

# Electronic VertiGage® Indicator

## FEATURES

- Compact size
- Highly visible full-process indication on a flat scale (no parallax)
- Scales easily replaced
- Accuracy: 0.5% of span
- All solid state (no moving parts)
- Loop identification card



## DESCRIPTION

The Model 375C Electronic VertiGage is a panel mounted instrument which provides indication of 1 or 2 analog electronic inputs. It will accept the standard electronic signals to indicate process variables (i.e., temperature, pressure, flow, etc.) in analog (bar-graph) form. The Model 375C employs a digital principle of operation to provide an analog indication having an accuracy that was previously associated only with servo operated indicators. However, unlike the servo-operated indicators the Model 375C has no moving parts.

Each input is displayed on a multi-segmented gas discharge (neon type tube) lamp which gives a bar-graph representation whose height is proportional to the input signal. The bar-graph element display has a right and left bar each containing 200 cathodes (0.1" wide) forming a column 4" high. Each bar has an anode common to all 200 cathodes.

The cathodes for the right and left bars are tied together and scanned at a rate of approximately 60 Hz. On each scan, starting at the bottom, the neon segments are ignited sequentially, until the common anode is turned off by a comparator circuit when the analog input signal coincides with a precise 1-5 Vdc scanning ramp signal. The result being a lighted bar-graph whose height is proportional to the input.

Scales can be furnished to allow process readout in engineering units and are available with both single and duplex graduations.

The case design allows the chassis to be withdrawn from the case for easy scale replacement and to provide access to calibration adjustments. The chassis can be completely removed from the case by disconnecting the plug at the rear.

## SPECIFICATIONS

### Performance:

- Accuracy:  $\pm 0.5\%$  of span
- Linearity: 0.2% of span
- Repeatability: 0.1% of span

Drift:  $< 0.1\%$  of span (30 days)

Standard Input Range: 1-5 Vdc into 10M $\Omega$ , minimum

Other Input Ranges with Optional Range Resistors:

Input	Impedance	Resistor*
1-5 mAdc	1000 $\Omega$	(P/N 14786-1001)
4-20 mAdc	250 $\Omega$	(P/N 14786-2500)
10-50 mAdc	100 $\Omega$	(P/N 14786-1000)

\*One required per input.

Isolation: Non-isolated

Ambient Temp. Limits: 10 to 140° F

Temp. Error: 0.01% per ° F

Zero & Span Adjustment:  $\pm 20\%$  of span

Power Requirement: 24 Vdc  $\pm 10\%$

Max. Current: 250 mA

Max. Ripple: 2% peak - peak

Supply Voltage Effect: Negligible

Electrical Classification: Approved by FM and CSA as Non-incendive for Class I, Div. 2, Groups A, B, C & D.

Suitable for use with intrinsically safe devices and their required energy limiting barriers.

Bargraph Colors:

Right-hand indicator: Orange

Left-hand indicator: Red

Weight: 2-3/4 Lb. approximate.

ORDERING INFORMATION

1. Model number
2. Input range (see note)
3. Scale range
4. Legend Card Printing

NOTE: Milliamp inputs require range resistors which are an extra cost option. They can be ordered separately or pre-installed. See SPECIFICATIONS for resistor part numbers.

TYPICAL WIRING



Wiring for control panels, etc., utilizing a "system common." NOTE: Jumper W1 is removed.

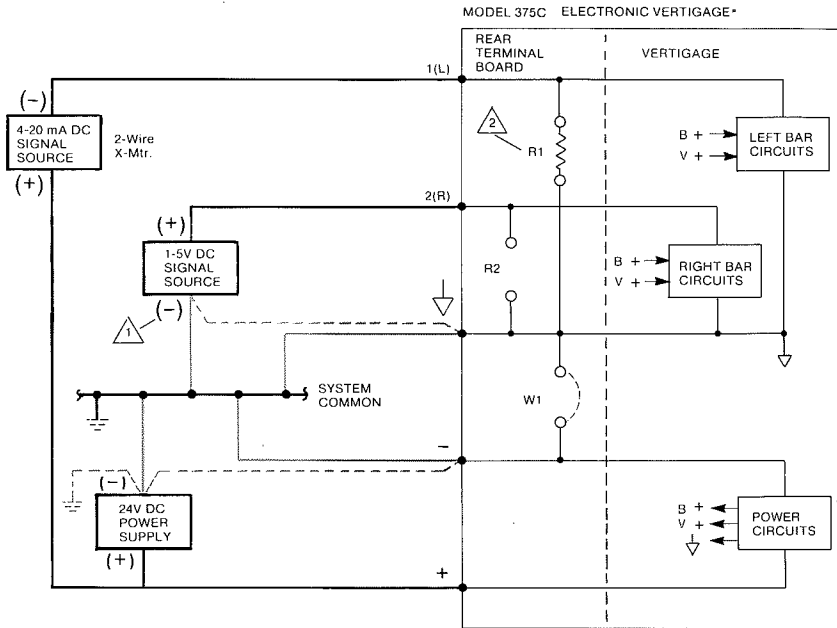
Wiring for control panels, etc. not utilizing a "system common." NOTE: Jumper W1 is intact.

NOTE: The VertiGage has non-isolated inputs. A signal source whose output is referenced to a ground other than "system common" requires a signal isolator if this other ground cannot be eliminated.

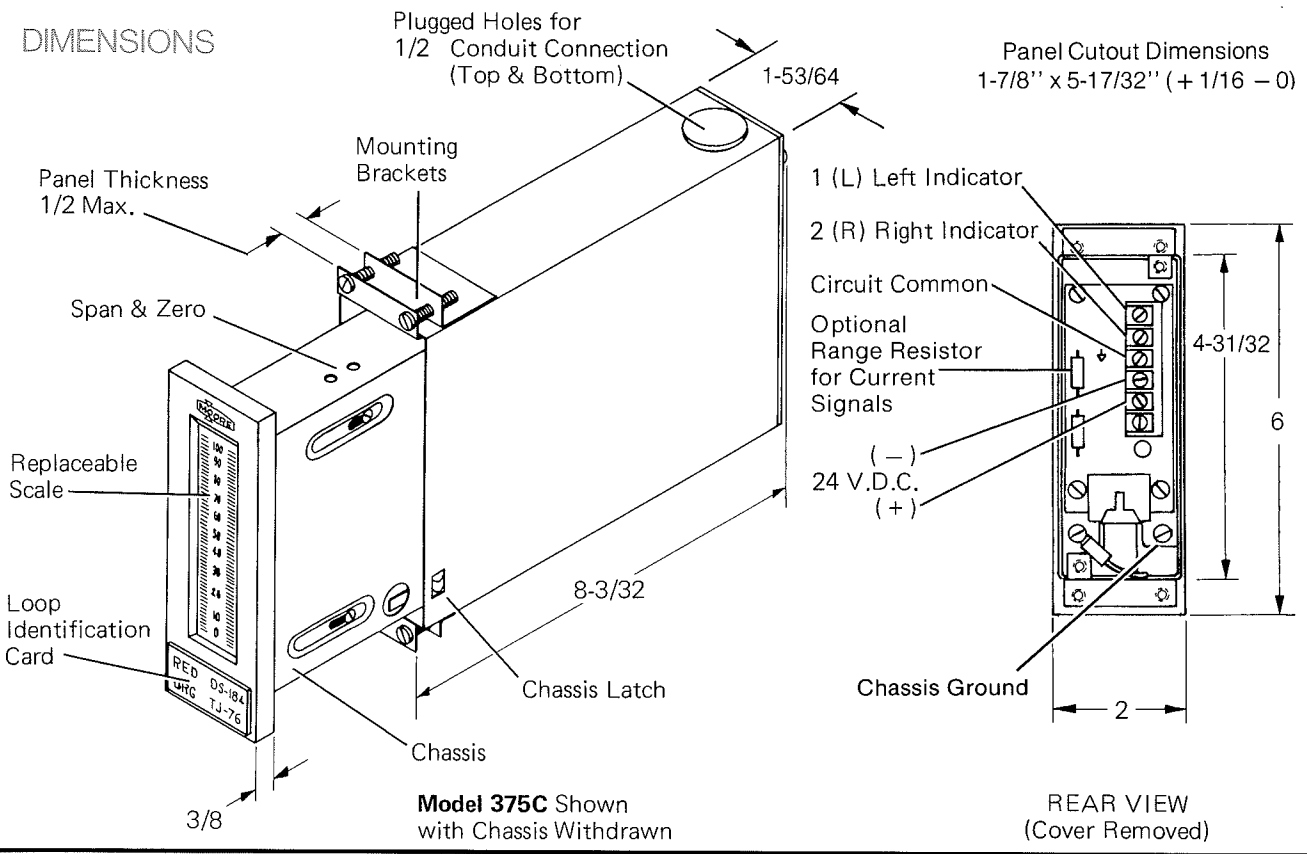


RANGE RESISTOR

Milliamp inputs only. (See SPECIFICATIONS for values.)



DIMENSIONS



Model 375C Shown with Chassis Withdrawn

REAR VIEW (Cover Removed)