



VA-WCX-900

**2026 Versatile & Adaptable Whelen Core Systems
Siren Module and CEM16 & CEM24 Expansions**

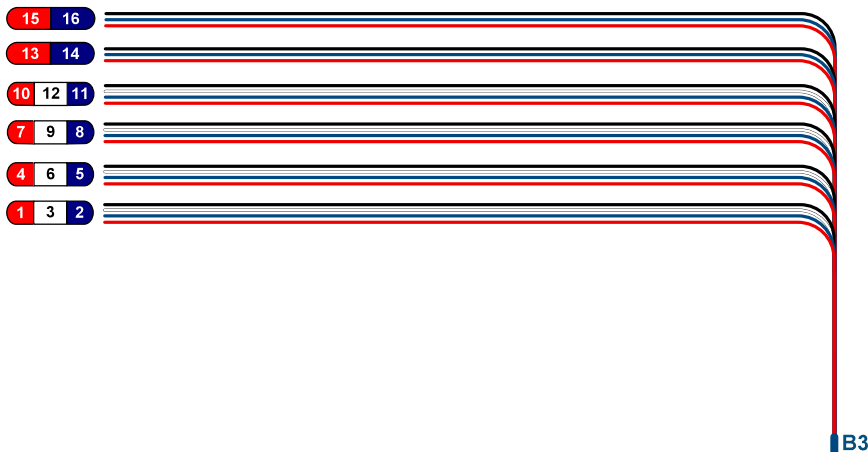


Note: Connectors shown in rear view.

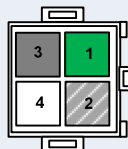
LIGHTING PIGTAILS:

CEM16 OUTPUTS

- 18 Ga. RD Light 1 "LT 1" from CEM16 J5 Pin 1
- 18 Ga. BL Light 2 "LT 2" from CEM16 J5 Pin 2
- 18 Ga. WH Light 3 "LT 3" from CEM16 J5 Pin 3
- 18 Ga. BK Lights Ground "LT 1 GND" from Ground Assembly
- 18 Ga. RD Light 4 "LT 4" from CEM16 J5 Pin 4
- 18 Ga. BL Light 5 "LT 5" from CEM16 J5 Pin 5
- 18 Ga. WH Light 6 "LT 6" from CEM16 J5 Pin 6
- 18 Ga. BK Lights Ground "LT 4 GND" from Ground Assembly
- 18 Ga. RD Light 7 "LT 7" from CEM16 J5 Pin 7
- 18 Ga. BL Light 8 "LT 8" from CEM16 J5 Pin 8
- 18 Ga. WH Light 9 "LT 9" from CEM16 J6 Pin 1
- 18 Ga. BK Lights Ground "LT 7 GND" from Ground Assembly
- 18 Ga. RD Light 10 "LT 10" from CEM16 J6 Pin 2
- 18 Ga. BL Light 11 "LT 11" from CEM16 J6 Pin 3
- 18 Ga. WH Light 12 "LT 12" from CEM16 J6 Pin 4
- 18 Ga. BK Lights Ground "LT 10 GND" from Ground Assembly
- 18 Ga. RD Light 13 "LT 13" from CEM16 J6 Pin 5
- 18 Ga. BL Light 14 "LT 14" from CEM16 J6 Pin 6
- 18 Ga. BK Lights Ground "LT 13 GND" from Ground Assembly
- 18 Ga. RD Light 15 "LT 15" from CEM16 J6 Pin 7
- 18 Ga. BL Light 16 "LT 16" from CEM16 J6 Pin 8
- 18 Ga. BK Lights Ground "LT 15 GND" from Ground Assembly



WeCanX DATA:



CAN DATA INPUT PIGTAIL

- Pin 1 – 20 Ga. GN Can High to CEM16 J7 Pin 1
- Pin 2 – 20 Ga. Shield to CEM16 J7 Pin 2
- Pin 3 – 20 Ga. GY Can Low to CEM16 J7 Pin 3
- Pin 4 – Not Used – Sealing Plug

UTILIZE WITH DC HARNESSSES

- Ex. WCX-MH-002 or MW-DC25 – Underhood Mounted

UTILIZE PDD PANELS

- Remove connector and utilize PDD panel. – Rear Mounted

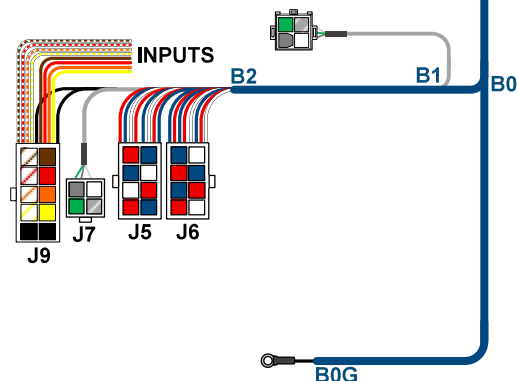
INPUTS:

CEM16 INPUTS – 12" PIGTAILS

- 18 Ga. WH/BR Input 1 "IN 1 GND" from CEM16 J9 Pin 1
- 18 Ga. BR Input 1 "IN 1 POS" from CEM16 J9 Pin 6
- 18 Ga. WH/RD Input 2 "IN 2 GND" from CEM16 J9 Pin 2
- 18 Ga. RD Input 2 "IN 2 POS" from CEM16 J9 Pin 7
- 18 Ga. WH/OR Input 3 "IN 3 GND" from CEM16 J9 Pin 3
- 18 Ga. OR Input 3 "IN 3 POS" from CEM16 J9 Pin 8
- 18 Ga. WH/YW Input 4 "IN 4 GND" from CEM16 J9 Pin 4
- 18 Ga. YW Input 4 "IN 4 POS" from CEM16 J9 Pin 9

RECOMMENDED POWER CABLES

- Based upon the mounting location of the CEM** module.
- CEM-PWR36 – Underhood Mounted
- 12-WCX-PWR36-G – Rear Tray Mounted



PRODUCTS SHOWN ON LAYOUT:

Whelen Expansion CEM16 Pigtail Harness: WCX-PT120

TECHNICAL SUPPORT & SALES CONTACT:

Phone: 844-423-7200

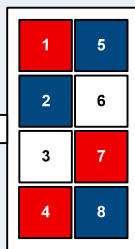
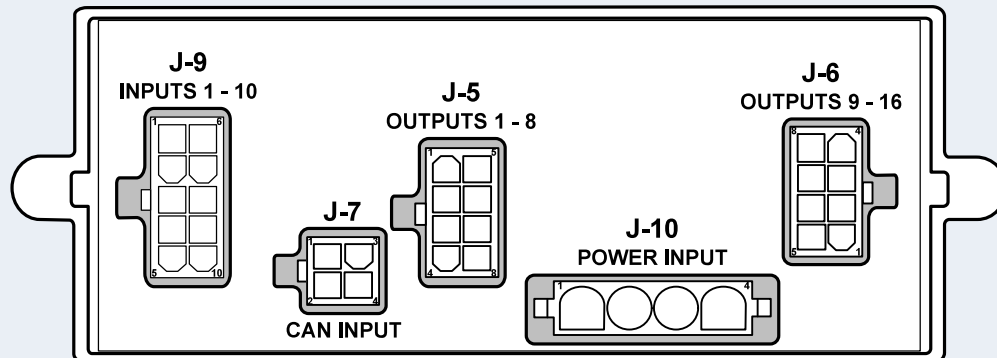
Email: sales@allfleetsolutions.com

Web: www.allfleetsolutions.com

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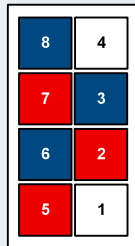
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CEM16 EXPANSION MODULE



J-5 – OUTPUTS 1 thru 8 FROM CEM16

- Pin 1 Output 1 (2.5A) – 18 Ga. RD Light 1 “LT 1”
- Pin 2 Output 2 (2.5A) – 18 Ga. BL Light 2 “LT 2”
- Pin 3 Output 3 (2.5A) – 18 Ga. WH Light 3 “LT 3”
- Pin 4 Output 4 (2.5A) – 18 Ga. RD Light 4 “LT 4”
- Pin 5 Output 5 (2.5A) – 18 Ga. BL Light 5 “LT 5”
- Pin 6 Output 6 (2.5A) – 18 Ga. WH Light 6 “LT 6”
- Pin 7 Output 7 (2.5A) – 18 Ga. RD Light 7 “LT 7”
- Pin 8 Output 8 (2.5A) – 18 Ga. BL Light 8 “LT 8”



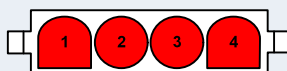
J-6 – OUTPUTS 9 thru 16 FROM CEM16

- Pin 1 Output 9 (2.5A) – 18 Ga. WH Light 9 “LT 9”
- Pin 2 Output 10 (2.5A) – 18 Ga. RD Light 10 “LT 10”
- Pin 3 Output 11 (2.5A) – 18 Ga. BL Light 11 “LT 11”
- Pin 4 Output 12 (2.5A) – 18 Ga. WH Light 12 “LT 12”
- Pin 5 Output 13 (2.5A) – 18 Ga. RD Light 13 “LT 13”
- Pin 6 Output 14 (2.5A) – 18 Ga. BL Light 14 “LT 14”
- Pin 7 Output 15 (2.5A) – 18 Ga. RD Light 15 “LT 15”
- Pin 8 Output 16 (2.5A) – 18 Ga. BL Light 16 “LT 16”



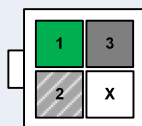
J-9 – INPUTS 1 thru 10 TO CEM16

- Pin 1 Input 1 Ground (–) – 18 Ga. WH/BR Input 1 “IN 1 GND”
- Pin 2 Input 2 Ground (–) – 18 Ga. WH/RD Input 2 “IN 2 GND”
- Pin 3 Input 3 Ground (–) – 18 Ga. WH/OR Input 3 “IN 3 GND”
- Pin 4 Input 4 Ground (–) – 18 Ga. WH/YW Input 4 “IN 4 GND”
- Pin 5 Main Ground Input – 16 Ga. BK CEM16 Ground “J9 5 GND” from Ground Assembly
- Pin 6 Input 1 Positive (+) – 18 Ga. BR Input 1 “IN 1 POS”
- Pin 7 Input 2 Positive (+) – 18 Ga. RD Input 2 “IN 2 POS”
- Pin 8 Input 3 Positive (+) – 18 Ga. OR Input 3 “IN 3 POS”
- Pin 9 Input 4 Positive (+) – 18 Ga. YW Input 4 “IN 4 POS”
- Pin 10 Main Ground Input – 16 Ga. BK CEM16 Ground “J9 10 GND” from Ground Assembly



J-10 – POWER INPUT TO CEM16

- Pin 1 Power Input 1 (10A) – 16 Ga. RD Power 1 (10A) “PWR 1” from Fuse Position 1
- Pin 2 Power Input 2 (10A) – 16 Ga. RD Power 2 (10A) “PWR 2” from Fuse Position 2
- Pin 3 Power Input 3 (10A) – 16 Ga. RD Power 3 (10A) “PWR 3” from Fuse Position 3
- Pin 4 Power Input 4 (10A) – 16 Ga. RD Power 4 (10A) “PWR 4” from Fuse Position 4



J-7 – CAN INPUT TO CEM16

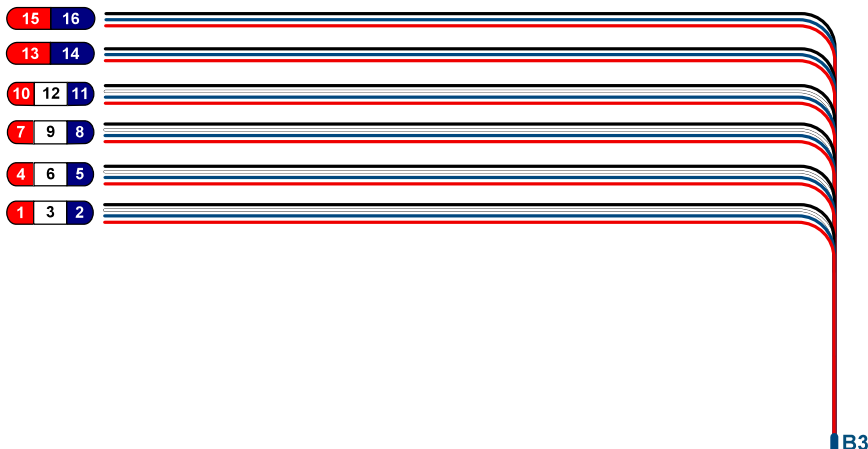
- Pin 1 CAN H – 20 Ga. GN Twisted Pair
- Pin 2 Shield – 20 Ga. Shield
- Pin 3 CAN L – 20 Ga. GY Twisted Pair
- Pin 4 Not Used – Plug

Note: Connectors shown in rear view.

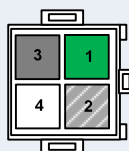
LIGHTING PIGTAILS:

CEM16 OUTPUTS

- 18 Ga. RD Light 1 "LT 1" from CEM16 J5 Pin 1
- 18 Ga. BL Light 2 "LT 2" from CEM16 J5 Pin 2
- 18 Ga. WH Light 3 "LT 3" from CEM16 J5 Pin 3
- 18 Ga. BK Lights Ground "LT 1 GND" from Ground Assembly
- 18 Ga. RD Light 4 "LT 4" from CEM16 J5 Pin 4
- 18 Ga. BL Light 5 "LT 5" from CEM16 J5 Pin 5
- 18 Ga. WH Light 6 "LT 6" from CEM16 J5 Pin 6
- 18 Ga. BK Lights Ground "LT 4 GND" from Ground Assembly
- 18 Ga. RD Light 7 "LT 7" from CEM16 J5 Pin 7
- 18 Ga. BL Light 8 "LT 8" from CEM16 J5 Pin 8
- 18 Ga. WH Light 9 "LT 9" from CEM16 J6 Pin 1
- 18 Ga. BK Lights Ground "LT 7 GND" from Ground Assembly
- 18 Ga. RD Light 10 "LT 10" from CEM16 J6 Pin 2
- 18 Ga. BL Light 11 "LT 11" from CEM16 J6 Pin 3
- 18 Ga. WH Light 12 "LT 12" from CEM16 J6 Pin 4
- 18 Ga. BK Lights Ground "LT 10 GND" from Ground Assembly
- 18 Ga. RD Light 13 "LT 13" from CEM16 J6 Pin 5
- 18 Ga. BL Light 14 "LT 14" from CEM16 J6 Pin 6
- 18 Ga. BK Lights Ground "LT 13 GND" from Ground Assembly
- 18 Ga. RD Light 15 "LT 15" from CEM16 J6 Pin 7
- 18 Ga. BL Light 16 "LT 16" from CEM16 J6 Pin 8
- 18 Ga. BK Lights Ground "LT 15 GND" from Ground Assembly



WeCanX DATA:



CAN DATA INPUT PIGTAIL

- Pin 1 – 20 Ga. GN Can High to CEM16 J7 Pin 1
- Pin 2 – 20 Ga. Shield to CEM16 J7 Pin 2
- Pin 3 – 20 Ga. GY Can Low to CEM16 J7 Pin 3
- Pin 4 – Not Used – Sealing Plug

UTILIZE WITH DC HARNESSSES

- Ex. WCX-MH-002 or MW-DC25 – Underhood Mounted

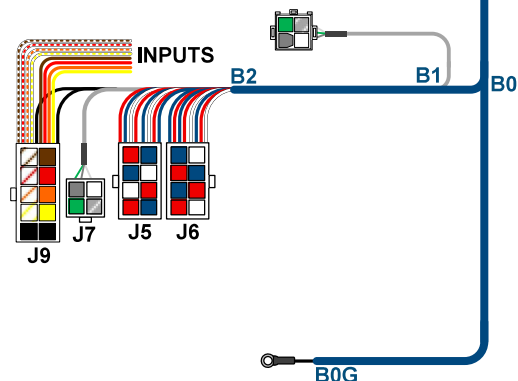
UTILIZE PDD PANELS

- Remove connector and utilize PDD panel. – Rear Mounted

INPUTS:

CEM16 INPUTS – 12" PIGTAILS

- 18 Ga. WH/BR Input 1 "IN 1 GND" from CEM16 J9 Pin 1
- 18 Ga. BR Input 1 "IN 1 POS" from CEM16 J9 Pin 6
- 18 Ga. WH/RD Input 2 "IN 2 GND" from CEM16 J9 Pin 2
- 18 Ga. RD Input 2 "IN 2 POS" from CEM16 J9 Pin 7
- 18 Ga. WH/OR Input 3 "IN 3 GND" from CEM16 J9 Pin 3
- 18 Ga. OR Input 3 "IN 3 POS" from CEM16 J9 Pin 8
- 18 Ga. WH/YW Input 4 "IN 4 GND" from CEM16 J9 Pin 4
- 18 Ga. YW Input 4 "IN 4 POS" from CEM16 J9 Pin 9



RECOMMENDED POWER CABLES

- Based upon the mounting location of the CEM** module.
- CEM-PWR36 – Underhood Mounted
- 12-WCX-PWR36-G – Rear Tray Mounted

PRODUCTS SHOWN ON LAYOUT:

Whelen Expansion CEM16 Pigtail Harness: WCX-PT240

TECHNICAL SUPPORT & SALES CONTACT:

Phone: 844-423-7200

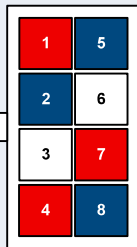
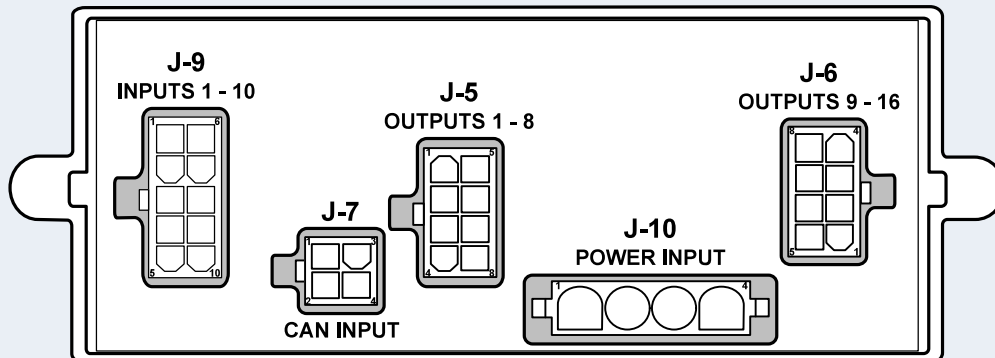
Email: sales@allfleetsolutions.com

Web: www.allfleetsolutions.com

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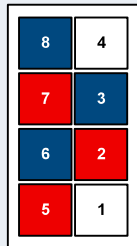
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CEM16 EXPANSION MODULE



J-5 – OUTPUTS 1 thru 8 FROM CEM16

- Pin 1 Output 1 (2.5A) – 18 Ga. RD Light 1 “LT 1”
- Pin 2 Output 2 (2.5A) – 18 Ga. BL Light 2 “LT 2”
- Pin 3 Output 3 (2.5A) – 18 Ga. WH Light 3 “LT 3”
- Pin 4 Output 4 (2.5A) – 18 Ga. RD Light 4 “LT 4”
- Pin 5 Output 5 (2.5A) – 18 Ga. BL Light 5 “LT 5”
- Pin 6 Output 6 (2.5A) – 18 Ga. WH Light 6 “LT 6”
- Pin 7 Output 7 (2.5A) – 18 Ga. RD Light 7 “LT 7”
- Pin 8 Output 8 (2.5A) – 18 Ga. BL Light 8 “LT 8”



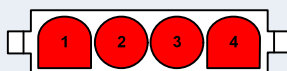
J-6 – OUTPUTS 9 thru 16 FROM CEM16

- Pin 1 Output 9 (2.5A) – 18 Ga. WH Light 9 “LT 9”
- Pin 2 Output 10 (2.5A) – 18 Ga. RD Light 10 “LT 10”
- Pin 3 Output 11 (2.5A) – 18 Ga. BL Light 11 “LT 11”
- Pin 4 Output 12 (2.5A) – 18 Ga. WH Light 12 “LT 12”
- Pin 5 Output 13 (2.5A) – 18 Ga. RD Light 13 “LT 13”
- Pin 6 Output 14 (2.5A) – 18 Ga. BL Light 14 “LT 14”
- Pin 7 Output 15 (2.5A) – 18 Ga. RD Light 15 “LT 15”
- Pin 8 Output 16 (2.5A) – 18 Ga. BL Light 16 “LT 16”



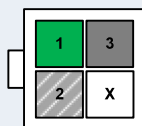
J-9 – INPUTS 1 thru 10 TO CEM16

- Pin 1 Input 1 Ground (–) – 18 Ga. WH/BR Input 1 “IN 1 GND”
- Pin 2 Input 2 Ground (–) – 18 Ga. WH/RD Input 2 “IN 2 GND”
- Pin 3 Input 3 Ground (–) – 18 Ga. WH/OR Input 3 “IN 3 GND”
- Pin 4 Input 4 Ground (–) – 18 Ga. WH/YW Input 4 “IN 4 GND”
- Pin 5 Main Ground Input – 16 Ga. BK CEM16 Ground “J9 5 GND” from Ground Assembly
- Pin 6 Input 1 Positive (+) – 18 Ga. BR Input 1 “IN 1 POS”
- Pin 7 Input 2 Positive (+) – 18 Ga. RD Input 2 “IN 2 POS”
- Pin 8 Input 3 Positive (+) – 18 Ga. OR Input 3 “IN 3 POS”
- Pin 9 Input 4 Positive (+) – 18 Ga. YW Input 4 “IN 4 POS”
- Pin 10 Main Ground Input – 16 Ga. BK CEM16 Ground “J9 10 GND” from Ground Assembly



J-10 – POWER INPUT TO CEM16

- Pin 1 Power Input 1 (10A) – 16 Ga. RD Power 1 (10A) “PWR 1” from Fuse Position 1
- Pin 2 Power Input 2 (10A) – 16 Ga. RD Power 2 (10A) “PWR 2” from Fuse Position 2
- Pin 3 Power Input 3 (10A) – 16 Ga. RD Power 3 (10A) “PWR 3” from Fuse Position 3
- Pin 4 Power Input 4 (10A) – 16 Ga. RD Power 4 (10A) “PWR 4” from Fuse Position 4



J-7 – CAN INPUT TO CEM16

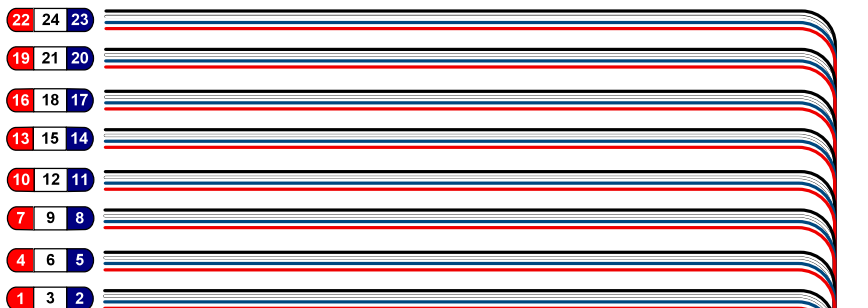
- Pin 1 CAN H – 20 Ga. GN Twisted Pair
- Pin 2 Shield – 20 Ga. Shield
- Pin 3 CAN L – 20 Ga. GY Twisted Pair
- Pin 4 Not Used – Plug

Note: Connectors shown in rear view.

LIGHTING PIGTAILS:

CEM24 OUTPUTS

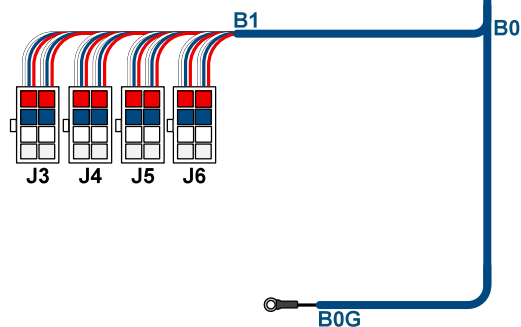
- 18 Ga. RD Light 1 "LT 1" from CEM24 J3 Pin 1
- 18 Ga. BL Light 2 "LT 2" from CEM24 J3 Pin 2
- 18 Ga. WH Light 3 "LT 3" from CEM24 J3 Pin 3
- 18 Ga. BK Lights Ground "LT 1 GND" from Ground Assembly
- 18 Ga. RD Light 4 "LT 4" from CEM24 J3 Pin 5
- 18 Ga. BL Light 5 "LT 5" from CEM24 J3 Pin 6
- 18 Ga. WH Light 6 "LT 6" from CEM24 J3 Pin 7
- 18 Ga. BK Lights Ground "LT 4 GND" from Ground Assembly
- 18 Ga. RD Light 7 "LT 7" from CEM24 J4 Pin 1
- 18 Ga. BL Light 8 "LT 8" from CEM24 J4 Pin 2
- 18 Ga. WH Light 9 "LT 9" from CEM24 J4 Pin 3
- 18 Ga. BK Lights Ground "LT 7 GND" from Ground Assembly
- 18 Ga. RD Light 10 "LT 10" from CEM24 J4 Pin 5
- 18 Ga. BL Light 11 "LT 11" from CEM24 J4 Pin 6
- 18 Ga. WH Light 12 "LT 12" from CEM24 J4 Pin 7
- 18 Ga. BK Lights Ground "LT 10 GND" from Ground Assembly
- 18 Ga. RD Light 13 "LT 13" from CEM24 J5 Pin 1
- 18 Ga. BL Light 14 "LT 14" from CEM24 J5 Pin 2
- 18 Ga. WH Light 15 "LT 15" from CEM24 J5 Pin 3
- 18 Ga. BK Lights Ground "LT 13 GND" from Ground Assembly
- 18 Ga. RD Light 16 "LT 16" from CEM24 J5 Pin 5
- 18 Ga. BL Light 17 "LT 17" from CEM24 J5 Pin 6
- 18 Ga. WH Light 18 "LT 18" from CEM24 J5 Pin 7
- 18 Ga. BK Lights Ground "LT 16 GND" from Ground Assembly
- 18 Ga. RD Light 19 "LT 19" from CEM24 J6 Pin 1
- 18 Ga. BL Light 20 "LT 20" from CEM24 J6 Pin 2
- 18 Ga. WH Light 21 "LT 21" from CEM24 J6 Pin 3
- 18 Ga. BK Lights Ground "LT 19 GND" from Ground Assembly
- 18 Ga. RD Light 22 "LT 22" from CEM24 J6 Pin 5
- 18 Ga. BL Light 23 "LT 23" from CEM24 J6 Pin 6
- 18 Ga. WH Light 24 "LT 24" from CEM24 J6 Pin 7
- 18 Ga. BK Lights Ground "LT 22 GND" from Ground Assembly



B2

RECOMMENDED POWER CABLES

- Based upon the mounting location of the CEM** module.
- WCX-PWR36-C24 – Underhood Mounted
- WCX-PWR40-C24 – Rear Tray Mounted
- WCX-PWR180-C24 – SUV Hatch Mounted, Pick-Up Truck Rear Under Bed Mounted or Pick-Up Truck Rear Cap Mounted



PRODUCTS SHOWN ON LAYOUT:

Whelen Expansion CEM24 Pigtail Harness: WC24-PT120

TECHNICAL SUPPORT & SALES CONTACT:

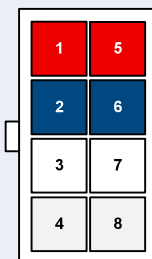
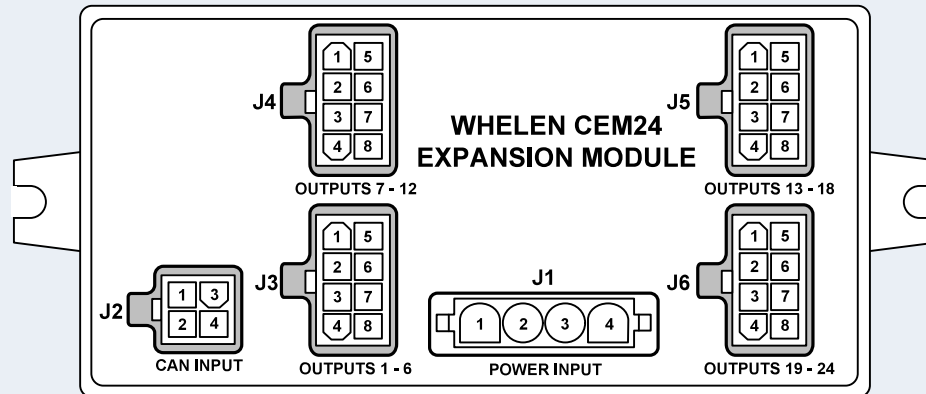
Phone: 844-423-7200

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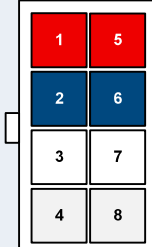
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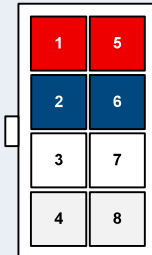
J-3 – OUTPUTS 1 – 6

- Pin 1 Output 1 (2.5A) – 18 Ga. RD Light 1 “LT 1”
- Pin 2 Output 2 (2.5A) – 18 Ga. BL Light 2 “LT 2”
- Pin 3 Output 3 (2.5A) – 18 Ga. WH Light 3 “LT 3”
- Pin 4 – No Connection – Sealing Plug
- Pin 5 Output 4 (2.5A) – 18 Ga. RD Light 4 “LT 4”
- Pin 6 Output 5 (2.5A) – 18 Ga. BL Light 5 “LT 5”
- Pin 7 Output 6 (2.5A) – 18 Ga. WH Light 6 “LT 6”
- Pin 8 – No Connection – Sealing Plug



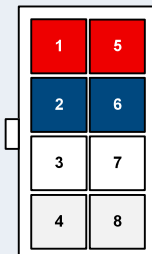
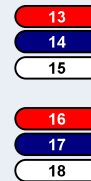
J-4 – OUTPUTS 7 – 12

- Pin 1 Output 7 (2.5A) – 18 Ga. RD Light 7 “LT 7”
- Pin 2 Output 8 (2.5A) – 18 Ga. BL Light 8 “LT 8”
- Pin 3 Output 9 (2.5A) – 18 Ga. WH Light 9 “LT 9”
- Pin 4 – No Connection – Sealing Plug
- Pin 5 Output 10 (2.5A) – 18 Ga. RD Light 10 “LT 10”
- Pin 6 Output 11 (2.5A) – 18 Ga. BL Light 11 “LT 11”
- Pin 7 Output 12 (2.5A) – 18 Ga. WH Light 12 “LT 12”
- Pin 8 – No Connection – Sealing Plug



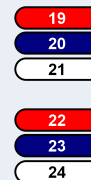
J-5 – OUTPUTS 13 – 18

- Pin 1 Output 13 (2.5A) – 18 Ga. RD Light 13 “LT 13”
- Pin 2 Output 14 (2.5A) – 18 Ga. BL Light 14 “LT 14”
- Pin 3 Output 15 (2.5A) – 18 Ga. WH Light 15 “LT 15”
- Pin 4 – No Connection – Sealing Plug
- Pin 5 Output 16 (2.5A) – 18 Ga. RD Light 16 “LT 16”
- Pin 6 Output 17 (2.5A) – 18 Ga. BL Light 17 “LT 17”
- Pin 7 Output 18 (2.5A) – 18 Ga. WH Light 18 “LT 18”
- Pin 8 – No Connection – Sealing Plug



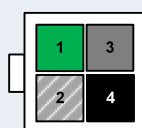
J-6 – OUTPUTS 19 – 24

- Pin 1 Output 19 (2.5A) – 18 Ga. RD Light 19 “LT 19”
- Pin 2 Output 20 (2.5A) – 18 Ga. BL Light 20 “LT 20”
- Pin 3 Output 21 (2.5A) – 18 Ga. WH Light 21 “LT 21”
- Pin 4 – No Connection – Sealing Plug
- Pin 5 Output 22 (2.5A) – 18 Ga. RD Light 22 “LT 22”
- Pin 6 Output 23 (2.5A) – 18 Ga. BL Light 23 “LT 23”
- Pin 7 Output 24 (2.5A) – 18 Ga. WH Light 24 “LT 24”
- Pin 8 – No Connection – Sealing Plug



J-1 – POWER INPUT TO CEM24

- Pin 1 Power Input 1 (15A) – 14 Ga. RD Power 1 (15A) “PWR 1” from Fuse Position 1
- Pin 2 Power Input 2 (15A) – 14 Ga. RD Power 2 (15A) “PWR 2” from Fuse Position 2
- Pin 3 Power Input 3 (15A) – 14 Ga. RD Power 3 (15A) “PWR 3” from Fuse Position 3
- Pin 4 Power Input 4 (15A) – 14 Ga. RD Power 4 (15A) “PWR 4” from Fuse Position 4



J-2 – CAN INPUT TO CEM24

- Pin 1 CAN H – 20 Ga. GN Twisted Pair
- Pin 2 Shield – 20 Ga. Shield
- Pin 3 CAN L – 20 Ga. GY Twisted Pair
- Pin 4 Main Ground Input – 18 Ga. BK CEM24 Ground

Note: Connectors shown in rear view.

LIGHTING PIGTAILS:

CEM24 OUTPUTS

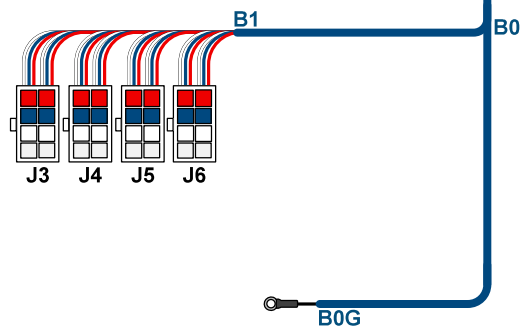
- 18 Ga. RD Light 1 "LT 1" from CEM24 J3 Pin 1
- 18 Ga. BL Light 2 "LT 2" from CEM24 J3 Pin 2
- 18 Ga. WH Light 3 "LT 3" from CEM24 J3 Pin 3
- 18 Ga. BK Lights Ground "LT 1 GND" from Ground Assembly
- 18 Ga. RD Light 4 "LT 4" from CEM24 J3 Pin 5
- 18 Ga. BL Light 5 "LT 5" from CEM24 J3 Pin 6
- 18 Ga. WH Light 6 "LT 6" from CEM24 J3 Pin 7
- 18 Ga. BK Lights Ground "LT 4 GND" from Ground Assembly
- 18 Ga. RD Light 7 "LT 7" from CEM24 J4 Pin 1
- 18 Ga. BL Light 8 "LT 8" from CEM24 J4 Pin 2
- 18 Ga. WH Light 9 "LT 9" from CEM24 J4 Pin 3
- 18 Ga. BK Lights Ground "LT 7 GND" from Ground Assembly
- 18 Ga. RD Light 10 "LT 10" from CEM24 J4 Pin 5
- 18 Ga. BL Light 11 "LT 11" from CEM24 J4 Pin 6
- 18 Ga. WH Light 12 "LT 12" from CEM24 J4 Pin 7
- 18 Ga. BK Lights Ground "LT 10 GND" from Ground Assembly
- 18 Ga. RD Light 13 "LT 13" from CEM24 J5 Pin 1
- 18 Ga. BL Light 14 "LT 14" from CEM24 J5 Pin 2
- 18 Ga. WH Light 15 "LT 15" from CEM24 J5 Pin 3
- 18 Ga. BK Lights Ground "LT 13 GND" from Ground Assembly
- 18 Ga. RD Light 16 "LT 16" from CEM24 J5 Pin 5
- 18 Ga. BL Light 17 "LT 17" from CEM24 J5 Pin 6
- 18 Ga. WH Light 18 "LT 18" from CEM24 J5 Pin 7
- 18 Ga. BK Lights Ground "LT 16 GND" from Ground Assembly
- 18 Ga. RD Light 19 "LT 19" from CEM24 J6 Pin 1
- 18 Ga. BL Light 20 "LT 20" from CEM24 J6 Pin 2
- 18 Ga. WH Light 21 "LT 21" from CEM24 J6 Pin 3
- 18 Ga. BK Lights Ground "LT 19 GND" from Ground Assembly
- 18 Ga. RD Light 22 "LT 22" from CEM24 J6 Pin 5
- 18 Ga. BL Light 23 "LT 23" from CEM24 J6 Pin 6
- 18 Ga. WH Light 24 "LT 24" from CEM24 J6 Pin 7
- 18 Ga. BK Lights Ground "LT 22 GND" from Ground Assembly



B2

RECOMMENDED POWER CABLES

- Based upon the mounting location of the CEM** module.
- WCX-PWR36-C24 – Underhood Mounted
- WCX-PWR40-C24 – Rear Tray Mounted
- WCX-PWR180-C24 – SUV Hatch Mounted, Pick-Up Truck Rear Under Bed Mounted or Pick-Up Truck Rear Cap Mounted



PRODUCTS SHOWN ON LAYOUT:

Whelen Expansion CEM24 Pigtail Harness: WC24-PT240

TECHNICAL SUPPORT & SALES CONTACT:

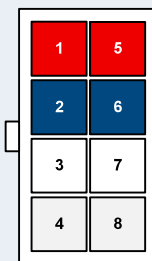
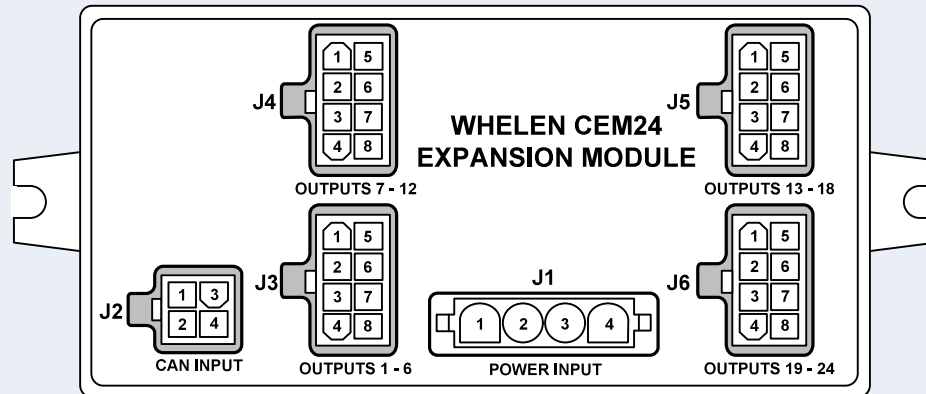
Phone: 844-423-7200

Email: sales@allfleetsolutions.com

Web: www.allfleetsolutions.com

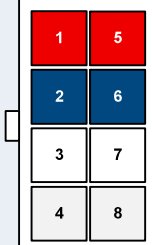
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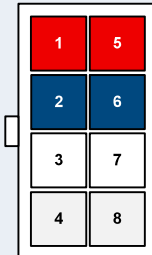
J-3 – OUTPUTS 1 – 6

- Pin 1 Output 1 (2.5A) – 18 Ga. RD Light 1 “LT 1”
- Pin 2 Output 2 (2.5A) – 18 Ga. BL Light 2 “LT 2”
- Pin 3 Output 3 (2.5A) – 18 Ga. WH Light 3 “LT 3”
- Pin 4 – No Connection – Sealing Plug
- Pin 5 Output 4 (2.5A) – 18 Ga. RD Light 4 “LT 4”
- Pin 6 Output 5 (2.5A) – 18 Ga. BL Light 5 “LT 5”
- Pin 7 Output 6 (2.5A) – 18 Ga. WH Light 6 “LT 6”
- Pin 8 – No Connection – Sealing Plug



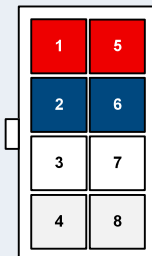
J-4 – OUTPUTS 7 – 12

- Pin 1 Output 7 (2.5A) – 18 Ga. RD Light 7 “LT 7”
- Pin 2 Output 8 (2.5A) – 18 Ga. BL Light 8 “LT 8”
- Pin 3 Output 9 (2.5A) – 18 Ga. WH Light 9 “LT 9”
- Pin 4 – No Connection – Sealing Plug
- Pin 5 Output 10 (2.5A) – 18 Ga. RD Light 10 “LT 10”
- Pin 6 Output 11 (2.5A) – 18 Ga. BL Light 11 “LT 11”
- Pin 7 Output 12 (2.5A) – 18 Ga. WH Light 12 “LT 12”
- Pin 8 – No Connection – Sealing Plug



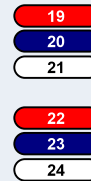
J-5 – OUTPUTS 13 – 18

- Pin 1 Output 13 (2.5A) – 18 Ga. RD Light 13 “LT 13”
- Pin 2 Output 14 (2.5A) – 18 Ga. BL Light 14 “LT 14”
- Pin 3 Output 15 (2.5A) – 18 Ga. WH Light 15 “LT 15”
- Pin 4 – No Connection – Sealing Plug
- Pin 5 Output 16 (2.5A) – 18 Ga. RD Light 16 “LT 16”
- Pin 6 Output 17 (2.5A) – 18 Ga. BL Light 17 “LT 17”
- Pin 7 Output 18 (2.5A) – 18 Ga. WH Light 18 “LT 18”
- Pin 8 – No Connection – Sealing Plug



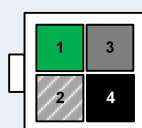
J-6 – OUTPUTS 19 – 24

- Pin 1 Output 19 (2.5A) – 18 Ga. RD Light 19 “LT 19”
- Pin 2 Output 20 (2.5A) – 18 Ga. BL Light 20 “LT 20”
- Pin 3 Output 21 (2.5A) – 18 Ga. WH Light 21 “LT 21”
- Pin 4 – No Connection – Sealing Plug
- Pin 5 Output 22 (2.5A) – 18 Ga. RD Light 22 “LT 22”
- Pin 6 Output 23 (2.5A) – 18 Ga. BL Light 23 “LT 23”
- Pin 7 Output 24 (2.5A) – 18 Ga. WH Light 24 “LT 24”
- Pin 8 – No Connection – Sealing Plug



J-1 – POWER INPUT TO CEM24

- Pin 1 Power Input 1 (15A) – 14 Ga. RD Power 1 (15A) “PWR 1” from Fuse Position 1
- Pin 2 Power Input 2 (15A) – 14 Ga. RD Power 2 (15A) “PWR 2” from Fuse Position 2
- Pin 3 Power Input 3 (15A) – 14 Ga. RD Power 3 (15A) “PWR 3” from Fuse Position 3
- Pin 4 Power Input 4 (15A) – 14 Ga. RD Power 4 (15A) “PWR 4” from Fuse Position 4



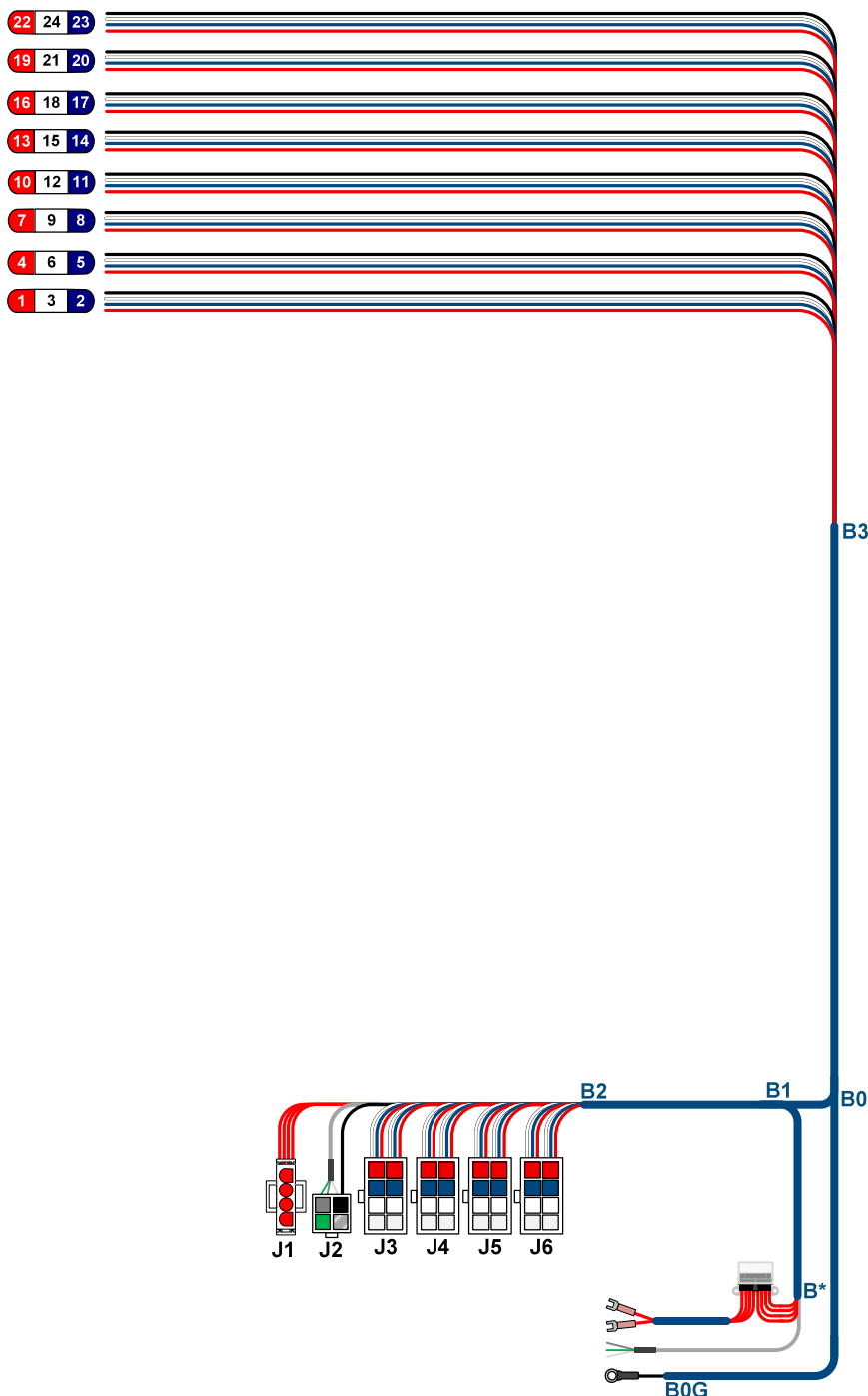
J-2 – CAN INPUT TO CEM24

- Pin 1 CAN H – 20 Ga. GN Twisted Pair
- Pin 2 Shield – 20 Ga. Shield
- Pin 3 CAN L – 20 Ga. GY Twisted Pair
- Pin 4 Main Ground Input – 18 Ga. BK CEM24 Ground

Note: Connectors shown in rear view.

LIGHTING PIGTAILS: CEM24 OUTPUTS

- 18 Ga. RD Light 1 "LT 1" from CEM24 J3 Pin 1
- 18 Ga. BL Light 2 "LT 2" from CEM24 J3 Pin 2
- 18 Ga. WH Light 3 "LT 3" from CEM24 J3 Pin 3
- 18 Ga. BK Lights Ground "LT 1 GND" from Ground Assembly
- 18 Ga. RD Light 4 "LT 4" from CEM24 J3 Pin 5
- 18 Ga. BL Light 5 "LT 5" from CEM24 J3 Pin 6
- 18 Ga. WH Light 6 "LT 6" from CEM24 J3 Pin 7
- 18 Ga. BK Lights Ground "LT 4 GND" from Ground Assembly
- 18 Ga. RD Light 7 "LT 7" from CEM24 J4 Pin 1
- 18 Ga. BL Light 8 "LT 8" from CEM24 J4 Pin 2
- 18 Ga. WH Light 9 "LT 9" from CEM24 J4 Pin 3
- 18 Ga. BK Lights Ground "LT 7 GND" from Ground Assembly
- 18 Ga. RD Light 10 "LT 10" from CEM24 J4 Pin 5
- 18 Ga. BL Light 11 "LT 11" from CEM24 J4 Pin 6
- 18 Ga. WH Light 12 "LT 12" from CEM24 J4 Pin 7
- 18 Ga. BK Lights Ground "LT 10 GND" from Ground Assembly
- 18 Ga. RD Light 13 "LT 13" from CEM24 J5 Pin 1
- 18 Ga. BL Light 14 "LT 14" from CEM24 J5 Pin 2
- 18 Ga. WH Light 15 "LT 15" from CEM24 J5 Pin 3
- 18 Ga. BK Lights Ground "LT 13 GND" from Ground Assembly
- 18 Ga. RD Light 16 "LT 16" from CEM24 J5 Pin 5
- 18 Ga. BL Light 17 "LT 17" from CEM24 J5 Pin 6
- 18 Ga. WH Light 18 "LT 18" from CEM24 J5 Pin 7
- 18 Ga. BK Lights Ground "LT 16 GND" from Ground Assembly
- 18 Ga. RD Light 19 "LT 19" from CEM24 J6 Pin 1
- 18 Ga. BL Light 20 "LT 20" from CEM24 J6 Pin 2
- 18 Ga. WH Light 21 "LT 21" from CEM24 J6 Pin 3
- 18 Ga. BK Lights Ground "LT 19 GND" from Ground Assembly
- 18 Ga. RD Light 22 "LT 22" from CEM24 J6 Pin 5
- 18 Ga. BL Light 23 "LT 23" from CEM24 J6 Pin 6
- 18 Ga. WH Light 24 "LT 24" from CEM24 J6 Pin 7
- 18 Ga. BK Lights Ground "LT 22 GND" from Ground Assembly



WeCanX DATA:

CAN DATA INPUT PIGTAIL

- 20 Ga. GN Twisted Pair – Can High to CEM24 J2 Pin 1
- 20 Ga. Shield to CEM24 J2 Pin 3
- 20 Ga. GY Twisted Pair – Can Low to CEM24 J2 Pin 2

PRODUCTS SHOWN ON LAYOUT:

Whelen Expansion CEM24 Pigtail Harness: WC24-PD-PT120

TECHNICAL SUPPORT & SALES CONTACT:

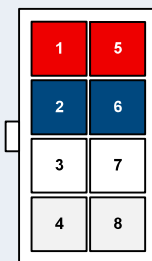
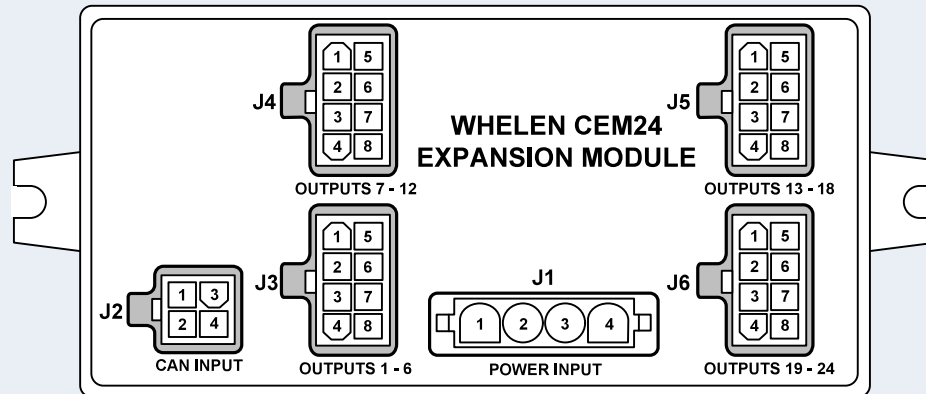
Phone: 844-423-7200

Email: sales@allfleetsolutions.com

Web: www.allfleetsolutions.com

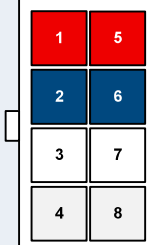
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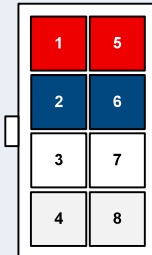
J-3 – OUTPUTS 1 – 6

- Pin 1 Output 1 (2.5A) – 18 Ga. RD Light 1 “LT 1”
- Pin 2 Output 2 (2.5A) – 18 Ga. BL Light 2 “LT 2”
- Pin 3 Output 3 (2.5A) – 18 Ga. WH Light 3 “LT 3”
- Pin 4 – No Connection – Sealing Plug
- Pin 5 Output 4 (2.5A) – 18 Ga. RD Light 4 “LT 4”
- Pin 6 Output 5 (2.5A) – 18 Ga. BL Light 5 “LT 5”
- Pin 7 Output 6 (2.5A) – 18 Ga. WH Light 6 “LT 6”
- Pin 8 – No Connection – Sealing Plug



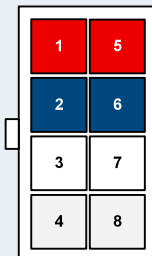
J-4 – OUTPUTS 7 – 12

- Pin 1 Output 7 (2.5A) – 18 Ga. RD Light 7 “LT 7”
- Pin 2 Output 8 (2.5A) – 18 Ga. BL Light 8 “LT 8”
- Pin 3 Output 9 (2.5A) – 18 Ga. WH Light 9 “LT 9”
- Pin 4 – No Connection – Sealing Plug
- Pin 5 Output 10 (2.5A) – 18 Ga. RD Light 10 “LT 10”
- Pin 6 Output 11 (2.5A) – 18 Ga. BL Light 11 “LT 11”
- Pin 7 Output 12 (2.5A) – 18 Ga. WH Light 12 “LT 12”
- Pin 8 – No Connection – Sealing Plug



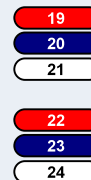
J-5 – OUTPUTS 13 – 18

- Pin 1 Output 13 (2.5A) – 18 Ga. RD Light 13 “LT 13”
- Pin 2 Output 14 (2.5A) – 18 Ga. BL Light 14 “LT 14”
- Pin 3 Output 15 (2.5A) – 18 Ga. WH Light 15 “LT 15”
- Pin 4 – No Connection – Sealing Plug
- Pin 5 Output 16 (2.5A) – 18 Ga. RD Light 16 “LT 16”
- Pin 6 Output 17 (2.5A) – 18 Ga. BL Light 17 “LT 17”
- Pin 7 Output 18 (2.5A) – 18 Ga. WH Light 18 “LT 18”
- Pin 8 – No Connection – Sealing Plug



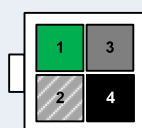
J-6 – OUTPUTS 19 – 24

- Pin 1 Output 19 (2.5A) – 18 Ga. RD Light 19 “LT 19”
- Pin 2 Output 20 (2.5A) – 18 Ga. BL Light 20 “LT 20”
- Pin 3 Output 21 (2.5A) – 18 Ga. WH Light 21 “LT 21”
- Pin 4 – No Connection – Sealing Plug
- Pin 5 Output 22 (2.5A) – 18 Ga. RD Light 22 “LT 22”
- Pin 6 Output 23 (2.5A) – 18 Ga. BL Light 23 “LT 23”
- Pin 7 Output 24 (2.5A) – 18 Ga. WH Light 24 “LT 24”
- Pin 8 – No Connection – Sealing Plug



J-1 – POWER INPUT TO CEM24

- Pin 1 Power Input 1 (15A) – 14 Ga. RD Power 1 (15A) “PWR 1” from Fuse Position 1
- Pin 2 Power Input 2 (15A) – 14 Ga. RD Power 2 (15A) “PWR 2” from Fuse Position 2
- Pin 3 Power Input 3 (15A) – 14 Ga. RD Power 3 (15A) “PWR 3” from Fuse Position 3
- Pin 4 Power Input 4 (15A) – 14 Ga. RD Power 4 (15A) “PWR 4” from Fuse Position 4



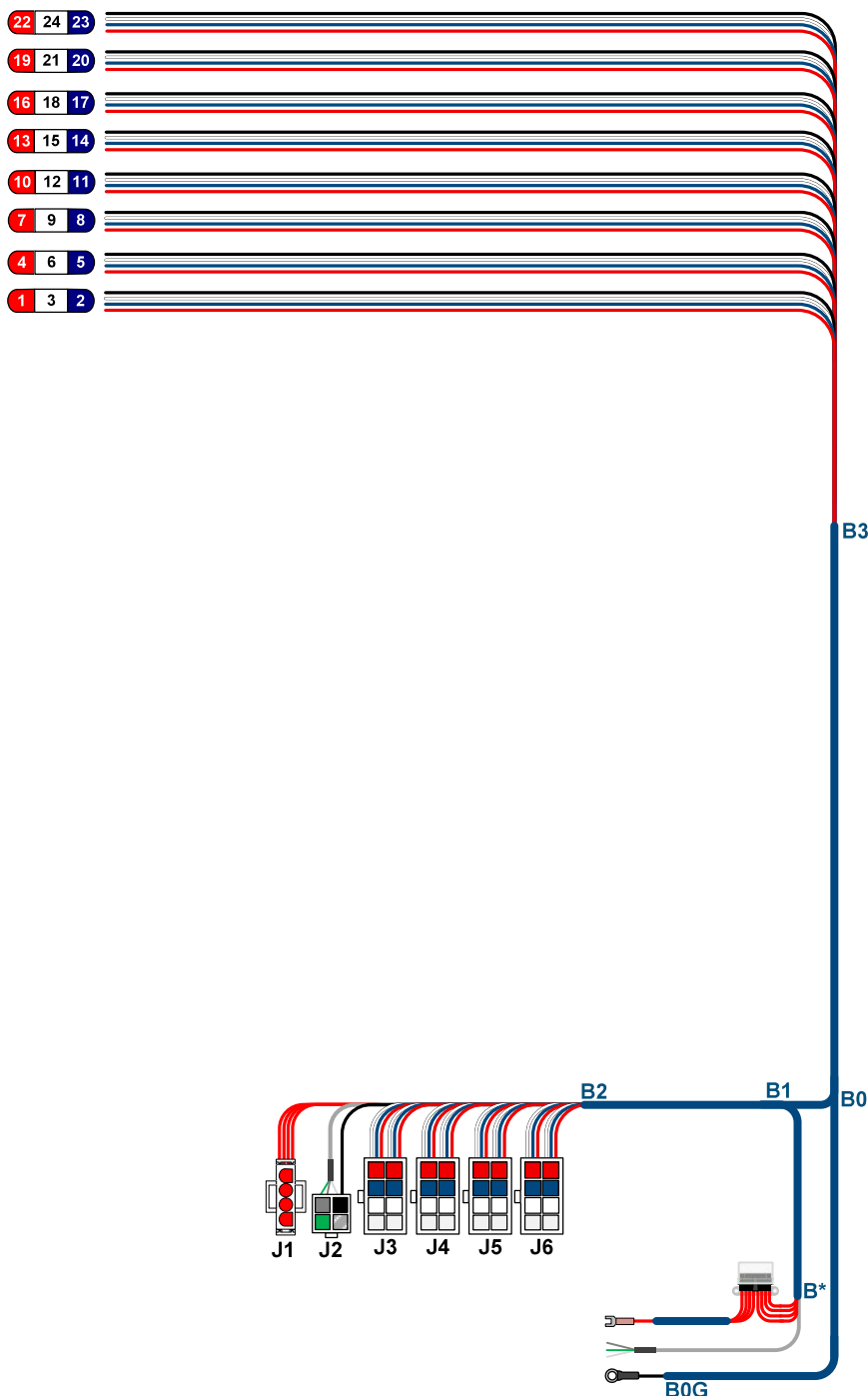
J-2 – CAN INPUT TO CEM24

- Pin 1 CAN H – 20 Ga. GN Twisted Pair
- Pin 2 Shield – 20 Ga. Shield
- Pin 3 CAN L – 20 Ga. GY Twisted Pair
- Pin 4 Main Ground Input – 18 Ga. BK CEM24 Ground

Note: Connectors shown in rear view.

LIGHTING PIGTAILS: CEM24 OUTPUTS

- 18 Ga. RD Light 1 "LT 1" from CEM24 J3 Pin 1
- 18 Ga. BL Light 2 "LT 2" from CEM24 J3 Pin 2
- 18 Ga. WH Light 3 "LT 3" from CEM24 J3 Pin 3
- 18 Ga. BK Lights Ground "LT 1 GND" from Ground Assembly
- 18 Ga. RD Light 4 "LT 4" from CEM24 J3 Pin 5
- 18 Ga. BL Light 5 "LT 5" from CEM24 J3 Pin 6
- 18 Ga. WH Light 6 "LT 6" from CEM24 J3 Pin 7
- 18 Ga. BK Lights Ground "LT 4 GND" from Ground Assembly
- 18 Ga. RD Light 7 "LT 7" from CEM24 J4 Pin 1
- 18 Ga. BL Light 8 "LT 8" from CEM24 J4 Pin 2
- 18 Ga. WH Light 9 "LT 9" from CEM24 J4 Pin 3
- 18 Ga. BK Lights Ground "LT 7 GND" from Ground Assembly
- 18 Ga. RD Light 10 "LT 10" from CEM24 J4 Pin 5
- 18 Ga. BL Light 11 "LT 11" from CEM24 J4 Pin 6
- 18 Ga. WH Light 12 "LT 12" from CEM24 J4 Pin 7
- 18 Ga. BK Lights Ground "LT 10 GND" from Ground Assembly
- 18 Ga. RD Light 13 "LT 13" from CEM24 J5 Pin 1
- 18 Ga. BL Light 14 "LT 14" from CEM24 J5 Pin 2
- 18 Ga. WH Light 15 "LT 15" from CEM24 J5 Pin 3
- 18 Ga. BK Lights Ground "LT 13 GND" from Ground Assembly
- 18 Ga. RD Light 16 "LT 16" from CEM24 J5 Pin 5
- 18 Ga. BL Light 17 "LT 17" from CEM24 J5 Pin 6
- 18 Ga. WH Light 18 "LT 18" from CEM24 J5 Pin 7
- 18 Ga. BK Lights Ground "LT 16 GND" from Ground Assembly
- 18 Ga. RD Light 19 "LT 19" from CEM24 J6 Pin 1
- 18 Ga. BL Light 20 "LT 20" from CEM24 J6 Pin 2
- 18 Ga. WH Light 21 "LT 21" from CEM24 J6 Pin 3
- 18 Ga. BK Lights Ground "LT 19 GND" from Ground Assembly
- 18 Ga. RD Light 22 "LT 22" from CEM24 J6 Pin 5
- 18 Ga. BL Light 23 "LT 23" from CEM24 J6 Pin 6
- 18 Ga. WH Light 24 "LT 24" from CEM24 J6 Pin 7
- 18 Ga. BK Lights Ground "LT 22 GND" from Ground Assembly



WeCanX DATA:

CAN DATA INPUT PIGTAIL

- 20 Ga. GN Twisted Pair – Can High to CEM24 J2 Pin 1
- 20 Ga. Shield to CEM24 J2 Pin 3
- 20 Ga. GY Twisted Pair – Can Low to CEM24 J2 Pin 2

PRODUCTS SHOWN ON LAYOUT:

Whelen Expansion CEM24 Pigtail Harness: WC24-PD-PT240

TECHNICAL SUPPORT & SALES CONTACT:

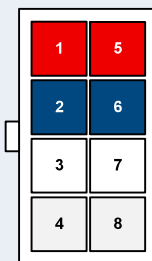
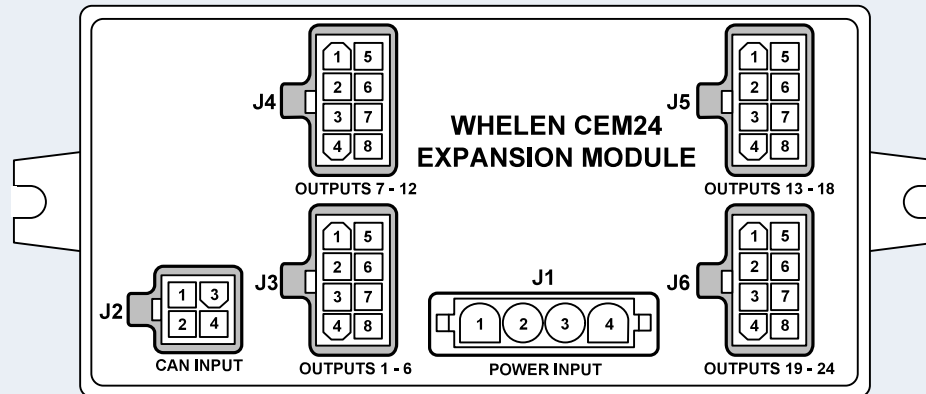
Phone: 844-423-7200

Email: sales@allfleetsolutions.com

Web: www.allfleetsolutions.com

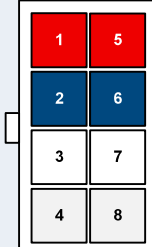
EDD 052026

ECN 000000



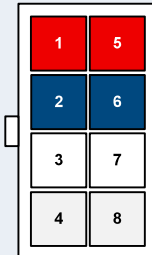
J-3 – OUTPUTS 1 – 6

- Pin 1 Output 1 (2.5A) – 18 Ga. RD Light 1 “LT 1”
- Pin 2 Output 2 (2.5A) – 18 Ga. BL Light 2 “LT 2”
- Pin 3 Output 3 (2.5A) – 18 Ga. WH Light 3 “LT 3”
- Pin 4 – No Connection – Sealing Plug
- Pin 5 Output 4 (2.5A) – 18 Ga. RD Light 4 “LT 4”
- Pin 6 Output 5 (2.5A) – 18 Ga. BL Light 5 “LT 5”
- Pin 7 Output 6 (2.5A) – 18 Ga. WH Light 6 “LT 6”
- Pin 8 – No Connection – Sealing Plug



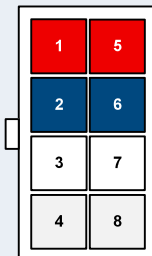
J-4 – OUTPUTS 7 – 12

- Pin 1 Output 7 (2.5A) – 18 Ga. RD Light 7 “LT 7”
- Pin 2 Output 8 (2.5A) – 18 Ga. BL Light 8 “LT 8”
- Pin 3 Output 9 (2.5A) – 18 Ga. WH Light 9 “LT 9”
- Pin 4 – No Connection – Sealing Plug
- Pin 5 Output 10 (2.5A) – 18 Ga. RD Light 10 “LT 10”
- Pin 6 Output 11 (2.5A) – 18 Ga. BL Light 11 “LT 11”
- Pin 7 Output 12 (2.5A) – 18 Ga. WH Light 12 “LT 12”
- Pin 8 – No Connection – Sealing Plug



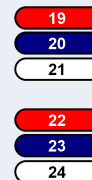
J-5 – OUTPUTS 13 – 18

- Pin 1 Output 13 (2.5A) – 18 Ga. RD Light 13 “LT 13”
- Pin 2 Output 14 (2.5A) – 18 Ga. BL Light 14 “LT 14”
- Pin 3 Output 15 (2.5A) – 18 Ga. WH Light 15 “LT 15”
- Pin 4 – No Connection – Sealing Plug
- Pin 5 Output 16 (2.5A) – 18 Ga. RD Light 16 “LT 16”
- Pin 6 Output 17 (2.5A) – 18 Ga. BL Light 17 “LT 17”
- Pin 7 Output 18 (2.5A) – 18 Ga. WH Light 18 “LT 18”
- Pin 8 – No Connection – Sealing Plug



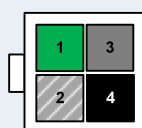
J-6 – OUTPUTS 19 – 24

- Pin 1 Output 19 (2.5A) – 18 Ga. RD Light 19 “LT 19”
- Pin 2 Output 20 (2.5A) – 18 Ga. BL Light 20 “LT 20”
- Pin 3 Output 21 (2.5A) – 18 Ga. WH Light 21 “LT 21”
- Pin 4 – No Connection – Sealing Plug
- Pin 5 Output 22 (2.5A) – 18 Ga. RD Light 22 “LT 22”
- Pin 6 Output 23 (2.5A) – 18 Ga. BL Light 23 “LT 23”
- Pin 7 Output 24 (2.5A) – 18 Ga. WH Light 24 “LT 24”
- Pin 8 – No Connection – Sealing Plug



J-1 – POWER INPUT TO CEM24

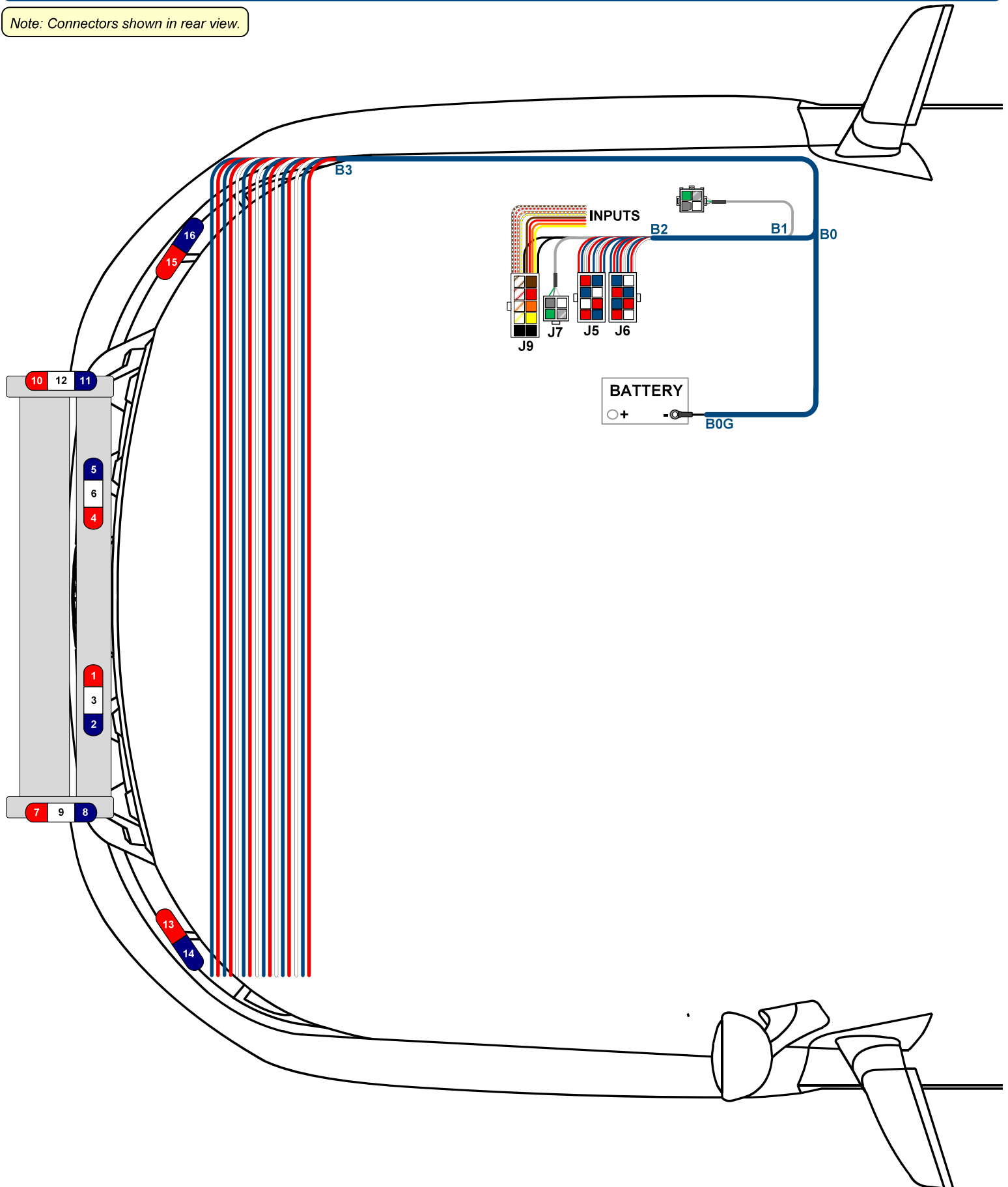
- Pin 1 Power Input 1 (15A) – 14 Ga. RD Power 1 (15A) “PWR 1” from Fuse Position 1
- Pin 2 Power Input 2 (15A) – 14 Ga. RD Power 2 (15A) “PWR 2” from Fuse Position 2
- Pin 3 Power Input 3 (15A) – 14 Ga. RD Power 3 (15A) “PWR 3” from Fuse Position 3
- Pin 4 Power Input 4 (15A) – 14 Ga. RD Power 4 (15A) “PWR 4” from Fuse Position 4

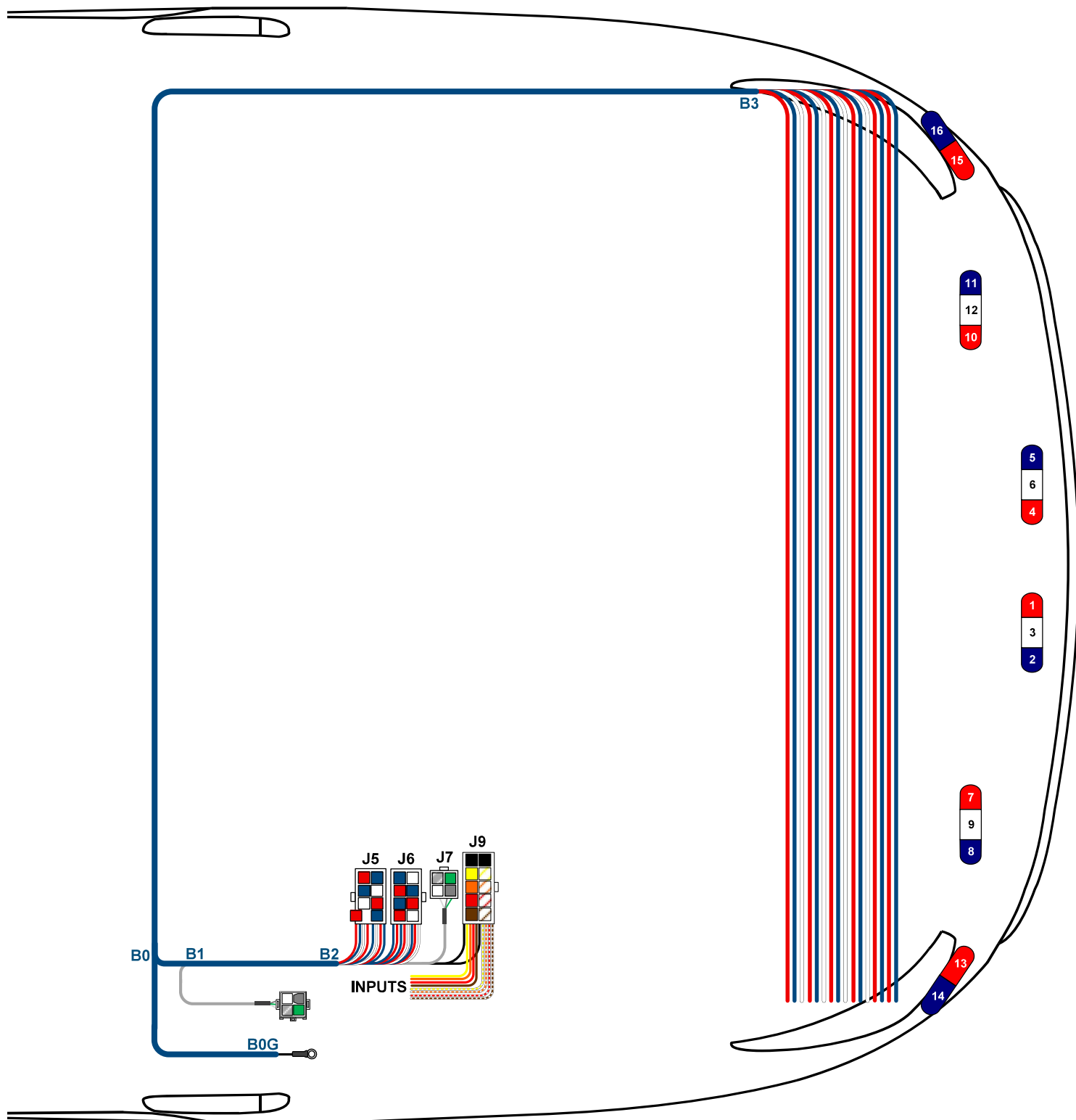


J-2 – CAN INPUT TO CEM24

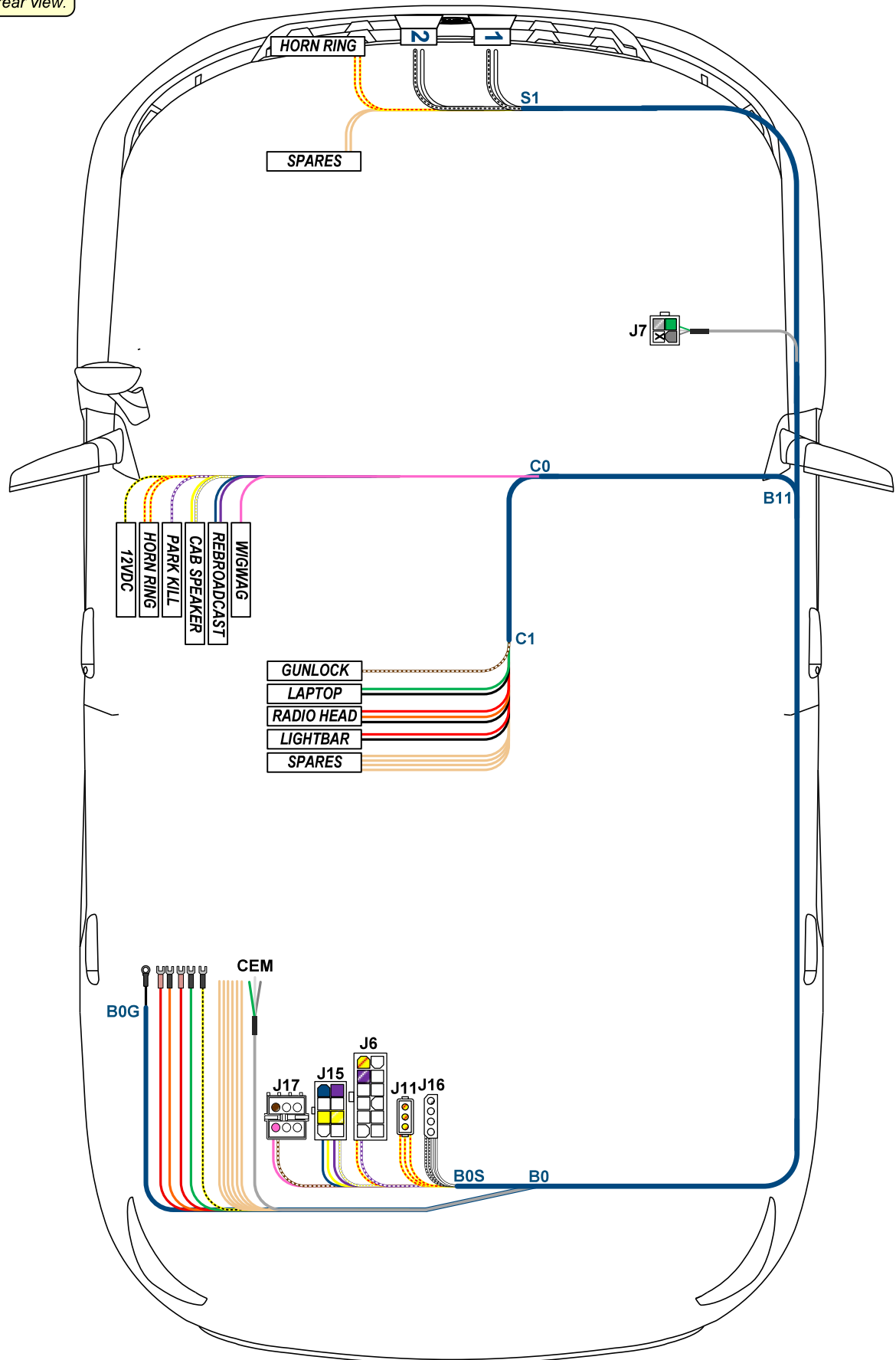
- Pin 1 CAN H – 20 Ga. GN Twisted Pair
- Pin 2 Shield – 20 Ga. Shield
- Pin 3 CAN L – 20 Ga. GY Twisted Pair
- Pin 4 Main Ground Input – 18 Ga. BK CEM24 Ground

Note: Connectors shown in rear view.





Note: Connectors shown in rear view.



PRODUCTS SHOWN ON LAYOUT:

Whelen Core C399 Main Harness: WCX-MH-002

TECHNICAL SUPPORT & SALES CONTACT:

Phone: 844-423-7200

Email: sales@allfleetsolutions.com

Web: www.allfleetsolutions.com

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ECN 000000

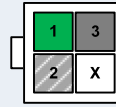
FRONT COMPONENTS:

SPEAKERS

- 16 Ga. WH/BK Speaker 1 Positive "SPKR 1 POS" from Core J16 Pin 1
- 16 Ga. WH/BK Speaker 2 Positive "SPKR 2 POS" from Core J16 Pin 2
- 16 Ga. WH Speaker 1 Common "SPKR 1 COM" from Core J16 Pin 3
- 16 Ga. WH Speaker 2 Common "SPKR 2 COM" from Core J16 Pin 4

HORN RING

- 16 Ga. YW/RD Horn "HORN 2" from Core J11 Pin 3 Assembly
- 16 Ga. YW/RD Horn Ring "HORN RG 2" from Core J11 Pin 2 Assembly



J7 DATA CONNECTOR

- Pin 1 CAN H – 20 Ga. GN Twisted Pair from Core J18 Pin 1
- Pin 2 Shield – 20 Ga. Shield from Core J18 Pin 2
- Pin 3 CAN L – 20 Ga. GY Twisted Pair from Core J18 Pin 3
- Pin 4 Not Used – Plug

FRONT SPARES

- 14 Ga. TN Front Spare 1 "SPARE 1" from Rear Tray
- 14 Ga. TN Front Spare 2 "SPARE 2" from Rear Tray

MID COMPONENTS:

12VDC

- 18 Ga. YW/BK 12VDC Ignition Sense "12V IGN" to Rear Tray

HORN RING

- 16 Ga. YW/RD Horn "HORN 1" from Core J11 Pin 3 Assembly
- 16 Ga. YW/RD Horn Ring "HORN RG 1" from Core J11 Pin 2 Assembly

PARK KILL

- 18 Ga. PU/WH Park Kill Input Sense "PARK KILL" to Core J6 Pin 2

CABIN SPEAKER

- 18 Ga. YW Cabin Speaker Positive "C SPKR POS" from J15 Pin 3
- 18 Ga. WH/YW Cabin Speaker Common "C SPKR COM" from J15 Pin 7

RADIO REBROADCAST

- 18 Ga. BL Radio Rebroadcast Positive + "REBROAD" from Core J15 Pin 1
- 18 Ga. PU Radio Rebroadcast Common - "REBROAD" from Core J15 Pin 5

WIGWAG

- 16 Ga. PK WigWag Flash Trigger "WIGWAG" from Core J17 Pin 2

GUNLOCK

- 16 Ga. BR/WH Gunlock Output Trigger "GUNLOCK" from Core J17 Pin 1

LAPTOP

- 14 Ga. GN Laptop Power "LAPTOP PWR" from Rear Tray
- 14 Ga. BK Laptop Ground "LAPTOP GND" from Ground Ring

LIGHTBAR

- 10 Ga. RD Lightbar Power "LB PWR" from Rear Tray
- 10 Ga. BK Lightbar Ground "LB GND" from Ground Ring

RADIO HEAD

- 14 Ga. RD Radio Head Power "RDO HD PWR" from Rear Tray
- 14 Ga. OR Radio Head Ignition "RDO HD IGN" from Rear Tray
- 14 Ga. BK Radio Head Ground "RDO HD GND" from Ground Ring

CONSOLE SPARES

- 14 Ga. TN Console Spare 3 "SPARE 3" from Rear Tray
- 14 Ga. TN Console Spare 4 "SPARE 4" from Rear Tray
- 14 Ga. TN Console Spare 5 "SPARE 5" from Rear Tray
- 14 Ga. TN Console Spare 6 "SPARE 6" from Rear Tray

REAR COMPONENTS:

GROUND RING

- 10 Ga. BK Lightbar Ground "LB GND" to Console
- 14 Ga. BK Laptop Ground "LAPTOP GND" to Console
- 14 Ga. BK Radio Head Ground "RDO HD GND" to Console

RADIO HEAD

- 14 Ga. RD Radio Head Power "RDO HD PWR" to Console
- 14 Ga. OR Radio Head Ignition "RDO HD IGN" to Console

LIGHTBAR

- 10 Ga. RD Lightbar Power "LB PWR" to Console

LAPTOP

- 14 Ga. GN Laptop Power "LAPTOP PWR" to Console

SPARES

- 14 Ga. TN Front Spare 1 "SPARE 1" to Underhood
- 14 Ga. TN Front Spare 2 "SPARE 2" to Underhood
- 14 Ga. TN Console Spare 3 "SPARE 3" to Console
- 14 Ga. TN Console Spare 4 "SPARE 4" to Console
- 14 Ga. TN Console Spare 5 "SPARE 5" to Console
- 14 Ga. TN Console Spare 6 "SPARE 6" to Console

WeCanX DATA INPUTS

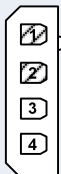
- 20 Ga. GN Twisted Pair to CEM16 J7 Pin 1
- 20 Ga. Shield to CEM16 J7 Pin 2
- 20 Ga. GY Twisted Pair to CEM16 J7 Pin 3

J11 – DRY CONTACT RELAY



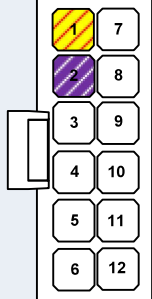
- Pin 1 Normally Open – 16 Ga. YW/RD "HORN TRANS"
- Pin 2 Common – 16 Ga. YW/RD "HORN RING"
- Pin 3 Normally Closed – 16 Ga. YW/RD "HORN"

J16 – SIREN OUT

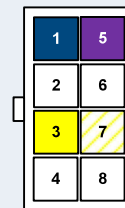


- Pin 1 Speaker 1 (+) – 16 Ga. WH/BK "SPKR 1 POS"
- Pin 2 Speaker 2 (+) – 16 Ga. WH/BK "SPKR 2 POS"
- Pin 3 Speaker 1 (–) – 16 Ga. WH "SPKR 1 COM"
- Pin 4 Speaker 2 (–) – 16 Ga. WH "SPKR 2 COM"

J6 – DIGITAL INPUTS



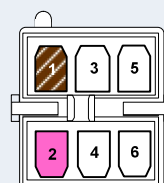
- Pin 1 Input 1 – 16 Ga. YW/RD "HORN TRANS"
- Pin 2 Input 2 – 18 Ga. PU/WH "PARK KILL"
- Pin 3 Input 3 –
- Pin 4 Input 4 –
- Pin 5 Input 5 –
- Pin 6 Input 6 –
- Pin 7 Input 7 –
- Pin 8 Input 8 –
- Pin 9 Input 9 –
- Pin 10 Input 10 –
- Pin 11 Input 11 –
- Pin 12 Input 12 –



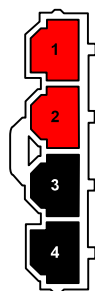
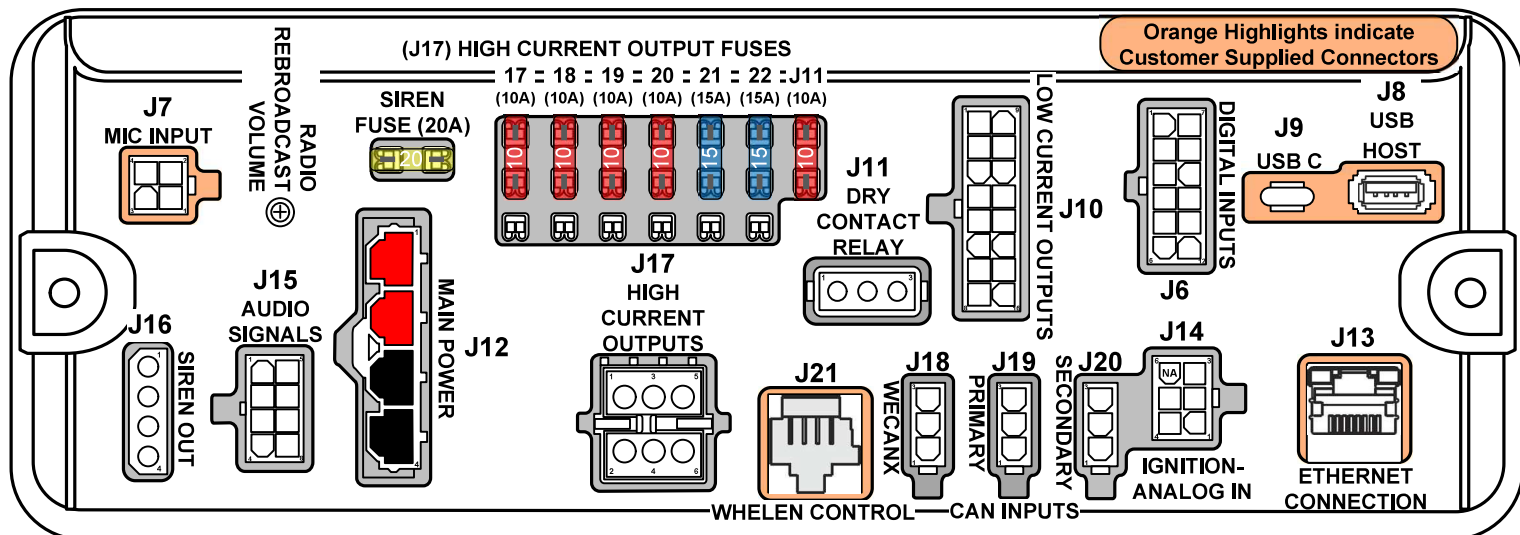
J15 – AUDIO SIGNALS

- Pin 1 Radio In (+) – 18 Ga. BL "REBROAD"
- Pin 2 Aux In (+) –
- Pin 3 Cab Speaker (+) – 18 Ga. YW "C SPKR POS"
- Pin 4 Aux Out (+) –
- Pin 5 Radio In (–) – 18 Ga. PU "REBROAD"
- Pin 6 Aux In (–) –
- Pin 7 Cab Speaker (–) – 18 Ga. WH/YW "C SPKR COM"
- Pin 8 Aux Out (–) –

J17 – HIGH CURRENT OUTPUTS



- Pin 1 Output 19 (10A) – 16 Ga. BR/WH "GUNLOCK"
- Pin 2 Output 18 (10A) – 16 Ga. PK "WIGWAG"
- Pin 3 Output 20 (10A) –
- Pin 4 Output 17 (10A) –
- Pin 5 Output 21 (15A) –
- Pin 6 Output 22 (15A) –



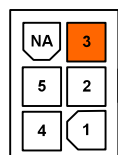
J12 – MAIN POWER

- Pin 1 Power In (40A) – 10 Ga. RD Power “POWER 2”
- Pin 2 Power In (40A) – 10 Ga. RD Power “POWER 3”
- Pin 3 Ground In – 10 Ga. BK Ground “GROUND 2”
- Pin 4 Ground In – 10 Ga. BK Ground “GROUND 3”



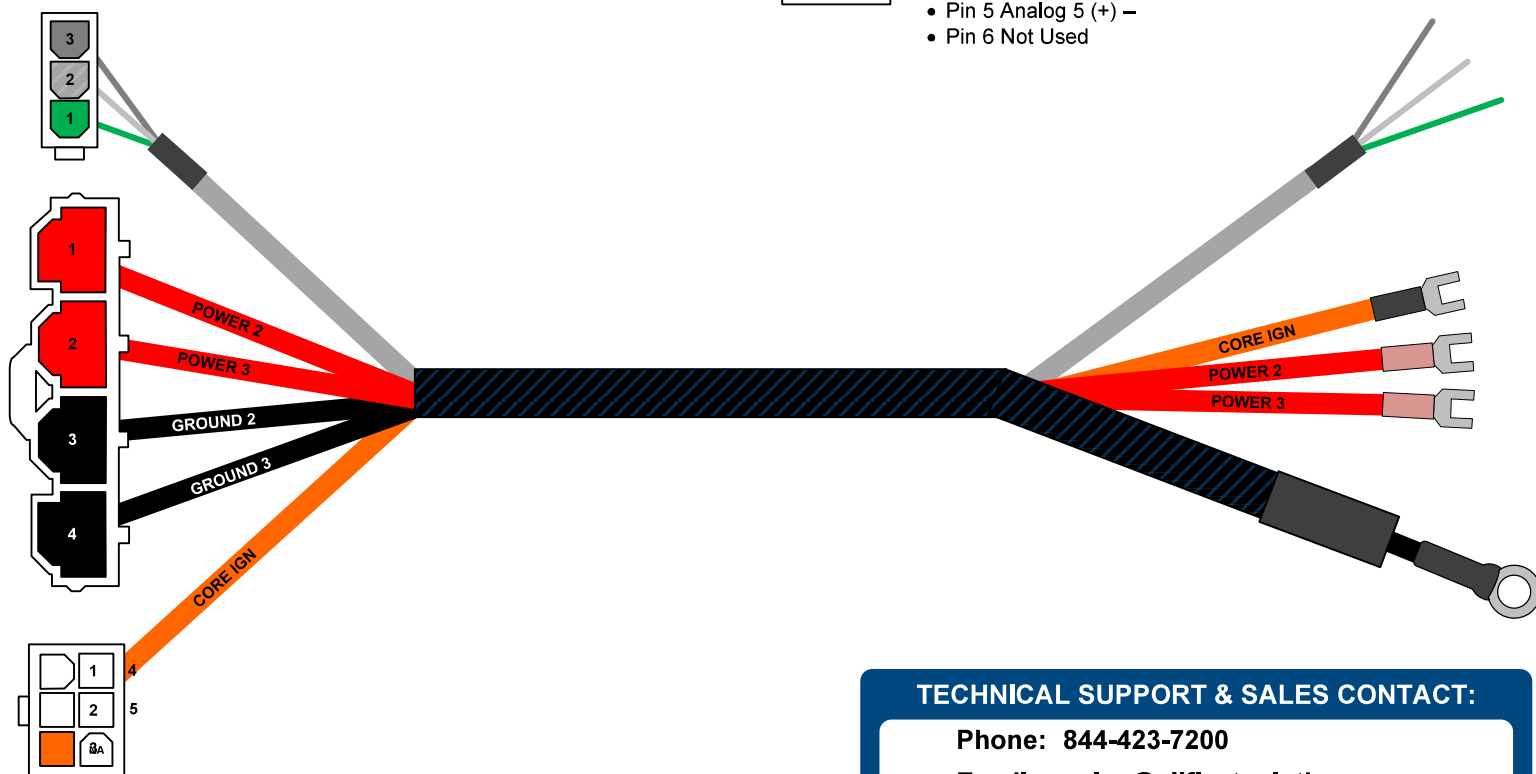
J18 CAN INPUTS

- Pin 1 Can High – 20 Ga. GN Twisted Pair
- Pin 2 Shield – 20 Ga. Shield
- Pin 3 Can Low – 20 Ga. GY Twisted Pair



J14 – IGNITION-ANALOG IN

- Pin 1 Analog 1 (+) –
- Pin 2 Analog 2 (+) –
- Pin 3 Ignition In (3A) – 18 Ga. OR Siren Ignition “CORE IGN”
- Pin 4 Analog 4 (+) –
- Pin 5 Analog 5 (+) –
- Pin 6 Not Used



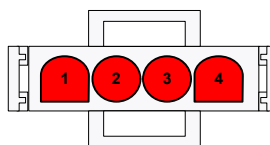
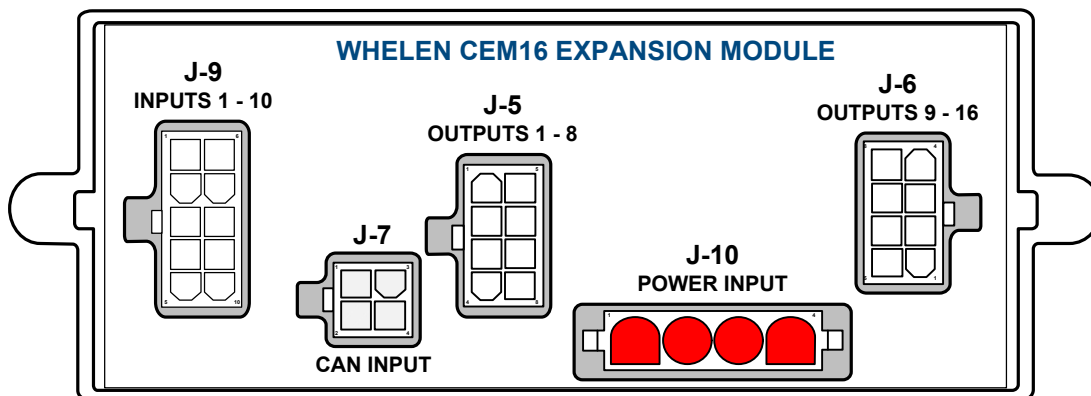
TECHNICAL SUPPORT & SALES CONTACT:

Phone: 844-423-7200

Email: sales@allfleetsolutions.com

Web: www.allfleetsolutions.com

Note: Connector shown in rear view.

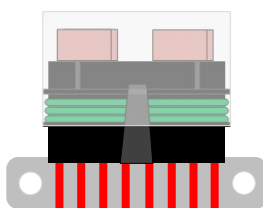


J-10 – POWER INPUT

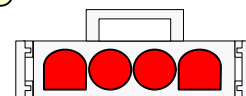
- Pin 1 Power Input 1 (10A) – 16 Ga. RD Power “POWER 1”
- Pin 2 Power Input 2 (10A) – 16 Ga. RD Power “POWER 2”
- Pin 3 Power Input 3 (10A) – 16 Ga. RD Power “POWER 3”
- Pin 4 Power Input 4 (10A) – 16 Ga. RD Power “POWER 4”

The Installer must torque all ring terminal connections to 50 in/lbs. Failure to adequately torque connections will result in premature failure of the product.

To Battery



Sealed 4-Position Fuse Holder with 4 10 Amp Fuses.



CEM-PWR36

- Power – ¼" Ring at Battery
- (4) 16 Ga. RD Power Wires to Ring
- Fuse 1, 10 Amp: 16 Ga. RD Power 1
- Fuse 2, 10 Amp: 16 Ga. RD Power 2
- Fuse 3, 10 Amp: 16 Ga. RD Power 3
- Fuse 4, 10 Amp: 16 Ga. RD Power 4

TECHNICAL SUPPORT & SALES CONTACT:

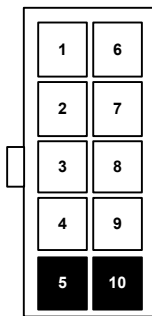
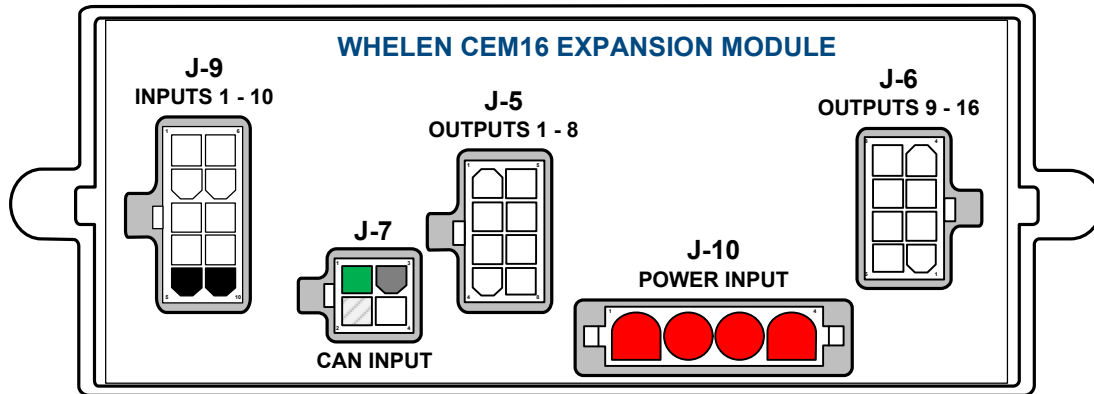
Phone: 844-423-7200

Email: sales@allfleetsolutions.com

Web: www.allfleetsolutions.com

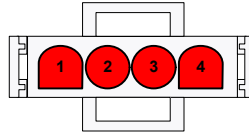
EDD 121025

ECN 000000



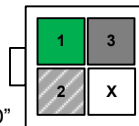
J-9 – INPUTS 1 thru 10

- Pin 1 Input 1 Ground (–) –
- Pin 2 Input 2 Ground (–) –
- Pin 3 Input 3 Ground (–) –
- Pin 4 Input 4 Ground (–) –
- Pin 5 Main Ground Input – 18 Ga. BK Ground “J9 5 GND”
- Pin 6 Input 1 Positive (+) –
- Pin 7 Input 2 Positive (+) –
- Pin 8 Input 3 Positive (+) –
- Pin 9 Input 4 Positive (+) –
- Pin 10 Main Ground Input – 18 Ga. BK Ground “J9 10 GND”



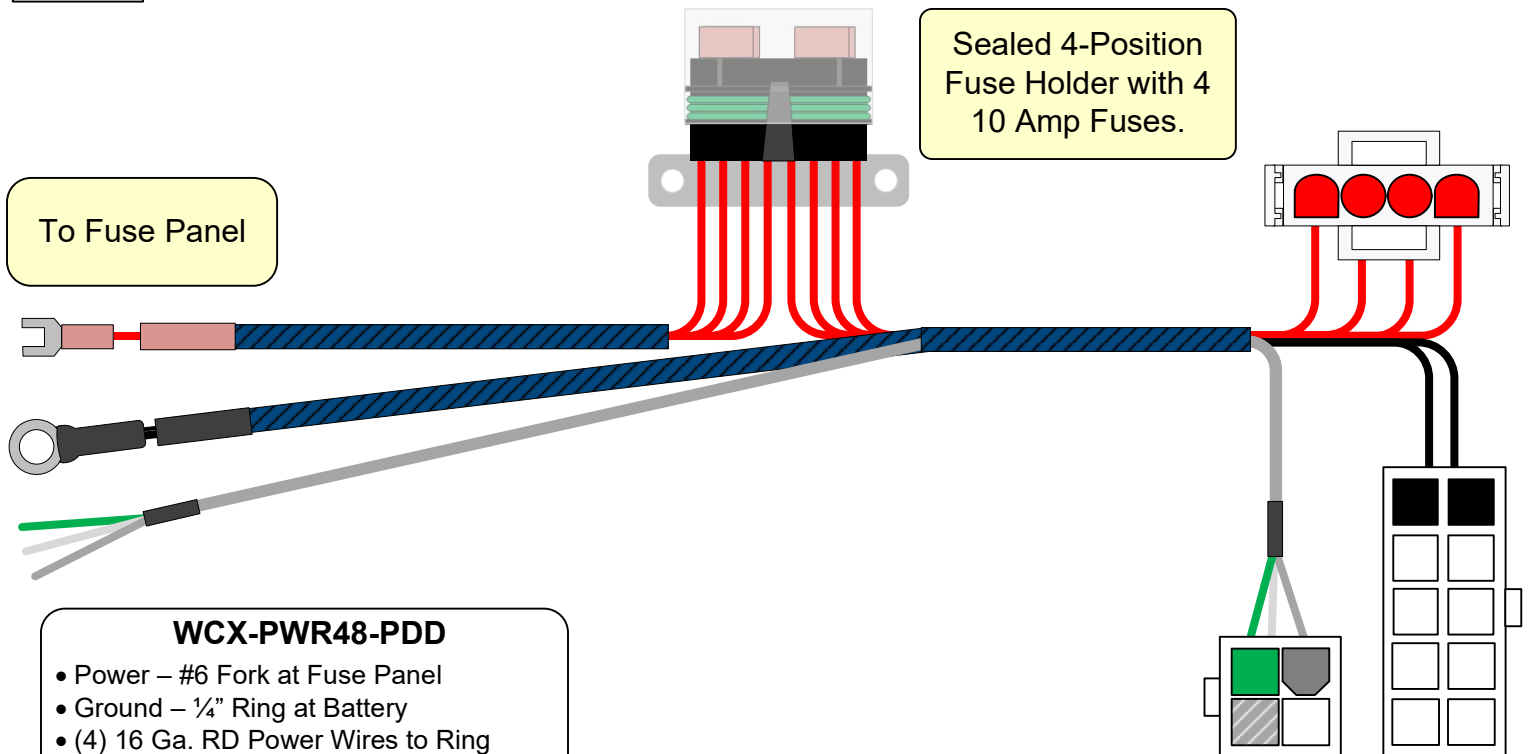
J-10 – POWER INPUT

- Pin 1 Power Input 1 (10A) – 16 Ga. RD Power “POWER 1”
- Pin 2 Power Input 2 (10A) – 16 Ga. RD Power “POWER 2”
- Pin 3 Power Input 3 (10A) – 16 Ga. RD Power “POWER 3”
- Pin 4 Power Input 4 (10A) – 16 Ga. RD Power “POWER 4”



J-7 – CAN DATA INPUT

- Pin 1 CAN H – 20 Ga. GN Twisted Pair
- Pin 2 Shield – 20 Ga. Shield
- Pin 3 CAN L – 20 Ga. GY Twisted Pair
- Pin 4 Not Used – Plug



WCX-PWR48-PDD

- Power – #6 Fork at Fuse Panel
- Ground – 1/4" Ring at Battery
- (4) 16 Ga. RD Power Wires to Ring
- Fuse 1, 10 Amp: 16 Ga. RD Power 1
- Fuse 2, 10 Amp: 16 Ga. RD Power 2
- Fuse 3, 10 Amp: 16 Ga. RD Power 3
- Fuse 4, 10 Amp: 16 Ga. RD Power 4
- 18 Ga. BK J9 5 Ground
- 18 Ga. BK J9 10 Ground
- Can High – 20 Ga. GN Twisted Pair
- Shield – 20 Ga. Shield
- Can Low – 20 Ga. GN Twisted Pair

TECHNICAL SUPPORT & SALES CONTACT:

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Email: sales@allfleetsolutions.com

Web: www.allfleetsolutions.com

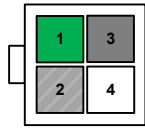
EDD 041026

ECN 000000

12-WCX-PWR180G

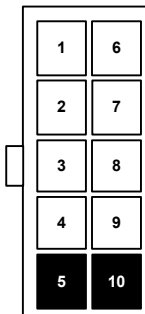
180" Rear Power Cable with Ground for Whelen CEM16 Expansion Module

© AFS 2025



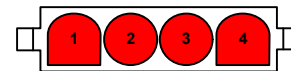
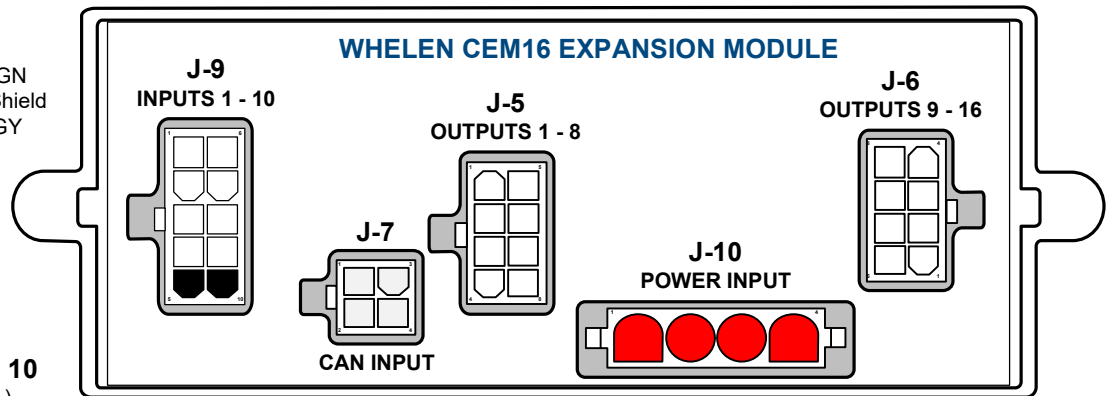
J-7 – CAN INPUT

- Pin 1 CAN H – 20 Ga. GN
- Pin 2 Shield – 20 Ga. Shield
- Pin 3 CAN L – 20 Ga. GY
- Pin 4 Not Used



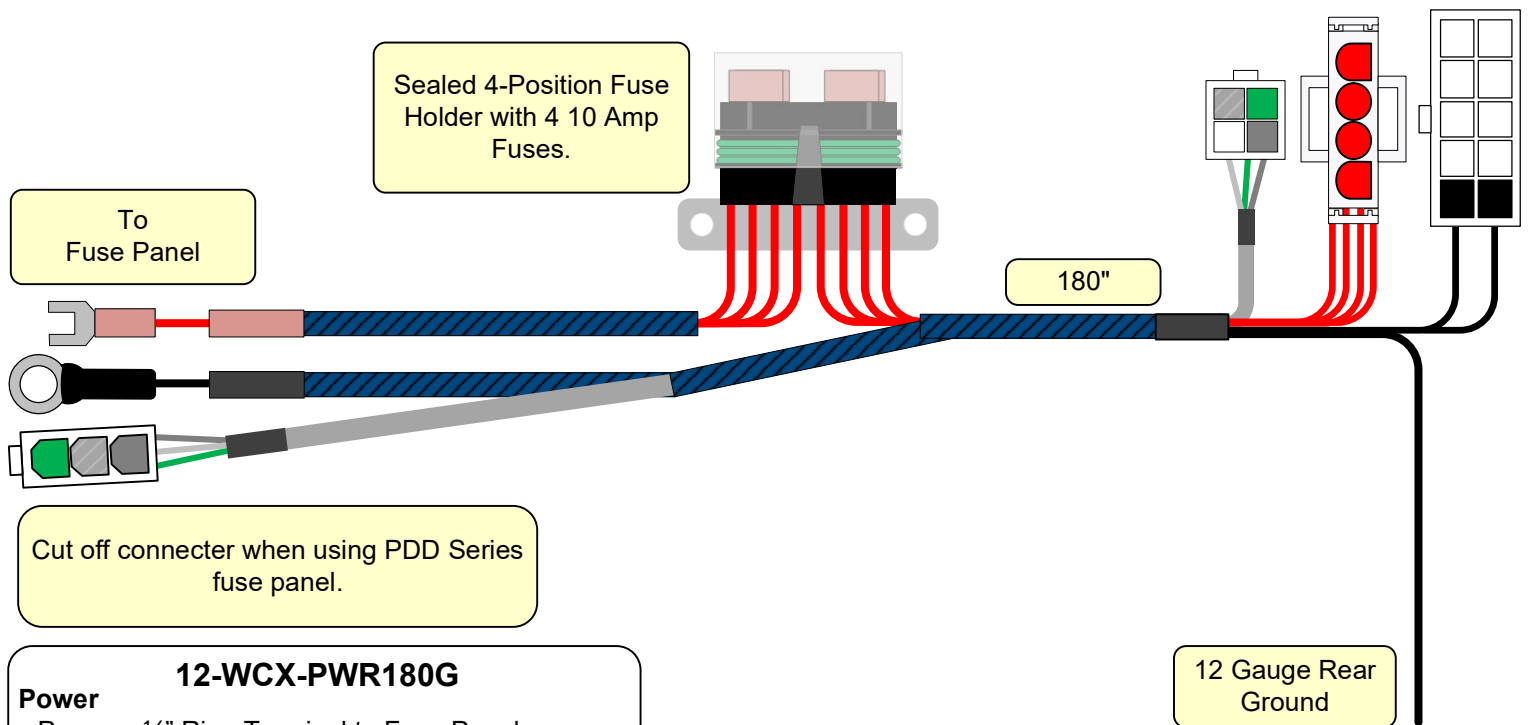
J-9 – INPUTS 1 thru 10

- Pin 1 Input 1 Ground (–) –
- Pin 2 Input 2 Ground (–) –
- Pin 3 Input 3 Ground (–) –
- Pin 4 Input 4 Ground (–) –
- Pin 5 Main Ground Input – 18 Ga. BK Ground “J9 5 GND”
- Pin 6 Input 1 Positive (+) –
- Pin 7 Input 2 Positive (+) –
- Pin 8 Input 3 Positive (+) –
- Pin 9 Input 4 Positive (+) –
- Pin 10 Main Ground Input – 18 Ga. BK Ground “J9 10 GND”



J-10 – POWER INPUT

- Pin 1 Power Input 1 (10A) – 16 Ga. RD Power “POWER 1”
- Pin 2 Power Input 2 (10A) – 16 Ga. RD Power “POWER 2”
- Pin 3 Power Input 3 (10A) – 16 Ga. RD Power “POWER 3”
- Pin 4 Power Input 4 (10A) – 16 Ga. RD Power “POWER 4”



12-WCX-PWR180G

Power

- Power – ¼” Ring Terminal to Fuse Panel
- 10 Ga. RD spliced to (4) 16 Ga. RD Power Wires
- Fuse 1, 10 Amp: 16 Ga. RD J2 1-4 Power 1
- Fuse 2, 10 Amp: 16 Ga. RD J2 5-8 Power 2
- Fuse 3, 10 Amp: 16 Ga. RD J3 1-4 Power 3
- Fuse 4, 10 Amp: 16 Ga. RD J3 5-8 Power 4

Ground

- 16 Ga. BK Exp Grounds Pin 5 of J9 and Lighthead grounds to the provided 12 Ga. ground wire.

Data Communication

- Pos. 1 – 20 Ga. GN CAN A – Twisted Pair
- Pos. 2 – 20 Ga. Shield
- Pos. 3 – 20 Ga. GY CAN B – Twisted Pair

The Installer is to splice the RLH ground & the WCX-PWR180G ground together.

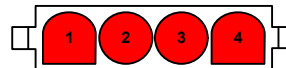
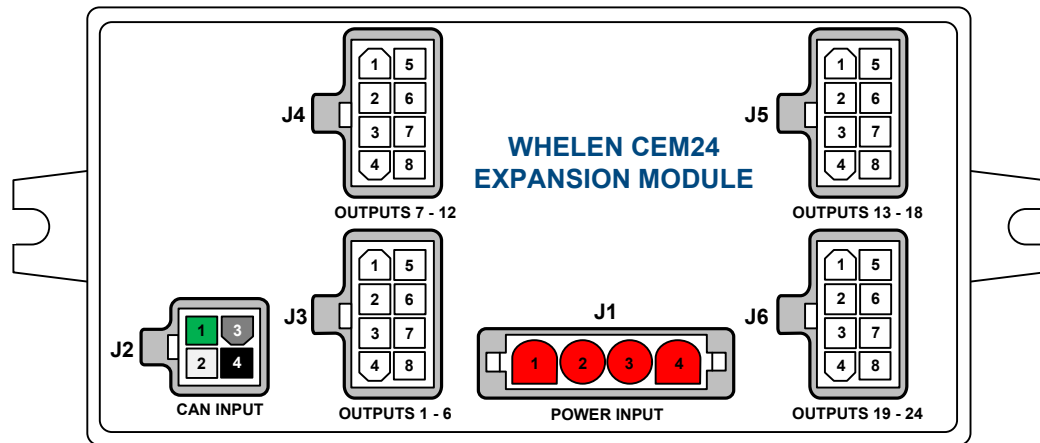
TECHNICAL SUPPORT & SALES CONTACT:

Phone: 844-423-7200

Email: sales@allfleetsolutions.com

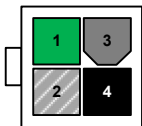
Web: www.allfleetsolutions.com

EDD 042224 ECN 000000



J1 – POWER INPUT

- Pin 1 Power Input 1 (15A) – 14 Ga. RD Power "POWER 1"
- Pin 2 Power Input 2 (15A) – 14 Ga. RD Power "POWER 2"
- Pin 3 Power Input 3 (15A) – 14 Ga. RD Power "POWER 3"
- Pin 4 Power Input 4 (15A) – 14 Ga. RD Power "POWER 4"



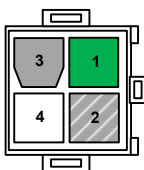
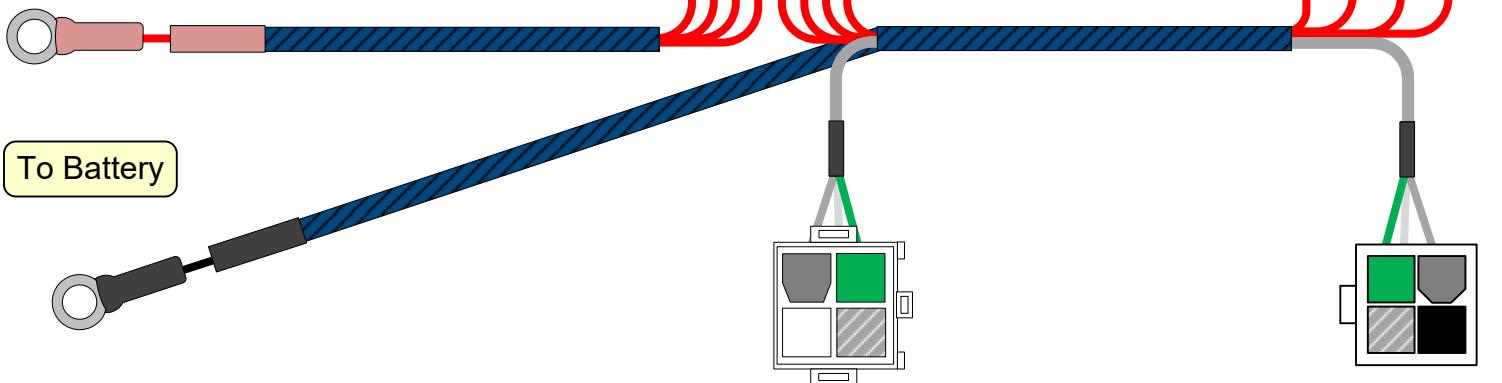
J2 – CAN INPUT TO CEM24

- Pin 1 CAN H – 20 Ga. GN Twisted Pair
- Pin 2 Shield – 20 Ga. Shield
- Pin 3 CAN L – 20 Ga. GY Twisted Pair
- Pin 4 Main Ground Input – 18 Ga. BK CEM24 Ground

WCX-PWR36-C24

- Power – ¼" Ring at Battery
- (4) 14 Ga. RD Power Wires
- Fuse 1, 15 Amp: 14 Ga. RD Power 1 to J1 Pin 1
- Fuse 2, 15 Amp: 14 Ga. RD Power 2 to J1 Pin 2
- Fuse 3, 15 Amp: 14 Ga. RD Power 3 to J1 Pin 3
- Fuse 4, 15 Amp: 14 Ga. RD Power 4 to J1 Pin 4

Sealed 4-Position
Fuse Holder with 4
15 Amp Fuses.



CAN INPUT TO DATA HARNESS

- Pin 1 CAN H – 20 Ga. GN Twisted Pair
- Pin 2 Shield – 20 Ga. Shield
- Pin 3 CAN L – 20 Ga. GY Twisted Pair
- Pin 4 Not Used – Sealing Plug

Utilize can input connector with Whelen supplied data pigtail or
AFS "DC Harnesses – Ex. MW-DC25"

TECHNICAL SUPPORT & SALES CONTACT:

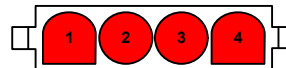
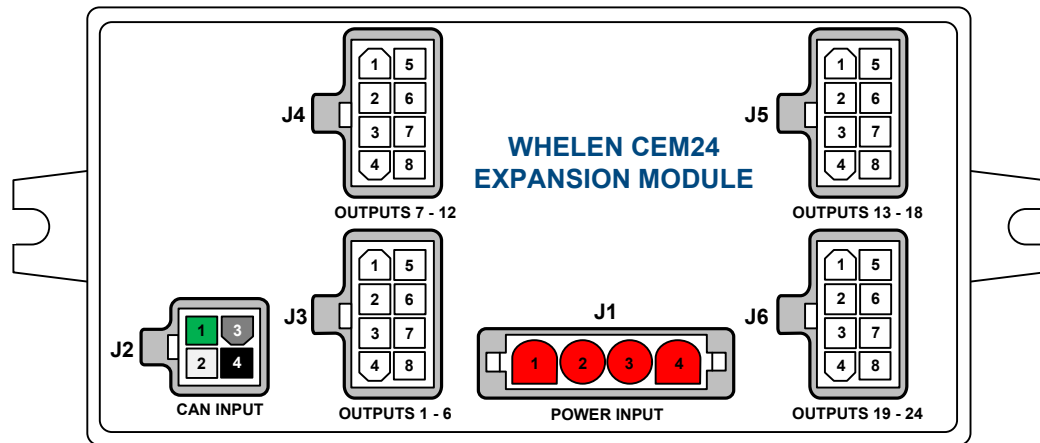
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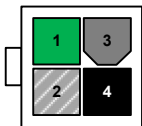
EDD 021825

ECN 000000



J1 – POWER INPUT

- Pin 1 Power Input 1 (15A) – 14 Ga. RD Power “POWER 1”
- Pin 2 Power Input 2 (15A) – 14 Ga. RD Power “POWER 2”
- Pin 3 Power Input 3 (15A) – 14 Ga. RD Power “POWER 3”
- Pin 4 Power Input 4 (15A) – 14 Ga. RD Power “POWER 4”



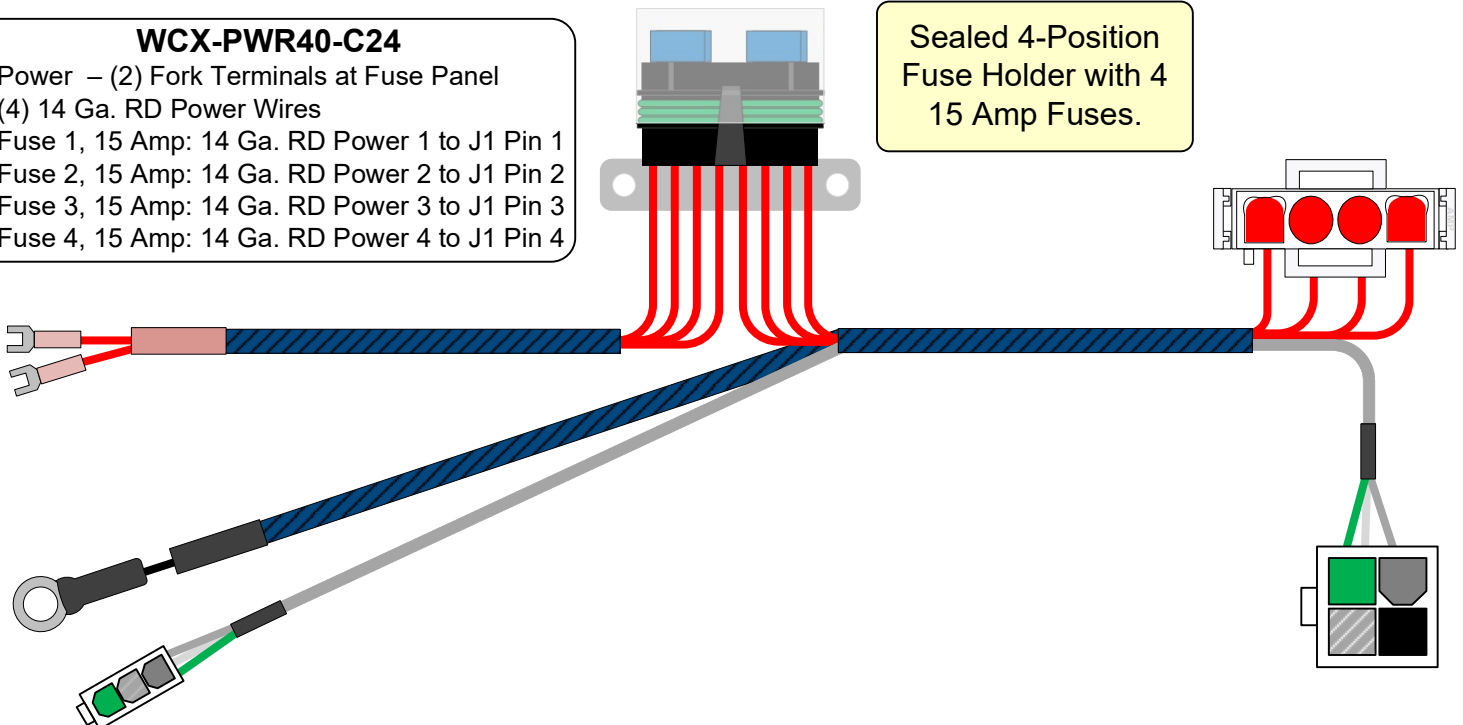
J2 – CAN INPUT TO CEM24

- Pin 1 CAN H – 20 Ga. GN Twisted Pair
- Pin 2 Shield – 20 Ga. Shield
- Pin 3 CAN L – 20 Ga. GY Twisted Pair
- Pin 4 Main Ground Input – 18 Ga. BK CEM24 Ground

WCX-PWR40-C24

- Power – (2) Fork Terminals at Fuse Panel
- (4) 14 Ga. RD Power Wires
- Fuse 1, 15 Amp: 14 Ga. RD Power 1 to J1 Pin 1
- Fuse 2, 15 Amp: 14 Ga. RD Power 2 to J1 Pin 2
- Fuse 3, 15 Amp: 14 Ga. RD Power 3 to J1 Pin 3
- Fuse 4, 15 Amp: 14 Ga. RD Power 4 to J1 Pin 4

Sealed 4-Position
Fuse Holder with 4
15 Amp Fuses.



CAN INPUT TO CORE

- Pin 1 CAN H – 20 Ga. GN Twisted Pair
- Pin 2 Shield – 20 Ga. Shield
- Pin 3 CAN L – 20 Ga. GY Twisted Pair

Connector to be removed when
utilizing PDD series panels.

TECHNICAL SUPPORT & SALES CONTACT:

Phone: 844-423-7200

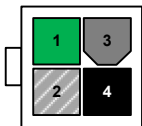
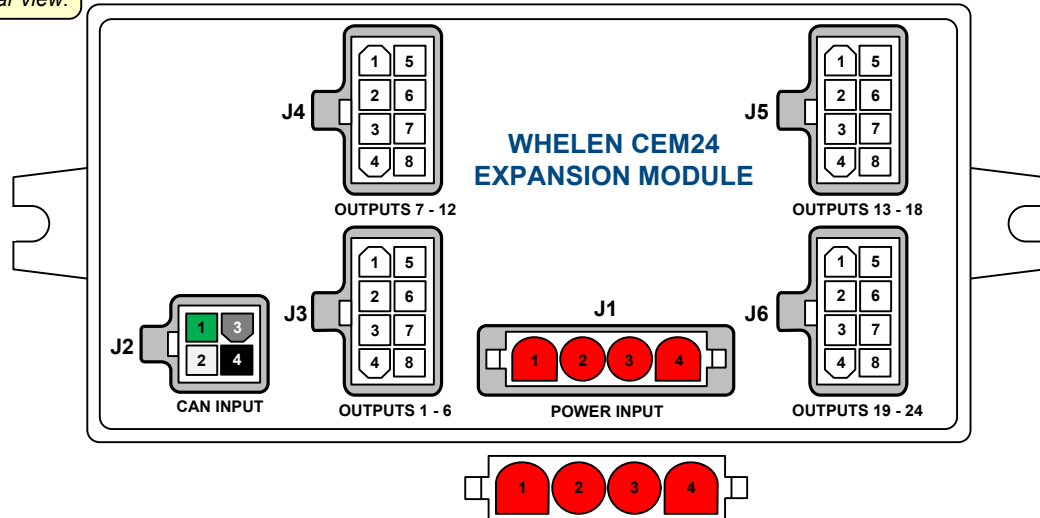
Email: sales@allfleetsolutions.com

Web: www.allfleetsolutions.com

EDD 100125

ECN 021026

Note: Connectors shown in rear view.



J2 – CAN INPUT TO CEM24

- Pin 1 CAN H – 20 Ga. GN Twisted Pair
- Pin 2 Shield – 20 Ga. Shield
- Pin 3 CAN L – 20 Ga. GY Twisted Pair
- Pin 4 Main Ground Input – 18 Ga. BK CEM24 Ground

J1 – POWER INPUT

- Pin 1 Power Input 1 (15A) – 14 Ga. RD Power “POWER 1”
- Pin 2 Power Input 2 (15A) – 14 Ga. RD Power “POWER 2”
- Pin 3 Power Input 3 (15A) – 14 Ga. RD Power “POWER 3”
- Pin 4 Power Input 4 (15A) – 14 Ga. RD Power “POWER 4”

WCX-PWR180-C24

- Power – (2) Fork Terminals at Fuse Panel
- (4) 14 Ga. RD Power Wires
- Fuse 1, 15 Amp: 14 Ga. RD Power 1 to J1 Pin 1
- Fuse 2, 15 Amp: 14 Ga. RD Power 2 to J1 Pin 2
- Fuse 3, 15 Amp: 14 Ga. RD Power 3 to J1 Pin 3
- Fuse 4, 15 Amp: 14 Ga. RD Power 4 to J1 Pin 4

Sealed 4-Position
Fuse Holder with 4
15 Amp Fuses.

To Fuse Panel

10 Gauge Ground



CAN INPUT TO CORE

- Pin 1 CAN H – 20 Ga. GN Twisted Pair
- Pin 2 Shield – 20 Ga. Shield
- Pin 3 CAN L – 20 Ga. GY Twisted Pair

Connector to be removed when
utilizing PDD series panels.

TECHNICAL SUPPORT & SALES CONTACT:

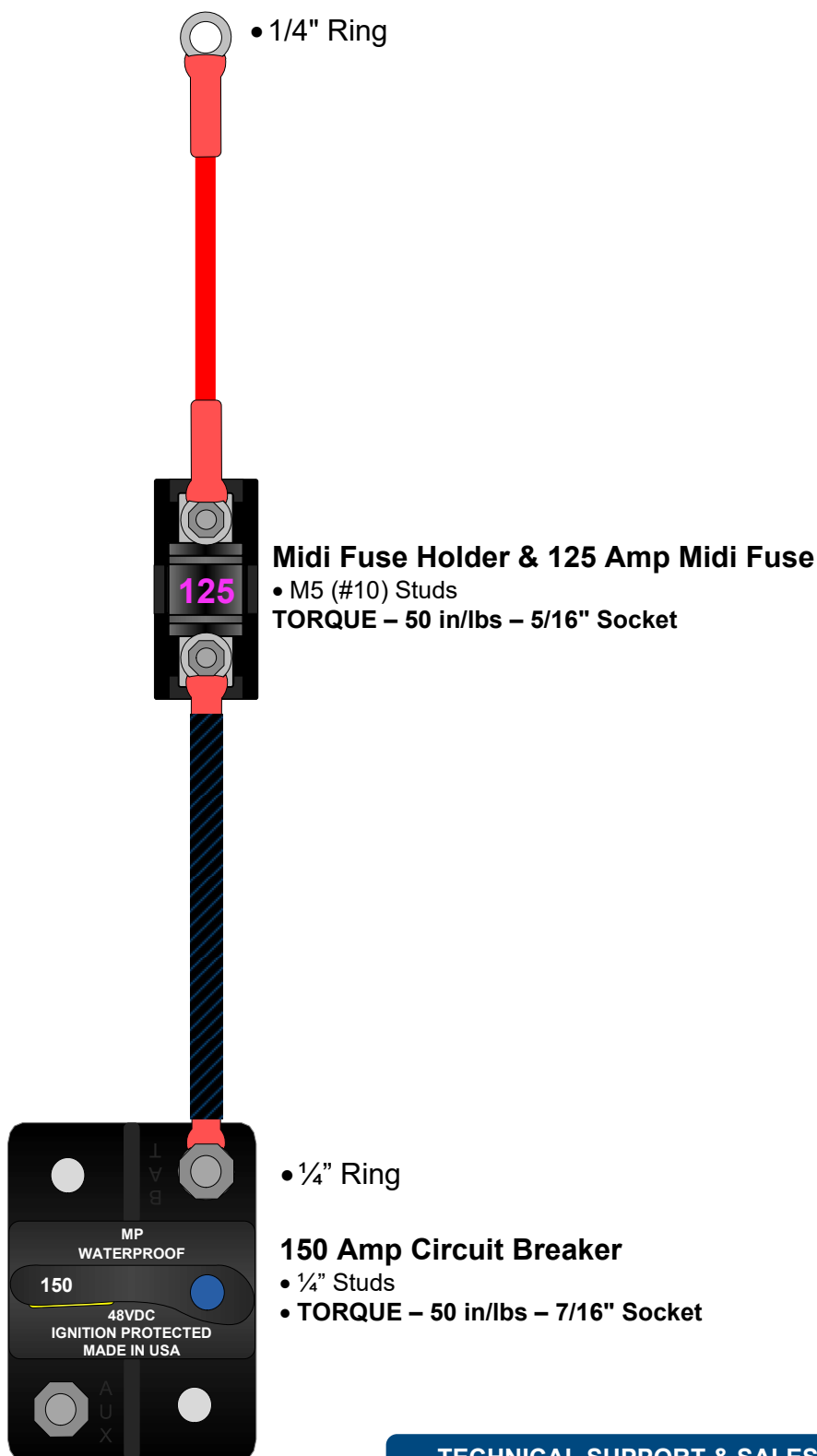
Phone: 844-423-7200

Email: sales@allfleetsolutions.com

Web: www.allfleetsolutions.com

EDD 021825

ECN 062426



TECHNICAL SUPPORT & SALES CONTACT:

Phone: 844-423-7200

Email: sales@allfleetsolutions.com

Web: www.allfleetsolutions.com

EDD 012220

ECN 000000

PDD-B6i2D4

6 Power, 2 Ignition & 4 Data Distribution Panel

Input Wire Fuse and Gauge:

- Fuse the input wire as close to the power source as is practical.
- The power input wire and ground stud wire must be the same gauge and should be sized based upon the intended load and wire length.
- 100 amps or less at 25' = 6 Ga.
- 50 amps or less at 25' = 8 Ga.

M6 Ground Bus:

- M6 Stud: Main Ground to Battery
- 100 Amp Max Total Load

M6 Power Input:

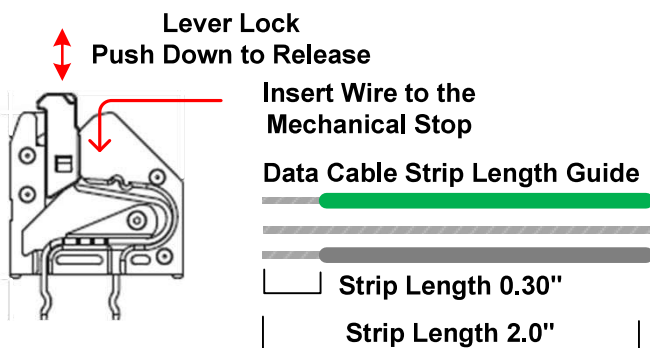
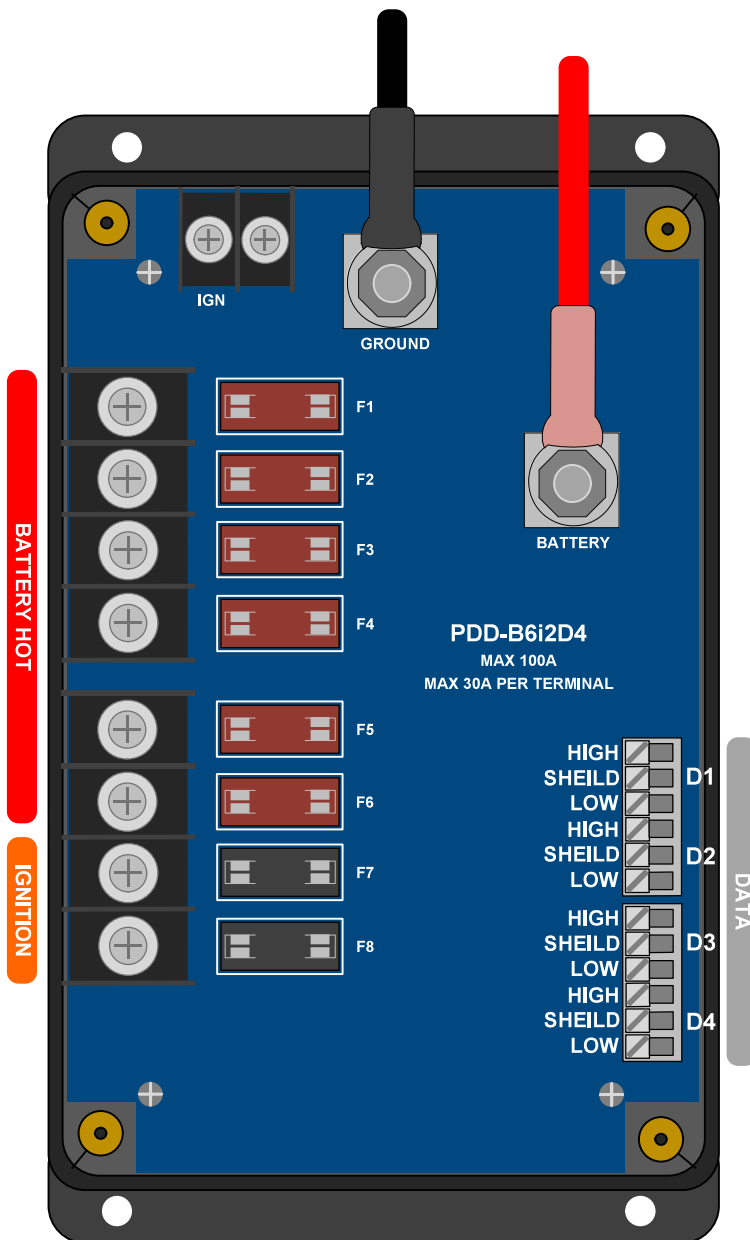
- M6 Power Input, 100 Amp Fuse
Required with a 6 Ga. Wire.

IG Pin: Ignition Sense

- Ignition Sense 12 VDC+
- Requires a 1 amp fuse, and an 18 Ga. wire.

Can Data Connectivity:

- H – Can High
- S – Shield
- L – Can Low



Do Not Exceed Torque Setting Damage Will Occur!

- Power and Ground M6 Inch Studs: 50 in/lb.
- Terminals Block Screws Torque: 15 in/lb.

Data Connector:

The CAN bus data connector features a lever lock design and does not require a terminal connector on the wire. The PDD-B6i2D4 features four data connections allowing communication between the light and siren controller and three additional devices. Utilize the Strip Length Guide below to ensure proper wire termination. Do not connect any data wires that are not terminated to Can bus device, dead end wires will disrupt CAN bus data networks. The shield drain position is connected to the fuse panel ground.

Power and Data Distribution for CAN bus Light and Siren Controllers

Built to support today's advanced light and siren controllers, the PDD-B6i2D4 is an all-in-one solution for the Whelen Core control systems in Amber, Commercial and Undercover vehicle installations. The PDD-B6i2D4 provides 4 Battery Hot and 2 Ignition Hot circuits with a 4-position CAN bus interface. The compact fuse panel supports detective and federal law enforcement vehicles with a two-way radio and a light and siren controller. Managing a fleet with advanced products becomes much simpler with the CAN bus data cables organized in the same fuse panel as the power and ground feeds.

Battery Hot Circuits: 30 Amps Max Per Fuse, 100 Amp Max Load All Battery Hot

Fuse 1: _____

Fuse 2: _____

Fuse 3: _____

Fuse 4: _____

Fuse 5: _____

Fuse 6: _____

Ignition Hot Circuits: 30 Amps Max Per Fuse, 45 Amp Max Load All Ignition

Fuse 7: _____

Fuse 8: _____

Data CanBus Connections D1-D4:

D1 Data Connection:

Can High: _____

Can Shield: _____

Can Low: _____

D2 Data Connection:

Can High: _____

Can Shield: _____

Can Low: _____

D3 Data Connection:

Can High: _____

Can Shield: _____

Can Low: _____

D4 Data Connection:

Can High: _____

Can Shield: _____

Can Low: _____

Input Wire Fuse and Gauge:

- Fuse the input wire as close to the power source as is practical.
- The power input wire and ground stud wire must be the same gauge and should be sized based upon the intended load and wire length.
- 125 amps or less at 25' = 6 Ga.
- 50 amps or less at 25' = 8 Ga.

M6 Ground Bus:

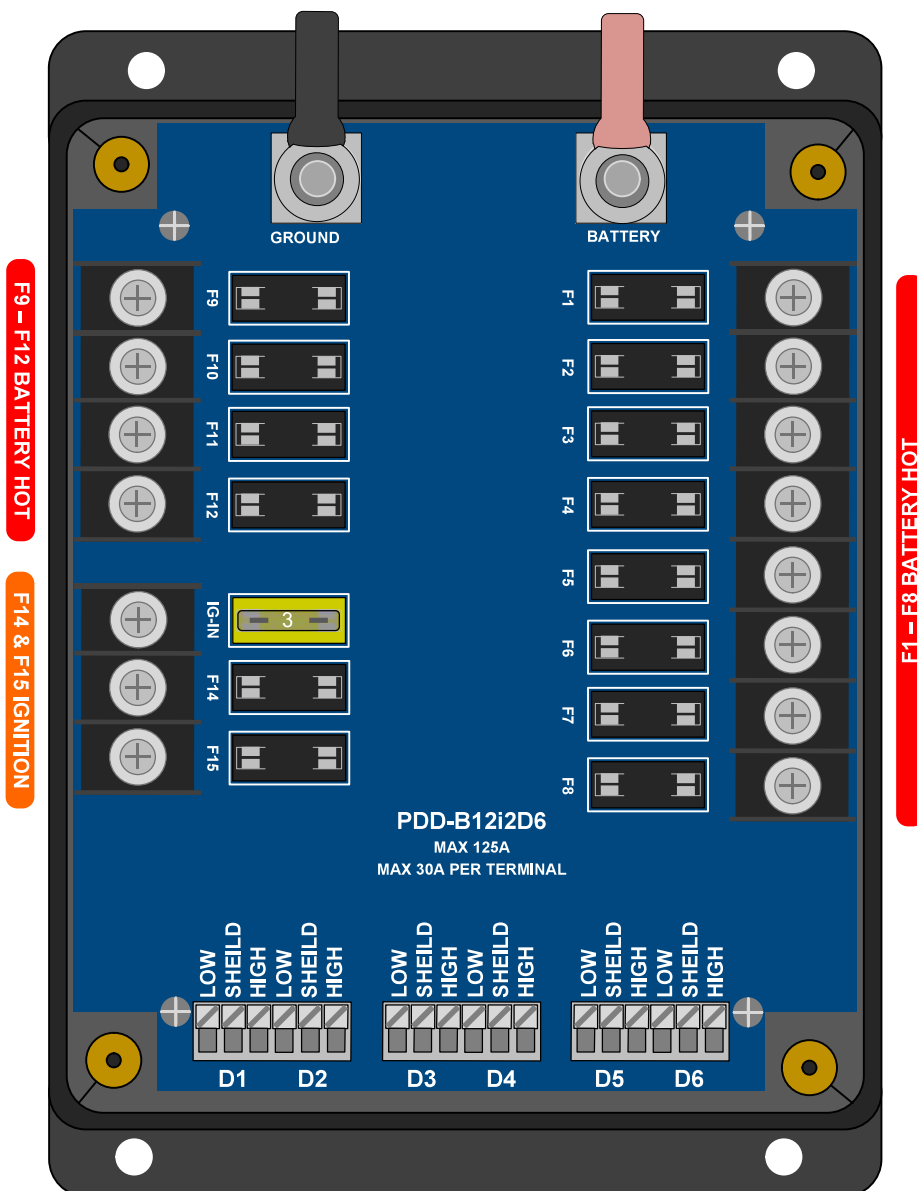
- M6 Stud: Main Ground to Battery
- 120 Amp Max Total Load

M6 Power Input:

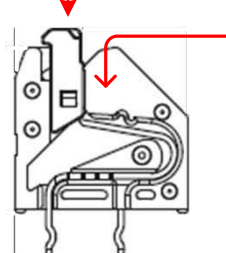
- M6 Power Input, 125 Amp Fuse
Required with a 6 Ga. Wire.

Can Data Connectivity:

- H – Can High
- S – Shield
- L – Can Low

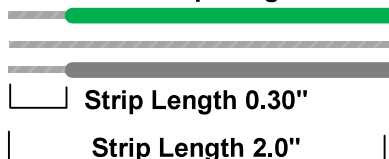


Lever Lock
Push Down to Release



Insert Wire to the
Mechanical Stop

Data Cable Strip Length Guide



Data Connector:

The CAN bus connector features a spring lock design and does not require a terminal connector on the wire.

Drawing Scale 1:1

Do Not Exceed Torque Setting Damage Will Occur!

- Power and Ground M6 Inch Studs: 50 in/lb.
- Terminals Block Screws Torque: 15 in/lb.

TECHNICAL SUPPORT & SALES CONTACT:

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Email: sales@allfleetsolutions.com

Web: www.allfleetsolutions.com

EDD 031825

ECN 000000

The PDD-B12i2D6 Fuse Panel provides twelve Battery Hot circuits, two Ignition circuits and Can Data with a M6 stud ground bus. With all emergency vehicle installations the Vehicle Manufacturer and Component Manufacturer modifier guides and instructions should be followed at all times. The installation and servicing of these components should only be completed by a trained emergency vehicle technician.

12VDC Ignition Input

Fuse 13: 12VDC Ignition Input, (2A)

Battery Hot Circuits: 30 Amps Max Per Fuse

Fuse 1: _____

Fuse 2: _____

Fuse 3: _____

Fuse 4: _____

Fuse 5: _____

Fuse 6: _____

Fuse 7: _____

Fuse 8: _____

Fuse 9: _____

Fuse 10: _____

Fuse 11: _____

Fuse 12: _____

Ignition Hot Circuits: 30 Amps Max Per Fuse

Fuse 14: _____

Fuse 15: _____

Data CanBus Connections D1-D6:

D1 Data Connection:

Can High: _____

Can Shield: _____

Can Low: _____

D2 Data Connection:

Can High: _____

Can Shield: _____

Can Low: _____

D3 Data Connection:

Can High: _____

Can Shield: _____

Can Low: _____

D4 Data Connection:

Can High: _____

Can Shield: _____

Can Low: _____

D5 Data Connection:

Can High: _____

Can Shield: _____

Can Low: _____

D6 Data Connection:

Can High: _____

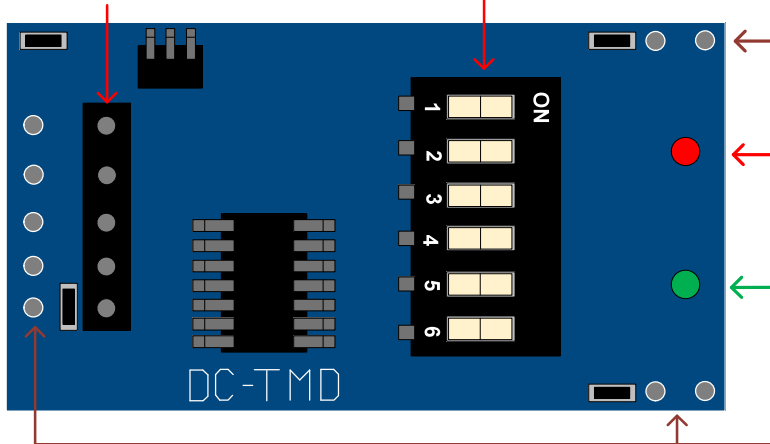
Can Shield: _____

Can Low: _____

Six-Position DIP Switch

- Positions 1 to 4 control the timed interval
- Position 5 controls the Ignition Sense function
- Position 6 controls the Low Voltage Disconnect

Programming Header



Low Voltage Disconnect

In order to ensure that a temporary load does not create a nuisance shut-down the timer will wait 15 seconds before disconnecting the circuit. DIP switch #6 controls the Low Voltage Disconnect, please note that the DIP switch settings should only be changed when the device is powered down.

Overvoltage Protection

The device immediately disconnects the circuit when voltage exceeds 18 VDC. The device monitors the voltage and it will reset when the voltage returns to less than 18 VDC.

Infinite Mode

Setting the timer to Infinite Mode allows computers and radios to stand by for immediate response. When Infinite Mode is selected the device will only disconnect when the voltage falls below the low voltage setting. When the vehicle voltage recovers to 11.9 VDC or greater the device will reset. In order to change between Infinite Mode and Timed Delay the power must be removed from the timer, this allows the program to see the Infinite Mode setting. When the timer is in Infinite Mode the diagnostic LEDs will clear the trouble signal when the condition no longer exists. In Timed Mode the diagnostic LEDs will remain on for three ignition cycles.

Ignition Override

Turning on the vehicle's ignition will activate the timer. The vehicle will not disconnect the output for low voltage when the ignition is on; however, it will disconnect for overvoltage regardless of the ignition status. The timer senses ignition when voltage is applied to the input terminal, or when DIP switch #5 is "ON" and the vehicle voltage is above 13.0 VDC (Ignition Optional feature).

Loose Connections

Loose connections anywhere in the vehicle's electrical system can create voltage spikes as loads are temporarily disconnected. Nuisance disconnects will typically occur after vehicle servicing or while driving on rough roads. Utilize a power probe or similar tool to check for voltage drop or impedance on the ground typical of loose connections.

Warning! The Timer Logic Card is only rated for use in AFS Power Series Fuse Panels, it should not be used in any other application.

Communication Connector to Motherboard

Red LED Fault Status

- Off: No Faults
- Slow Flashing 15 Seconds: Low Voltage is occurring
- Steady Red: Undervoltage has occurred
- Rapid Flash: Overvoltage has occurred

Green LED Timer Status

- Solid Green: Ignition On
- Flashing Green: Timed Mode
- Off: Outputs Off

Specifications: Software PS-6DV3-01 10-01-20

Low Voltage Disconnect:	11.0 VDC #6 Off
(Position 6 on the DIP Switch)	11.75 VDC #6 On
High Voltage Disconnect:	18.0 VDC
Disconnect Tolerance:	+/- 0.25V DC
Override Low Voltage:	Ignition On
Ignition Wire Required:	DIP switch #5 Off
Ignition Wire Optional:	DIP switch #5 On
Ignition On Voltage Set Point:	13.0 VDC
Ignition Off Voltage Set Point:	12.8 VDC
Standby Current:	5 mA
Load Current Rating:	Logic Only
Minimum Time Delay:	1 Minute
Time Intervals:	16 Intervals
Time Interval Tolerance:	1%
Selectable Delay:	1 Min. to 24 Hr.

Circuit Protection for the timer includes: Surge, Brownout, Static, Spike, and Reverse Polarity.

Installation Notes & Best Practices

Complete all installations with the vehicle battery power and ground lines disconnected.

- Use proper fusing or an unsafe condition may occur.
- Utilize a Run/Start circuit for the ignition sense (12v+) to prevent interruption of the signal while starting the vehicle.
- The Time Interval should be set while the timer is not connected to either power or ignition feeds.
- The amperage of the timed outputs is determined by the motherboard. Please consult those instructions.
- To clear a fault code on the LEDs remove the ground wire or cycle the ignition four times.

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Web: www.allfleetsolutions.com

Amp Rating by Zone

- The twelve Battery Hot fuses, F1 to F12, are rated at 30A per terminal, 125A max total load, MINI fuses.
- Zone 1: 6 ATO fuses, 30A per terminal, 60A max total load.
- Zone 2: 2 ATO fuses, 30A per terminal, 30A max total load.
- Zone 3: 4 ATO fuses, 30A per terminal, 45A max total load.
- The combined maximum total load for the fuse panel with Battery, Ignition, Master, and Timed circuits is 125 amps.

Blue Control DIP Switch:

- The 3 Zones are configured by the blue DIP switches.
- Timer 1, Master or Ignition can control Zones 1, 2, or 3.
- Timer 2 will always control Zone 2.
- Timer 2 can control Zone 3 and Zone 2.
- A Zone can be controlled by more than one input.

Reset Pin RST:

- A momentary 12VDC + input to the RST pin will shut down the timer.
- The RST pin will clear the LED fault codes.

Ignition Hot Circuits:

- The IG input pin activates the ignition hot circuits which are set by the blue control DIP switches.
- 0, 2, 4, 6, 8, 10, or 12 Ignition Circuit configurations can be created with the PDD25-FLEX.

Master Switch Circuits:

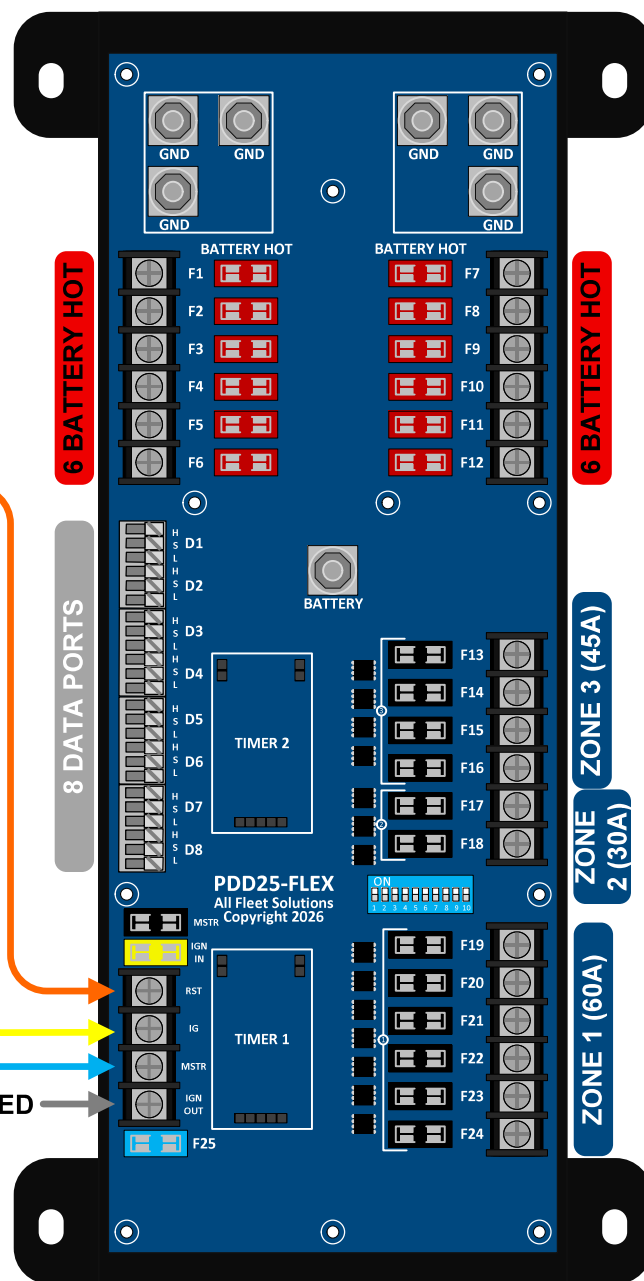
- The Master input pin activates the Master hot circuits which are set by the blue control DIP switches.
- 0, 2, 4, 6, 8, 10, or 12 Master Circuit configurations can be created with the PDD25-FLEX.

Timed Circuits:

- 0, 2, 4, 6, 8, 10, or 12 Timed circuit configurations can be created with the PDD25-FLEX with a single timer card.
- An available 2nd timer card, DC-TMD, is sold separately.
- The IG input pin activates the timer card.
- Black DIP switches 1-4 control the timed interval.
- Black DIP switch 5 controls the Ignition Optional feature.
- Black DIP switch 6 controls the Low Voltage Disconnect.
- Do not set the blue DIP switch to ignition control for the zone if timed circuits are desired, this will override the over-voltage protection.

DC-TMD Timer Card: The timer cards are programmed by the six position black DIP switch.

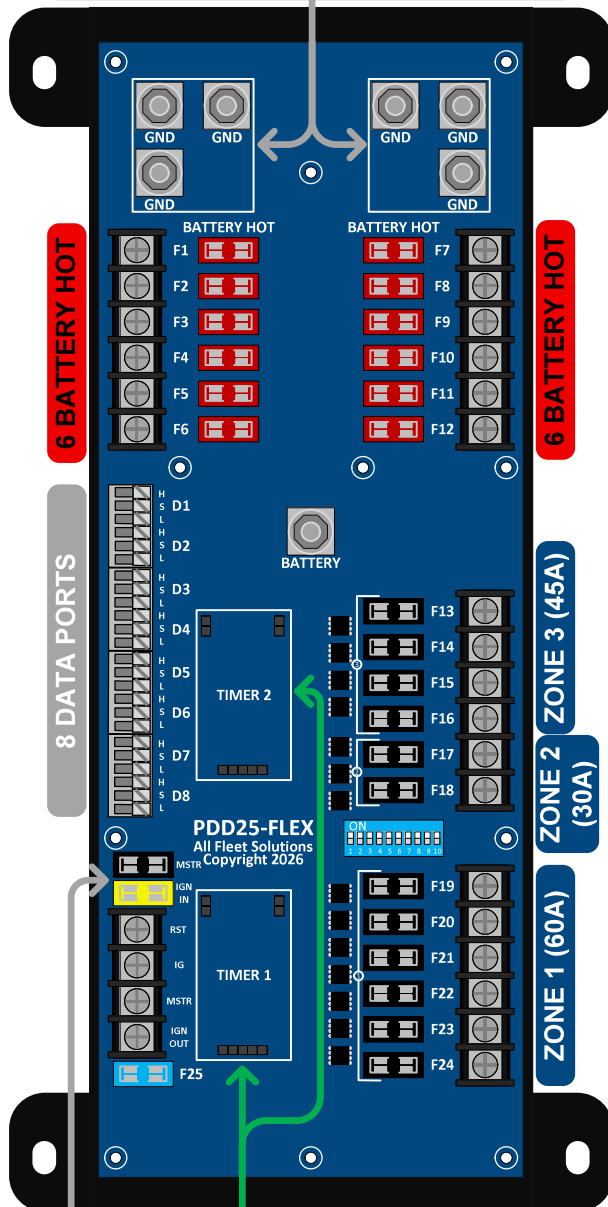
Infinite On					30 Minutes					2:00 Hours					8:00 Hours					Ignition		
On	1	2	3	4	On		2			On			3	4	On		2		4	On		IGN. wire is required for timer activation.
Off					Off	1		3	4	Off	1	2			Off	1		3		Off	5	
1 Minute					45 Minutes					2:30 Hours					12:00 Hours					Ignition Optional		
On					On	1			4	On				4	On	1	2		4	On	5	Voltage ≥13.0V will activate timer.
Off	1	2	3	4	Off		2	3		Off	1	2	3		Off			3		Off		
5 Minutes					60 Minutes					3:00 Hours					18:00 Hours					Low Voltage		
On	1				On		2	3	4	On	1		3		On		2	3		On		Disconnect at 11.0V >15 seconds.
Off		2	3	4	Off	1				Off		2		4	Off	1			4	Off	6	
15 Minutes					1:30 Hours					4:00 Hours					24:00 Hours					Low Voltage		
On	1	2			On			3		On	1		3	4	On	1	2	3		On	6	Disconnect at 11.75V >15 seconds.
Off			3	4	Off	1	2		4	Off		2			Off				4	Off		



DO NOT EXCEED TORQUE SETTING. DAMAGE WILL OCCUR!

- Power and Ground M6 Studs: 50 in/lb.
- Terminal Block Screws Torque: 15 in/lb.

6 M6 Ground Studs



Battery Hot Circuits: 30 Amps Max Per Fuse

- Fuse 1: _____
- Fuse 2: _____
- Fuse 3: _____
- Fuse 4: _____
- Fuse 5: _____
- Fuse 6: _____
- Fuse 7: _____
- Fuse 8: _____
- Fuse 9: _____
- Fuse 10: _____
- Fuse 11: _____
- Fuse 12: _____

Zone 3: 45 Amps Max Combined Ignition ☐ Timer 1 ☐ Timer 2 ☐ Master ☐

- Fuse 13: _____
- Fuse 14: _____
- Fuse 15: _____
- Fuse 16: _____

Zone 2: 30 Amps Max Combined Ignition ☐ Timer 1 ☐ Timer 2 ☐ Master ☐

- Fuse 17: _____
- Fuse 18: _____

Zone 1: 60 Amps Max Combined Ignition ☐ Timer 1 ☐ Master ☐

- Fuse 19: _____
- Fuse 20: _____
- Fuse 21: _____
- Fuse 22: _____
- Fuse 23: _____
- Fuse 24: _____

Ignition Output / Aux - 10 Amp MAX

- Fuse 25: _____

DC-TMD Timer Cards:

- Field Replaceable
- Status & Diagnostic LEDs

MSTR

MSTR IN - MAX 3 AMP

IGN

IGN IN - MAX 3 AMP

PLEASE NOTE:

Customer supplied MINI fuses should be sized to 125% of the designed load of the circuit.

Data CANbus Connections D1-D8

- D1: _____ D5: _____
- D2: _____ D6: _____
- D3: _____ D7: _____
- D4: _____ D8: _____

PDD25-FLEX Customer Configuration:

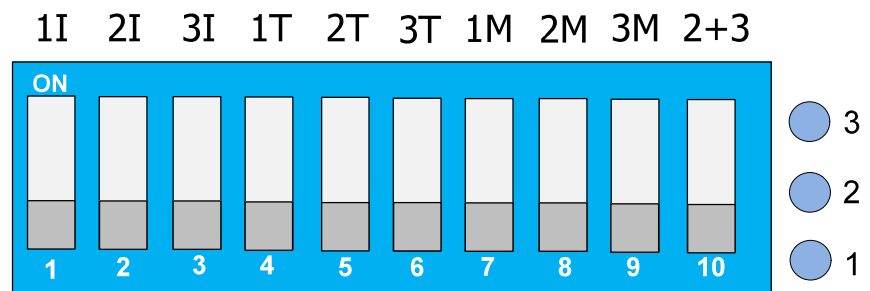
The PDD25-FLEX Power Distribution Center provides Battery Hot, Ignition Hot, Timed Hot, and/or Master Switch outputs. The blue control DIP switches and the optional DC-TMD timer cards regulate the Ignition, Timed, and Master Switch Circuits. The Master Switch can be connected to a customer supplied switch or an output from a light and siren controller.

When present, the 2nd Timer will always control Zone 2. When on, the 10th blue DIP switch combines Zone 2 and 3 allowing the 2nd Timer card to control six outputs. The Timer Control Card Instructions, "Power Series Timer", will provide programming instructions for changing the Low Voltage Disconnect Setting, Timed Interval Setting, Infinite Mode Operation, and the diagnostic LED status codes.

With all emergency vehicle installations the Vehicle Manufacturer and Component Manufacturer Modifier Guides and instructions should be followed at all times. The installation and servicing of these components should only be completed by a trained emergency vehicle technician.

Switch Functions:

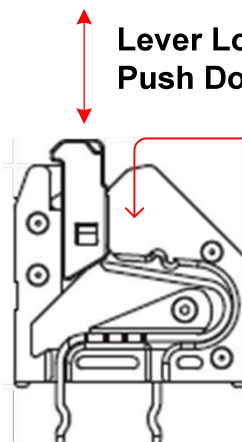
- Switch 1 On = Zone 1 on with Ignition.
- Switch 2 On = Zone 2 on with Ignition.
- Switch 3 On = Zone 3 on with Ignition.
- Switch 4 On = Zone 1 on with Timer 1.
- Switch 5 On = Zone 2 on with Timer 1.
- Switch 6 On = Zone 3 on with Timer 1.
- Switch 7 On = Zone 1 on with Master Input.
- Switch 8 On = Zone 2 on with Master Input.
- Switch 9 On = Zone 3 on with Master Input.
- Switch 10 On = Zone 3 on with Zone 2.



Zone Indicators: The blue zone indicator LEDs will illuminate when a zone is active by ignition or timer control.

Data Connector:

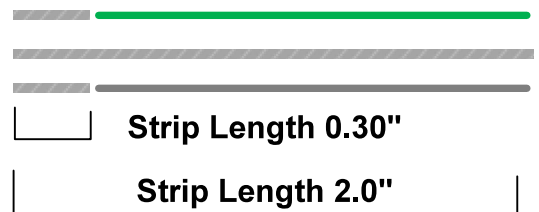
The CAN bus data connector features a lever lock design and does not require a terminal connector on the wire. The PDD25-FLEX features eight data connections allowing communication between the light and siren controller and five additional devices. Utilize the Strip Length Guide below to ensure proper wire termination. Do not connect any data wires that are not terminated to Can bus device, dead end wires will disrupt CAN bus data networks. The shield drain position is connected to the fuse panel ground.



Lever Lock
Push Down to Release

Insert Wire to the Mechanical Stop

Data Cable Strip Length Guide



Strip Length 0.30"

Strip Length 2.0"

Mating Terminals for the PDD25-FLEX:

- SSFT-6-1822 – 18-22 Ga. #6 Block Fork
- SSFT-6-1416 – 14-16 Ga. #6 Block Fork
- SSFT-6-1012 – 10-12 Ga. #6 Block Fork
- SSRB-25-06NI – 6 Ga. M6 Ring Barrel

Please Note:
DC-TMD 2nd Timer
Sold Separately.

TECHNICAL SUPPORT & SALES CONTACT:

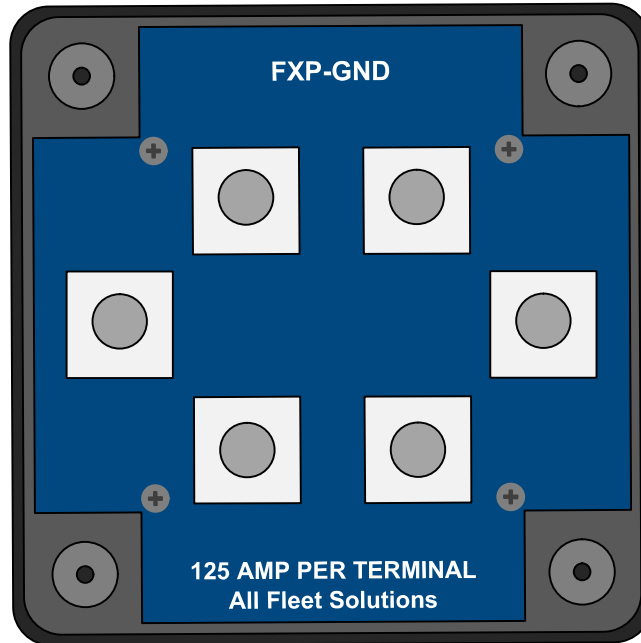
Phone: 844-423-7200

Email: sales@allfleetsolutions.com

Web: www.allfleetsolutions.com

AFS 6-Stud Ground Bus

- AFS # FXP-GND



- Stud Torque – 50 in/lbs

1/4" Ring



(1) 12-6GA GND BLK 18-22

- 1/4" Ring to 1/4" Ring
- Midi Fuse Torque Spec Label
- Recommended Ground wire from FXP-GND to CTF or Power Series Fuse Panels

TECHNICAL SUPPORT & SALES CONTACT:

Phone: 844-423-7200

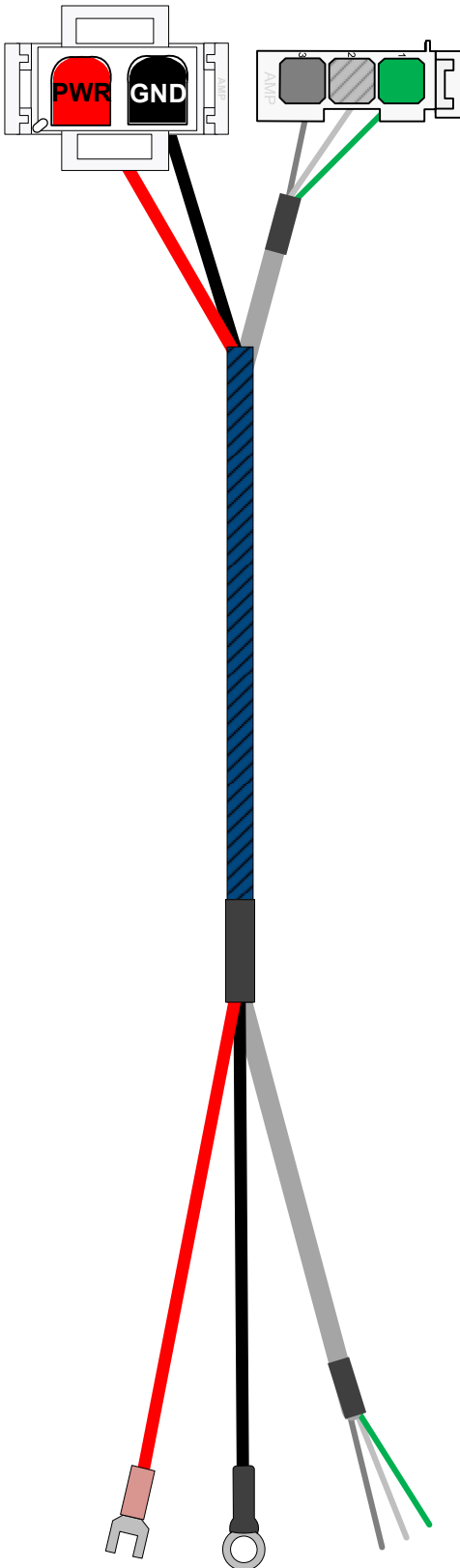
Email: sales@allfleetsolutions.com

Web: www.allfleetsolutions.com

EDD 021324

ECN 000000

Note: Connectors shown in rear view.



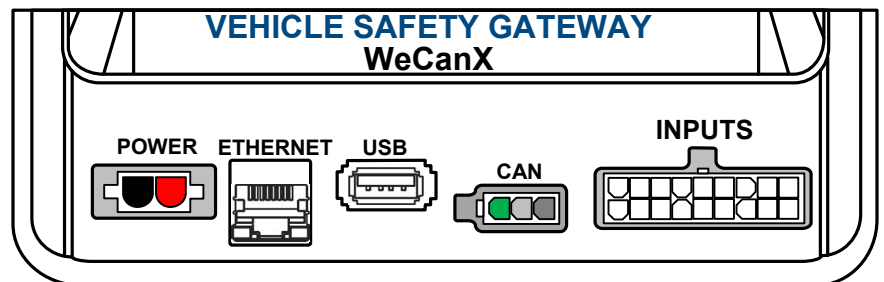
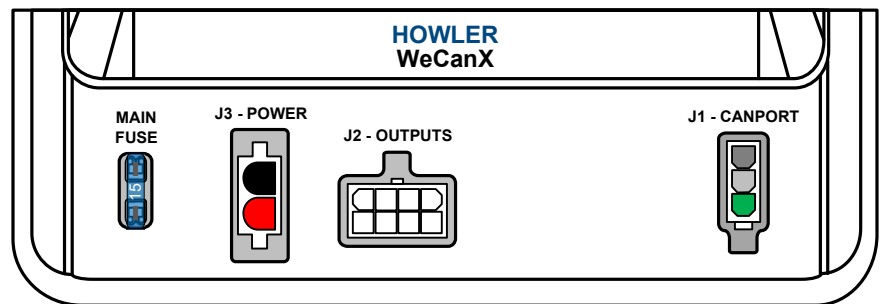
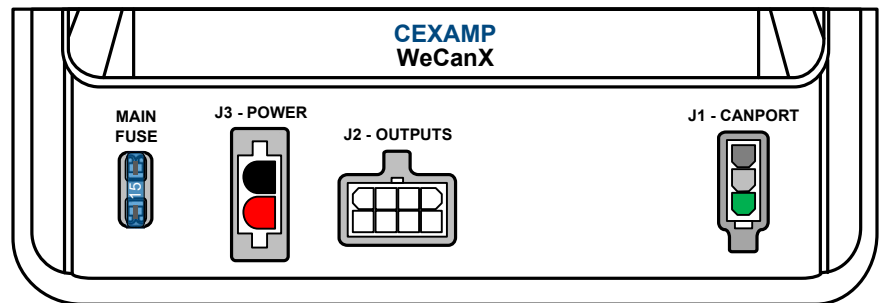
To Fuse Panel

POWER

- Pin 1 – Device Main Power – 14 Ga. RD WeCanX Device Power “PWR”
- Pin 2 – Device Main Ground – 14 Ga. BK WeCanX Device Ground “GND”

J18 – Data Communication

- Pos. 1 – 20 Ga. GN CAN H – Twisted Pair
- Pos. 2 – 20 Ga. Shield
- Pos. 3 – 20 Ga. GY CAN L – Twisted Pair



Note: This cable will provide power and data to the above WeCanX devices.

TECHNICAL SUPPORT & SALES CONTACT:

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Email: sales@allfleetsolutions.com

Web: www.allfleetsolutions.com

EDD 111225

ECN 000000

Recommended Application:

Weather-tight gasket for the lightbar power cable on the vehicle's roof. The 83-0115 Seal eliminates the need for silicone mounds around the lightbar line, and provides a clean finished appearance for the lightbar installation.

Technical Data:

- Shrinkage upon heat application above 120° C. Fast shrinkage at 200° C
- Continuous operating temperature range from -55° C to 135° C.
- Meets or exceeds standard specifications for Cable Entry Seals – ASTM F1837M.
- Flame Retardant with a flammability rating of non-burning – ASTM D-635.
- NEMA category 4X rated.

Installation Instructions:

- As with all installations the technician must review the manufacturer's modifier guide before proceeding to ensure vehicle safety systems and integrity are not compromised by the installation.
- The gasket should sit directly below the lightbar wire egress. With most lightbars the top of the heatshrink will extend very slightly into the egress.
- The gasket is designed to shrink onto the lightbar cable and provide a weather tight seal. With dual cable lightbar installations a bead of silicone between the two wires may improve the final seal.
- When seating the gasket on the lightbar line leave a small amount of wire length that can be safely pushed into the lightbar once installed. This extra length on the lightbar cable will assist in adjusting and servicing the lightbar.
- Apply touch-up paint or similar sealant to the exposed metal edge of the hole.

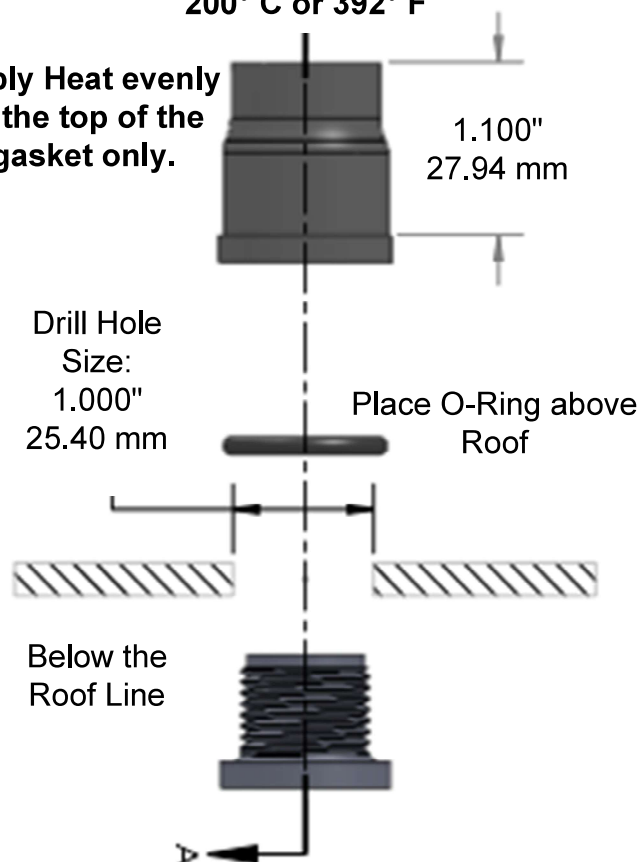


Part Number:	A: Overall Nominal Length	Minimum Inside Diameter	Recovered Minimum I.D.	Nut Length	Drill/Hole Size
83-0115	1.25"	0.75"	0.25"	0.95"	1.00"

Note: The Nominal Overall Length is the height over the roof line.

**For ideal performance set Heat Gun to:
200° C or 392° F**

Apply Heat evenly to the top of the gasket only.



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Phone: 844-423-7200

Email: sales@allfleetsolutions.com

Web: www.allfleetsolutions.com

EDD 120717

ECN 000000

AFS Part #	Part Description	Page #	List Price
WCX-PT120	120" Pigtail Harness for Whelen CEM16 Expansion	1-2	\$447.41
WCX-PT240	240" Pigtail Harness for Whelen CEM16 Expansion	3-4	\$537.37
WC24-PT120	120" Pigtail Harness for Whelen CEM24 Expansion	5-6	\$462.70
WC24-PT240	240" Pigtail Harness for Whelen CEM16 Expansion	7-8	\$581.98
WC24-PD-PT120	120" Pigtail Harness for Whelen CEM24 Expansion with Power & Data	9-10	\$648.23
WC24-PD-PT240	240" Pigtail Harness for Whelen CEM24 Expansion with Power & Data	11-12	\$784.84
WCX-MH-002	Main Siren & Data Cable Harness for Whelen Core C399	15-16	\$794.56
WCSP-PDI-28G	28" Power, Data & Ignition Cable for Whelen Core C399	17	\$134.65
CEM-PWR36	36" Power Pigtail Harness for Whelen Expansion CEM16	18	\$204.78
WCX-PWR48-PDD	48" Power Pigtail Harness for Whelen Expansion CEM16	19	\$271.93
12-WCX-PWR180G	180" Power Pigtail Harness for Whelen Expansion CEM16	20	\$380.59
WCX-PWR36-C24	36" Power Pigtail Harness for Whelen Expansion CEM24	21	\$177.53
WCX-PWR40-C24	40" Power Pigtail Harness for Whelen Expansion CEM24	22	\$286.48
WCX-PWR180-C24	180" Power Pigtail Harness for Whelen Expansion CEM24	23	\$375.36
PWR-6GA-2-125	6 Ga. Power Feed with 125A In-Line Midi Fuse & 150A Circuit Breaker	24	\$191.37
PDD-B6i2D4	Power, Ignition & Data Distribution Panel	25-26	\$360.00
PDD-B12i2D6	Power, Ignition & Data Distribution Panel	27-28	\$395.00
PDD25-FLEX	Power, Ignition, Timed & Data Distribution Panel	29-32	\$930.00
FXP-GND-18	Ground Buss Expansion Panel	33	\$91.13
WCX-PWR24-D	Power & Data Cable Pigtail for WeCanX Devices	34	\$80.47
83-0115	Lightbar Gasket Seal for Rooftop Application	35	\$36.34

Notes

View www.allfleetsolutions.com for full Warranty and Return Policy.

TECHNICAL SUPPORT & SALES CONTACT:

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EDD 062426

ECN 000000