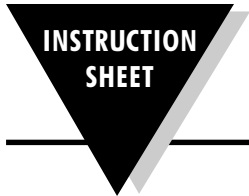




**DRP Series**  
**DRP-8611, DRP-8612**



**M3213/0499**



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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.

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

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**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 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 which wear are not warranted, including but not limited to contact points, fuses, and triacs.

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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
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. Purchase Order 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.

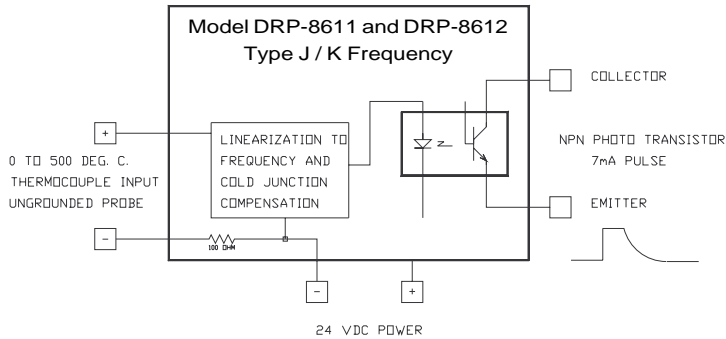
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# Models DRP-8611 Type J and DRP-8612 Type K Thermocouple to Frequency Converter

## Features

- Linearized Frequency
- Cold Junction Compensation
- 0 to 500°C or 0 to 1000°C Type J Thermocouple
- 0 to 1250°C Type K Thermocouple
- Isolated Input to Output



## Description

**Model DRP-8611.** This type J thermocouple to frequency converter is designed to operate into the common 24 Volt, 7 mA PLC inputs. It's output is an isolated optocoupler transistor and provides DC isolation from the input and DC power. The DRP-8611 will operate with a DC supply of 15 Volts to 26 Volts at 17 mA.

**Model DRP-8612.** This Type K thermocouple to frequency converter is designed to operate into the common 24 volt, 7 mA PLC inputs. The output frequency is linear to the temperature. It's output is an isolated optocoupler transistor and provides DC isolation from the input and DC power. The DRP-8612 will operate with a DC supply of 10 Volts to 26 Volts at 20 mA.

The ITS-90 Standard specifies that the standard limits of error for type K commercial thermocouples be  $\pm 2.2^\circ\text{C}$  between 0 and  $277^\circ\text{C}$  and  $\pm 0.75\%$  between 277 and  $760^\circ\text{C}$ . The typical error of 8612 itself is equal to one half the limits given above.

The Model DRP-8611 and DRP-8612 modules are housed in a plastic housing with a U-foot for mounting on standard DIN rails. The unit's dimensions, excluding the mounting foot, are 1.65"H x 1.06"W x 3.78"L. Connections are made to screw clamp terminal blocks.

Specifications	DRP-8611	DRP-8612						
<b>Input</b>	Type J Thermocouple 0°C to 500°C or 0°C to 1000°C	Type K Thermocouple 0°C to 1250°C						
	Use Ungrounded Probes							
<b>Output</b>	10 Hz at 0° to 510 Hz at 500°C or 1100 Hz at 1000°C	<table border="1"> <tr> <td><i>OPTIONS</i> 0.5 Hz / 0°C</td> <td>5 Hz at 0°C to 255 Hz at 500°C and to 630 Hz at 1250°C</td> </tr> <tr> <td>1 Hz / 0°C</td> <td>10 Hz at 0°C to 510 Hz at 500°C and to 1260 Hz at 1250°C</td> </tr> <tr> <td>2 Hz / 0°C</td> <td>20 Hz at 0°C to 1020 Hz at 500°C and to 2520 Hz at 1250°C</td> </tr> </table>	<i>OPTIONS</i> 0.5 Hz / 0°C	5 Hz at 0°C to 255 Hz at 500°C and to 630 Hz at 1250°C	1 Hz / 0°C	10 Hz at 0°C to 510 Hz at 500°C and to 1260 Hz at 1250°C	2 Hz / 0°C	20 Hz at 0°C to 1020 Hz at 500°C and to 2520 Hz at 1250°C
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2 Hz / 0°C	20 Hz at 0°C to 1020 Hz at 500°C and to 2520 Hz at 1250°C							
<b>Resolution</b>	1°C for 1 second Time Base							
<b>Accuracy</b>	$\pm 2^\circ\text{C}$ plus the error of J Thermocouple	<i>Accuracy (23°C <math>\pm 2^\circ\text{C}</math>)</i> 0 to 277°C: Max $\pm 1.2^\circ\text{C}$ 277 to 1250°C: Max $\pm 0.4\%$ Less than one half the error limits of K Thermocouple (ITS-90 Standard) typical						
<b>Temperature Coefficient</b>	n/a	$\pm 0.005\%/^\circ\text{C}$ typ $\pm 0.02\%/^\circ\text{C}$ max						
<b>Cold Junction Compensation</b>								
0°C to 55°C	$\pm 0.05^\circ\text{C} / ^\circ\text{C}$ typ	$\pm 1.2^\circ\text{C}$ typ, $\pm 3^\circ\text{C}$ max						
23°C to $\pm 2^\circ\text{C}$	n/a	$\pm 0.8^\circ\text{C}$ typ, $\pm 2^\circ\text{C}$ max						
<b>Output Source</b>	Floating Optocoupler Transistor 7 mA Minimum Current							
	Square Wave Output	Square Wave for 0.5 and 1 Hz/ $^\circ\text{C}$ option 70 $\mu\text{s}$ pulse width for 2 Hz/ $^\circ\text{C}$ option						
<b>Response Time</b>	1 second							
<b>Isolation</b>								
Input to Output Transistor	700 Volts DC 5 pF	700 Volts DC 5 pF						
<b>Power Requirements</b>								
Voltage	15 to 26 Volts	10 to 26 Volts						
Current	17 mA typ Thermocouple negative input lead connected to Power Supply common through 100 ohms resistor	20 mA typ Thermocouple negative input lead connected through 100 ohms to Power Supply common						
<b>Size</b>	1.65" H x 1.06" W x 3.78" L (42 x 27 x 96 mm)							
<b>Weight</b>	3 oz. (85 grams)							

# **Models DRP-8611 Type J and DRP-8612 type K Thermocouple to Frequency Converter**