

LASER ASPIRATING SMOKE DETECTION



FIRE & SECURITY

MARLOWE *Critical Services*

020 8974 1177

www.fafs.biz

connect@fafs.biz

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LASER ASPIRATING SMOKE DETECTION



The LASD is a professional, high-sensitivity air sampling smoke detector, designed for the protection of risks requiring class A, B or C design sensitivity. The unit is rugged, compact, weatherproof and highly versatile, enabling it to be used for both general area coverage and localised protection of equipment cabinets or ductwork. Areas which are subject to high levels of dust, low temperature or water ingress can also be accommodated using optional harsh environment filters, water traps and pipework heaters.

LASD is available in 1 or 2 pipe versions, each with 2 sets of alarm and 1 set of fault contacts per channel. Alarm contacts are programmable across the dynamic sensitivity range of 0.06 to 3.33% per meter in 9 stages. The internal fan is both powerful and quiet, allowing pipe lengths of up to 100m (25mm of 3/4" tube) per channel to be installed.

The LASD requires no special tools or software to configure and can be programmed and interrogated externally by a code protected membrane keypad. A PC utility, Configtracer, is also available for configuration and diagnostics, which is accessed via an external USB port.

System Design

Pipe configurations can be installed following simple pre-engineered guidelines or developed and verified using Aspire2 PC software.



Features

| | |
|--|---|
| EN54-20 approved | ✓ |
| Economical, single or dual area aspirated 'fire' detection | ✓ |
| 1 or 2 sampling pipes - each up to 100m in length | ✓ |
| Coverage up to 1,500m ² at class C | ✓ |
| 3 users configurable alarm levels per channel | ✓ |
| Integral Display and Programmer | ✓ |
| Field serviceable and/or replaceable laser detection element | ✓ |
| Easy to install, commission and maintain | ✓ |
| Low operating current | ✓ |
| Rugged IP65 enclosure | ✓ |
| Single, redundant or coincidence detection strategies | ✓ |

Operation

The LASD utilises high sensitivity laser point detectors in an aspirated enclosure. Each detector monitors the air from separate sampling pipes, which allows for a large area of coverage using sampling holes in place of traditional point detectors.

Air is drawn from the protected area from one or two perforated 25mm pipes. A powerful fan together with sophisticated air-flow monitoring and control circuitry ensures that transport delays are minimised and air-flow is kept within working limits. System status and flow control is continuously displayed and internal power management ensures that operating current is kept to a minimum, allowing superior performance and optimisation of external power supply and standby battery resources.

Technical Specifications

Mechanical

| | |
|-------------------------|---|
| Sampling Pipe Inlets | 1 or 2 (LASD1 & LASD2 respectively) |
| Detectors | 1 or 2, 0.06%/m Laser Point Detectors (fitted) |
| Sampling Holes (Max) | 18 Class C, 6 Class B, 3 Class A |
| Sampling Pipe Length | 100m (max) per pipe. For VdS approved installations, consult manual |
| Sampling Pipe Diameter | 1 or 2 x 25mm or 3/4" (27mm) nominal bore |
| Exhaust Air Pipe Outlet | 1 (25mm or 3/4") |

Electrical

| | |
|--------------------|--|
| Supply Voltage | Nominal 24Vdc (18 to 30Vdc) |
| Operating Current | 350mA max (fan speed dependant) |
| Sensitivity | 0.06 - 3.33% obscuration per metre, adjustable in 9 stages |
| Alarm Levels | Programmable Alert, Fire 1, Fire 2 (per channel) |
| Operating Modes | Single detector, redundancy, double-knock |
| Settings | Isolate, latching, non-latching, operating mode, reset |
| Programming/set-up | Integral control switch's and/or PC via USB |
| Event Log | 1000 Events |
| Fault Monitoring | Power failure (common), flow fault per channel, detector fault |
| Relay Outputs | 2 alarm & 1 fault per channel (changeover contacts) |
| Cable Terminals | Removable 2.0mm maximum |
| Display | 5 common status plus 10 segment LED bargraph per channel |
| User Controls | External weatherproof membrane - Code protected |
| Flow Monitoring | Thermal, with adjustable High/Low and sensitivity limits |

Environmental

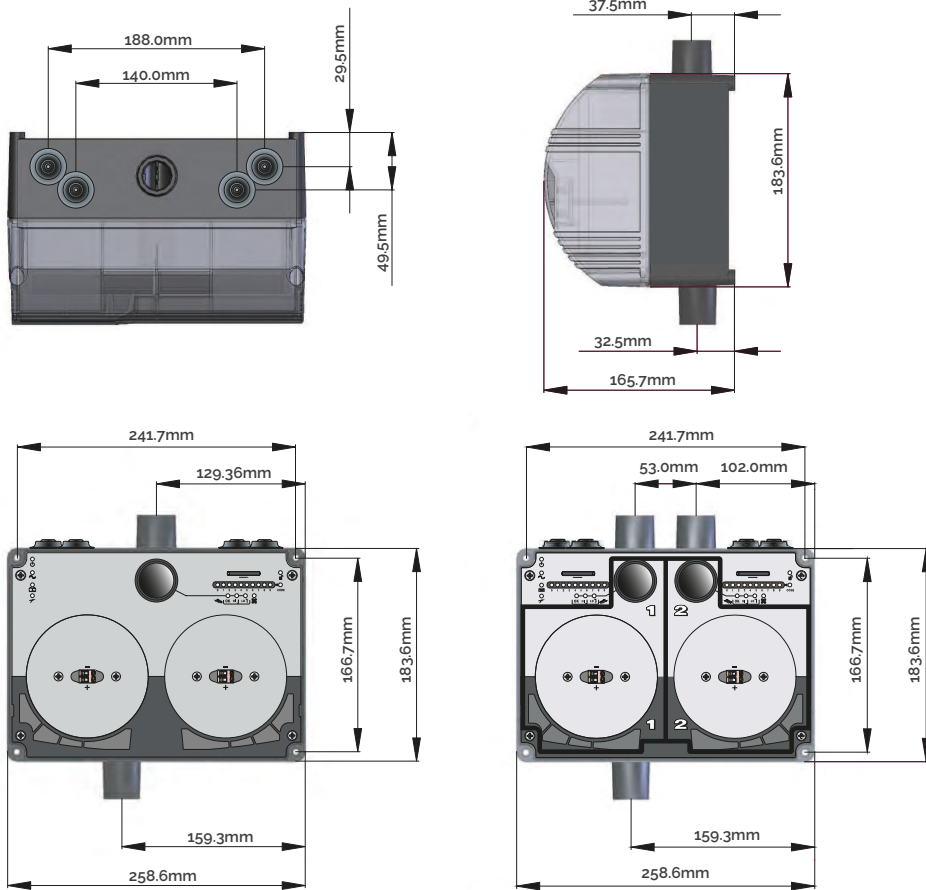
| | |
|-----------------------|--|
| Operating Temperature | -10 to +60°C |
| Operating Humidity | 10 to 95% (non condensing) |
| IP Rating | IP65 with exhaust pipe fitted and cable entries sealed |

General

| | |
|------------------------|--|
| Filtration (internal) | Replaceable dust particle. Harsh environment filter also available |
| Filtration (external) | Optional, external harsh environment filter |
| Housing Material | ABS, with tamper-proof locking mechanism |
| Mounting | Upright, horizontal or Inverted |
| Weight | 2.7kg |
| Dimensions (W x H x D) | 259 x 184 x 166mm |
| Equipment Approvals | EN54-20, CE, VdS, CPD |



Dimensions



Ordering Information

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|---------------------|---|
| ILS-1-ML | ILS-1 Laser Aspirating Smoke Detector |
| ILS-2-ML | ILS-2 Laser Aspirating Smoke Detector |
| 01-LDET | Laser Detector Head Unit c/w Baffle |
| 02-FL53 | Replacement Filter Element, Coarse 20ppi (Pack of 10) ASD/LASD/E Series |
| 20-LA0015-03 | Key for ASD/LASD |
| 28-023-ML | 2A Power Supply, 24VDC, 110-240V AC (EN54-4) 17AH Max |