

# FHSD8310-ULF

## LaserSense ModuLaser, Standard display module

### Description

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.

### Standard display module

The Standard Display Module features a user interface which consist of a TFT color display, navigation buttons and status LED's. Configuration of the Standard Display Module (and associated detectors modules) can be done via the user interface, via a computer using Remote software or via SenseNET using a Command Display Module. The TFT color display support simple operations like changing configuration options via a menu driven structure, but also advanced features like viewing the chart recording in graphical format.

The Standard Display Module has two USB ports, one master and one slave. The master is used to connect a pen drive/memory stick, which in turn can be used for storing the configuration, the event logs or chart recordings, or for firmware upgrade purposes. While the USB slave is used to connect to a computer.

### 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.



### Details

- 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.

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### Especificaciones técnicas

#### General

Indicación de estado	LED's
Interfaz usuario	TFT and navigation buttons on Normal and Command Display Modules
Niveles de alarma	4, Aux, Pre-alarm, Alarm and Alarm 2
Registro de eventos	20.000 events per module
Soporte RS485	Yes (SenseNET and SenseNET+)
Conectividad	USB (x2) on Display Module

#### Eléctrico

Voltaje de funcionamiento	24 VDC nominal
Consumo de corriente	Display Module (at 24 VDC): 204 mA (Minimum), 232 mA (Standard), 232 mA (Command) Detector Module (at 24 VDC): 260 mA (fan speed 1), 380 mA (fan speed 6, default), 940 mA (fan speed 16)

#### Detección

Principio de detección	Laser light scattering mass detection and particle evaluation
Rango de sensibilidad de partículas	de 0.003 to 10 microns

#### Tubo de muestreo

Longitud	Up to 250 m / 820 ft* combined per detector module
Cantidad de puntos de muestreo	Up to 50* * Sampling pipe design with PipeCAD, including classification of configuration
Tamaño de la entrada	27 or 25 mm (1.06 or 0.98 in) outer diameter
Ubicación de la entrada	Top or bottom
Tamaño del escape	27 or 25 mm (1.06 or 0.98 in) outer diameter
Ubicación del escape	Top or bottom

#### Entrada

Cantidad de entradas	2 per module
Ratio y tipo de entrada	Supervised
Terminación	15 K $\Omega$ 5% 1/4 W
Programable	Yes

#### Salida

Cantidad de salidas	3 per module
Ratio y tipo de salida	Voltage free (contact rating 2 A at 30 VDC / NO/NC/C)
Programable	Yes

#### Físico

Dimensiones físicas	W x D x H 110.5 x 133.5 x 300 mm (4.35 x 5.25 x 11.8 in)
Peso neto	Display Module: 1.18 Kg (2.6 lb.) Detector Module: 1.57 Kg (3.46 lb.)
Color	Crema
Tipo de Montaje	Montaje en Superficie
Entradas de cable	2 at the bottom, 2 at the rear, 2 at the top on Detector Module, and 3 at the top on the Display Module

#### Medioambiental

Temperatura de funcionamiento	0 to +38°C (UL) 0 to +49°C (FM)
Humedad relativa	0 to 90% noncondensing
Entorno	Interior
Clasificación IP	IP40

#### Regulador

Certificación	CSFM, FM, UL, ULC
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#### Physical

Cable entry size	20 mm (0.5 in) - top and bottom
Detector module orientation	Vertical (0 or 180 deg)

#### Chart recorder

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

#### Sampling pipe

Inlet quantity	1 per detector module
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#### Regulatory

	Approved for use as open area protection and special application, as per UL268
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