

# EGS Temperature Switch

**CURTISS -  
WRIGHT**

Nuclear Power Products and Services



## Product Description

The EGS Temperature Switch units are strut-and-tube type thermostiches comprised of two basic parts:

1. the outer shell made of a high expanding metal, and
2. the strut assembly made of low-expanding metal.

A pair of electrical contacts are mounted on the strut assembly and installed in the shell under tension or compression. Each end of the strut assembly is mechanically connected to the ends of the shell. A net change in force is produced on the low-expansion strut assembly as the high-expanding shell expands or contracts with changing temperature. The contact "make" or "break" temperature can be regulated by a temperature adjusting screw. This electromechanical switch comes with integral Quick Disconnect Connector (QDC) for easy installation/removal.

## Design Features

- Electrical ratings:
  - 10A at 120 VAC
  - 5A at 240 VAC
  - 2A at 120 VDC
- Adjustable temperature range from -100°F to 600°F (-73°C to 316°C)
- Available in normally open (N.O.) or normally closed (N.C.) configurations
- Switches close on temperature rise or open on temperature rise
- 20' field cable on socket side (standard)
- Electrical components hermetically sealed by disconnect assembly
- Mounting base available
- Direct replacement temperature switches for Models 17002-40 and 17023-6 (previously supplied by Fenwal, Inc.) and EGS models 01-170020-090 (N.C.) and 01-170230-090 (N.O.).
- Accuracy: Setpoint +/- 2%

## Qualification Levels

*(Per Report EGS-TR-23002-09)*

- Qualified Life: 40 years at 135°F (57°C)
- Seismic:
  - Horizontal 15.0g peak, 6.5g ZPA at 5.0% damping
  - Vertical 15.0g peak, 6.5g ZPA at 5.0% damping
- Radiation: 6.35E7 rads gamma
- Cycling: 2200 operational cycles under full-rated load
- Accident Peaks: 355°F (179°C)

*(See graph on back)*

## Qualification Standards

Successfully qualified by test in accordance with:

- ASME
- ANSI N45.2
- 10CFR50/Appendix B
- 10CFR21
- NQA-1
- IEEE 323-1974/1983/2003
- IEEE 344-1975/1987/2004

# EGS Temperature Switch

- Moisture resistant seal
- Extra lead length available
- Stainless steel construction
- Temperature adjustment screw

## Mounting Base (Optional)

Mount with #4 screws, flat washers, nuts, and lock washers. This optional mounting base uses the 1/2" NPT threads for mounting.

See installation instructions

EGS-TR-23002-14 for qualified mounting configurations.

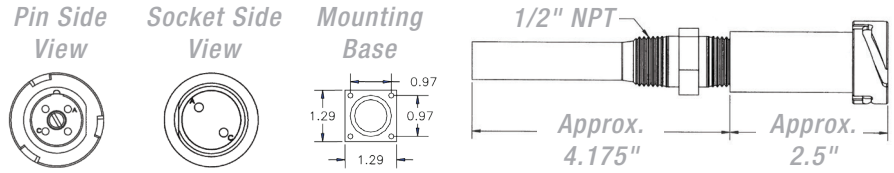
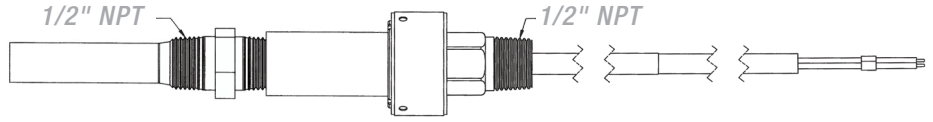
## How to Order

EGS Temperature Switches are provided in either a normally open (N.O.) or normally closed (N.C.) state. Normally open switch closes on rising temperature. Part numbers for ordering are shown in the table to the right.

Indicate desired setpoint temperature in degrees Fahrenheit on order.

QDC Socket Side Assembly Purchased Separately - Required to meet qualified configuration.

Standard length is 20', additional lengths available upon request.



## Temperature Switch Order Numbers

Contact State	N.O.	N.C.
EGS Part Number	23002-07	23002-08
Direct Replacement Fenwal Model	17023-6	17002-40
Obsolete EGS Model	01-170230-0	01-170020-0

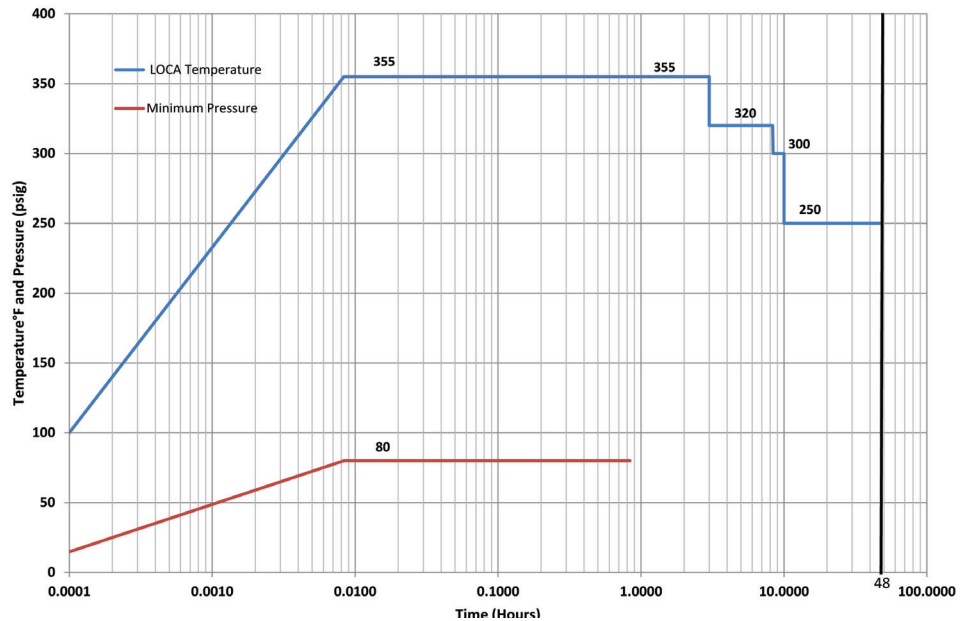
## 1/2" QDC Socket Side Assembly

Contact State	EGS Part Number
N.O.	23002-09
N.C.	23002-10

## Mounting Base Order Number

EGS Part Number	
Mounting Base	23002-06

LOCA Temp Profile for EGS Temp Switch  
(Pressures based on Superheated conditions for first 10 Hours then Saturated Conditions for remainder)



## CONTACT INFORMATION:

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