



**TS 840 - 400 AMP  
TRANSFER SWITCH**



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## Model Series TS 840 • 100- 800 Amp TS840 AUTOMATIC TRANSFER SWITCHES

THOMSON TECHNOLOGY TS 840 AUTOMATIC TRANSFER SWITCHES OFFER THE FOLLOWING OUTSTANDING FEATURES:

### Enclosed Contact Power Switching Units

- **fully enclosed** silver alloy contacts provide **high withstand** rating & **100% continuous** current rating.
- **3 cycle short circuit current withstand.**
- **completely separate** utility and generator side power switching units.
- power switching units can incorporate **overcurrent protection**, allowing cost savings in upstream devices.
- **not damaged if manually switched** while in service.

### Reliable Motor-Operated Transfer Mechanism

- **heavy duty** brushless gearmotor and operating mechanism provide mechanical interlocking and extreme long life.
- **safe manual operation** permits operation under adverse conditions.

### Superior Serviceability

- all mechanical and control devices are **visible and readily accessible.**
- all control wires and power busses are **front-accessible** - there are no wires or connections which require removal of the transfer switch from its enclosure for servicing.

### Control Features

- **TSC 80** microprocessor based controller.
- **NEMA 3R rated** enclosure for outdoor weatherproof applications
- **isolation plug** permits disconnecting control circuits from all power sources.

### Quality Assurance

- ISO 9001 Registered

**Seismic Certification:** TS 840 ATS is certified for installation and operation per the following requirements:

- IBC 2006 – Section 13, Occupancy Category IV
- ASCE7-05 Region 3 (minimum  $S_s=342\%$ )

### Safety Standards

- UL 1008 Automatic Transfer Switches for use in Emergency Systems
- CSA C22.2 No. 178 Automatic Transfer Switches



A Regal Brand

**REGAL**

## GENERAL DESCRIPTION

### STANDARD ATS

**Thomson Technology TS 840** series of Automatic Transfer Switches employ two mechanically interlocked enclosed contact power switching units and a microprocessor based controller to automatically transfer system load to a generator supply in the event of a utility supply failure. System load is automatically re-transferred back to the utility supply following restoration of the utility power source to within normal operating limits.

**TS 840** Automatic Transfer Switches are certified for use in emergency power system applications for light industrial, telecom and agricultural markets that require automatic standby power.

The standard **TS 840** Automatic Transfer Switch is rated for 100% system load and requires upstream overcurrent protection.

All **TS 840** series automatic transfer switch models have been 3 cycle short circuit withstand current tested in accordance with UL 1008 & CSA 22.2 No. 178. All **TS 840** automatic transfer switches are supplied with NEMA 3R outdoor weatherproof enclosures as standard.

The **TS 840** series automatic transfer switches use a type **TSC 80** microprocessor based controller which provides all necessary control functions for fully automatic operation. Refer to separate literature for additional information on the **TSC 80** transfer controller.

The standard **TS 840** series automatic transfer switch provides an open transition “break-before-make” transfer system with neutral position delay to ensure adequate voltage decay to prevent out of phase transfers.

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### SERVICE ENTRANCE ATS

**Thomson Technology TS 840 Service Entrance Automatic Transfer Switches** incorporate an isolating mechanism and over current protection on the utility supply thereby removing the need to have a separate, upstream circuit breaker/disconnect switch. This unique **Service Entrance Rated Automatic Transfer Switch** design is incorporated into a standard sized automatic transfer switch enclosure.

Standard features of the **Service Entrance Rated Automatic Transfer Switch** include a NEMA 3R rated enclosure, pad-lockable Service Disconnect control switch and status indications.

**TS 840 SE** Service disconnect operation is very simple and ensures a high level of safety for system maintenance personnel when performed. Normal operation and performance of the automatic transfer switch is unaffected by the Service Entrance ATS feature.

**TS 840 SE** Automatic Transfer Switches are certified to the UL 1008 Standard as well as complying with NEC and NFPA requirements. **TS 840 SE** Automatic Transfer Switches are for use in Emergency Power System applications.

All **TS 840 SE** transfer switch models have been 3 cycle withstand current tested in accordance with UL 1008 which allows high current ratings and use of non-series rated upstream protective devices. The **TS 840 SE** Automatic Transfer Switch requires upstream over current protection on the generator supply.

The **TS 840 SE** series transfer switches use a type **TSC 80** microprocessor based controller.

## WITHSTAND CURRENT RATINGS (ALL MODELS)

BASIC MODEL	MAXIMUM VOLTAGE	RATED CURRENT (AMPS)	WITHSTAND CURRENT RATING AMPS (RMS)		
			With Upstream Circuit Breaker Protection		With Upstream Fuse Protection
			@240V	@ 240V	FUSE TYPE
TS 84xA - 0100	240	100	65,000	100,000	T,J
TS 84xA - 0150	240	150	65,000	100,000	T,J
TS 84xA - 0200	240	200	65,000	100,000	T,J
TS 84xA - 0250	240	250	65,000	100,000	T,J
TS 84xA - 0400	240	400	65,000	100,000	T,J
TS 84xA - 0600	240	600	65,000	100,000	T,J
TS 84xA - 0800	240	800	65,000	100,000	Consult Factory

## ENCLOSURE DIMENSIONS/CABLE TERMINALS

(NEMA 3R, ASA 61 GRAY)

MODEL AMPERAGE	NUMBER OF POLES	DIMENSIONS Inches (mm) <sup>1</sup>			SHIPPING WEIGHT lbs (KG)	TERMINAL RATING <sup>3</sup>	
		HEIGHT	WIDTH	DEPTH		QTY PER PHASE	RANGE <sup>4</sup>
100A	2,3	31.1 (790)	22.3 (566)	14.0 (356)	143 (65)	1	#14 - 1/0
100A w/Dist <sup>2</sup>	2,3	43.1 (1095)	34.3 (871)	13.0 (330)	233 (106)	1	#14 - 1/0
150A	2,3	31.1 (790)	22.3 (566)	14.0 (356)	143 (65)	1	#2 - 4/0
150A w/Dist <sup>2</sup>	2,3	43.1 (1095)	34.3 (871)	13.0 (330)	233 (106)	1	#2 - 4/0
200A	2,3	31.1 (790)	22.3 (566)	14.0 (356)	143 (65)	1	#6 - 350 MCM
200A w/Dist <sup>2</sup>	2,3	43.1 (1095)	34.3 (871)	13.0 (330)	237 (108)	1	#6 - 350 MCM
250A	2,3	35.1 (892)	27.3 (693)	14.0 (356)	172 (78)	1	#6 - 350 MCM
250A w/Dist <sup>2</sup>	2,3	43.1 (1095)	34.3 (871)	13.0 (330)	251 (114)	1	#6 - 350 MCM
400A	2,3	43.1 (1095)	34.3 (871)	13.0 (330)	227 (103)	2	2/0 - 500 MCM
400A w/Dist <sup>2</sup>	2,3	63.1 (1603)	40.8 (1036)	14.5 (368)	354 (161)	2	2/0 - 500 MCM
600A	2,3	46.1 (1171)	36.3 (922)	14.5 (368)	248 (113)	2	2/0 - 500 MCM
600A w/Dist <sup>2</sup>	2,3	63.1 (1603)	40.8 (1036)	14.5 (368)	358 (163)	2	2/0 - 500 MCM
800A	2,3	48.1 (1222)	37.8 (960)	18.0 (457)	309 (140.4)	3	2/0 - 500 MCM
800A w/Dist <sup>2</sup>	2,3	63.1 (1603)	40.8 (1036)	18.0 (457)	422 (192)	3	2/0 - 500 MCM

<sup>1</sup> Enclosure dimensions are for reference. (DO NOT USE FOR CONSTRUCTION)

<sup>2</sup> Enclosures for models with Distribution Breaker Options (Dist 2 or Dist 4)

<sup>3</sup> All cable connections suitable for copper or aluminum

<sup>4</sup> Optional terminal ratings are available in some models - Consult Thomson Technology

## STANDARD FEATURES (With TSC 80 Controller)

- Load on Utility & Load on Generator Lights
- Utility & Generator Source Available Lights
- Three Phase Voltage Sensing on Utility & Generator Sources
- Under Frequency Sensor on Generator Source
- Engine Start Delay Timer 0-60 sec.
- Engine Cooldown Delay Timer 0-30 min.
- Engine Warm-up Timer 0-60 sec.
- Neutral Position Delay 0-60 sec.
- Utility Return Timer 0-30 min.
- Engine Start Contact (10A, 120/240VAC res. Form B)
- Exercise Timer (On or Off Load, Fixed 30 min.)
- Auxiliary Contact - Utility side (10A, 120/240VAC res. Qty 1, Form C)
- Auxiliary Contact - Generator side (10A, 120/240VAC res. Qty 1, Form C)
- Local Utility Power Fail Simulation Test Pushbutton



- Provision for Remote Load Test/Peak Shave Switch Input
- NEMA 3R Enclosure
- Solid Neutral
- Storage Temperature: -20°C to 70°C (-4°F to 158°F)
- Operating Temperature: -40°C to 50°C (-40°F to 122°F)
- Humidity: 95% non-condensing, maximum

## ORDERING INFORMATION

When placing an order, specify the following 21 digit ATS MODEL CODE as per the features and application described below.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
T	S		8	4																	

### 1-3. SERIES

TS – TRANSFER SWITCH

### 4 & 5. MODEL

84 – 840 SWITCH

### 6. POLES

2 – 2 POLE  
3 – 3 POLE

### 7. CONFIGURATION TYPE

A – ATS

### 8-11. AMPERAGE

0100  
0150  
0200  
0250  
0400  
0600  
0800

### 12. APPLICATION

A – STANDARD  
B – SERVICE ENTRANCE

### 13. OPERATION TYPE

1 – OPEN TRANSITION

### 14. SAFETY STANDARD

A – UL 1008  
B – CSA C22.2. No. 178  
C – UL 1008 & CSA 178

### 15. VOLTAGE

**1Ø 3 WIRE**  
D – 120/240

**3Ø 4 WIRE**  
(GROUNDED NEUTRAL)  
E – 120/208  
G – 120/240 (DELTA)

### 16. CONTROLLER

1 – TSC 80

### 17. ENCLOSURE TYPE

D – NEMA 3R SD, ASA #61 GREY

### 18. UTILITY SWITCHING DEVICE

K – Molded Case Switch 100-800A  
M – Molded Case Switch C/W  
Ther-Mag Trip 100-200A  
N – Molded Case Switch C/W  
Electronic Trip 250-800A

### 19. GENERATOR SWITCHING DEVICE

K – Molded Case Switch 100-800A  
M – Molded Case Switch C/W  
Ther-Mag Trip 100-200A  
N – Molded Case Switch C/W  
Electronic Trip 250-800A

### 20. POWER CONNECTIONS

A – STANDARD

### 21. CONNECTION CONFIGURATION

A – STANDARD

## STOCKING MODELS

The following standard Automatic Transfer Switch models are available from stock:

Model Number	Amperage	2 Pole (Single Phase, 3 Wire with Neutral)	Standard ATS	Service Entrance Rated ATS	Voltage	TSC 80 Controller	Nema 3R Enclosure
TS842A0200A1AD1DKKAA	200A	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		120/240V	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
TS842A0200B1AD1DNKAA	200A	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	120/240V	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
TS842A0250A1AD1DKKAA	250A	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		120/240V	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
TS842A0400A1AD1DKKAA	400A	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		120/240V	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
TS842A0400B1AD1DNKAA	400A	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	120/240V	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
TS842A0600A1AD1DKKAA	600A	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		120/240V	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
TS842A0600B1AD1DNKAA	600A	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	120/240V	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

## OPTIONAL FEATURES (Specify separately from ATS MODEL CODE when ordering)

### CODE

### DESCRIPTIONS

<b>Dist 2</b>	Load Distribution Breakers (Qty 2, 200A, 2 Pole Only)
<b>Dist 4</b>	Load Distribution Breakers (Qty 4, 200A, 2 Pole Only)
<b>Dist 6</b>	Load Distribution Breakers (Qty 6, 200A, 2 Pole Only)
<b>SDM</b>	LCD Service Display Module - Displays TSC 80 Controller Settings and Timer Adjustments - Plug in Connector and Cable
<b>TS-H1</b>	Enclosure Strip Heater c/w Thermostat (120VAC External Power Source Required)
<b>TS-H2</b>	Enclosure Strip Heater c/w Thermostat (Internally Powered from ATS Load)

NOTE: Specifications subject to change without notice.

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