

# Installation Instructions for MurphyLink™ Analog Gages Series: MLA20 and MLA35



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

W**ARNING**

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.



MLA20 Series

MLA35 Series

### Description

The MurphyLink™ gages are a series of instruments designed to display the information transmitted by the Murphy Display and Diagnostic Module (MDDM) in a traditional analog format. Communication from the MDDM to these units is via an RS485 twisted pair proprietary serial link. These MurphyLink™ components are environmentally sealed, LED back lit (green) and are available in a standard 2 in. (51 mm) diameter, plastic case. The MLA35 Series models feature a 3-3/8 in. (86 mm) diameter, plastic case.

### Specifications

#### Power Supply:

**Input Voltage:** 12V (10-16 VDC min. & max. voltage).  
 24V (18-32 VDC min. & max. voltage).

**Operating Current:** (@ 14 VDC) = MLA20: 27 mA min.; 50 mA max.  
 MLA35: 43 mA min.; 48 mA max.

#### Backlight:

**Voltage:** 12 to 14 VDC (See NOTE below).  
**Maximum Current:** 30 mA.

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

**Input:** RS485 data (MurphyLink™ proprietary protocol).

**Output:** Analog Readout.

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

**Storage Temperature:** -76° to 185°F (-60° to 85°C).

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

MLA20: 90° sweep; MLA35: 250° sweep.

**Gage Accuracy:** MLA20: Better than ±1.5% of scale.

MLA35: Better than ±2% of scale.

**Enclosure:** Environmentally Sealed.

#### Material:

**Case and Clamp:** Polyester (PBT).

**Lens:** Polycarbonate.

**Bezel:** Stainless Steel (Black optional).

Basic 2 in. (51 mm) case models	
MLA20-A-100-A	Engine Oil Pressure
MLA20-B-250-A	Coolant Temperature
MLA20-C-12-A	Voltmeter 12 VDC
MLA20-C-24-A	Voltmeter 24 VDC
MLA20-D-100-A	Percent Load @ Current Speed
MLA20-E-400-A	Gear Oil Pressure
MLA20-F-250-A	Gear Oil Temperature
Basic 3-3/8 in. (86 mm) case models	
MLA35-T-3000-A	Tachometer
MLA35-S-85-A	Speedometer

**NOTE:** All basic models listed above are available with Amp mini universal (standard), Deutsch or Metri-Pack connectors.

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

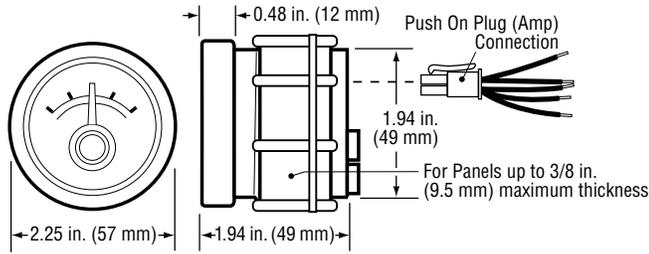
### Warranty

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

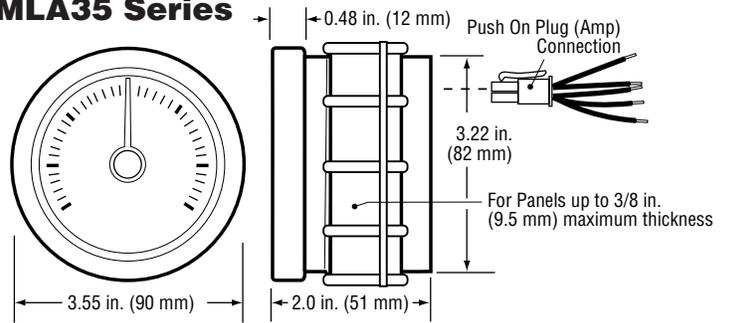
In order to consistently bring you the highest quality, full featured products, we reserve the right to change our specifications and designs at any time.

# MLA20 and MLA35 Dimensions and Mounting

## MLA20 Series



## MLA35 Series

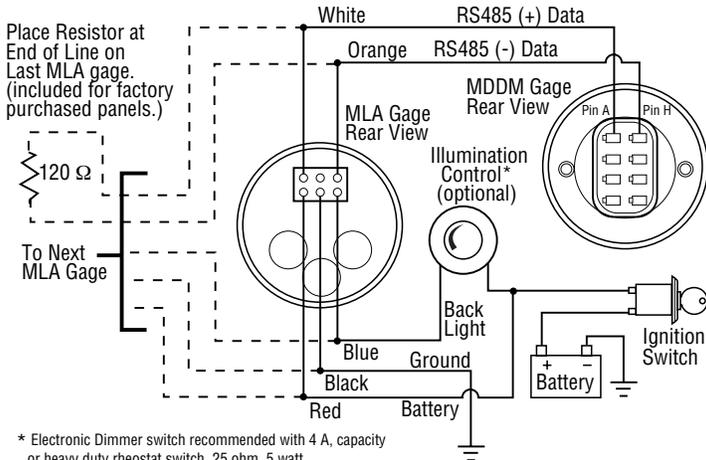


## MLA20 and MLA35 Typical Wirings For 12 and 24 VDC



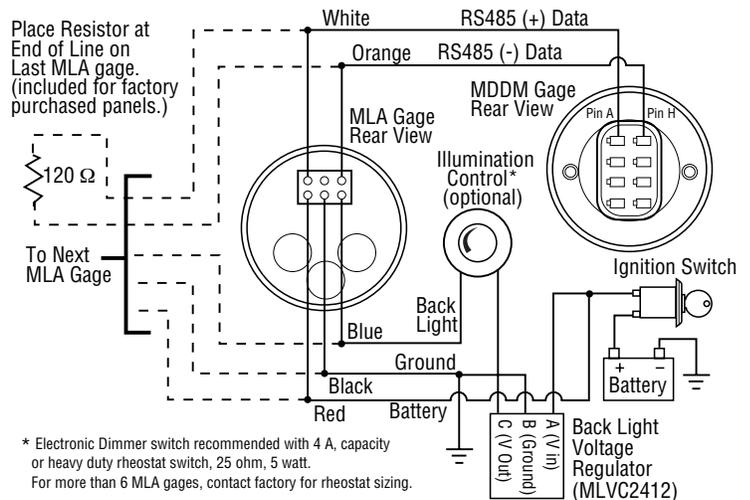
**WARNING: Disconnect battery negative cable before wiring or service.** Devices containing solid state components can be damaged or caused to malfunction when used in systems which incorporate inductive loads (e.g. relays, solenoids, etc.) that can generate voltage spikes. To reduce the potential for 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.

### Wiring for 12 VDC Systems



\* Electronic Dimmer switch recommended with 4 A, capacity or heavy duty rheostat switch, 25 ohm, 5 watt. For more than 6 MLA gages, contact factory for rheostat sizing.

### Wiring for 24 VDC Systems



\* Electronic Dimmer switch recommended with 4 A, capacity or heavy duty rheostat switch, 25 ohm, 5 watt. For more than 6 MLA gages, contact factory for rheostat sizing.



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