Digital Type Linear Heat Detection System

Compared with other kind of detectors, Digital Linear Heat Detector provides a very-early alarm detecting function to the protected environment, the detector can be known as an intelligent “switch” type detector. The polymers between the two conductors will break down at specific fixed temperature allowing the conductors contact, the shot circuit will intimate the alarm. The detector has a continuous sensitivity. The sensitivity of linear heat detector will not be influenced by the environment temperature changing and the length of detection cable using. It does not need to be adjusted and compensation. The detector can transfer both alarm and fault signals to control panels normally with 24VDC or without 24VDC.

Linear Heat Detection(abbr LHD) System Consists:

a. LHD Cable



b. Control Unit



c. End of Line Unit (EOL)Box



ASENWARE LTD
ADDRESS: 6 PROSPECT WAY, ROYAL OAK INDUSTRIAL ESTATE DAVENTRY,
NORTHAMPTONSHIRE, ENGLAND, NN118PL
WEBSITE: www.asenware.com EMAIL: info@asenware.com

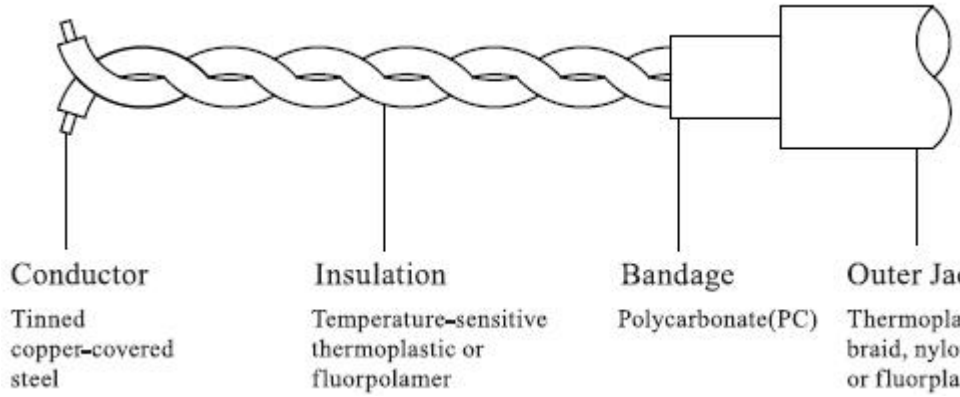
LHD Cable

1. Classification

Conventional Type	This Type of LHD cable is the most widely used with strong stability.
CR/OD Type	CR/OD Type not only has good UV resistance and good weather resistance, strongly recommended for outdoor using even under bad weather conditions, but also with high performance of acid resistant, alkali-resistant, salt spray resistant.
EP Type	Explosion Proof Type, two main application environments: harsh EMI environment and explosive hazardous environment. The outer jacket of this type is protected by woven metal mesh with good performance of anti-EMI and eliminating the surface static of the LHD cable. We can us this type LHD cable in explosive hazardous environment with safety fence. During the installation, please make grounding connection of the woven metal mesh. Used in harsh EMI environment, single end grounding connection or double ends grounding connection should be specified after analysis of the interference sources.

2. Structure

Inter twisting two rigid metallic conductors which are covered by NTC heat sensitive material, with insulative bandage and outer jacked, here comes the Digital Type LHD Cable of P.T.S, and the different model numbers depend on the variety of materials of outer jacket to meet different special environments.



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3. Features and benefits

- Industrial safety design
- Electrical interface with low power consumption design
- Real-time monitoring
- Working with 24VDC supply or without 24VDC supply
- Fast response time
- No alarm temperature compensation needed
- Compatible to any kind fire alarm system
- Alarm temperatures: 68℃,88℃,105℃,138℃,180℃

Model / Parameter					
	AW-D4068 (Conventional Type 68°C)	AW-D4088 (Conventional Type 88°C)	AW-D4105 (Conventional Type 105°C)	AW-D4138 (Conventional Type 138°C)	AW-D4180 (Conventional Type 180°C)
	AW-D4068-P (CR/OD Type 68°C)	AW-D4088-P (CR/OD Type 88°C)	AW-D4105-P (CR/OD Type 105°C)	AW-D4138-P (CR/OD Type 138°C)	AW-D4180-P (CR/OD Type 180°C)
	AW-D4068-E (EP Type 68°C)	AW-D4088-E (EP Type 88°C)	AW-D4105-E (EP Type 105°C)	AW-D4138-E (EP Type 138°C)	AW-D4180-E (EP Type 180°C)
Alarm Temperature	68°C	88°C	105°C	138°C	180°C
Ambient temperature（Max）	45°C	60°C	75°C	93°C	121°C
Ambient Temperature（Min）	-55°C for CR/OD Type	-55°C for CR/OD Type	-55°C for CR/OD Type	-55°C for CR/OD Type	-55°C for CR/OD Type
	-40°C for Conventional and EP Type	-40°C for Conventional and EP Type	-40°C for Conventional and EP Type	-40°C for Conventional and EP Type	-40°C for Conventional and EP Type
Storage Temperature	UP TO 45°C	UP TO 45°C	UP TO 70°C	UP TO 70°C	UP TO 105°C
Alarm Deviation	±3°C	±5°C	±5°C	±5°C	±8°C
Alarm Response Time（s）	10 (Max)	10 (Max)	15 (Max)	20 (Max)	20 (Max)

Control Unit & EOL Unit

AW-D401 Control Unit

Control Unit AW-D401 is used for digital type LHD cable. Digital type LHD cable with comparatively simple output signal, the control unit and EOL box are easy to install and operate.

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Technical parameters

- Operating Voltage: 24VDC
- Allowed Voltage Range: 16VDC-28VDC
- Operating Current : Standby Current: ≤20mA
  Alarm Current: ≤30mA
  Fault Current: ≤25mA
- Operating environment: Temperature:-45℃--+60℃
- Relative humidity: 95%
- IP Rating: IP66
- Dimensions: 90mm×85mm×52mm(H×W×Depth)



Cable connecting instruction

1) Connecting drawing of AW-D401 (Diagram 1)

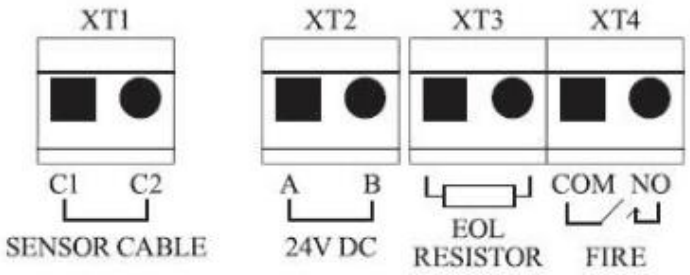


Diagram 1

- C1 C2: with sensor cable, non-polarized connection
- A,B: with DC24V power, non-polarized connection
- EOL RESISTOR: EOL RESISTOR (conforming to input module)
- COM NO: fire alarm output (resistance value in fire alarm<50Ω)

AW-D402 EOL Box

EOL Box for digital type LHD cable.



Technical parameters

- Operating Voltage: No Electronics
- Operating environment: Temperature:-45℃--+60℃
- Relative humidity: 95%
- IP Rating: IP66
- Dimensions: 90mm×85mm×52mm(H×W×Depth)

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Cable connecting instruction

2) Connecting Drawing of AW-D402 (Diagram 2)

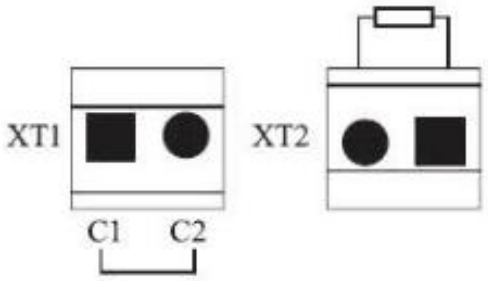
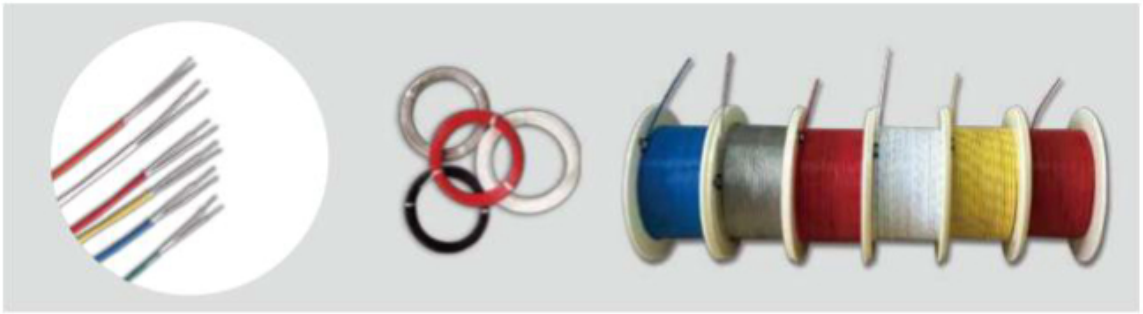
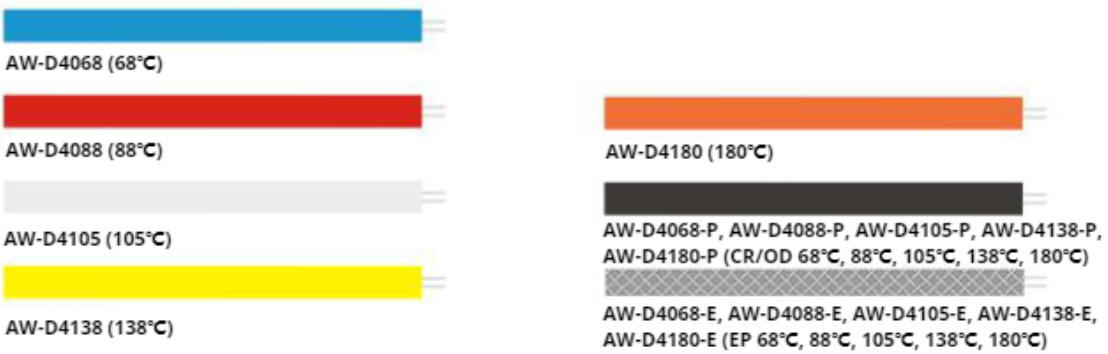


Diagram 2

- C1 C2: with sensor cable, non-polarized connection
- XT: connected with 4.7kΩ terminal resistance

4. Product Models





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