CCI Digital Temperature Probe "DigiTemp"

Overview

The CCI Digital temperature probe is a unique design of a complete probe / sender combination. It is designed to be interfaced easily to a PLC based Temperature Monitoring / Control system, using only one digital PLC input. The probe has been designed to interface into most installations using other manufacturer's digital "hockey-puk" type probes, regardless of the data format they use.

Probe Details

The sender is packaged into a standard ANSI 50mm "hockey-puck" housing, which is installed into the head of the industrial probe assembly. The stainless steel probe stem is manufactured with a digital temperature sensor installed into the tip. The probe can read temperatures from –55 to +125°.

Function

The digital temperature sensor reads the temperature information, which is then transferred to the Micro-Controller in the sender. The Micro-Controller transmits the temperature as a series of low speed on / off pulses which can be easily read by a standard digital input on a PLC. Data is transferred to the PLC in a 16-bit format. Using a few lines of PLC code, temperature is easily acquired by the PLC which then controls cooling solenoids to maintain the set temperature.

Features

The sender incorporates two diagnostic LED's, that give an immediate indication of applied power and data transmission status. Connectors are high quality Industrial types. Some other manufacturer's probes present data in MSB or LSB formats. By the use of a jumper setting MSB or LSB first data can be selected. The final assembly of the sender is potted in 2-pack resin for ruggedness, long-life and to protect against moisture ingression.

Specifications

Model No	: CCI-1045/SC	
Data format	: Start pulse followed by 16 data-bit 2's complement binary code, MSB first °C x 10.	
Start Pulse	: 500mS on + 100mS off	
Data Pulse	: Binary 0 = 100ms on + 200mS off, Binary 1 = 200mS on + 100mS off.	
Rate	: One reading approximately every 6 seconds.	
Format Select	: MSB / LSB first data – set by jumper link. **NOTE: Probes are shipped set to LSB first.**	
Accuracy	: -10° to + 40°	+/- 0.25°
	-20° to + 80°	+/- 0.5°
	-55° to -20° and 80°-125°	+/- 1°
Resolution	: 0.1°	
Power Supply	: 24VDC @ 4mA (min 16V max 32V)	
Connection (3)	: 1) +24VDC, 2) Data-Output, 3) 0VDC	
Output	: 24VDC source 50mA max. (Suggested load, 2 – 5 K-Ohm)	
Output Protection	: Output is protected against short circuit, overload, reverse-polarity and data clash.	
Probe Stem	: Standard 200mm length. (Or to customer specified length) Spring loaded probe stems are available on request.	