



# SOUTHWEST RESEARCH INSTITUTE®

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Calibration Laboratory  
Certificate #0972-01

## Certificate of Calibration

**Submitted By:** DIV20

**Address:** B51

**Contact:** DON BANNON

**Manufacturer / Model:** DIGI-SENSE / 08516-55

**Description:** THERMOCOUPLE PROBE

**Serial No:** 12196

**Asset No:** 012196

**Procedure:** TEMPERATURE PROBES - 5 JUN 06

**Work Order:** 303081000

**Date Issued:** May 15, 2008

**Calibration Date:** May 15, 2008

**\*Calibration Due:** May 15, 2009

**Calibration Location:** Bldg. 64

**Environment:** Temp. 74.0°F Hum. 40 %RH

**\*\*Data Type:** FOUND-LEFT

**DivID/Location:** N/A

This certificate documents traceability to the National Institute of Standards and Technology (NIST) and the International System of Units (SI). The Laboratory quality system conforms to ISO/IEC 17025, 2005, ANSI/NCCL Z540-1-1994 and relevant requirements of the ISO 9000-2000 standard. This certificate shall not be reproduced, except in full, without the written approval of the Southwest Research Institute Calibration Laboratory. This certificate shall not be used to claim product endorsement by Southwest Research Institute, American Association for Laboratory Accreditation (A2LA) or any agency of the U. S. Government. Results of this calibration relate only to the instrument described above at the time of calibration and does not imply any long term stability of the instrument.

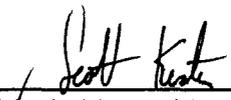
\*Determined by the customer, does not imply the instrument will remain within tolerance as any number of factors may cause an out-of-tolerance condition before this date. \*\*Found/Left = adjustment and/or repair was not required, As Left = adjusted and/or repaired was required. The client has sole responsibility for determination of in-/out-of-tolerance or compliance/noncompliance. See Remarks or attached Measurement Report with the same Work Order number for data.

Reported uncertainty calculated in accordance with the ISO "Guide to the Expression of Uncertainty in Measurement" (GUM) and represents an expanded uncertainty with a coverage factor of k=2 to approximate a 95% confidence level.

**Remarks:** Cal -20 to 200 °C

### Standards Used

Asset No.	Serial No.	Manufacturer	Model	Description	Cal Due
009137	A21208	HART SCIENTIFIC	1575	SUPER THERMOMETER	Jun 17, 08
010814	A44625	HART SCIENTIFIC	1529	THERMOCOUPLE THERMOMETER	Oct 16, 08
013908	1641	HART SCIENTIFIC	5628	SPRT	Feb 20, 10

Reviewed by:  (  ) srk (  ) mar (  ) wgh

  
Measurements by: Bob Trollinger  
Metrology Technician

Southwest Research Institute  
Calibration Laboratory  
Measurement Report

Work Order:	303081000	Mfr:	DIGI-SENSE	Technician:	blt
Asset No:	012196	Model:	THERMOCOUPLE PROBE	Cal Date:	15-May-08
Serial No:	12196	Type:	TYPE K		
Remarks: Limits taken from ASTM E230-02 and are based on brand new unused thermocouples.					
Limited Cal - tested at -20 to 200°C					

Function/Range	Test Point	TI Read	Difference	+/-Limit	+/-Uncertainty	Found/Left
Temperature	° C	° C	° C	° C	° C	Result
	-19.758	-18.71	-1.05	2.2	0.19	Pass
	0.163	0.61	-0.45	2.2	0.30	Pass
	50.130	49.80	0.33	2.2	0.30	Pass
	100.148	99.89	0.26	2.2	0.30	Pass
	150.150	150.80	-0.65	2.2	0.30	Pass
	214.440	215.30	-0.86	2.2	0.93	Pass

END OF REPORT