Micropack FDS303 Multi Spectrum IR Flame Detector (5101031-10A)

Product reference	
Part No.	5101031-10A
Manufacturer	MICROPACK / Consilium
Model	FDS303



Product overview

Explosion-proof multi spectrum IR flame detector for hydrocarbon liquid fuel and gas fires; catalogued by Consilium.

Technical specifications

Manufacturer Article Number	5101031-10A	Gasoline sensitivity	30 × 30 cm (12 × 12 in.) at 30 m (98 ft)
Order row	FDS303IR3FLAMEDETALMB 2xM25	JP4 sensitivity	30 × 30 cm (12 × 12 in.) at 30 m (98 ft)
Material	Aluminium (copper free)	Methane sensitivity	60 cm (24 in.) plume at 30 m (98 ft)
Material legend	SS = Stainless Steel; AL = Aluminum (copper free)	Ethanol sensitivity	30 × 30 cm (12 × 12 in.) at 30 m (98 ft)
Bracket type	Marine bracket	Mounting	Ceiling or wall; vertical adjustment 0° to 45°; horizontal rotation ±45°
Bracket thickness	8 mm	Wall mounting restriction	Allow space for cable gland and cable; otherwise downward rotation may be restricted
Marine bracket condition	MB shall be used in applications requiring DNV GL type approval; current validity unknown	Wiring terminals	Rear enclosure section; remove end cap; view looking inside detector
Cable entries	2 x M25	0-20 mA fixed values	0 mA power/detector fault; 1.5 mA optical fault; 4 mA healthy; 18 mA alarm; 21 mA over-range
Cable glands included	No	0-20 mA tolerance	±0.3 mA DC; maximum loop resistance 500 ohm
Weight	2.5 kg (5.5 lbs)	Relay wiring	Relay output wiring options; EOL and alarm resistor values defined by client and control system/fire panel
Model	FDS303	RS485 configuration	The source describes a configuration-only procedure: reversing terminals 1/2 enables Micropack RS485 on 3/4 with Micropack applications. Follow manual 3303.0001; this is not normal supply wiring.
Manufacturer	MICROPACK	Optical self-test	Continuous optical test without reflector; verifies operation and improves device up-time
Catalog / supplier	Consilium	Hazardous area warning	See FDS303 Safety & Technical Manual 3303.0001 for further information and hazardous-area installation
Compatible systems	All Consilium fire alarm systems	Installation warning	Refer to FDS303 technical manual 3303.0001 before installing or maintaining; do not open if explosive atmosphere may be present
Detection principle	Multi spectrum IR flame detector	Maintenance restriction	Front section only accessed by trained personnel
Explosion protection	Explosion proof multi spectrum IR flame detector	Safety manual review status	Manual 3303.0001 is referenced by the datasheet and has not been reviewed for this catalog summary.
Nominal supply voltage	24 V DC	ATEX certificate and classification	FM18 ATEX 0040X; ATEX II 2 G; 60079-0, 60079-1.
Operating voltage range	18-32 V DC	IECEx certificate and standard	IECEx FME18.0003X; Ex db IIC T4; 60079-0, 60079-1
Power consumption	3 W minimum (no heater); 15 W maximum at 32 V DC with heater	FM and NEC approvals	FM 3260; NEC 505 Class 1 Zone 1 AEx/Ex d IIC T4; NEC 500 Class 1 Division 1 Groups B,C,D T4

Relay outputs	Alarm and fault	Printed IECEx approval ambient	-60 °C to +85 °C (approval ambient; not the separately stated operating range)
Current output	0-20 mA, HART	FM / NEC approval ambient	-50 °C to +85 °C (FM/NEC ambient; not the separately stated operating range)
Output modes	0-20 mA (source non-isolated) and relay (alarm and fault), available simultaneously	SIL capability	SIL 2 capable according to IEC 61508
HART function	Configuration only	EN 54 certificate and standard	1725-CPR-E0007; EN 54-10:2002+A1:2005
Response time	Approx. 5 seconds (typical)	Declaration of Performance	DoP D of P FDS303 2018
Operating temperature range	-60 °C to +85 °C (-76 °F to +185 °F)	Certification validity status	Printed / historical; current validity unknown
Storage temperature range	-60 °C to +85 °C (-76 °F to +185 °F)	Heated optics control	Microprocessor controlled heated optics; maintains operation in harsh weather conditions (snow, ice, condensation)
Ambient humidity	0 to 100% RH (non-condensing)	External flame simulator test	External testing with a long-range flame simulator; minimises the need for scaffolding
Ingress protection	NEMA type 4X / IP66	Flame simulator accessory	CD-FS-30X flame simulator; 5100791-00A
Horizontal field of view	90°	Spare marine bracket accessory	Marine bracket (spare only); 5101032-00A
Vertical field of view	90°	Spare standard bracket accessory	Standard bracket (spare only); 5101033-00A
Generic data-sheet entries	2×M25 (must not replace variant order-row entries)	Detector sealing kit accessory	Detector sealing kit (gland seals and O ring set); 5101093-00A
n-Heptane sensitivity	Standard sensitivity: 30 × 30 cm (12 × 12 in.) at 30 m (98 ft)	Original source drawing requirement	Review the 9-page original for pages 4-6 connections, page 7 dimensions, and pages 8-9 standard/marine bracket drawings; do not transcribe unverified diagram values