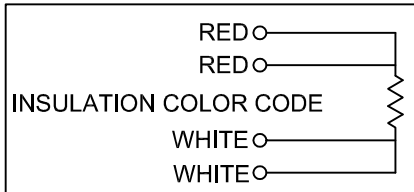
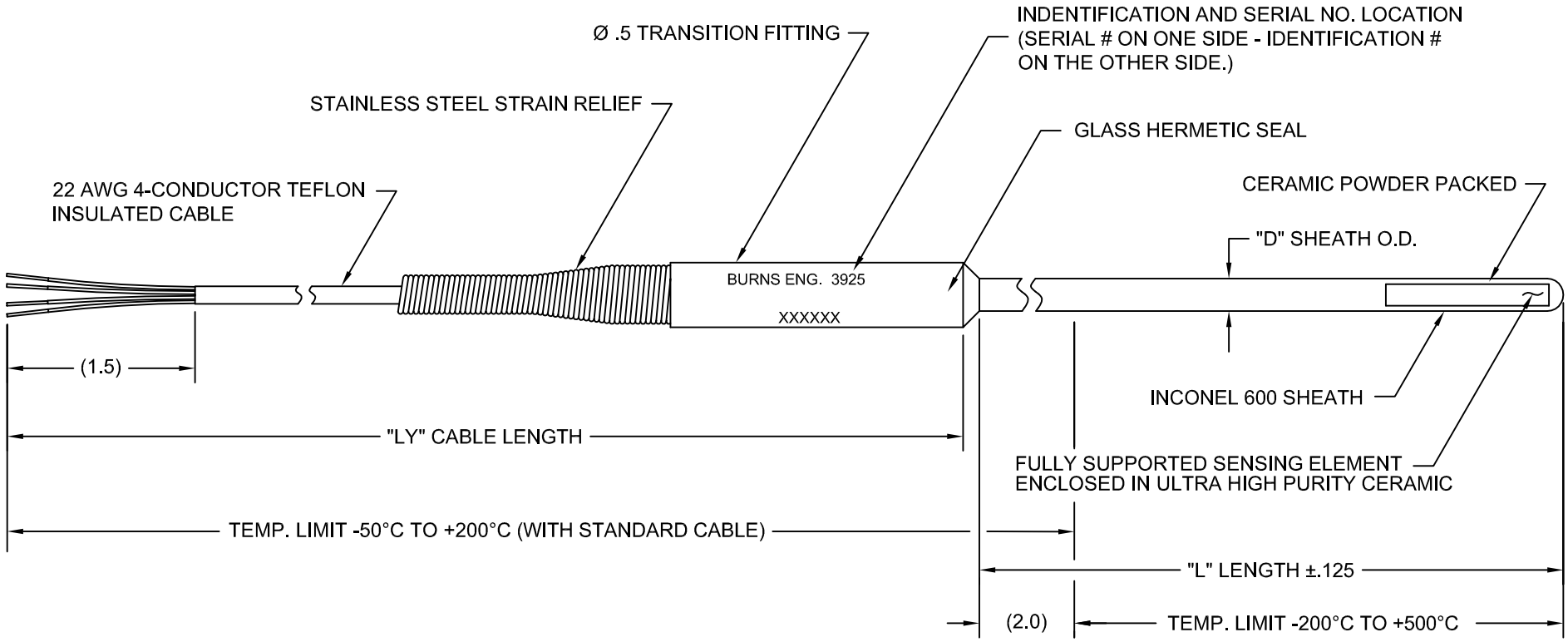
SYM	ECO NUMBER	DATE	APPD
A	ECO 5505	9-25-03	JPZ



NOMINAL: 25.5 OHMS AT 0°C
.0039250 Ω/Ω/°C TEMP. COEFFICENT



NOTES:

1. SEE SHEET #2 FOR ORDERING INFORMATION.

2. 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.

3. BURNS MODEL 19439 IS DESIGNED FOR LABORATORY USE WHERE WIDE TEMPERATURE RANGES (-200°C TO 500°C) ARE MONITORED.

-TOLERANCES-
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	TSH	9-25-03
CHKD	JPZ	9-25-03
APPD	JPZ	9-25-03

DIMENSIONS IN INCHES
REF: 19453

MOUNTING AND OUTLINE DRAWING,
BUNRS SECONDARY REFERENCE
TEMPERATURE STANDARD, 25.5 OHM

SHEET	SIZE	DRAWING NUMBER	REV
SHEET 1 OF 4	A	19439-	A

ORDERING INFORMATION:

19439	SECONDARY STANDARD, 25.5 OHMS						
	"D" SHEATH DIAMETER INCHES						
	-A -B	A = SHEATH DIAMETER OF 1/4" B = SHEATH DIAMETER OF 3/16"					
		"L" SHEATH LENGTH IN INCHES					
		-12 -L	12 = 12.0" SHEATH LENGTH (STANDARD LENGTH SPECIFY "L" LENGTH IN INCHES (6" MIN. / 24" MAX.)				
			"LY" CABLE LENGTH IN FEET				
			-6 -LY	6 = 6 FEET (STANDARD "LY" LENGTH) LY= SPECIFY "LY" IN FEET			
				CALIBRATION			
				-0 -1 -2 -3	0 = NO CALIBRATION 1 = TABLE FROM 0 TO 500°C IN 1°C INCREMENTS 2 = TABLE FROM -200 TO 500°C IN 1°C INCREMENTS 3 = TABLE FROM -200 TO 300°C IN 1°C INCREMENTS (FOR PROBES < 9" IN LENGTH)		
					TEMPERATURE SCALE		
					-A -B -C	-A = ITS-90 (CURRENT INTERNATIONAL STANDARD) -B = IPTS-68 -C = CALLENDAR-VAN DUSEN (IPTS-48)	
						OPTIONS (SEE SHEET #4)	
						/LT14 /LT13 /LT40 /LT60 /LC20T40 /LC20T40	/LT14 = GOLD PLATED 1/4" STUD SIZE SPADE LUGS /LT13 = GOLD PLATED SIZE #8 SPADE LUGS /LT40 = 5-PIN DIN PLUG /LT60 = BANANA PLUG /LC20 = SHIELDED CABLE /LC20T40 = 5-PIN DIN PLUG WITH SHIELDED CABLE
19439	-A	-12	-6	-2	-A		TYPICAL PART NUMBER

PERFORMANCE SPECIFICATIONS (NOMINAL)

ICE POINT RESISTANCE: 25.5 OHMS NONINAL AT 0°C

ALPHA VALUE: .0039200 TO .0039280 OHM/OHM/°C

INSULATION RESISTANCE: 1000 MEGOHMS @ 100 VDC @ 20°C
100 MEGOHMS @ 100 VDC @ 400°C

HYSTERESIS: .01°C MAX USING 0,400°C AS THE ENDPOINTS.

SELF HEATING: .02°C/mW IN WELL STIRRED BATH

THERMOELECTRIC VOLTAGE: WHEN TESTED IN AN ICE BATH, WITH IMMERSION DEPTH FROM 4 TO 10 INCHES, THERMOELECTRIC VOLTAGE SHALL NOT EXCEED 2μV.

TIME CONSTANT: 9 SECONDS TYPICAL FOR 63.2% RESPONSE TO STEP CHANGE IN IMMERSION TEMPERATURE IN WATER @ 3 FT/SECOND.

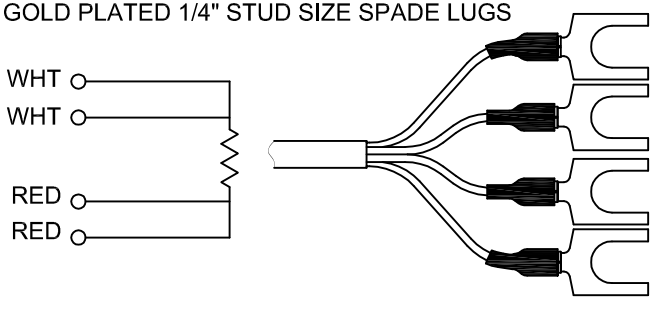
LONG TERM STABILITY : STABILITY AT 0°C AFTER EXPOSURE TO VARIOUS UPPER TEMPERATURE LIMITS. STABILITY ESTIMATES ASSUME PERIODIC USAGE AT THE MAXIMIM USE TEMPERATURE DURING THE COURSE OF ONE YEAR.

USE TEMPERATURE	NOMINAL DRIFT PER YEAR
200°C	.01°C
300°C	.02°C
400°C	.05°C
500°C	.10°C

PROBE ACCURACY: INCLUDES CALIBRATION UNCERTAINTY AND SHORT TERM REPEATABILITY - DOES NOT INCLUDE SENSOR DRIFT.

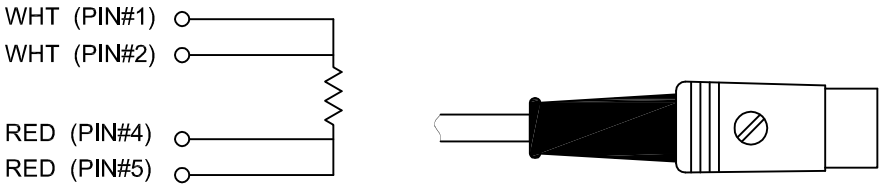
TEMP.	UNCERTAINTY
-196°C	±.010°C
0	±.007°C
200	±.024°C
420	±.033°C

OPTION LT14 = GOLD PLATED 1/4" STUD SIZE SPADE LUGS



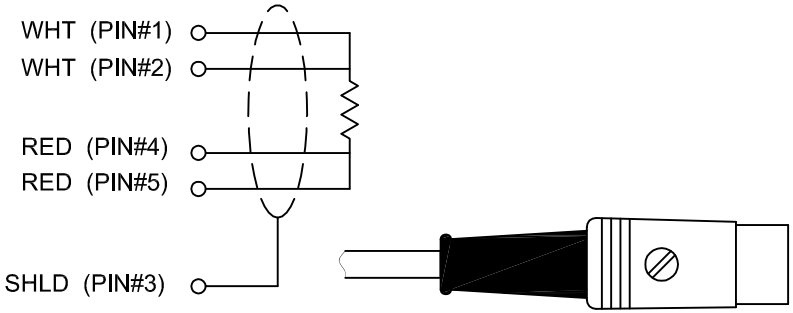
OPTION LT13 = GOLD PLATED SIZE #8 SPADE LUG.

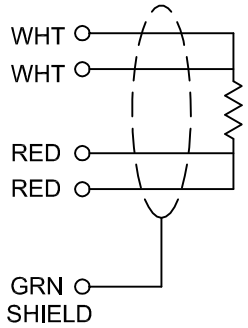
OPTION LT40 = 5-PIN DIN PLUG



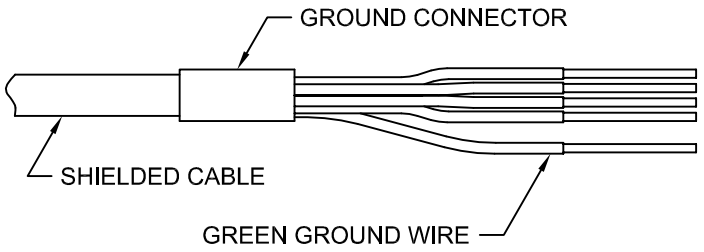
NOTE: LEAVE PIN #3 BLANK

OPTION LC20T40 = 5-PIN DIN PLUG W/SHEILDED CABLE

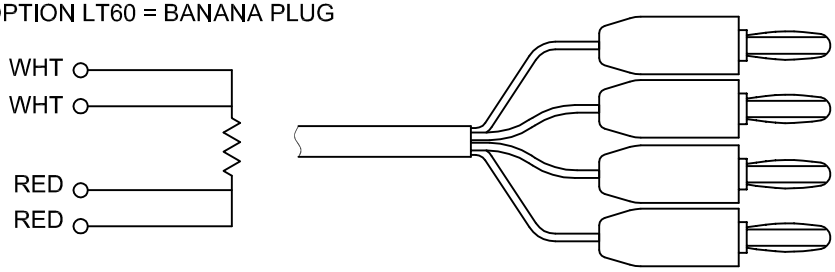




OPTION LC20 = W/SHIELDED CABLE



OPTION LT60 = BANANA PLUG



15880-* BANANA PLUG NOTE: 15880-1 WHITE PLUG TO WHITE LEADS AND 15880-2 RED PLUG TO RED LEADS

EXAMPLE PART NUMBERS:

SENSOR ONLY: 19439-A-12-6-1-A

SENSOR AND GOLD PLATED SPADE LUGS: 19439-A-12-6-1-A/LT14

SENSOR AND 5-PIN PLUG: 19439-A-12-6-1-A/LT40

SENSOR WITH A SHEATH BEND: 19439-A-12-6-1-A/SB90060

BURNS ENGINEERING INC. MINNEAPOLIS, MINNESOTA	SHEET 4 OF 4	SIZE A	DRAWING NUMBER 19439-	REV A