LHS™

Intrinsic Safety Barriers for Intelligent LHS™ Systems

Kidde Fire Systems

Effective: September 2017
K-73-09 Rev AC

FEATURES

- ***Compatible with Kidde Fire Systems Addressable Contact Input Devices (AI)***
- ***Permits LHS installation in Classified Hazardous Areas***
- ***1-Channel Operation***
- ***Shunt-Diode Type***
- ***Limits Energy***
- ***Slim Packaging***
- ***UL Listed***
- ***FM Approved***

DESCRIPTION

Linear Heat Sensor (LHS™) applications, in classified hazardous areas with potentially explosive vapors, dust or fibers, require the use of Intrinsic Safety Barriers so as to limit the total energy entering the hazard via the sensor wiring conductors.

Kidde P/N 73-117068-302 shunt-diode Safety Barriers are 1-channel devices that use intrinsically safe techniques to allow electrical signals to be conveyed between non-hazardous (safe) and hazardous areas. The Safety Barriers achieve this by limiting the transfer of energy in one direction to a level that cannot cause ignition of explosive atmospheres.

WIRING

As shown in Figure 1, the Intrinsic Safety Barrier (P/N 73-117068-302) is used in Intelligent LHS applications where SmartOne® Addressable Contact Input Devices (AI) interface one circuit of the LHS cable to the ARIES™ or ARIES NET*Link*™ Control Panel. Each Intrinsic Safety Barrier handles two conductors and hence only one Safety Barrier is required for each LHS circuit.

INSTALLATION

Intrinsic Safety Barriers — with dimensions as shown in Figure 2 — must be enclosed in a separate weather-tight enclosure. Kidde offers multi-barrier enclosures suitable for 5 or 13 barriers (see Ordering Information for part numbers).

To determine if the need for an intrinsically safe circuit exists on a specific application, consult the National Electric Code and the local Authority Having Jurisdiction (AHJ).

REFERENCE DOCUMENTATION

- SSK-105: Kidde LHS™ Linear Heat Sensor Cable Sell Sheet
- K-73-06: Kidde LHS™ Linear Heat Sensor Data Sheet
- K-73-100: Kidde Intelligent Linear Heat Detection Systems Fire Alarm Zone Identification and Output Control Application Guide
- K-73-200: Kidde LHS™ Series Linear Heat Sensor Application and Installation Notes

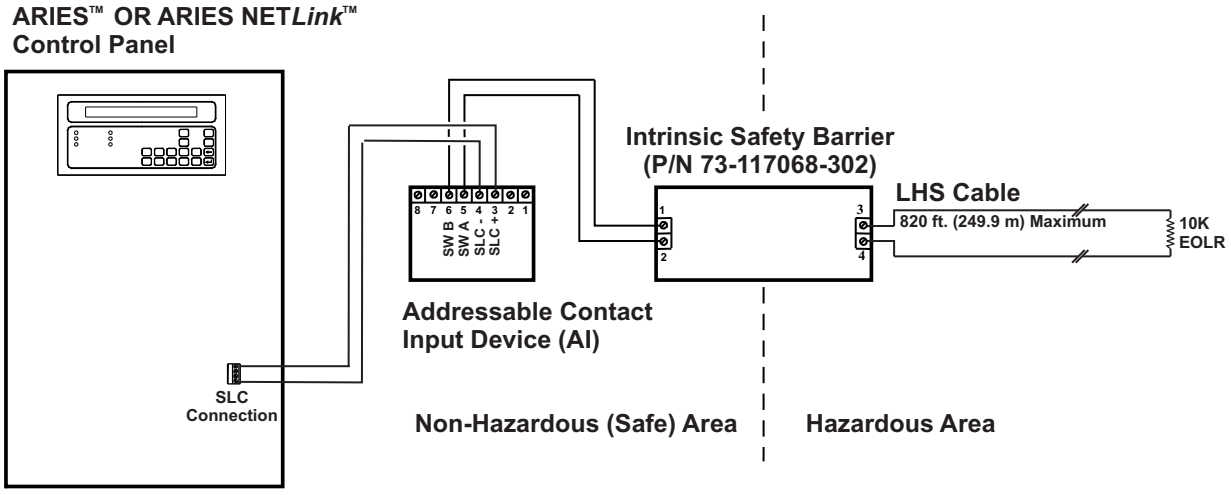

Figure 1. Typical Schematic Wiring Diagram

DIMENSIONS

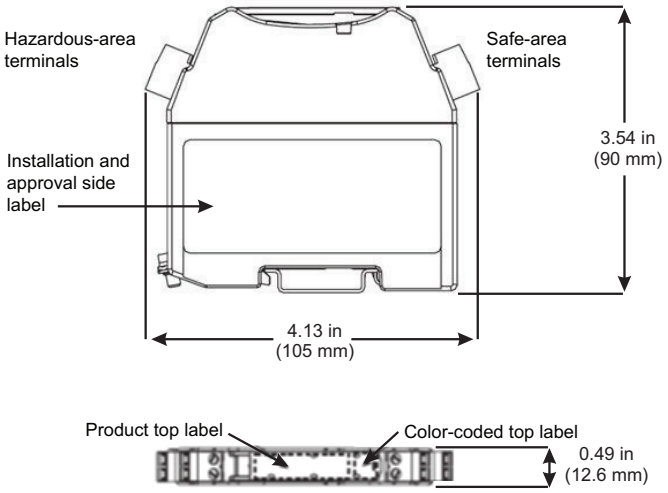

Figure 2. Intrinsic Safety Barrier Dimensions

SPECIFICATIONS

FM Approvals	Class I, Division 1, Groups A, B, C, D Class II, Division 1, Groups E, F G Class III, Division 1
Operating Temperature Range	-4°F to 140°F (-20°C to 60°C)
Humidity	5 to 95% RH
Terminals	Accept up to #12 AWG; Hazardous Area terminals identified by blue tabs
Working Voltage	10 V
Maximum Voltage	10.6 V
Fuse Rating	50 mA
End-to-End Resistance	174 ohms maximum
Weight	Approximately 0.310 lb. (0.140 kg)
Mounting and Grounding	By clamping to DIN-rail, ground connection is made through DIN-rail or by screw terminal

ORDERING INFORMATION

Part Number	Description
73-117068-302	Intrinsic Safety Barrier for Intelligent LHS (need one per circuit).
73-117068-132	Intrinsic Safety Barrier Weather-tight Enclosure. Holds up to 5 barriers.
73-117068-133	Intrinsic Safety Barrier Weather-tight Enclosure. Holds up to 12 barriers.

EXPORT INFORMATION (USA)
Jurisdiction: EAR
Classification: EAR99
This document contains technical data subject to the EAR.

K-73-09 Rev AC

Kidde Fire Systems
400 Main Street
Ashland, MA 01721 USA
Ph: 508.881.2000
Fax: 508.881.8920
www.kiddefiresystems.com