X-Ray Dual-Interlock Switch

TSG Catalog #503003

Designed specifically to meet C.D.R.H. requirements for dual-safety interlock devices. This switch assembly incorporates a solid steel plunger with high-current capacity spring-tensioned copper contacts which can be used to comply with the U.S. federal requirement for “physical disconnection of the energy supply circuit” for x-ray safety interlocks. It can be mounted to an x-ray cabinet and door to provide the required disconnection independent of any moving parts other than the door itself. The combination of the high-current plunger contact and the built-in miniature micro-switches meet the “dual-interlock” requirement in one convenient package.

Electrical connections are made to the “primary contacts” via ring-type terminals and #10-32 machine screws. The micro-switch connections are made using quick-connect terminals.

DIMENSIONS & WEIGHT: 6.25” Wide x 5.0” High x 1.25” Deep, approx. 1lbs. (See second page for dimensional drawing).

FINISH: Machined nylon with clear plexi-glass access covers.

ELECTRICAL: Micro-switches: 11 amp. 250 vac; Primary contact: 35 amp. 250 vac.

TSG

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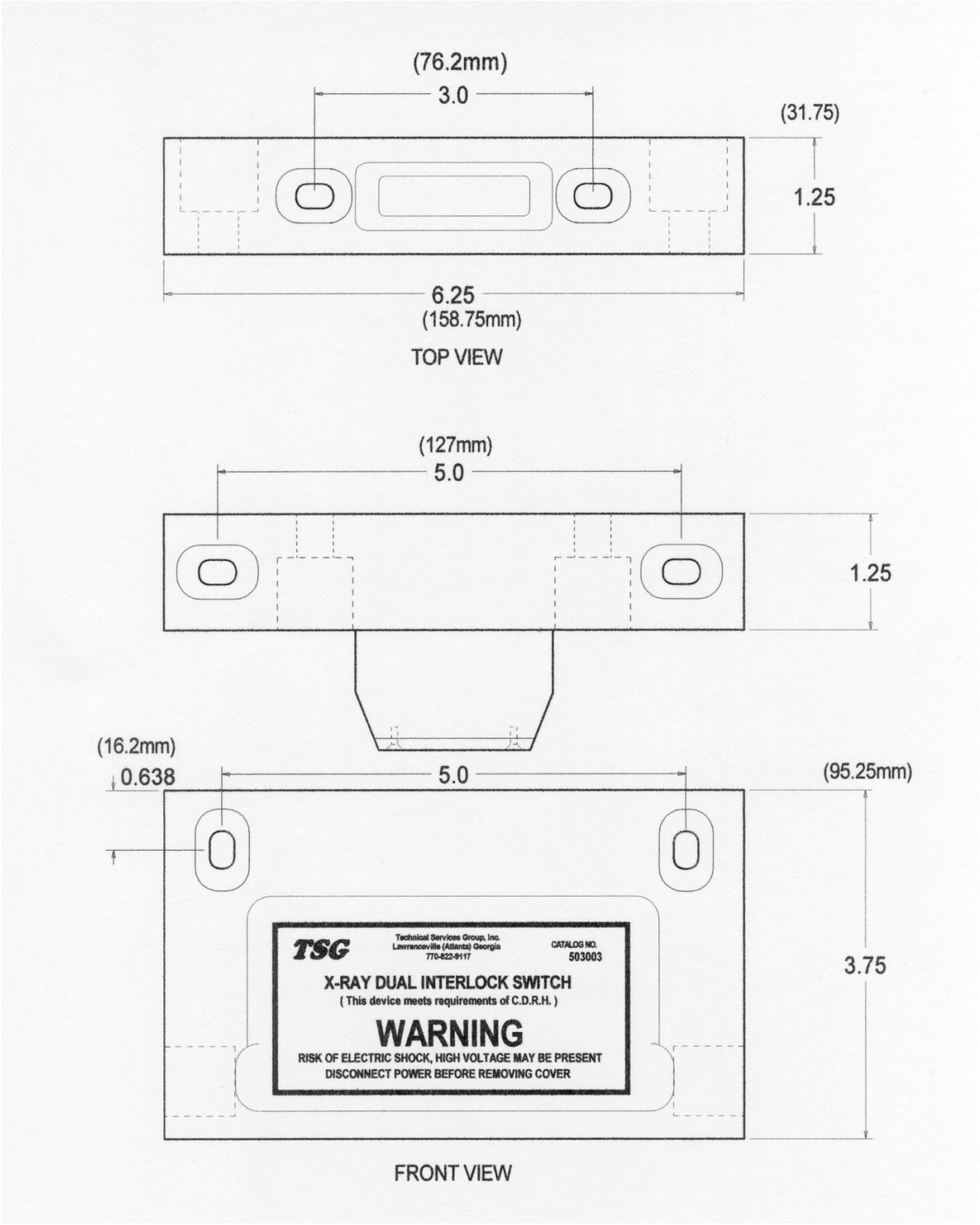
Catalog #503003, C.D.R.H. Switch, Dimensions



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Installation Guide

This is for reference information concerning the installation of the TSG 503003 CDRH type interlock switch. This device is a 2 part switch block that when one part of the switch is removed, there is an open circuit to the x-ray generating supply.

The switch assembly is designed to accommodate ¼" socket head cap screw with a small pattern flat washer for bolting to door and opening. Some applications use the 6 mm socket head cap screw and washer for mounting. The mounting holes are slotted to allow for some adjustment after installation. The installer needs to pay close attention to the alignment of the two parts. Although the switch block is very durable design, a motorized door can do significant damage to the assembly. The dimensions on the previous page will be very close to actual build.

This switch can be mounted on a variety of door configurations. When mounting on a hinged door it is necessary to mount the switch at the shortest angle of approach as possible.

When closing the switch, it is necessary to provide adequate pressure to ensure the contacts are able to carry the current necessary to be supplied to the x-ray generator. If this switch is not carrying the mains current of the generator, it is still necessary to provide a latch that will hold the spring loaded contacts to be in compression.

The intention of the two micro type switches is to provide a logic circuit that can be used to insure that the "safety" circuit is complete. The switches are usually connected in series in the case that one of the switches remains in the closed state when the other switch will still open the circuit. The switches are provided with plug on connections called spade lug. The spade lug is 3/16" connection. There is one circuit on each switch and can be used as normally open or normally closed.

When connecting the wiring be sure to allow ample space around the spring loaded connections. Do not bundle wires around these connections.

The wiring will be routed through the ½" conduit (pipe thread) access. The wiring can be routed from either or both sides. Standard conduit fittings will work well.

If there are any other questions, please feel free to contact us.

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