

The Perfect fit for Facilities Temperature Monitoring BioPharma and Pharmaceutical Manufacturing.

One of the most critical processes in Drug manufacture and storage and within Laboratory testing facilities is the temperature controlled storage of sterile products in industrial grade Incubators, Fridges and Freezers.

Risks of Contamination and insurance of product stability and integrity requires that products are incubated/stored with accurate control under FDA guidelines and monitoring for 21CFR Part 11 compliance.

After thermal mapping indicates the weakest point of temperature measurement, it is critical that an accurate, stable and responsive independent temperature sensor is installed for continuous monitoring back to a site Building Management System (BMS), QBAS or Independent Chart Recorder.

- A high accuracy full immersion RTD
- A 2-wire Temperature transmitter with HART connectivity and analog output
- Polished Stainless enclosure with IP67 rating.
- Laser Etched Tag numbers on front plate

Burns A02 ($3/16"$) A03 ($1/4"$) Sensors:

- Designed for Pharmaceutical industry as a freezer probe
- Small design profile with accuracy & repeatability to meet demands of the industry
- Precise at both extremely low and elevated temperatures

T55 Transmitter:

- Best in class stability
- HART compatible for ease of set-up and calibration
- Full input-output isolation
- FM, CE and CSA approvals.

Irish Power and Process Ltd have combined with Burns Engineering to provide a high accuracy wall mountable Independent Temperature Assembly, designed aesthetically for use in Cleanroom or Laboratory grade areas.



Features and Benefits:

- Application: Direct or indirect immersion in cryogenic and elevated temperature applications.
Easily “snaked” into guide tubes and difficult to reach measurement points.
- Accuracy: Precision, 0.05%
- Sheath: 316 stainless steel, 0.188" (A02) / 0.250" (A03) / diameter and 1.250" length
- Sensitive Length: 0.40"
- Element/Lead Wire Configuration: Single 3 or 4 wire
- Cable: 22 AWG for A02/A03 & 26AWG for dual A03 stranded PTFE insulated wires with PFA jacket
- Cleanability: 316 stainless steel sheath and PFA cable jacket

Specifications:

- Element Configuration: Single, 100 ohms at 0°C, 0.00385 ohm/ohm/°C nominal alpha
- Temperature Range: -196°C to 200°C
- Cable Limits: -196°C to 200°C continuous exposure
- R0 interchangeability: R0 ± 0.05 ohms
- Short-Term Repeatability and Hysteresis: ± 0.025°C (0.01 ohms) maximum change at 0°C over any 5 consecutive thermal cycles from -196°C to 200°C
- Repeatability: ± 0.05°C (0.02 ohms) maximum shift at 0°C after 10 cycles between -196°C and 200°C
- Insulation Resistance: 10 mega-ohms minimum at 100 VDC at room temperature

T55

- Operating temperature: -40°C to 85°C
- Supply voltage, DC
- Standard: 8.0 to 35 V
- CE, FM and CSA: 7.2 to 30 VDC
- Internal consumption: 25 mW to 0.8 W
- Voltage drop: 7.2 VDC
- Isolation voltage, test / operation: 1.5 kVAC / 50 VAC
- Communications interface: Programming Module and HART
- Signal / noise ratio: Min. 60 dB
- Response time (programmable): 1 to 60 s
- EEProm error check: < 10 s
- Signal dynamics, input: 22 bit
- Signal dynamics, output: 16 bit
- Calibration temperature: 20 to 28°C
- Accuracy: the greater of general and basic values given in Tables below
- Effect of supply voltage variation:* < 0.005% of span/ VDC
- Vibration: IEC 60068-2-6 Test FC
- Lloyd’s specification no. 1: 4 g / 2 to 100 Hz
- Max. wire size: 1 x 16 AWG stranded wire
- Humidity: < 95% RH (non-cond.)
- Dimensions: Ø 1.73 x 0.8 in
- Tightness (enclosure / terminal): IP68 / IP00
- Weight: 1.8 oz.

Accuracy General Values

Input Type	Absolute Accuracy	Temperature Coefficient
All	≤ ±0.05% of span*	≤ ±0.005%/°C

Accuracy Basic Values

Input Type	Basic Accuracy	Temperature Coefficient
RTD	≤ ±0.1°C	≤ ±0.005°C/°C
TC Type: E, J, K, L, N, T, U	≤ ±0.5°C	≤ ±0.025°C/°C
TC Type: B, R, S, W3, W5, LR	≤ ±1.0°C	≤ ±0.1°C/°C
EMC immunity influence..... < ±0.1% of span		
Extended EMC immunity: NAMUR NE 21, A criterion, burst..... < ±1% of span		

Input Range

Type	Min. Value	Max. Value	Min. Span	Standard
Pt100	-200°C	+850°C	10°C	IEC 60751
Ni100	-60°C	+250°C	10°C	DIN 43760
B	+400°C	+1820°C	100°C	IEC584
E	-100°C	+1000°C	50°C	IEC584
J	-100°C	+1200°C	50°C	IEC584
K	-180°C	+1372°C	50°C	IEC584
L	-100°C	+900°C	50°C	DIN43710
N	-180°C	+1300°C	50°C	IEC584
R	-50°C	+1760°C	100°C	IEC584
S	-50°C	+1760°C	100°C	IEC584
T	-200°C	+400°C	50°C	IEC584
U	-200°C	+600°C	50°C	DIN 43710
W3	0°C	+2300°C	100°C	ASTM E988-90
W5	0°C	+2300°C	100°C	ASTM E988-90

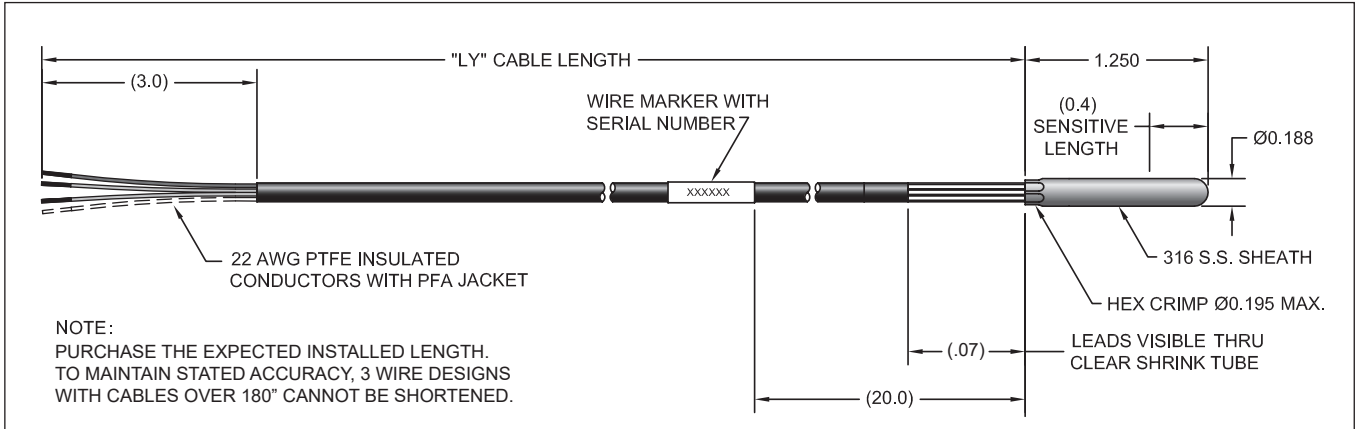
*Of span - Of the presently selected range

A02

3/16" Minature RTD

Ordering Information

PROBE



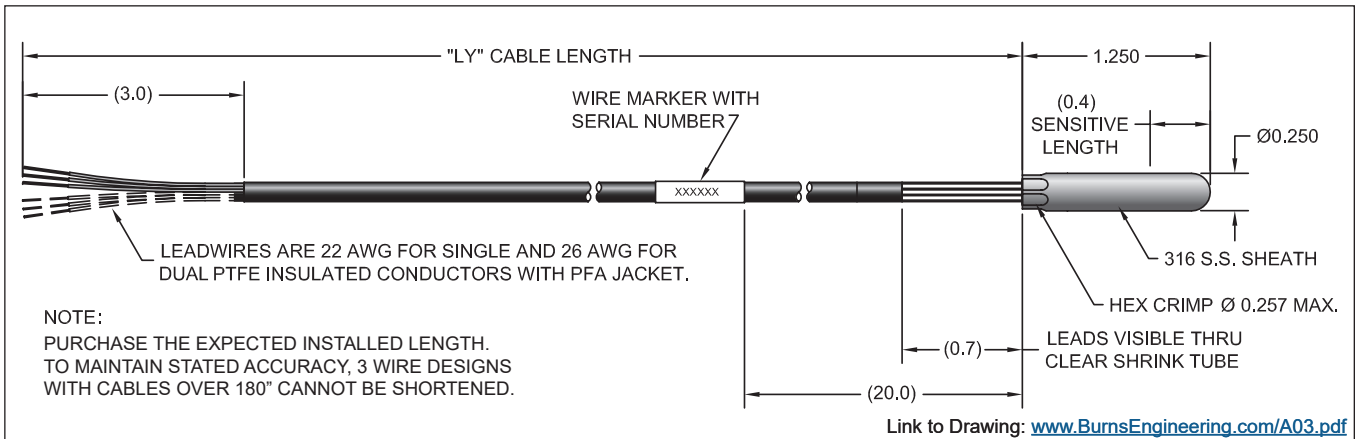
All dimensions in inches

A03

1/4" Minature RTD

Ordering Information

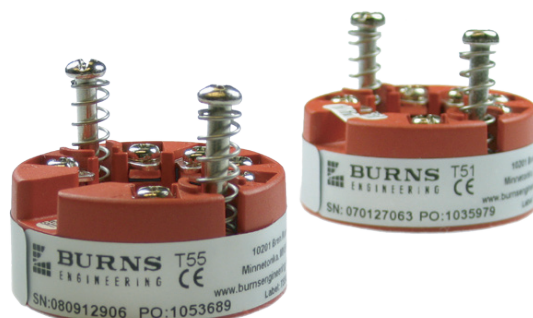
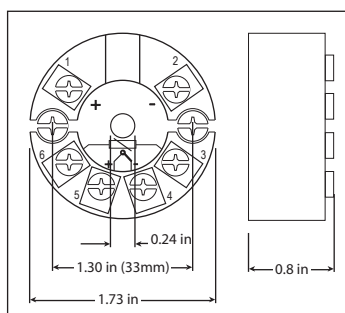
PROBE



Link to Drawing: www.BurnsEngineering.com/A03.pdf

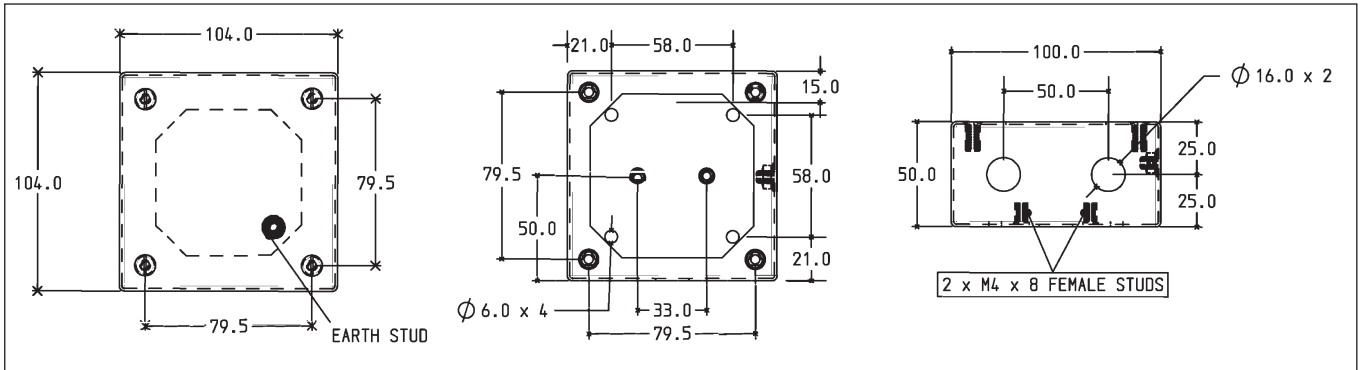
All dimensions in inches

TRANSMITTER

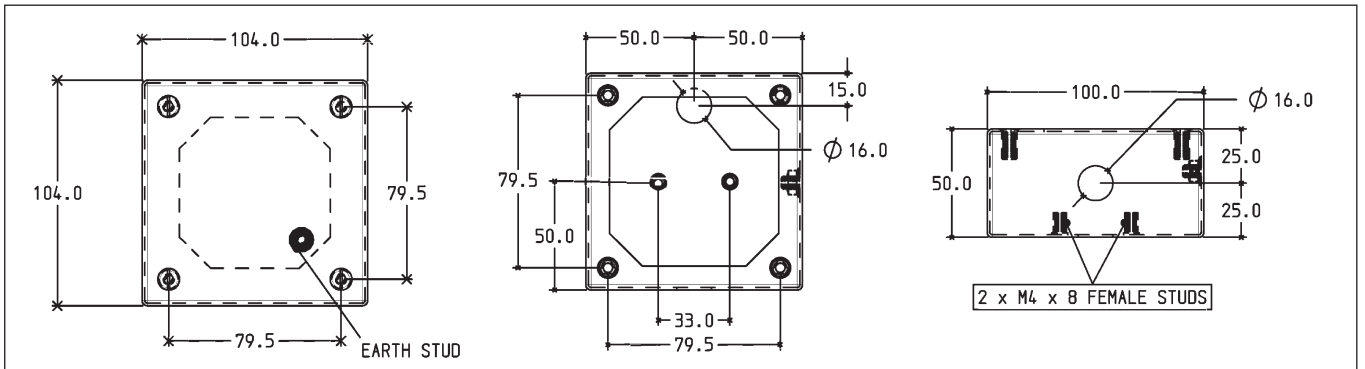


ENCLOSURES

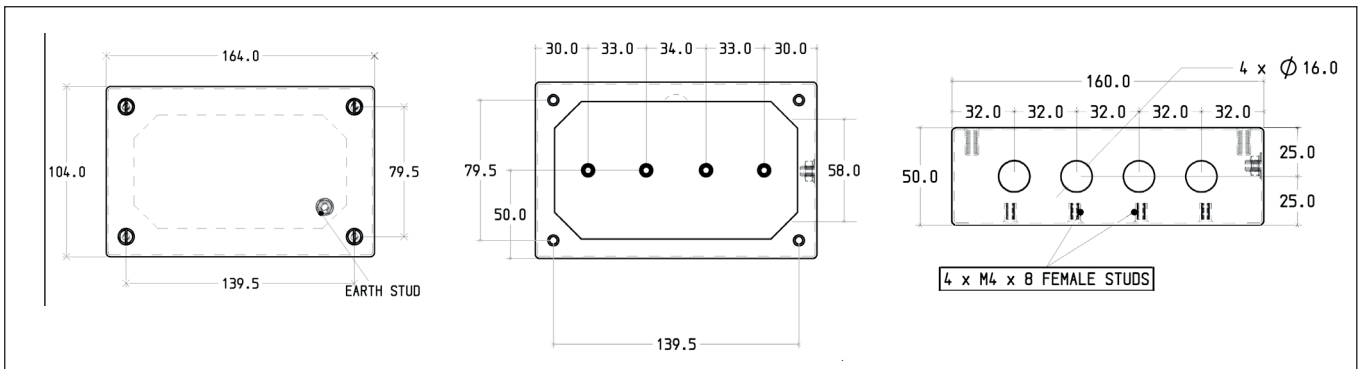
DR3067



DR2913



DR3589

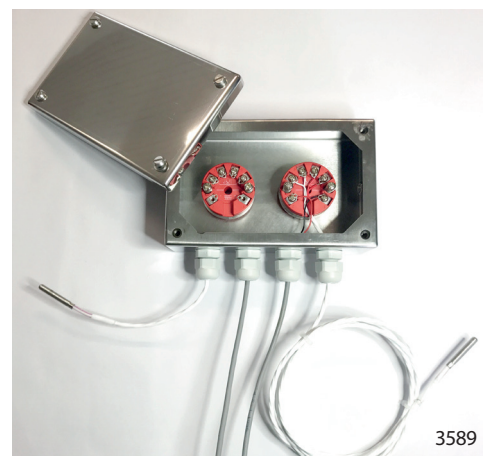
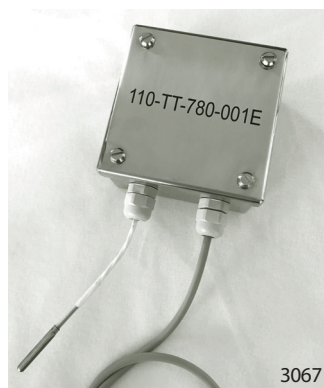
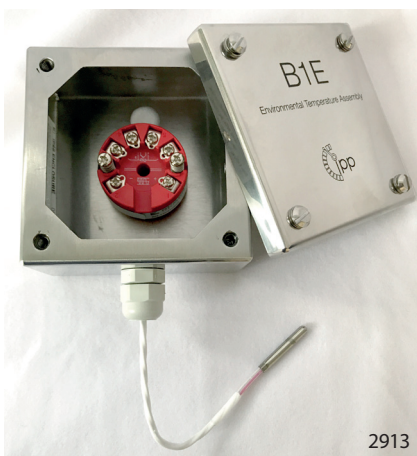


MOUNTING CLIPS



Model	Suffix Code	Option Code	Description
B1E			
Enclosure		3067	2 x Bottom Entry Glands
		2913	1 x Bottom Entry & 1 x Back Entry Glands
		3589	Duplex - 2 Transmitters 4 x Bottom Entry
Sensor	A02 (3/16")	-A	3-Wire
		-B	4-Wire
	A03 (1/4")	-A	3-Wire
		-B	4-Wire
		-C	3-Wire Dual
	Cable Length	-CL _____	Specify Length in Inches
	Certification	/CR10	Calibration Cert (1 point verification)
		/CR11	Certificate of Conformance
		/CR13	Tag Numbers on Cal Report
	Sensor Tag	/MT01	Paper Tag with Tag Number
/MT02		Stainless Steel Tag with Tag Number	
/MT32		2" diameter Stainless Tag with Tag Number	
Transmitter	/T55 - R		Min Range
			Max Range
	Units	C	Celsius
		F	Fahrenheit
	Laser Etching	/LE	Tag no laser etched to front plate
	Probe Mounting Clamps	/H2P	Cable fixing clamps

SAMPLE MODEL CODE: B1E-3067 / A02 -A -CL120 /CR10 /CR11 /MT01 /T55-R0 150C /LE



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