

LOREX LR-2100-R12 / LR-2100-R24

Optical Smoke Detector with Relay Output

12V / 24VDC



Product Overview

The LOREX LR-2100 series is a 4-wire photoelectric (optical) smoke detector with integrated sounder and alarm relay output, designed for reliable early fire detection in residential, commercial and light industrial environments. The detector uses an advanced optical smoke sensing chamber to detect both fast flaming fires and slow smoldering smoke, providing stable and dependable performance. The LR-2100-R12 (12V DC) and LR-2100-R24 (24V DC) models include a built-in audible alarm and configurable relay output (NO/NC), enabling direct integration with external devices such as alarm panels, warning beacons or shutdown systems.

The LOREX LR-2100 optical smoke detector series is designed to deliver dependable early warning against fire hazards in a wide range of indoor environments. Utilizing a photoelectric sensing principle, the detector effectively identifies smoke generated by both fast-flaming and slow-smoldering fires, helping to ensure early detection and timely response. The device features a 4-wire operating structure, making it suitable for conventional fire detection installations as well as systems requiring additional alarm control logic.

Both versions of the detector include a built-in sounder that provides a local audible warning and a relay output that can be configured as normally open (NO) or normally closed (NC) via jumper selection. This relay output allows easy connection to external systems such as fire alarm control panels, warning lights, sirens or building automation shutdown systems. With clear LED status indication, reliable detection performance and simple ceiling mounting installation, the LR-2100 series provides a practical and cost-effective solution for reliable smoke detection and alarm signaling.

Photoelectric Smoke Detection

The detector uses an advanced optical sensing chamber designed to detect smoke particles produced by both fast-flaming and slow smoldering fires, ensuring reliable early fire warning.

Built-in Alarm Sounder

An integrated 85 dB sounder provides immediate local audible warning, enabling quick awareness and response even without a central alarm panel.

Configurable Relay Output

A built-in alarm relay with NO/NC jumper selection allows the detector to control external devices such as fire alarm panels, warning beacons, ventilation shutdown systems or sirens.

Flexible Power Options

Available in 12V DC (LR-2100-R12) and 24V DC (LR-2100-R24) versions, making it compatible with a wide range of fire alarm and safety system installations.

Clear LED Status Indication

High-visibility LED indicators provide clear information about the detector's operational status and alarm condition, enabling quick visual verification.

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Parameter	Specification
Model Code	LOREX LR-2100-R12 / LR-2100-R24
Detection Principle	Photoelectric (Optical) Smoke Detection
Supply Voltage	12V DC / 24V DC
Alarm Current	20 mA @12V DC / 10 mA @24V DC
Wiring Type	4-Wire
Relay Output	NO / NC Selectable (Jumper)
Relay Contact Rating	1A @ 24V
Internal Sounder	Yes
Sounder Level	85 dB @ 3 m
LED Indicator	Yes
Mounting Type	Ceiling Mount (Base Included)
Case Material	ABS Plastic
Colour	White
Operating Temperature	0°C ~ 40°C
Humidity	10% ~ 90% RH
Dimensions	130 mm × 37 mm
Application	Indoor Smoke Detection

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