

ENGINEERED SWITCHES

FUSIBLE SHUNT TRIP

DISCONNECT SWITCHES



Ferraz Shawmut’s Engineered Switches offer modular industrial control panels featuring a fusible shunt trip to allow for remote disconnection. An array of available options allows for maximum functionality to be built into a single compact panel.

Panels built for elevator applications feature control transformers (fusing both primary and secondary sides), a fire safety interface relay with a fire alarm voltage monitoring relay and mechanically interlocked auxiliary contacts.

Use of Ferraz Shawmut’s Amp-Trap 2000® AJT Class J fuses permits easy selectivity coordination, while providing the panel and its components with superior current limitation and the ability to withstand high fault conditions. AJT fuses provide added system reliability since no maintenance or periodic testing is required as with other electromechanical overcurrent devices.

HIGHLIGHTS:

- 3-Pole Fused Switch
- 120 VAC Shunt Trip
- Class J fuse block (fuses not included)
- Ground Lug as per NEC
- Control Power brought to terminals
- Modular components
- NEMA 1 Industrial
- Enclosure Standard

APPLICATIONS:

- Elevators
- Building emergency systems
- Data processing rooms
- Miscellaneous fusible shunt trip applications

OPTIONAL FEATURES:

- Industrial Control circuit transformer
- Primary (208, 240, 480 or 600 VAC)
- Fire safety relay for control interface (3PDT Relay, choice of Coil Voltage: 120 VAC, 24 VDC or 24VAC)
- Oil-tight Key Switch to test 2 position selector switch.
- Oil-tight Power enabled power light (choice of colors: Red, Green, White or Yellow)
- Isolated neutral lug – 100%. Oversized 200% for excessive Non-Linear loads.
- Auxiliary and Alarm Contacts are both Form C contacts. The Auxiliary contacts change state when the switch is in the on position. Alarm contacts change state when the switch is in the tripped position. The Alarm contact is located in place of the second auxiliary contact.
- NEMA 12, 3R, 4 or 4X enclosure available.

FEATURES/BENEFITS:

- Fused switch – provides high current limitation and short circuit withstand
- Padlockable handle – allows panel to be locked with switch in the off position ensuring load side power isolation during servicing
- Shunt trip – allows for remote tripping of the main line power prior to the application of water in elevator
- Sprinkler system applications

RECOMMENDED FUSE USAGE:

ES Series.....use with **AJT, A4J, H5J**

Ratings

- 600 VAC: 30A, 60A,
- 100A, 200A &400A
- Withstand rating: 200kA I.R.

Approvals

- UL 1087 Molded-Case Switch
- UL 50
- NEMA 1, 12, 3R, 4, 4x
- UL512
- UL/cUL Listed Control Panel



FUSIBLE SHUNT TRIP

DISCONNECT SWITCHES

An example of an Engineered Switch Catalog number is listed below with the ordering process detail.

ES2T20R1KRN2A2

Select fusible shunt trip switch:

Ampacity Rating	Catalog Number
30	ES3
60	ES6
100	ES1
200	ES2
400	ES4

Select options:

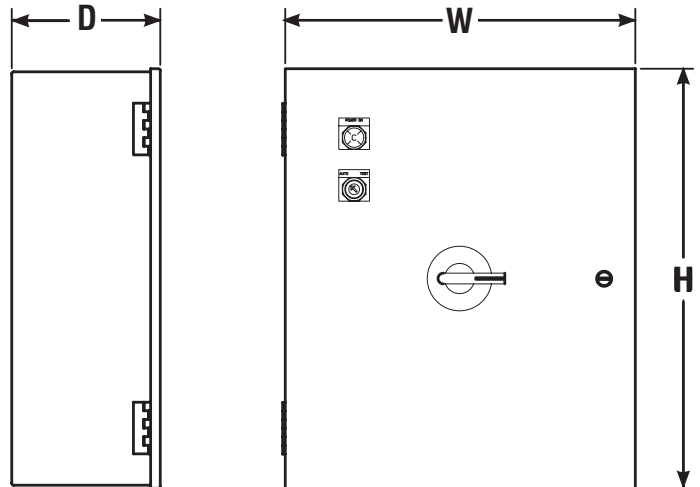
Option No.	Description	Catalog No.
1	Control Transformer 208VAC to 120VAC 240VAC to 120VAC 480VAC to 120VAC 600VAC to 120VAC	T20 T24 T48 T60
2	Fire Safety Relay 3PDT with Voltage Monitoring 120VAC coil 24VDC coil 24VAC coil	R1 R2 R3
3	Keyswitch Key to test switch, 120V, with legend plate	K
4	Pilot light – power enabled Red Green White Yellow	R G W Y
5	Isolated Neutral Lug 30-60A (for 200% oversize use N1) 100A (for 200% oversize use N2) 200A (for 200% oversize use N4) 400A (for 200% oversize use two N4)	N6 N1 N2 N4
6	Mechanical Interlocked Auxiliary Contacts 1 Form C auxiliary contact 2 Form C auxiliary contacts 1 Form C auxiliary contacts and 1 Form C auxiliary alarm contact	A B C
7	Enclosure options NEMA 1 standard NEMA 12 NEMA 3R NEMA 4 NEMA 4X	- 2 3 4 X

(No Neutral)

VOLTAGE	30 AMP			60 AMP			100 AMP			200 AMP			400 AMP			
	FLA %	150	175	225	150	175	225	150	175	225	150	175	225	150	175	225
208 VAC 3-φ	5	5	3	10	10	10	20	15	15	40	40	30	75	75	60	
240 VAC 3-φ	5	5	5	10	10	10	20	20	15	50	40	30	125	75	75	
480 VAC 3-φ	10	10	10	30	25	20	50	40	30	100	75	75	250	150	150	
600 VAC 3-φ	15	15	10	30	30	25	60	50	40	125	100	100	250	200	200	

- 150...Light duty maximum allowable motor horsepower based on Class J fuses
- 175...General duty maximum allowable motor horsepower based on Class J fuses
- 225...Heavy duty maximum allowable motor horsepower based on Class J fuses

Horsepower values in the above table are intended for estimating the size of the switch only. For light duty applications size switch for a minimum of 1.5 times the motors full load amps. Medium or General duty applications size for a minimum of 1.75 times the full load amps of the motor. For Heavy Duty applications use a maximum of 2.25 times the full load amps of the motor.



VOLTAGE	30 AMP		60 AMP		100 AMP		200 AMP		400 AMP	
	H x W x D	H x W x D	H x W x D	H x W x D	H x W x D	H x W x D	H x W x D	H x W x D	H x W x D	
208 VAC 3-φ	24 x 20 x 8	24 x 20 x 8	24 x 20 x 8	24 x 20 x 8	30 x 24 x 8	36 x 30 x 8				
240 VAC 3-φ	24 x 20 x 8	24 x 20 x 8	24 x 20 x 8	24 x 20 x 8	30 x 24 x 8	36 x 30 x 8				
480 VAC 3-φ	24 x 20 x 8	24 x 20 x 8	24 x 20 x 8	24 x 20 x 8	30 x 24 x 8	36 x 30 x 8				
600 VAC 3-φ	24 x 20 x 8	24 x 20 x 8	24 x 20 x 8	24 x 20 x 8	30 x 24 x 8	36 x 30 x 8				
Neutral Lug Size	350 - #6	350 - #6	350 - #6	350 - #6	500 - #4	600 - #2				

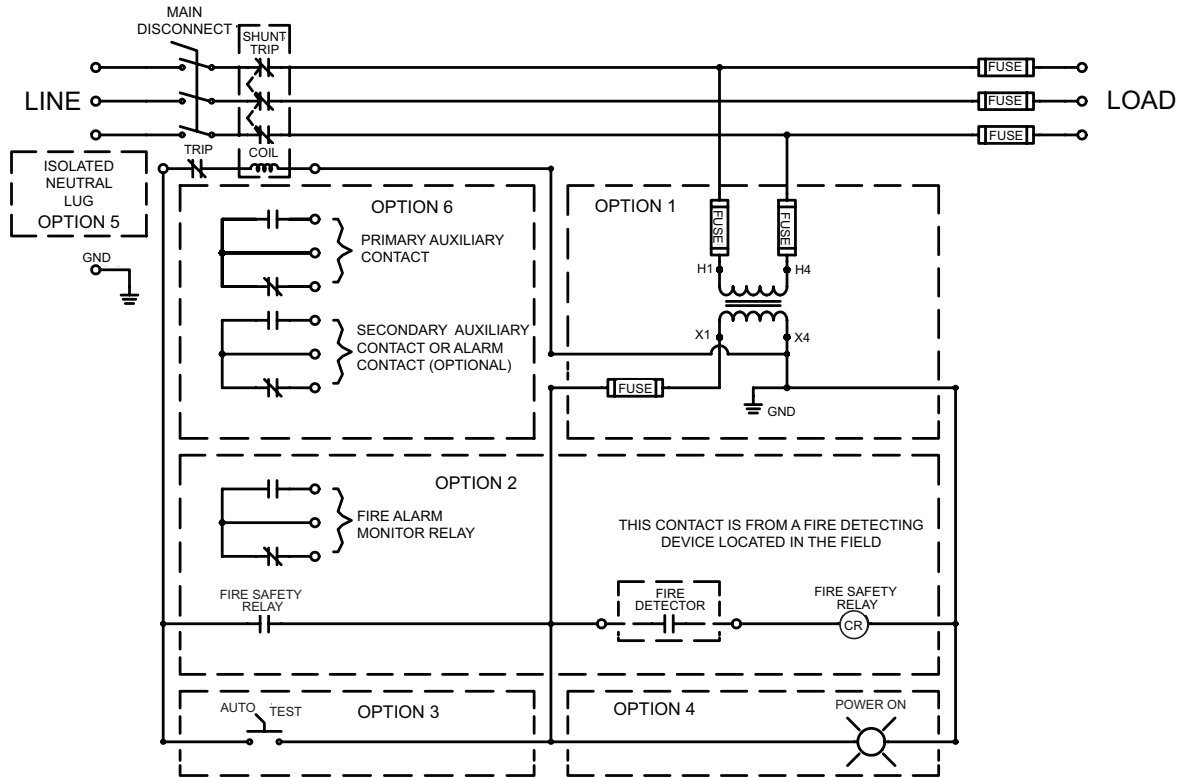
Notes:

- Options must be selected in above order for part number to be valid.
- Elevator panels must include a control transformer, fire safety relay with voltage monitoring and mechanical interlocked auxiliary contact.
- Options 1, 2, and 6 are required. Options 3, 4, 5, and 7 are optional.

FUSIBLE SHUNT TRIP

DISCONNECT SWITCHES

FUSIBLE SHUNT TRIP SWITCH 120 VAC Fire Safety Control Interface



FUSIBLE SHUNT TRIP SWITCH 24 VDC Fire Safety Control Interface

