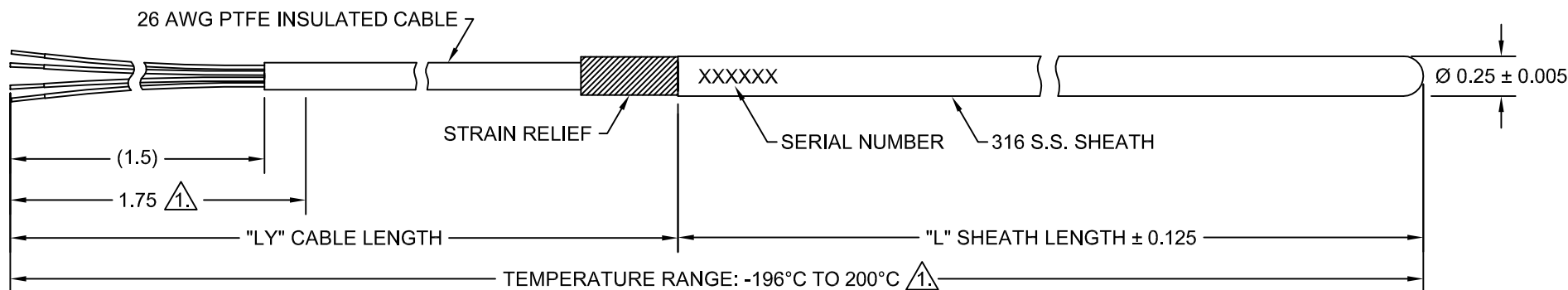


SYM	ECO NUMBER	DATE	APPD
A	ECO 8286	5-23-18	JAZ



NOTES:

$\triangle$  PROBE IS SPECIALLY SEALED FOR USE IN LOCATIONS WHERE EXPOSED TO LIQUID WATER. END OF CABLE MUST REMAIN OUTSIDE OF LIQUID ENVIRONMENT TO MAINTAIN MOISTURE SEAL.

2. SEE SHEET #2 FOR ORDERING INFORMATION AND SPECIFICATIONS.

<b>-TOLERANCES-</b> UNLESS OTHERWISE SPECIFIED
ALL DIMENSION IN INCHES
FRACTIONS = ±1/16 ONE PLACE .X = ±.050 TWO PLACE .XX = ±.010 THREE PLACE .XXX = ±.005
ALL ANGLES ARE ± 0°30'
SHEATH AND LEAD LENGTHS PER BURNS P/N 17026
UNLESS OTHERWISE NOTED: ALL SURFACES 125 ✓
ALL FINISHES IN MICRO INCHES



# BURNS ENGINEERING

SCALE	N.T.S.	
DFTM	JAZ	5-23-18
CHKD	TSH	5-23-18
APPD	JMB	5-23-18

MOUNTING AND OUTLINE DRAWING,  
WATERPROOF SECONDARY STANDARD,  
100 OHM, 0.003925 TEMP. COEFFICIENT

DIMENSIONS IN INCHES REF.: 23776	SHEET 1 OF 2	SIZE A	DRAWING NUMBER 23436	REV A
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**GENERAL DESCRIPTION:** THE BURNS ENGINEERING MODEL 23436 IS A HIGH QUALITY PLATINUM RESISTANCE THERMOMETER DESIGNED FOR USE AS A REFERENCE TEMPERATURE STANDARD. THE SENSING ELEMENT IS MANUFACTURED USING AN ULTRA HIGH PURITY CERAMIC AND A PURE PLATINUM WIRE (99.999%) WHICH IS FULLY SUPPORTED IN A MANNER THAT IMPOSES MINIMAL STRAIN.

**CAUTION:** RESISTANCE STABILITY IS HIGHLY DEPENDENT UPON HANDLING. THEREFORE, IT IS NOT INCLUDED IN THE STANDARD WARRANTY. THIS SENSOR IS INTENDED TO BE USED IN A LABORATORY SETTING AND SHOULD NOT BE EXPOSED TO SEVERE THERMAL SHOCK , PHYSICAL SHOCK, OR VIBRATION. CAREFUL HANDLING WILL ASSURE ACCURACY AND LONG LIFE.

ICE POINT RESISTANCE: 100 ± 0.10 Ω AT 0 °C

ALPHA VALUE: 0.003925 Ω / Ω / °C

W(302.9146K): 1.11806 TYPICAL

TEMPERATURE RATING: -196 °C TO 200 °C

**PERFORMANCE SPECIFICATIONS:** k=2, 95% CONFIDENCE LIMITS ARE LISTED BELOW

INSULATION RESISTANCE: GREATER THAN 1000 MEGOHMS @ 100 VDC @ 20°C

SHORT-TERM REPEATABILITY LESS THAN ± 0.005°C (0.002 Ω) CHANGE AT 0.01°C OVER ANY 10 CONSECUTIVE THERMAL CYCLES FROM -196°C TO 200°C

HYSTERESIS: LESS THAN ± 0.009°C (0.004 Ω) BETWEEN -196°C TO 200°C

LONG-TERM STABILITY: ± 0.003°C (0.001 Ω) MAXIMUM SHIFT AT 0.01°C AFTER 100 HOURS AT 200°C

**INDIVIDUAL CALIBRATION:** EACH THERMOMETER WILL BE PROVIDED WITH CALIBRATION PER THE ORDERING INFORMATION SHOWN ON SHEET 2. THE BURNS ENGINEERING CALIBRATION LABORATORY COMPLIES WITH THE REQUIREMENTS OF ANSI/NCSL Z540-1 PART 1, AND ISO/IEC 17025 AND IS ACCREDITED BY NVLAP (LAB CODE 200706-0). CALIBRATION UNCERTAINTIES WILL BE INCLUDED ON THE CALIBRATION REPORT AT EACH MEASURED TEMPERATURE, TYPICAL EXPANDED UNCERTAINTIES (k=2, APPROXIMATELY 95%) ARE LISTED IN THE TABLE BELOW AND INCLUDE ALL OF THE KNOWN SOURCES PRESENT AT THE TIME OF CALIBRATION.

**ORDERING INFORMATION:**

TEMPERATURE (°C)	EXPANDED UNCERTAINTY k=2 (°C)
-196	0.024
-38	0.011
0.01	0.010
200	0.018

23436	FREEZER SENSOR, 0.003925 TEMP. COEFFICIENT		
	"L" SHEATH LENGTH		
	-035 -***	3.5 INCHES SPECIFY SHEATH LENGTH IN INCHES (3.5" MINIMUM, 6.0" MAXIMUM)	
	"LY" CABLE LENGTH		
	-120 -***	120.0 INCHES SPECIFY CABLE LENGTH IN INCHES (12" MINIMUM, 600" MAXIMUM)	
	ITS-90 CALIBRATION OPTION CODES (INCLUDES R VS T TABLE IN 1°C INCREMENTS)		
	/CS13 /CS16 /CS36 /C***	NO CALIBRATION (LEAVE BLANK) CALIBRATION AT -196, -38, 0.01°C CALIBRATION AT -196, -38, 0.01, 100 AND 200°C CALIBRATION AT 0.01, 100 AND 200°C CONTACT BURNS CUSTOMER SERVICE FOR OTHER AVAILABLE CALIBRATION RANGES	
23436	-035	-120	/CS13 EXAMPLE PART NUMBER



**BURNS**  
ENGINEERING

SHEET 2  
OF 2

SIZE  
A

DRAWING NUMBER  
23436

REV  
A