

Amendment 2021 – SBF 110:8

Rules for fire alarm

This amendment is a correction of SBF 110:8 and are valid from 2021-01-01. Amendments are marked with a line in the margin.

In the event of any discrepancy between the Swedish original version and the English translation, the former shall prevail.

6.6 Alarm signalling

6.6.2 Marking of alarm devices

Comment added

- 6.6.2.1** Alarm devices shall be equipped with the sign *BRANDLARM [FIRE ALARM]* and text that describes expected actions when alarm devices are activated. The sign is sited on or next to the alarm device. If all text due to a shortage of space does not fit on ceiling-sited alarm devices, descriptive action text may be disregarded, and the alarm device equipped only with the text *BRANDLARM [FIRE ALARM]*.

Comment:

This does not apply to alarm device according to 6.6.1.1, that is only to be marked BRANDLARM [FIRE ALARM].

6.6.3 Acoustic alarm devices intended for evacuation alarms

Reworded.

- 6.6.3.7** The sound level of the signal for evacuation alarms where there are people shall not be more than 115 dB(A).

14 Fire extinguishing systems

Complete chapter rewritten.

14.1 General

The system can be used for the activation of various kinds of fire extinguishing systems, such as:

- Gas extinguishing systems and carbon dioxide fire extinguishing systems
- Water sprinkler systems (pre-action installations) and water spray systems
- Residential sprinkler systems
- Water mist systems, foam fire extinguishing systems and other types of fire extinguishing systems

Connection of fire extinguishing systems may not entail an increased risk of faults or incorrect function in the system.

The fire extinguishing systems are presupposed to fulfil relevant guidelines and standards, including SBF 500, SBF 501, SBF 503, SBF 115 and SBF 120. Requirements stated in these guidelines and standards shall be followed and this chapter only states supplementary requirements.

A consultation with the authorised installation company or another installer of fire extinguishing system shall always be done before design to clarify interfaces, control signals and responsibility relationships.

14.2 Water sprinkler, water mist and residential sprinkler systems

14.2.1

Alarm pressure controls or flow controls shall be used as alarm sensors.

The connection to the fire alarm system shall take place from the alarm sensor and constitute an own detection zone (see clause 6.3.1.10).

14.2.2

Other alarm signals from the sprinkler system may be connected to system after consent by the specifier. Connection shall in such cases constitutes its own detection zone so that the alarm as per clause 14.2.1 is not obstructed.

14.3 Gaseous extinguishing systems

14.3.1

Activation of gaseous extinguishing systems

14.3.1.1

Both manual and automatic gaseous extinguishing systems shall be activated by a control unit and delay device (ECD) and shall be designed according to SBF 500.

14.3.1.2

Design of the control and activation system for gas extinguishing systems can be divided into different types:

Type 1: Automatic activation from control and indicating equipment as per SBF 110 through a separate control unit and delay device (ECD)

Type 2: Automatic activation from control and indicating equipment as per SBF 110 with integrated control unit and delay device (ECD)

Type 3: Only manual activation from a separate control unit and delay device (ECD)

Type 1	Type 2	Type 3
Automatic installation CIE sends activation signal to a separate ECD. ECD sends signal for triggered and fault back to CIE.	Automatic installation Control and indicating equipment and ECD integrated in the same unit.	Manual installation. ECD sends signal for triggered and fault back to control and indicating equipment or another manned location.

Figure 14.3.1.2 Type of activation of fire extinguishing system

- 14.3.1.3 Installation of ECD with associated functions shall be done as per any of the following alternatives:
 Type 1 by authorised installation company for the fire extinguishing system or by the authorised installation company for fire alarms
 Type 2 by the authorised installation company for fire alarms
 Type 3 by authorised installation company for the fire extinguishing system or by the authorised installation company for fire alarms
- 14.3.1.4 ECD shall be monitored by a detector from the fire alarm system.
- 14.3.1.5 Release of gaseous extinguishing system and fault signal from ECD shall always be transmitted to the fire alarm system and constitute an own zone (see clause 6.3.1.10).
- 14.3.1.6 Other signals from gaseous extinguishing system may be connected to the fire alarm system. The signal may not obstruct alarm signal according to 14.3.1.5.

14.3.2 Control outputs

- 14.3.2.1 Activations that are required for holding the extinguishing media or otherwise retain the effect of the extinguishing media during the required time may take place through control outputs in CIE alternatively control outputs in ECD.

Comment:

Examples of controls to take into account are fan stop, closure of fire dampers, machine stop, door closure or stop of processes.

14.3.3 Detection system

- 14.3.3.1 Detection shall take place as quickly as possible. Normally, some kind of smoke detector or aspirating smoke detector should therefore be used. Detector type shall always be chosen based on the current risk situation and environment. In the selection of detector type, sources of false alarms shall always be taken into account, also refer to clauses 6.4 and Appendix G.

Examples of suitable detector types:

Skyddat utrymme	Detektortyp
Telecommunication room	✓ Aspirating smoke detectors ✓ Smoke detectors
Computer room	✓ Aspirating smoke detectors ✓ Smoke detectors
Switchgear room	✓ Aspirating smoke detectors ✓ Smoke detectors
Transformer room	✓ Smoke detectors ✓ Aspirating smoke detectors
Hydraulic room	✓ Flame detectors ✓ Heat detectors ✓ Smoke detectors
Archive (storage of documents, objects)	✓ Aspirating smoke detectors ✓ Smoke detectors
Rolling mill	✓ Flame detectors ✓ Heat detectors
Control room process industry	✓ Smoke detectors ✓ Aspirating smoke detectors
Motor testing room	✓ Flame detectors ✓ Heat detectors ✓ Smoke detectors
Oil cellar	✓ Flame detectors ✓ Heat detectors ✓ Smoke detectors

Table 14.3.3.1 Example of type of detectors for protected areas

- 14.3.3.2 All detectors that control activation of fire extinguishing systems shall be marked with *STYR SLÄCKANLÄGGNING [CONTROL EXTINGUISHING SYSTEM]*.
- 14.3.3.3 Detectors that monitor ECD may for two-detection zone dependency be connected to one of the detection zones that monitor the fire extinguishing area but may not be connected to the detection zone that constitutes the ECD connection to the control and indicating equipment.

14.3.4 Activation conditions

- 14.3.4.1 Signal for activation to the ECD can be designed as one- or two-detector dependency (or detection zone dependency). If smoke detectors or aspirating smoke detectors are used for the activation of the system, the system should be designed as two-detector/two-detection zone dependency.

In some cases, two-detector dependency (or two-detection zone dependency) can entail a delay in activation of the suppression media that entails greater impact by the fire. The selection of activation systems should always take place in consultation with the orderer/specifier and rapid activation should be balanced with the risk of unnecessary releases of extinguishing media.

- 14.3.4.2 Two-detector/two-detection zone dependency, see clause 6.12.
- 14.3.4.3 In one-detector or one-detection zone dependency, all required control outputs shall be activated by the first reacting detector.

14.3.5 Manual call point

For activation system Type 2 the requirement for red manual call point in clause 6.5.8.1 may be disregarded on condition that the CIE only monitors the fire extinguishing area and the ECD.