Kidde Fire Protection

Alarmline

ALARMLINE DIGITAL
Linear Heat Detection System

Kidde Alarmline Digital Linear Heat Sensor is a twin conductor cable with temperature-sensitive insulation protected by a special braid, PVC or fluoropolymer outer sheath to meet specific application requirements. This concept of point-of-risk detection can also be employed as cabling for electrical fire alarm systems - subject to British Standards or customer specification restrictions.

- Twin-conductor switching heat sensing cable
- Effective monitoring at precise point of risk
- Economical, reliable and durable detection
- Simple and easy to install
- Applied where other types of fire detection are unsuitable

Operation

Alarmline Digital cable operates by short-circuiting in a fire condition or where acceptable operating temperature levels are exceeded, to provide a quick, positive and reliable signal.

Alarmline Digital may be used as a stand-alone detection facility with a sensor open circuit FAULT or short circuit FIRE condition, monitored by an associated simple electrical device.

As an integral part of a fire protection system, Alarmline Digital cable may be used as a conventional detector and operate automatic extinguishing systems via an Extinguishing Control Panel (ECP). See KIDDE FIRE PROTECTION datasheet E9832-327.

As a cable and detector in one, installed close to potential sources of fire, Alarmline Digital cable provides economical detection for a wide range of risks which include:
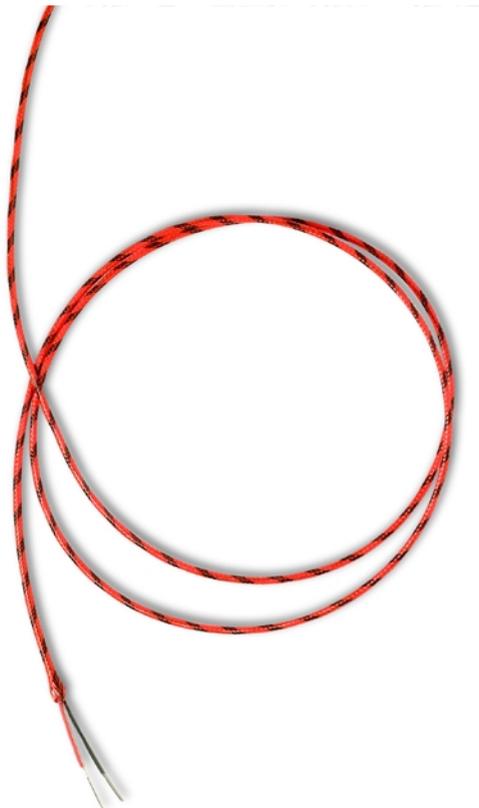
- Rack storage
- Vehicle engine bays
- Floating roof fuel storage tanks
- Turbines
- Boiler fronts
- Ships' holds
- Rail locomotives and rolling stock.

All these risks fall well within Alarmline Digital cable's continuous operating ambient limits of -65°C to +200°C.

Installation

Ease of handling and stripping of the cable permits quick installation and allows conventional or proprietary methods of support to be employed.

Nail type cable clips should not be used. Care must be taken to avoid mechanical impact, kinking, unacceptable heat sources or other factors which may affect the integrity of the cable.

For details of sensor supports consult Kidde Fire Protection data sheet E9832-409 "Alarmline Linear Detection - Sensor Supports".

WARNING: Alarmline Digital cables must never be connected to mains electrical supplies.

Control Units
Kidde Fire Protection manufactures a range of Firebeta II Conventional Control Units from 2 to 12 zones of detection, including a range of Extinguishing Control Panels (ECP). Data sheets are available on request, or from our website.
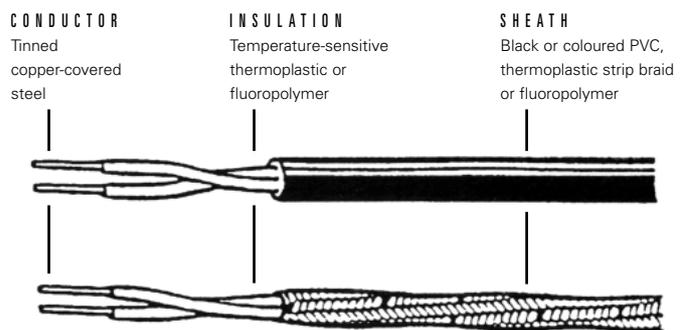
Approvals
1. National Power category "A" approval granted to 26794-2xx/H8045.

2. Factory Mutual USA approval granted to all Alarmline Digital Cable variants.

3. CEA European Approval – Testing on cable type 26794-1xx/H8040 confirms compliance with requirements of Class 3 point detectors when installed 25mm below a ceiling, perpendicular to the air flow (BS 5445 Part 5:1977 and EN54 Part 5 refers).

Ordering Data
Alarmline Digital cables are available in lengths of 50 metres, 100 metres, and then 100 metre increments up to 1000 metres. The last three digits of the cable reference denote the length, i.e. D5387-068-100 specifies a requirement for 1000m of H8040.

Alarmline Digital Cable Construction

CONDUCTOR	INSULATION	SHEATH
Tinned copper-covered steel	Temperature-sensitive thermoplastic or fluoropolymer	Black or coloured PVC, thermoplastic strip braid or fluoropolymer

Note: Refer to table on Page 3 for Part Number cross-reference.

Short lengths of cable may be joined by crimp connectors, using a crimping tool to achieve longer sensor runs.

Part No. 27426-601 - Crimp Connector

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Specification

All cables	Tinned copper-covered steel
	Conductor diameter 0.9mm
Maximum conductor resistance	
(per km at 20°C)	100 ohms
Voltage Rating	100V DC
Insulation Material	Temperature sensitive to 1.55mm thickness
Inner Cores	H8028, H8040, H8040N, H8045, H8045N: each two cores (red, black) twinned together: 3.0mm dia
	H8069: two cores (black, black and white) twinned together: 3.0mm dia
	H9650: two cores (white, black) twinned together: 3.0mm dia
Outer Sheath	H8028: PVC (black): 4.25mm dia
	H8069: PVC (red): 4.25mm dia
	H8040: Polythene braid (red with green ID tracer): 3.65mm dia
	H8040N: (black nylon) 3.0mm dia
	H8045: Polythene braid (red with black ID tracer): 3.65mm dia
	H8045N: (black nylon) 3.0mm dia
	H9650: Fluoropolymer (white) 3.5mm dia

Part Number	Ref.	Maximum Ambient (°C)	Minimum Alarm (°C)	Maximum Alarm (°C)	Appropriate Detection time (small flame)	Application
D5387-068	H8040	45	61	70	4 seconds	Internal only
B6794-100	H8040N	45	61	70	4 seconds	Internal/External
D5387-085	H8045	70	79	90	5 seconds	Internal only
B6794-101	H8045N	70	79	90	5 seconds	Internal/External
D5387-105	H8028	70	97	113	10 seconds	Internal/External
D5387-170	H8069	105	178	190	20 seconds	Internal/External
D5387-227	H9650	200	216	238	20 seconds	Internal/External