

# Model 8540

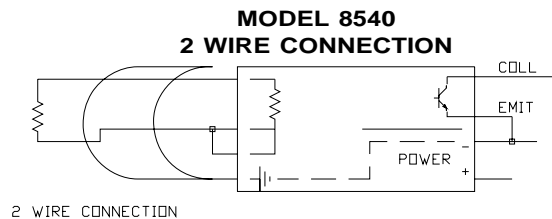
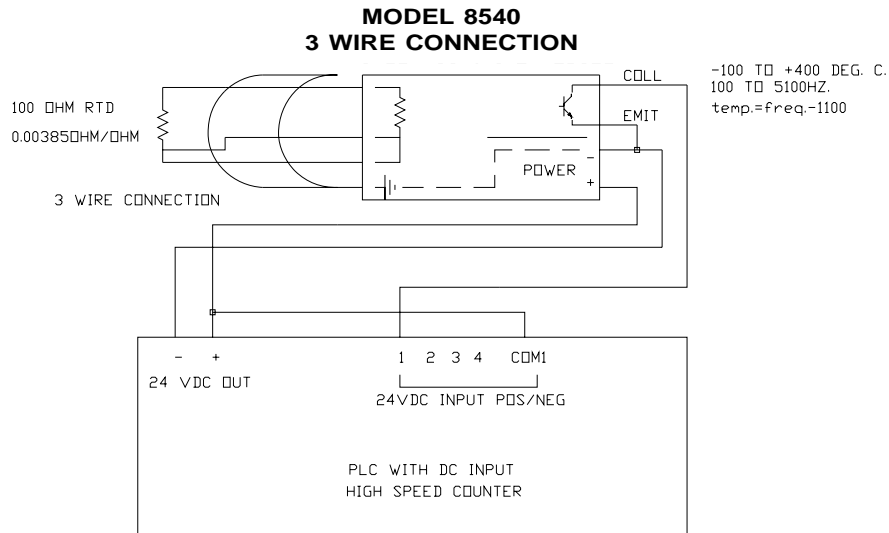
## Pt100E RTD to Frequency

**Model 8540** RTD to frequency converter is designed to operate into the common 24 volt, 7mA PLC high speed counter inputs. It's output is an isolated optocoupler transistor and provides DC isolation from the input and DC power. The 8540 will operate with a DC supply of 15 volts to 26 volts at 37mA.

The model 8540 has compensation for the non-linear characteristic of the platinum 100 ohm RTD and is calibrated

to the European  $\alpha=0.00385$ . The output frequency is 100Hz at  $-100^{\circ}\text{C}$  to 5100Hz at  $+400^{\circ}\text{C}$  providing 0.1 degree or 12 bits resolution. The linearization is accurate to 0.5 degree over the 500 degree span.

The module is 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.



Model	8540
<b>Input</b>	Type PT100 E -100 to +400°C 100 Ohm Platinum RTD European $\alpha = 0.00385$ 2 or 3 Wire Connection
<b>Calibration</b>	European $\alpha = 0.00385$
<b>Output</b>	100 Hz at $-100^{\circ}\text{C}$ to 5100 Hz at $400^{\circ}\text{C}$ (Temp. in Tenths = Freq. -1100)
<b>Resolution</b>	0.1°C for 1 second Time Base 12 Bits
<b>Accuracy</b>	$\pm 0.5^{\circ}\text{C}$ plus RTD conformity
<b>Temperature Coefficient</b>	$\pm 0.01\%/^{\circ}\text{C}$ Typical
	0° to 55°C Ambient
<b>RTD Current</b>	1 mA Typical
<b>Output Source</b>	Floating Optocoupler Transistor 7mA Minimum Current
	Pulse Width 50 microseconds Typical
<b>Response Time</b>	0.1 second Typical
<b>Isolation</b>	700 Volts DC
	Input to Output Transistors 5 pF
<b>Power Requirements</b>	
	Voltage 24 Volts Nominal 15 to 26 Volts DC
	Current 37 mA Typical
<b>Environment</b>	
	Operating 0°C to +55°C
	Storage $-40^{\circ}\text{C}$ to $+80^{\circ}\text{C}$
<b>Size</b>	1.65"H x 1.06"W x 3.78"L (42 x 27 x 96mm)
<b>Weight</b>	3 oz. (85 grams)
<b>Agency Approvals</b>	UL 508, C22.2 No 14-M91, UL 1604, C22.2 No 213-M1987