



**TYPE APPROVAL CERTIFICATE**  
No. **ELE037623CS003**

**This is to certify** that the product below is found to be in compliance with the applicable requirement of the RINA type approval system.

<i>Description</i>	<b>Fixed fire detection and fire alarm systems: Flame detector including Short circuit isolator</b>
<i>Type</i>	<b>MD9902 IR Tri-Spectrum</b>
<i>Applicant</i>	<b>MICRODATA DUE SRL Via Greti Del Vara 9 , 19020 Follo, La Spezia ITALY</b>
<i>Manufacturer</i>	<b>MICRODATA DUE SRL</b>
<i>Place of manufacture</i>	<b>Via Greti Del Vara 9, 19020 Follo, La Spezia Italy</b>
<i>Reference standards</i>	<b>SOLAS 74 as amended: Reg. II-2/7, Reg. X/3; IMO Res.MSC.36(63)-(1994 HSC Code) 7 ; IMO Res.MSC.97(73)-(2000 HSC Code) 7; IMO Res.MSC.98(73)-(FSS Code) 9; IMO Res.MSC 391(95)-(Codice IGF) 11; IMO MSC.1/Circ.1242</b>

*Issued in* **Genoa** on **February 22, 2023**. *This Certificate is valid until* **February 21, 2028**

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**RINA Services S.p.A.**  
**Luigi Benedetti**

This certificate consists of this page and 1 enclosure

**TYPE APPROVAL CERTIFICATE**  
No. **ELE037623CS003**  
**Enclosure - Page 1 of 3**  
**MD9902 IR Tri-Spectrum including Short circuit isolators**

**Product description:**

MD 9902 IR Tri-Spectrum  
Analogue, Addressable detectors able to provide flame detection and temperature analog value.

The flame is detected by three sensors working simultaneously; one of them is working on the hot carbon dioxide specific flame wavelength, the two other measure the interference radiation on the near wavelengths.

Sensitivity Class 1, 2 , 3 as defined on the EN 54-10 Requirements is complied with.

In case a failure occurs in the fire detection and alarm system (eg. loss of communication with detectors through loop card), the degraded mode is activated and a digital signal is sent to the central unit to activate the relevant loop led on the central unit.

A signalling LED on the detector housing is also flashing when a fire alarm is detected.  
The detector warns its failure conditions or degradation.  
IR sensors is contained in Aluminium chamber.

**Detector housing:** IP 65/67\_Polycarbonate flame retardant  
(in connection with approved socket type MD9900-BS or MD9900-BS-PT and MD9900-BSI or MD9900-BSI-PT);

**Detector housing:** IP 32\_Polycarbonate flame retardant  
(in connection with approved socket type MD9900-BC or MD9900-BC-PT and MD9900-BCI or MD9900-BCI-PT);

IP 32 protection with bases MD9900-BC and MD9900-BCI  
IP 65 protection with bases MD9900-BS and MD9900-BSI  
IP 66/IP67 protection with bases MD9900-XF and MD9900-XFI  
IP X7 protection with bases MD9900-BS and MD9900-BSI

**Reference documents:**

Microdata Due	Technical descriptions	ST24737 Rev. C
Microdata Due	Data sheets	D25795 Rev. H
Microdata Due	Software description	D25806 Rev. 0
Microdata Due	Installation and maintenance manual	IS 31219 Rev. A
Microdata Due	Risk Assessment	D36685 Rev. 0
Microdata Due	Comparing Lexan 920 and Lexan 923 resin	D36647 Rev. 0

**TYPE APPROVAL CERTIFICATE**  
**No. ELE037623CS003**  
**Enclosure - Page 2 of 3**  
**MD9902 IR Tri-Spectrum including Short circuit isolators**

**Test reports:**

BRE Laboratory	Environmental/ Performance	Report n. TE227965, (07/11/06)
BRE Laboratory	Environmental/ Performance	Report n. TE227965 -SW (10/01/07)
Microdata Due	Functional tests	Report n.1050 annex to IS-26872 Rev. 0, (13/12/06)
Istituto Giordano Lab	IP test	Report n. 213254 (30/06/06)
Istituto Giordano Lab	IP test	Report n. 225438 (10/05/07)
Test Lab	EMC (EN60092-504)	Report n. 17B302E-c
Test Lab/Microdata	Functional tests	Report n. 0974-17 (28/11/17)

**Fire detector bases :**

The following detector bases may be used in connection with MD9902 detectors

Models MD9900 BC or MD9900-BC-PT and MD9900 BCI or MD9900-BCI-PT detector bases (IP 32 in connection with the MD9900 and MD9901 detectors) for false ceiling installation; Models MD9900-BCI or MD9900-BCI-PT in addition contain a short circuit isolator. Models MD9900-BC-PT and MD9900-BCI-PT are suitable for connection to PTS Satellite

MD 9900 BS or MD9900-BS-PT and MD 9900-BSI or MD9900-BSI-PT detector bases: (IP67 in connection with the MD9902 for installation in wet or outdoor areas) Models MD9900-BSI or MD9900-BSI-PT in addition contain a short circuit isolator Models MD9900-BS-PT and MD9900-BSI-PT are suitable for connection to PTS Satellite

MD9900-XF or MD9900-XFI detector bases: (proof base IP66+IP67) particularly suitable for installation in areas exposed to severe environmental conditions. Model MD9900-XFI in addition contain a short circuit isolator.

**Reference documents:**

Microdata Due	Technical specification	n. ST21405 rev. C
Microdata Due	Data sheet	n. D24729 Rev. F
Microdata Due	Data sheet	n. D24730 Rev. F
Microdata Due	Data sheet	n. D37706 rev. A
Microdata Due	Functional Test Procedure	n. D36618 Rev.0

**TYPE APPROVAL CERTIFICATE**  
No. **ELE037623CS003**  
Enclosure - Page 3 of 3  
**MD9902 IR Tri-Spectrum including Short circuit isolators**

**Test reports:**

BRE Laboratory	Report n.TE213449/A, (03/10/2007)_Environmental / Performance
Microdata Due	Test procedure n.IS34434_report 822/14 testing on 16/05/2014
Microdata Due	Test procedure n.D36618 Rev.0 (13/07/16)_report 656/16 (2/08/16) Functional Test Procedure
Microdata Due	Test Report n.172048F-b_UNI-EN 54-17 for MD9900BSI
Microdata Due	Test Report n.172048F-d UNI-EN 54-17 for MD9900-XFI
Microdata Due	Report n.1951561A, degrees of protection test for MD99002 with MD9900-XF base
RINA	Report n° 2006CS014611 for MD9902

**Genoa February 22, 2023**