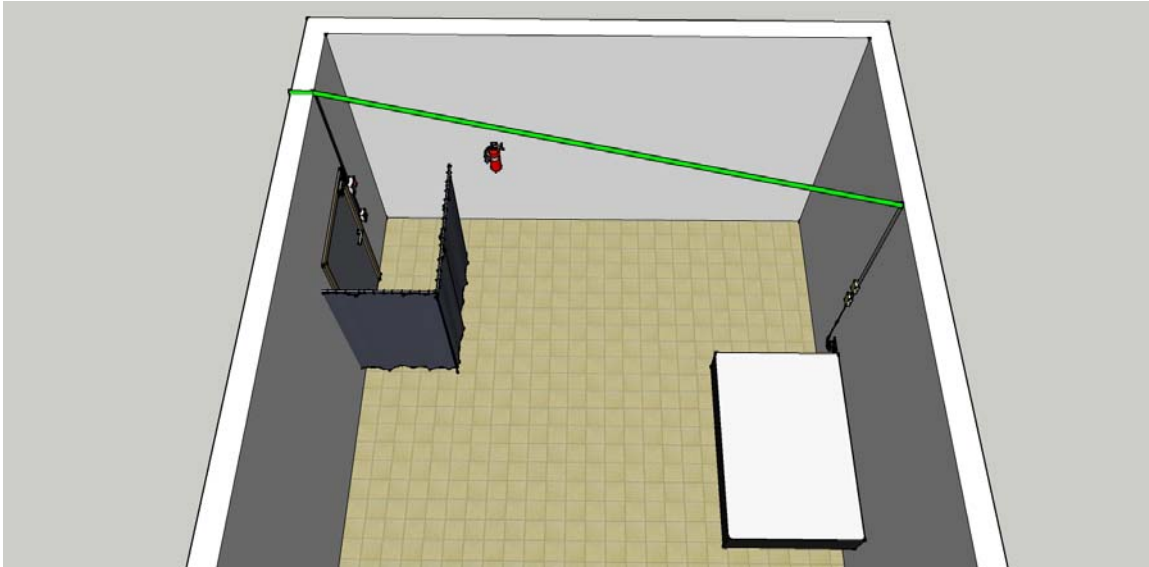


Laser Safety Systems

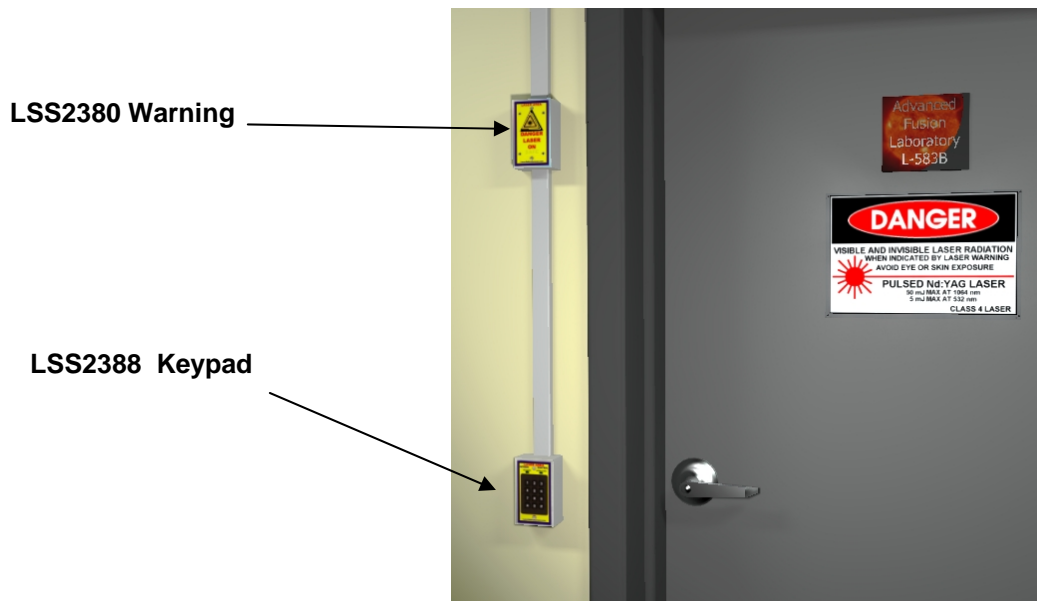


**Your Engineered Laser
Safety Solution**

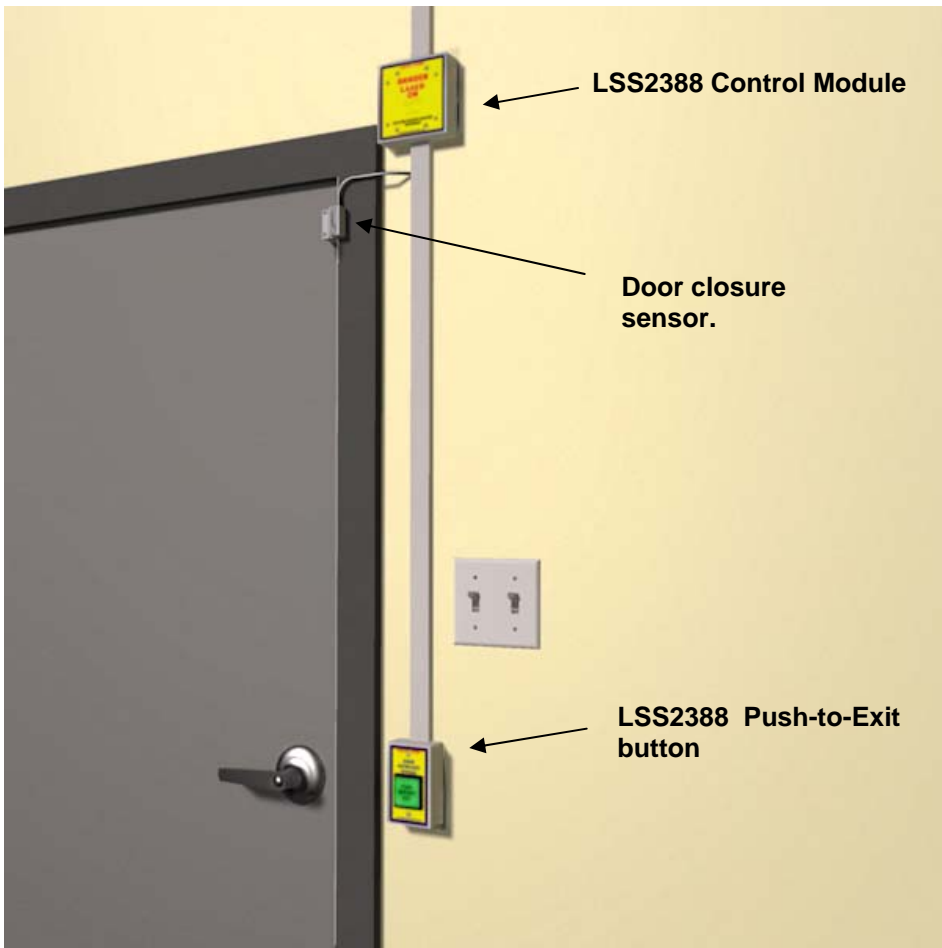
The following plan describes a typical room using the LSS2388 Defeatable Access Control kit and common control components.



The image above shows a top view of a typical lab. The green line above the room represents the cable run of the eight conductor interlock cable provided with your system. Notice how the line starts at the front door and ends at the laser table. This “start” to “end” run will be evident when reviewing the final schematic. Note: When using a defeatable access controller, the laser is NOT secured during authorized entrance or egress. If there is a potential for exposure over MPE, we recommend a curtain labyrinth to prevent exposure to personnel in hall during door opening.



The front door is shown from the exterior. The LSS2380 warning module is the starting point of our system. The warning shows the armed or safe status of the room using our LED backlit hidden text display. Authorized laser workers can bypass the door interlock by entering a pass code in the keypad, or by swiping a key card if our card reader option has been purchased.

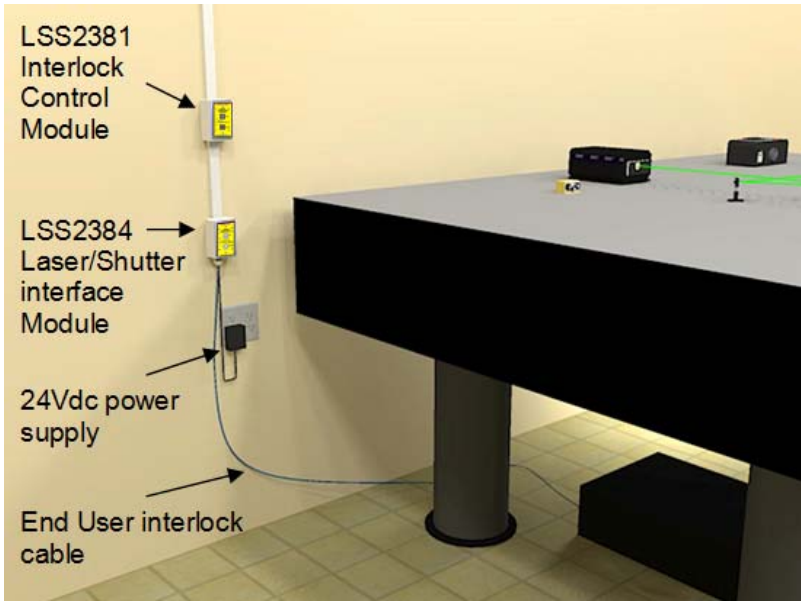


LSS2388 Control Module

Door closure sensor.

LSS2388 Push-to-Exit button

Interior exit is shown above. The door components are installed as described in the LSS2388 User Manual. The LED backlit push-to-exit module permits egress without tripping the door interlock. The LSS2388 main control module pictured above shows the interlock state and access state using our LED backlit hidden text display. An audible signal is also produced during access. This feature may be programmed off by the client if audible tones are a disturbance.



LSS2381 Interlock Control Module

LSS2384 Laser/Shutter interface Module

24Vdc power supply

End User interlock cable

The LSS2381 interlock control is placed at any convenient location in the room. Here we have shown it installed near the table to allow the user to arm and disarm the entire system from the

table. The LSS2384 laser/shutter interface module should be installed near the laser table and within 5 feet of a power outlet. The LSS2384 accepts system power from a 24VDC Wall Wart power supply and allows connection to the laser or shutter provided by the end user. The LSS-2384 can interlock two lasers or shutters.

This installation plan shows a surface track and surface boxes for installation. Laser Safety Systems carries a selection of Hellermann-Tyton low-voltage surface mount track, boxes, and interconnects. These components are completely compatible with a laser cleanroom environment and use a simple “peel and stick” double sided permanent tape. Using this material, the entire installation can be made without drilling any holes in the walls. Some drilling will be required at the door casing to mount the door limit switch; unless a 3M VHB tape or equivalent is used to mount the switch and magnet.

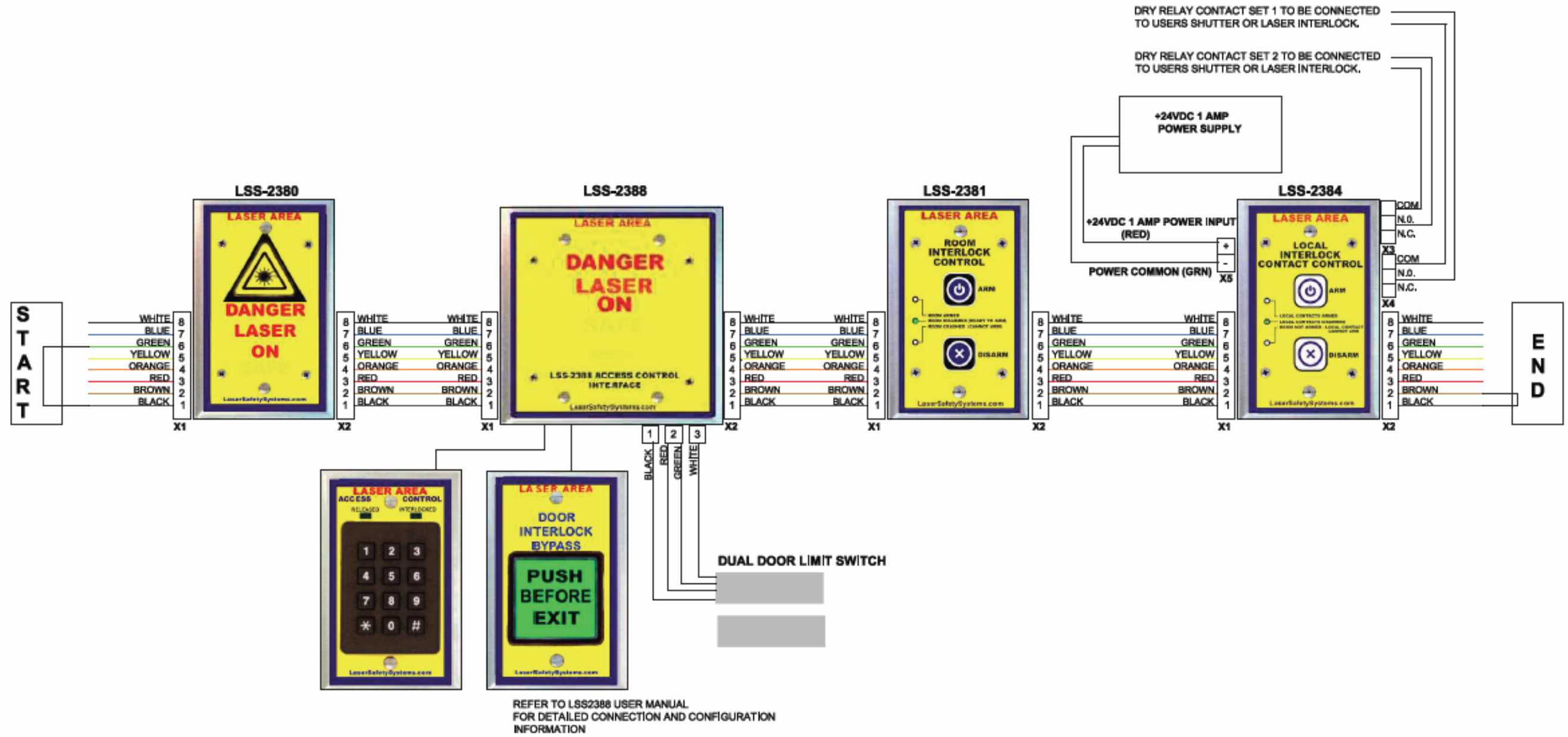
The modules can also be mounted using conventional metal boxes and conduit, or they can be dropped into the wall using “drop-in” boxes. The cable provided with the system is UL Plenum rated, so it can be run within walls or above a false drop ceiling without conduit.

The following schematics represent the entire electrical connection requirement for the system described in this proposal. Details of individual modules are shown in the installation and operation manual. These particular manuals can be downloaded from:

http://www.lasersafety.com/files/LSS2388_Installation_and_users_manual.pdf

http://www.lasersafety.com/files/Laser_Safety_Systems_user_manual.pdf

TYPICAL DEFEATABLE INTERLOCK CONTROL SYSTEM SCHEMATIC



Note: Modules can be placed in any order desired as long as the start and end are terminated. The schematic layout shown above is only a suggestion.