

## AM-30, AM-30R1 & AM-30R2

**31 Segment Bargraph  
7 Header Selectable Input Ranges  
in a 1/16 DIN Case**



**5V DC Powered LED Bargraph with Optional Single or Dual Setpoints.**

### General Features

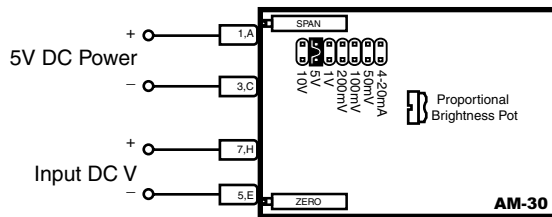
The AM-30 is a 31-segment 5VDC powered red, green, or amber LED bargraph in a compact DIN case (96x24mm) with a short depth (56.5mm/2.23"). It can be ordered in either a horizontal or vertical format. Single or dual setpoints are available as options. The setpoints are easily adjustable by the user from the front of the meter.

There are seven header selectable input ranges of 50mV, 100mV, 200mV, 1V, 5V, 10V and 4-20mA. The meter comes standard with a scale of 0 – 100%, but any required scale and unit of readout can be specially ordered. The meter may also be ordered with a dot mode display option.

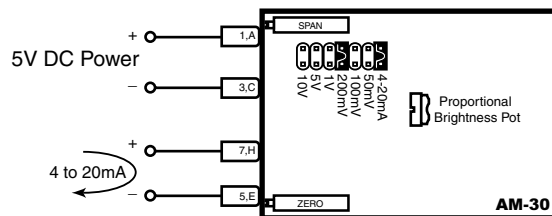
The AM-30 uses a 30-pin PCB edge card connector or optionally a Push-On™ screw terminal connector may be used (see ordering information on page 8). This bargraph is designed especially for use in process applications where a low cost visual analog indication is required.

### Typical Application Connections

**AM-30/AM-30R1/AM-30R2 with DC Volt Input.**



**AM-30/AM-30R1/AM-30R2 with 4 to 20mA Input.**



### Compatibility

The AM-Series have a matching DIN case style that is complementary to the Lynx, Leopard and Tiger family of meters. AM-Meters are the OEM's choice for economical switchboard and process indication. For economy, each model is dedicated to a specific application and designed for quick and easy installation.



### Specifications

- Input Configuration:** .....Single ended
- Full Scale Ranges:** .....50mV/100mV/200mV/1V/5V/10V/4-20mA
- Input Impedance:** .....> 500kΩ for voltage inputs  
13Ω for 4 to 20mA inputs
- A/D Converter:** .....Flash converter
- Accuracy:** .....1% of full scale
- Temperature Coefficient:**...200ppm/°C (typical)
- Warm Up Time:**.....Instantly reads to specified accuracy
- Conversion Rate:** .....Instantaneous flash conversion
- Display:**.....Thirty-one 0.20" X 0.06" (5.08mm X 1.52mm) bar segments
- Polarity:** .....Operates with positive polarity signals only
- Power Supply:**.....5VDC @ 300mA, 1.5 watt
- Operating Temperature:** ...-10°C to 60°C
- Storage Temperature:**.....-20°C to +70°C
- Relative Humidity:** .....95% (non condensing)
- Case Dimensions:** .....Bezel: 24X96 mm (0.95" X 3.78")  
Depth behind bezel: 56.5 mm (2.23")  
Plus 27 mm (1.06") for Push-on connector  
or plus 17.5 mm (0.69") for Edge connector
- Weight:**.....90.72 gms (3.2 oz)  
136.1 gms (4.8 oz) when packed

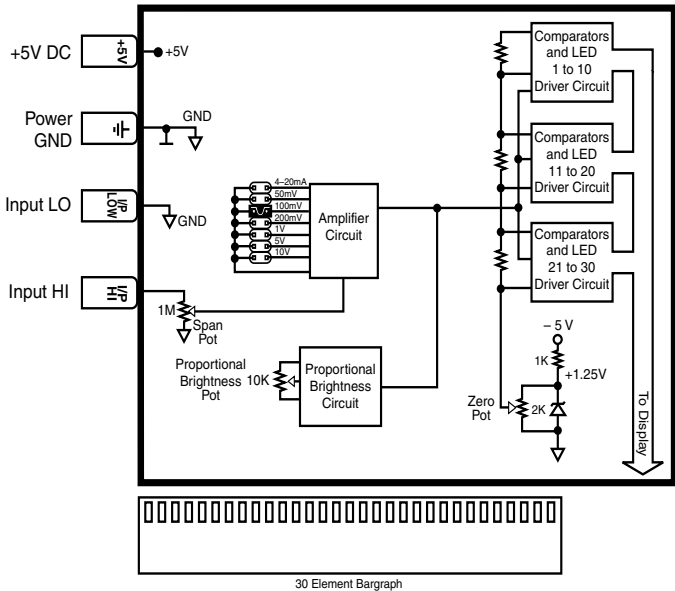
### AM-Series, the choice for easy user adjustability

AM-30 . . . . .Red 31 Seg. Bargraph, 0.05/0.1/0.2/1/5/10VDC/4-20mA  
AM-30R1 . . . . .Red 31 Seg. Bargraph, 1 VDC std w/one 2 A/120 VAC relay

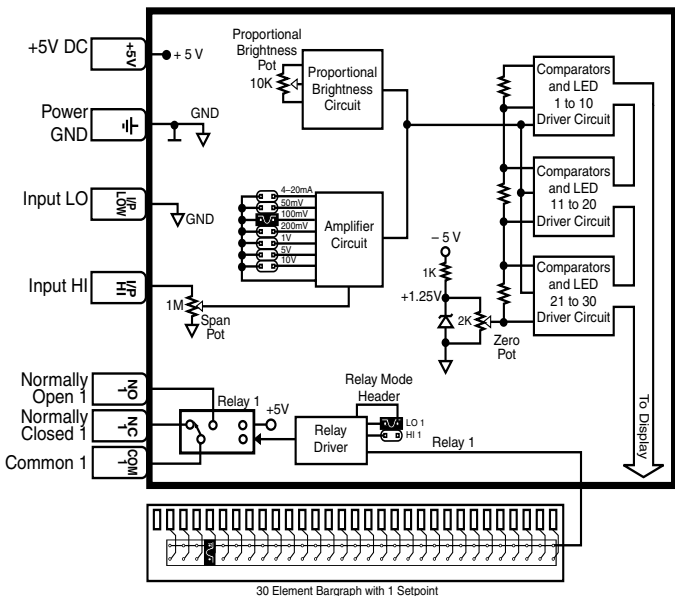
AM-30R2 . . . . .Red 31 Seg. Bargraph, 1 VDC std w/two 2 A/120 VAC relays

# Functional Diagram

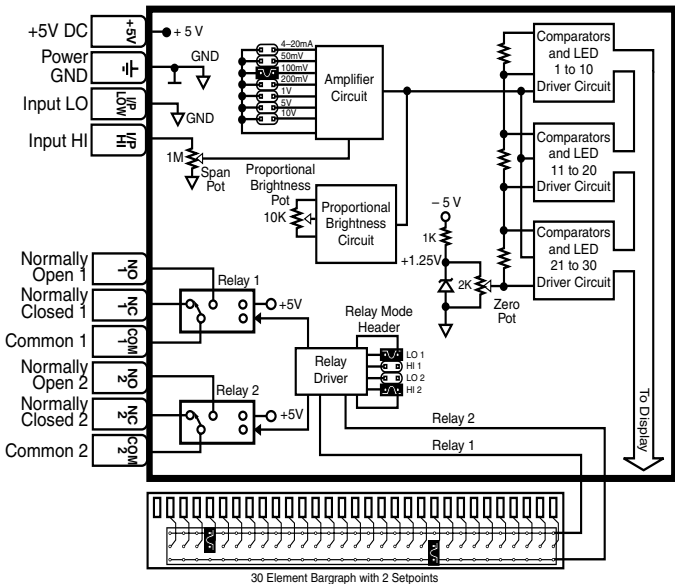
AM-30 Functional Diagram



AM-30 R1 Functional Diagram

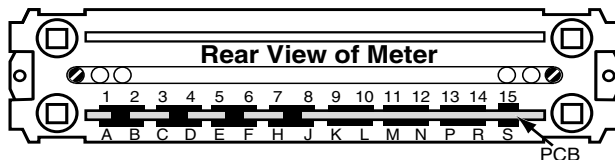


AM-30 R2 Functional Diagram



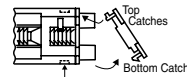
# Connector Pinouts

The Texmate model AM-30 interconnects by means of a standard PC board edge connector having two rows of 15 pins on 0.156" centers. Connectors are available from Texmate or from almost any connector manufacturer.



REAR VIEW OF CASE AND CONNECTOR

TO REMOVE REAR COVER



Component Side		Solder Side	
5V DC POWER [1]	+5V	+5V	A] 5V DC POWER
POWER SUPPLY GROUND [2]	GND	GND	B] POWER SUPPLY GROUND
SIGNAL INPUT LOW [5]	I/P LOW	I/P LOW	E] SIGNAL INPUT LOW
SIGNAL INPUT HIGH [7]	I/P HI	I/P HI	H] SIGNAL INPUT HIGH
SETPOINT #1 RELAY [9]	NO 1	NO 2	K] SETPOINT #2 RELAY
SETPOINT #1 RELAY [11]	NC 1	NC 2	M] SETPOINT #2 RELAY
SETPOINT #1 RELAY [13]	COM 1	COM 2	P] SETPOINT #2 RELAY
			R] SETPOINT #2 RELAY
			S]

**Pins A, B, 1 and 2** - These pins are internally connected together. The 5VDC @ 300mA is connected here to power the AM-30.

**Pins C, D, 3 and 4** - These pins are internally connected together. They are the Power Supply Ground pins.

**Pins E, F, 5 and 6** - These are the Signal Ground (Input Lo) Pins. They are internally connected to the Power Supply Ground Pins.

**Pins H, J, 7 and 8** - These are the signal input (Input Hi) pins.

**Pins 9 and 10** - Normally open contact of Setpoint #1 relay.

**Pins 11 and 12** - Normally closed contact of Setpoint #1 relay.

**Pins 13 and 14** - Contact Common of Setpoint #1 relay.

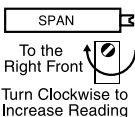
**Pins K and L** - Normally open contact of Setpoint #2 relay.

**Pins M and N** - Normally closed contact of Setpoint #2 relay.

**Pins P and R** - Contact Common of Setpoint #2 relay.

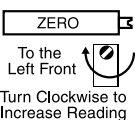
**Pins S and 15** - No connection is made to these pins.

# Signal Conditioning Components



**SPAN Potentiometer (Pot)**

The 15 turn SPAN Pot is on the left side (as viewed from the back of the meter). Typical adjustment is 100% of the input signal range.



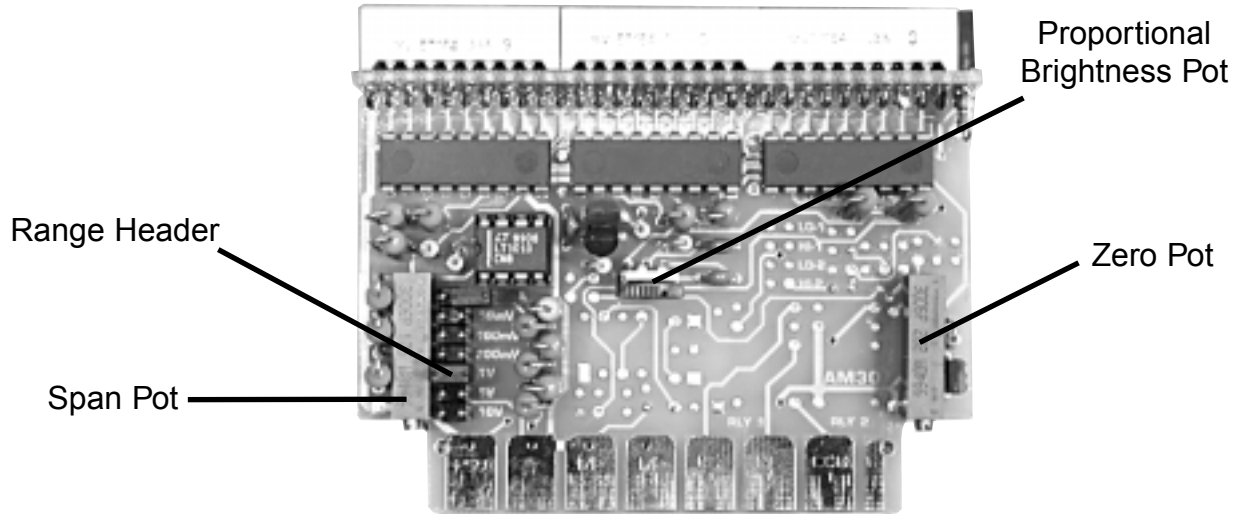
**ZERO Potentiometer (Pot)**

The ZERO Pot is to the right side (as viewed from the back of the meter). It enables the Digital Display Span to be offset 50% of the input signal range.

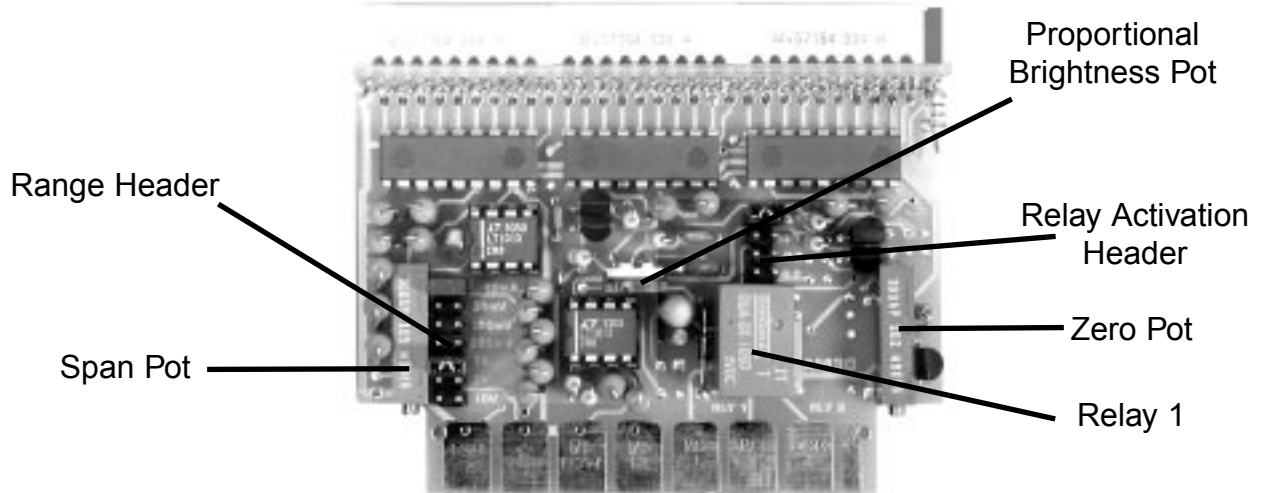
**Proportional Brightness Band Potentiometer**

The Proportional Brightness Potentiometer superimposes a proportional brightness band to the leading edge of the bargraph which creates the optical appearance of a pointed arrow. This feature produces a display of infinite resolution. The position of the signal in relation to any two adjacent segments and the scale on the faceplate can be accurately ascertained to within 1%. When the amplitude of the proportional band is adjusted counterclockwise to zero, the smooth proportional advance of the display will be replaced by a step by step movement as each bar is either turned full on or full off.

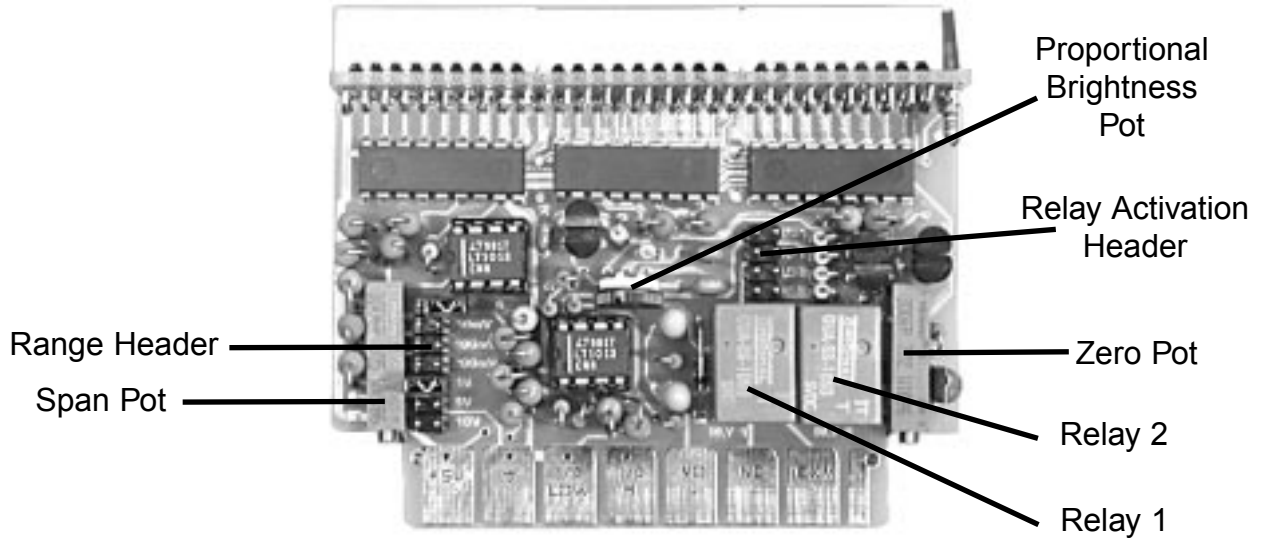
**AM-30**



**AM-30 R1**

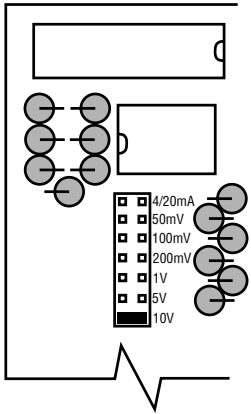


**AM-30 R2**

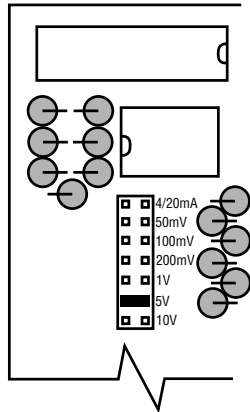


## Selecting the Input Full Scale Range

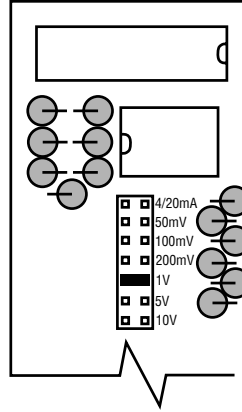
The AM-30 has seven header selectable ranges. The standard AM-30 is shipped from the factory as a 1V full scale meter. To select any other input range (4 to 20mA, 50mV, 100mV, 200mV, 5V, or 10V), use needlenose pliers to remove the jumper clip and replace it on the appropriate header pins as shown in the diagrams below.



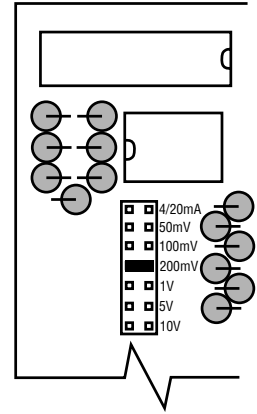
0 to 10V Input



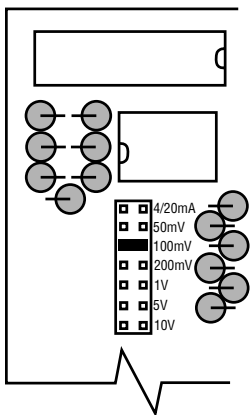
0 to 5V Input



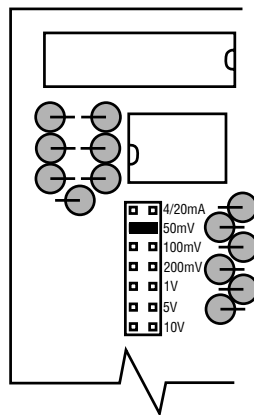
0 to 1V Input



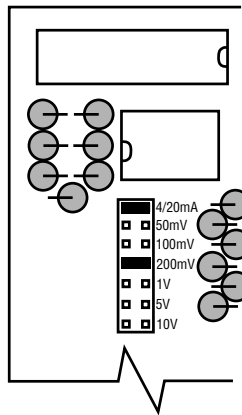
0 to 200mV Input



0 to 100mV Input

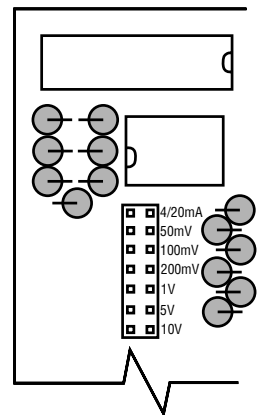


0 to 50mV Input



4 to 20mA Input

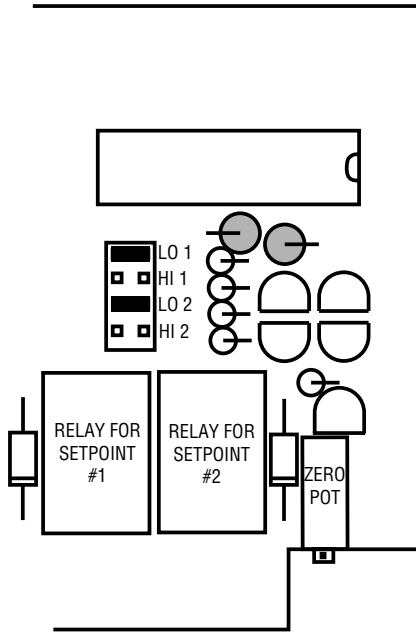
For 4 to 20mA inputs, jumper clips must be put in both the 4 to 20mA and 200mV positions. A second jumper clip is provided for this purpose.



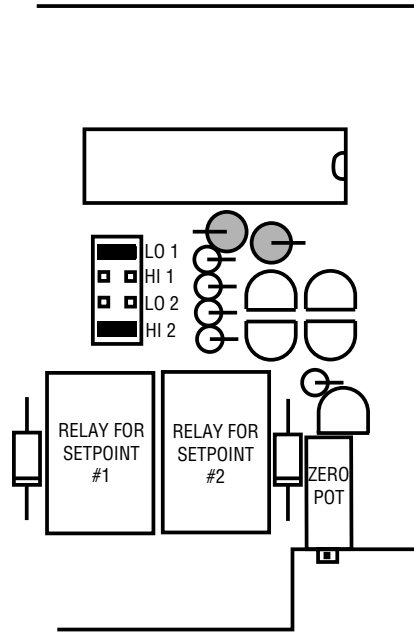
If there is no jumper clip inserted on the input header pin when the power is turned on, the AM-30 goes into the display test mode and all segments of the display come on.

## Selecting the Relay Activation Modes

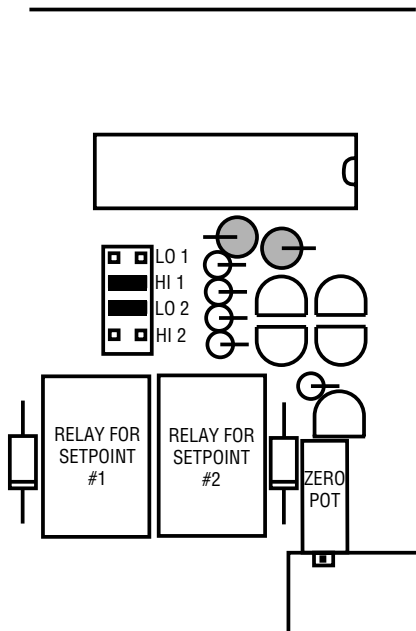
There are four activation modes available for the AM-30R2 with relay options. To change the activation mode, use needlenose pliers to remove and replace the shorting clips on the relay activation header, as shown below.



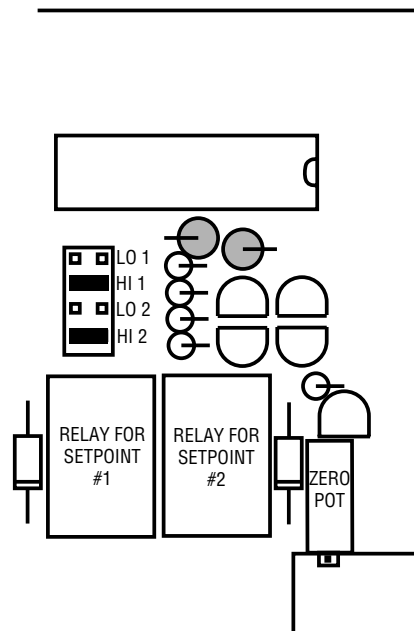
Setpoint #1 will activate whenever the input is LESS THAN setpoint #1.  
Setpoint #2 will activate whenever the input is LESS THAN setpoint #2.



Setpoint #1 will activate whenever the input is LESS THAN setpoint #1.  
Setpoint #2 will activate whenever the input is GREATER THAN setpoint #2.  
The standard AM-30 with dual relay option is shipped from the factory, with this setting.



Setpoint #1 will activate whenever the input is GREATER THAN setpoint #1.  
Setpoint #2 will activate whenever the input is LESS THAN setpoint #2.

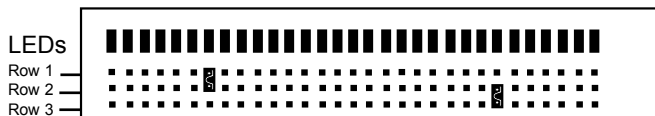


Setpoint #1 will activate whenever the input is GREATER THAN setpoint #1.  
Setpoint #2 will activate whenever the input is GREATER THAN setpoint #2.

## Calibration Procedure

1. Select the required input range. (See "Selecting the Input Full Scale Range" above for details).
2. Input the minimum signal to the AM-30. Adjust the ZERO pot so that only one segment stays on.
3. Input the maximum signal to the AM-30. Adjust the SPAN pot so that all the segments just light up.
4. In the case of the AM-30R1 and AM-30R2, select the relay activation mode (details on page 6) and setpoints (details on page 2).
5. The meter is now calibrated and ready for use.

## CHANGING THE SETPOINTS FROM THE FRONT OF THE METER



### FRONT OF METER WITH BEZEL AND FILTER REMOVED

In the case of the AM-30R1 and AM-30R2, which have relays, remove the front bezel and faceplates. Use needlenose pliers to remove and reposition the setpoint jumper clips.

**For Setpoint #1:** Insert the jumper clip between Row #1 and Row #2, directly below the LED that you wish to activate.

**For Setpoint #2:** Insert the jumper clip between Row #2 and Row #3, directly below the LED that you wish to activate.

**AM-30 WITH DOT MODE OPTION:** The AM-30 may be ordered with the dot mode option. Please note that NO SET POINTS are available in this mode. For a 4-20mA input (or virtually any positive input), the dot mode AM-30 is easily user scaled to be a center zero meter.

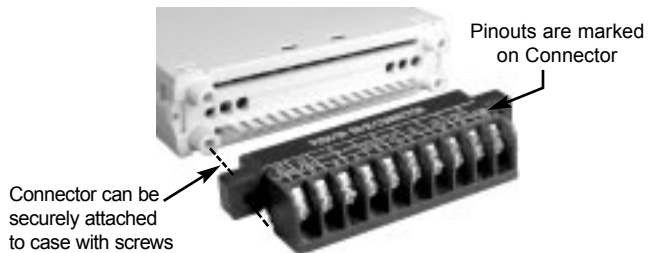
## Power Supply

The AM-30, AM-30R1 & AM-30R2 ship from the factory with an isolated 5VDC power supply.

## Push-On Screw Terminals

They provide the greatest convenience and ease of use

Texmate's exclusive optional Push-On Connectors combine an edge card connector and a 10 position screw terminal block. Push-On Connectors are ordered preconfigured for each specific power supply voltage and each optional power supply available for the AM-Series.



CN-PUSH/AM  
CN-PUSH/AMR

CN-PUSH/A24  
CN-PUSH/AR24

## Optional PCB Edge Connector

### PCB Edge Connector

A standard 30-pin edge connector (two rows of 15 pins on 0.156" centers) may be used to connect the AM-30, AM-30R1 & AM-30R2 meters. Order part no. CN-L15.



## Custom Face Plates and Scales



Texmate Produces Thousands of Custom OEM Face Plates

Have Texmate Design and Build a Custom Face Plate to Suit your Next project!

- Custom face plates have a non-recurring artwork charge. A serial number is then assigned to each artwork, to facilitate re-ordering.
- Small Run or One-Off custom face plates incur an installation charge, and are generally printed on a special plastic film, which is then laminated to custom faceplate blanks as required.

- Large Run (300 pieces min): custom face plates are production silk screened, issued a part number.

### Part Number Description

#### Small Run Custom Face plates for Bargraphs

ART-FB-S/L . . . . .NRC for artwork & set-up Faceplate/Library  
 ART-FB-S/N . . . . .NRC for artwork & set-up Faceplate/Non-Library  
 ART-FB-S/L/C . . . . .NRC for artwork & set-up Faceplate/Library/Co.Logo  
 ART-FB-S/N/C . . . . .NRC for artwork & set-up Faceplate/Non-Library/Co.Logo  
 ART-FB-001 . . . . .Install Faceplate per meter - 1 color  
 ART-FB-002 . . . . .Install Faceplate per meter - 2 color  
 ART-FB-003 . . . . .Install Faceplate per meter - 3 color  
 Specify artwork serial number when ordering face plate installation. ie: AFB-XXXX

#### Large Run Custom Face plates for Bargraphs

ART-FL-001 . . . . .Minimum order 250 pieces - 1 color  
 ART-FL-002 . . . . .Minimum order 250 pieces - 2 color  
 ART-FL-003 . . . . .Minimum order 250 pieces - 3 color  
 When ordering Large Run Face plates to be installed specify the custom part number issued for each different artwork. ie: 77-FLXXXX

# Case Dimensions and Panel Cutouts

### PANEL CUTOUT

Case will mount in standard 1/16 DIN cutouts

Panel adaptor plates are available to retrofit most existing panel cutouts.

For additional strength, extra Mounting Slide Clips can be ordered and doubled up one behind the other.  
P/N:(75-DMT96X24)

When extra panel mounting tightness is required, optional Screw Mounting Clips are included which fit on the Mounting Slide Clips.

### FRONT VIEW

1/16 DIN (96x24mm)

Various bezel colors are available. Black is standard.

### SIDE VIEW

5.4mm (0.21")  
21.85mm (0.86")  
56.5mm (2.23")  
27mm (1.06")  
5mm (0.20")  
Push-On Connector P/N:(CN/PUSH/BN)

### TO REMOVE REAR COVER

Top Catches  
Bottom Catch  
Release Bottom Catch with a small flat blade, and lever outwards.

### TOP VIEW

25.4mm (3.78") Max. panel thickness  
96mm (3.78")  
92.8mm (3.6") Widest mountable panel cutout without using adaptors.  
97.8mm (3.86")  
91mm (3.59")  
Edge Connector P/N:(CN-L15)  
17.5mm (0.69")

The 96x24mm case is particularly suitable for mounting in mosaic panels or insulative panels. They can also stack mount, 2 up in existing cut-outs for 1/8 DIN (96x48mm) or 4 up in 1/4 DIN (96x96mm).

## Ordering Information

### Standard Options for this Model Number

Part Number .Description .List

#### ▶ BASIC MODEL NUMBER

- AM-30 . . . . .Red 31 Seg. Bargraph, 0.05/0.1/0.2/1/5/10VDC/4-20mA . . . . .
- AM-30R1 . . . . .Red 31 Seg. Bargraph, 1 VDC std w/one 2 A/120 VAC relay . . . . .
- AM-30R2 . . . . .Red 31 Seg. Bargraph, 1 VDC std w/two 2 A/120 VAC relay . . . . .

#### ▶ DISPLAY

- STANDARD . . .Vertical Red . . . . .
- AM-HORZ/RED . .Horizontal Red LED option . . . . .
- AM-VERT/GRN . .Vertical Green LED option . . . . .
- AM-HORZ/GRN . .Horizontal Green LED option . . . . .
- AM-MULTI . . .Red, green or amber LEDs (10 seg. increments) . . . . .
- AM-30DOT . . .Dot mode - one segment display (AM-30 only) . . . . .
- AM-30DOT/CZ .Center zero dot mode (AM-30 only) . . . . .

#### ▶ POWER SUPPLY

- STANDARD . .5 V DC . . . . .

### Special Options and Accessories

Part Number .Description .List

#### ▶ SPECIAL OPTIONS (Specify Inputs & Req. Reading)

- HD-CHANGE . . . . .Factory Range Change from bolded ranges listed (AM-30) . . . . .
- CB-FS35 . . . . .Non-Std Range (AM-30) . . . . .
- AM-30RELAYH . . .Factory Installed 200mA/250VAC relay (AM-30R1 & R2) . . . . .

#### ▶ ACCESSORIES

- CN-L15 . . . . .PCB Edge Connector, Solder Type, Dual row 15 Pins (AM-30) . . . . .
- CN-PUSH/AM . . .AM-30 / 5VDC power Push-on Screw Terminal Block Connector . . . . .
- CN-PUSH/AMR . . .AM-30R1 & R2 / 5VDC Push-on Screw Terminal Block Conn. . . . .
- CN-PUSH/A24 . . .AM-30 / 24VDC Push-on Screw Terminal Block Connector . . . . .
- CN-PUSH/AR24 . . .AM030R1 & R2 / 24VDC Push-on Screw Terminal Block Conn. . . . .
- 75-DMTC96X24 . . .Side Slide Brackets, extra set (96x24mm only) . . . . .
- 75-DBBZ96X24 . . .Black Bezel for 96x24mm Case, BN and AM series . . . . .
- DN.CAS96X24 . . .Din Case 96 X 24 Short Depth Plus Accessories . . . . .
- OP-MTLCLIP . . . . .Screw Mounting Clips (2 pc) to screw tighten slide brackets . . . . .
- 75-DTP96X24 . . .Black Metal Trim Plate (96x24mm Case) 1 Meter . . . . .
- 75-DTP2X9624 . . .Black Metal Trim Plate (96x24mm Case) 2 Meters . . . . .
- 75-DTP3X9624 . . .Black Metal Trim Plate (96x24mm Case) 3 Meters . . . . .

Prices subject to change without notice.

### WARRANTY

Texmate warrants that its products are free from defects in material and workmanship under normal use and service for a period of one year from date of shipment. Texmate's obligations under this warranty are limited to replacement or repair, at its option, at its factory, of any of the products which shall, within the applicable period after shipment, be returned to Texmate's facility, transportation charges pre-paid, and which are, after examination, disclosed to the satisfaction of Texmate to be thus defective. The warranty shall not apply to any equipment which shall have been repaired or altered, except by Texmate, or which shall have been subjected to misuse, negligence, or accident. In no case shall Texmate's liability exceed the original purchase price. The aforementioned provisions do not extend the original warranty period of any product which has been either repaired or replaced by Texmate.

### USER'S RESPONSIBILITY

We are pleased to offer suggestions on the use of our various products either by way of printed matter or through direct contact with our sales/application engineering staff. However, since we have no control over the use of our products once they are shipped, NO WARRANTY WHETHER OF MERCHANTABILITY, FITNESS FOR PURPOSE, OR OTHERWISE is made beyond the repair, replacement, or refund of purchase price at the sole discretion of Texmate. Users shall determine the suitability of the product for the intended application before using, and the users assume all risk and liability whatsoever in connection therewith, regardless of any of our suggestions or statements as to application or construction. In no event shall Texmate's liability, in law or otherwise, be in excess of the purchase price of the product.

Texmate cannot assume responsibility for any circuitry described. No circuit patent or software licenses are implied. Texmate reserves the right to change circuitry, operating software, specifications, and prices without notice at any time.



1934 Kellogg Ave., Carlsbad, CA 92008

Tel: 1-760-598-9899 • USA 1-800-839-6283 • That's 1-800-TEXMATE

Fax: 1-760-598-9828 • Email:orders@texmate.com • Web:www.texmate.com

For product details visit [www.texmate.com](http://www.texmate.com)

Local Distributor Address