

MX TECHNOLOGY®

VLC-800 MX LaserCOMPACT Aspirating Smoke Detector

LPC & SSL Listed

Features

Model VLC-800MX LaserCOMPACT addressable, aspirating smoke sensor provides:

- VESDA® LaserCOMPACT operation communicating with the established MX4428 Fire Alarm Panel for area coverage up to 800 m²**
- Compact 225 mm square size
- Dual stage dust filter that is used on larger systems
- Detector programmed sensitivity from 0.05%/m to 12%/m
- Local computer port access for the VESDA VConfig Pro software program as used on larger systems
- Five LEDs indicate status information
- On-board relay
- Power supply monitoring input
- Capability of driving a remote LED (ordered separately)

Fault conditions are also communicated:

- Mechanical & electrical problems are received as fault conditions
- Indication of field serviceable faults
- Additional details are obtained from VConfig Pro

Compatible with Tyco MX4428 Fire Alarm Panels:

- Communications are via the MX loop
- Connection is to the same loop with other devices such as addressable manual call points, addressable control modules, etc.
- Communications are as a single device and connection is direct to the loop without requiring a dedicated interface

Two threshold levels are programmable from the detector:

- Pre-Alarm at 70% of smoke alarm threshold
- Alarm at 100% of smoke alarm threshold

Sampling pipe network:

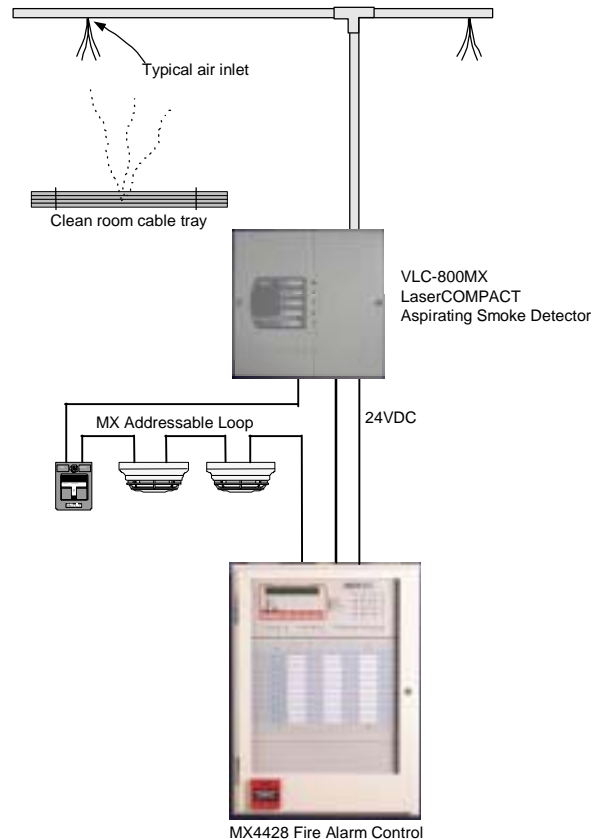
- Uses standard Vision Systems pipe and inlet in accordance with Vision Systems Aspire™ design tool

LPC listed to GEI 1-048 *

SSL listed to AS 1603.8 – 1996 **

* LPC listing is to Vision Fire & Security Pty Ltd on Certificate No. 305b Issue 7.

** Tyco Fire & Safety – afp-1580



Tyco VLC-800MX LaserCOMPACT Connections

Description

Aspirating smoke detection technology operates by actively drawing in air for sampling in a high intensity, stable detection chamber. The Model VLC-800MX LaserCOMPACT smoke detector uses the latest in VESDA sampling technology including a highly efficient laser light source and a dual stage dust filter.

The Tyco VLC-800MX LaserCOMPACT sensor communicates smoke chamber information to the connected fire alarm panel. The panel evaluates the smoke sensor information against programmed thresholds and sends an alarm depending on smoke chamber activity.

Status communications. In addition to smoke chamber information, the Tyco VLC-800MX LaserCOMPACT also advises the MX4428 of fault conditions. Faults may include dirty filter, airflow restriction or failure, etc. Specific details are stored in memory at the sensor location.

Operation

Filtered airflow. A high efficiency aspirator continually draws air through a simple pipe network to a central detector. Air entering the sensor housing passes a flow sensor before the sample is passed through a dual-stage dust filter. The majority of air is exhausted from the detector and where required, back vented to the protected area. The first stage of the air filter removes dust and dirt from the air sample before it enters the smoke detection chamber. A second, ultra-fine filter stage provides a clean air supply to be used inside the detection chamber to form clean air barriers which protect the optical surfaces from contamination.

Operation (Continued)

Laser detection chamber. The detection chamber uses a stable, highly efficient laser light source and unique sensor configuration to achieve optimum response to a wide range of smoke types. When smoke passes through the detection chamber, it creates light scattering, which is detected by very sensitive sensor circuitry. The smoke level of the sensor is then communicated to the MX4428 for comparison to pre-selected alarm thresholds.

Status logging. The sensor status history for all alarms, service, and fault events, is monitored and logged with time and date stamps within the electronics of the sensor, accessible via the local computer port. General Fault status indications are communicated to the MX4428 fire alarm panel.

Model	Description
VLC-800MX	Tyco VLC-800MX LaserCOMPACT Smoke Sensor (sampling pipe is ordered separately)

Specifications

Sensor Voltage	18 to 30 VDC, supplied from fire alarm control panel
Sensor Current	Quiescent 225 mA
	Alarm 245 mA
Communications	Tyco MX addressable
Electrical Terminations	1 to 2 mm ² cable
Operating Conditions	Sensor Ambient -10° C to 39° C
	Sampled Air -20° C to 60° C
	Sensor Humidity 10-95% RH, non-condensing
Sampling Network	Maximum area of coverage = 800 m ² , maximum pipe length in accordance with Vision Systems computer design tool (ASPIRE™)
Alarm Sensitivity Range	0.05% to 12%/m obscuration, selected at the fire alarm control panel
Recognized Sensitivity Levels	Three levels, selectable and designated as required at the fire alarm control panel
Enclosure Rating	NEMA 1 (IP 30)
Weight	1.9 kg

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