



Proline

Digital Linear Heat Detection Cable

General Overview

Proline EN Digital Linear Heat Detection (LHD) cable uses fixed temperature detection technology to provide a straightforward method for sensing changes in temperature. The cable can offer alternative overheat protection in a vast range of applications and environments, from tunnels, cable trays, warehousing to sensing changes in temperature within escalators and other applications where many risks of fire are hidden from view.

Proline EN Digital LHD cable is a non-resettable line-type heat detector. The two twisted cores and held apart by an advanced temperature sensitive polymer. At a temperature, set by the manufacturing processes of the cable, the temperature sensitive polymer surrounding the two cores softens, allowing the cores to come into contact. This is an irreversible process and once the cable has activated, the section which has triggered must be cut out and replaced (not the whole cable).

Digital Sensor Control Unit (Z1-02 EN)

The Proline EN Digital LHD cable has been approved to EN54-28:2016 in conjunction with the Proline Digital Sensor Control Unit (Z1-02 EN). The Z1-02 EN monitors up-to two zones of Digital LHD cable and has separate fault and alarm outputs for each zone. It is straightforward to connect the Z1-02 EN to a conventional fire alarm panel or to an addressable system using an I/O, zone or switch monitor module. It also has a built-in display which shows the state of each zone, including the distance in metres and feet to the alarm point, if an alarm is triggered. Furthermore, an RS-485 Modbus RTU/ASCII output is available as standard for integration with a PLC or SCADA system.

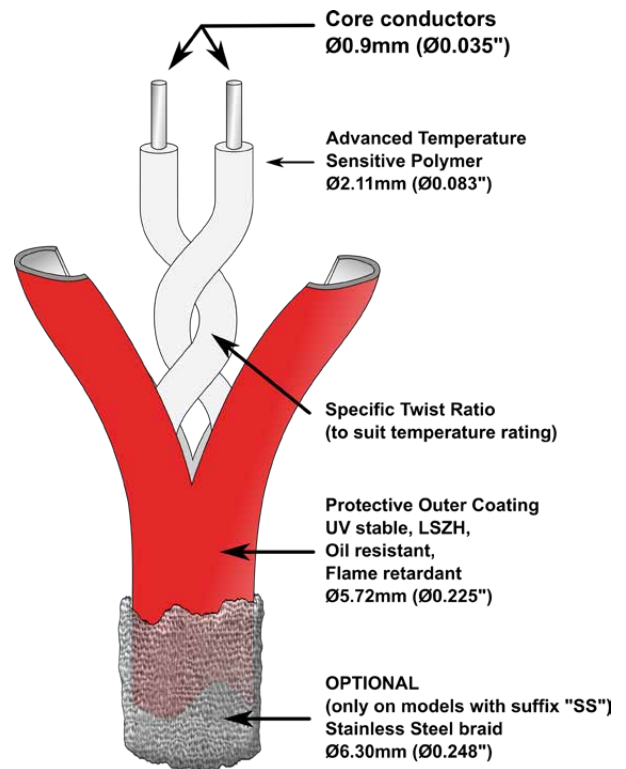


Figure 1. Proline EN Digital LHD Cable Construction

Product Features

- EN54-28:2016 approved
- CE Marked
- RoHS compliant
- Up-to 1,000m (3,280ft) per zone (when used with the Z1-02 EN)
- Fixed sensitivity and detection along the entire length of sensor cable
- Low smoke and halogen free. Flame retardant.
- UV stable and hydrocarbon resistant.
- Optional stainless steel over-braiding for increased mechanical protection

Technical Data

Product type:	Non-resettable line-type heat detector
Construction:	Overall insulated, twisted pair of stainless steel cores
Insulation:	1kV tested protective outer coatings
Additional insulation options:	Stainless Steel over-braiding
Approvals:	EN54-28:2016, CE Marked, RoHS Compliant
Maximum Zone Length:	1,000m (3,280ft) (when used with Z1-02 EN)
Wire Overall Diameter:	5.72mm (0.225in) LSZH Coating 6.30mm (0.248in) with Stainless Steel braid
Minimum bend radius:	100mm (4in) LSZH Coating 125mm (5in) with Stainless Steel braid
Electrical	
Max Voltage Rating:	49Vac, 74Vdc
Resistance:	approx 1.25ohms per metre per core

Technical Specifications

Detection Temperatures & Coatings

Product	Proline EN Digital LHD Cable - TH68EN	Proline EN Digital LHD Cable - TH68EN with Stainless Steel Braid	Proline EN Digital LHD Cable - TH78EN	Proline EN Digital LHD Cable - TH78EN with Stainless Steel Braid	Proline EN Digital LHD Cable - TH88EN	Proline EN Digital LHD Cable - TH88EN with Stainless Steel Braid
UL Model Designation	TH68EN	TH68ENSS	TH78EN	TH78ENSS	TH88EN	TH88ENSS
Description	Proline EN Digital LHD Cable – 68 deg C	Proline EN Digital LHD Cable – 68 deg C with Stainless Steel Braid	Proline EN Digital LHD Cable – 78 deg C	Proline EN Digital LHD Cable – 78 deg C with Stainless Steel Braid	Proline EN Digital LHD Cable – 88 deg C	Proline EN Digital LHD Cable – 88 deg C with Stainless Steel Braid
EN54-28 Performance Type	T068-V10-A045		T078-V10-A045		T088-V10-A065	
EN54-28 Environmental Group	II		III		III	
Nominal Activation Temperature	68 deg C		78 deg C		88 deg C	
Maximum Ambient Temperature	45 deg C		45 deg C		65 deg C	
Minimum Ambient Temperature	-40 deg C					
Humidity	0% to 98% RH					
Colour	Red	Silver braid over Red	Red	Silver braid over Red	White	Silver braid over White
Capacitance per m	<100pF					
Inductance per m	<3.2µH					
Resistance per m	Approx 2.5ohms					
Diameter	5.72mm +/- 0.12mm (0.225" +/- 0.005")	6.3mm +/- 0.12mm (0.248" +/- 0.005")	5.72mm +/- 0.12mm (0.225" +/- 0.005")	6.3mm +/- 0.12mm (0.248" +/- 0.005")	5.72mm +/- 0.12mm (0.225" +/- 0.005")	6.3mm +/- 0.12mm (0.248" +/- 0.005")
Minimum bend radius	100mm (4")	125mm (5")	100mm (4")	125mm (5")	100mm (4")	125mm (5")
Features	Low-Smoke Zero Halogen (LSZH), UV Stable, Oil resistant, Flame retardant	Low-Smoke Zero Halogen (LSZH), UV Stable, Oil resistant, Flame retardant, Increased mechanical strength, Abrasion resistant	Low-Smoke Zero Halogen (LSZH), UV Stable, Oil resistant, Flame retardant	Low-Smoke Zero Halogen (LSZH), UV Stable, Oil resistant, Flame retardant, Increased mechanical strength, Abrasion resistant	Low-Smoke Zero Halogen (LSZH), UV Stable, Oil resistant, Flame retardant	Low-Smoke Zero Halogen (LSZH), UV Stable, Oil resistant, Flame retardant, Increased mechanical strength, Abrasion resistant
Chemical Resistance	These ratings are given as a guide and for constant exposure to the chemicals shown at normal (10 to 30 deg C) temperatures. (* - not recommended, ***** - little or no impact)					
Ammonia, Liquid / Gas	*****					
Butane	**					
Copper Nitrate	*****					
Fuel Oils	***					
Gasoline	***					
Hydrofluoric Acid	*****					
Kerosene	*					
Diesel Fuel	***					
Acetic Acid	*****					

Technical drawings of Proline EN Digital Linear Heat Detection Cable are available upon request.