

Doran Universal Exterior Light Monitor UBM-00

Instructions for Installation and Use

Monitor and Light Installation

The Doran UBM-00 is a fully electronic Exterior Light Monitor designed for use with incandescent, halogen, Light Emitting Diode (LED) constant burn and strobing lights. In order to work with the large differences in current draw between the incandescent versus the LED lights, it is necessary to “calibrate” the monitor for the lights installed.

Preferred Wiring -- Wire the unit with no more than two (2) lights in parallel and both lights must be of same type and manufacturer. Typically, the two (2) 7” stop/tail lights should be wired in parallel and the two (2) 4” stop/tail lights should be wired in parallel.

Alternate Wiring -- Sometimes buses are wired with a 7” and 4” stop/tail in parallel for the right and left sides. **If wired in this manner, the monitor may be unable to detect a failure of only one of the paralleled lights**, but it will detect a failure of both.

Calibrate unit after installation and after each lamp replacement.

Calibration

To self calibrate the monitor, ALL monitored lights must be in working order.

For faster calibration, the operator may turn on as many exterior lights as possible at the start of the procedure. The operator will be required to activate these lights during the calibration procedure. Operator may begin with the tail/head lights on, hazard lights (for the turn signals), and the amber warning lights flashing (door closed).

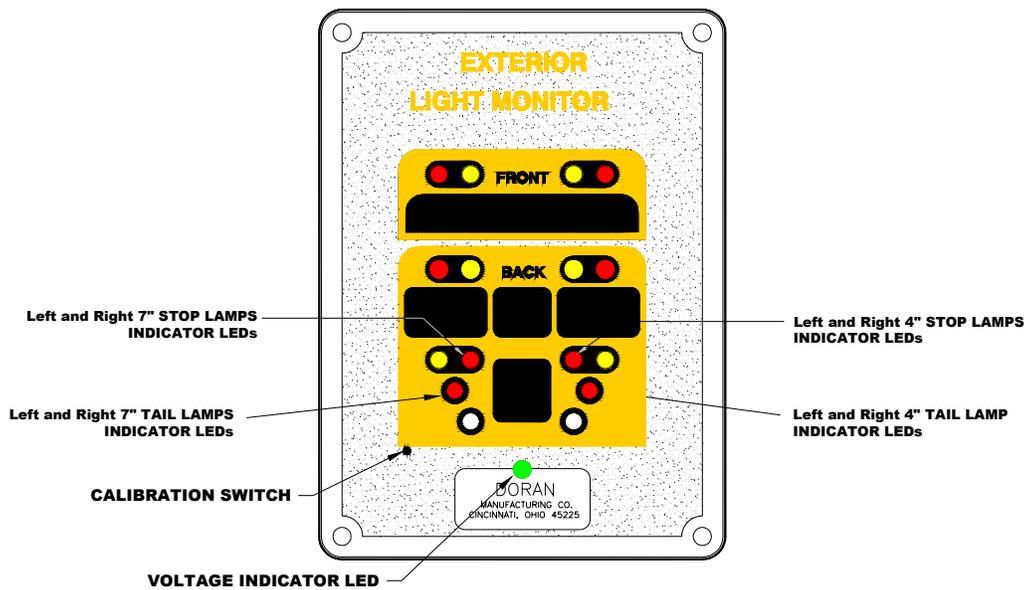
1. Turn on ignition and start engine – Engine is running to assure proper voltage for operation and calibration. The GREEN LED voltage indicator at the bottom center of the monitor **MUST BE ILLUMINATED** indicating the voltage is within limits for proper operation. Before beginning calibration, allow time for the voltage to stabilize to its normal running voltage. After cranking the engine the battery voltage may be lower than normal. Allow time for the battery to recharge.
2. When the ignition is turned on, all LED’s on monitor will be enabled for a few seconds to verify that all LED’s are working.
3. To enter the calibration mode, press and hold the calibrate button through the face plate hole for longer than two (2) seconds. This button/hole may be found located at the bottom left corner of the bus image on the monitor face plate. The first light to calibrate will begin flashing when the unit enters calibration mode. You may use an object such as an allen wrench or paper clip to activate the switch.
4. The unit will begin calibrating each light in a sequence. Each light tested must be active at the time of the calibration. As each light is calibrated, the matching monitor LED will flash. Operator shall activate (if not active) the bus light corresponding to the flashing LED. The sequence is as follows:
 - a. Left turn signal – switch on

- b. Right turn signal – switch on
 - c. Stop lights (left, then right side 7” will flash) – press brake pedal
 - d. Tail light (left, then right side 4” will flash) – switch on (brakes off)
 - e. Backup lights – press brake/clutch and engage reverse
 - f. Each Amber warning light – switch on with door closed
 - g. Each Red warning light – open door
5. Calibrated lights are indicated by the corresponding LED staying illuminated on the monitor. The unit continues to loop through the sequence flashing the un-calibrated lights until all lights are calibrated.
 6. When all LED’s are illuminated, turn off ignition to complete the calibration.

Operation

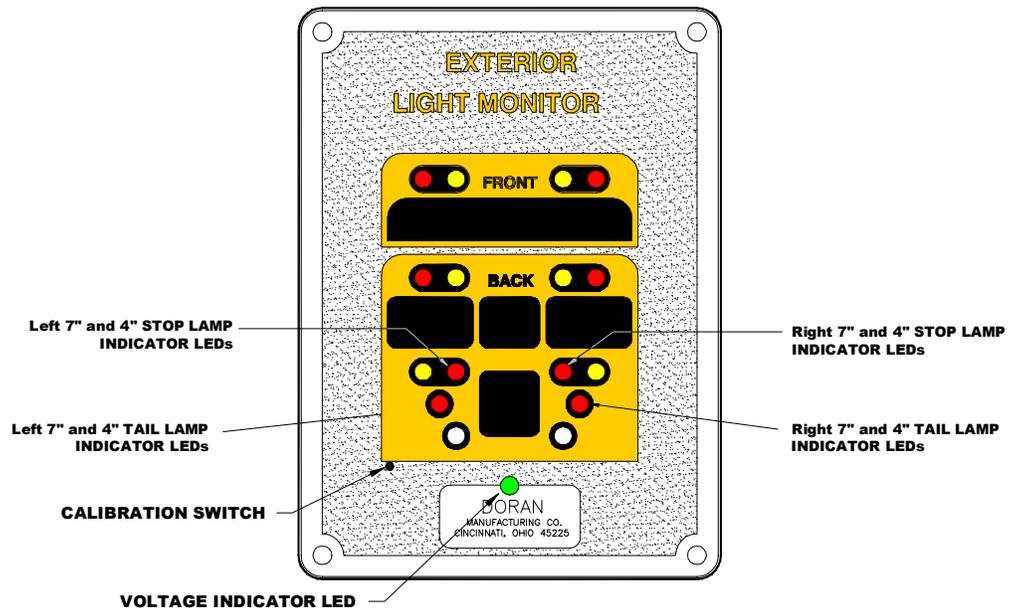
The GREEN LED at the bottom center of the monitor MUST BE ILLUMINATED indicating the voltage is within limits for proper operation. With the GREEN LED on, a lighted LED on the monitor display indicates the corresponding bus lamp/light circuit is drawing current. If the monitor LED does not illuminate when the corresponding bus light should be active, this/these bus lights should be checked for proper operation.

See the illustrations for the definition of the brake/stop and tail light indicators.



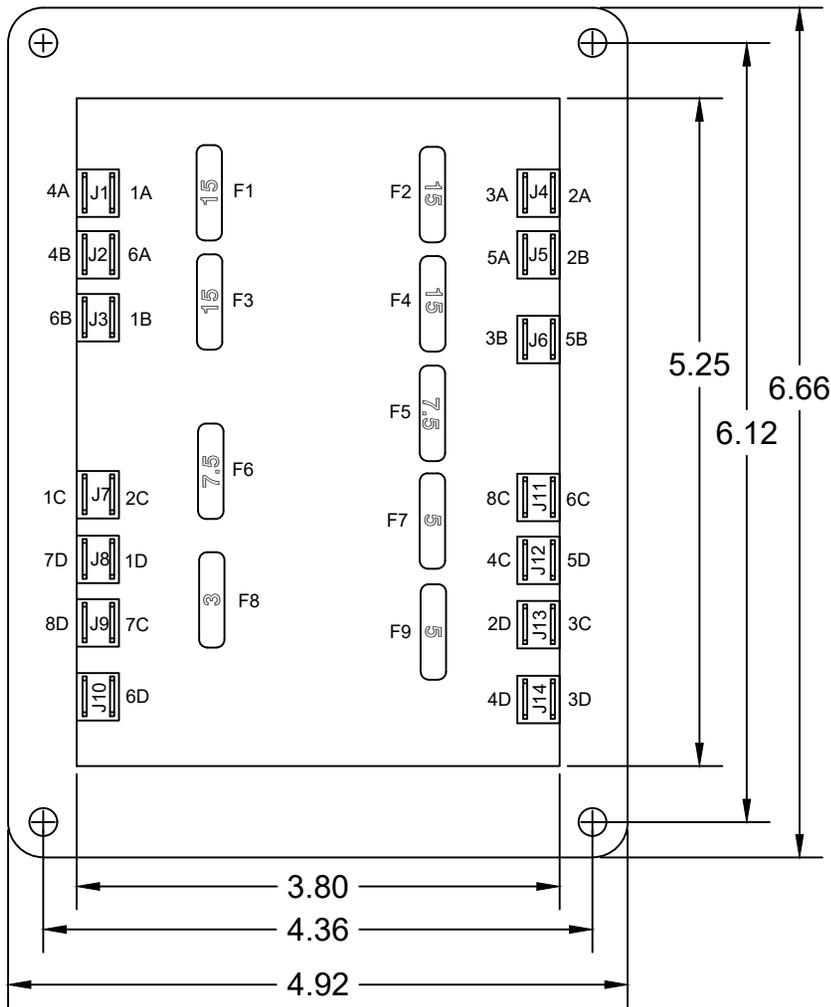
Preferred Wiring Fuse Table

Fuse	Rating	Circuit	Fuse	Rating	Circuit
F1	15 A	Red Warn – Left Input	F7	5 A	Left Directional Input
F2	15 A	Amber Warn – Left Input	F8	5 A	Right Directional Input
F3	15 A	Red Warn – Right Input	F9	7.5 A	4” Stop Out
F4	15 A	Amber Warn – Right Input	F10	3 A	7” Tail Out
F5	15 A	Backup – Input	F11	3 A	4” Tail Out
F6	7.5 A	7” Stop Out			



Alternate Wiring Fuse Table

Fuse	Rating	Circuit	Fuse	Rating	Circuit
F1	15 A	Red Warn – Left Input	F7	5 A	Left Directional Input
F2	15 A	Amber Warn – Left Input	F8	5 A	Right Directional Input
F3	15 A	Red Warn – Right Input	F9	7.5 A	Right Stop
F4	15 A	Amber Warn – Right Input	F10	3 A	Left Tail
F5	15 A	Backup – Input	F11	3 A	Right Tail
F6	7.5 A	Left Stop			



Doran Exterior Light Monitor #UBM-00 V2 - PINOUT

Signal Description	Jumper	Pin	Label
Right Red Warning Input	J1	4A	RRWI
Right Red Warning Front		1A	RRWF
Left Red Warning Input	J2	4B	LRWI
Right Red Warning Back		6A	RRWB
Left Red Warning Back	J3	6B	LRWB
Left Red Warning Front		1B	LRWF
Right Amber Warning Front	J4	3A	RAWF
Right Amber Warning Input		2A	RAWI
Right Amber Warning Back	J5	5A	RAWB
Left Amber Warning Input		2B	LAWI
Left Amber Warning Front	J6	3B	LAWF
Left Amber Warning Back		5B	LAWB
Brake Light Input	J7	1C	BLI
4" Brake Lights		2C	4BL
Tail Lights Input	J8	7D	TLI
7" Brake Lights		1D	7BL
7" Tail Lights	J9	8D	7TL
4" Tail Lights		7C	4TL
Ground	J10	6D	GND
Right Reverse Lights	J11	8C	RRL
Reverse Lights Input		6C	RLI
Right Turn Input	J12	4C	RTI
Left Reverse Lights		5D	LRL
Left Turn Input	J13	2D	LTI
Right Turn Lights		3C	RTL
12VDC Battery	J14	4D	12V+
Left Turn Lights		3D	LTL

Fuse	Rating
F1	15 A
F2	15 A
F3	15 A
F4	15 A
F5	7.5 A
F6	7.5 A
F7	5 A
F8	3 A
F9	5 A

REV	INITIALS	DESCRIPTION	DATE	DORAN MANUFACTURING		
0	DES	DRAWING GENERATED	4/23/25	PART NAME MODEL UBM-00 (#5029) V2 PINOUT		
1	DES	ADDED PIN NAMES	11/10/25			
TOLERANCES				DECIMALS .XXX +OR- .005, .XX +OR- .015 FRACTIONS +OR- 1/32, ANGLES +OR- 1/2 DEGREE		
CUSTOMER				SCALE		
DRAWN DES		DATE 04/25/2025		DRAWING NO.		REV.
APPR		DATE		0101		1