



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 ³	DIMENSIONS ¹			SHIPPING WEIGHT lbs (kg)	TERMINAL RATING ²		
						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 ⁴	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 ⁴	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 ⁴	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 ⁴	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	

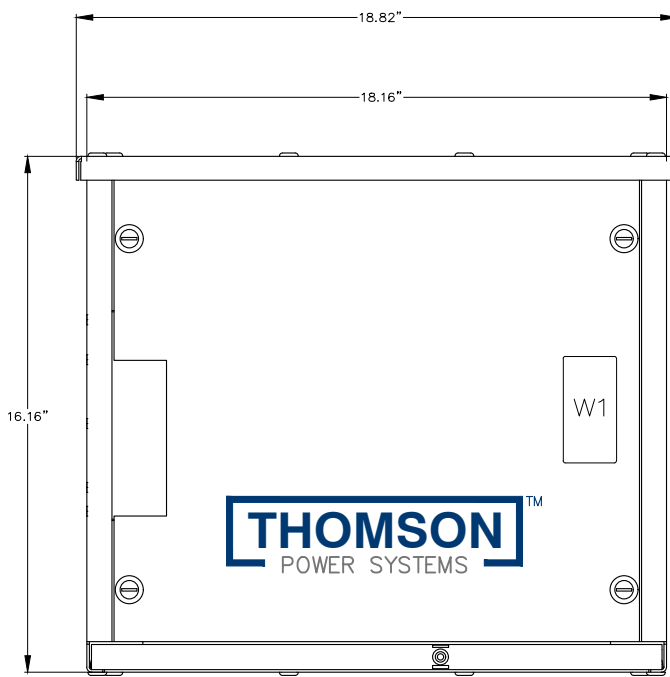
- 1 Enclosure dimensions are for reference. (DO NOT USE FOR CONSTRUCTION)
- 2 All cable connections suitable for copper or aluminum
- 3 Contact factory for further information on required upstream circuit breaker protection
- 4 When protected by specific upstream circuit breaker, refer to TS 910/920 manual

OPTIONAL ACCESSORIES (Field Installable)

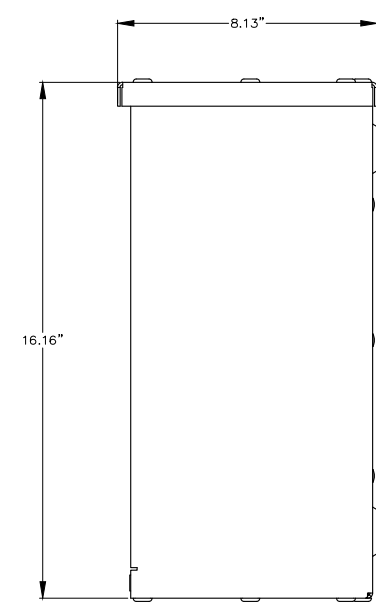
CODE	DESCRIPTION	CODE	DESCRIPTION
TS910-N3R100A	NEMA 3R Door, External Door Mountable to NEMA 1 ATS Enclosure (Specify matching ATS model number)	TS910-UGI	Universal Generator Interface Start Kit
TS910-N3R100B		TS910-HTR	Enclosure Heater, 120VAC Fused, supplied from ATS Load Bus
TS910-N3R200A			
TS910-N3R200B		TS910-KWLS1PH2	kW Load Shed Control output contact, Single Phase, One Stage, 0-200A Current Transformers connected to ATS Load Bus
TS913-N3R200A			
TS913-N3R200B			
TS910-N3R400A			
TS910-N3R400B		TS910-KWLS1PH4	kW Load Shed Control output contact, Single Phase, One Stage, 0-400A Current Transformers connected to ATS Load Bus
TS910-WMS	Wireless Remote Alarm Messaging Module		
TS910-SPD1PH	Surge Protective Device, Single Phase, Class 1, 120/240V connected to Load Bus	TS910-KWLS3PH2	kW Load Shed Control output contact, Three Phase, One Stage, 0-200A Current Transformers connected to ATS Load Bus
TS910-SPD3PH	Surge Protective Device, Three Phase Class 1, 120/208V connected to 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

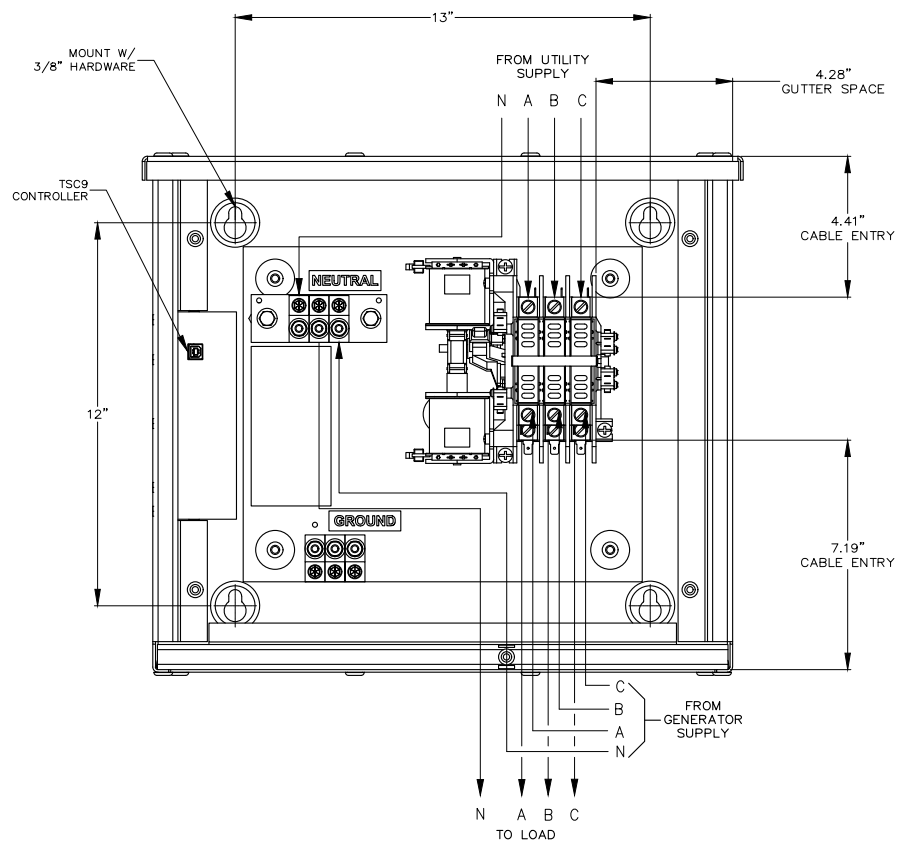
All Automatic Transfer Switch models listed in the Electrical Rating chart above are available from our stocking warehouses. Please specify 11 digit model code (e.g. TS912A0100A) plus code number for required optional items. (e.g. TS910-UGI)



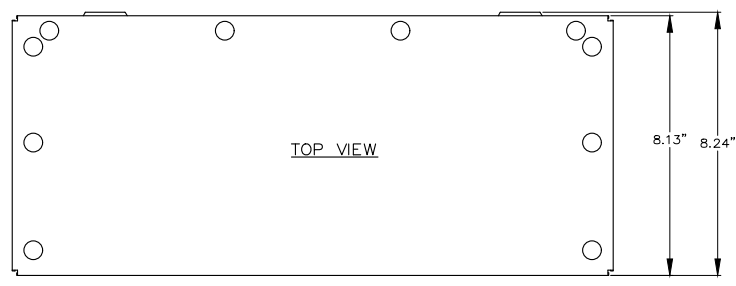
FRONT VIEW



RHS VIEW



INTERIOR FRONT VIEW
(DOOR NOT SHOWN)



TOP VIEW

CONNECTION DATA		
100A ATS	UTILITY (SRC1)	1C, #14-1/0 Cu/AI PER PHASE
	GENERATOR (SRC2)	1C, #14-1/0 Cu/AI PER PHASE
	LOAD	1C, #14-1/0 Cu/AI PER PHASE
	NEUTRAL	1C, #14-2/0 Cu/AI PER SOURCE
	GROUND	1C, #14-2/0 Cu/AI

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 4/0
6	TOP CABLE ACCESS, MAX #3
7	ELECTRICAL KNOCKOUTS FOR 1\" & 2\" CONDUIT

2.5\" x 5\"

DANGER PELIGRO

Arc Flash and Shock Hazard
Will cause severe injury or death. More than one live circuit - see diagram. Disconnect all sources of supply before servicing. This equipment must be installed and serviced only by qualified electrical personnel utilizing safe work practices and appropriate Personal Protective Equipment (PPE). Failure to comply may result in injury or death! Refer to NFPA 70E for minimum PPE requirements.

Risque d'Arc Electrique et d'Electrocution
Peut causer des blessures graves ou la mort. Plus d'un circuit sous tension - voir schéma. Couper toutes les sources d'alimentation avant de faire l'entretien et les réparations. Ce matériel doit être installé et entretenu uniquement par un électricien qualifié. Ce dernier doit connaître les pratiques de travail sécuritaires et porter l'équipement de protection individuelle approprié. Le non respect peut entraîner des blessures ou la mort! Reportez-vous à NFPA 70E pour le manuel des exigences minimales PPE.

Riesgo de Arco y Choque Eléctrico
Se causarán lesiones graves o muerte. Más de un circuito energizado - ver diagrama. Desconectar todas las fuentes de suministro antes de hacer mantenimiento. Este equipo solo se debe instalar y mantener por personal calificado, usando medidas de seguridad y equipo de protección personal adecuado. No seguir estas recomendaciones puede causar lesiones o muerte! Consulte la NFPA 70E para los requisitos mínimos del equipo de protección personal (PPE).

QTY = 1

APPROVED FOR CONSTRUCTION
 MASTER COPY REFERENCE COPY ___ OF ___
 MULTIPLE UNIT WORK ORDER
 RELEASED FOR INFORMATION
 AUTH. BY: _____ DATE: _____

CROSS REFERENCE LEGEND
 50C-C-1
 GRID COORDINATE
 SHEET No. _____

DRAWING No.	REFERENCE DRAWINGS	No.	REVISIONS	BY	AUTH	DATE



AUTOMATIC TRANSFER SWITCH
 MODEL TS 910
 PHYSICAL LAYOUT & INSTALLATION DETAILS
 100A, 2P/3P, NEMA 1 SD, PCS ATS, STD

FOR REVIEW ONLY

DRAWINGS AND/OR OTHER TECHNICAL INFORMATION SUPPLIED BY THOMSON POWER SYSTEMS AS A PART OF A SALE OF EQUIPMENT ARE FOR THE PURCHASER'S USE SOLELY IN CONJUNCTION WITH THAT EQUIPMENT, UNLESS SPECIFICALLY AGREED TO OTHERWISE AS A PART OF THE TERMS OF SALE.			
CUSTOMER THOMSON POWER SYSTEMS		WORK ORDER No. W-XXXXXX	
CUSTOMER ORDER No. C-XXXXXX		DATE	REV
DRAWN BY NS	AUTH BY OG	20-11-05	0
DRAWING/FILE No. PCS910M100		SHEET	10A



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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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