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Elevator Control Switches (ECS)

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General Information

Type ECS Switches

Description

Siemens Elevator Control Switch (ECS) is designed to interrupt incoming AC power upon receiving a signal from a Fire Alarm Control Panel (FACP) for both cable and hydraulic elevators.

The Elevator Control Switch comes completely assembled for quick installation, eliminating the labor and time needed to assemble individual components. The smart numbering system helps ensure the switch includes the correct components and eliminates the need for ordering accessories.

Siemens' ECS supports fused systems requiring selective coordination code compliance. The ECS achieves the code requirement by utilizing Class J fuses which coordinate with any upstream fuse by simply using a 2:1 line-side to load-side fuse ratio.

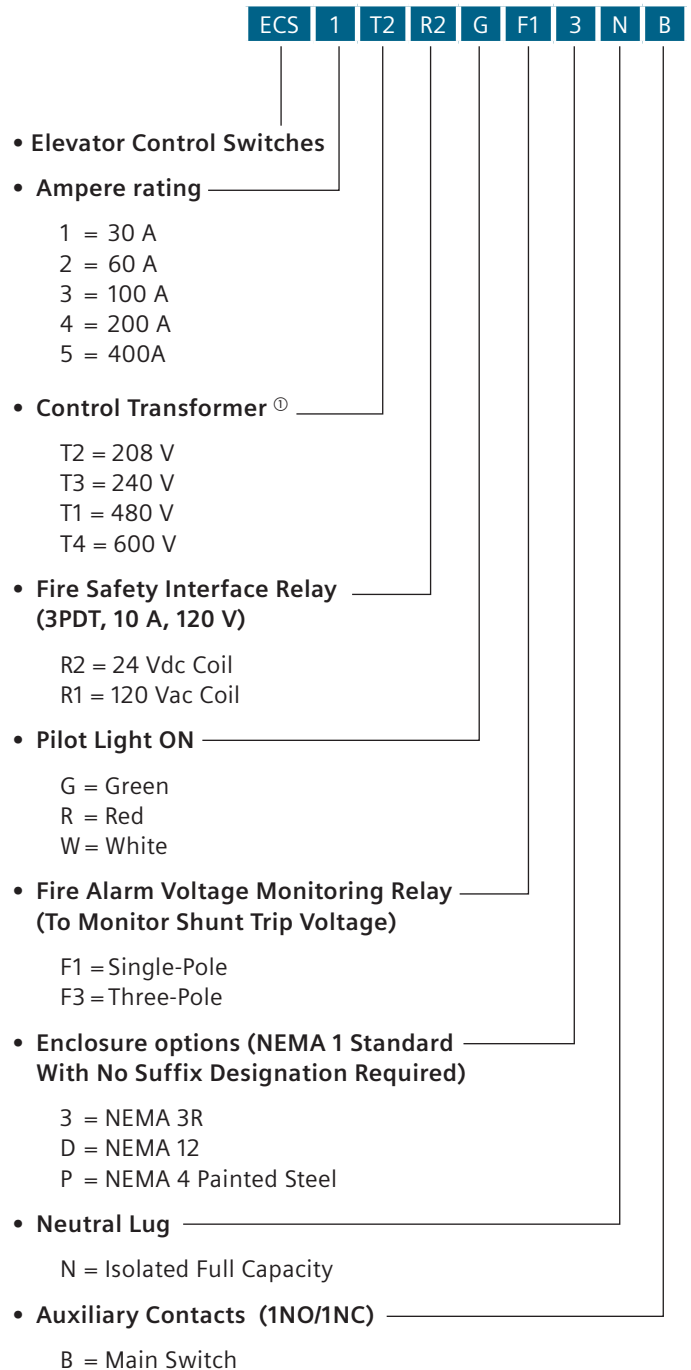
Agency Information

- UL 98 Enclosed and Dead Front Switch – Guide 96NK3917, File E25506



Catalog Number System

The following catalog numbering system defines an Elevator Control Switch construction.



① 100 VA with Primary and Secondary fusing (120 V Secondary)

Type ECS Elevator Control Switches

Features and ordering information

Standard Features

- 30-400 A, 600 Vac, 3-phase fused power switch
- 200 kA RMS assembly short-circuit current rating
- Shunt trip 120 V
- Control power terminal block
- Ground lug compliant with the National Electric Code
- Class J fuse mounting only (Class J fuses not included)
- Key to test switch
- Pilot light – "ON"
- Mechanically interlocked auxiliary contact for hydraulic elevators with battery backup (5 A, 120 Vac rated)
- Handle designed for hook stick operation

Optional Features

- Control power transformer with fuses and blocks
- Fire safety interface relay
- Isolated neutral lug (oversized 200% rated neutral option available where required by excessive non-linear loads)
- Fire Alarm Voltage Monitoring Relay (to monitor Shunt Trip Voltage)
- NEMA 3R, 4, and 12 enclosures available
- OSHPD Special Seismic Certification Preapproval (OSP)

Other Options

Optional features include contact closure, i.e. battery lowering/door opening system. The B option offers support for the states of Arizona, Oregon, and Texas requirements to prevent "nuisance" fire alarms by over-riding the "Control Power not Available" signal when the ECS is manually (intentionally) turned off, and distinctive signaling for ON-OFF-TRIPPED conditions (Option B).

All ECS configurations are UL-Listed and designed for safe access by qualified personnel. To help ensure safe maintenance, when the switch is in the "OFF" position and the enclosure door is open, no energized parts are exposed. For proper maintenance safety precautions, always turn off incoming power to the Siemens Elevator Control elevator switch when possible. When servicing any live electrical equipment, always wear appropriate personal protective equipment.

Shunt-Trip Operation

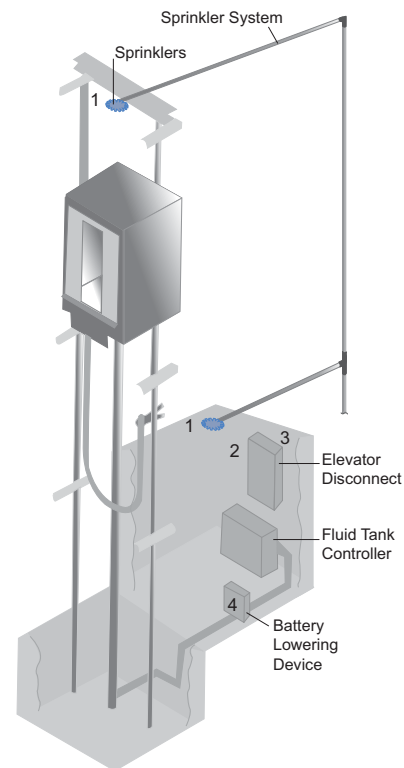
The disconnect means is a shunt-trip operated switch. The control power source for the shunt-trip operator is a 120 Vac supply originating in the Siemens Elevator Control switch. Current to the shunt-trip device is switched by an isolation relay, which is in turn controlled by the FACP.

The control signal may be either 24 Vdc from the FACP (Option R2) or a "dry" contact closure in the FACP (Option R1). In the case of a "dry" contact closure, the sensing voltage is 120 Vac originating in the Siemens Elevator Control switch.

A key test switch (Option K) is included for testing the shunt-trip circuit.

Supervisory Indication

An optional separate relay can be specified to monitor the 120 Vac control power source in the Siemens Elevator Control switch. This relay (Option F1 or F3) is used to provide supervisory indication of "Control Power Available" as required by NFPA 72 Section 6.15.4.4.



1 NFPA 13 requires sprinklers in elevator shaft (with exceptions) and in control room.

2 ASME A17.1 (Safety Code for Elevators and Escalators) requires shutdown of power to the elevator prior to the release

3 NFPA 72 (Fire Alarm Code) requires control circuit for elevator shutdown to be monitored for the loss of voltage.

4 NEC requires standby power systems such as a battery lowering device to be disconnected by an auxiliary

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