

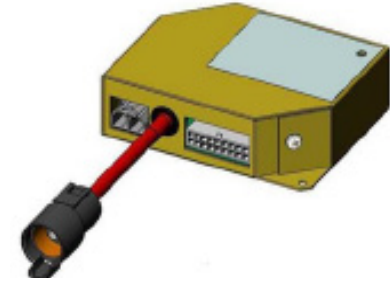


WELDON
A DIVISION OF AKRON BRASS

V-MUX®

PARTS, CONNECTORS, AND ACCESSORIES – SPECIFICATION REFERENCE

March 2020



Weldon, a division of Akron Brass
3656 Paragon Dr.
Columbus, OH 43228
(800) 989-2718
www.V-MUX.com
e-mail: weldoncare@idexcorp.com

V-MUX Input/Output nodes



- 12/24 Volt
- 120 Amp

Hercules High Content HCN 6060
 settable: 16-20 wired switch Inputs
 settable: 0-4 wired sensor Inputs
 (16) 13-Amp +12V Outputs
 (12) 4-Amp +12V Outputs
 (4) 4-Amp Ground Outputs
 ----- Pages 9-10 -----



- 12/24 Volt
- 120 Amp

Hercules (original) 6000
 (16) wired switch Inputs
 (3) wired sensor Inputs
 (16) 10.5-Amp +12V Outputs
 (8) 4-Amp +12V Outputs
 (2) 4-Amp Ground Outputs
 ----- Pages 11-12 -----



- 12/24 Volt
- 100 Amp capacity

8x16 CAN 6030-2000
 (8) wired switch Inputs
 (2) wired sensor Inputs
 (16) 13-Amp +12V Outputs
 (2) 4-Amp Ground Outputs

supports V-MUX and ES-Key CAN
 ----- Page 13 -----

Mini 4x12 6010
 (4) wired switch Inputs
 (1) wired sensor Input
 (12) 7.5-Amp +12V Outputs
 ----- Page 14 -----



- 12 Volt only
- 55 Amp



Mini 16x0 6020
 (16) wired switch Inputs
 (0) Outputs
 ----- Page 15 -----

- 12/24 Volt



Climate Control Module ON70-1519-xx
 (3) wired switch inputs
 (2) wired sensor inputs
 (8) load Outputs
 (1) control Out
 ----- Page 16 -----

- 12 Volt only
- 66 Amp

V-MUX system nodes:



- 12/24 Volt

Vista IV 6240

Display center with Touchscreen option
 (8) menu driven buttons
 (7) permanent legend buttons
 (4) video inputs

--- Page 17 ---

PODS Switch Controller 6310 with 6311 button modules

--- Pages 18-19 ---

- 12/24 Volt



VDR/Gateway 6444 with 6204 Occupant Indicator

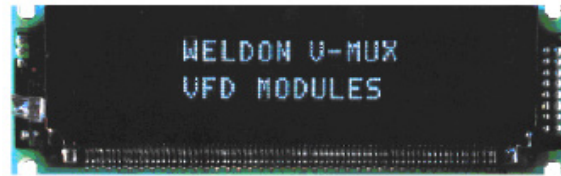
--- Pages 20-21 ---



- 12/24 Volt



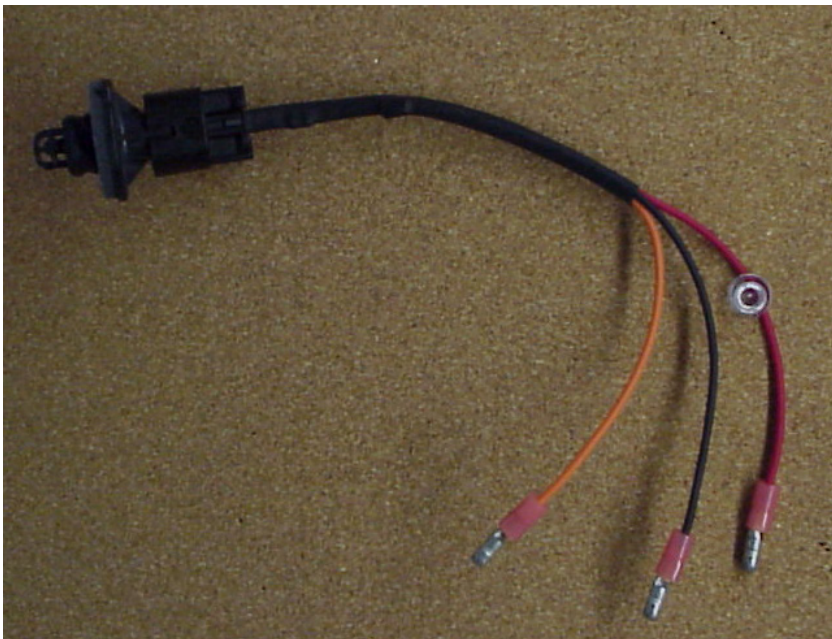
V-MUX Accessories (Optional components for V-MUX applications)



0U10-0715-00

VFD Information Display - 2 lines x 20 characters. Text only.

----- Page 23 -----



0R13-0614-00

0R13-2557-00

Air Temperature Sensor, -20° to 200° F

----- Page 24 -----



0R00-23725-00

Amperage Sensor (Hall Effect type)

----- Page 24 -----

V-MUX OEM and Field Service Tools



6131-0000-00 V-MUX USB Field Service kit.

Boxed kit: includes #6111 USB transceiver, USB cable, V-MUX hook-up cable, One-on-one adapters for nodes, Pin extractor tools, Jumper wires, Diagnostics and Downloader software.

6151-0000-00 V-MUX USB OEM kit.

Boxed kit: Includes the entire 6131 Field Service kit plus V-MUX System Designer™ software.

included adapters:

#0L40-1244-00 Hercules adapter

#0L40-1635-00 Mini adapter

#0L40-2111-00 Gateway adapter

NOTE: V-MUX Service kit software is designed for use with computers running Microsoft Windows® XP, Vista, 7, 8.1, 10 operating systems.



6111-0000-00 USB transceiver (upgrade)

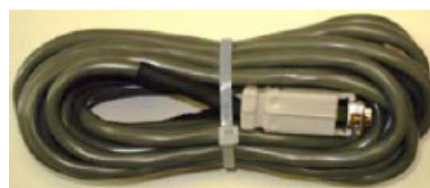
Transceiver and cables only; no kit. This part is intended as an upgrade to existing V-MUX field service kits. It should not be ordered as an initial item.

Includes:

(1) USB transceiver box

(1) USB 3-ft cable (computer to transceiver)

(1) #0L20-1617-00 15-ft cable (transceiver to V-MUX)



Deutsch HDT48-00 hand-held crimp tool

OK26-2064-00

(This item not included with field service kits. Must be purchased separately)



OK26-1260-00
0411-310-1605
Pin removal tool
16-18 AWG



OK26-1261-00
0411-240-2005
Pin removal tool
20-24 AWG

Pin removal tools are included in the field service kit, but it is a good idea to have a supply of spares.



6190-0000-00 V-MUX Training

(On-site training – for both OEM and Service)

V-MUX Connector Parts Weldon and TE-Deutsch part number Cross- Reference

Weldon #	Deutsch #	Description
0K26-1261-00	0411-240-2005	TOOL CONTACT REMOVAL 20/22 AWG (RED)
0K26-1260-00	0411-310-1605	TOOL CONTACT REMOVAL 16/18 AWG (BLUE)
0K70-2082-00	0413-204-2005	SEALING PLUG 20/22 AWG (RED)
0K70-2060-00	0413-217-1605	SEALING PLUG 16/18 AWG (WHITE)
0K20-0837-00	0460-202-16141	CONTACT, 16/18 AWG PIN
0K20-2063-00	0460-202-20141	CONTACT, 20/22 AWG PIN
0K20-0852-00	0460-215-16141	CONTACT, 16 AWG PIN (GREEN BAND)
0K21-1001-00	0462-201-16141	CONTACT, 16/18 AWG SOCKET
0K21-2062-00	0462-201-20141	CONTACT, 20/22 AWG SOCKET
0K21-2061-00	0462-203-08141	CONTACT, 8/10 AWG SOCKET
0K00-2065-00	1011-026-0205	MOUNTING FLANGE FOR DT04-4P
0K70-1269-00	114017	WIRE LOCATION PLUG
0K15-1192-00	DT04-2P	RECEPTACLE, 2 POS -- 18 AWG PINS
0K15-1784-00	DT04-3P	RECEPTACLE, 3 POS -- 18 AWG PINS
0K15-2056-00	DT04-3P-P007	REC. TEE, 3 POS
0K15-1436-00	DT04-4P	RECEPTACLE, 4 POS -- 18 AWG PINS
0K15-0828-00	DT04-6P	RECEPTACLE, 6 POS -- 18 AWG PINS
0K14-2338-00	DT06-12SA	PLUG, 12 POS, A-KEY -- 18 AWG SOCKETS
0K14-2339-00	DT06-12SB	PLUG, 12 POS, B-KEY -- 18 AWG SOCKETS
0K14-2340-00	DT06-12SC	PLUG, 12 POS, C-KEY -- 18 AWG SOCKETS
0K14-2057-00	DT06-3S-P032	PLUG, 3-POS -- 18 AWG SOCKETS
0K14-1435-00	DT06-4S	PLUG, 4 POS -- 18 AWG SOCKETS
0K14-0829-00	DT06-6S	PLUG, 6 POS -- 18 AWG SOCKETS
0K15-2584-00	DTM04-3P-E003	RECEPTACLE, MINI 3 POS -- 20 AWG PINS
0K14-2070-00	DTM06-12SA	PLUG, MINI 12 POS, A-KEY -- 20 AWG SOCKETS
0K14-2071-00	DTM06-12SB	PLUG, MINI 12 POS, B-KEY -- 20 AWG SOCKETS
0K15-2510-00	DTM06-4S	PLUG, MINI 4 POS -- 20 AWG SOCKETS
0K14-2654-00	DTM06-6S	PLUG, MINI 6 POS -- 20 AWG SOCKETS
0K48-2068-00	HD30-24BT	BOOT, HD36 SERIES CONNECTORS
0K14-2066-00	HD36-24-23PN	CONNECTOR, 23 POS
0K14-2067-00	HD36-24-35PN	CONNECTOR, 35 POS

Weldon #	Deutsch #	Description
0K15-1145-00	JS16-00	RECEPTACLE, IN-LINE JIFFY SPLICE
0K26-2064-00	HDT48-00	TOOL, HAND CRIMP FOR DEUTSCH WIRE CONTACTS
0K18-2341-00	W12S	LOCK, WEDGE, ORANGE, 12 POS -- SOCKETS
0K18-1193-00	W2P	LOCK, WEDGE, 2 POS -- PINS
0K18-1785-00	W3P	LOCK, WEDGE, 3 POS -- PINS
0K18-2059-00	W3S-1939-P012	LOCK, WEDGE, BLUE, KEYED 3 POS -- SOCKETS
0K18-2058-00	W3S-P012	LOCK, WEDGE, GREEN, KEYED 3 POS -- SOCKETS
0K18-1438-00	W4P	LOCK, WEDGE, GREEN, 4 POS -- PINS
0K18-1437-00	W4S	LOCK, WEDGE, ORANGE, 4 POS -- SOCKETS
0K18-0831-00	W6P	LOCK, WEDGE, 6 POS -- PINS
0K18-0830-00	W6S	LOCK, WEDGE, 6 POS -- SOCKETS
0K18-2072-00	WM-12S	LOCK, WEDGE, 12 POS -- PINS
0K18-2585-00	WM-3P	LOCK, WEDGE, 3 POS -- PINS
0K18-2511-00	WM-4S	LOCK, WEDGE, 4 POS -- SOCKETS
0K18-2654-00	WM-6S	LOCK, WEDGE, 6 POS -- SOCKETS
0K90-2056-00		CONNECTOR KIT -- V-MUX NETWORK JUNCTION
0K90-3111-00		CONNECTOR KIT -- V-MUX NETWORK FORWARD TAP
0K90-2280-00		CONNECTOR KIT -- HERCULES 6000 series
0K90-3462-00		CONNECTOR KIT -- HERCULES HC 6060 series
0K90-2281-00		CONNECTOR KIT -- MINI 4x12 6010 series
0K90-2282-00		CONNECTOR KIT -- MINI 16x0 6020 series
0K90-2286-00		CONNECTOR KIT -- 8x16 6030 series
0K90-2310-00		CONNECTOR KIT -- VISTA IV 6240 series
0K90-2311-00		CONNECTOR KIT -- PODS 6300 series
0L80-2653-00		CONNECTOR KIT -- 6444 CAN/VDR; 6204 ORI
0K90-2783-00		CONNECTOR KIT -- 6204 SEAT DISPLAY ONLY
0K90-2763-00		CONNECTOR KIT -- CLIMATE MODULE 0N70 series

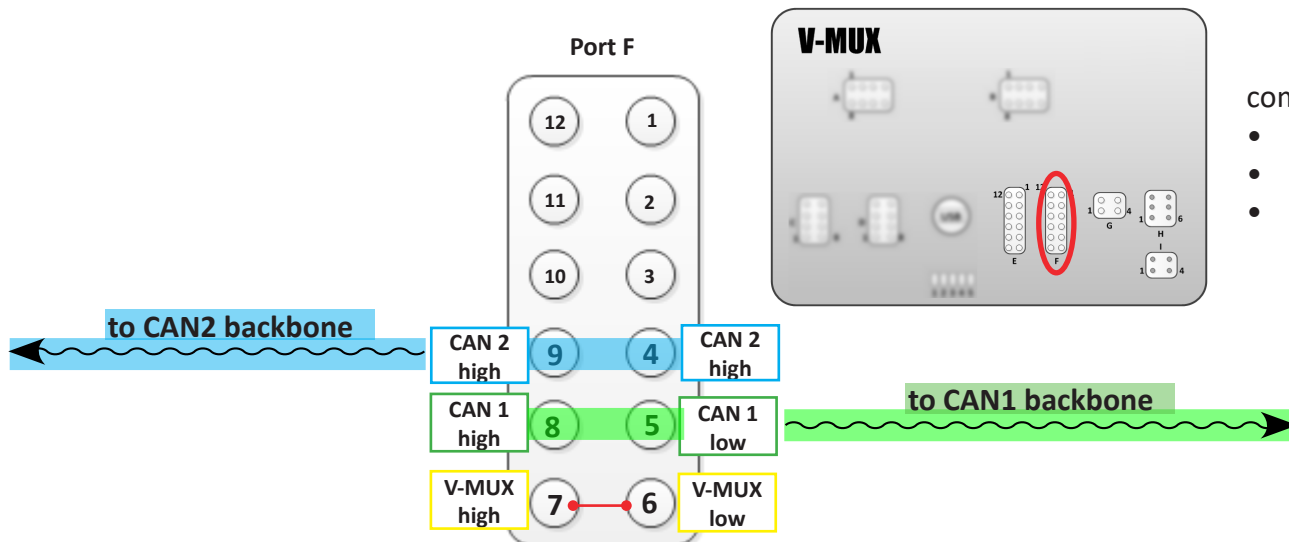
NOTE: Deutsch components may be ordered from authorized distributors at
www.TE.com

Network data cable
RS-485 twisted pair
cable on spool

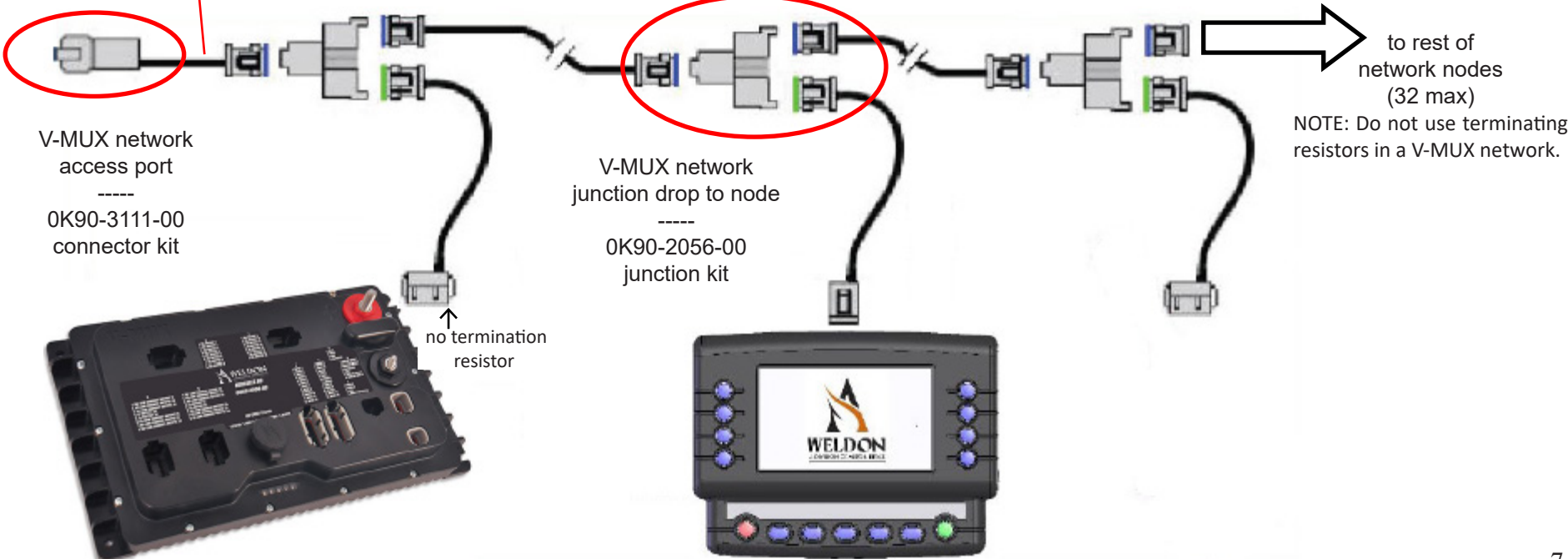


OL20-1600-51 (50 ft)
OL20-1600-22 (200 ft)
OL20-1600-52 (500 ft)
OL20-1600-13 (1000 ft)

V-MUX network layout -- backbone



- communications PORT F
- V-MUX -- pins 7,6
 - CAN 1 -- pins 8,5
 - CAN 2 -- pins 9,4



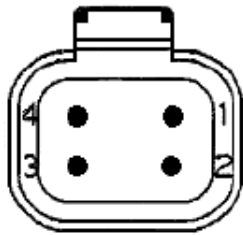
V-MUX network layout -- terminal pins and sockets

Network data tap

0K15-1436-00

DT04-4P

(viewed as looking
into receptacle)



- pin 1 = comms A (white)
- pin 2 = comms B (black)
- pin 3 = OPTIONAL ground
- pin 4 = OPTIONAL power +V Batt



terminal pin
Weldon 0K20-0837-00
Deutsch 0460-202-16141

Network data cable

RS-485 twisted pair

white = comms A

black = comms B



NOTE

At each 3-pin plug-in:

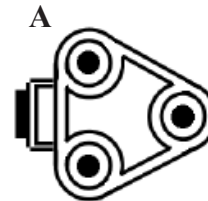
It is important that the RS-485 shield wire be pinned at C so as to provide a path for electrical noise to drain off. A correctly wired network will have all shield wires common and drained at a separate ground stud away from the V-MUX node grounds.

Plug-in at each data Tee

0K14-2057-00

DT06-3S-P032

(viewed as looking from rear)



B

- pin A = comms A (white)
- pin B = comms B (black)

terminal socket

Weldon 0K21-1001-00

Weldon 0462-201-16141



pin C = shield ground

Use at the pin C

shield ground:

Solid socket -- extended

Deutsch 0462-221-1631



Use of the extended version of the socket prevents water from infiltrating into the data Tee by way of the unjacketed shield wire.

Hercules HC #6060

Output ports A, B, C, D

Port A: +V High (13 Amp) Outputs 1-8

Conn/Term	Key	Pin	Name	Polarity	Capacity
(1) Deutsch DT06-08S Gray ----- (8) Deutsch 0462-201-16141	A	1	Out 1 High Amp	+Vbatt	13 Amp
		2	Out 2 High Amp	+Vbatt	13 Amp
		3	Out 3 High Amp	+Vbatt	13 Amp
		4	Out 4 High Amp	+Vbatt	13 Amp
		5	Out 5 High Amp	+Vbatt	13 Amp
		6	Out 6 High Amp	+Vbatt	13 Amp
		7	Out 7 High Amp	+Vbatt	13 Amp
		8	Out 8 High Amp	+Vbatt	13 Amp

Port B: +V High (13 Amp) Outputs 9-16

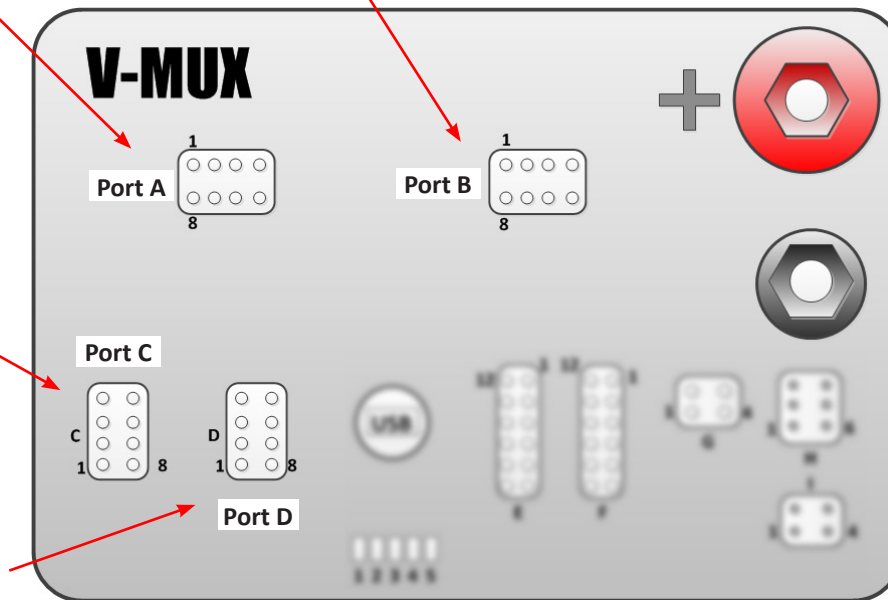
Conn/Term	Key	Pin	Name	Polarity	Capacity
(1) Deutsch DT06-08S Dark Gray ----- (8) Deutsch 0462-201-16141	B	1	Out 9 High Amp	+Vbatt	13 Amp
		2	Out10 High Amp	+Vbatt	13 Amp
		3	Out 11 High Amp	+Vbatt	13 Amp
		4	Out 12 High Amp	+Vbatt	13 Amp
		5	Out 13 High Amp	+Vbatt	13 Amp
		6	Out 14 High Amp	+Vbatt	13 Amp
		7	Out 15 High Amp	+Vbatt	13 Amp
		8	Out 16 High Amp	+Vbatt	13 Amp

Port C: +V Low (4 Amp) Outputs 1-6; Ground (4Amp) Outputs 1-2

Conn/Term	Key	Pin	Name	Polarity	Capacity
(1) Deutsch DT06-08S Green ----- (8) Deutsch 0462-201-16141	C	1	Out 17 Low Amp	+Vbatt	4 Amp
		2	Out 18 Low Amp	+Vbatt	4 Amp
		3	Out 19 Low Amp	+Vbatt	4 Amp
		4	Out 29 Low Amp	Ground	4 Amp
		5	Out 30 Low Amp	Ground	4 Amp
		6	Out 20 Low Amp	+Vbatt	4 Amp
		7	Out 21 Low Amp	+Vbatt	4 Amp
		8	Out 22 Low Amp	+Vbatt	4 Amp

Port D: +V Low (4 Amp) Outputs 7-12; Ground (4Amp) Outputs 3-4

Connector	Key	Pin	Name	Polarity	Capacity
(1) Deutsch DT06-08S Pink Gray ----- (8) Deutsch 0462-201-16141	D	1	Out 23 Low Amp	+Vbatt	4 Amp
		2	Out 24 Low Amp	+Vbatt	4 Amp
		3	Out 25 Low Amp	+Vbatt	4 Amp
		4	Out 31 Low Amp	Ground	4 Amp
		5	Out 32 Low Amp	Ground	4 Amp
		6	Out 26 Low Amp	+Vbatt	4 Amp
		7	Out 27 Low Amp	+Vbatt	4 Amp
		8	Out 28 Low Amp	+Vbatt	4 Amp



- 12/24 Volt
- 120 Amp capacity

Port E: Inputs 1-12 (signal +/-)

Hercules HC #6060 -- Inputs and Communications, ports E, F, G, H, I

Conn/Term	Key	Pin	Name	Signal
(1) Deutsch DTM06-12S Black ----- (12) Deutsch 0462-201-20141	B	1	Input 1	+V / -ground
		2	Input 2	+V / -ground
		3	Input 3	+V / -ground
		4	Input 4	+V / -ground
		5	Input 5	+V / -ground
		6	Input 6	+V / -ground
		7	Input 7	+V / -ground
		8	Input 8	+V / -ground
		9	Input 9	+V / -ground
		10	Input 10	+V / -ground
		11	Input 11	+V / -ground
		12	Input 12	+V / -ground

Port G: Secondary V-MUX Communications (such as the VF Display)

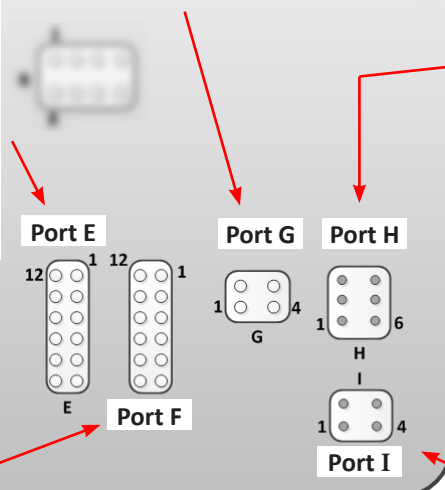
Connector	Key	Pin	Name
(1) DT06-04S Light Gray -----	~	1	V-MUX 2A
		2	V-MUX 2B
(8) Deutsch 0462-201-16141	~	3	device Ground
		4	+5V Source (500 mA)

Port H: Sensor Inputs 1-4 (with sensor +5V Source & Ground)

Conn/Term	Key	Pin	Name
(1) DTM06-06S Light Gray ----- (6) Deutsch 0462-201-20141	~	1	Sensor 1 or Input 17 (+)
		2	Sensor 2 or Input 18 (+)
		3	+5V Source (500 mA)
		4	Sensor Ground
		5	Sensor 3 or Input 19 (+)
		6	Sensor 4 or Input 20 (+)

USB program port:

- Place binary file to be loaded onto a USB flash drive.
- With power off plug the flash drive into the port.
- Power up and wait about 8 seconds for the program to load.
- Unplug the flash drive and cycle power Off/On.



Port F: V-MUX and CAN ports; Inputs 13-16

Conn/Term	Key	Pin	Name	Signal
(1) DTM06-12S Light Gray ----- (12) Deutsch 0462-201-20141	A	1	Input 15	-ground only
		2	Input 14	-ground only
		3	not used	
		4	CAN2 L	
		5	CAN1 L	
		6	V-MUX 1B	
		7	V-MUX 1A	
		8	CAN1 H	
		9	CAN2 H	
		10	not used	
		11	Input 13	-ground only
		12	Input 16	-ground only

Port I: for external PODS button modules

Conn/Term	Key	Pin	Name
(1) DTM06-04S Light Gray -----	~	1	PODS A (comms)
		2	PODS B (comms)
(4) Deutsch 0462-201-20141	~	3	PODS Ground
		4	+Vbatt (protected source)

Hercules HC Connector kit #0K90-3462-00:

- | | |
|--|----------------------------------|
| (1) 0K90-2783-00 Conn kit Seatbelt Display | (1) 0K90-3595-00 8-pos DT06 Kit |
| (1) 0K90-2310-00 Conn kit Vista | (1) 0K14-3490-00 8-pos DT06-8SA |
| (1) 0K90-2282-00 Conn kit 16 Input Node | (1) 0K14-3491-00 8-pos DT06-8SB |
| (1) 0K90-3496-00 Conn kit 4-pos DTM06-4S | (1) 0K14-3492-00 8-pos DT06-8SC |
| (1) 0K15-2510-00 Connector | (1) 0K14-3493-00 8-pos DT06-8SD |
| (1) 0K18-2511-00 Lock/wedge | (4) 0K18-3494-00 8-position WS8 |
| (5) 0K21-2062-00 Pins | (26) 0K21-1001-00 Term AWG 18-16 |

high capacity outputs

pin	name	polarity	capacity	wire
L	OUT-09	+VBatt	10.5 Amp	14/16 AWG
B	OUT-10	+VBatt	10.5 Amp	14/16 AWG
M	OUT-11	+VBatt	10.5 Amp	14/16 AWG
C	OUT-12	+VBatt	10.5 Amp	14/16 AWG
N	OUT-13	+VBatt	10.5 Amp	14/16 AWG
D	OUT-14	+VBatt	10.5 Amp	14/16 AWG
O	OUT-15	+VBatt	10.5 Amp	14/16 AWG
P	OUT-16	+VBatt	10.5 Amp	14/16 AWG

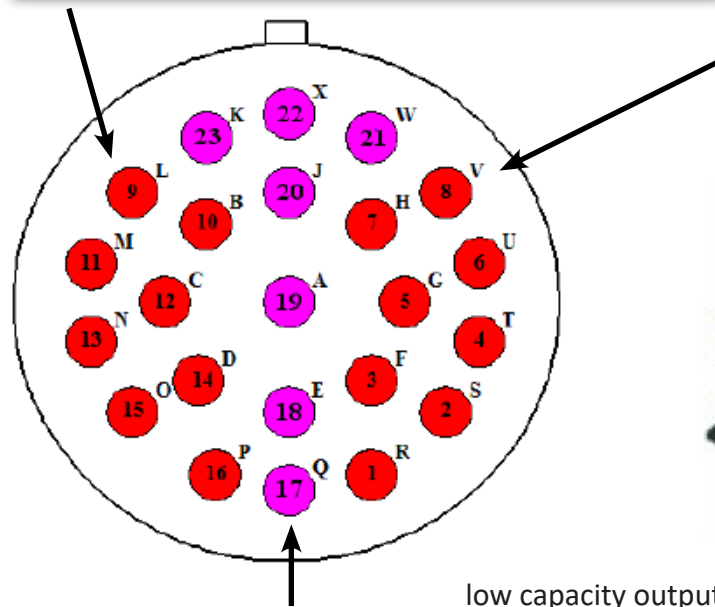
Hercules #6000 Output pin assignments
(viewed as looking at the node)

- 12/24 Volt
- 120 Amp capacity

high capacity outputs

pin	name	polarity	capacity	wire
R	OUT-01	+VBatt	10.5 Amp	14/16 AWG
S	OUT-02	+VBatt	10.5 Amp	14/16 AWG
F	OUT-03	+VBatt	10.5 Amp	14/16 AWG
T	OUT-04	+VBatt	10.5 Amp	14/16 AWG
G	OUT-05	+VBatt	10.5 Amp	14/16 AWG
U	OUT-06	+VBatt	10.5 Amp	14/16 AWG
H	OUT-07	+VBatt	10.5 Amp	14/16 AWG
V	OUT-08	+VBatt	10.5 Amp	14/16 AWG

Hercules Connector kit
#OK90-2280-00:
---includes---
(1) OK14-2066-00
Output connector
(1) OK14-2067-00
Input connector
(28) OK20-0837-00
Output pins
(25) OK20-2063-00
Input pins



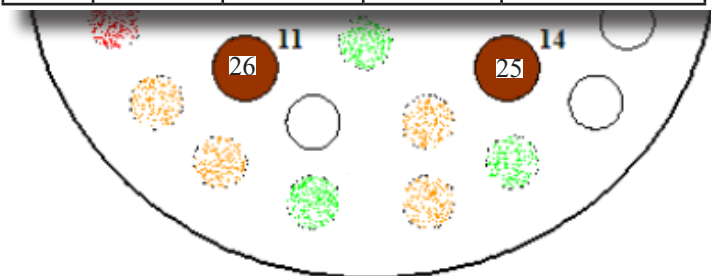
three of the low capacity outputs are located on the Input-side connector

low capacity outputs

pin	name	polarity	capacity	wire
7	OUT-24	+VBatt	4 Amp	16/18 AWG
14	OUT-25	GND	4 Amp	16/18 AWG
11	OUT-26	GND	4 Amp	16/18 AWG

low capacity outputs

pin	name	polarity	capacity	wire
Q	OUT-17	+VBatt	4 Amp	16/18 AWG
E	OUT-18	+VBatt	4 Amp	16/18 AWG
A	OUT-19	+VBatt	4 Amp	16/18 AWG
J	OUT-20	+VBatt	4 Amp	16/18 AWG
W	OUT-21	+VBatt	4 Amp	16/18 AWG
X	OUT-22	+VBatt	4 Amp	16/18 AWG
K	OUT-23	+VBatt	4 Amp	16/18 AWG



Hercules #6000 Input pin assignments (viewed as looking at the node)

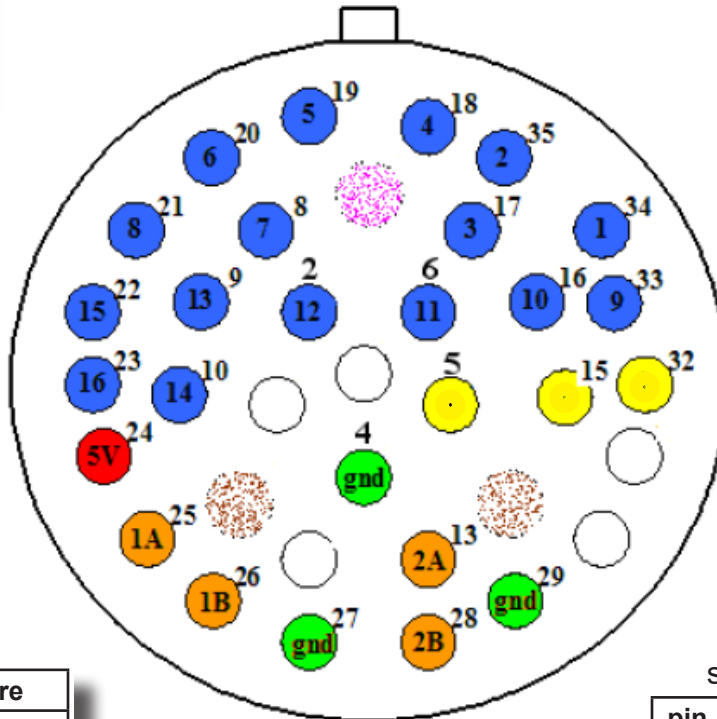


Input connector of Hercules

Hercules Connector kit #0K90-2280-00:

---includes---

- (1) 0K14-2066-00 Output-side connector
- (1) 0K14-2067-00 Input-side connector
- (28) 0K20-0837-00 Output pins
- (25) 0K20-2063-00 Input pins



Bi-polar switch inputs

pin	name	polarity	wire
34	IN-01	+VBatt/GND	20 AWG
35	IN-02	+VBatt/GND	20 AWG
17	IN-03	+VBatt/GND	20 AWG
18	IN-04	+VBatt/GND	20 AWG
19	IN-05	+VBatt/GND	20 AWG
20	IN-06	+VBatt/GND	20 AWG
8	IN-07	+VBatt/GND	20 AWG
21	IN-08	+VBatt/GND	20 AWG
33	IN-09	+VBatt/GND	20 AWG
16	IN-10	+VBatt/GND	20 AWG
6	IN-11	+VBatt/GND	20 AWG
2	IN-12	+VBatt/GND	20 AWG
9	IN-13	+VBatt/GND	20 AWG
10	IN-14	+VBatt/GND	20 AWG
22	IN-15	+VBatt/GND	20 AWG
23	IN-16	+VBatt/GND	20 AWG

Each Input channel is programmed for signal "ON" polarity.

communications

pin	name	note	wire
25	Comm-1A	twisted pair A	18 AWG
26	Comm-1B	twisted pair B	18 AWG
27	GND	DO NOT USE	
13	Comm-2A	for VFD (pg. 24)	20 AWG
28	Comm-2B	DO NOT USE	
29	GND	DO NOT USE	

pin	unused
1	DO NOT USE
3	DO NOT USE
12	DO NOT USE
30	DO NOT USE
31	DO NOT USE

sensor inputs (analog 0-5V)

pin	name	range	wire
32	Sensor-1	0-5V	20 AWG
15	Sensor-2	0-5V	20 AWG
5	Sensor-3	0-5V	20 AWG
24	+5V Source		20 AWG
4	Sensor GND		20 AWG

8x16 with CAN #6030-2000-00

- 12/24 Volt
- 100 Amp capacity

8x16 Connector kit #0K90-2286-00:

---includes---

- (1) 0K14-2338-00 Connector
- (1) 0K14-2339-00 Connector
- (1) 0K14-2340-00 Connector
- (3) 0K18-2341-00 wedge-lock insert
- (36) 0K21-1001-00 #18 AWG socket



Connector A

Pin	Name	Polarity	Capacity
1	Hi-side 1 Out	+VBatt	10.5 Amp
2	Hi-side 2 Out	+VBatt	10.5 Amp
3	Hi-side 3 Out	+VBatt	10.5 Amp
4	Hi-side 4 Out	+VBatt	10.5 Amp
5	Hi-side 5 Out	+VBatt	10.5 Amp
6	Hi-side 6 Out	+VBatt	10.5 Amp
7	Hi-side 7 Out	+VBatt	10.5 Amp
8	Lo-side 1 Out	GND	4 Amp
9	Input 1	program +/-	signal
10	Input 2	program +/-	signal
11	Input 3	program +/-	signal
12	Unused		

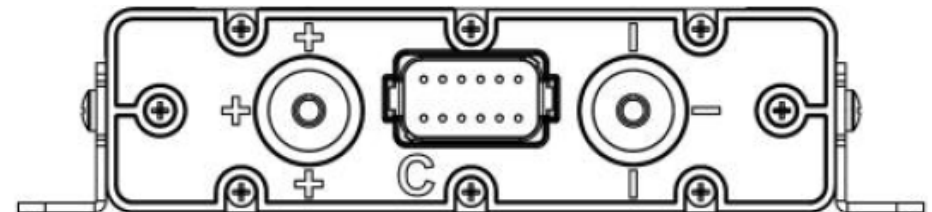
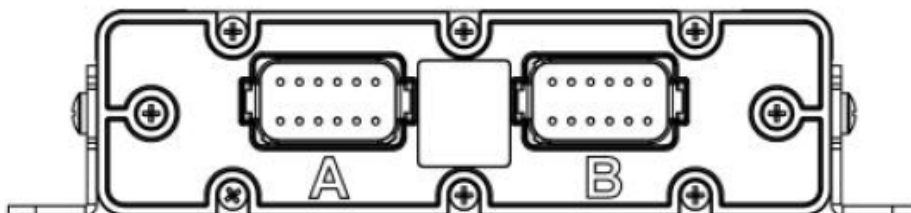
Connector B

Pin	Name	Polarity	Capacity
1	Hi-side 8 Out	+VBatt	10.5 Amp
2	Hi-side 9 Out	+VBatt	10.5 Amp
3	Hi-side 10 Out	+VBatt	10.5 Amp
4	Hi-side 11 Out	+VBatt	10.5 Amp
5	Hi-side 12 Out	+VBatt	10.5 Amp
6	Hi-side 13 Out	+VBatt	10.5 Amp
7	Hi-side 14 Out	+VBatt	10.5 Amp
8	Lo-side 2 Out	GND	4 Amp
9	Input 4	program +/-	signal
10	Input 5	program +/-	signal
11	Input 6	program +/-	signal
12	Unused		

Connector C

Pin	Name	Notes
1	V-Mux comm1 A	twisted pair A
2	V-Mux comm1 B	twisted pair B
3	CAN High	
4	Aux comm2 A	for VFD (pg 24)
5	Aux comm2 B	DO NOT USE
6	CAN Low	
7 *	Analog 1 In	Sensor 1 (0-5V)
8 *	Analog 2 in	Sensor 2 (0-5V)
9	Analog GND	
10	5V (500mA) Out	for VFD, sensors
11	Gnd Out	for VFD, sensors
12	CAN Shield	

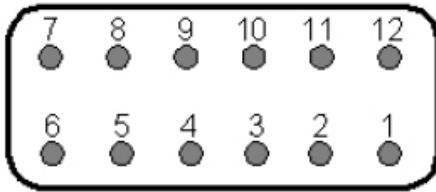
NOTE: The two analog channels on Connector C Pins 7 & 8, may also be used as standard Input signal channels (+/-)



Mini 4x12 node #6010

- 12 Volt only
- 55 Amps total capacity

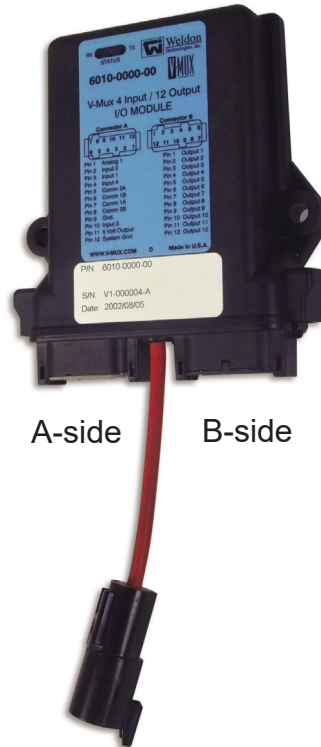
'A' Connector



Mating Connector Needed:
DTM06-12SA

pin	name	note
1	Analog 1	0-5V sensor
2	Input 2	wired switch 2
3	Input 1	wired switch 1
4	Input 4	wired switch 4
5	Comm 2A	for VFD (pg 24)
6	Comm 1B	twisted pair B
7	Comm 1A	twisted pair A
8	Comm 2B	DO NOT USE
9	Comm GND	for sensor/VFD
10	Input 3	wired switch 3
11	+5V Source	for sensor/VFD
12	System GND	

NOTE: All wired inputs use programmable signal polarity (+VBatt or -Ground) set by the vehicle designer



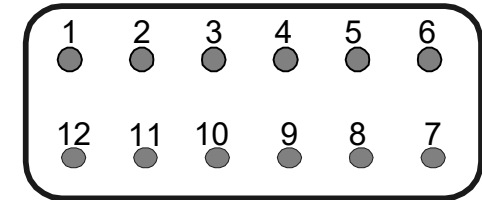
A-side B-side

Mini 4x12 Connector kit #0K90-2281-00:

---includes---

- (1) 0K14-2070-00 A-side connector
- (1) 0K14-2071-00 B-side connector
- (2) 0K18-2072-00 WM12S wedge insert
- (26) 0K21-2062-00 #20AWG sockets
- (1) 0K21-2061-00 #8 AWG socket
- (1) 0K14-2069-00 plastic hook-up

'B' Connector

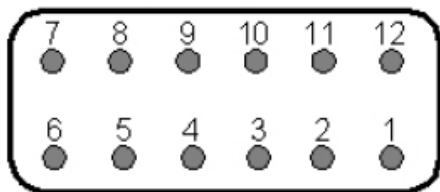


Mating Connector Needed:
DTM06-12SB

pin	name	polarity	Amps
1	Output 1	+VBatt	7.5 Amp
2	Output 2	+VBatt	7.5 Amp
3	Output 3	+VBatt	7.5 Amp
4	Output 4	+VBatt	7.5 Amp
5	Output 5	+VBatt	7.5 Amp
6	Output 6	+VBatt	7.5 Amp
7	Output 7	+VBatt	7.5 Amp
8	Output 8	+VBatt	7.5 Amp
9	Output 9	+VBatt	7.5 Amp
10	Output 10	+VBatt	7.5 Amp
11	Output 11	+VBatt	7.5 Amp
12	Output 12	+VBatt	7.5 Amp

Mini 16x0 (input only) node #6020

'A' Connector



Mating Connector Needed:
DTM06-12SA

pin	name	note
1	Input 13	wired switch 13
2	Input 14	wired switch 14
3	Input 15	wired switch 15
4	Input 16	wired switch 16
5	Comm 2A	for VFD (pg 19)
6	Comm 1B	twisted pair B
7	Comm 1A	twisted pair A
8	Comm 2B	DO NOT USE
9	Comm GND	for VFD (pg 19)
10	+12V Power	+VBatt
11	+5V Source	for VFD (pg 19)
12	System GND	

NOTE: All wired inputs use programmable signal polarity (+VBatt or -Ground) set by the vehicle designer



A-side

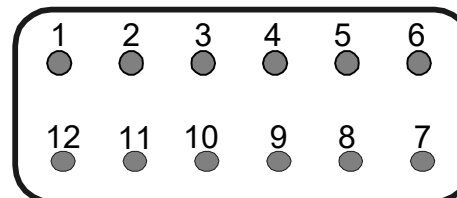
B-side

Mini 16x0 Connector kit #OK90-2282-00:

---includes---

- (1) 0K14-2070-00 A-side connector
- (1) 0K14-2071-00 B-side connector
- (2) 0K18-2072-00 WM12S wedge insert
- (24) 0K21-2062-00 #20AWG sockets

'B' Connector



Mating Connector Needed:
DTM06-12SB

pin	name	note
1	Input 1	wired switch 1
2	Input 2	wired switch 2
3	Input 3	wired switch 3
4	Input 4	wired switch 4
5	Input 5	wired switch 5
6	Input 6	wired switch 6
7	Input 7	wired switch 7
8	Input 8	wired switch 8
9	Input 9	wired switch 9
10	Input 10	wired switch 10
11	Input 11	wired switch 11
12	Input 12	wired switch 12

V-MUX Climate Control Module (CCM) -- #0N70-1519-03 (Fahrenheit), #0N70-1519-04 (Centigrade)

- 12 Volt
- 66 Amp capacity

(J1)

Mating Connector Needed:

Molex MINI-FIT, SR.™ #42816-0212

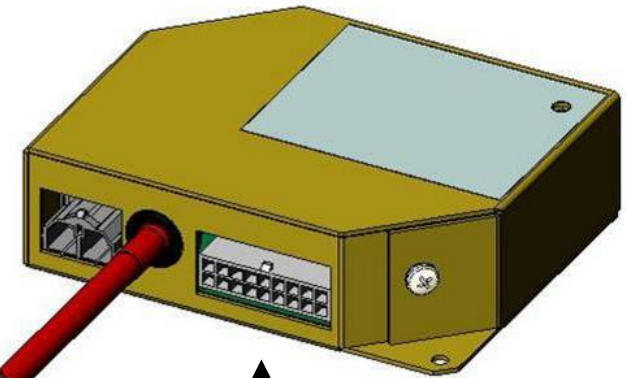
Mating Terminal Needed:

Molex 42815-0011 (10, 12 AWG)

Molex 42815-0031 (8 AWG)

Molex 42815-0041 (14, 16 AWG)

female crimp terminals



(+Batt)

Mating Connector Needed:

Deutsch DTHD06-1-4S

Mating Terminal Needed:

0462-203-04141

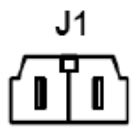
(J3)

Mating Connector Needed:

Amp Mini-Universal MATE-N-LOK® #770584-1

Mating Terminal Needed:

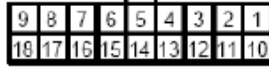
Amp MATE-N-LOK® Socket contacts #770988-1



+12V



J3

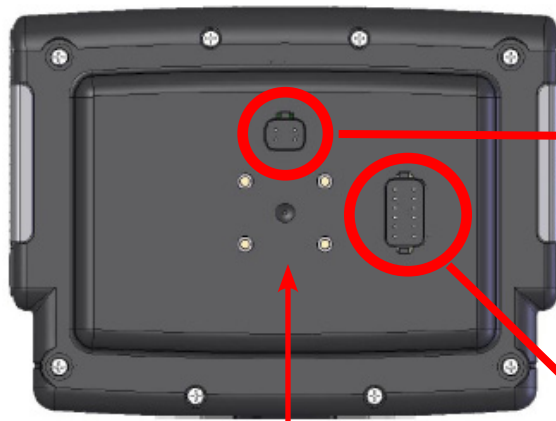


J1-1 Front Blower
J1-2 Rear Blower

J3-1 Temp. Ground
J3-2 ATM Common
J3-3 Set Point
J3-4 Inside Temp.
J3-5 Pressure In
J3-6 Pressure Out
J3-7 Comm-B
J3-8 Comm-A
J3-9 System Ground

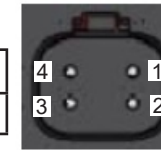
J3-10 Outside Temp.
J3-11 Thermostat 2
J3-12 Thermostat 1
J3-13 ATM Power
J3-14 Liquid Sol. Valve
J3-15 Condenser
J3-16 Air Relay
J3-17 Comp. Clutch
J3-18 Water Pump

Vista IV Display node-- #6240 series – ordering options



Comm port

4	Power (+V _{Batt})
3	GND



1	Comms A
2	Comms B

Vista III/IV Connector kit #0K90-2310-00:

---includes---

- (1) 0K14-1435-00 4-pin connector
- (2) 0K18-1437-00 front insert (orange)
- (4) 0K21-1001-00 #18AWG sockets

Vista IV -- 6240 series part number ordering guide:

6 2 4 **A - B C D E -xx**

A: Video/GPS adapter

(1 = none; 2 = 6" adapter; 3 = 10" adapter)

B: Legend Button Colors

(0 = Red/Blue/Green; 1 = Green/Blue/Green)

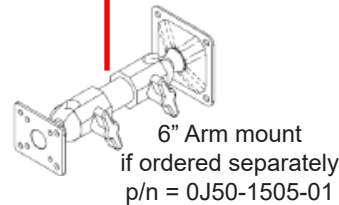
C: Touch Screen capable (0 = No; 1 = Yes)

D: Finish/Enclosure (1 = standard; 2 = sealed; 3 = bezel; 4 = DIN)

E: Mounting Method (0 = panel mount; 1 = arm mount;

2/3 = open; 4 = dash; 5 = legacy for Vista III)

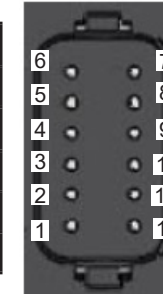
-xx (suffix): custom options, see below



GPS/Video port

GPS/Video adapter # 0L40-2806-00 (6")
0L40-2806-01 (10")

6	GND (video 1)
5	GND (video 2)
4	GND (video 3)
3	GND (video 4)
2	* CAN High
1	** GPS Rx (gray)



7	Video 1
8	Video 2
9	Video 3
10	Video 4
11	* CAN Low
12	** GPS Tx (purple)

NOTES:

(*) pins 2,11 = CAN High/Low are not currently used

(**) pins 1,12 = GPS Rx/Tx only for Vista IV Touchscreen.

Part Number	Description
624x-0010-00	Standard Vista IV, replaces Standard Vista III
624x-0110-00	Standard Vista IV with Touch
624x-0115-00	Rear Panel Mount, replacement for 0N30-2391 & 0N30-2392
624x-0144-00	double-DIN dash -- Ford (E-series and F150-F550)
624x-0144-02	double-DIN dash -- Chevy/GMC
624x-0144-03	double-DIN dash -- Sprinter vans
624x-0144-04	double-DIN dash -- Dodge RAM
624x-0130-00	Vista IV Touch only with bezel, panel mount

S-MUX Switch side
mates with cable
#0L40-2088-00

V-MUX Network side
mates with connector
#0K14-2070-00

Connector A



- Pin 1 Ground
- Pin 2 +12V
- Pin 3 Ground
- Pin 4 +12V
- Pin 5 Ground
- Pin 6 +12V
- Pin 7 S-Mux Comm B
- Pin 8 S-Mux Comm A
- Pin 9 S-Mux Comm B
- Pin 10 S-Mux Comm A
- Pin 11 Display Comm B
- Pin 12 Display Comm A

Connector B

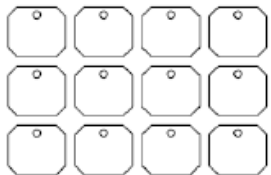


- Pin 1 Display Pwr
- Pin 2 Unused
- Pin 3 Unused
- Pin 4 Unused
- Pin 5 Unused
- Pin 6 Comm B
- Pin 7 Comm A
- Pin 8 Unused
- Pin 9 Unused
- Pin 10 Vbatt Pwr
- Pin 11 Display Gnd
- Pin 12 System Gnd

PODS Connector kit #0K90-2311-00:

---includes---

- (1) 0L40-2088-00 cable assembly
- (1) 0K14-2070-00 B-side connector
- (1) 0K18-2072-00 wedgelock insert, orange
- (2) 4-pin miniature plug
- (2) insert for plug



Button Labels

#0Q20-1736-00

Adhesive label paper -- 88 Die-cut labels for button legends
Initially blank -- Create button text & background with a Color Laser Printer

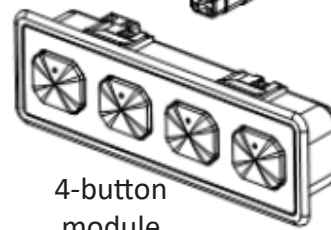
PODS Controller #6310 with PODS button modules #6311

S-MUX side #1: Up to 8 switch modules can exist on the Controller pins 7,8.

For long runs use only Weico #7704 cable.

Use terminals **#0K21-2062-00** #0462-201-20141

#DTM06-4S



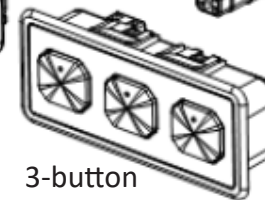
4-button module

#6311-0400-00

#0L40-2088-00

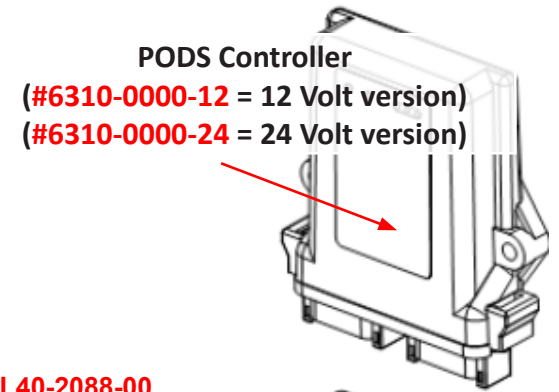
controller cable assembly (see next page for details)

#0L40-2020-00
Module-to-module cable assembly

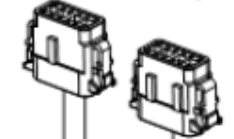


3-button module

#6311-0300-00



PODS Controller
(#6310-0000-12 = 12 Volt version)
(#6310-0000-24 = 24 Volt version)



connector **#0K14-2070-00**

V-MUX data cable **0L20-1600-XX**

S-MUX side #2: Up to 8 switch modules can exist on the Controller pins 9,10.

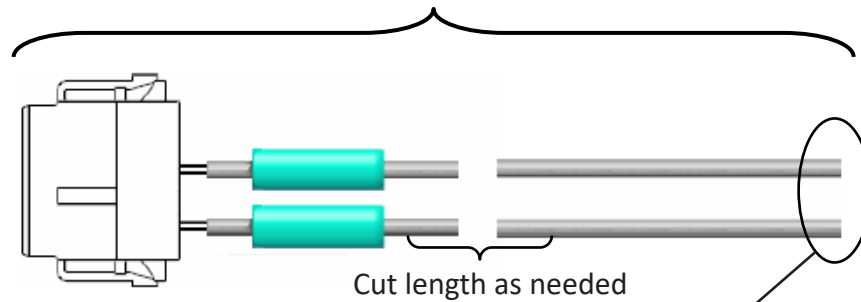
PODS info is continued on next page...

PODS button modules #6311 with PODS Controller #6310

#0L40-2088-00 PODS controller cable assembly

Includes two 10-ft. cable leads with ferrite RFI protection—
Controller to button modules.

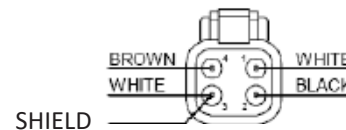
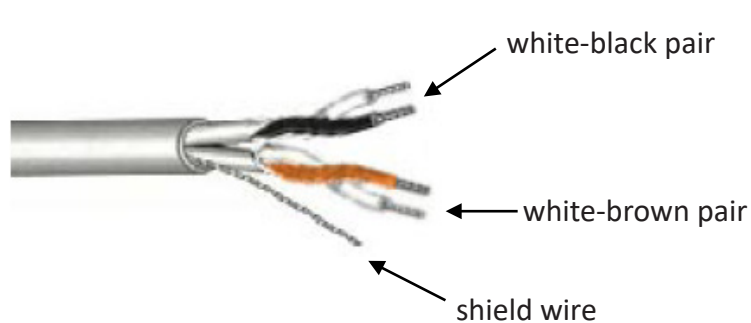
Either lead or both may be used. Order is unimportant.



NOTE: This part as ordered has no end termination of the cable leads. End fitting(s) Weldon #0K15-2510-00 (Deutsch DTM06-4S) are provided with the Connector kit #0K90-2311-00

Assembly instructions:

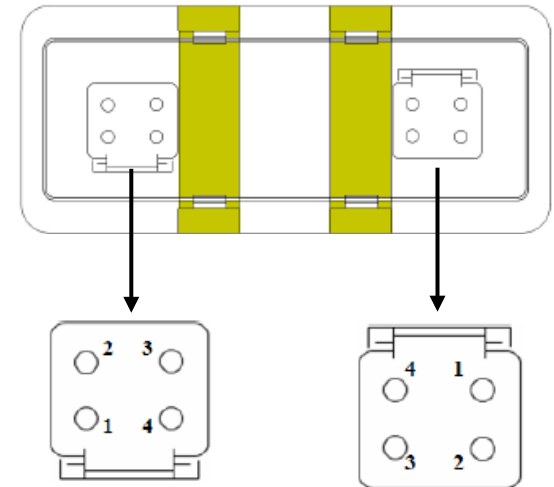
- 1) Remove insulation 1½" from end
- 2) Carefully separate the white-black twisted pair from the white-brown twisted pair. DO NOT mix the two white-colored wires.
- 3) Crimp the shield wire common with the white wire of the white-brown pair. Both wires fit easily into the Deutsch 0462-201-20141 socket.



NOTE: Cable shield line must be crimped common with Ground line (Pin 3, white) at DTM06-4S

#6311-0300-00 (3-button module)
#6311-0400-00 (4-button module)

Connector view from rear of module.



OK15-2510-00
Deutsch #DTM06-4S
4-pin miniature plug



Pin assignments – both sides

1	S-MUX Comm A
2	S-MUX Comm B
3	Ground
4	+Batt

Vehicle Data Recorder (VDR) + CAN Gateway -- #6444 Series

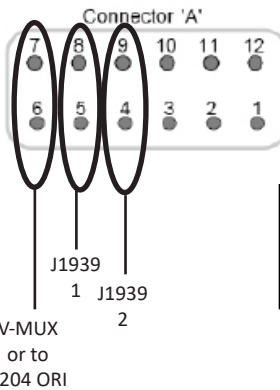
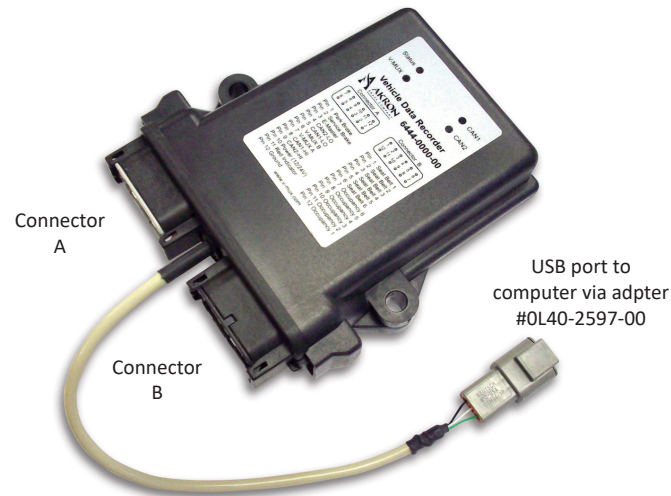
Connector A 0K14-2070-00

Pin	Name	Function	ON Polarity *
1	Park Brake	switch ON/OFF	+VBatt/GND
2	Service Brake	switch ON/OFF	+VBatt/GND
3	E-Master	switch ON/OFF	+VBatt/GND
4	CAN2-LO	J1939 comms 2	signal low
5	CAN1-LO	J1939 comms 1	signal low
6	Comm 1B	V-MUX/ORI pin 2	signal low
7	Comm 1A	V-MUX/ORI pin 1	signal high
8	CAN1-HI	J1939 comms 1	signal high
9	CAN2-HI	J1939 comms 2	signal high
10	Power (12/24V)	System Power	+VBatt
11	Red Indicator	warning output	+VBatt
12	Ground	System Ground	GND

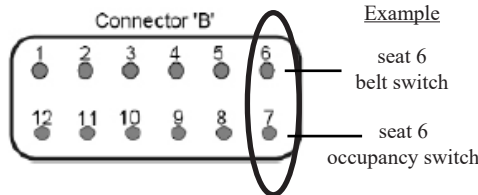
Connector B 0K14-2071-00

Pin	Name	Function	ON Polarity *
1	Seat Belt 1	Seat 1 belt switch	+VBatt/GND
2	Seat Belt 2	Seat 2 belt switch	+VBatt/GND
3	Seat Belt 3	Seat 3 belt switch	+VBatt/GND
4	Seat Belt 4	Seat 4 belt switch	+VBatt/GND
5	Seat Belt 5	Seat 5 belt switch	+VBatt/GND
6	Seat Belt 6	Seat 6 belt switch	+VBatt/GND
7	Occupancy 6	Seat 6 occupancy switch	+VBatt/GND
8	Occupancy 5	Seat 5 occupancy switch	+VBatt/GND
9	Occupancy 4	Seat 4 occupancy switch	+VBatt/GND
10	Occupancy 3	Seat 3 occupancy switch	+VBatt/GND
11	Occupancy 2	Seat 2 occupancy switch	+VBatt/GND
12	Occupancy 1	Seat 1 occupancy switch	+VBatt/GND

* The ON Polarity for switches (+VBatt/GND) is set by the VDR Configuration Tool software or V-MUX System Designer™.



6444/6204
Connector kit:
#0L80-2653-00

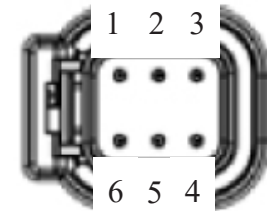


Connector B: For each seat location (Example: Seat 6) the seat belt signal pin and the seat occupancy signal pin line up vertically.

Occupant Restraint Indicator #6204 Series



6204 ORI -- pin locations
Viewed as looking into back of ORI. Mates
with 0K14-2654-00

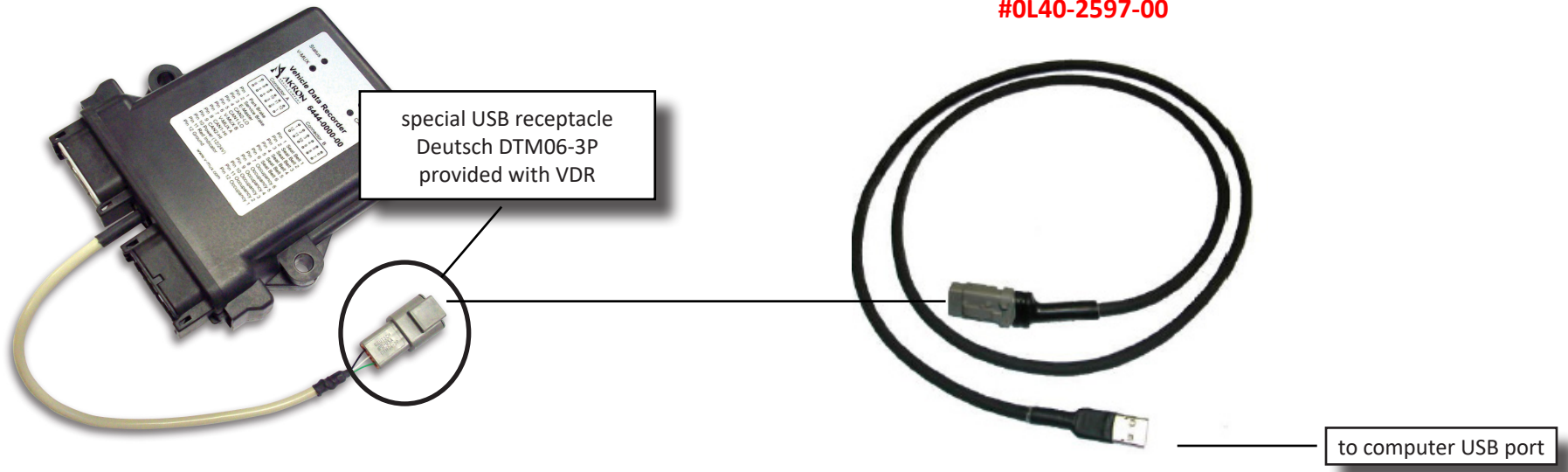


Pin	Name	notes
1	Comm 1A	to VDR pin 7
2	Comm 1B	to VDR pin 6
3	GND	device ground
4	Power	+VBatt power
5	Dimmer *	0-32V input
6	Buzzer *	80 mA out (ground polarity)

* For Dimmer and Buzzer control, see
"VDR Manual -- End User" page 24

CAN/Gateway + Vehicle Data Recorder -- #6444 Series

**USB interface cable for VDR to computer
#0L40-2597-00**



---- optional instructions ----

fabricate a 6444 Data Port USB adapter extension (not to exceed 12 ft. length)

Hardware for the adapter extension end

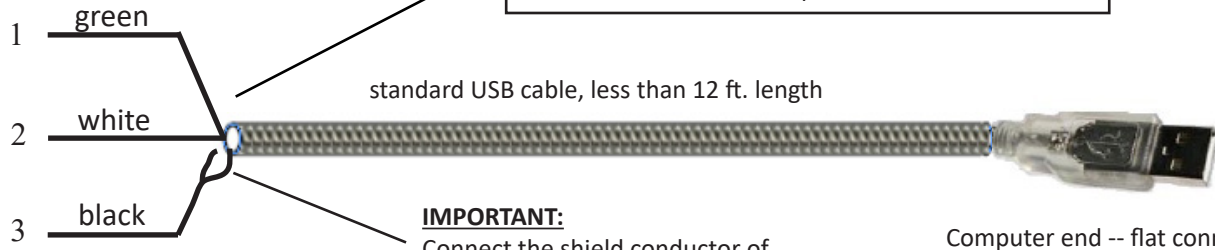
Deutsch DTM06-3S



Pin	Name	Color
1	D+	green
2	D-	white
3	GND	black

Lock wire terminals in with Deutsch wedge insert WM-3S

Cut the USB device end (square connector) off of a standard USB cable and expose the internal wires.

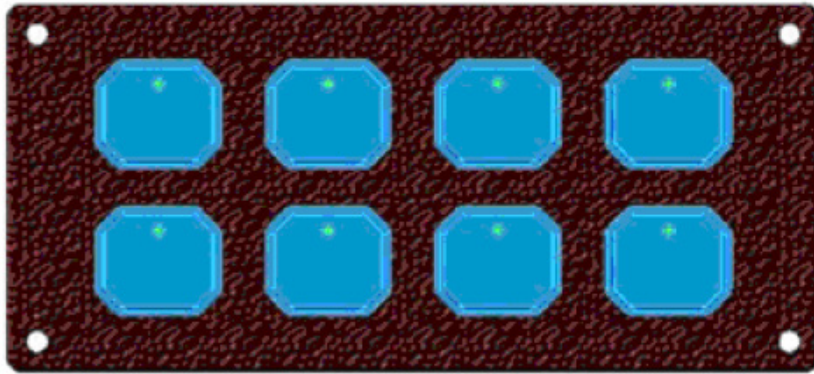


IMPORTANT:
Connect the shield conductor of the USB cable to wire 3 (black wire)

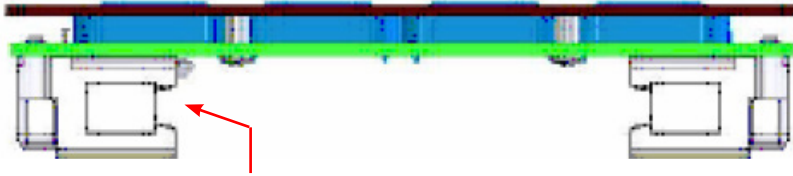
Terminate all wires with:
Deutsch 0462-201-20141
= Weldon 0K21-2062-00
(20 AWG terminal socket)

Computer end -- flat connector
(preserve this)

Blue Touch™ Static Switch Panel #6300

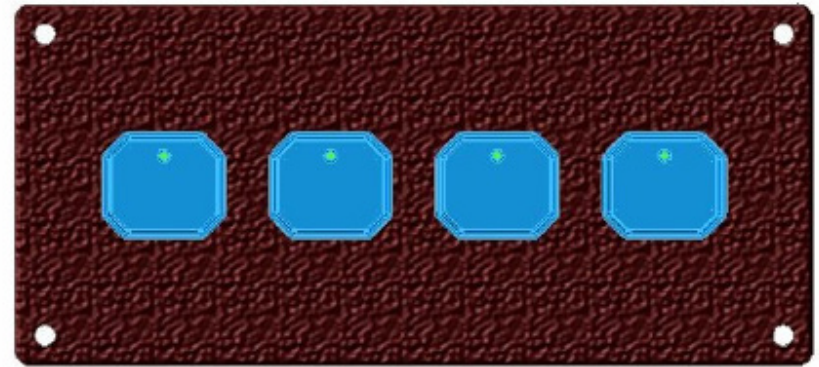


#6300-0800-00 (eight button)



Mating connector
Deutsch DT06-12SB

pin	name
1	Key 5 Indicator LED
2	Normally Open Key 5
3	Key 6 Indicator LED
4	Key 8 Indicator LED
5	Key 7 Indicator LED
6	+Batt VDC
7	Normally Open Key 8
8	Normally Open Key 7
9	Normally Open Key 6
10	Key Sw Common (GND)
11	LED Backlights (+Batt)
12	Ground

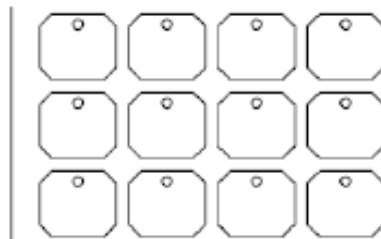


#6300-0400-00 (four button)



Mating connector
Deutsch DT06-12SA

pin	name
1	Key 1 Indicator LED
2	Normally Open Key 1
3	Key 2 Indicator LED
4	Key 4 Indicator LED
5	Key 3 Indicator LED
6	+Batt VDC
7	Normally Open Key 4
8	Normally Open Key 3
9	Normally Open Key 2
10	Key Sw Common (GND)
11	Backlights (+Batt LED)
12	Ground



Button Labels

#0Q20-1736-00 Adhesive label paper
-- 88 Die-cut labels for button legends

Initially blank -- Create button text & background with a Color Laser Printer

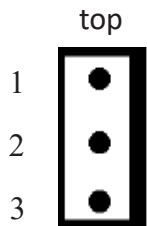
Vacuum Fluorescent Display (VFD) #OU10-0715-00

The VFD requires attachment to a programmed V-MUX host node:
Hercules HC, Hercules, Mini-4x12, Mini-16x0, 8x16

Connector Pin-out:

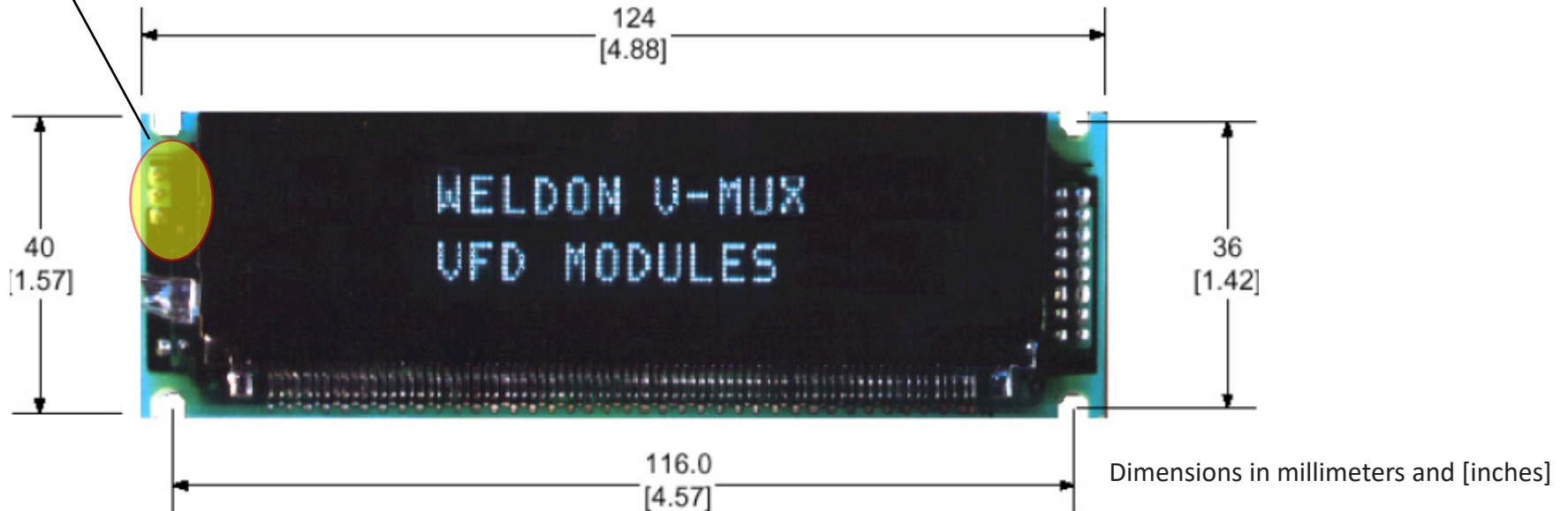
VFD pin	name	matches Hercules HC pins	matches Hercules pins	matches Mini 4x12 Mini 16x0 pins	matches 8x16 pins
1	+5V	G4	24	11	10
2	Comm 2A	G1	13	5	4
3	Ground	G3	29	9	11

VFD cable: A shielded cable must be used to minimize electrical noise. If ordering Weldon type **OL20-1600-xx** cable, the non-insulated shield wire should be used for the Ground.



VFD 3-pin connector at rear:
Weldon **#OK14-2073-00**
= Amp #171822-3

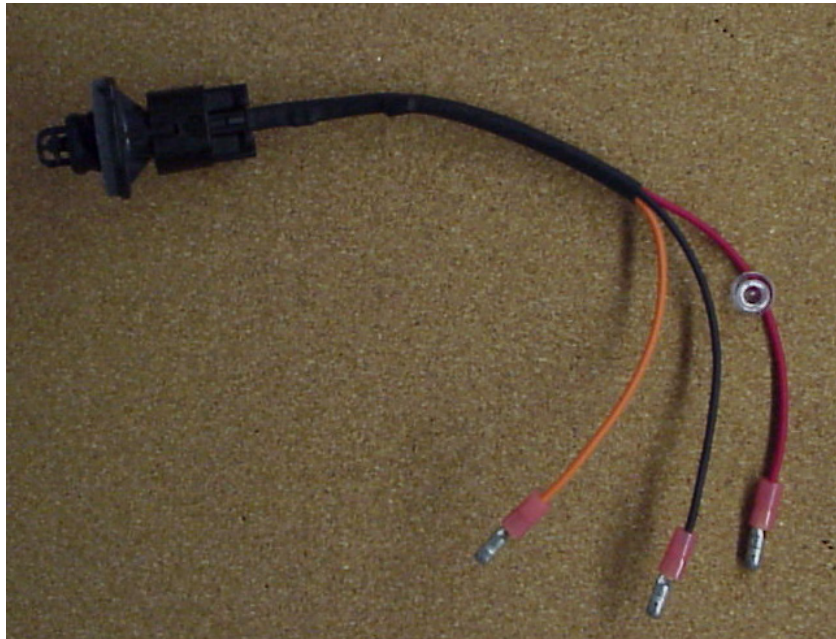
VFD Terminating pins: use Weldon **#OK21-2074-00** = Amp #170204-4



air Temperature Sensor

#OR13-0614-00 (3-wire for general I/O nodes)

#OR13-2557-00 (2-wire for ON70 Climate Module)



Amperage Sensor (DHAB S/118) -- #OR00-3725-00



connects with -- #OL40-2355-00



NOTE: The combination of the OR00-3725-00 Amperage sensor with the OL40-2355-00 connector allows the signal wire to terminate directly into the V-MUX I/O node.

sensor pin assignments -- to general I/O node types

wire	name	matches 6060 Hercules HC pin	matches 6000 Hercules pin	matches 6010 Mini 4x12 pin	matches 6020 8x16 node pin
black	Ground	H4	4	9	11
red	Power +5 VDC	H3	24	11	10
orange	0-5V signal	H: 1, 2, 5, 6	5, 15, or 32	1	7, 8

