# Facilities Standards & Guidelines

## C.25 Laser Safety Interlocks & Alarms

Revision 1

Issue Date: 08/29/2022, Revised 03/29/2024



BAE SYSTEMS

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# Section 1 – Summary

1.1 This standard defines acceptable forms of interlocks for laser applications used throughout BAE Interlocking the laser operation through switches ensures personal aren't inadvertently exposed to lasers.

# Section 2 – Specific Design Requirements

## 2.1 General

2.1.1 Typically, lasers are operated within dedicated laboratories. Only qualified personnel are permitted to operate tests with lasers.

2.1.2 Some laser laboratories have a decided control room, while other are in a standalone room.

2.1.3 Interlocks shall be installed at the entrance to the laboratories so that laser operation stops if the entry door is opened.

2.1.4 Laser operation can be stopped by either turning off the line voltage (hard stop) or be sending a disable signal to the laser's control board (soft stop) if applicable. If line voltage is interlocked to turn off, the power source shall be clearly labeled stating this functionality.

## 2.2 Installation Details

2.2.1 Physical limit switches shall be used to monitor if entry door is open or closed. Typically, 120V is passed through the limit switch and then an interposing relay/contactor to control the laser's operation. If a disabled signal (soft stop) is used, 120V is not permitted. for the control voltage. Acceptable laser control board voltage should be coordinated for operation. No magnetic switches are permitted.

2.2.2 Laser Interlock system shall have an "enable" and "disable" push button within the space, so that the system can be controlled locally.

2.2.3 A red status light should be mounted at the entrance to the laser lab (and control room where applicable), so that its apparent when the system is in operation.

## 2.3 Additional Laser safety information

2.3.1 ANSI Z136.8

2.3.2 ANSI Z136.1

### Supplemental Document Information

The following resource documents should be referenced for execution of the standards and guidelines described above.

| Document Number | Document Title |
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## Revision Log

| Revision | Release Date | Description of Changes |
|---|---|---|
| 0 | 02/28/2022 | Initial Release |
| 1 | 03/29/2024 | Branding update to BAE Systems |