

LIFE SAFETY &amp; INCIDENT MANAGEMENT

# Edwards ModuLaser® Detector Module



7259-2342:0501



## Overview

ModuLaser is a scalable aspirating smoke detection solution that makes installation easier, maintenance quicker, and takes applications further than traditional air sampling detectors. Two basic module types comprise the ModuLaser solution: a display module, and a detector module. Each detector module can accommodate up to 250 m / 820 ft. of combined sampling pipe. Display modules and detector modules communicate by RS-485 interconnections.

Display modules are available in three configurations: Standard with TFT color display, status LED's and navigation buttons, Minimum with only status LED's, and Command which is similar to the Standard but with the added functionality to control various modules over SenseNET. The Minimum and Standard Display Modules can each support up to 8 detector modules, while the Command Display Module can support up to 127 modules across the SenseNET network.

## Detector module

The Detector Module is a fully self-contained unit, which aspirate the sampled air from the protected area, analyze the air and based on ClassiFire™ determine if a pre-alarm or alarm should be raise, if smoke particles would be present in the sampled air. If an alarm condition or fault condition would occur, then the unit will activate the corresponding local relay output, subjected to the programming of the relays. Simultaneously the alarm or fault condition would also be reported to the Display Module to which the Detector Module is connected.

Due to the modular nature of the ModuLaser, maintenance (for example routine filter replacement) can be done on a module per module bases, rather than a complete system. This in turn reduces the risk of the area which is unprotected during the maintenance period, as only one sampling pipe (protected zone) would be affected at a time.

## Perfect solution

Thanks to advanced features that make it virtually impervious to dust and dirt, ModuLaser is ideal for use in hostile environments that would disable other kinds of smoke detectors. Forward scattering optical detection adds early warning capability without the risk of nuisance alarms normally associated with high sensitivity smoke detection, while exclusive environmental compensation technology adds a high degree of reliability to an already solid detection solution.

## Standard Features

- Modular Design**  
 Separate centrally-controllable detector modules allow efficient piping and discrete zones with no overlap.
- Zoned aspirating smoke detection**  
 Individual detector modules provide detection for individual areas or zones, specific zone alarm information can be transmitted to the main fire alarm panel through dedicated alarm relays within each detector module.
- Simplified installation**  
 Ingenious docking station design allows detectors to be easily connected together as a group. Sensitive electronics are easily removed to ensure they will not be damaged during first fix installation. Aspirating pipework and cable entries can easily be made into either the top or the bottom of the unit.
- Intuitive user interface**  
 Bright easy-to-see color TFT display and universal navigation and control buttons take the guesswork out of programming and diagnostics.
- Easy pipe connection**  
 The quick fit pipe adaptor system locks down securely, yet leaves plenty of room for easy pipe connection and removal.
- Quick location of smoke**  
 Each detector module is self-contained, which means no delays in determining in which zone (sampling pipe) smoke is present.

# Specifications

## General

Status indication	LED's
User interface	TFT and navigation buttons on Normal and Command Display Modules
Alarm levels	4 (Aux, Pre-alarm, Alarm and Alarm 2)
Event log	20,000 events per module
RS485 support	Yes (SenseNET+)
Connectivity	USB (x2) on Display Module

## Electrical

Operating voltage	24 VDC nominal (18.0V to 30.0V)
Current consumption	Detector Module (at 18 VDC): 269 ma – fan speed 1 387 ma – fan speed 6 (default speed) 1028 ma – fan speed 16
SenseNet+	Twisted pair wire, 32 ohms, .44uf max

## Detection

Detection principle	Laser light scattering mass detection and particle evaluation
Particle sensitivity range	0.003 to 10 microns

## Sampling pipe

Length	Up to 820 ft* (250 m) combined per detector module
Quantity sampling holes	Up to 50*
<i>*Sampling pipe design with PipeCAD, including classification of configuration</i>	
Inlet size	1.06 or 0.98 in. (27 or 25 mm) outer diameter
Inlet location	Top or bottom
Exhaust size	1.06 or 0.98 in. (27 or 25 mm) outer diameter
Exhaust location	Top or bottom
Inlet quantity	1 per detector module

## Input

Input quantity	2 per module
Input type and rating	Supervised
Termination	15 KΩ 5% 1/4 W
Programmable	Yes

## Output

Output quantity	3 per module
Output type and rating	Voltage free (contact rating 2 A at 30 VDC / NO/NC/C)
Programmable	Yes

## Physical

Physical dimensions	(W x D x H) 4.35 x 5.25 x 11.8 in. (110.5 x 133.5 x 300 mm)
Net weight	Display Module: 2.6 lb. (1.18 Kg) Detector Module: 3.46 lb. (1.57 Kg)
Color	Cream (RAL 9016)
Mounting type	19" rack, Surface mount
Cable entries	2 at the bottom, 2 at the rear, 2 at the top on Detector Module, and 3 at the top on the Display Module
Cable entry size	0.5 in. (20 mm) - top and bottom
Detector module orientation	Vertical (0 deg or 180 deg)

## Environmental

Operating temperature	0 to +38°C (UL) 0 to +49°C (FM)
Relative humidity	0 to 90% noncondensing
Environment	Indoor
IP rating	IP40

## Standards & regulation

Certification	FM, UL 268 7th edition, CSFM
Approved for use as open area protection and special application, as per UL268	

## Chart recorder

Sampling period	Adjustable between 1s and 60 s
Capacity	1 months @ 1s / Up to 5 years @ 60 s
Values recorded	Detector value, 4 alarm level values, flow value and temperature (all simultaneously)

## Ordering Information

FHSD8330-ULF	Modulaser Detector module 5.3 lbs
9-30791-2	Detector Cover, replacement 2.2 lbs
9-30794	Gromets, replacement .23 lbs
9-30795	Pipe Adapter, angled, replacement .34 lbs
9-30796	Pipe Adapter, straight, replacement .34 lbs
9-30797	Accessory Kit .23 lbs
9-30798-2	Wiring Housing, Gray 3.3 lbs
9-30699N-P	Filter pack (6), replacement .56 lbs



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