

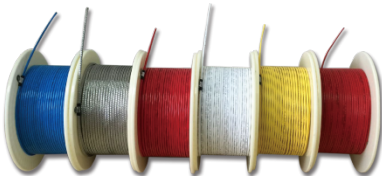
Wizmart has developed a full range of linear heat cables, adapter unit and termination unit that provide extensive and continuous coverage, are easy to install. Our products have been certified by globally recognized test houses to ensure that they meet the required safety and quality requirements in various industries.

The linear heat detector may be used in a wide variety of applications but is particularly suited where there are harsh environmental conditions, a physical or hazardous maintenance access constraint to protect the area, and/or a requirement to cost effectively install detection in close proximity to the risk(s).

Definition

Linear Heat Detector is composed of **linear heat cables**, **adapter unit** and **termination unit**. The digital linear heat cables are designed to trigger a response when a specific temperature is reached, it is a temperature sensitive material, which can detect the temperature change at any section or point along its entire installation length. Through the adapter unit, the electrical signal is converted into alarm signal to the fire alarm panel, so as to realize the function of fire detection and warning.

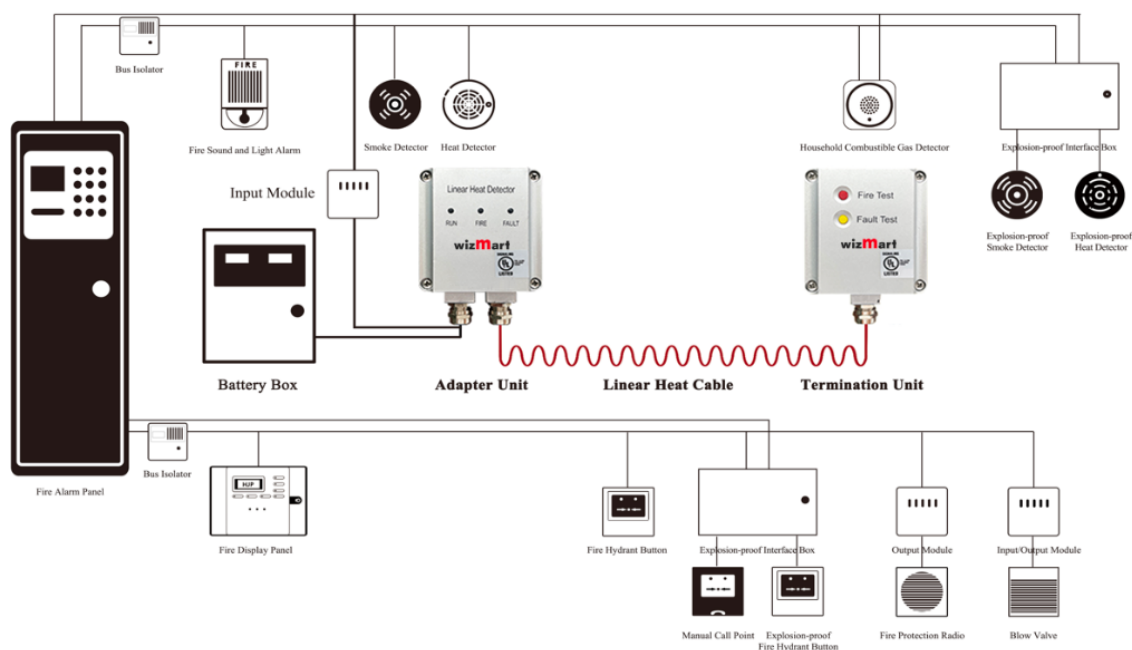
NB1000 Digital Linear Heat Detector (abbr. LHD)

A: Linear Heat Cable	B: Adapter Unit	C: Termination Unit
		

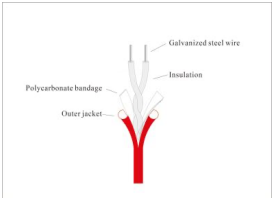
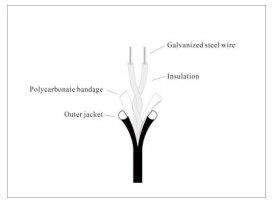
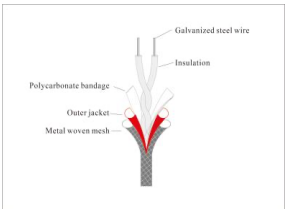
Working Principle

Compared with other kinds of detectors, NB1000 Digital Linear Heat Detector functions on a very-early detection and alarm for the protected context. The detector can be known as an intelligent “switch” type detector. When the temperature meets or exceeds the specific fixed temperature, the NTC heat sensitive material which covers the two conductors softens and fuses, the contact of conductors will cause a short circuit, this short circuit will trigger the alarm directly. 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 linear heat cable using. It does not need to be adjusted and temperature compensation. Through the adapter unit, the electrical signal is converted into alarm signal to the fire alarm panel, so as to realize the function of fire detection and warning with 24VDC

Automatic Fire Alarm Control System



Products Linear Heat Detector**◆Classifications**

Type	Structure	Application	Features and benefits
Conventional Type		This type of Linear Heat Cables is normally used in wide range of environmental conditions with strong stability.	• Industrial safety design • Detect heat at any point along its length • Electrical interface with low power consumption design • Real-time monitoring • Working with 24 VDC supply or without 24VDC supply • Fast response • No alarm temperature compensation required • Compatible to any kind fire alarm system • Multiple alarm temperature: 68°C, 88°C, 105°C, 138°C, 180°C
CR/OD Type		CR/OD Type has not only good UV resistance and weather resistance, but also with high performance of acid resistant, alkali-resistant, salt spray resistant, it has been strongly recommended for outdoor using even under bad weather conditions.	
EP Type		Explosion Proof Type is mainly applied in: 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 which can eliminate the surface static of the linear heat cables. It can be used in explosive hazardous environment with safety fence. During the installation, please make grounding connect of the woven metal mesh. When it is used in harsh EMI environment, single end grounding connection or double ends grounding connection should be specified after analysis of the interference sources.	

◆ Specifications

Item / Type	NB1000 68°C NB1000 CR/OD68°C NB1000 EP 68°C	NB1000 88°C NB1000 CR/OD88°C NB1000 EP 88°C	NB1000 105°C NB1000 CR/OD105°C NB1000 EP 105°C	NB1000 138°C NB1000 CR/OD138°C NB1000 EP 138°C	NB1000 180°C NB1000 CR/OD180°C NB1000 EP 180°C
Diameter of core conductor	0.92mm	0.92mm	0.92mm	0.92mm	0.92mm
Alarming temperature	68°C	88°C	105°C	138°C	180°C
Storage temperature	−20°C~50°C	−20°C~50°C	−20°C~50°C	−20°C~50°C	−20°C~50°C
Ambient temperature (Min)	−40°C (NB1000&EP) −55°C (CR/OD)	−40°C (NB1000&EP) −55°C (CR/OD)	−40°C (NB1000&EP) −55°C (CR/OD)	−40°C (NB1000&EP) −55°C (CR/OD)	−40°C (NB1000&EP) −55°C (CR/OD)
Ambient temperature (Max)	45°C	60°C	75°C	93°C	121°C
Acceptable deviation	±3°C	±5°C	±5°C	±5°C	±8°C
Responding time(s)	10 (Max)	10 (Max)	15 (Max)	20 (Max)	20 (Max)

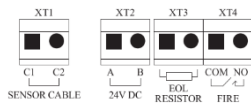
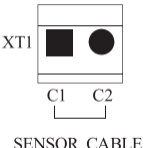
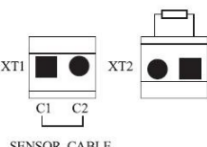
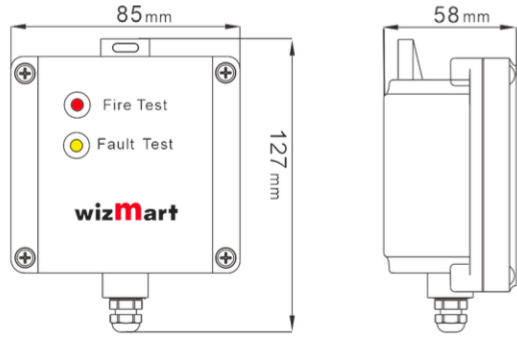
Adapter Unit & Termination Unit

Adapter Unit NB1000-I and **NB1000-P Termination Unit** are used for NB1000 Conventional Type and NB1000 CR/OD type.

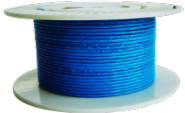
NB1000-P with ATEX approval is certified used for NB 1000 EP type.

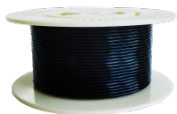
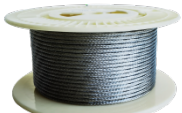
◆Specifications

Products	Adapter Unit	Termination Unit	Termination Unit (ATEX)
UL Approval			
FM Approval			
Operating voltage	24VDC	No Electricity	
Allowed voltage range	16VDC~28VDC		
Operating environment	Relative humidity: 95%		
	Temperature : −45°C~+60°C		
Ex classification	N/A		- II 2G Ex ib IIC T6 Gb - II 2D ex ib IIIC T85°C
IP Rating	IP66		
Materials of shell	Aluminum Alloys		
Operating current	Standby Current: ≤20mA Fire Current: ≤35mA Fault Current: ≤25mA		
Linear heat cables used with	Digital NB1000 conventional type, NB1000 CR/OD type and NB1000 EP type 68°C, 88°C, 105°C, 138°C, 180°C		Digital explosion proof type NB1000 EP type 68°C, 88°C, 105°C, 138°C, 180°C

Cable connection Instruction			
Dimensions			

Approvals

Name	Type	Products	Approvals
Linear Heat Detector	NB1000 68°C		FM, UL, EAC, CE
	NB1000 88°C		FM, UL, EAC, CE
	NB1000 105°C		FM, UL, EAC, CE
	NB1000 138°C		FM, UL, EAC, CE
	NB1000 180°C		FM, EAC, CE
	NB1000 CR/OD 68°C		UL, CE, EAC
	NB1000 CR/OD 88°C		UL, CE, EAC
	NB1000 CR/OD		UL, CE, EAC

	105°C		
	NB1000 CR/OD		UL, CE, EAC
	138°C		
	NB1000 CR/OD		CE, EAC
	180°C		
	NB1000 EP 68°C		UL, CE, EAC
	NB1000 EP 88°C		UL, CE, EAC
	NB1000 EP 105°C		UL, CE, EAC
	NB1000 EP 138°C		UL, CE, EAC
	NB1000 EP 180°C		CE, EAC
Adapter unit	NB1000-I		FM, UL, EAC, CE
Termination unit	NB1000-P		FM, UL, EAC, CE
	NB1000-P (Ex)		FM, ATEX, IECEx, CE, EAC

Applications

Application Industries	Application Places	
Electrical Power	Cable trough, cable trench, transformer, control cabinet, cooling tower, photovoltaic system, pipelines, etc	
Nuclear Power	Cable trough, cable trench, transformer, control cabinet, cooling tower, pipelines, etc	
Coal Mining	Coal conveying belt, power supply cable, etc	
Petrochemical	Floating roof tank, dome roof tank, spherical tank, cable tray, pipelines, reaction vessel, etc	

Offshore Platform	Cable tray, transformer, electrical equipment, etc	
Iron & Steel	Cable tray, cable trench, transformer, conveyor, electrical equipment, etc	
Highway Tunnel	Cable tunnel, tunnel ceiling, electrical equipment, etc	
Tunnel Traffic	Cable tray, transformer and power distribution apparatus, metro, etc	
Utility Tunnel	Cable tray, electrical equipment, etc	
Warehouse Logistics	Passenger channel, warehouse, baggage carousel, hangar, etc	
General Industry	Cable tray, conveyor, transformer, power distribution apparatus, electrical equipment, etc	