

SECTION 16442000
HIGH PRESSURE CONTACT SWITCHES

PART 1.03 REFERENCES

- A. UL 891, Dead-Front Switchboards
- B. UL 977, Fused Power-Circuit Devices

PART 2 PRODUCTS

2.01 MANUFACTURER

A. General Electric Company products have been used as the basis for design. Other manufacturers' products of equivalent quality, dimensions and operating features may be acceptable, at the Engineer's discretion, if they comply with all requirements specified or indicated in these Contract documents.

2.02 EQUIPMENT

A. Furnish high pressure contact switches, GE Type HPC [with] [without] ground fault option (or equal) as indicated in drawings.

2.03 COMPONENTS

Refer to Drawings for: actual layout and location of equipment and components; current ratings of devices, bus bars, and components; voltage ratings of devices, components and assemblies; and other required details.

- A. The high pressure contact switches and protection devices in this specification shall be designed and manufactured according to latest revision of the standards listed in Part 4 of this specification and shall be CSA Certified.
- B. Switches shall be UL and CSA Listed for use on any system up to 600 VAC at 60 Hz.
- C. Switches shall be rated as indicated on the drawings.
- D. Switches shall have high dielectric strength, polyester glass reinforced insulating cases for safe operation.
- E. Switches shall have butt-type contact construction with multiple, spring-loaded main arms and an arcing arm per pole for excellent current-carrying capability with high fault interrupting performance.
- F. Arc chutes shall rapidly suppress arcs and cool gases to provide quick arc interruption for extended switch life.
- G. The over-center toggle mechanism shall provide stored energy, quick-make, quick-break operation. Opening time shall be 2-1/2 cycles maximum.
- H. The switch contacts and over-center toggle mechanism shall require no maintenance.
- I. Switches shall have integrally molded interphase partitions that mesh with the switch cover to completely isolate each pole, to withstand high transient voltage.
- J. All current carrying parts shall be silver plated copper.

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K. Manual operated switches shall have a quick-make, quick-break front operated mechanism. Electric trip switches shall have a manual charging, electric trip open, quick-make quick-break, front operated mechanism, with manual override.

L. Provisions shall be provided for (3) padlocks, to lock the switch in the OFF position.

M. Switches shall have defeatable, front access, coin-proof interlocks. Interlocks shall prevent opening the switch door when the switch is ON and prevent turning the switch ON when the door is open.

N. There shall be external indication that switch is ON or OFF.

O. Switch handle shall remain stationary when tripped.

2.04 ACCESSORIES

A. UL listed accessories shall be available as follows:

1. Electric trip for use on [120]{240}{480} VAC control power, to provide for remote tripping of the switch.
2. Blown-fuse Protector, to provide single-phase protection by tripping the switch when a fuse blows, or when the switch is closed with a blown or missing fuse.
3. Provision for up to three key interlocks, for mechanical interlocking schemes with other switches or equipment.
4. Auxiliary Switches with [1]{2}{3}{4} single-pole, double-throw elements, to provide remote indication of the switch main contact position.
5. Integral, self-powered ground-fault protection with mechanical ground-fault indicator, test function, current sensors, and adjustable pick-up and delay with inverse and constant time characteristics. The ground fault system shall be self-powered and shall only require external control power for test purposes. The ground fault relay shall have an internal memory circuit that sums intermittent arcing ground faults, until the summed ground fault current reaches the trip setting and opens the switch.