

# Hazardous Areas Adjustable Temperature Switch

# 6900TE\* - Probe

### DESCRIPTION

- Highly reliable devices utilizing the CCS Dual-Snap® Belleville disc spring principle pioneered by CCS' engineers.
- Engineering based on aerospace technology.
- Rigid, compact and internally adjustable for convenient field set point adjustment.
- Repeatable and stable set points.
- Vibration and shock resistant.
- High cycle life.
- High over-temperature capability. (System and Proof)
- Certified explosion proof hermetically sealed electrical assembly for environmental protection.
- Various options for electrical ratings to meet a wide range of application requirements.

SHIPPING WEIGHT: APPROXIMATELY 32 OUNCES (907 GRAMS)

#### SERIES:

6900TE\*

#### ADJUSTABLE SET POINT RANGE: TEMPERATURE: 0° to 405°F

-18° to 207°C

**OPERATING TEMPERATURE:** 

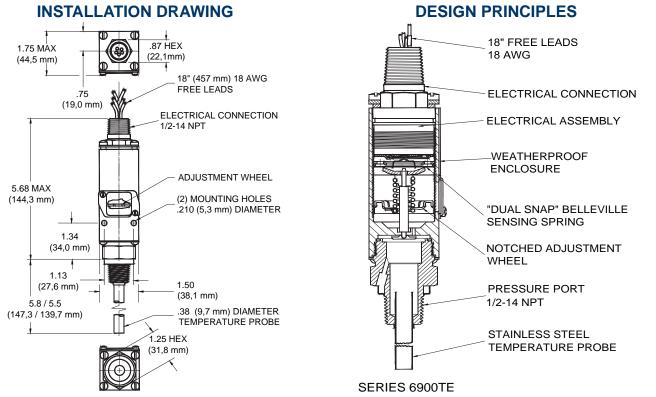
-40° to 186°F -40° to 86°C

### **STANDARD FEATURES:**

- CE Mark
- CCC

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- Dual Seal: ANSI/ISA-12.27.01
- NACE MR0175 / ISO 15156
- NEMA: 4, 7, 9,13 / IP66
- U.L. / CSA Listed
- Hermetically Sealed Electrical Assembly
  - 316 SST Electrical Assembly



FIELD SETTING: Loosen access cover. Adjust adjustment screw using screwdriver slot as illustrated, then attach to a variable pressure source with a suitable gage, and check that the circuit continuity operates at the pressures desired. Clockwise to increase settings. Counterclockwise to decrease setting.

NOTE: DO NOT USE ELECTRICAL HEX FOR TORQUING.



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#### **OPERATING AND ORDERING DATA**

WETTED	PARTS: 300 STAINLE	SS STEEL TEN	/IPERATURE P	ROBE
ADJUSTABLE SET POINT RANGE		APPROXIMATE DEAD BAND		MAXIMUM
INCREASING	DECREASING	AT BOTTOM	AT TOP OF	PROBE
TEMPERATURE	TEMPERATURE	OF RANGE	RANGE	TEMPERATURE
DEGREES F	DEGREES F	DEGREES F	DEGREES F	DEGREES F
(DEGREES C)	(DEGREES C)	(DEGREES C)	(DEGREES C)	(DEGREES C)
+20° to +120°	+0° to +113°	20°	5°	+200°
(-7° to +49°)	(-18° to +45°)	(11°)	(4°)	(+93°)
+80° to +205°	+60° to +198°	20°	5°	+300°
(+27° to +96°)	(+16° to +92°)	(11°)	(4°)	(+149°)
+185° to +315°	+165° to +308°	20°	5°	+400°
(+85° to +157°)	(+74° to +153°)	(11°)	(4°)	(+204°)
+280° to +405°	+260° to +398°	20°	5°	+500°
(+138° to +207°)	(+127° to +203°)	(11°)	(4°)	(+260°)
	ADJUSTABLE SI INCREASING TEMPERATURE DEGREES F (DEGREES C) +20° to +120° (-7° to +49°) +80° to +205° (+27° to +96°) +185° to +315° (+85° to +157°) +280° to +405°	ADJUSTABLE SET POINT RANGE   INCREASING TEMPERATURE DEGREES F (DEGREES C) DECREASING TEMPERATURE DEGREES F (DEGREES C)   +20° to +120° (-7° to +49°) +0° to +113° (-18° to +45°)   +80° to +205° (+27° to +96°) +60° to +198° (+16° to +92°)   +185° to +315° (+85° to +157°) +165° to +308° (+74° to +153°)   +280° to +405° +260° to +398°	ADJUSTABLE SET POINT RANGEAPPRO DEADINCREASING TEMPERATURE DEGREES F (DEGREES C)DECREASING TEMPERATURE DEGREES F (DEGREES C)AT BOTTOM OF RANGE DEGREES F (DEGREES C) $+20^{\circ}$ to $+120^{\circ}$ ( $-7^{\circ}$ to $+49^{\circ}$ ) $+0^{\circ}$ to $+113^{\circ}$ ( $-18^{\circ}$ to $+45^{\circ}$ ) $20^{\circ}$ ( $11^{\circ}$ ) $+80^{\circ}$ to $+205^{\circ}$ ( $+27^{\circ}$ to $+96^{\circ}$ ) $+60^{\circ}$ to $+198^{\circ}$ ( $+16^{\circ}$ to $+92^{\circ}$ ) $20^{\circ}$ ( $11^{\circ}$ ) $+185^{\circ}$ to $+315^{\circ}$ ( $+85^{\circ}$ to $+157^{\circ}$ ) $+165^{\circ}$ to $+308^{\circ}$ ( $+74^{\circ}$ to $+153^{\circ}$ ) $20^{\circ}$ ( $11^{\circ}$ ) $+280^{\circ}$ to $+405^{\circ}$ ( $+260^{\circ}$ to $+398^{\circ}$ ( $20^{\circ}$ $20^{\circ}$ ( $11^{\circ}$ )	ADJUSTABLE SET POINT RANGEDEAD BANDINCREASING TEMPERATURE DEGREES F (DEGREES C)DECREASING TEMPERATURE DEGREES F (DEGREES C)AT BOTTOM 

### **HOW TO ORDER**

Follow these steps to build your part number:

- Specify the series based on your required set point, range, dead band, system pressure and proof pressure.
- 2. Add desired options model code letter.
- 3. Add the applicable standard suffix number.

(Ex: 6900TEM16-7042)

### TEMPERATURE CONVERSION

32 Deg F = 0 Deg C

EXTERNAL PROBE PRESSURE:

System Pressure: 1250 PSIG (86 bar)

Proof Pressure: 1500 PSIG (103 bar)

#### OPTIONAL STANDARD MODIFIED SUFFIXES

- 7008: Gold Contacts
- 7042: Stainless Steel Body
- 7054: 2 Meter Free Leads
- 7076: 18 inch Teflon Free Leads (Low Temp Wire)

#### OPTIONS MODEL CODES

M: DPDT Electrical

Y: ATEX / GOST Certified Electrical Assembly (Consult CCS Sales Department for GOST options and requirements.)

Note: Additional modified standard suffixes are available, consult CCS sales department or CCS Representative.

**DUAL-SNAP®** 

## THERMOWELLS

Order as separate line items. See accessory page for detailed information. **113-34-2:** 1" NPT 316 SST 7.5" "U" Dim. **113-35-2:** 3/4" NPT 316 SST 7.5" "U" Dim.

### CERTIFICATIONS

Consult CCS website for complete certification and approval listing.

### **ELECTRICAL ENCLOSURE CERTIFICATIONS**

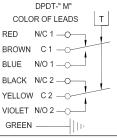
\* c-UL, U.L./CSA Explosion Proof: Div. 1, 2 hermetically sealed electrical assembly P/N 46-1058 (46-1061 for M model option), listed by both Underwriter's Laboratories, Inc. (File No. E32961) and Canadian Standard Association (CSA) Testing Laboratories (File No. LR22921) for hazardous locations, Class 1, Groups A, B, C, and D; Class 2 Groups E, F, and G.

\* ATEX certified for potentially explosive atmospheres electrical assembly series 46-XXXXXX, Models 6\*\*\*\*, Ex d IIC T6, Directive 94/9/EC Sira 08ATEX1046X. (Option Y) \* IECEx - SIRA certified, SIR 10,0193X (Option Y)

## ELECTRICAL CHARACTERISTICS SCHEMATIC AND WIRING CODE

RATING OF SWITCH ELEMENT				
	AMPERES			
VOLTS	SPDT	DPDT "M"		
	Res.	Res.		
125 AC - 50/60 Hz	11	11		
250 AC - 50/60 Hz	11	11		
30 DC	5	5		
125 DC	.5	.5		
*125 AC - 50/60 Hz	1 max	1 max		
*30 DC	1 max	1 max		
*Gold Contacts -7008 Suffix				

SPDT-STANDARD COLOR OF LEADS T RED N/C O BROWN C BLUE N/O GREEN ||||



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