

# J1939 MurphyLink™ System Installation Instructions For MLAA20 Audible Alarm



Please read the following information before installing. A visual inspection of this product for damage during shipping is recommended before mounting. It is your responsibility to have a qualified person install this unit.

## GENERAL INFORMATION

### WARNING

BEFORE BEGINNING INSTALLATION OF THIS MURPHY PRODUCT

- ✓ Disconnect all electrical power to the machine.
- ✓ Make sure the machine cannot operate during installation.
- ✓ Follow all safety warnings of the machine manufacturer.
- ✓ Read and follow all installation instructions.

### Description

The J1939 MurphyLink™ MLAA20 Audible Alarm instruments are designed to alert the operator of alarm conditions on an engine using the information transmitted by the Murphy Display and Diagnostic Module (MDDM). Communication from the MDDM to these units is via an RS485 twisted pair proprietary serial link. The J1939 MurphyLink™ MLAA20 Audible Alarms are environmentally sealed. They are enclosed in a standard 2 in. (51 mm) diameter, non-corrosive metal case.

### Specifications

**Power Input (Operating Voltage):** 12-24 VDC (8 VDC min., 32 VDC max.).

**NOTE:** MLVC2412 Voltage Regulator required for 24 VDC Systems.

**Bezel:** Stainless Steel.

**Membrane Switch:** Polyester.

**Case and Clamp:** Nickel Plated Steel, Aluminum killed, QQ-S-698.

**Maximum Panel Thickness:** 0.30 in. (8 mm).

**Mounting Hole:** ø2.062 in. (52 mm).

**Dial:** White numerals over black background.

**Reversed Polarity:** Withstands reversed battery terminal polarity indefinitely within operating temperatures.

**Communications:** RS485 data (MurphyLink™ proprietary protocol)

**Operating Temperature:** -4° to 158°F (-20° to 70°C).

**Storage Temperature:** -40° to 185°F (-40° to 85°C).

**Relay Rated Load:** 0.5 A, 125 VAC; 1 A, 24 VDC.

**Relay Maximum Switching Capacity:** 62.5 VA, 30W.

**Output for External Audible Alarm:** 28 VDC, 30 mA max. (current sink).

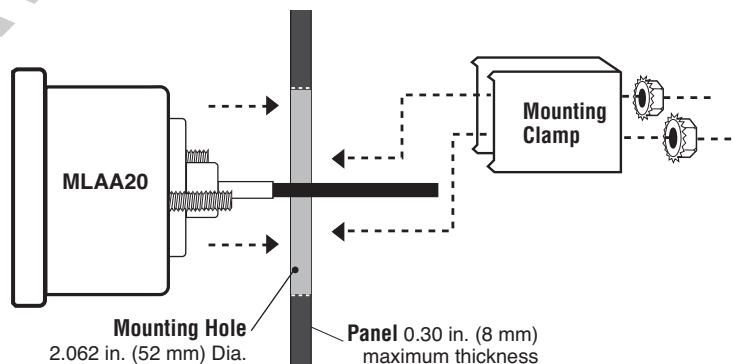


**CAUTION:** These instruments are designed to be used ONLY with the MurphyLink™ Display and Diagnostic module (MDDM) or other approved MurphyLink™ products.



### Panel Mounting

To mount the MLAA20 on a panel, a mounting hole of 2.062 in. (52 mm) diameter is required. Once the mounting hole is ready, remove the mounting bracket by unscrewing the two locknuts. Insert the MLAA20 from the front side of the panel. (See Figure below). Replace the mounting bracket and secure it with the two locknuts to 12-16 in./lb. torque (recommended), do NOT overtighten.



### Basic Operation

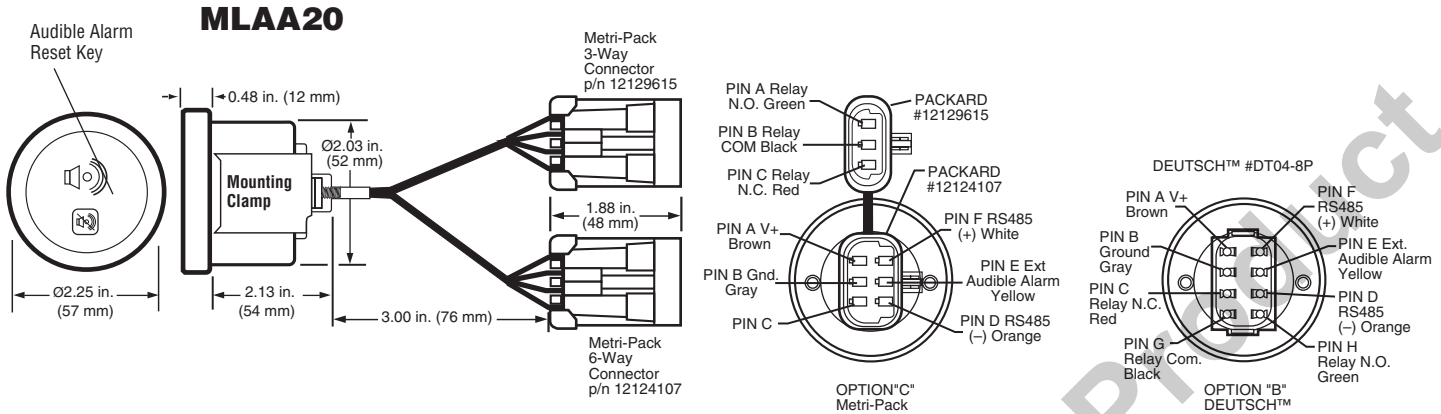
The MLAA20 gives two types of audible alarms, and it includes an alarm reset key. The two types of audible alarms are:

- (1) A Cautionary, intermittent alarm sounds when a Fault Condition is detected by the MDDM MurphyLink™ module—its amber LED is lit. If after the reset key is depressed and the alarm condition is not cleared, the cautionary alarm will sound again after 30 seconds.
- (2) A Warning, continuous alarm sounds when a Shutdown Condition is detected by the MDDM MurphyLink™ module—its red LED is lit. If after the reset key is depressed and the shutdown condition is not cleared, the warning alarm will sound again after 2 minutes.

### Warranty

A limited warranty on materials and workmanship is given with this FW Murphy product. A copy of the warranty may be viewed or printed by going to [www.fwmurphy.com/support/warranty.htm](http://www.fwmurphy.com/support/warranty.htm)

# Dimensions

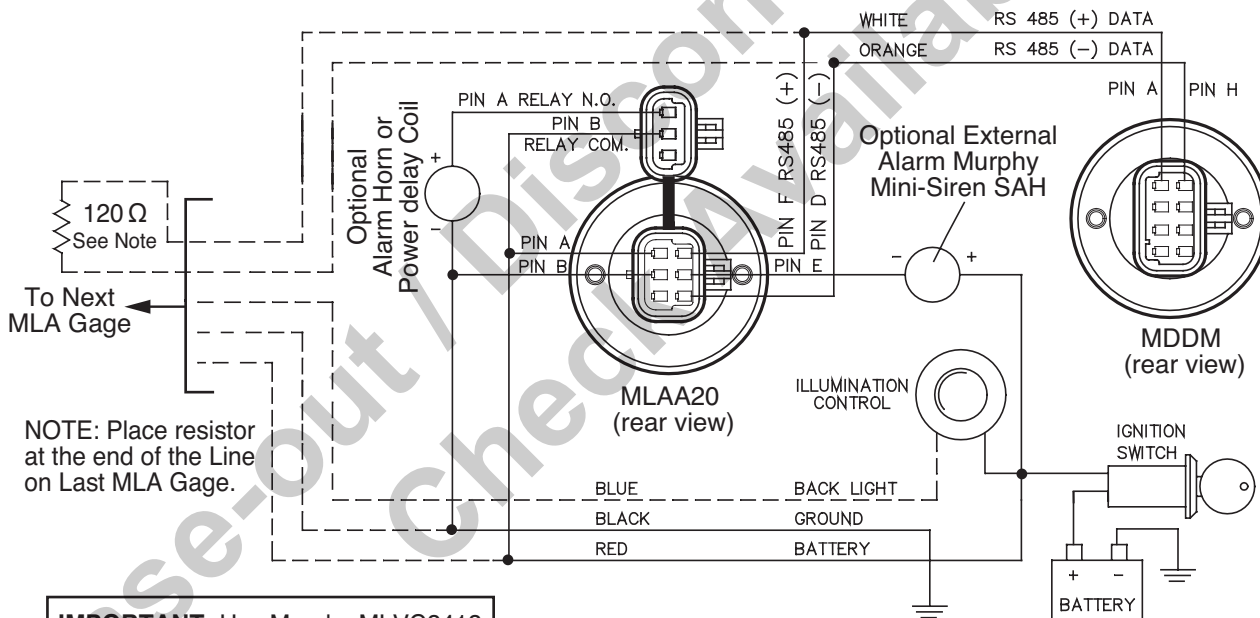


# Wiring Diagram



**WARNING: Disconnect battery negative cable before wiring or service.** Devices containing solid state components can be damaged or caused to malfunction when used in systems which incorporate inductive loads (e.g. relays, solenoids, etc.) that can generate voltage spikes. To reduce the potential for this type of damage, install a fly back or clamping diode across all inductive loads. Use Murphy diode package 65-00-0343 or equivalent. A typical diode is 1N4005 and is readily available from commercial sources. Failures of this type are not covered by our Limited Warranty.

## Typical MLAA20 Audible Alarm Wiring Diagram for 12 VDC Systems



**IMPORTANT:** Use Murphy MLVC2412 voltage regulator on 24 VDC systems.



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