



# SERIES TS 910 100 - 400 AMP AUTOMATIC TRANSFER SWITCHES

RESIDENTIAL

**REGAL**®

# THOMSON POWER SYSTEMS TS 910 AUTOMATIC TRANSFER SWITCHES OFFER THE FOLLOWING:

## POWER CONTACTOR SWITCHING UNITS

- 100% Continuous Current Ratings for use with all load types
- Suitable for Copper and Aluminum power cable connections
- High Short Circuit Withstand Ratings when used with upstream molded case circuit breakers

## RELIABLE SOLENOID OPERATED TRANSFER MECHANISM

- Fast Operation allows In-Phase Power Transfer
- Electrical and Mechanical Interlocked mechanism prevents simultaneous closure of Utility and Generator sources

## SUPERIOR SERVICEABILITY

- Plug-in Control Devices allow superior field service ability
- Enclosed Power Contacts for safe operation and maintenance

## CONTROL FEATURES

- Advanced TSC 9 Series Transfer Controller with features specifically designed for Residential and Light Commercial ATS applications. User programmable timers, simple LED interface
- Outputs for Automatic Load Shed & Remote Alarming
- kW Load Shed Control (Optional) reduces costs by sizing your standby power system for prioritized loads
- Wireless Remote Alarm Messaging Module (Optional)

- Universal Generator Interface kit option allows TS 910 to be applied to multiple types of generator sets utilizing 240V remote starting control systems

## PRODUCT DATA

- 100A, 200A, 400A Models
- Service Entrance rated Models are available
- 120/240V Single Phase, 3 wire c/w Neutral
- 120/208V Three Phase, 4 wire c/w Neutral
- 2 Pole/3 Pole, 50/60hz
- Rust Resistant Aluminum Enclosures
- NEMA 3R Door for Outdoor Applications (Optional)
- Withstand Short Circuit Current Ratings up to 50kA

## QUALITY ASSURANCE

- ISO 9001 Registered Manufacturing Facilities
- Complies with:
  - NEMA & UL50
  - UL 508
  - IEEE C62.41, C37.90.1
  - FCC CFR 47 Part 15, (Subpart B) Class B
  - EN 61000 Series Electromagnetic Capability

## SAFETY STANDARDS

- UL 1008 Listed Automatic Transfer Switches for use in optional standby system

## WARRANTY

- 2 year limited warranty included

**Thomson Power System TS 910** Automatic Transfer Switches employ a power contactor switching unit with a micro-processor based controller to automatically start a generator and transfer system load to the 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. All load transfer sequences are "Open Transition" (i.e. "break-before-make") utilizing an in-phase transfer detection control sequence. All TS 910 transfer switch models have been tested in accordance with UL 1008 standards. Molded case circuit breakers or fuses with overcurrent protection are required upstream of the transfer switch. The standard TS 910 Transfer Switch is rated for 100% system load. The TS 910 Transfer Switches are also available as Service Entrance Rated devices.

The TS 910 Transfer Switches use a TSC 9 microprocessor based controller. All necessary control functions for fully automatic operation are provided. The TSC 9 controller is mounted inside the transfer switch enclosure. Operating status is provided via LED indicators visible through the front panel on NEMA 1 rated enclosures.

## STANDARD FEATURES

- Normal Operation Status LED Lights: Load on Utility & Load on Generator, Utility & Generator Source Available, Engine Start Activated, Load Shed Activated
- Diagnostic LEDs: System OK, Alarm, Wait For Transfer, Diagnostic
- USB Port Factory Programming/Diagnostic
- Single Phase and Three Phase Voltage sensing on Utility and Generator
- Generator AC frequency sensing
- Utility under voltage control set point 70% dropout (fixed)
- Generator Set points: under voltage 70% dropout (fixed), under frequency 90% pick-up (fixed)
- Engine warm-up timer (Selectable 10 sec, 30 sec, 60 sec)
- Utility return timer (Selectable 10 sec, 60 sec, 120 sec)
- Engine start timer (Selectable 3 sec, 6 sec, 10 sec)
- Engine cool down timer (Selectable 60, 120, 300 sec)
- Integrated Programmable Generator Exercise Timer with easy to configure 7, 14 or 28 day, On-load or Off-load
- Programmability, initiate pushbutton & light
- Local utility power fail simulation test pushbutton & LED, front faceplate mounted
- Engine start contact (5A, 120/240VAC resistive max.)
- Load Shed contact (5A, 120/240VAC resistive max.)
- Alarm Output (100ma, 24Vdc)



## ELECTRICAL RATINGS/ENCLOSURE DIMENSIONS/CABLE TERMINALS

MODEL	ATS TYPE	AMPERAGE	MAX VOLTAGE	POLES	SHORT CIRCUIT CURRENT <sup>3</sup>	DIMENSIONS <sup>1</sup>			SHIPPING WEIGHT lbs (kg)	TERMINAL RATING <sup>2</sup>		
						HEIGHT INCHES (mm)	WIDTH INCHES (mm)	DEPTH INCHES (mm)		QTY (PER PHASE)		RANGE
TS912A0100A	STANDARD	100A	240V	2	10kA	16 1/8" (409.6)	18 7/8" (479.4)	8 1/4" (209.6)	20 lbs (9.1)	1		#3 - 1/0
TS912A0100B	SERVICE ENTRANCE	100A	240V	2	10kA	27 1/8" (689)	18 7/8" (479.4)	8 1/4" (209.6)	30 lbs (13.6)	Gen.	1	#3 - 1/0
										Utility	1	#3 - 300 mcm
TS912A0200A	STANDARD	200A	240V	2	10kA	27 1/8" (689)	18 7/8" (479.4)	8 1/4" (209.6)	30 lbs (13.6)	1		#3/0 - 250 mcm
TS912A0200B	SERVICE ENTRANCE	200A	240V	2	10kA	32 7/8" (835)	18 7/8" (479.4)	8 1/4" (209.6)	35 lbs (15.9)	1		#3/0 - 250 mcm
TS912A0400A	STANDARD	400A	240V	2	50kA <sup>4</sup>	45 1/8" (1146.2)	24 7/8" (631.8)	11" (279.4)	70 lbs (31.8)	2		#3/0 - 250 mcm
TS912A0400B	SERVICE ENTRANCE	400A	240V	2	25kA	45 1/8" (1146.2)	24 7/8" (631.8)	11" (279.4)	80 lbs (36.3)	2		#3/0 - 250 mcm
TS913A0100A	STANDARD	100A	240V	3	22kA <sup>4</sup>	16 1/8" (409.6)	18 7/8" (479.4)	8 1/4" (209.6)	25 lbs (11.3)	1		#3 - 1/0
TS913A0100B	SERVICE ENTRANCE	100A	240V	3	10kA	27 1/8" (689)	18 7/8" (479.4)	8 1/4" (209.6)	35 lbs (15.9)	Gen.	1	#3 - 1/0
										Utility	1	#3 - 300 mcm
TS913A0200A	STANDARD	200A	240V	3	25kA <sup>4</sup>	32 7/8" (835)	18 7/8" (479.4)	8 1/4" (209.6)	35 lbs (15.9)	1		#3/0 - 250 mcm
TS913A0200B	SERVICE ENTRANCE	200A	240V	3	10kA	32 7/8" (835)	18 7/8" (479.4)	8 1/4" (209.6)	40 lbs (18.1)	1		#3/0 - 250 mcm
TS913A0400A	STANDARD	400A	240V	3	50kA <sup>4</sup>	45 1/8" (1146.2)	24 7/8" (631.8)	11" (279.4)	80 lbs (36.3)	2		#3/0 - 250 mcm
TS913A0400B	SERVICE ENTRANCE	400A	240V	3	25kA	45 1/8" (1146.2)	24 7/8" (631.8)"	11" (279.4)	90 lbs (40.8)	2		#3/0 - 250 mcm

1 Enclosure dimensions are for reference. (DO NOT USE FOR CONSTRUCTION)

2 All cable connections suitable for copper or aluminum

3 Contact factory for further information on required upstream circuit breaker protection

4 When protected by specific upstream circuit breaker, refer to TS 910/920 manual

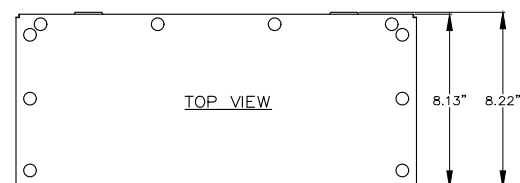
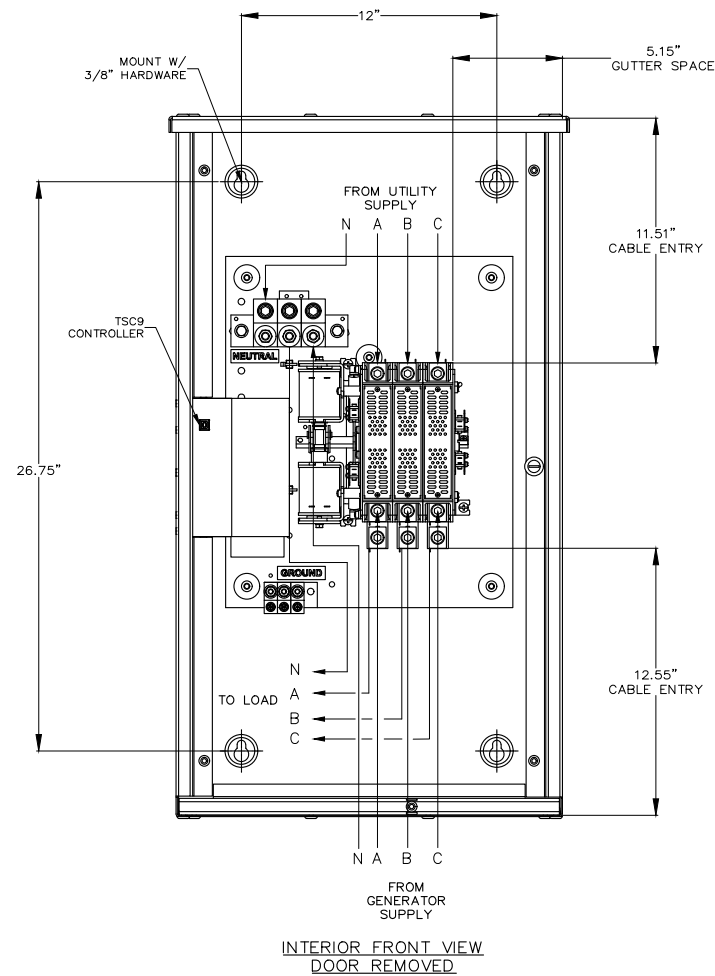
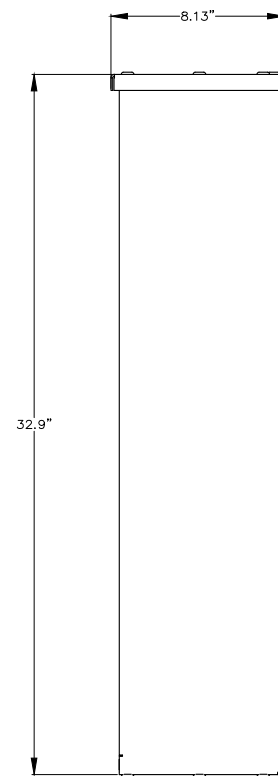
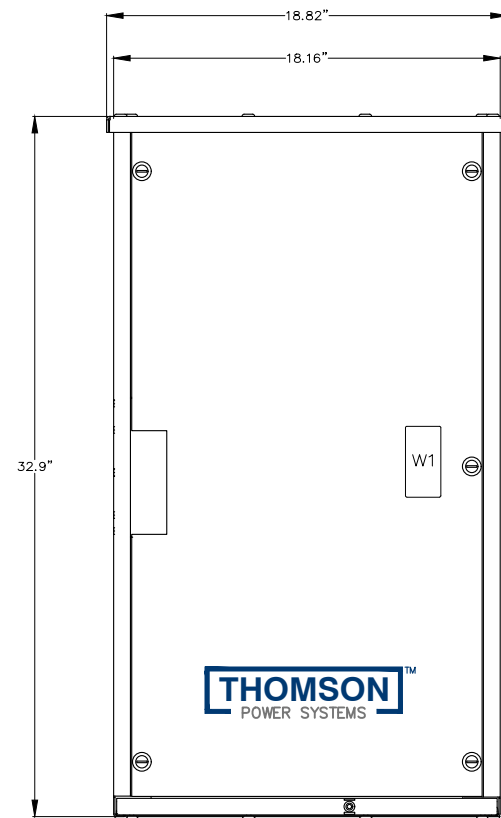
## OPTIONAL ACCESSORIES (Field Installable)

CODE	DESCRIPTION
TS910-N3R100A	NEMA 3R Door, External Door Mountable to NEMA 1 ATS Enclosure (Specify matching ATS model number)
TS910-N3R100B	
TS910-N3R200A	
TS910-N3R200B	
TS913-N3R200A	
TS913-N3R200B	
TS910-N3R400A	
TS910-N3R400B	
TS910-WMS	Wireless Remote Alarm Messaging Module
TS910-SPD1PH	Surge Protective Device, Single Phase, Class 1, 120/240V connected to Load Bus
TS910-SPD3PH	Surge Protective Device, Three Phase Class 1, 120/208V connected to Load Bus

CODE	DESCRIPTION
TS910-UGI	Universal Generator Interface Start Kit
TS910-HTR	Enclosure Heater, 120VAC Fused, supplied from ATS Load Bus
TS910-KWLS1PH2	kW Load Shed Control output contact, Single Phase, One Stage, 0-200A Current Transformers connected to ATS Load Bus
TS910-KWLS1PH4	kW Load Shed Control output contact, Single Phase, One Stage, 0-400A Current Transformers connected to ATS Load Bus
TS910-KWLS3PH2	kW Load Shed Control output contact, Three Phase, One Stage, 0-200A Current Transformers connected to ATS Load Bus
TS910-KWLS3PH4	kW Load Shed Control output contact, Three Phase, One Stage, 0-400A Current Transformers connected to ATS Load Bus

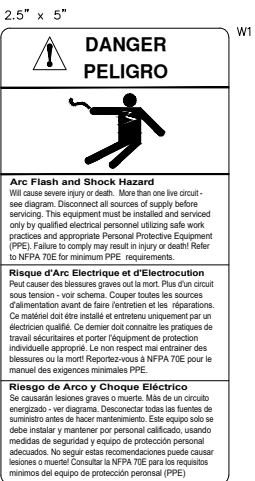
## ORDERING INFORMATION

All Automatic Transfer Switch models listed in the Electrical Rating chart above are available from our stocking warehouses. Please specify 11 digit model code (e.g. TS912A0100A) plus code number for required optional items. (e.g. TS910-UGI)



CONNECTION DATA		
200A ATS	UTILITY (SRC1)	1C, #6-250MCM Cu/Al PER PHASE
	GENERATOR (SRC2)	1C, #6-250MCM Cu/Al PER PHASE
	LOAD	1C, #6-250MCM Cu/Al PER PHASE
	NEUTRAL	1C, #6-250MCM Cu/Al PER SOURCE
	GROUND	1C, #14-2/0 Cu/Al

GENERAL NOTES	
1	POWER SWITCHING DEVICES ARE MECHANICALLY INTERLOCKED SO THAT ONLY ONE DEVICE IS CLOSED AT A TIME
2	FOR 1 PHASE, 3 WIRE SOLID NEUTRAL APPLICATION, CONNECT PHASE TO 'A' & 'B', OMIT 'C'
3	FOR 1 PHASE, 3 WIRE SWITCHED NEUTRAL APPLICATION, CONNECT PHASE TO 'A' & 'B', CONNECT NEUTRAL TO 'C'
4	TYPE OF ENCLOSURE : ALUMINIUM
5	BOTTOM & SIDE CABLE ACCESS, MAX 300MCM
6	TOP CABLE ACCESS, MAX 3/0
7	ELECTRICAL KNOCKOUTS FOR 1", 1½ 2" & 2½" CONDUIT



QTY = 1

FOR REVIEW ONLY

<input type="checkbox"/> APPROVED FOR CONSTRUCTION <input type="checkbox"/> MASTER COPY <input type="checkbox"/> REFERENCE COPY _____ OF _____ <input type="checkbox"/> MULTIPLE UNIT WORK ORDER <input type="checkbox"/> RELEASED FOR INFORMATION AUTH. BY: _____ DATE: _____		CROSS REFERENCE LEGEND <div style="border: 1px solid black; padding: 2px; display: inline-block;">           50 C - C - 1         </div> <div style="margin-left: 10px;">             GRID              COORDINATE           </div> <div style="margin-top: 10px;">             SHEET No. _____           </div>		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 15%;">DRAWING No.</th> <th style="width: 40%;">REFERENCE DRAWINGS</th> <th style="width: 10%;">No.</th> <th style="width: 15%;">REVISIONS</th> <th style="width: 10%;">BY</th> <th style="width: 10%;">AUTH</th> <th style="width: 10%;">DATE</th> </tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </table>		DRAWING No.	REFERENCE DRAWINGS	No.	REVISIONS	BY	AUTH	DATE																																																																		AUTOMATIC TRANSFER SWITCH MODEL TS 910 PHYSICAL LAYOUT & INSTALLATION DETAILS 200A, 2P/3P, NEMA 1 SD, PCS ATS, STD		<div style="text-align: right; font-size: small;">NEW 3" UP SALE</div> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="4" style="text-align: center;">CUSTOMER THOMSON POWER SYSTEMS</td> </tr> <tr> <td style="width: 50%;">CUSTOMER ORDER No. C-XXXXXX</td> <td style="width: 50%;">WORK ORDER No. W-XXXXXX</td> <td colspan="2"></td> </tr> <tr> <td style="width: 25%;">DRAWN BY NS</td> <td style="width: 25%;">AUTH BY OG</td> <td style="width: 25%;">DATE 20-11-05</td> <td style="width: 25%;">REV 0</td> </tr> <tr> <td colspan="3">DRAWING/FILE No. PCS910M102</td> <td style="text-align: right;">SHEET 10A</td> </tr> </table>				CUSTOMER THOMSON POWER SYSTEMS				CUSTOMER ORDER No. C-XXXXXX	WORK ORDER No. W-XXXXXX			DRAWN BY NS	AUTH BY OG	DATE 20-11-05	REV 0	DRAWING/FILE No. PCS910M102			SHEET 10A
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ISO 9001

NOTE: Specifications subject to change without notice.

**APPLICATION CONSIDERATIONS**

The proper selection and application of power generation products and components, including the related area of product safety, is the responsibility of the customer. Operating and performance requirements and potential associated issues will vary appreciably depending upon the use and application of such products and components. The scope of the technical and application information included in this publication is necessarily limited. Unusual operating environments and conditions, and other factors can materially affect the application and operating results of the products and components and the customer should carefully review its requirements. Any technical advice or review furnished by Regal Beloit America, Inc. and its affiliates with respect to the use of products and components is given in good faith and without charge, and Regal assumes no obligation or liability for the advice given, or results obtained, all such advice and review being given and accepted at customer's risk.

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