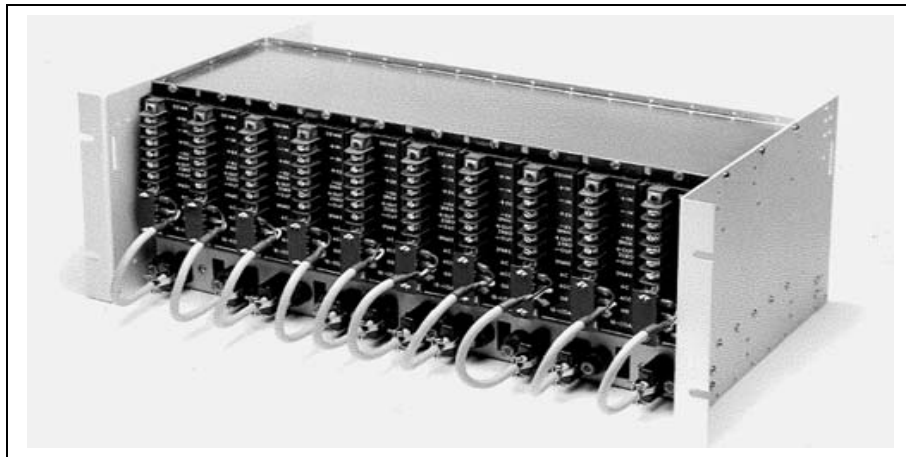


CONNECT THESE SENSORS DIRECTLY

- * MILLIVOLT ANALYZERS
- * THERMOCOUPLE (ALL ISA TYPES)
- * RTDs
- * DIFFERENTIAL TEMPERATURE
- * STRAIN GAGE
- * LOAD CELL
- * POTENTIOMETRIC
- * VOLTAGE
- * CURRENT
- * RESISTANCE



RACK MOUNT 18-010R-PDP

**CHEMICAL, POWER, LABORATORIES, AND
INDUSTRIAL PROCESS INDUSTRIES**

DEVAR Inc.

Acquiring signals from field sensors such as analyzers, temperature devices, weigh cells, positioning elements or other process loop variables may require a variety of signal conditioning units. These devices are available from many manufacturers and contain various mounting formats and power requirements.

For over 25 years Devar has been manufacturing solid state isolater/converters capable of accepting signals from mV-T/C, R.T.D., differential R.T.D. and strain gage sources. Originally encapsulated in cast epoxy type packages, these units provided exact signal reproduction in the form of voltage or current signals directly proportional to the input signal. Recognizing the need for ease of calibration in the field, a unique, patented inductive calibration technique was utilized enabling the user to change calibration by simple external wire positioning.

Today's technology of optical isolation and digital circuitry are incorporated in the new universal sensor isolator/converter. The model 18-115A will accept an input signal directly from a mV source, Thermocouple, Resistance Temperature Detector, Potentiometer, Strain Gage Transducer, Load Cell or voltage and current sources.

To calibrate, a simple circuit is provided utilizing digitally coded dip-switches. Positioning of these switches provide for spans of 2 to 126mV, and offsets up to $\pm 63\text{mV}$ directly. Replacing components, such as resistors, when range changes are desired is not required. Other ranges up to 500VDC may be accepted via a divider input option. Utilization of this technique eliminates the need for purchasing various models.

The 18-115A features a modular packaging scheme which incorporates single unit back of panel mounting or a 10 channel, 5 $\frac{1}{4}$ " high x 19" wide rack mount. It also comes fully RFI protected and may incorporate 10 segment signal linearization as an option.

SPECIFICATIONS

Inputs:

- mV, T/C, Span 2 to 126mV, Offset 0 to $\pm 63.5\text{mV}$
- T/C Type, J, K, T, R, S, E (Cold junction built-in)
- Voltage, 0 to 500VDC (Optional E-88 volt divider)
- Current, 1 to 5, 4 to 20, 10 to 50mA
- Resistance, 0 to 1000 ohms
- RTD, PT 100 ohm
- Differential RTD
- Strain Gage, Load cell;
- 10VDC @ 57mA
- Potentiometer, 50,000 ohms max.

Calibration Adjustments

Internal Dip Style Switches – Adjust Span, Offset Range, Upscale/Downscale T/C Break, Positive or Negative Offset Selection.

Multiturn Trimmers – Externally Accessible at Terminations for Fine Tuning of Span & Offset.

Outputs:

Voltage and Min. Load

- 0 to 10VDC @ 1K ohms
- 0 to 5VDC @ 500 ohms
- 1 to 5VDC @ 500 ohms

Current and Max. Load

- 1 to 5mA @ 3K ohms
- 4 to 20mA @ 750 ohms
- 10 to 50mA @ 300 ohms
- 0 to 20mA @ 750 ohms

Load Effect: $\pm .01\%$ Span

Temperature Coefficient of Output: 0.01%/°C

Ambient Temperature Range: -20°F to 125°F
(-29°C to 50°C)

Ripple: 0.1% F.S.

Isolation: Input/Output 500VDC via optical coupling.
Transformer isolated power circuits for input, output and excitation supplies.

Input Impedance: 10 meg ohm min.

Leakage Resistance: Greater than 20,000 meg ohm @ 200VDC.

Source Current: 10nA Typ, 28nA max.

Accuracy: 0.1%

Common Mode: 160db min @ 60HZ

Band Width: 1 HZ

Weight: 1 lb.

Power: 117VAC 50/60 HZ 7 watts
230VAC -Option E71
24VDC -Option E92I

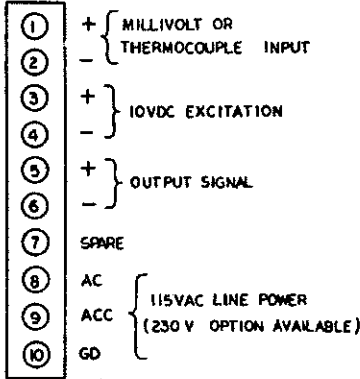
Supply Regulation: .01%/V (Between 105 and 125VAC)

Excitation Supply: 10VDC @ 57 mA

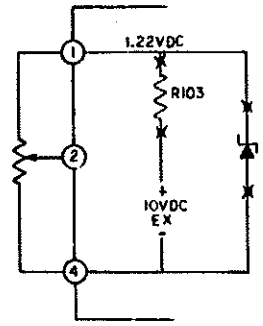
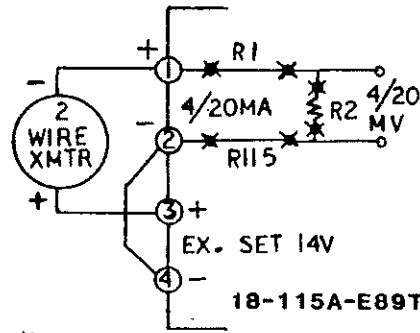
Linearization Option: Provides 10 to 1 improvement of non-linear signal

DEVAR Inc.

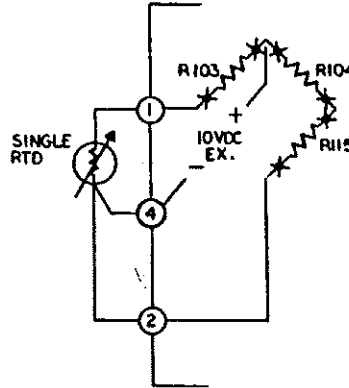
ELECTRICAL CONNECTIONS



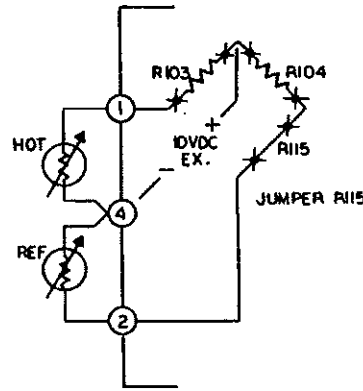
MILLIVOLT
THERMOCOUPLE
VOLTAGE
CURRENT



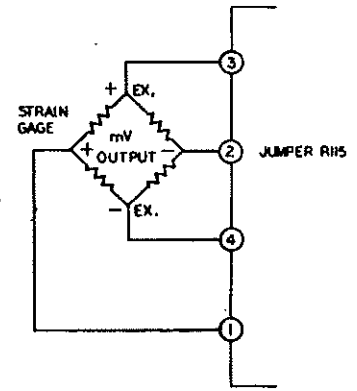
POTENTIOMETER



R.T.D.
VARIABLE
RESISTANCE

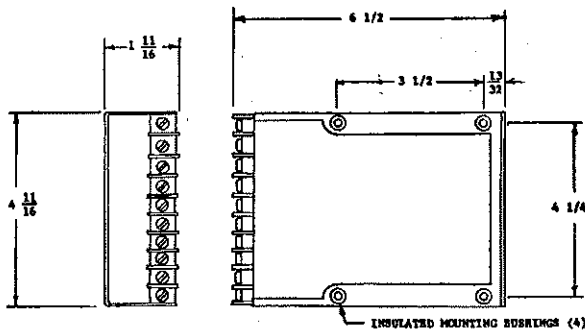


DIFFERENTIAL R.T.D.



STRAIN GAGE
LOAD CELL

MECHANICAL DIMENSIONS



Options:

- E114 HI level input signal.
Multiply span & zero switch settings by 10.
(Ex. span x 10 = 20 to 1260 mV)
(zero x 10 = 0 to ±635 mV)
- E139 HI input impedance.
(source current, 1 PICO AMP typ.)

-E2510 Fast Response (12 Hz)

HOW TO ORDER MODEL 18-115A

Input Signal * (Code)

Millivolt	-mV
Thermocouple	-TC
Resistance	-R
RTD	-RD
Strain Gage Load Cell	-SG
Potentiometer	-POT
Output Circuit	
Transient Protection	-E73
Voltage	-E88
Current	-E89
Current with 24 VDC	-E89T

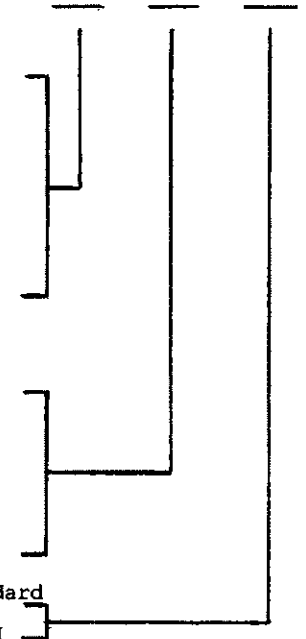
Output Signal

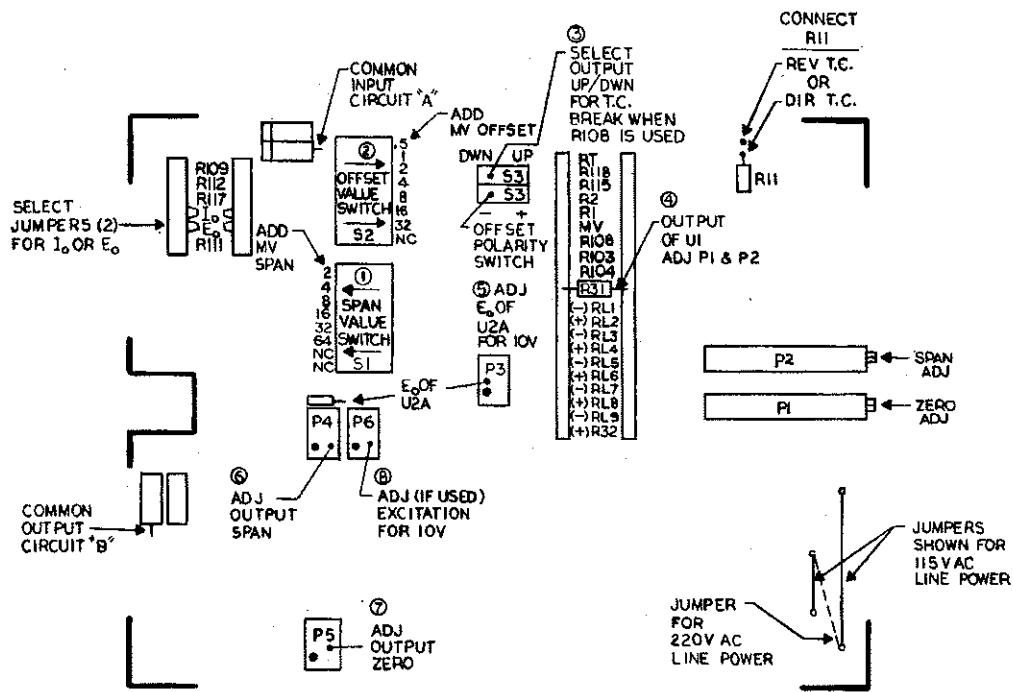
Voltage:	0 to 10 VDC	-E5
	0 to 5 VDC	-E74
	1 to 5 VDC	-E94
Current:	1 to 5 mA	-E54
	4 to 20 mA	-E44
	10 to 50 mA	-E80
	0 to 20 mA	-E70

Power Source:	117 VAC Standard
	220 VAC -E71
	24 VDC -E92 I

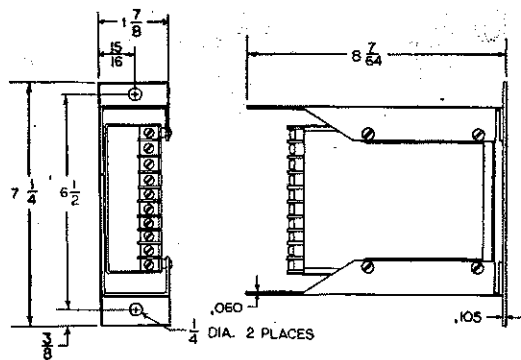
* Specify Code

-mV	Millivolt
-TC	T/C Type and Range
-R	Ohmic Range
-RD	R ₀ and Ohmic Range
-SG	Sensitivity @ 10 VDC Excitation
-E88	Voltage Range
-E89	Current Range

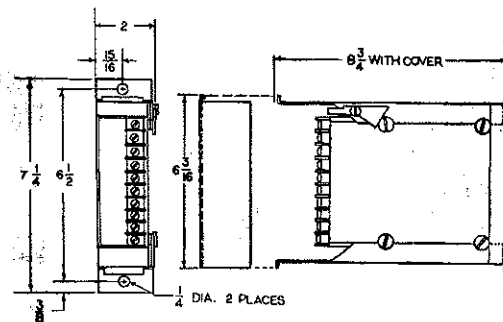




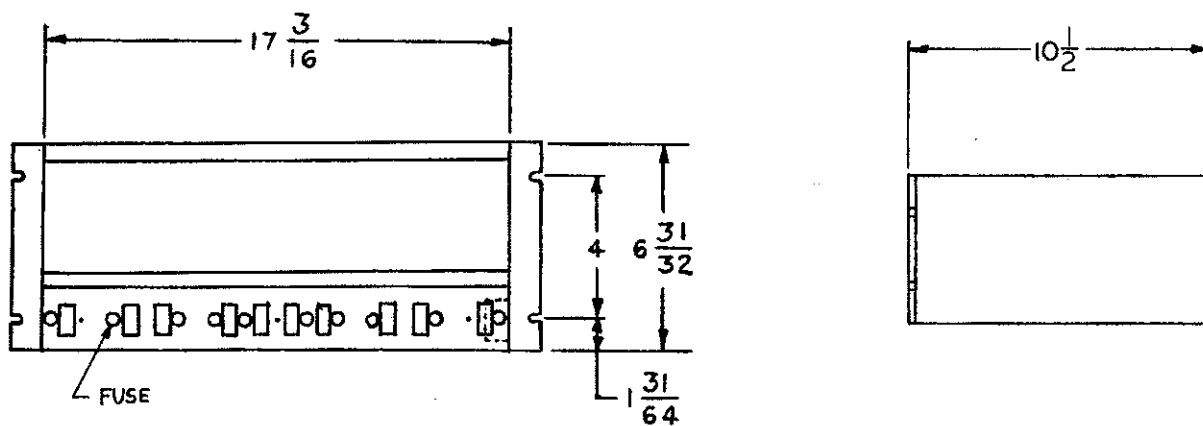
MODEL 18-115A LOCATION OF CALIBRATION COMPONENTS & ADJUSTMENTS



M-31 MOUNTING BRACKET



M-32 MOUNTING BRACKET



18-010R-PDP MOUNTING RACK

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 use: <http://www.devarinc.com>