



TYPE APPROVAL CERTIFICATE
No. **ELE064024CS**

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>	Fixed fire detection and fire alarm systems: Flame detector including Short circuit isolator
<i>Type</i>	MD9902-Ex
<i>Applicant</i>	MICRODATA DUE SRL Via Greti Del Vara 9 , 19020 Follo, La Spezia ITALY
<i>Manufacturer</i>	MICRODATA DUE SRL
<i>Place of manufacture</i>	Via Greti Del Vara 9, 19020 Follo, La Spezia Italy
<i>Reference standards</i>	EN 54-10 (2002) incl. A1: (2005) ; EN 54-17 (2007) incl. AC (2007) ; IEC 60092-504 (2016); IEC 60533 (2015); RINA Rules for the classification of ships Part C Ch. 3 Sec. 6

Issued in **Genoa** on **April 18, 2024**. *This Certificate is valid until* **April 18, 2029**

Valerio Bonanni

RINA Services S.p.A.

This certificate consists of this page and 1 enclosure

TYPE APPROVAL CERTIFICATE

No. ELE064024CS

Enclosure - Page 1 of 1

MD9902-Ex

Product description:

MD9902-Ex: 3IR Flame detector

Automatic addressable flame detector able to provide fire alarm in case of flame presence.

The MD9902-Ex is the Ex version (Flameproof Exd) of the MD9902 flame detector.

It can be used either connected to the Loop of a Fire Detection System of Microdata Due and as standalone detector.

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.

Detector housing: IP 66/ 67 _Aluminium

Reference documents:

<i>Microdata Due</i>	Technical specification:	ST40100 Rev. C RINA id. n. ELET/32832
<i>Microdata Due</i>	Data sheets:	D40101 Rev. E RINA id. n. ELET/32833
<i>Microdata Due</i>	Software description:	SDD42325 Rev.0 RINA id. n. ELET/32838
<i>Microdata Due</i>	User manual - Operating instructions:	IS41219 Rev.B - IS42308 Rev. A RINA id. n. ELET/32835-ELET/32837
<i>Microdata Due</i>	Risk Assessment:	D43453 Rev.0 RINA id. n. ELET/32834
<i>IMQ</i>	ATEX - IECEx safety certificates:	IMQ 21 ATEX 062 X - IECEx IMQ 21.0015X RINA id. n. ELET/34344-ELET/34345

Test reports:

<i>CNBOP-PIB</i>	Performance	Test Report_1285_BA_21 (05/05/2023) RINA id. n. ELET/32859
<i>TESLAB</i>	Environmental	Test Report 232049F (30/03/2023) RINA id. n. ELET/32861

Genoa April 18, 2024