Amendment on 29 June 2026
Resolved by Technical Committee on 29 January 2026

Arrangement Requirements for Combined Fire Detectors in Ro-ro Spaces and Special Category Spaces of Ro-ro Passenger Ships

Object of Amendment

Guidance for the Survey and Construction of Passenger Ships

Reason for Amendment

At the 108th session of the IMO Maritime Safety Committee (MSC108) held in May 2024, amendments to chapter II-2 of SOLAS and the Fire Safety Systems Code (FSS Code) concerning additional fire safety measures for ro-ro spaces and special category spaces (vehicle spaces accessible to passengers and vehicles) on ro-ro passenger ships were adopted as resolution MSC.550(108) and resolution MSC.555(108). These resolutions include requirements for the installation of combined smoke and heat detectors, a new type of fire detector, (hereinafter referred to as "combined fire detectors") as part of the additional fire safety measures required for ro-ro passenger ships. The Society has already incorporated these requirements into its Rules.

Subsequently, at the 11th session of the IMO Sub-Committee on Ship Systems and Equipment (SSE11) held in February 2025, the clarification of the specific arrangements of combined fire detectors specified in paragraph 2.4.2.2 of Chapter 9 of the FSS Code was proposed: 2.4.2.2 specifies the maximum spacing between detector centres, the maximum floor area per detector and the maximum distance from bulkheads.

As a result of its discussion, the SSE agreed on a unified interpretation (UI) regarding two arrangement methods for combined fire detectors based on maximum spacing and maximum floor area, and this UI was approved as IMO circular MSC.1/Circ.1695 at the 110th session of the IMO Maritime Safety Committee (MSC110) held in June 2025.

Accordingly, relevant requirements are amended in accordance with MSC.1/Circ.1695.

Outline of the Amendment

Adds reference examples of arrangements considered acceptable for combined detectors.

Effective Date and Application

Effective date of this amendment is 1 July 2026.

ID:DX25-18

Amended-Original Requirements Comparison Table (Arrangement Requirements for Combined Fire Detectors in Ro-ro Spaces and Special Category Spaces of Ro-ro Passenger Ships)

<table>
<tr><th>Amended</th><th>Original</th><th>Remarks</th></tr>
<tr><td>

Annex 7-1 INTERPRETATION OF PROVISION OF CHAPTER II-2, *SOLAS* CONVENTION ON PASSENGER SHIPS

2 INTERPRETATION OF PROVISION OF FIRE SAFETY SYSTEMS CODE

2.1 Interpretation

Table 7-1-B1 Interpretations of FSS Code

<table>
<tr><th>Number</th><th>FSS Code</th><th>Interpretations</th></tr>
<tr><td colspan="3">(Omitted)</td></tr>
<tr><td>FSS 9.2.4.2.2 & Table 9.1</td><td>The maximum spacing of detectors shall be in accordance with the table below*:</td><td>*:
The arrangement of combined smoke and heat detectors may be based on either (1) or (2) (See MSC.1/Circ.1695):
(1) Arrangement based on the maximum permissible centre-to-centre distance of 9 m (See Fig. 7-1-B3(1)).
(2) Arrangement based on the maximum permissible floor area of 74 m^2 (See Fig. 7-1-B3(2)).</td></tr>
<tr><td>FSS 9.2.4.2.3</td><td>Detectors in stairways shall be located at least at the top level of the stair and at every second level beneath.</td><td>Detectors provided at inside the stairway enclosures are, in principle, to be installed on the ceiling of the upper deck of the two decks which are connected by the stairs (See Fig. 7-1-B~~3~~4(1)). However, in cases where the stairway enclosure is continuous throughout the all decks, one detector is to comply with the requirements specified in 9.2.4.2.3 and to be located at every intervals not exceeding 11 m (See Fig. 7-1-B~~3~~4(2)).</td></tr>
<tr><td colspan="3">(Omitted)</td></tr>
<tr><td>FSS 11.2.1</td><td>Any required low-location lighting systems* shall be approved by the Administration based on the guidelines developed by the Organization, or to an international standard acceptable to the Organization.</td><td>*: Reference is made to Annex 7-3 - GUIDELINES FOR EVALUATION, TESTING AND APPLICATION OF LOW-LOCATION LIGHTING (hereinafter referred to as “LLL”) ON PASSENGER SHIPS (IMO Resolution</td></tr>
</table>

</td><td>

Annex 7-1 INTERPRETATION OF PROVISION OF CHAPTER II-2, *SOLAS* CONVENTION ON PASSENGER SHIPS

2 INTERPRETATION OF PROVISION OF FIRE SAFETY SYSTEMS CODE

2.1 Interpretation

</td><td>

The table reflects the revised version.

Update figure numbers.

Update figure numbers.

</td></tr>
</table>

Amended-Original Requirements Comparison Table (Arrangement Requirements for Combined Fire Detectors in Ro-ro Spaces and Special Category Spaces of Ro-ro Passenger Ships)

Amended	Original	Remarks
	A752(18)). Furthermore, the requirement for electric LLL is to comply with the follows; (1) The requirement for the electric power supply of emergency electric power source is to comply with paragraph **2.3, Part 6 of the Rules**. (2) The power supply circuit to the LLL are to be arranged such that a single fault in the circuit does not result in the complete loss of the lighting in any fire zone and a fire in one fire zone does not result in loss of the lighting in any other fire zone. For this purpose, the power supply circuits are to be used the fire resistant cables complying with IEC Publication 331 or may supply by the independent batteries which located adequate place and can supply for LLL for at least 60 *minutes*. (3) Single lights and lighting assemblies are to be designed or arranged so that any single fault or failure in a light or lighting assembly, other than a short circuit, will not result in non visible area exceeding 1*m* in continuous lighting. (4) Lighting fixtures and assemblies are to be flame retardant as a minimum, have an ingress protection of at least *IP55* and are to meet the type test requirements as specified in **UR E10**. (5) The LLL system is to be capable of being manually activated by a single action from the continuously manned central control station. However it may be acceptable by continuously operating or be switched on automatically, e.g. by the presence of smoke within the space(s) being served. (6) The electric LLL systems are to achieve the following minimum luminance: (a) For any planar source:- 10cd/m^2 from the active parts in a continuous line of 15*mm* minimum width; (b) For any point source:- 35*mcd* in the typical track directions of approach and viewing which is to be considered; (i) For sources which are required to be viewed	

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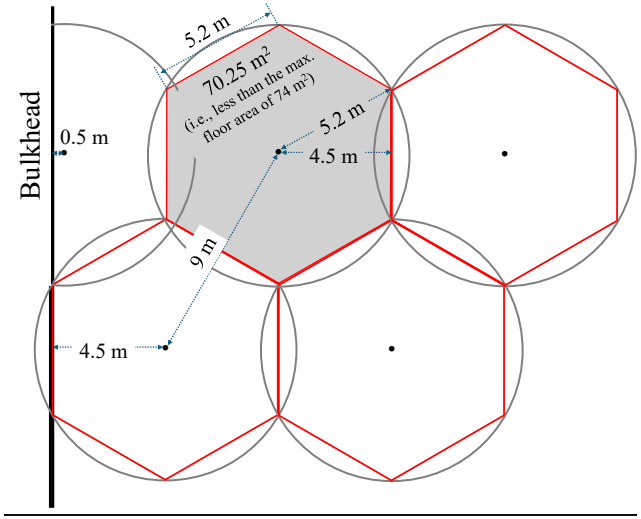
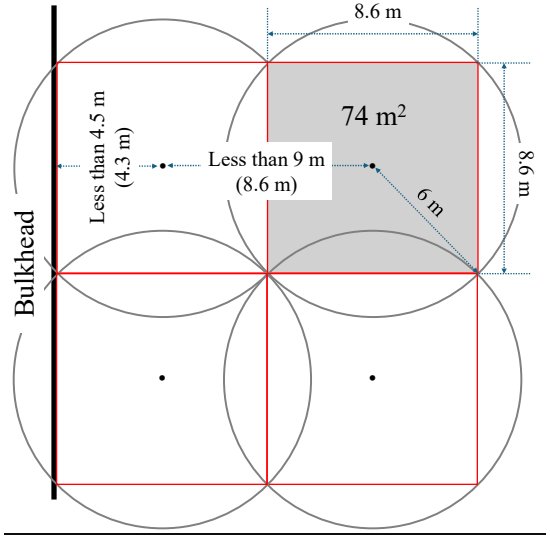
Amended	Original	Remarks
	from a horizontal position, i.e. deck mounted or horizontally bulkhead mounted fittings, within a 60 degrees cone having its centre located 30 degrees from the horizontal mounting surface of the point source and in line with the track direction. (see **Fig. 7-1-B~~45~~(1)**) (ii) For sources which are required to be viewed vertically, i.e. the vertical LLL marking up to the door handles, within a 60 degrees cone having its centre located perpendicular to the mounting service of the point source. (see **Fig. 7-1-B~~45~~(2)**) Spacing between sources is not to exceed 300*mm*. (7) The lights or lighting assemblies are to be continuous except as interrupted by constructional constraints, such as corridors or cabin doors etc. and are to provide a visible delineation along the escape route and, where applicable, are to lead to the exit door handles. Interruption of the LLL system, due to constructional constraints is not to exceed 2*metres*. (8) The lighting is to be provided on at least one side of the corridor or stairway. In corridors and stairways, in excess of 2*meters* width, lighting is to be provided on both sides. (9) In corridors the lighting is to be installed either on the bulkhead within 300*mm* from the deck or on the deck within 150*mm* from the bulkhead. (10) The lighting in stairways is to be installed within 300*mm* above the steps in order to be easily identified from either above or below the stairways. (11) The condition of the LLL system and its power source(s) is to be verified every 5 *years*.	Update figure numbers. Update figure numbers.
(Omitted)		

Amended-Original Requirements Comparison Table (Arrangement Requirements for Combined Fire Detectors in Ro-ro Spaces and Special Category Spaces of Ro-ro Passenger Ships)

Amended	Original	Remarks
2.2 Figures and Tables Referred to in Interpretation of FSS Code	**2.2 Figures and Tables Referred to in Interpretation of FSS Code**	
Fig. 7-1-B3 Arrangement of Combined Smoke and Heat Detectors (FSS 9.2.4.2.2)  (1) Solution 1  (2) Solution 2		(Newly added)
Fig. 7-1-B4 Arrangements of Fire Detectors within Stairway Enclosures (FSS 9.2.4.2.3) (Omitted)	Fig. 7-1-B3 Arrangements of Fire Detectors within Stairway Enclosures (FSS 9.2.4.2.3) (Omitted)	Update figure numbers.
Fig. 7-1-B5 Location for Measuring Luminance of Powered LLL (FSS 11.2.1.1) (Omitted)	Fig. 7-1-B4 Location for Measuring Luminance of Powered LLL (FSS 11.2.1.1) (Omitted)	Update figure numbers.
EFFECTIVE DATE AND APPLICATION **1.** The effective date of the amendments is 1 July 2026.		