

# FHSD8310-EN

## ModuLaser, Standard display module

### General

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 meters 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.



### Dettagli

- **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 via a common APIC address card in the display module or 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.

# FHSD8310-EN

## ModuLaser, Standard display module

### Specifiche tecniche

#### Generale

|                    |                                                                  |
|--------------------|------------------------------------------------------------------|
| Indicazione stato  | LED's                                                            |
| User interface     | TFT and navigation buttons on Normal and Command Display Modules |
| Livelli di allarme | 4 (Aux, Pre-alarm, Alarm and Alarm 2)                            |
| Registro eventi    | 20 000 events per module                                         |
| Supporto RS485     | Yes (SenseNET and SenseNET+)                                     |
| Connettività       | USB (x2), IP and APIC on Display Module                          |

#### Elettrico

|                       |                                                                                                                                                                                                                                                                |
|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Tensione di esercizio | 18 to 30 VDC                                                                                                                                                                                                                                                   |
| Consumo attuale       | Display Module (at 24 VDC):<br>204 mA - Minimum Display Module<br>232 mA - Standard Display Module<br>232 mA - Command Display Module<br>Detector Module (at 24 VDC):<br>260 mA - fan speed 1<br>380 mA - fan speed 6 (default speed)<br>940 mA - fan speed 16 |

#### Rivelazione

|                                            |                                                               |
|--------------------------------------------|---------------------------------------------------------------|
| Principio di rilevamento                   | Laser light scattering mass detection and particle evaluation |
| Intervallo di sensibilità delle particelle | 0.003 to 10 microns                                           |

#### Tubo di campionamento

|                                   |                                                                                                                            |
|-----------------------------------|----------------------------------------------------------------------------------------------------------------------------|
| Lunghezza                         | Up to 250 m (820 ft.) combined per detector module                                                                         |
| Quantità di fori di campionamento | Up to 20 - Class A per detector module<br>Up to 40 - Class B per detector module<br>Up to 50 - Class C per detector module |
| Dimensioni ingresso               | 27 or 25 mm (1.06 or 0.98 in) outer diameter                                                                               |
| Posizione di ingresso             | Top or bottom                                                                                                              |
| Misura scarico                    | 27 or 25 mm (1.06 or 0.98 in) outer diameter                                                                               |
| Posizione di scarico              | Top or bottom                                                                                                              |

#### Ingresso

|                            |                        |
|----------------------------|------------------------|
| Quantità in entrata        | 2 per module           |
| Tipo di input e intervallo | Supervised             |
| Termine                    | 15 K $\Omega$ 5% 1/4 W |
| Programmabile              | Yes                    |

#### Uscita

|                             |                                                       |
|-----------------------------|-------------------------------------------------------|
| Quantità in uscita          | 3 per module                                          |
| Tipo di uscita e intervallo | Voltage free (contact rating 2 A at 30 VDC / NO/NC/C) |
| Programmabile               | Yes                                                   |

#### Fisico

|                    |                                                                                                         |
|--------------------|---------------------------------------------------------------------------------------------------------|
| Dimensioni fisiche | W x D x H<br>110.5 x 133.5 x 300 mm<br>(4.35 x 5.25 x 11.8 in)                                          |
| Peso netto         | Display Module:<br>1.18 Kg (2.6 lb.)<br>Detector Module:<br>1.57 Kg (3.46 lb.)                          |
| Colore             | Grey-white (RAL 9002)                                                                                   |
| Tipo di montaggio  | Montaggio a superficie                                                                                  |
| Cavo di entrata    | 2 at the bottom, 2 at the rear, 2 at the top on Detector Module, and 3 at the top on the Display Module |

#### Ambientale

|                       |                                                                                            |
|-----------------------|--------------------------------------------------------------------------------------------|
| Temperatura operativa | Equipment:<br>-10 to +60°C (14 to +140°F)<br>Sampled air:<br>-20 to +60 °C (-4 to +140 °F) |
| Umidità relativa      | 0 to 95% noncondensing                                                                     |
| Ambiente              | Interno                                                                                    |
| IP rating             | IP40                                                                                       |

#### Regolatorio

|                |                     |
|----------------|---------------------|
| Conformità     | REACH, RoHS         |
| Certificazioni | BOSEC, CPR, EN54-20 |

#### Physical

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

#### 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) |

#### Sampling pipe

|                |                       |
|----------------|-----------------------|
| Inlet quantity | 1 per detector module |
|----------------|-----------------------|