PROLINE PROTECTION SYSTEMS LTD **Leaders in LINEAR HEAT DETECTION**

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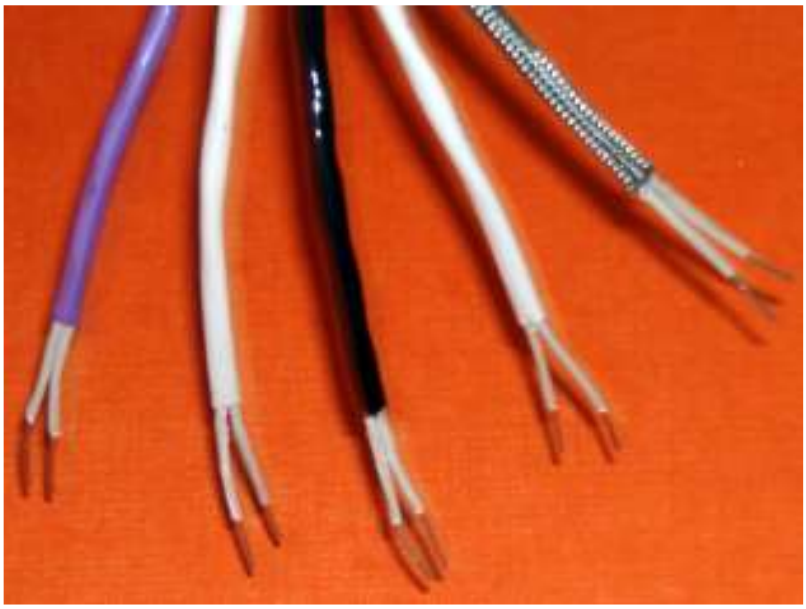
"TH" LINEAR HEAT SENSOR CABLES

TH68 TH88 TH105



FEATURES

- Alarm Temperatures:- 68C/155F 88C/190F 105C/221F
- Factory Mutual (F.M.) Approved AND Underwriters Laboratories (U.L.) Listed
- Line Detector coverage with better than point detector sensitivity
- Detection at ANY and ALL points along its length
- Alarm Temperature Ratings require no minimum length exposure
- Project design lengths NOT restricted by ambient temperatures
- No site calibration required
- Suitable for Installation within ANY environment
- Hazardous Area Installations
- Alarm Response Times – less than 8 seconds (UL1581 Clause 1090)
- Meets UL standards for Propagation and self extinguishing
- Minimum operating temperature MINUS 40C/40F
- Extrusions or Steel Braid options available for harsher environment applications
- Easily integrated with ANY Central Fire/BMS Control Panel
- Alarm POINT Location Feature – optional

DESCRIPTION

PROLINE "TH" Digital linear heat sensor cable range employs a 3.5mm (0.138in) external diameter single pair (two conductors) heat sensitive cable as the basis for its market leading overheat/fire detection system. The "digital" operating concept has been elected by the Company to provide the end user customer with much more information that just a simple alarm/fire or trouble/fault signal. For example: alarm point location, multiple pre-alarm outputs and ambient temperature monitoring and signaling.

Where required the "TH" sensor cable can be directly connected to any existing fire alarm/BMS control panel by address loop installed switch/zone monitors. Alternatively a Proline "ZI" interface unit can be integrated to provide the additional information output referred to above.

In its simplest form the thermal sensitive polymer extruded onto the sensor cable tin plated copper coated steel conductors softens allowing the two conductors to move into contact with each other to produce an alarm signal at a fixed temperature specified at time of order and supply. No minimum length exposure is required to achieve the specified alarm temperature. The two conductors are twisted together and tensioned during manufacture to ensure contact in an alarm condition.

In the event of mechanical damage to the sensor cable at below alarm levels – the spring like pressure between the conductors allows them to open circuit – generating a system fault/trouble signal. Outer extrusions of high temperature grade non propagating pvc based material, Rilsan "nylon" or Stainless Steel braid can be supplied to suit local risk environmental conditions. In accordance with UL recommendations a minimum 11C/20F temperature differential should exist between maximum "normal" ambient and minimum alarm temperatures. A maximum 10.6m/35ft spacing should not be exceeded when installing the sensor cable for general area risk applications.

ELECTRICAL AND MECHANICAL SPECIFICATION

External Diameter:	**3.5mm (0.138in)**
Dielectric Voltage Withstand:	**500Vdc - UL tested**
Conductors:	**Tinplated copper coated steel - 0.912mm (0.036in) diameter**
Electrical Rating:	**30VAC (42.2Vdc), 10A**
Monitoring current applied:	**3mA @ 1 Volt (Proline ZI interface units only)**
Conductor Resistance:	**88.1 ohms minimum/92.1 ohms maximum**
Capacitance:	**TH68: 150pF/m TH88: 97pF/m TH105: 88pF/m**
Inductance:	**TH68: 960nH/m TH88: 540nH/m TH105: 1060nH/m**
Impedance:	**TH68: ~80ohm TH88: ~75ohm TH105: ~110ohm**
Inner Extrusion:	**"Hybrid" temperature sensitive polymer – 0.294mm (0.011in) per conductor**
External Extrusion/Insulation:	**Colour Coded Class 43 PVC based polymer - Lead & Cadmium Free**
UTS - tensile strength:	**1700 minimum (N/mm2) tested to BS EN 60811-1**
Minimum sensor cable bend radius:	**Recommended - 100mm**
Gross Shipping Weight:	**per 1000m reel - 26.6kgs (59lbs)**
Single 1000m reel:	**480mms (18.9 inches) diameter**