



# Thermatel TG1 Thermal Dispersion Switch

## DESCRIPTION

Thermatel TG1 is a two-wire, intrinsically safe switch for liquid or gas flow, level, or interface detection using the proven thermal dispersion technology.

The switch consists of a DIN rail mounted electronics unit and a remote sensor with separation of up to 1650 feet (500 meters)

Applications for the TG1 include low flow detection, high temperature operation, and high viscosity and coating applications

## FEATURES

### ELECTRONICS

- Two-wire intrinsically safe design with integral barrier
- LED indication provides continuous indication of flow rate relative to switch point
- 24 VDC input power
- Output:
  - 2 A SPDT alarm relay with goldflash contacts
  - mA output signal for diagnostic fault indication per NAMUR NE43
- High/Low fail safe selection
- Adjustable set point and time delay

## AGENCY APPROVALS

AGENCY	APPROVAL CLASSES
<b>CENELEC</b> 	EEX IA II B T5, Intrinsically Safe



## FEATURES

### SENSOR

- Standard twin tip sensor:
  - Corrosive resistant materials
  - Pressures to 3000 psig (205 bar)
- Standard spherical tip sensor:
  - General purpose service
  - Stainless steel only
- High temperature sensor:
  - Temperatures up to 850° F (450° C)
  - Pressures up to 6000 psi (413 bar)
- Low flow body with ¼" and ½" connections



These units have been tested to EN 50081-2 and EN 50082-2 and are in compliance with the EMC Directive 89/336/EEC.

# MODEL NUMBER

## ELECTRONICS AND SENSOR HOUSING



## SENSOR

### BASIC

TE	Length in inches
TM	Length in centimeters

### PROBE TYPE

A	Standard spherical tip	maximum 250° F (121° C) / maximum 600 psi (41 bar)
B	Standard spherical tip with heat extension	maximum 392° F (200° C) / maximum 600 psi (41 bar)
C	Standard twin tip	maximum 250° F (121° C) / maximum 3000 psi (205 bar)
D	Standard twin tip with heat extension	maximum 392° F (200° C) / maximum 3000 psi (205 bar)

### MATERIALS OF CONSTRUCTION

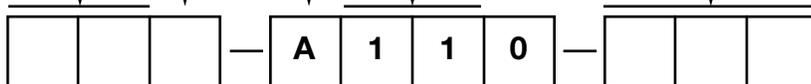
A	316/316L stainless steel
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### PROCESS CONNECTION SIZE

11	Threaded 3/8" NPT
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### INSERTION LENGTH (determined by second digit of model number)

Specify in 1" (1 cm) increments  
 Minimum 2 inches (5 cm), Maximum 130 inches (330 cm)  
 Example: 5 inches = 0 0 5  
 Example: 130 cm = 1 3 0



NOTE: Other materials of construction and flange connections are available.

High temperature sensor and low flow body sensor are available.

## CONNECTING CABLE

### CABLE

009 – 7146	Shielded twisted pair instrument cable
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### CABLE LENGTH

Specify per foot (0.3 meter) increments  
 Minimum 10 feet (3 meters), Maximum 999 feet (305 meters)  
 Example: 10 feet = 0 1 0



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