

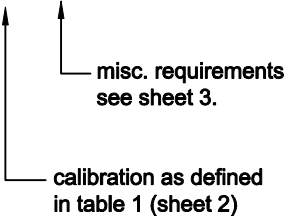
SYM	ECO NUMBER	DATE	APPD
A	ECO 4971	3-29-02	JPZ
B	ECO 5589	1-30-04	JPZ
C	ECO 5867	12-21-06	JPZ
D	ECO 5945	8-24-07	JPZ

Notes:

- This drawing lists the requirements for calibration of temperature measuring "systems" consisting of a platinum resistance thermometer (PRT) and a readout meter performed by Burns Engineering. The Burns Engineering calibration laboratory complies with the requirements of ANSI/NC SL Z540-1 Part 1, and ISO/IEC 17025 and is accredited by NVLAP (Lab Code 200706-0). The calibrations performed to this drawing are intended for high quality PRTs and digital readouts which are dedicated to each other as a system. In general the steps required to perform this calibration are as follows.
 - Visually examine the PRT and readout meter for any indication of damage or unusual conditions.
 - Measure the insulation resistance of the PRT per Burns Engineering Procedure SOP C265.
 - Take the system "as-found" calibration data at the temperature points listed in the table (not applicable if the PRT is new).
 - Anneal sensors (only if recommended by the PRT manufacturer)
 - Calibrate the PRT at the temperatures listed in the table and generate the appropriate coefficients. Examine the data for irregular behavior.
 - Input the coefficients into the readout meter. ITS-90 coefficients will be used where possible, CVD or IPTS-68 coefficients will only be used if the readout does not accept ITS-90 coefficients or if the customer has specified other coefficients on the purchase order.
 - Take the system "as-left" calibration data at the temperature points listed in the table.
- Calibration of the PRTs to be performed per Burns Engineering Procedure SOP C265 at the temperatures listed in the table by comparison to an SPRT whose calibration is traceable to NIST. All temperatures are on the ITS-90 Temperature Scale.
- Calibration of the readout meter is limited to inputting the PRT coefficients and checking the output only. No repair or other calibration service of the readout can be performed at Burns Engineering.
- A calibration report shall be provided to the customer for each system calibrated. The report shall contain the following minimum information.
 - As-found system data including the difference between readout and actual temperature at the calibration points (not applicable if the PRT is new).
 - The PRT calibration data including the appropriate coefficients.
 - As-left system data including the difference between readout and actual temperature at the calibration points.

5. Part Number Definition:

18616 - X X - ***




-TOLERANCES- UNLESS OTHERWISE SPECIFIED		 BURNS ENGINEERING			
ALL DIMENSION IN INCHES		SCALE		N.T.S.	
FRACTIONS = ±1/16 ONE PLACE .X = ±.050 TWO PLACE .XX = ±.010 THREE PLACE .XXX = ±.005		DFTM		AJO 4-1-02	
		CHKD		JPZ 3-29-02	
		APPD		JPZ 3-29-02	
ALL ANGLES ARE ± 0°30'		MOUNTING AND OUTLINE DRAWING CALIBRATION OF TEMPERATURE MEASURING SYSTEMS BY COMPARISON TO NIST TRACEABLE SPRT'S			
UNLESS OTHERWISE NOTED: ALL SURFACES 125 ✓ ALL FINISHES IN MICRO INCHES		DIMENSIONS IN INCHES		SHEET 1 OF 3	SIZE A
				DRAWING NUMBER 18616	REV D

TABLE 1

PART NUMBER	RANGE (°C)	CALIBRATION POINTS TAKEN (°C)								
		-196	-38	-20	0.01	50	100	200	300	420
18616-15	-196 TO 100	X	X		X	X	X			
18616-16	-196 TO 200	X	X		X		X	X		
18616-17	-196 TO 300	X	X		X			X	X	
18616-18	-196 TO 420	X	X		X			X		X
18616-25	-38 TO 100		X	X	X	X	X			
18616-26	-38 TO 200		X	X	X		X	X		
18616-27	-38 TO 300		X	X	X			X	X	
18616-28	-38 TO 420		X	X	X			X		X
18616-35	0 TO 100				X	X	X			
18616-36	0 TO 200				X		X	X		
18616-37	0 TO 300				X			X	X	
18616-38	0 TO 420				X			X		X
18616-91	NON-STANDARD SINGLE-POINT	<p align="center">SPECIAL INSTRUCTIONS MUST APPEAR ON THE JOB PAPERWORK.</p>								
18616-92	NON-STANDARD 2-POINT									
18616-93	NON-STANDARD 3-POINT									
18616-94	NON-STANDARD 4-POINT									
18616-95	NON-STANDARD 5-POINT									



ADDITIONS TO THIS PAGE NOT SUBJECT TO ECO CONTROL

TABLE 2

DASH NUMBER	ADDITIONAL REQUIREMENTS	DASH NUMBER	ADDITIONAL REQUIREMENTS
-001	SYSTEM AS-FOUND AND AS-LEFT AT 0, 68.3, AND 85°C, RTD CAL POINTS 0.01, 100, 200°C		
-002			
-003			
-004			
-005			