

### **Hazardous Areas Adjustable Temperature Switch**

6900TUE\* - Capillary

6900TU Series Shown

#### **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:

6900TUF\*

#### **ADJUSTABLE SET POINT RANGE: TEMPERATURE:**

0° to 650°F -18° to 340°C

#### **OPERATING TEMPERATURE:**

-40° to 186°F -40° to 86°C

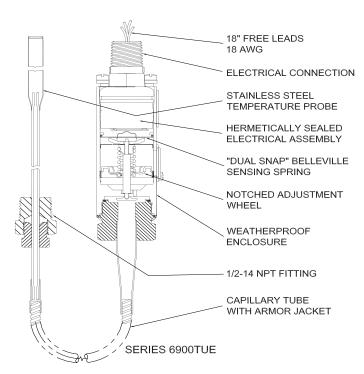
#### STANDARD FEATURES:

- **CE Mark**
- CCC
- 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

#### INSTALLATION DRAWING

#### 1.75 .87 HEX (44,5 mm) 18" (457 mm) 18 AWG FREE LEADS .75 (19,1 mm) **ELECTRICAL CONNECTION** 1/2-1/4 NPT ADJUSTMENT WHEEL 5.68 MAX (144,3 mm) (2) MOUNTING HOLES .210 (5,3 mm) DIAMETER .38 / .37 1.34 (34,0 mm) (9,7 / 9,6 mm) 4.5 MAX (114,3 mm) 1.13 (28,6 mm) 1/2 - 14 NPT (38,1 mm) 12.00 / 10.00 60±2 ADJUSTMENT (305 / 254 mm) (1524 ±50,8 mm) GLAND NUT CAP TUBE WITH 3/16 (4,8 mm) OD ARMOR JACKET BENDABLE TUBING

#### **DESIGN PRINCIPLES**



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.





CustomControlSensors

### Hazardous Areas Adjustable Temperature Switch

### 6900TUE\* - Capillary

#### OPERATING AND ORDERING DATA

	WETTED PARTS: 300 STAINLESS STEEL TEMPERATURE PROBE WITH 5' STAINLESS STEEL GRAPHITE AND LUBRICATED GLASS FIBER CAPILLARY TUBE					
SERIES 6900TUE*	ADJUSTABLE SET POINT RANGE		APPROXIMATE DEAD BAND		MAXIMUM	
	INCREASING TEMPERATURE DEGREES F (DEGREES C)	DECREASING TEMPERATURE DEGREES F (DEGREES C)	AT BOTTOM OF RANGE DEGREES F (DEGREES C)	AT TOP OF RANGE DEGREES F (DEGREES C)	PROBE TEMPERATURE DEGREES F (DEGREES C)	
6900TUE*12	+20° to +120°	+0° to +113°	20°	5°	+200°	
	(-7° to +49°)	(-18° to +45°)	(11°)	(4°)	(+93°)	
6900TUE*14	+80° to +205°	+60° to +198°	20°	5°	+300°	
	(+27° to +96°)	(+16° to +92°)	(11°)	(4°)	(+149°)	
6900TUE*16	+185° to +315°	+165° to +308°	20°	5°	+400°	
	(+85° to +157°)	(+74° to +153°)	(11°)	(4°)	(+204°)	
6900TUE*18	+280° to +405°	+260° to +398°	20°	5°	+500°	
	(+138° to +207°)	(+127° to +203°)	(11°)	(4°)	(+260°)	
6900TUE*20	+385° to +565°	+360° to +555°	25°	10°	+650°	
	(+196° to +296°)	(+182° to +291°	(14°)	(5°)	(+343°)	
6900TUE*22	+465° to +650°	+440° to +640°	25°	10°	+700°	
	(+241° to +343°)	(+227° to +338°)	(14°)	(5°)	(+371°)	

EXTERNAL PROBE PRESSURE:

System Pressure: 1250 PSIG (86 bar)

#### Bro

Proof Pressure: 1500 PSIG (103 bar)

#### **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: 6900TUEMY22-7001)

# TEMPERATURE CONVERSION

32 Deg F = 0 Deg C

# OPTIONAL STANDARD MODIFIED SUFFIXES

7001: 10' Capillary
7002: 15' Capillary
7003: 25' Capillary
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.

#### CERTIFICATIONS

Consult CCS website for complete certification and approval listing.

#### **THERMOWELLS**

Order as separate line items. See accessory page for detailed information.

**113-34-1:** 1" NPT 316 SST 4.5" "U" Dim. **113-34-2:** 1" NPT 316 SST 7.5" "U" Dim. **113-34-3:** 1" NPT 316 SST 10.5" "U" Dim. **113-34-4:** 1" NPT 316 SST 13.5" "U" Dim. **113-35-4:** 3/4" NPT 316 SST 10.5" "U" Dim. **113-35-4:** 3/4" NPT 316 SST 13.5" "U" Dim. **113-35-4:** 3/4" NPT 316 SST 13.5" "U" Dim.

#### **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-XXXXXXX, 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					

