

# Adjustable Temperature Switches

TSW Series



TSW-11 shown smaller than actual size.

- ✓ Compact and Economical
- ✓ Ideal for Economical Temperature Switching Applications
- ✓ External Temperature Scale Dial for Easy Setpoint Adjustments (°F Only)
- ✓ 1 A Gold Contacts for TTI and Dry Contact Closures
- ✓ 5 A Silver Contacts for Larger Electrical Loads
- ✓ Vibration Resistant

OMEGA's TSW Series adjustable temperature switch is perfect for applications that require an economical solution to temperature control. The stainless steel stem of the TSW Series switch is sealed and filled with a gas that expands as process temperature rises. A membrane within the switch body mechanically causes closure of a 5 A Form "C" relay.

The 9.7 mm (0.38") diameter of the probe is designed to mate with OMEGA's standard 385 Series thermowells for your most rugged applications. Please visit [omega.com](http://omega.com).

## Specifications

**Temperature Range:** -43 to 266°C (-45 to 510°F)

**Temperature Sensor:** Limit filled, saturated vapor sensor

**Ambient Temperature Limits for Switch Body:** -55 to 105°C (-67 to 221°F)

**Max System Temperature Capillary:** 425°C (797°F)

**Max System Pressure:** 68.9 bar @ 425°C (1000 psi @ 798°F)

### Electrical:

**1 A Rated Contacts:** 115 Vac/28 Vdc

**5 A Rated Contacts:** 250 Vac/28 Vdc

**Max Switch Cycle Rate:** Not to exceed 20 cycles per minute

**Wiring Code:** Black = common, white = normally open, red = normally closed

## Construction Materials

### Wetted Parts:

**Temperature Sensor:** 316 SS

### Non-Wetted Parts:

**Body:** 303 SS

**Lock Ring:** Zinc alloy, chromate finish

**Switch Housing:** Zinc alloy, chromate finish

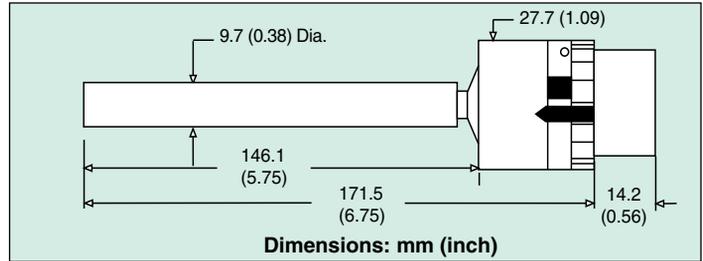
**Caps and Accessories:** Black valox and brass terminals

**Indicator:** 303 SS

**Indicator Ring:** Black nylon

**Wire Interface:** 3-wire pigtail, furnished 300 mm (12") long, 20 AWG insulated with PVC, 300V rating

**Weight:** 113 g (0.25 lb)



## To Order

Model No.	Temperature Range °C/°F	Rating (A)	Contact Repeatability °C/°F
TSW-11	-45 to -5 (-49 to 23)	1	±0.7 (1.3)
TSW-15	-45 to -5 (-49 to 23)	5	±0.7 (1.3)
TSW-21	-25 to 20 (-13 to 63)	1	±0.9 (1.6)
TSW-25	-25 to 20 (-13 to 63)	5	±0.9 (1.6)
TSW-31	-5 to 35 (23 to 95)	1	±0.8 (1.4)
TSW-35	-5 to 35 (23 to 95)	5	±0.8 (1.4)
TSW-41	25 to 70 (77 to 158)	1	±0.9 (1.6)
TSW-45	25 to 70 (77 to 158)	5	±0.9 (1.6)
TSW-51	55 to 105 (131 to 221)	1	±1.0 (1.8)
TSW-55	55 to 105 (131 to 221)	5	±1.0 (1.8)
TSW-61	80 to 125 (176 to 257)	1	±.9 (1.6)
TSW-65	80 to 125 (176 to 257)	5	±.9 (1.6)
TSW-71	115 to 175 (239 to 347)	1	±1.2 (2.2)
TSW-75	115 to 175 (239 to 347)	5	±1.3 (2.3)
TSW-81	175 to 230 (347 to 456)	1	±1.2 (2.1)
TSW-85	175 to 230 (347 to 456)	5	±1.2 (2.1)
TSW-91	200 to 265 (392 to 509)	1	±1.3 (2.4)
TSW-95	200 to 265 (392 to 509)	5	±1.3 (2.4)

## Accessories

Model No.	Description
3/4-385S-U21/2-304SS	Stainless steel thermowell
3/4-385S-U21/2-BRASS	Brass thermowell
SSLK-38-12	Stainless steel compression fitting
BRLK-38-12	Brass compression fitting

Comes complete with operator's manual.

Other thermowells available;

**Ordering Example:** TSW-41, adjustable temperature switch with a 25 to 70°C (77 to 158°F) range, 1 A contact rating and 3/4-385S-U21/2-304SS, stainless steel thermowell.