

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate No:
MEDB000078F

Application of: Directive 2014/90/EU of 23 July 2014 on marine equipment (MED). This Certificate is issued by DNV SE based on the notification of the Federal Maritime and Hydrographic Agency of Germany.

This is to certify:

That the Fixed fire detection and fire alarm systems components for control stations, service spaces, accommodation spaces, cabin balconies, machinery spaces and unattended machinery spaces: Flame detectors – Point detectors

with type designation(s)
Spectrex SharpEye 40/40 series Flame Detectors & 975 Series Flame Detectors

Issued to
**Rosemount Inc.
Shakopee, MN, USA**

is found to comply with the requirements in the following Regulations/Standards:
Regulation **(EU) 2020/1170**,
item No. MED/3.51e. SOLAS 74 as amended, Regulation II-2/7 & X/3, 1994 HSC Code 7, 2000 HSC Code 7, FSS Code 9, IGF Code 11 and IMO MSC.1/Circ.1242

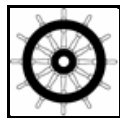
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2026-05-24**.

Issued at **Hamburg** on **2021-05-25**

DNV local station:
Certification & Inspection Services

Approval Engineer:
Didier Girardin



Notified Body
No.: **0098**

for **DNV SE**

Christine Mydlak-Roeder
Head of Notified Body

The mark of conformity may only be affixed to the above type approved equipment and a Manufacturer's Declaration of Conformity issued when the production-surveillance module (D, E or F) of Annex B of the MED is fully complied with and controlled by a written inspection agreement with a Notified Body. The product liability rests with the manufacturer or his representative in accordance with Directive 2014/90/EU. This certificate is valid for equipment, which is conform to the approved type. The manufacturer shall inform DNV SE of any changes to the approved equipment. This certificate remains valid unless suspended, withdrawn, recalled or cancelled. Should the specified regulations or standards be amended during the validity of this certificate, the product is to be re-approved before being placed on board a vessel to which the amended regulations or standards apply.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



Product description

The SharpEye 40/40 series Flame Detectors & 975 Series Flame Detectors are manufactured from stainless steel or aluminium.

Nomenclature Spectrex SharpEye 40/40 series 40/40D-x-xxxxxxxx [40/40D-X ₁ -X ₂ X ₃ X ₄ X ₅ X ₆ X ₇ X ₈ X ₉] ¹⁾		
X ₁ Sensor type	I	IR3 (Triple IR)
	M	Hydrogen + Hydrocarbon
	LB	with BIT (UV/IR)
	L4B	IR at 4. µM with BIT (UV/IR)
X ₂ Wiring	6	Universal
X ₃ Temperature	3	-60°C-+85°C
X ₄ (Elec. Entries)	1	M25
	2	3/4"NPT
X ₅ Enclosure	S	Stainless Steel
	A	Aluminium
X ₆ ²⁾ EX -Approval	B	Immetro,
	F	FM, FM, FMC, CSA US/C
	C	ATEX, IECEX
	R	EAC CU TR
	K	Kazakhstan
X ₇ Mounting	Y	Tilt Mount
	N	Not Tilt Mounted
X ₈ ²⁾ Protective Cover	0	without,
	7	Plastic,
	8	Stainless steel
X ₉	H	Hot CO ₂

Nomenclature 975 Series 975xxxxxxxx [975X ₁ X ₂ X ₃ X ₄ X ₅ X ₆ X ₇ X ₈ X ₉] ¹⁾		
X ₁ Sensor type	MR	IR3 (Triple IR)
	HR	Hydrogen + Hydrocarbon
	UF	with BIT (UV/IR)
	UR	IR at 4. µM with BIT (UV/IR)
X ₂ Wiring	4U	Universal
X ₃ (Elec. Entries)	8	M25
	6	3/4"NPT
X ₄ Enclosure	S	Stainless Steel
	A	Aluminium
X ₅ Temperature	3	-60°C-+85°C
X ₆ ²⁾ EX -Approval	E2	Immetro,
	A2	FM, FM, FMC, CSA US/C
	A1	ATEX, IECEX
	EM	EAC CU TR
	KZ	Kazakhstan
X ₇ Mounting	Y	Tilt Mount
	N	Not Tilt Mounted
X ₈ ²⁾ Protective Cover	0	without,
	7	Plastic,
	8	Stainless steel
X ₉	H	Hot CO ₂

Note:

- ¹⁾ Firmware: S87701, S87702
- ²⁾ Not covered by present certificate

Application/Limitation

Ex-certification is not covered by this certificate. Application in hazardous area to be approved in each case according to the Rules and Ex-Certification/ Special Condition for Safe Use listed in valid Ex-certificate issued by a notified/recognized Certification Body.

The equipment is found to comply with the following location/application dependent requirements (for definition of each of the location classes, see below the table):

Model	Temp.	Vibration	EMC	Humidity	Enclosure
Spectrex SharpEye 40/40 series & 975 series	D	B	B	B	D

Definition of the location classes with reference to relevant standards:

Temperature D

Non-weather-protected (-25°C to +70°C) (ref. IEC 60092-504:2016 table 1 item 6-7)

Vibration B

For general applications: ± 1,6 mm/± 4 g (ref. IEC 60092-504:2016 table 1 item 10)

EMC B

Bridge and open deck zone (ref. IEC 60092-504:2016 table 1 item 13-20)

Humidity B

Damp heat, cyclic (ref. IEC 60092-504:2016 table 1 item 8)

Enclosure D

Non-weather-protected (ref. IEC 60092-504:2016 table 1 item 9 and 12)

The equipment is complying with requirements for equipment installed on the bridge and deck zone.

The SharpEye 40/40 Series Flame Detectors can be fitted with an unmoulded (non-encapsulated), End of Line (EOL) Resistor. Such a resistor can only be fitted into the flameproof 'Ex d' compartment as indicated in the instructions. The EOL Resistor shall be rated at 1.56 kΩ, 1 W minimum

Each Delivery is to be provided with an Installation and user manual or, if not supplied with each detector, reference to the appropriate and approved document shall be given on, or with each detector.

Type Examination documentation

Hidden

Hidden: The 975 Series Flame Detectors is a rebranding of the SharpEye 40/40 series Flame Detectors. Both products are completely identical except for the brand and supporting documents.

Test Report	Vers/Ed.	Issuing day
20190221-1437	01	2019.03.03
20200106-0932	01	2020.02.11
SPC 230620	01	2020.06.23
SPC 240620	01	2020.06.24
SPC 080919	02	2020.10.22
2122A12788	02	2021.02.21
N80077231A	03	2021.04.15
N80077231B	03	2021.04.21
Drawings		
877-SPX-FM	Bf	2018.03.18
888176	A	2012.09.20
00913-0100-4975	AA-M	2020.07
00913-0100-4976	AA-I	2020.07
00913-0100-4977	AA-LB	2020.07
00913-0100-4978	AA-L4B	2020.07
E877039	Ae	2019.11.18

E877139	Ae	2019.11.18
Description SharpEye 40/40-DNV	Aa	
Extract SharpEye 40/40-DNV	Aa	
Description 975-DNV	Aa	
Extract 975-DNV	Aa	
00813-0100-4976	BA-MR	
00813-0100-4975	BA -HR	
00813-0100-4978	BA -UF	
00813-0100-4977	BA -UR	
Description SharpEye 975-DNV	Aa	
Extract SharpEye 975-DNV	Aa	

Tests carried out

- IEC 60092-504:2016
- IEC 60533:2015
- EN 54-10:2002 including A1:2005

Marking of product

For identification to this type examination certificate the products shall be marked with:

- Manufacturer's name
- Type designation with device type
- Serial Number
- Mark of Conformity

END OF CERTIFICATE