

# Fusible Shunt Trip

Mersen'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 Mersen'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.

## 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

## Highlights:

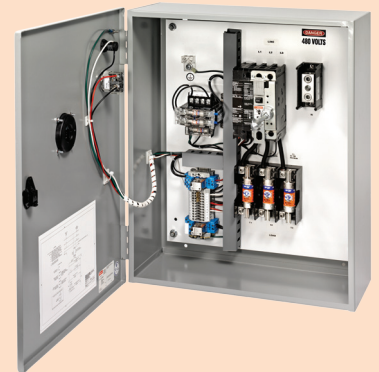
- 3-Pole fused switch
- 120 VAC Shunt Trip
- Class J fuse block (fuses not included)
- Ground lug as per NEC
- Control power brought to terminals
- Modular components
- NEMA 1 Industrial enclosure standard

## 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.

## Applications:

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



## Ratings:

- Volts** : 600VAC  
**Amps** : 30A, 60A, 100A, 200A & 400A

## Approvals:

- UL 489 molded-case switch (file number E68312)
- UL 50
- NEMA 1, 12, 3R, 4, 4X
- UL 4248
- UL / cUL listed control panel

## Recommended Fuse Usage:

- ES Series - Use with AJT, A4J, HSJ

# Fusible Shunt Trip

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

## ES2T20R1KRN2A2

Select fusible shunt trip switch:

Ampere Rating (A)	Catalog Number
30	ES3
60	ES6
100	ES1
200	ES2
400	ES4

Fusible Shunt Trip Switch Maximum Horsepower Ratings based on Motor Load																	
Ampere Rating (A)		30			60			100			200			400			
FLA %		150	175	225	150	175	225	150	175	225	150	175	225	150	175	225	
VOLTAGE	208 VAC 3 (l)	5	5	3	10	10	10	20	15	15	40	40	30	75	75	60	
	240 VAC 3 (l)	5	5	5	10	10	10	20	20	15	50	40	30	125	75	75	
	480 VAC 3 (l)	10	10	10	30	25	20	50	40	30	100	75	75	250	150	150	
	600 VAC 2 (l)	15	15	10	30	30	25	60	50	40	125	100	100	250	200	200	

Select options:

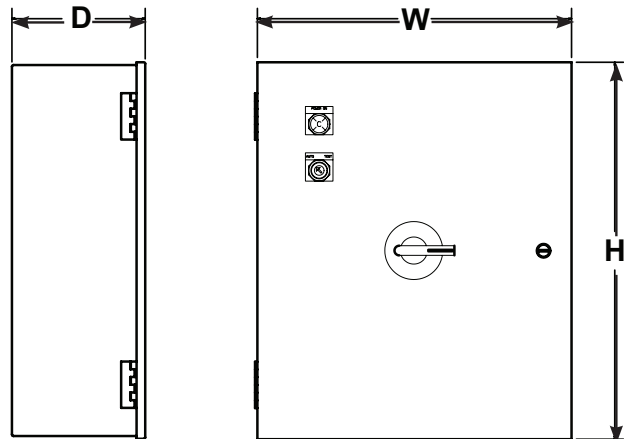
Option No.	Description	Catalog No.
<b>Control Transformer</b>		
1 (Req'd)	208VAC to 120VAC	T20
	240VAC to 120VAC	T24
	480VAC to 120VAC	T48
	600VAC to 120VAC	T60
<b>Fire Safety Relay 3PDT with Voltage Monitoring</b>		
2 (Req'd)	120VAC coil	R1
	24VDC coil	R2
	24VAC coil	R3
<b>Keyswitch</b>		
3	Key to test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

**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 motor's 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.



Fusible Shunt Trip Switch Dimensions and Optional Neutral Lug Sizes					
Ampere Rating (A)	30	60	100	200	400
Voltage	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 (l)	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 (l)	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 (l)	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 (l)	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	500 - #4	600 - #2

Note: Options must be selected in above order for part number to be valid.

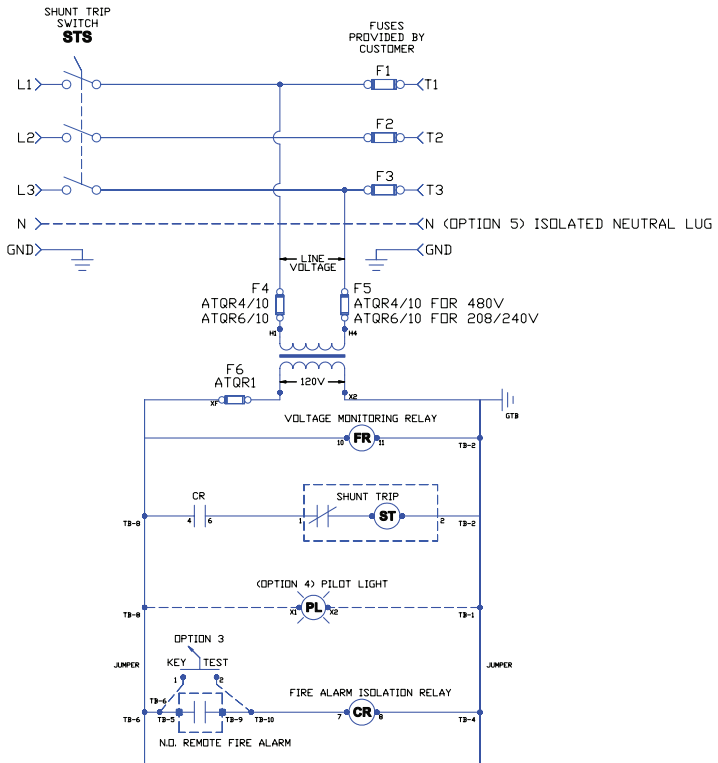
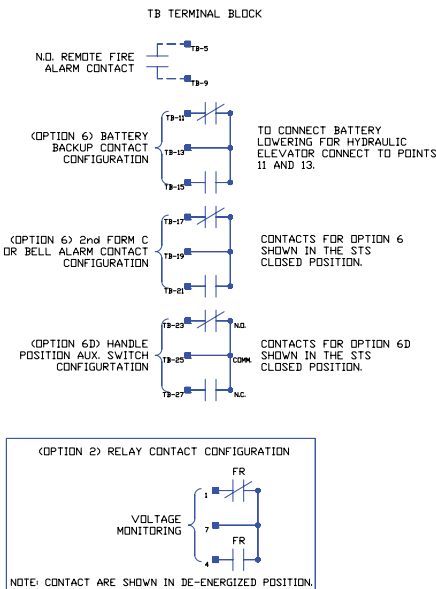
# Fusible Shunt Trip

## Fusible Shunt Trip Switch 120 VAC Fire Safety Control Interface

### -LEGEND-

**N.O./R.F.A. CONTACT:** CONTACT SUPPLIED FROM THE FIRE ALARM SYSTEM TO INITIATE THE SHUNT TRIP.  
**SHUNT TRIP:** SOLENOID THAT REMOTELY TRIPS THE SWITCH AND IS ACTIVATED BY THE CLOSING OF THE FIRE ALARM CONTACT OR KEY TEST SWITCH.  
**CR:** CONTROL RELAY USED TO ISOLATE THE REMOTE CONTACT FROM THE SHUNT TRIP.  
**FR:** RELAY USED TO MONITOR THE VOLTAGE IN THE SWITCH FROM A REMOTE LOCATION.  
**PL:** PILOT LIGHT THAT INDICATES CONTROL VOLTAGE ON THE OUTSIDE OF THE ENCLOSURE.

- INTERNAL CONNECTION POINTS
- CUSTOMER CONNECTION POINTS



## Fusible Shunt Trip Switch 24 VAC/DC Fire Safety Control Interface

### -LEGEND-

**N.O./R.F.A. CONTACT:** CONTACT SUPPLIED FROM THE FIRE ALARM SYSTEM TO INITIATE THE SHUNT TRIP.  
**SHUNT TRIP:** SOLENOID THAT REMOTELY TRIPS THE SWITCH AND IS ACTIVATED BY THE CLOSING OF THE FIRE ALARM CONTACT OR KEY TEST SWITCH.  
**CR:** CONTROL RELAY USED TO ISOLATE THE REMOTE CONTACT FROM THE SHUNT TRIP.  
**FR:** RELAY USED TO MONITOR THE VOLTAGE IN THE SWITCH FROM A REMOTE LOCATION.  
**PL:** PILOT LIGHT THAT INDICATES CONTROL VOLTAGE ON THE OUTSIDE OF THE ENCLOSURE.

- INTERNAL CONNECTION POINTS
- CUSTOMER CONNECTION POINTS

