with loose crimps. Professional crimp tool is required.

16 CHANNEL SPECIFICATION



Part No:	CK-PDP-16 / CK-PDP-16-R
Size:	L = 195mm, W = 140mm.
Weight:	600g.
Battery positive terminal:	M6 stud.
Mating Connectors:	AMPSEAL 776164-1 (Black) 776164-5 (Blue)
Total Output Current	160A Continuous
Outputs	16
Switch Inputs/Outputs	16
ECU Inputs	16
Battery Isolator XR Ignition Inputs	2
Dedicated Wiper Park Position Input	1
Operating temperature:	-10°C - +85°C.

Connector options from CARTEK for PDP-16

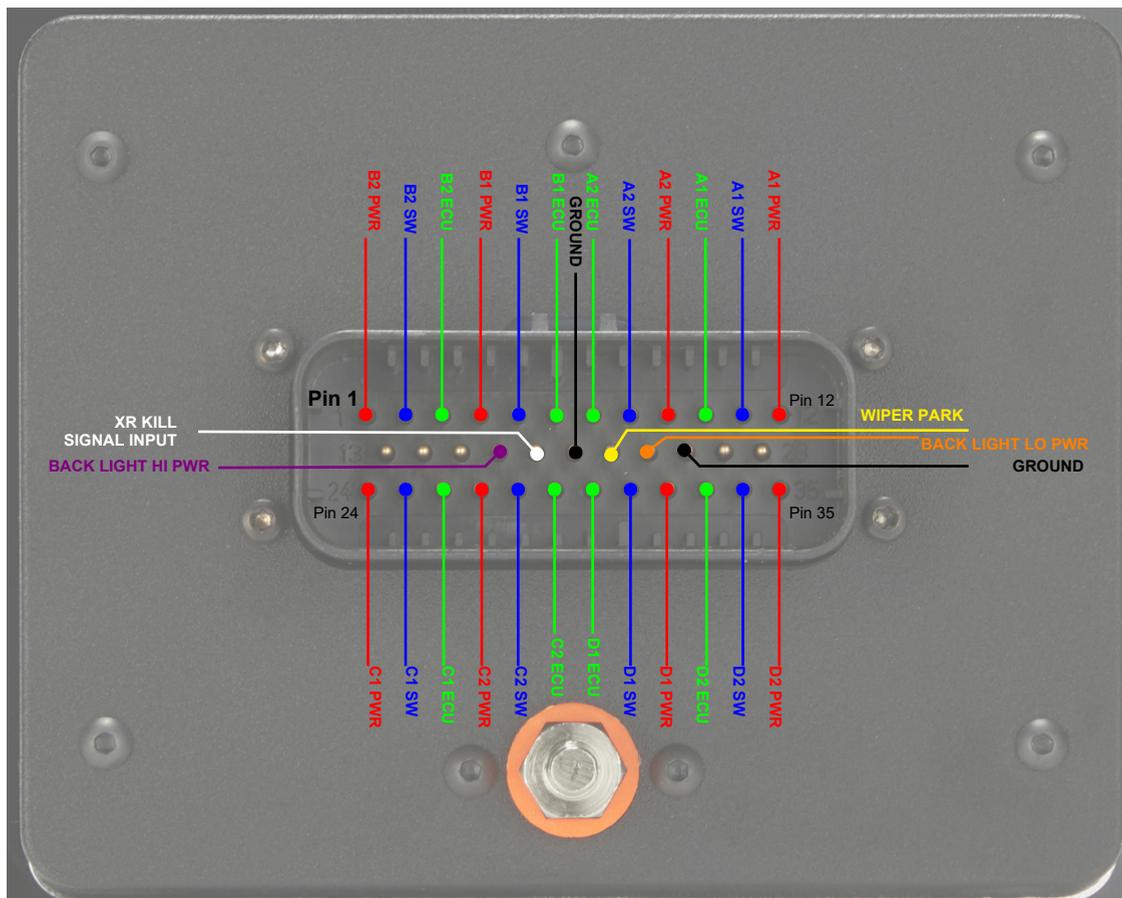


CK-PDP-CC
Part assembled connectors
with wires. No crimping required.



CK-PDP-LF
Connectors supplied with loose crimps.
Professional crimp tool is required.

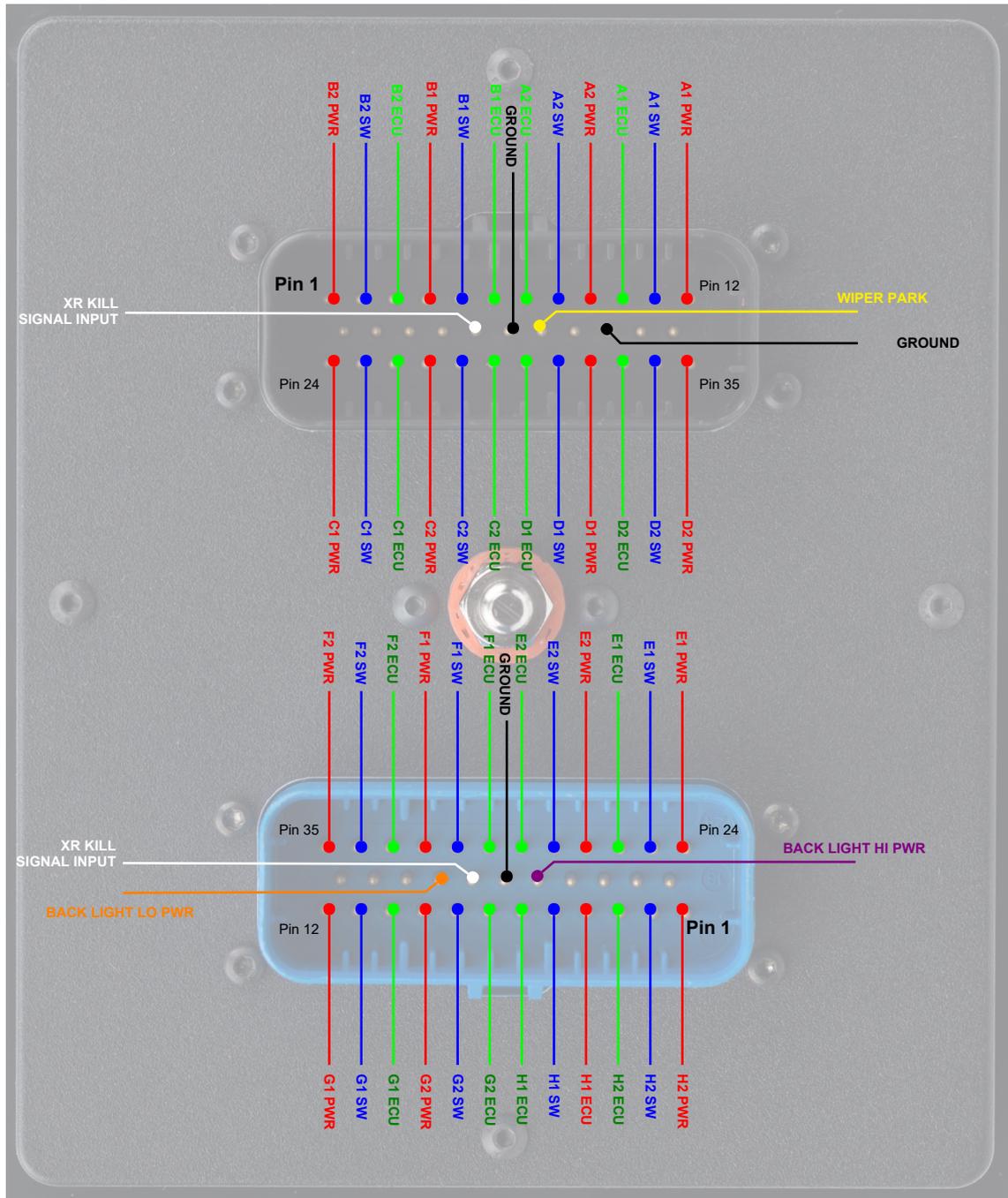
8 CHANNEL PIN OUT DIAGRAM



8 CHANNEL PIN OUT DESCRIPTION

Pin no:	Connector A (BLACK)
1	Channel B2 Power Output
2	Channel B2 Switch Input/Output
3	Channel B2 ECU Input
4	Channel B1 Power Output
5	Channel B1 Switch Input/Output
6	Channel B1 ECU Input
7	Channel A2 ECU Input
8	Channel A2 Switch Input/Output
9	Channel A2 Power Output
10	Channel A1 ECU Input
11	Channel A1 Switch Input/Output
12	Channel A1 Power Output
13	N/C
14	N/C
15	N/C
16	Back-light (High) Power Input
17	Battery Isolator XR Ignition Signal Input
18	Ground
19	Wiper Park Position Input
20	Back-light (Low) Power Input
21	Ground
22	N/C
23	N/C
24	Channel C1 Power Output
25	Channel C1 Switch Input/Output
26	Channel C1 ECU Input
27	Channel C2 Power Output
28	Channel C2 Switch Input/Output
29	Channel C2 ECU Input
30	Channel D1 ECU Input
31	Channel D1 Switch Input/Output
32	Channel D1 Power Output
33	Channel D2 ECU Input
34	Channel D2 Switch Input/Output
35	Channel D2 Power Output

16 CHANNEL PIN OUT DIAGRAM





16 CHANNEL PIN OUT DESCRIPTION

Pin no:	Connector A (BLACK)	Pin no:	Connector B (BLUE)
1	Channel B2 Power Output	35	Channel F2 Power Output
2	Channel B2 Switch Input/Output	34	Channel F2 Switch Input/Output
3	Channel B2 ECU Input	33	Channel F2 ECU Input
4	Channel B1 Power Output	32	Channel F1 Power Output
5	Channel B1 Switch Input/Output	31	Channel F1 Switch Input/Output
6	Channel B1 ECU Input	30	Channel F1 ECU Input
7	Channel A2 ECU Input	29	Channel E2 ECU Input
8	Channel A2 Switch Input/Output	28	Channel E2 Switch Input/Output
9	Channel A2 Power Output	27	Channel E2 Power Output
10	Channel A1 ECU Input	26	Channel E1 ECU Input
11	Channel A1 Switch Input/Output	25	Channel E1 Switch Input/Output
12	Channel A1 Power Output	24	Channel E1 Power Output
13	N/C	23	N/C
14	N/C	22	N/C
15	N/C	21	N/C
16	N/C	20	Back-light (Low) Power Input
17	Battery Isolator XR Ignition Signal Input	19	XR Signal Input
18	Ground	18	Ground
19	Wiper Park Position Input	17	Back-light (Hi) Power Input
20	N/C	16	N/C
21	Ground	15	N/C
22	N/C	14	N/C
23	N/C	13	N/C
24	Channel C1 Power Output	12	Channel G1 Power Output
25	Channel C1 Switch Input/Output	11	Channel G1 Switch Input/Output
26	Channel C1 ECU Input	10	Channel G1 ECU Input
27	Channel C2 Power Output	9	Channel G2 Power Output
28	Channel C2 Switch Input/Output	8	Channel G2 Switch Input/Output
29	Channel C2 ECU Input	7	Channel G2 ECU Input
30	Channel D1 ECU Input	6	Channel H1 ECU Input
31	Channel D1 Switch Input/Output	5	Channel H1 Switch Input/Output
32	Channel D1 Power Output	4	Channel H1 Power Output
33	Channel D2 ECU Input	3	Channel H2 ECU Input
34	Channel D2 Switch Input/Output	2	Channel H2 Switch Input/Output
35	Channel D2 Power Output	1	Channel H2 Power Output

SYSTEM OVERVIEW

The CARTEK Power Distribution Panel is a fully integrated, fully electronic solution to power distribution in race and rally cars. Designed to replace Fuses, Relays and Switches as well as a variety of control systems, these units therefore greatly simplify the wiring, reducing build time, saving weight and maximising reliability.

HOW IT WORKS

The Power Distribution Panel takes +12V power directly from the Battery then distributes this to all of the electrical systems around the car. All power outputs from the Power Distribution Panel are controlled from the front panel Pushbuttons and/or from external switches and inputs. All Power Outputs are fully protected with 7 selectable current settings thereby completely removing the need for fuses or circuit breakers. The Function of each Channel is also selectable from a choice of 8 different Functions.

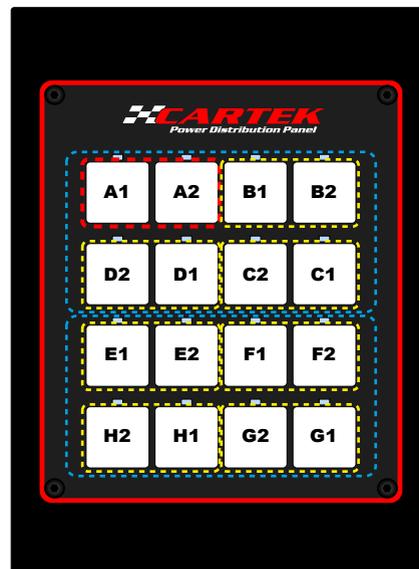
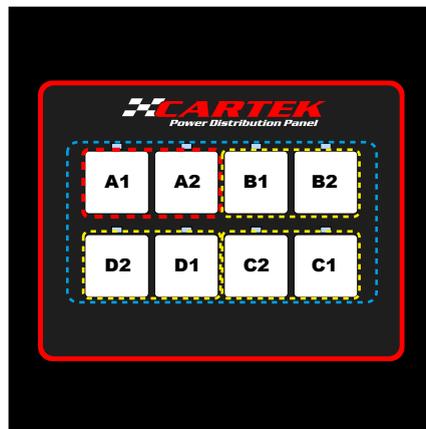
OPERATION

After configuring the Power Distribution Panel each Channel is operated by pressing the relevant front panel Pushbutton or by external signals such as from ECU or separate external switches (See details later).

Above each pushbutton is a Status LED :

No LED = Channel OFF. - LED on = Channel ON. - LED flashing = Over-current or short-circuit detected.

On power up all channels perform a system reset which is indicated by all status LEDs flashing twice.



Internally, the Power Distribution Panel is constructed using independent Power Control Modules where each Module controls 2 Channels. Each Power Distribution Panel contains 7 Full Power Modules (3 for PDP-8), which can handle any current from 5A to 30A and 1 Low Current Module which has a fixed current setting of 7.5A per Channel. The Low Current Module also contains the necessary functionality and electronics for controlling a 1 or 2 speed windscreen wiper motor and is located in position A1/A2.

Each Channel on each Module can be set to any 1 of 8 selectable functions. However, when both Channels on a Module are set to the same function then extra functionality becomes available such as 'toggling' between Channels or synchronised flashing. Please refer to the Function descriptions later for more detailed information.

ERROR DETECTION + OVER CURRENT

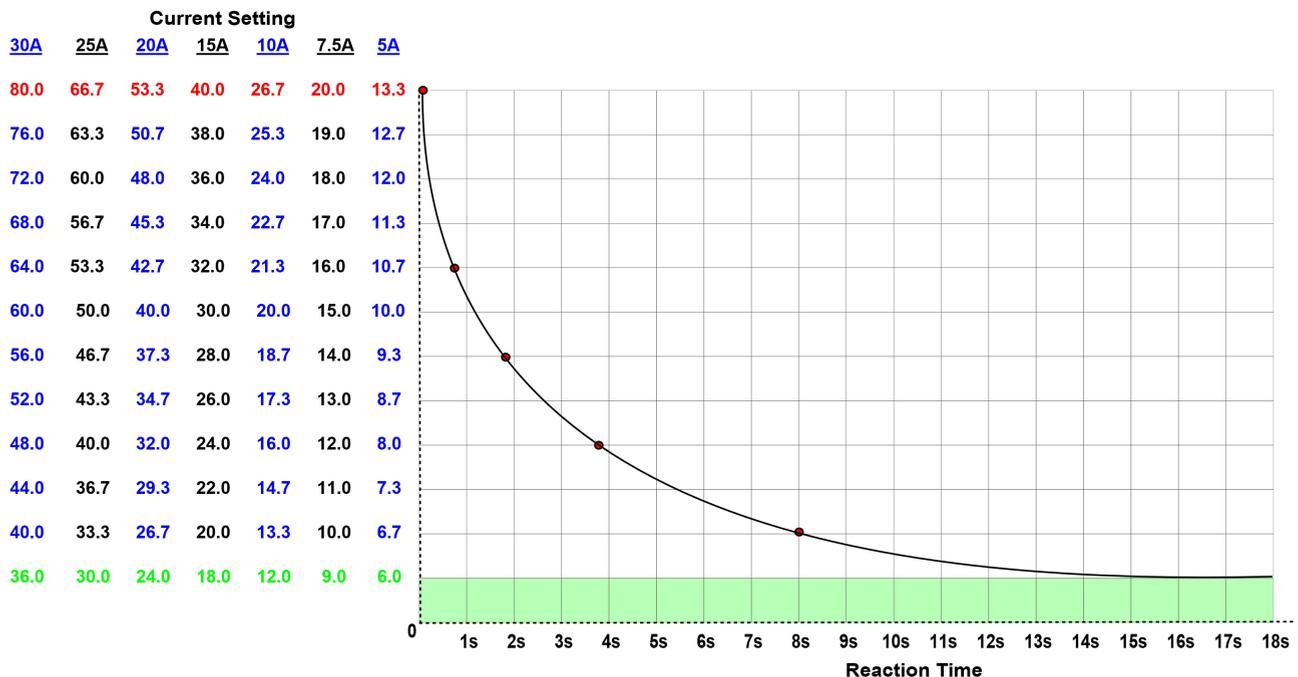
ERROR DETECTION

When a short-circuit or over current fault is detected, the Power Distribution Panel will switch the relevant output OFF to protect the car's wiring system. How quickly the output is switched off will depend on the severity of the fault detected thereby eliminating false detections caused by normal current surges.

If the Power Distribution Panel does detect a fault, causing it to switch the relevant Channel OFF, then the corresponding LED will begin to flash to indicate this. To reset the error, switch the Channel OFF then ON again. A full power cycle / system reset is not required.

Over Current

If too much current is detected on any Channel then the relevant Status LED will initially begin flashing at a fast rate to indicate that a fault situation has been detected. A fault situation only occurs when the current exceeds 15% of the rated setting. If the maximum current is exceeded by only a small amount and only for a short time then the fault situation will cease, the LED will stop flashing and the channel will remain ON. This provides users with an early warning if the current flowing through a Channel is close to the maximum current (as set in the configuration). If the over-current increases further, or continues for a longer period of time, then the Channel will shut down and indicate a double-flashing error status on the relevant LED.



Short Circuit

If a short-circuit fault is detected on any channel then it will immediately switch the relevant channel OFF and indicate a double-flashing error status on the relevant LED.

Over Temperature

If the internal temperature gets too hot then any, or all, of the status LEDs will begin flashing around 10°C below the maximum safe temperature. This again provides users with an early warning. If the temperature continues to increase and exceeds the maximum safe limit then the channels will begin switching OFF.



OUTPUTS and INPUTS

Power Outputs

Each Channel has 1 Power Output. The Power Outputs on the Full Power Modules can each be configured to 0,5,10 or 15 Amp while the Low Power Module outputs can be configured to 0 or 7.5 Amp only.

If Amperage higher than 15 Amp is required then this can be achieved by combining two Channels but these must be on the same internal Module. By combining two Channels so Amperage settings of 20, 25 and 30 Amp become available. (e.g. B1 +B2 could be set to output 30 Amps but not B1 + C1).

When a Module is set to a high current then the Power Output will be controlled by just 1 of the 2 Pushbuttons. The other Pushbutton will have no effect on the Power Output but can still be used as a 0v momentary switch output (see **Switch Outputs**).

ECU Inputs

Every Channel has an ECU Input allocated to it. These ECU Inputs are active-low, i.e. the input signal needs to be switched to 0V to have an effect. How the ECU Input affects the associated power output will depend on the Channel Function selected. In most cases, the ECU Input signal will simply cause the Channel to switch ON, overriding the pushbutton on the front panel. Therefore, the ECU Input has priority.

Example: Channel B2 is set to Function 2 (LATCHING without memory) and the output is connected to a Fuel Pump. The ECU will then turn the Fuel Pump ON and OFF when required. However, when the ECU turns the Fuel Pump OFF the driver can then manually operate it by using the pushbutton on the front panel, perhaps to test the pump or empty the fuel tank. Most motorsport ECUs can be programmed with this type of output signal.

Note: The Power Distribution Panel does not accept PWM signals or CAN-BUS data.

Switch Inputs

Every channel has an external Switch Input/Output allocated to it which can be used to receive a switch input signal or output a switch signal. These External Switch Inputs are active-low, i.e. the input signal needs to be switched to 0V to have an effect. These External Switch Inputs directly replicate the operation of the pushbuttons on the front panel. This allows Channels to be operated remotely such as with steering wheel mounted pushbuttons.

Switch Outputs

Every channel has an output switch signal allocated to it. These Switch Outputs are active-low, i.e. the output signal switches to 0V when the pushbutton is pressed. These Switch Outputs can be used to operate other Channels on the same Power Distribution Panel, such as Hazard Button for indicators, or activate external systems such as pit limiter or dashboards menus.

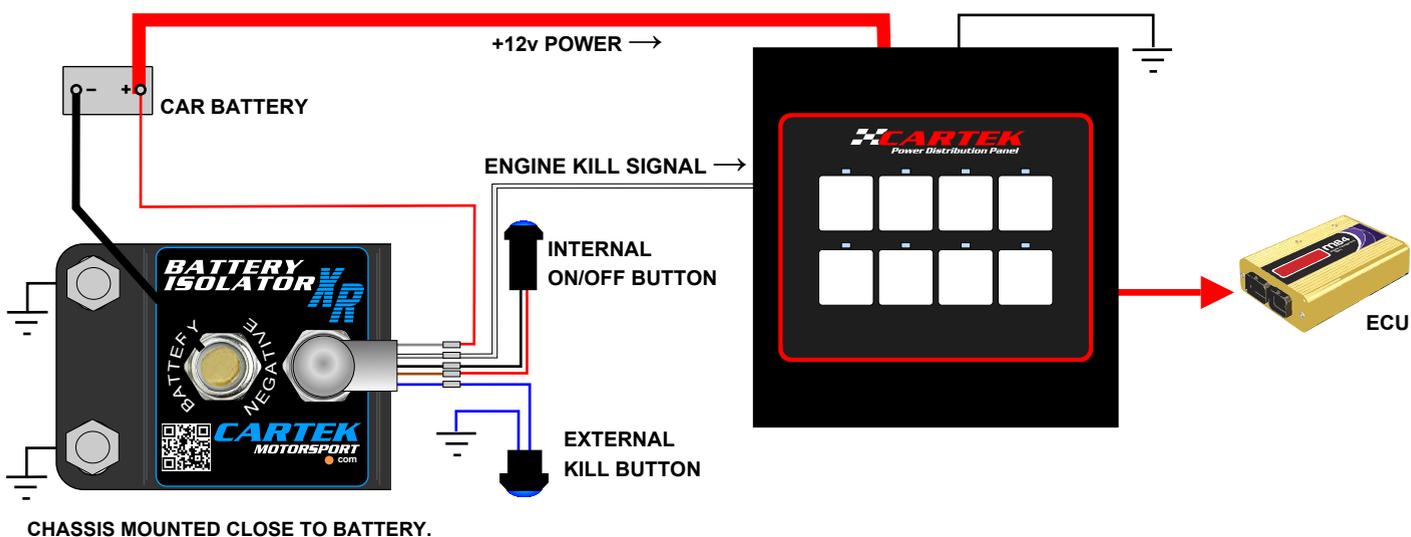
BATTERY ISOLATOR CONNECTION

Battery Isolator XR Input

The Power Distribution Panels have dedicated pins that can accept the Kill Signal from a CARTEK Battery Isolator XR. This input signal is active-low, i.e. when the input signal is switched to 0V all Channels will instantly switch OFF and remain OFF until the signal is released. If any of the Channels are used to supply power to ECU or ignition system then this Kill Signal will subsequently cause the engine to stop.

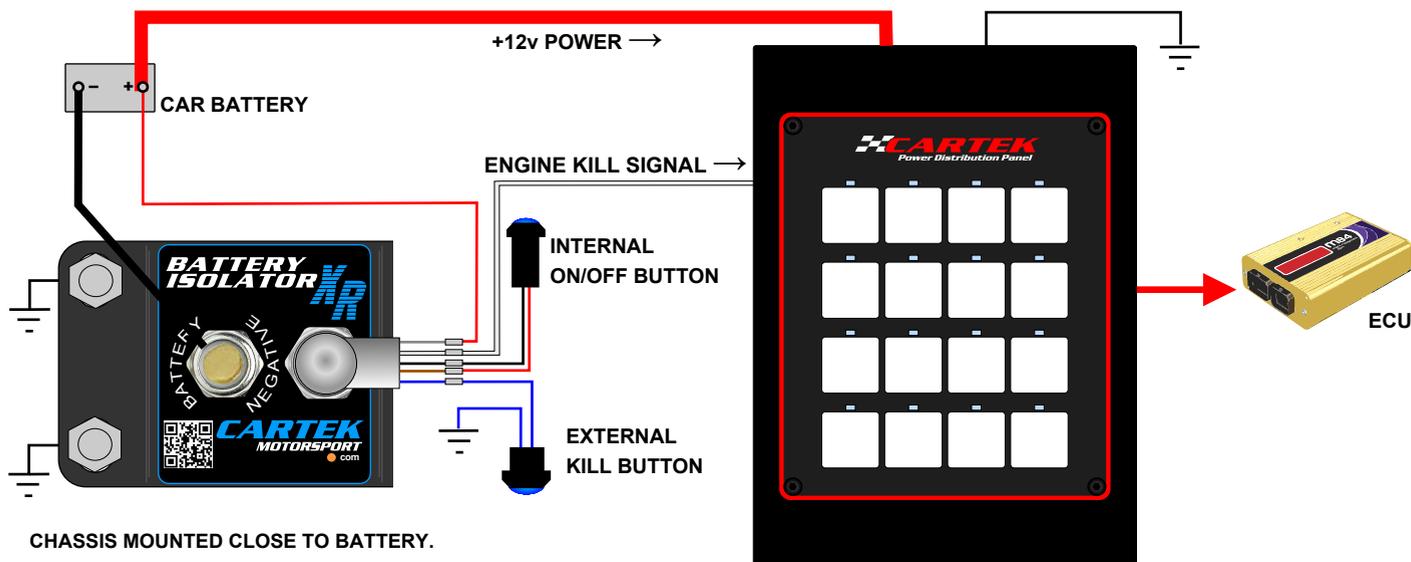
PDP-08 Connection

Connect the Engine Kill signal from the Battery Isolator XR to pin 17.



PDP-16 Connection

Connect the Engine Kill signal from the Battery Isolator XR to pin 17 (Conn A) or pin 19 (Conn B).



WIRING

Power Input

The Power Distribution Panel has one M6 stud which must be connected directly to Battery Positive(+). The wire size should be chosen according to the wire temperature limit and acceptable volt drop, however we recommend a minimum of 2 AWG. The Power Cable must be securely fastened onto the M6 stud using a Nyloc nut (tightened to 15Nm).

Power Outputs

It is recommended that 20 AWG wire is used for channels rated to 5-7.5 Amp. Channels rated to 15 Amp must use 16 AWG wire. Where channels are combined for a 25 or 30 Amp channel then both power output pins must use 16 AWG wire. If crimping into main connectors then wire outside diameter should not exceed 2.7mm.

Many electrical devices will draw much less current than you think, however it is important that you find out the maximum current draw of each item to give the wiring and electrical device as much protection as possible. You can obtain the Amperage information from data sheets on your electrical device, or by using a clamp type Ammeter.

The Power Distribution Panel will accept normal inrush/surge currents from solenoids, motors, pumps, fans, etc.

Ground

There are multiple Ground inputs on the Power Distribution Panels, 3 for PDP-16 and 2 for PDP-8, all must be connected to ground using 20 AWG Wire.

ECU Inputs / Switch Inputs / Switch Outputs / XR Signal Inputs

Although these signals are all low current, 20 AWG wire is the minimum the crimp contacts can accept to form a reliable electrical crimp connection. However, you can use 22-24 AWG providing it is crimped correctly by stripping a larger amount of wire and “doubling” over itself inside the crimp barrel.

Back-light Power Inputs

The Power Distribution Panel is equipped with 2 levels of Back Lighting, Low Level and Hi Level Illumination. The preferred level of illumination is selected by applying +12V power to either, or both of these inputs, 20 AWG wire should be sufficient.



WIPER MOTOR CONTROL

Wiper Motor Control

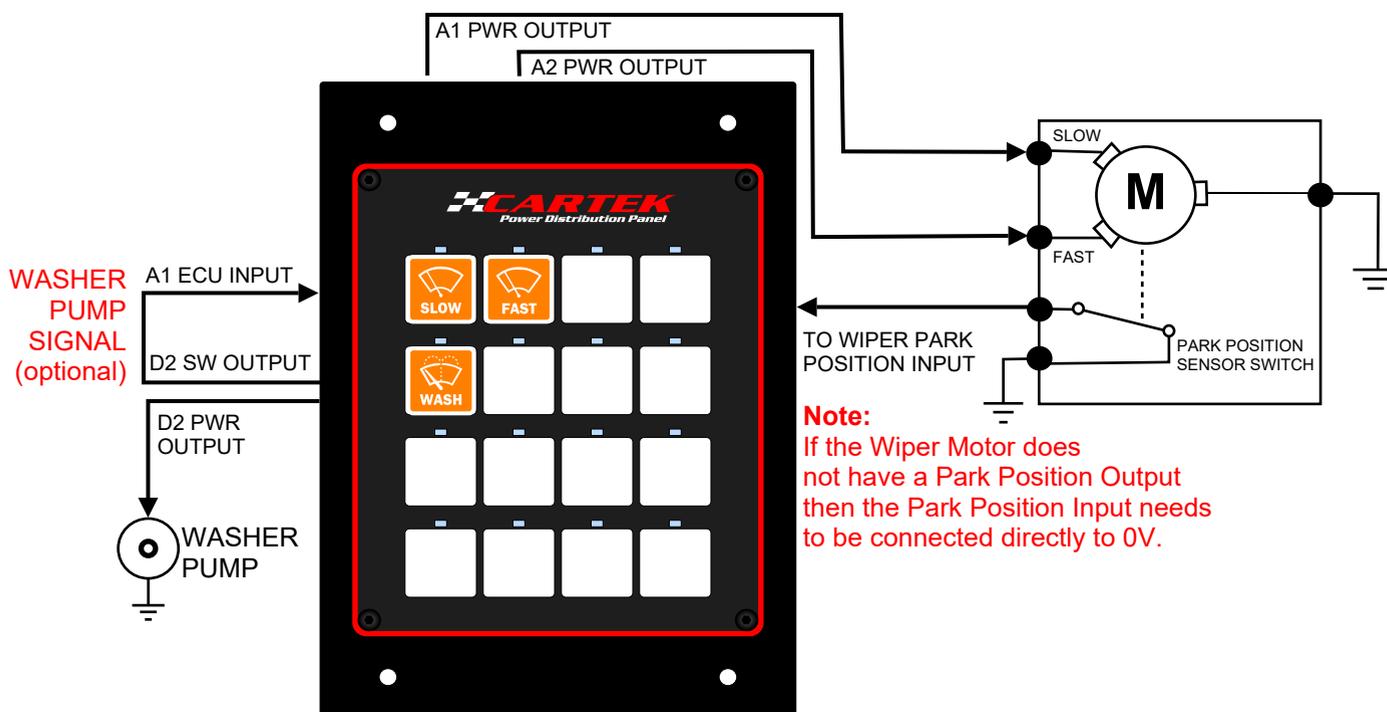
The Power Distribution Panel can control a 1 or 2 speed Windscreen Wiper Motor via the Low Power Module located in position A1/A2. However, the 2 Channels in this module can be independently set to any of the other 7 selectable Functions. If the Low Power Module is set to Function 8 (TOGGLE) then it will enable the dedicated Wiper Motor control electronics including accepting a Wiper Park Position Signal Input and providing Wiper Motor Braking. This allows the wipers to fully finish a cycle and stop in the correct position when turned OFF. The power outputs of the Low Power Module are fixed at 7.5 Amps which is sufficient for most Wiper Motors. This Low Power Module also has 2 additional inputs:

- 1) Allows the user to toggle between Low and High Speeds using a single button on a steering wheel.
- 2) Allows the wipers to activate when a momentary 0v input is received, such as that controlling a Washer Pump channel.

If just 1 of the 2 Channels is configured to control a Single Speed Wiper Motor then the other Channel can be configured to any of the remaining 7 Functions. **Please see Set-Up section for more details.**

Here is a typical installation for a 2 speed Wiper Motor with Washer Pump.

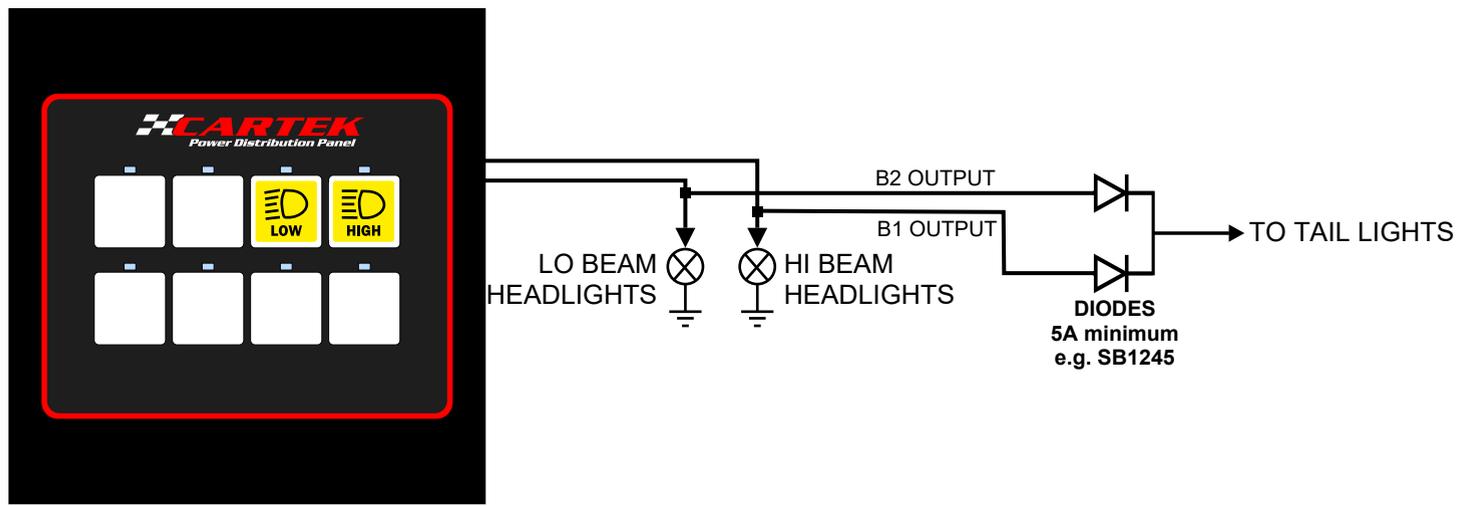
Channel	Function	Function Setting No.
A1	Toggling	8
A2	Toggling	8
D2	Momentary	3



WIRING OPTIONS

Tail Lights

Tail Lights can be made to operate when either Lo Beam or Hi Beam Headlights are used by installing two Diodes. See diagram below:



Hazard Warning

If using a channel on the Power Distribution Panel to operate as a Hazard Warning switch then you must change the amperage of that channel to 0 Amps. If a channel has been set to 20/25/30 Amps then the adjacent Channel will be automatically set to 0 Amps and so could be used for this purpose. Please refer to diagram 1 below which shows how to wire the Switch Input/Output of a Hazard Warning Switch channel to the Switch Input/Outputs of the Indicator channels.

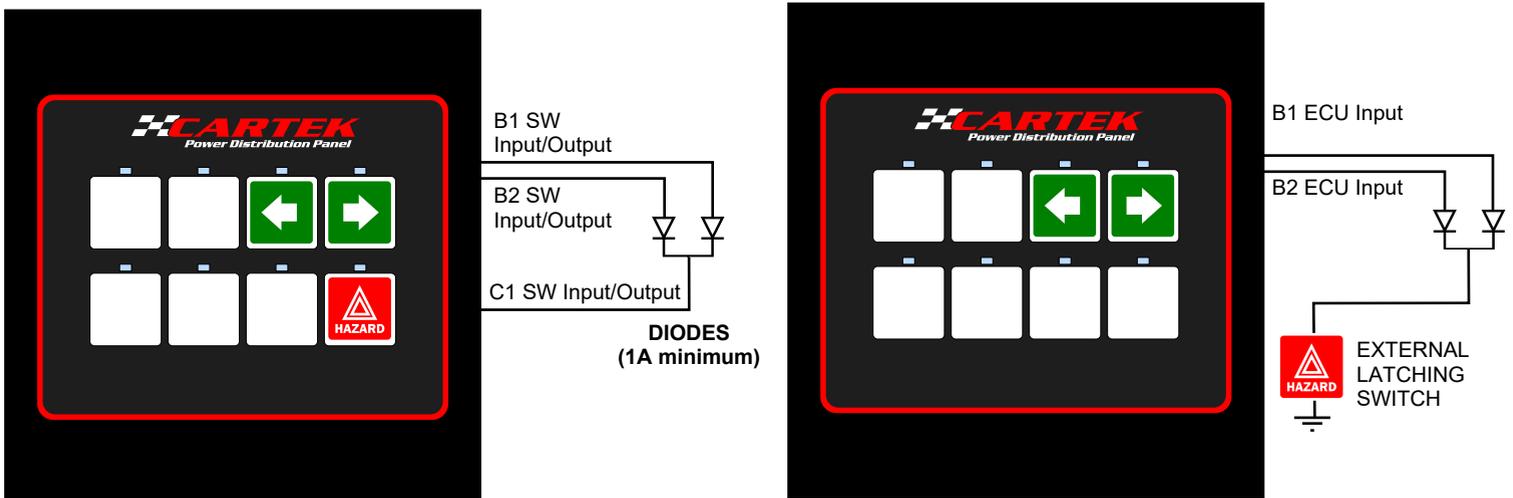


Diagram 1.

Diagram 2.

If using an external switch for Hazard Warning then this must be a latching type switch and connected to the two ECU Inputs of the Indicator channels as shown if diagram 2.



FUNCTION CHOICE

Each of the 16 Channels can be configured to operate in any 1 of 8 selectable Functions. These Functions allow the the outputs to behave in a variety of ways.

FUNCTION 1: Latching with Memory (DEFAULT)

Press the front panel Pushbutton once to make the associated output switch ON, press again to switch the output OFF. 'With Memory' means when power to the Power Control Panel is removed then it will remember it's state, ON or OFF, so when power is re-applied again then this Channel will return to it's remembered state i.e. ON or OFF. **Note: ECU Input is disabled** Example of use: Dash Display, Rain Light.

FUNCTION 2: Latching without Memory

Same as above except when power is applied to the Power Control Panel so this Channel will always power up in the OFF state. Use this function if ECU control is required. Example: Radiator Fan, Fuel Pump.

FUNCTION 3: Momentary

The output will only switch ON while the Pushbutton is being pressed. Example of use: Starter, Horn.

FUNCTION 4: Latching with 30 Second Timer

Press the front panel Pushbutton once to make the associated output switch ON, press again to switch the output OFF. '30 Second Timer' means it will automatically switch OFF after 30 seconds.

FUNCTION 5: Latching with 5 Minute Timer - As above but for 5 minutes. Example of use: Screen Demist.

FUNCTION 6: Latching with 10 Minute Timer - As above for but 10 minutes.

FUNCTION 7: Flashing (Indicators)

This function is a constant Flash to be used for Turn Signal Indicators. Press the front panel Pushbutton once to make the associated output flash, press again to switch the output OFF. If both buttons are pressed in the same module then they will both flash for a Hazard Warning function. Alternatively, an additional switch can be used to activate the Hazard Warning function, see previous page.

FUNCTION 8: Toggling (Headlights or Wipers)

This function is dedicated for use with Wipers, when using the Low Power Module only, or Headlights using any of the Full Power Modules. If both Channels in the same module are set to Function 8 then it will toggle between the two Channels, i.e. press one Pushbutton to switch one Channel ON, press the other Pushbutton and the first Channel will switch OFF while the second Channel will Switch ON and visa-versa. To Switch the Function OFF then simply press the active Channel one more time.

Note: When controlling a Wiper Motor, only the Low Power Module and Function 8 should be used. Only when using Function 8 will the Wiper Motor Park Input Signal become active along with Wiper Parking Brake facility.

SPECIAL FUNCTIONS

External Toggling (Function 8) All Modules

If both Channels on a Module have been assigned to Function 8 then ECU2 Input Signal can be used to remotely toggle between the two Channels using a single Steering Wheel mounted Pushbutton. This also includes Wiper operation using the Low Power Module. Here is an example of the remote toggling operation:



- 1) Operate ECU2 input – Channel C2 switches ON
- 2) Operate ECU2 input again – Channel C2 switches OFF, Channel C1 switches ON
- 3) Operate ECU2 input again – Channel C1 switches OFF, Channel C2 switches ON
- 4) Operate ECU2 input continuously for 2 seconds - Both Channels will switch OFF

Note: Module C has been used as an example, this Toggle Function will work on any Module.

Flashing Headlights (Function 8) Full Power Modules only

When Function 8, TOGGLING, is selected on any Full Power Module it will also allow remote flashing of the Headlights by using a Steering Wheel Pushbutton connected to an ECU Input Signal for that Channel/Module.

If just one Channel on a Module is set to Function 8 then it will operate in the same way as Function 1 (Latching with Memory), however activating the associated ECU Input Signal will cause this Channel to flash.

One quick press of the steering wheel pushbutton will cause this Channel to flash 3 times. Holding the pushbutton will make the Channel flash continuously until released. If both Channels on a Module are set to Function 8 then it is the ECU1 Input Signal only which will cause both Channels to flash.

Wash / Wipe (Function 8) Low Power Module only

When Function 8, TOGGLING, is selected on the Low Power Module it will also allow Channel 2, Hi Speed Wipe, to operate when the ECU1 Input Signal is activated. This is to facilitate automatic operation of the Wipers when a Washer Pump is operated. The Hi Speed Wiper Channel will also continue to operate for 2 seconds after the Wash Input Signal is released to allow 1-2 extra dry wipes of the screen.

Low Power Module use

Either Channel of the Low Power Module can be set to any of the 8 Functions in the same way as the Full Power Modules, however the Current can only be set to 0A or 7.5 A. This can come in useful if:

- The Wiper Motor only has a single speed setting.
- You do not have a Wiper Motor and therefore do not require the wiper functions.

If one Channel in the Low Power Module is still set to the Function 8 then it will still retain the use of its dedicated Wiper inputs, Park Position Input and Wash Input, as well as Wiper Braking which may affect non-wiper systems.



CHANNEL AMPERAGE ADJUSTMENT

The Amperage setting of all Channels can be independently set to:

Low Power Module: 0A or 7.5A only

Full Power Modules: 0A, 5A, 10A, 15A (Single Channel) 20A, 25A or 30A (Two Channels combined)

To check or change the Amperage:

- 1) Turn Power OFF to the Power Distribution Panel.
- 2) Press and hold the Pushbutton of the Channel you wish to check or adjust.
- 3) Turn Power ON while continuing to press the Pushbutton.
- 4) After about 2 seconds the Status LED of the Channel will illuminate. Once illuminated then release the Pushbutton. You are now in Amperage Adjustment Mode.

The LED will now begin to flash to indicate the Amperage setting.

Setting No	Amperage	Flashes
1	0 Amps (Disabled)	1 Flash, pause, 1 Flash...
2	5 Amps (Full Power Module) 7.5 Amps (Low Power Module-DEFAULT)	2 Flashes, pause, 2 Flashes...
3	10 Amps	3 Flashes, pause, 3 Flashes...
4	15 Amps (Full Power Module-DEFAULT)	4 Flashes, pause, 4 Flashes...
5	20 Amps (Two Channels combined)	5 Flashes, pause, 5 Flashes...
6	25 Amps (Two Channels combined)	6 Flashes, pause, 6 Flashes...
7	30 Amps (Two Channels combined)	7 Flashes, pause, 7 Flashes...

If the Amperage setting is correct and no adjustment is required then turn power OFF to the Power Distribution Panel to exit Amperage Adjustment Mode.

To make an adjustment simply press the button once and the Amperage setting will increment to the next available setting. Pressing the button repeatedly will cycle through all available settings. When the preferred Amperage setting is correct then turn power OFF to the Power Distribution Panel to exit Amperage Adjustment Mode. The new Amperage setting will be saved automatically.

FULL RESET

A full reset of the Amperage and Function settings on each Module can be performed as follows:

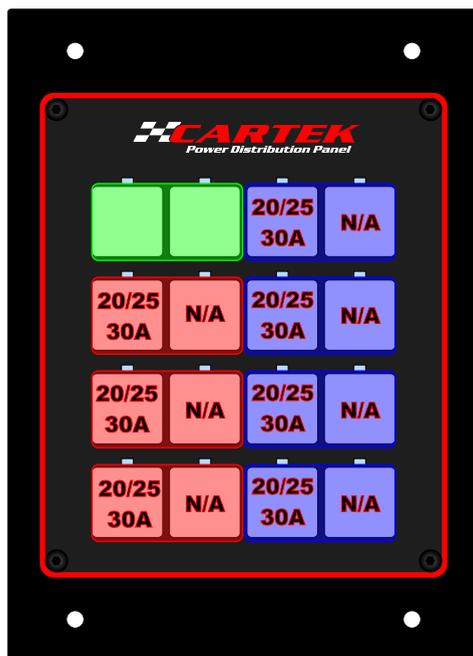
- 1) Turn Power OFF to the Power Distribution Panel.
- 2) Press and hold the both Pushbuttons of the Module you wish to reset.
- 3) Turn Power ON and continue to press the Pushbutton.
- 4) After about 2 seconds the Status LEDs of both Channels will begin to flash rapidly. Now release both Pushbuttons.

After resetting a Module the Amperage and Function settings on each Channel will set to the defaults.

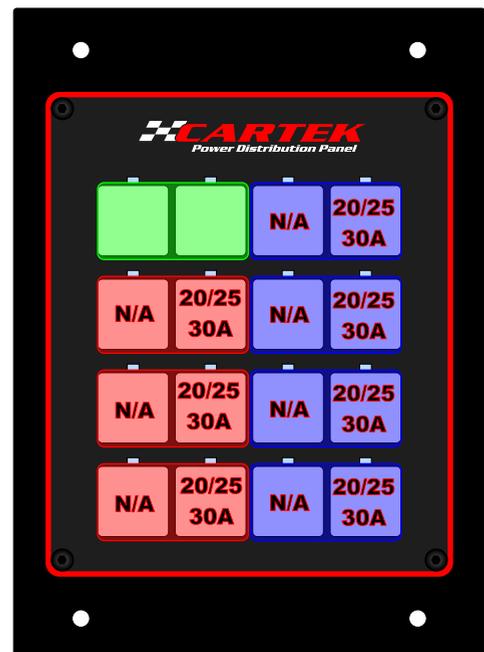
CHANNEL AMPERAGE ADJUSTMENT

When a Channel is set to a high current such as 20, 25 or 30 Amp then it will achieve this by automatically combining both Channels on the same Module. Once a Channel has been programmed for 20, 25 or 30 Amp then the adjacent Channel will be automatically disabled and set to 0 Amp.

If you need to step down from 1 High Power channel to 2 Low Power Channels then perform a full reset on the module as described earlier.



OR



Both Power Output pins for combined 20, 25 or 30 Amp channels must be used to distribute the current flow evenly between the two Channels.

The Disabled channel can still be used as a momentary 0V switch via the associated Switch Input/Output pin. This can be used to trigger an Input on another Channel, or perhaps an input to ECU or Dash Display.

The Status LED on a disabled Channel will continue to indicate when the Pushbutton on the Front Panel is pressed or if it receives an external Switch Input.

NOTE: Please view the video tutorial on our website for more guidance.



CHANNEL FUNCTION ADJUSTMENT

The Function setting of all Channels can be independently set to any 1 of 8 Functions available.

To check or change the Function:

- 1) Turn Power OFF to the Power Distribution Panel.
- 2) Press and hold the Pushbutton of the Channel you wish to check or adjust.
- 3) Turn Power ON while continuing to press the Pushbutton.
- 4) After 2 seconds the Status LED of the Channel will illuminate, continue to press the Pushbutton.
- 5) After 1 more second the Status LED of the Channel will extinguish. Once extinguished release the Pushbutton. You are now in Function Adjustment Mode.

The LED will now begin to flash to indicate the Amperage setting.

Function no	Function description	Flashes
1	Latching with memory (DEFAULT)	1 Flash, pause, 1 Flash...
2	Latching without memory	2 Flashes, pause, 2 Flashes...
3	Momentary	3 Flashes, pause, 3 Flashes...
4	Latching with 30 sec delay	4 Flashes, pause, 4 Flashes...
5	Latching with 5 min delay	5 Flashes, pause, 5 Flashes...
6	Latching with 10 min delay	6 Flashes, pause, 6 Flashes...
7	Flashing for Indicators	7 Flashes, pause, 7 Flashes...
8	Toggling Function: Low Power Module has additional Wiper functionality. Full Power Modules have additional Headlight functionality.	8 Flashes, pause, 8 Flashes...

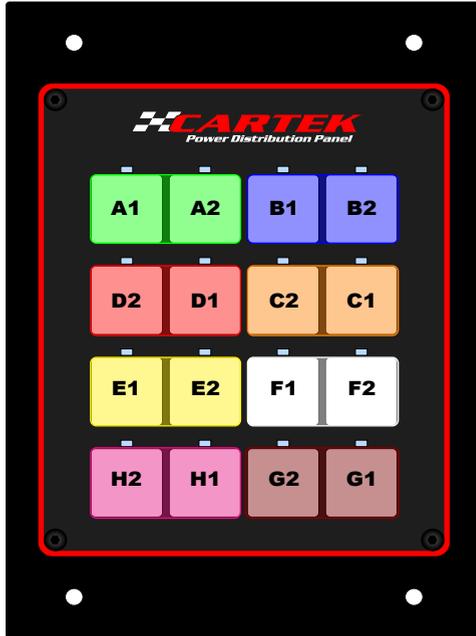
If the Function setting is correct and no adjustment is required then turn power OFF to the Power Distribution Panel to exit Function Adjustment Mode.

To make an adjustment simply press the button once and the Function setting will increment to the next available setting. Pressing the button repeatedly will cycle through all available settings. When the preferred Function setting is correct then turn power OFF to the Power Distribution Panel to exit Function Adjustment Mode. The new Function setting will be saved automatically.

To go back to the default settings please refer to page 17.

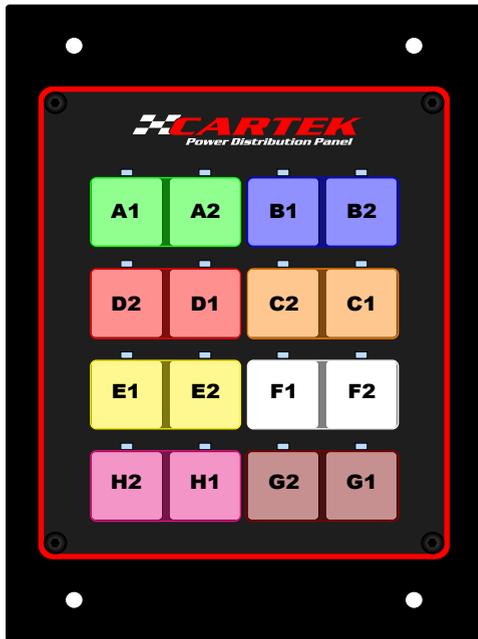
NOTE: Please view the video tutorial on our website for more guidance.

USER CONFIGURATION NOTES



Channel	Amp Rating	Amp No.	Function	Function No.	Description
A1					
A2					
B1					
B2					
C1					
C2					
D1					
D2					
E1					
E2					
F1					
F2					
G1					
G2					
H1					
H2					

USER CONFIGURATION NOTES (Example)



Channel	Amp Rating	Amp No.	Function	Function No.	Description
A1	7.5A	2	Toggling	8	Wiper slow
A2	7.5A	2	Toggling	8	Wiper fast
B1	15A	4	Latching with Memory	1	Ignition
B2	15A	4	Momentary	3	Start
C1	10A	3	Flashing	7	Indicator right
C2	10A	3	Flashing	7	Indicator left
D1	15A	4	Toggling	8	Headlamps low beam
D2	15A	4	Toggling	8	Headlamps high beam
E1	15A	4	Latching no memory	2	Pump 1
E2	15A	4	Latching no memory	2	Pump 2
F1	25A	6	Latching no memory	2	Rad fan
F2	0A	0	N/A	N/A	Hazard
G1	15A	3	Latching with memory	1	Spare
G2	15A	3	Latching with memory	1	Spare
H1	5A	2	Latching with memory	1	Intercom
H2	10A	2	Momentary	3	Horn



ASSOCIATED PRODUCTS



WIRELESS CONTROL SYSTEM

The Wireless Control System from Cartek is the quickest and easiest way to install pushbutton controls to a detachable racing steering wheel.

This innovative solution means users no longer spend time wiring in their own switches on to a custom fabricated panel, and do not have to contend with 'curly' cords or expensive steering wheel connectors that can easily become damaged.

The function on each channel is also selectable and two label sheets are supplied to fully customise the switches.



POWER DISTRIBUTION MODULE

CARTEK also produce a smaller 4 Channel Power Distribution Module (PDM) that can be used if more channels are required.

A single PDM is designed to replace 4x 10A relays and 4x 10A circuit breakers while being fully electronic and fully sealed against water and dirt.

The outputs can be used to control power to various devices such as ECUs, instrumentation, lighting, starter solenoid, pumps, etc.

CONTACT INFORMATION

CARTEK AUTOMOTIVE ELECTRONICS LTD

Unit 25, Mitchell Point
Ensign Way, Hamble
Southampton
SO31 4RF
UNITED KINGDOM

+44(0)2380 457747

info@cartekmotorsport.com

For the very latest technical advice always go to our website:

www.CARTEKMOTORSPORT.com