



User's Guide

Ω OMEGA

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DRA-ACT-2I & DRA-ACT-2V
AC Input, Two-Wire Transmitter
Operator's Manual



OMEGA

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It is the policy of OMEGA to comply with all worldwide safety and EMC/EMI regulations that apply. OMEGA is constantly pursuing certification of its products to the European New Approach Directives. OMEGA will add the CE mark to every appropriate device upon certification.

The information contained in this document is believed to be correct but OMEGA Engineering, Inc. accepts no liability for any errors it contains, and reserves the right to alter specifications without notice.

WARNING: These products are not designed for use in, and should not be used for, patient connected applications.

Contents:

1. CALIBRATION INSTRUCTIONS
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1.CALIBRATION INSTRUCTIONS

1.1 The DRA-ACT-2 coarse ranging is factory set. The Zero and Span potentiometers located on the unit's front panel are used for fine tuning.

1.2 Calibration instrumentation:

1. 24Vdc power supply
2. AC voltage/current calibrator
3. High accuracy DVM
4. Small screwdriver

Connect the transmitter to be calibrated according to fig.1.

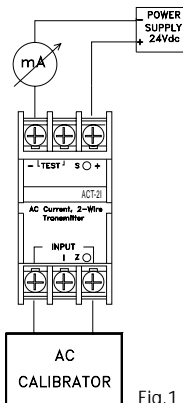


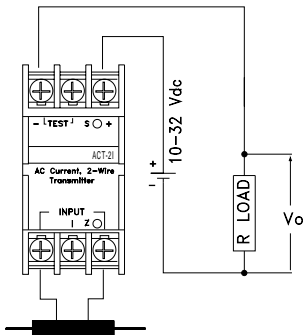
Fig.1

- a. Set calibrator to 0 output
- b. Adjust with the Zero potentiometer to obtain an output current of 4.000mA.
- c. Set the calibrator to I/V maximum.
- d. Adjust with the Span potentiometer to obtain an output current of 20.000mA.

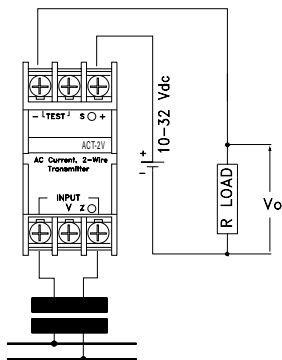
Repeat steps a to d until satisfactory results are achieved.

2. CONNECTION DIAGRAMS

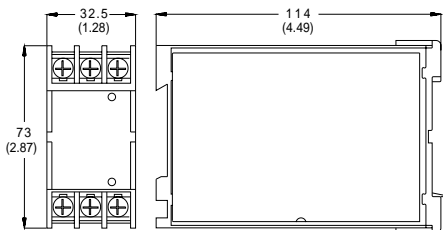
2.1 DRA-ACT-2I



2.2 DRA-ACT-2V



3. MECHANICAL DIMENSIONS mm (In)



4. DRA-ACT-2I & DRA-ACT-2V SPECIFICATIONS

DRA-ACT-2I

INPUT:	AC current
INPUT SPANS:	0-1 Aac, 0-5 Aac (RMS)
INPUT POWER CONSUMPTION:	0.26 VA at 5 Aac
INRUSH CURRENT:	40 Aac (RMS) maximum, for 8 seconds every 10 minutes 75 Aac (RMS) maximum, for 1 second every 10 minutes
ISOLATION:	2.5 KV (RMS)/1 minute

DRA-ACT-2V

INPUT:	AC voltage
INPUT SPANS:	0-150 Vac, 0-250 Vac, 0-400 Vac (RMS)
INPUT POWER CONSUMPTIONS:	0.3 VA at 120 Vac, 1.4 VA at 250 Vac (RMS)
ISOLATION:	2.5 KV (RMS)/1 minute

GENERAL SPECIFICATIONS

OUTPUT CURRENT RANGE:	4-20 mA
TEST TERMINALS:	40-200 mV represents 4-20 mA
SUPPLY VOLTAGE:	10-32 Vdc, reverse polarity protected

SUPPLY AND LOAD VARIATION EFFECT:	< $\pm 0.03\%$ of span for full change
LOOP RESISTANCE:	$R_{max} (\Omega) = (V_{sup}-10)/0.02$
RESPONSE TIME:	220 msec. (0-98% of span)
OUTPUT RIPPLE:	Better than 0.1% of span RMS
FREQUENCY:	40-500 Hz
ACCURACY (2-100% of input span):	$\pm 0.1\%$ of span for pure sinusoidal input
FINE ADJUSTABILITY:	Zero: $\pm 35\%$ of span (minimum) Span: $\pm 25\%$ of span (minimum)
CMR:	122 dB typical 117 dB minimum
TEMPERATURE STABILITY:	$\pm 0.015\%$ of span/ 1°C
OPERATING AMBIENT:	32 to 158 $^{\circ}\text{F}$ (0 to 70 $^{\circ}\text{C}$)
STORAGE TEMPERATURE:	-13 to 185 $^{\circ}\text{F}$ (-25 to +85 $^{\circ}\text{C}$)
HUMIDITY:	5-95% relative humidity, non-condensing
HOUSING:	Plastic, Polycarbonate
PROTECTION LEVEL:	Box: According to IP-50 DIN 40050 Terminals: According to IP-10 DIN 40050
MOUNTING:	Standard 35 mm DIN rail
WEIGHT:	0.5 lb (0.2 Kg)

WARRANTY/DISCLAIMER

OMEGA ENGINEERING, INC. warrants this unit to be free of defects in materials and workmanship for a period of 13 months from date of purchase. OMEGA Warranty adds an additional one (1) month grace period to the normal one (1) year product warranty to cover handling and shipping time. This ensures that OMEGA's customers receive maximum coverage on each product. If the unit should malfunction, it must be returned to the factory for evaluation. OMEGA's Customer Service Department will issue an Authorized Return (AR) number immediately upon phone or written request. Upon examination by OMEGA, if the unit is found to be defective it will be repaired or replaced at no charge. OMEGA's WARRANTY does not apply to defects resulting from any action of the purchaser, including but not limited to mishandling, improper interfacing, operation outside of design limits, improper repair, or unauthorized modification. This WARRANTY is VOID if the unit shows evidence of having been tampered with or shows evidence of being damaged as a result of excessive corrosion; or current, heat, moisture or vibration; improper specification; misapplication; misuse or other operating conditions outside of OMEGA's control. Components which wear are not warranted, including but not limited to contact points, fuses, and triacs.

OMEGA is pleased to offer suggestions on the use of its various products. However, OMEGA neither assumes responsibility for any omissions or errors nor assumes liability for any damages that result from the use of its products in accordance with information provided by OMEGA, either verbal or written. OMEGA warrants only that the parts manufactured by it will be as specified and free of defects. OMEGA MAKES NO OTHER WARRANTIES OR REPRESENTATIONS OF ANY KIND WHATSOEVER, EXPRESSED OR IMPLIED, EXCEPT THAT OF TITLE, AND ALL IMPLIED WARRANTIES INCLUDING ANY WARRANTY OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED. LIMITATION OF LIABILITY: The remedies of purchaser set forth herein are exclusive and the total liability of OMEGA with respect to this order, whether based on contract, warranty, negligence, indemnification, strict liability or otherwise, shall not exceed the purchase price of the component upon which liability is based. In no event shall OMEGA be liable for consequential, incidental or special damages.

CONDITIONS: Equipment sold by OMEGA is not intended to be used, nor shall it be used: (1) as a "Basic Component" under 10 CFR 21 (NRC), used in or with any nuclear installation or activity; or (2) in medical applications or used on humans. Should any Product(s) be used in or with any nuclear installation or activity, medical application, used on humans, or misused in any way, OMEGA assumes no responsibility as set forth in our basic WARRANTY / DISCLAIMER language, and additionally, purchaser will indemnify OMEGA and hold OMEGA harmless from any liability or damage whatsoever arising out of the use of the Product(s) in such a manner.

RETURN REQUESTS / INQUIRIES

Direct all warranty and repair requests/inquiries to the OMEGA Customer Service Department. BEFORE RETURNING ANY PRODUCT(S) TO OMEGA, PURCHASER MUST OBTAIN AN AUTHORIZED RETURN (AR) NUMBER FROM OMEGA'S CUSTOMER SERVICE DEPARTMENT (IN ORDER TO AVOID PROCESSING DELAYS). The assigned AR number should then be marked on the outside of the return package and on any correspondence.

The purchaser is responsible for shipping charges, freight, insurance and proper packaging to prevent breakage in transit.

FOR WARRANTY RETURNS, please have the following information available BEFORE contacting OMEGA:

1. P.O. number under which the product was PURCHASED,
2. Model and serial number of the product under warranty, and
3. Repair instructions and/or specific problems relative to the product.

FOR NON-WARRANTY REPAIRS, consult OMEGA for current repair charges. Have the following information available BEFORE contacting OMEGA:

1. P.O. number to cover the COST of the repair,
2. Model and serial number of product, and
3. Repair instructions and/or specific problems relative to the product.

OMEGA's policy is to make running changes, not model changes, whenever an improvement is possible.

This affords our customers the latest in technology and engineering.

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