



MDX00042 MCS-LBC Datasheet





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1. Description

A device that can expand the input and output functions of the MCS-32 Universal Controller Plus or used in conjunction with other devices to convert/increase inputs and outputs.

One application of the MCS-LBC Universal Lighting Breakout Controller is to boost the inputs and outputs of an MCS-32.

The Universal Lighting Breakout Controller takes a CAN Bus encoded signal and converts it into a set of up to 10 conventional on/off (12 volts on and 0 volts off) signals to turn lights and/or other control units on and off.

By connecting a Universal Lighting Breakout Controller to an MCS-32 you add 10 outputs, thereby increasing the outputs from 32 to 42. The inputs are also increased by 4 making a total of 28 inputs.



2. Specification

1.1. **Absolute Maximum Ratings**

Supply Voltage: 32 Volts DC.
Supply Current: 40 Amps

1.2. **Electrical Characteristics**

Operating Voltage: 12-24 Volts DC

Current Consumption:

Typical: 50 milliamps. (@13.8VDC, no peripherals attached)
Max: 60 milliamps. (@13.8VDC, no peripherals attached)

Temperature

Standby Temperature: -20 Deg C – 70 Dec C
Operating Temperature: -20 Deg C – 65 Deg C

1.3. **Power**

4 x 12Amp DC pins on pluggable connector.
2 x Ground / chassis connections

1.4. **Digital Inputs**

4 x Positive Switched

1.5. **Analog Monitoring**

Incoming supply voltage sense.
Internal temperature monitor.

1.6. **Outputs**

8x Positive switching 3 Amp rated MOSFET outputs.
2x Positive Switching 10 Amp rated MOSFET outputs.

1.7. **Communications**

1 x CAN Bus 2.0

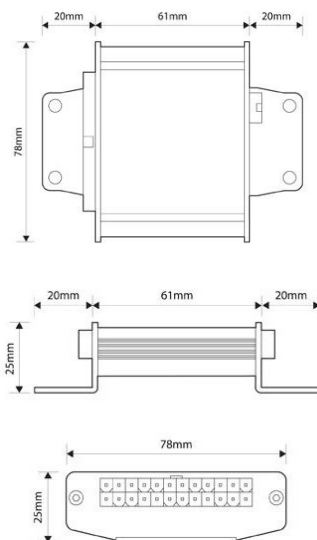


Stationery

2. Installation Requirements

- a) The supply lines MUST be protected with a fuse, preferably at (or near to) the battery terminal. VCC1, VCC2, VCC3 and VCC4 **must be individually 10A fused.**
- b) The MCS-LBC is a slave device and requires a MCS controller or MCS Handset to operate.

3. Dimensions

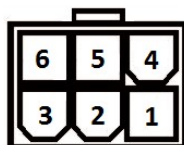


4. Approvals

The MCS-LBC is VCA approved for regulation No. 10.04.
Approval number: 10R-048937

5. Wiring and Connections

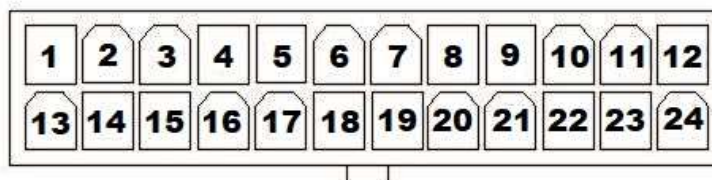
5.1. 6 Way Power Connector



Pin	Name	Function
1	SUP	Power Supply to the device
2	CANH	CAN High Data
3	CANL	CAN Low Data
4	GND	Ground Supply
5	N/A	
6	N/A	

Table 1 6 Way Power Connector

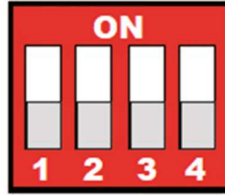
5.2. IO Connector



Pin	Name	Function
1	VCC1	Power Supply for Output 9 (External 10A fuse required)
2	Input 1	User Defined Positive Input signal
3	Input 2	User Defined Positive Input signal
4	Input 3	User Defined Positive Input signal
5	Input 4	User Defined Positive Input signal
6	CAN Data High	Connection point to CAN bus
7	CAN Data Low	Connection point to CAN bus
8	CAN Data High	Connection point to CAN bus
9	CAN Data Low	Connection point to CAN bus
10	Ground	Chassis connection point
11	Ground	Chassis connection point
12	VCC2	Power Supply for Output 10 (External 10A fuse required)
13	Output 10	High Power Output User defined
14	VCC3	Power Supply for Output 1-4 (External 10A fuse required)
15	Output 1	PWM Output User defined
16	Output 2	PWM Output User defined
17	Output 3	PWM Output User defined
18	Output 4	PWM Output User defined
19	Output 5	PWM Output User defined
20	Output 6	PWM Output User defined
21	Output 7	PWM Output User defined
22	Output 8	PWM Output User defined
23	VCC4	Power Supply for Output 5-8 (External 10A fuse required)
24	Output 9	High Power Output User defined

Table 2 IO Connector 1 Pins

5.3. DIP Switch Selector



CAN Address	DIP1	DIP2	DIP3	DIP4
0	OFF	OFF	OFF	OFF
1	OFF	OFF	OFF	ON
2	OFF	OFF	ON	OFF
3	OFF	OFF	ON	ON
4	OFF	ON	OFF	OFF
5	OFF	ON	OFF	ON
6	OFF	ON	ON	OFF
7	OFF	ON	ON	ON

Table 4 DIP Switch Pins



5.Revision History

<i>Revision</i>	<i>Comments</i>	<i>By</i>	<i>Date</i>
1	Initial Release in new format	KJVR	04/08/2018