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UV1000 OMEGASAYS® Universal Verbalizer



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Section 1 - Introduction

The Universal Verbalizer UV1000 is a handheld portable device that verbalizes 0 to 10 VDC voltage input, 0 to 20 mA current input and K type thermocouple input. The unit has a four switch keypad allowing the user to select different input verbalization, providing volume control, command talk and continuous talk.

Model UV1000 comes with RS232 PC interface, allowing the user to configure the input(s) for any specific applications, and setting high & low alarm set points. The user can configure the input for a specific input range, Engineering scale, and Engineering unit by selecting from over 100 built-in engineering units.

Model UV1000 operates from 2 "AA" size batteries or a 5 Vdc adaptor input. The unit also comes with ear phone jack, power switch, and speech mode switch.

This device is not intended to replace, substitute for, or reduce the need for visual displays. For safety purposes, it is essential that a visual display be monitored in conjunction with the verbalizer at all times.

The Universal Verbalizer UV1000 is not designed to measure high voltage or current signals. It is designed to measure up to 10 Vdc max. voltage and 20 mA max. current signals.

1.1 Check List of the Accessories

Please confirm that the following accessories are in the box.

Items	No.
• Earphone	1
• Batteries - 1.5V AA Lithium	1
• 5Vdc adaptor	1
• Aluminum stand	1
• TEST LEADS 36"	2
RS232 CABLE	1
• K type Thermocouple, SMP Miniature Size Spool Caddy	1
CD, PC Configuration Software	1

1.2 Install the batteries

Open the battery compartment door. Observe the polarities inside the compartment. Install the 2 "AA" batteries into the battery compartment.



Section 2 - Front Panel



The front panel shows Power on and off slide switch, Speech mode slide switch, RS232 jack, earphone jack and 5V AC adaptor input jacks.

2.1 Power Switch - I/O [On/Off]

Turn the Universal Verbalizer on and off.

2.2 Command Talk and Continuous Talk Switch

Switch between Command talk and Continuous talk

- At Command talk mode, you must press TALK/SET button to listen the measurement.
- At Continuous talk mode, the verbalizer will talk continuously at the selected talking interval. The default talking interval is 3 seconds. The range is 0 to 120 seconds.

2.3 Power Jack, RS232 Jack and Earphone Jack

- The power jack is for DC adaptor input: 5 Vdc @ 300mA
- The RS232 jack is for connecting verbalizer to PC to configure the Universal Verbalizer (cable is provided).
- The Earphone jack is for connecting an earphone.

Keypad Function

Section 3 - Keypad Function:

Followings show UV1000 front and back pictures.



3.1 MODE key - Change the Input Selections

The input change sequence is:





3.2 TALK/SET Key



- At Command talk mode everytime you press the Talk key the Universal Verbalizer announces the measurement.
- During the Continuous talk mode and at Thermocouple input Selection: Press the Talk key to toggle the temperature engineering units °F and °C.

3.3 Up Key - With Key Press the Volume Goes Up



3.4 Down Key - With Key Press the Volume Goes Down



Section 4 - Verbaview[™] – User Configuration Software

4.1 Verbaview[™] Installation

Insert the Verbaview[™] software CD into your CD-ROM, the install program will run install automatically and the software will guide you through the whole the installation.

If the program didn't install automatically, click Windows Start Run, click Browse... find your D: drive and select setup.exe file and then click OK button

4.2 Starting the Verbaview[™] Program

Connect the Universal Verbalizer UV1000 to your PC through RS232 cable (Omega Part No. OM-NOMAD-CP9). Click Start Programs Verbaview UV-1000 Verbaview UV-1000 to run the program.

4.3 Settings Tag

Go to the Settings tag

Verbaview
Process Measurement and Control!
Select the communication port and and other settings.
COM Port
Port Com
Speed
Skip Logo Sound Log To File Talking Interval (Sec.):
Calibration Mode
Set Factory Defaults
Status read OK!

4.3.1 You can select the COM port which connect to your Universal Verbalizer and the Speed (Baud Rate) is fixed at 9600bit/sec

COM Port Port				_	
	сом1	сом2	сомз	COM4	
Speed	2400			9600	

4.3.2 Check the 'Skip Logo Sound' to disable the sound effect during the program at start up.

Г	Skip Logo Sound
Ta	lking Interval (Sec):

4.3.3 Talking Interval.

You can set the talking time interval from 0 to 120 seconds. The default talking interval is 3 seconds.



4.3.4 Factory default settings Button



If you click this button the Universal Verbalizer settings will go back to manufacture default settings as followings:

- The Talking Interval is 3 seconds.
- TC Input: Decimal point: None; Engineering Unit: degree Fahrenheit, Alarm settings: low alarm -100°F and high alarm setting value 1600°F, all alarms are disabled.
- Voltage Input: Rescaling; 0; Decimal point: 2; 0~10v, Engineering Unit: volts, Voltage Range (V): 0 to 10; Scaling Min and Max values are 0 V and 10 V; Low alarm: 0; High alarm: 10; All alarms are disabled;
- Current Input: Rescaling: 0; Decimal point: 2; 0~20mA; Engineering Unit: mA; Current Range (mA): 0~20mA; Scaling Min and Max values are 0 and 20; low alarm: 0; High alarm: 20; All alarms are disabled.

4.4 Calibrate Tag

This function is disabled (grayout) and is only for factory calibration use.

Record the high and low points	for the various inputs.	
Thermo Couple		
C TC Input Low Point TC Input High Point	Se	et
Current		
C 0 mA Point G 20 mA Point	S	et
Voltage		
C 0 Volt Point (10 Volt Point)	S	et

4.5 Input Tag





4.5.1 Select the Input Type

You can select T-Couple (Thermocouple) Input, Voltage Input or Current Input by click the pull down list.



• Thermocouple input configuration interface

Engineering Units	erature agree Fahrenheit agree F agree Celsius agree C	Input Type: T-Couple Decimal Point: X X Voltage Range (V) 0-1 1000 Max 0-5 Max
Alarms Low Alarm	High Alarm 800.000	Current Range (mA) 6 0-20 Min 6 4-20 Max 4 000
Scaling Min Value	Max Value	Device Set Read

Calibrate 14	y Input Load/	Save M Settings 🕥 Hel
Engineering Unit	\$	Input Type: Voltage
-с н	our 🔼	
-C M	inute	Decimal Point:
	econd M	
C P	M	X X.X X.XX X.X
E @ 🚺 Elect	trical	Voltage Range (V)
-C m	v	Min
- 6 🛛	olts	C 0.5 0.00
-C m		@ 0-10 Max
		3 10.00
Alarms		Current Range (mA)
Low Alarm	High Alarm	6 10.201 Min
0.000	10.000	C 4-20 30.00
	-	Max
Enable	I Enable	30.00
Scaling		Device
Min Value	Max Value	
10.000	10.000	Set Head
30.000	310,000	

• Voltage input configuration interface

• Current input configuration interface

Calibrate	Input Load/S	ave M Setting	IS 🕜 Help
Engineering Units		Input Type:	Current 🔽
C S	nute	Desire I Desire	8
C AL	4	Decimal Point	
C PI	4	1 1	
Elect	ical	X X.X	X.XX X.XX
C m)	/	-Voltage Ra	inge (V)
-C Vo	olts	0.01	Min
	-	0-5	30.00
	np v	6 0.10	Max
-	>		10.00
Alarms		Current Ra	ange (mA)
Low Alarm	High Alarm	0 10 00	Min
10.000	20.000	C 4 20	\$ 0.00
10.000	20.000	(4-20	Max
Enable	Enable		20.00
Scaling		Device	
Min Value	Max Value		
10.000	20.000	Set	Read
0.000	20.000		



4.5.2. Select the Engineering Unit



Select the Engineering Unit from the trees at Engineering Units window after you select the Input type.

The Engineering Units categories are:

- Acceleration
- Area
- Conductivity
- Dissolved
- Electrical
- Energy
- Flow
- Force
- Humidity
- Length
- pH
- Power
- Pressure
- Salinity
- Sound
- Temperature
- Time
- Turbidity
- Vacuum
- Velocity
- Viscocity
- Volume
- Weight

Please see Appendix 2 Engineering Units Table for complete Engineering Units.

4.5.3 Select the Decimal Point

You can select the Decimal Point for the verbal number. You can select no decimal point, one decimal, two decimal point and up to three decimal point.

Thermocouple Input: x, x.x



Voltage and Current Input: x, x.x, x.xx, x.xx;



For example:

For Thermocouple input, the temperature measurement is 75.3° F. If you select Decimal Point is 'x.x', then the Verbalizer will talk " Seventy Five Point Three Degrees F" – 75.3° F; If you select Decimal point is 'x', then the Verbalizer will talk " Seventy Five Degrees F" - 75° F;

4.5.4 Rescaling the Engineering Unit

4.5.4.1 Voltage input settings and rescaling

Application Example 1: General Purpose Output Pressure Transducer

Omega Model Number: PX303-100A5V

Output: 0.5 - 5.5 Vdc

Pressure Range: 0-100 PSIA

The following PC user interface graphic, showing all the configuration settings and values for this application example.



a. Select the Voltage Input

Input Type:	Voltage 🔻

b. Select the Engineering Unit -PSI



c. Select the decimal points - 2



d. Input the voltage range value to the text boxes These text boxes are for the voltages input values:



e. Input the Engineering Unit range value to the text boxes These text boxes are for Engineering Units input values:

Scaling	
Min Value	Max Value
0.000	100.000

f. Set the High or Low alarm value Enable or disable the High or Low alarm settings

-Alarms	
Low Alarm	High Alarm
20.000	90.000
🗖 Enable	F Enable



g. Click the Set button to send the settings to Universal Verbalizer.

Device	
Set	Read

h. After a few seconds, you will see 'Configuration OK!' message at the bottom of the User interface. Now you are done with the rescaling and also updated other settings for the Verbalizer.

Configuration OK!	<u>E</u> xit

i. If you click the Read button, you will get all the settings from the Universal Verbalizer at Voltage input mode.

Device	
Set	Read

Application Example 2: High Temperature Handheld Infrared Thermometer

Omega Model Number: OS523E Analog Output: 1 mV/deg Temperature Range: 0 to 2500°F

The following PC user interface graphic, showing all the configuration settings and values for this application example.





a. Select the Voltage input



b. Select the Engineering Unit - Degree F.

Engineering	-Engineering Units			
🖃 🥌 👃	Temperature			
	Degree Fahrenheit			
-6	Degree F			
C	Degree Celsius			
	Degree C			
ė. 🔿 🍐	Humidity			
-0	Precent RH			
	Dew Point			
	D-P	<u> </u>		
I	>			



c. Select the decimal points x – No decimal point



d. Input the voltage range value to the text boxes

Calculate the Voltage Range:

Since the Analog Output: 1 mV/deg and the Temperature Range is $0 - 2500^{\circ}\text{F}$ The Voltage Min = 1 mV/deg * 0 deg = 0 mV = 0 V; The Voltage Max = 1 mV/deg * 2500 deg = 2500 mV = 2.5 V; Type these calculated voltage values into the Min and Max text boxes:



e. Input the Engineering Unit range value to the text boxes according to: Temperature Range: 0 - 2500°F

So, the Min Value is 0 and the Max Value is 2500.



f. Set the High or Low alarm value

Enable or disable the High or Low alarm settings

Alarms	
Low Alarm	High Alarm
100.000	2000.000
F Enable	🔎 Enable

g. Click the Set button to send the settings to Universal Verbalizer.

Device	
Set	Read

h. After a few seconds, you will see 'Configuration OK!' message at the bottom of the User interface. Now you are done with the rescaling and also updated other settings for the Verbalizer.

Configuration OK!	<u>E</u> xit
-------------------	--------------

i. If you click the Read button, you will get the all the settings from the Universal Verbalizer at Voltage input mode.

Device	
Set	Read

4.5.4.2	0 to 20 mA or 4-20 mA	Current in	put settings and	rescaling
---------	-----------------------	------------	------------------	-----------

Application Example 3: Miniature Low Cost Non-Contact IR Temperature Sensor/Transmitter

Omega part number: OS101-MA Transmitter with 4 to 20 mA output

Current Output: 4 to 20 mA

Temperature Range: 0 to 1000°F

The following PC user interface graphic, showing all the configuration settings and values for this application example.



a. Select the Current input

Input Type: Current

b. Select the Engineering Unit – Degree F.



c. Select the no decimal points – x



d. Input the Current range value to the text boxes This Transmitter Current Output range is : 4 – 20 mA Select Current Range 4-20 or just type in 4 to Min text box and 20 to Max text box



e. Input the Engineering Unit range value to the text boxes The Transmitter temperature range is: 0-1000°F So, type in 0 in Scaling Min Value, 1000 in Scaling Max Value

Scaling	
Min Value	Max Value
0.000	1000

f. Set the High or Low alarm value Enable or disable the High or Low alarm settings

Alarms	
Low Alarm	High Alarm
100.000	\$800.000
Enable	Enable

g. Click the Set button to send the settings to Universal Verbalizer

Device	
Set	Read

h. After a few seconds, you will see 'Configuration OK!' message at the bottom of the User interface. Now you are done with the rescaling and also updated other settings for the Verbalizer.

Configuration OK!	<u>E</u> xit
-------------------	--------------



j. If you click the Read button, you will get all the settings from the Universal Verbalizer at Current input mode

ice	
Set (Read
Set	Read

Application Example 4: LIQUID FLOW TRANSMITTERS

Omega Model number: FPR205-PC 500, transmitter with clear cover Current Output: $4-20\ \mathrm{mA}$

Flow Measuring Range: 0.5 to 15.0 GPM

a. The following PC user interface graphic, showing all the configuration settings and values for this application example.



b. Select the Current input

nput Type: 🛛 Current 🔻



c. Select the Engineering Unit - GPM at Engineering Unit window

d. Select the one decimal points - x.x



e. Input the Current range value to the text boxes This transmitter Current Output is 4 – 20 mA Select Current Range to 4-20 or type in the Min and Max value in the text boxes.



f. Input the Engineering Unit range value to the text boxes

This transmitted Flow Measuring Range: 0.5 to 15.0 GPM

Type in the Scaling Min and Max Value according to the Measuring Range

Scaling	
Min Value	Max Value
0.500	15.000

g. Set the High or Low alarm value Enable or disable the High or Low alarm settings



Device	
Set	Read

i. After a few seconds, you will see 'Configuration OK!' message at the bottom of the User interface. Now you are done with the rescaling and also updating other settings for the Verbalizer.

Configuration OK!

j. If you click the Read button, you will get all the settings from the Universal Verbalizer at Current input mode.

Device	
Set	Read

4.6 Load/Save Tag

At this tag, you can Load the saved previous configuration settings from your PC to the program. Or you can save the Configuration settings to your PC for future reference.

💽 Yerbaview
- OMEGA.COM Your One Stop Source for Process Measurement and C
Calibrate (M Input Load/Save Settings O Help Save/Restore the unit's entire setup.
Current Configuration: Input Type = Current Engineering Units = mA Decimal Point = 2
Voltage Range High = 10.00V Voltage Range Low = 0.00v Current Range High = 0.00mA Current Range Low = 0.00mA Alalm High = 20.000 - Enabled: yes Alalm Low = 0.000 - Enabled: yes Scaling High = 20.000 Scaling Low = 0.000 Talk Time Interval = 2 seconds
Status OK!

4.7 Error Messages

• You may get the error message "Did not receive SOH or EOT when expected". If this happens, please make sure the Universal Verbalizer power is turn on, check the COM port selection in Settings tag, the cable connections between PC and Universal Verbalizer and then try again.

Engineering Uni	ts perature <u>A</u> pegree Fahrenheit pegree F pegree Celsius	Input Type: Voltage
Alarms	Jegree C iidity RROR I not receive SOH or EO QK	Voltage Range (V) Mir 0 000 T when expected S 000
Low Alam 0.000 Enable	High Adam ∰9999.999 □ Enable	C 0 20 C 1 20 C 1 20 Mai 2000
Scaling Min Value	Max Value	UV-1000 Set Read

• You may get "I/O operation time out" error messages during the configuration. If this happens, please check the COM port, cable connection between PC and Universal Verbalizer and make sure the universal Verbalizer power is turn on. Then try again

Units		Input Type: T-Couple
E 6 👃 T	emperature	Decimal Point
-0	Degree F	-
-C	Degree Celsius Degree C	X
		-voltage Hange (v) Mi
	FRROP	× 0 0 5 3000
-4		
Alarms	I/O operation timed	- Current Flange (mA1-
Low Alarm	ŌK	@ [0-20]M
0.000		@ 4+20 Ma
Enable	T= Enable	20.00
Scaling		Device
Min Value	MaxValue	Set Read

Section 5 - Specifications:

Voltage Input: Input Impedance: **Current Input: Analog Input Accuracy:** Thermocouple Input: Thermocouple Range: Thermocouple Input Accuracy: Command/Continuous Talk: High & Low Alarm Set Points: High & Low Alarm Set Value Range: **Engineering Scale: Engineering Scaling** Min & Max Value Range: **Engineering Unit:** Volume Control:

Power: Power Indication: Low Battery Indication: Speech Sampling Rate: Speaker: Battery Life:

Operating Ambient Temperature: Operating Relative Humidity: Dimensions:

Weight:

0-10 Vdc 500 Kohms 0-20 mA, 4-20 mA 0.2% of full scale K type, SMP connection -100 to 871°C (-148 to 1600°F) 2°C (3.6°F) Set via slide switch Set via RS232 PC interface

±9999.999 Set via RS232 PC interface

±9999.999 Set via RS232 PC interface Set via keypad, 8 levels at 4 dB intervals 2 AA size Batteries or 5 Vdc adaptor Red LED, Red LED, Flashing 8 KHz Built-in, 8 Ohms At 5 seconds talk interval, volume medium 40 Hours – Continuous Talking Mode (Alkaline Battery) 160 Hours - Continuous Talking Mode (Lithium Battery)

0 to 50°C (32 to 122°F) 0 to 95% RH (Non-condensing) 120.6 x 76 x 32 mm (4.75 x 3 x 1.25") 250 g

Appendix 1 Factory Default Settings

The Factory default input is TC input, Command Talk and the Talking Interval is 3s and each input default settings are as followings.

• TC Input:

Engineering Unit: Degree F Decimal Point: x – No decimal points Alarms are disabled Low alarm: -100 High alarm: 1600 Talking interval: 3s



Appendix	
Talking Interval (Sec):	
Talking interval at Settings tag • Voltage Input: Engineering Unit: volt Decimal Point: x.xx – Two decimal points Alarms are disabled Low alarm: 0 High alarm: 10 Voltage Range(V): 0-10v Voltage Min: 0.00 Voltage Max: 10.00 Rescaling Min Value: 0 Rescaling Max Value: 10 Talking time interval: 3s	
Verbaview ess Measurement and Control! Imput Imput <tr< td=""><td></td></tr<>	
Status OK!	



• Current Input: Engineering Unit: mA Decimal Point: x.xx – Two decimal points Alarms are disabled Low alarm: 0 High alarm: 10 Current Range(V): 0-20mA Current Min: 0.00 Current Max: 20.00 Rescaling Min Value: 0 Rescaling Max Value: 20 Talking time interval: 3s

🕂 Yerbaview	×
	VerbaView f
Calibrate (Mr Input) Load/Sav Engineering Units C Second C AM C PM C PM C Volts C Volts C Amp	e M Settings
Alarms Low Alarm High Alarm (10.000 (10.000) F Enable F Enable	Current Range (mA)
Scaling Min Value Max Value	Set Read
Status OK!	Exit



Appendix 2 Engineering Units Table:

Categories	Engineering Units> For the tree of PC GUI	Note
Acceleration	Centimeter per square second	Metric
	g	
	Meter per square second	
	Foot per square second	English
	Inch per square second	
Area	Are	Metric
	Square centi-meter	
	Square deci-meter	
	Square meter	
	Square kilo-meter	
	Square nanometer	
	Square micrometer	
	Acre	English
	Square foot	
	Square inch	
	Square yard	
Conductivity	mho	
	Siemens	
	ppm - Part per million	ppm
Dissolved		
Oxygen	Milligram/liter	
Electrical	mV	
	Volts	
	mA	
	Amp	
	Kohm	
	Ohm	
	uF	
	pF	
	Farad	
	Henry	
	Khz	
	Hertz	

Appendix Engineering Units --> For the tree of PC GUI Categories Note Newton meter English Energy Inch pound force Joule Kilojoule Gram Calorie Calorie Metric Horsepower-hour Watt Hour Kilowatt-hour Electron volt Flow Gram/second Metric Kilogram/Minute Ton/day LPM Cubicmeter per minute Milliliter per minute Ounce/second English Pound/Minute GPM - Gallon/Minute GPH - Gallon/Hour GPD - Gallon/Day LPD - Liter/Day Force (Strain) Newton Metric Kilo-Newton Dyne English Long Short Humidity Percent RH Dew Point D-P Dew Point Length Nanometer Metric Millimeter Centimeter

> Decimeter Kilometer

Categories	Engineering Units> For the tree of PC GUI	Note
Length cont.	Foot	English
0	Inch	0
	Yard	
	Mile	
pН	pН	
Power	Watt	
	Kilowatt	
	Horsepower	
	Calorie (IT) per hour	
Pressure	Inch of Mercury	English
	Inch of water	
	Foot of water	
	PSI	
	Pound per Square foot	
	Atmosphere	Metric
	Bar	
	Kilogram per square meter	
	mmHg	
	millimeter of water	
	Pascal	
	Hecto-Pascal	
	Kilo-Pascal	
Salinity	Total dissolved solid	
	% concentration	
Sound	Decibel	
Гemperature	Degree Fahrenheit	Metric
	Degree F	
	Degree Celsius	Englisł
	Degree C	
	Kelvin	

Appendix

Appendix

Categories Engineering Onits> For the tree of FC GOT	1.000
Time Week	
Month	
Day	
Hour	
Minute	
Second	
AM	
PM	
Turbidity NTU - Nephelometric Turbidity Unit	
Vacuum Torr	
Velocity Meter per second	Metric
КРН	
Knot's	
Foot per second	English
Inch per second	U
Foot per Minute	
Inch/Minute	
MPH - Mile per hour	
Meter	
Viscosity Centipoise	
Stoke	
Centistoke	
Volume Cubic meter	Metric
Cubic Centimeter	
Milliliter	
Liter	
Barrel	English
Gallon	Ū
Pint	
Quart	
Ounce	
Weight Gram	Metric
Kilogram	
Ton	
Ounce	English
Pound	Δ-7



NOTES:



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's 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 malfunctions, 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 having been 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 in which wear is not warranted, include but are 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 the company 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. Purchase Order number under which the product was PURCHASED,
- 2. Model and serial number of the product under warranty, and
- 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. Purchase Order number to cover the COST of the repair,
- 2. Model and serial number of theproduct, 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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