



# SERIES TS 910 100 - 400 AMP AUTOMATIC TRANSFER SWITCHES

RESIDENTIAL

**REGAL**<sup>®</sup>

# 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 Utility 1	#3 - 1/0 #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 Utility 1	#3 - 1/0 #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)

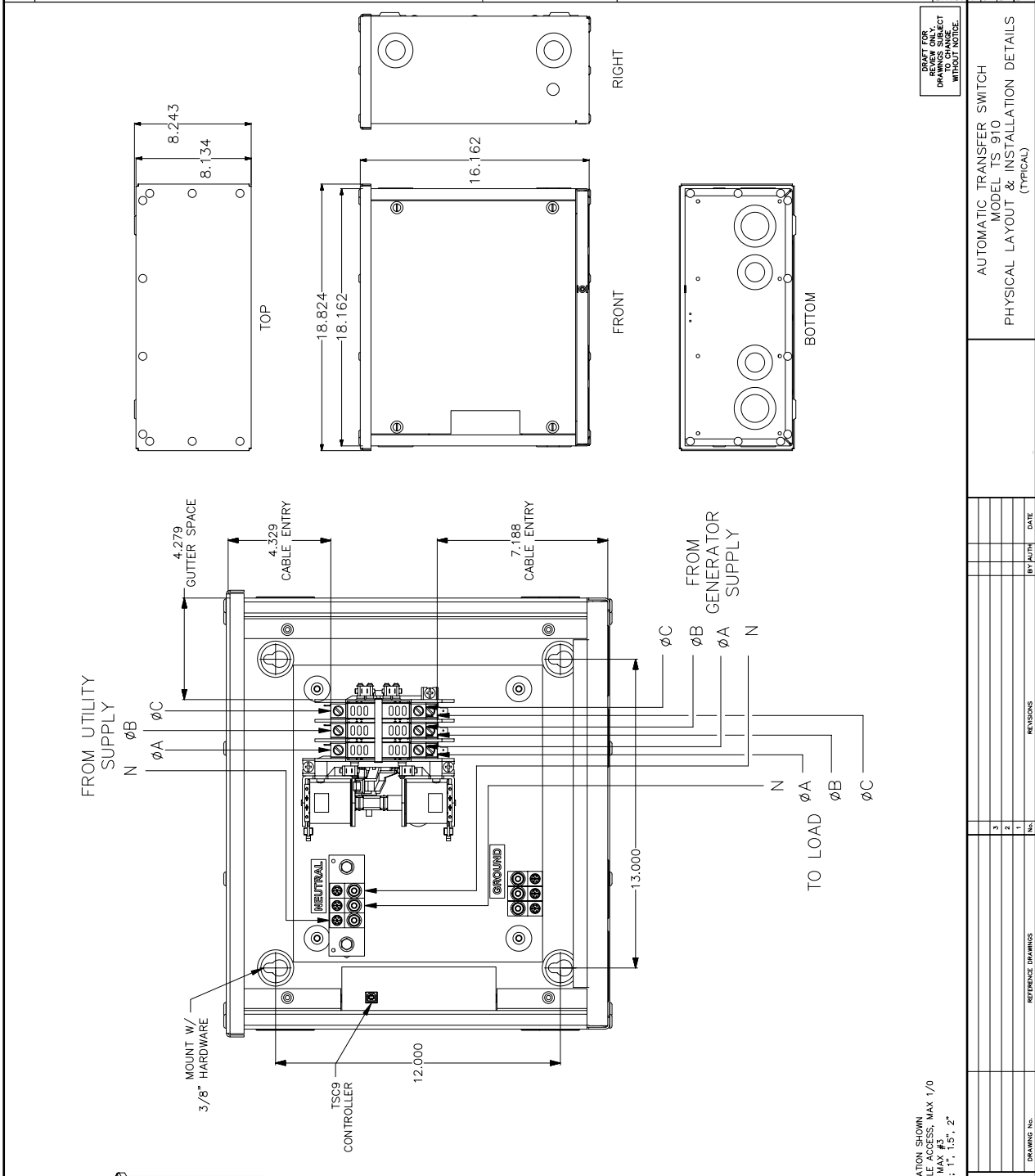
CODE	DESCRIPTION
TS910-N3R100A	NEMA 3R Door, External Door Mountable to NEMA 1 ATS Enclosure (Specify matching ATS model number)
TS910-N3R100B	
TS910-N3R200A	
TS910-N3R200B	
TS913-N3R200A	
TS913-N3R200B	
TS910-N3R400A	
TS910-N3R400B	
TS910-WMS	Wireless Remote Alarm Messaging Module
TS910-SPD1PH	Surge 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)

TRANSFER SWITCH OPTIONS	
ENCLOSURE TYPE	NEMA 1 <input type="checkbox"/> NEMA 3R <input type="checkbox"/>
ENCLOSURE MATERIAL	ALUMINUM <input checked="" type="checkbox"/>
APPLICATION	STANDARD <input checked="" type="checkbox"/>
SIZE (AMPS)	100A <input checked="" type="checkbox"/>
	2 POLE <input type="checkbox"/> 3 POLE <input type="checkbox"/>
	SOLID NEUTRAL <input checked="" type="checkbox"/>
<p><b>⚠ POWER SUPPLIES SERVICE ARE MECHANICALLY PROVIDED TO THE USER. THE SERVICE IS CLOSED AT ALL TIMES. THE SERVICE IS CLOSED BY THE USER. SEE SCHEMATIC DRAWING.</b></p>	
<p><b>CONNECTION DATA</b></p> <p>LOADS: 1C #14-2/0 Cu/Al MULTI: 1C #14-2/0 Cu/Al GEN: 1C #14-2/0 Cu/Al LOAD: 1C #14-2/0 Cu/Al NEUTRAL: 1C #14-2/0 Cu/Al PER SOURCE GROUND: 1C #14-2/0 Cu/Al</p>	
SPECIAL REQUIREMENTS	



**NOTES:**

- STANDARD CONFIGURATION SHOWN.
- STANDARD SIDE CABLE ACCESS, MAX 1/0
- TOP CABLE ACCESS, MAX #3
- CONDUIT KNOCKOUTS: 1", 1.5", 2"

**APPROVED FOR CONSTRUCTION**

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MULTIPLE UNIT WORK ORDER

RELEASED FOR INFORMATION

AUTH: BY:LOG DATE: 12-10-03 DRAWING NO. 910M001

REVISIONS

No.	REVISIONS	BY/AUTH	DATE
1			
2			
3			

**2.5" x 5"**

**DANGER PELIGRO**

**W/ NEMA3R OPTION**

**DRIFT FOR CONSTRUCTION DRAWINGS SUBJECT TO CHANGE WITHOUT NOTICE.**

**AUTOMATIC TRANSFER SWITCH MODEL TS 910 PHYSICAL LAYOUT & INSTALLATION DETAILS (TYPICAL)**

**910M001 1/1**

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**TRANSFER SWITCH OPTIONS**

ENCLOSURE TYPE: NEMA 1  NEMA 3R

ENCLOSURE MATERIAL: ALUMINUM

APPLICATION: STANDARD

SIZE (AMPS): 200A

2 POLE

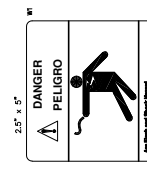
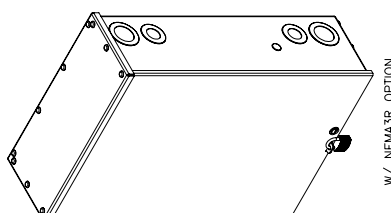
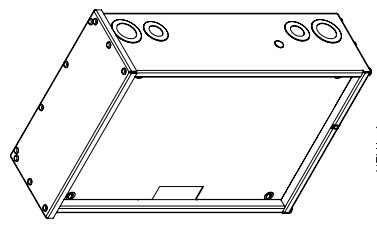
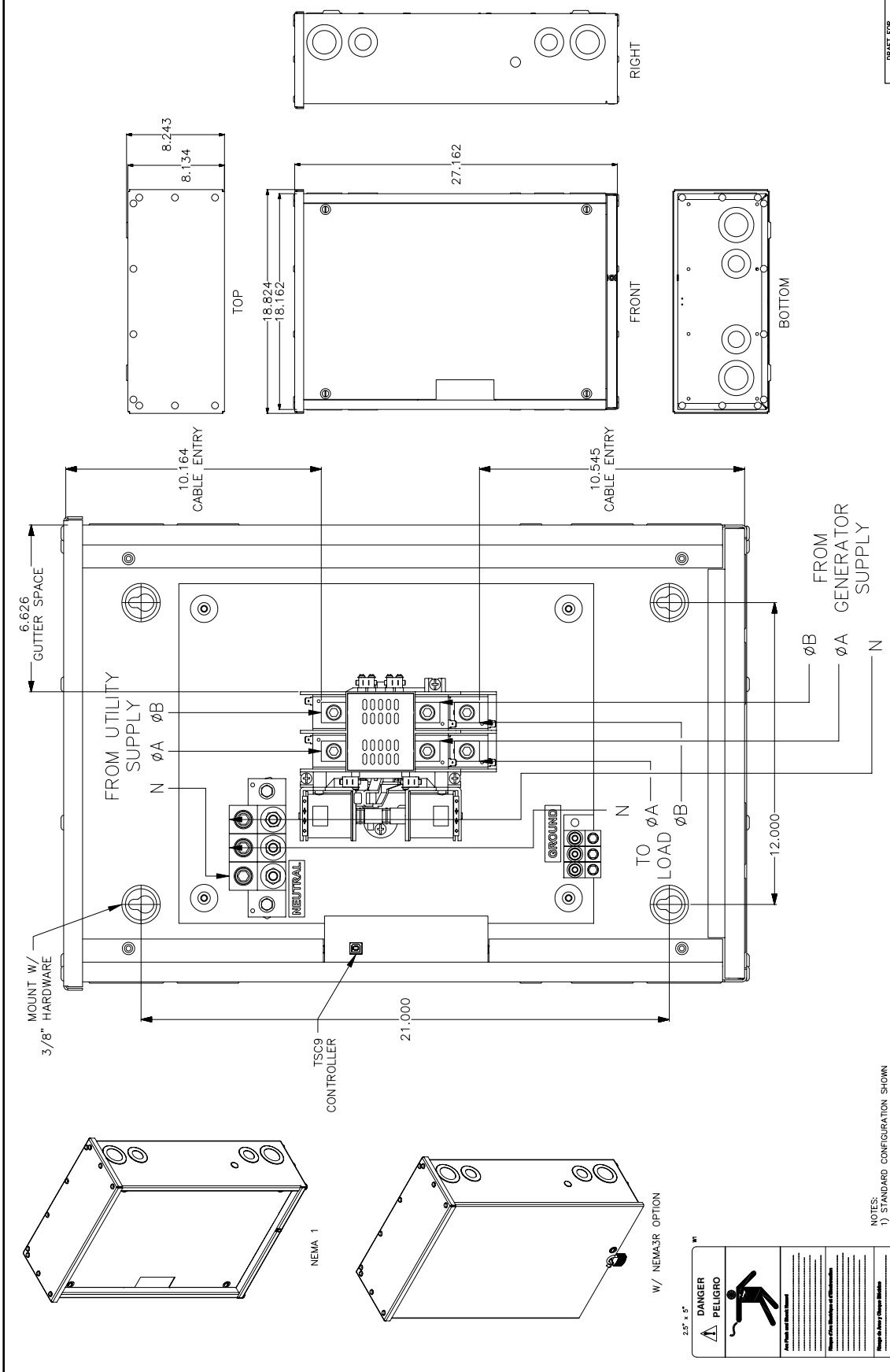
SOLID NEUTRAL

⚠ POWER SUPPLY SERVICE ARE NOT MANUALLY INTERLOCKED AND THE SERVICE IS CLOSED AT A TIME. THE SERVICE IS CLOSED BY AUTOMATIC MEANS. SEE SCHEMATIC DRAWING.

**CONNECTION DATA**

200A LISTS: 1C #8-250MCM CU/AL  
 2C #8-250MCM CU/AL  
 GEN. 1C #8-250MCM CU/AL  
 GEN. 2C #8-250MCM CU/AL  
 LOAD. 1C #8-250MCM CU/AL  
 LOAD. 2C #8-250MCM CU/AL  
 NEUTRAL 1C #8-250MCM CU/AL  
 NEUTRAL 2C #8-250MCM CU/AL  
 GROUND. 1C #14-2/0 CU/AL

**SPECIAL REQUIREMENTS**



- NOTES:**
- STANDARD CONFIGURATION SHOWN.
  - STANDARD SIDE CABLE ACCESS, MAX. 250MCM.
  - TOP CABLE ACCESS, MAX. 3/0.
  - CONDUIT KNOCKOUTS: 1", 1.5", 2", 2.5"

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**TRANSFER SWITCH**

**AUTOMATIC TRANSFER SWITCH**  
 MODEL TS 910  
 PHYSICAL LAYOUT & INSTALLATION DETAILS  
 (TYPICAL)

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 REFERENCE COPY  
 MULTIPLE UNIT WORK ORDER  
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NO.	REVISIONS	BY/AUTH.	DATE
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 DATE: 12-10-03

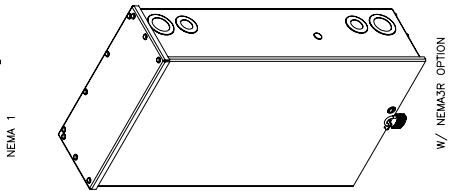
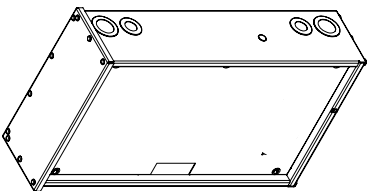
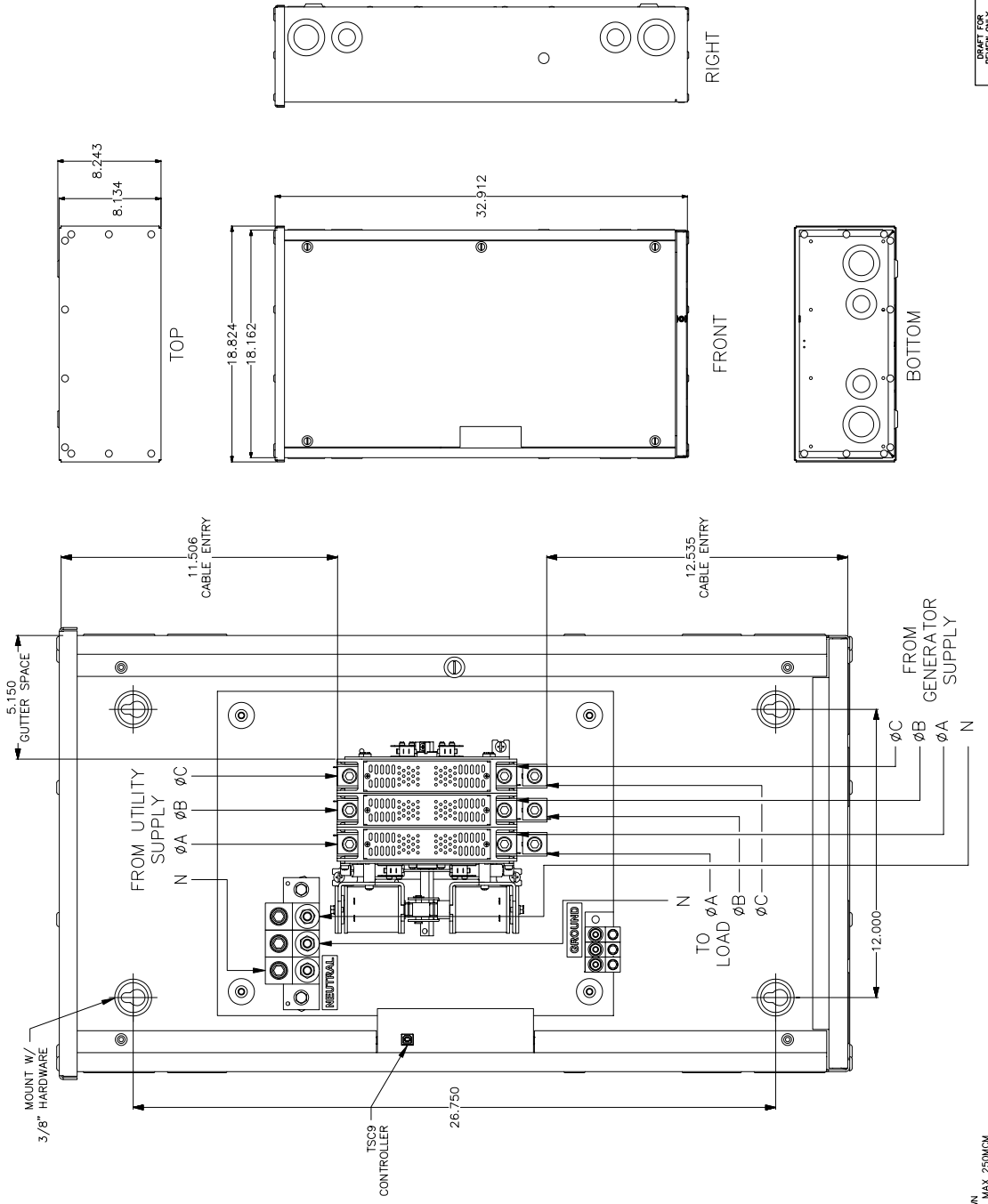
**TRANSFER SWITCH OPTIONS**

<b>ENCLOSURE TYPE</b>	NEMA 1 <input type="checkbox"/> NEMA 3R <input type="checkbox"/>
<b>ENCLOSURE MATERIAL</b>	ALUMINUM <input checked="" type="checkbox"/>
<b>APPLICATION</b>	STANDARD <input checked="" type="checkbox"/>
<b>SIZE (AMPS)</b>	200A <input checked="" type="checkbox"/>
	3 POLE <input checked="" type="checkbox"/>
	SOLID NEUTRAL <input checked="" type="checkbox"/>

**CONNECTION DATA**  
 200A LITS: 1C #8-250MCM CU/AL  
 250A LITS: 1C #8-250MCM CU/AL  
 GEN: 1C #8-250MCM CU/AL  
 LOAD: 1C #8-250MCM CU/AL  
 NEUTRAL 1C #8-250MCM CU/AL  
 PER SOURCE  
 GROUND: 1C #14-2/0 CU/AL

**SPECIAL REQUIREMENTS**

<b>CUSTOMER</b>	WORK ORDER NO.
<b>DRAWN BY</b>	DATE
<b>CHECKED BY</b>	DATE
<b>DATE</b>	12-10-03
<b>BY/AUTH</b>	1/1



2.5" x 5"

**⚠ DANGER PELIGRO**

**⚡**

For Your and Others Safety

Always Use Proper Locking Technique

Always Use Proper Locking Technique

- NOTES:**
- STANDARD CONFIGURATION SHOWN
  - STANDARD SIDE CABLE ACCESS, MAX. 250MCM
  - TOP CABLE ACCESS, MAX. 3/0
  - CONDUIT KNOCKOUTS: 1", 1.5", 2", 2.5"

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**AUTOMATIC TRANSFER SWITCH  
 MODEL TS 910  
 PHYSICAL LAYOUT & INSTALLATION DETAILS  
 (TYPICAL)**

**TRANSFER SWITCH OPTIONS**

ENCLOSURE TYPE  
 NEMA 1   
 NEMA 3R

ENCLOSURE MATERIAL  
 ALUMINUM

APPLICATION  
 STANDARD   
 SERVICE ENTRANCE

SIZE (AMPS)  
 400A

2 POLE   
 3 POLE

SOLID NEUTRAL

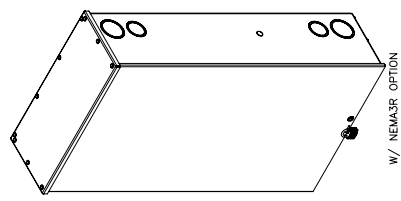
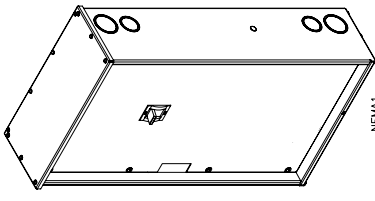
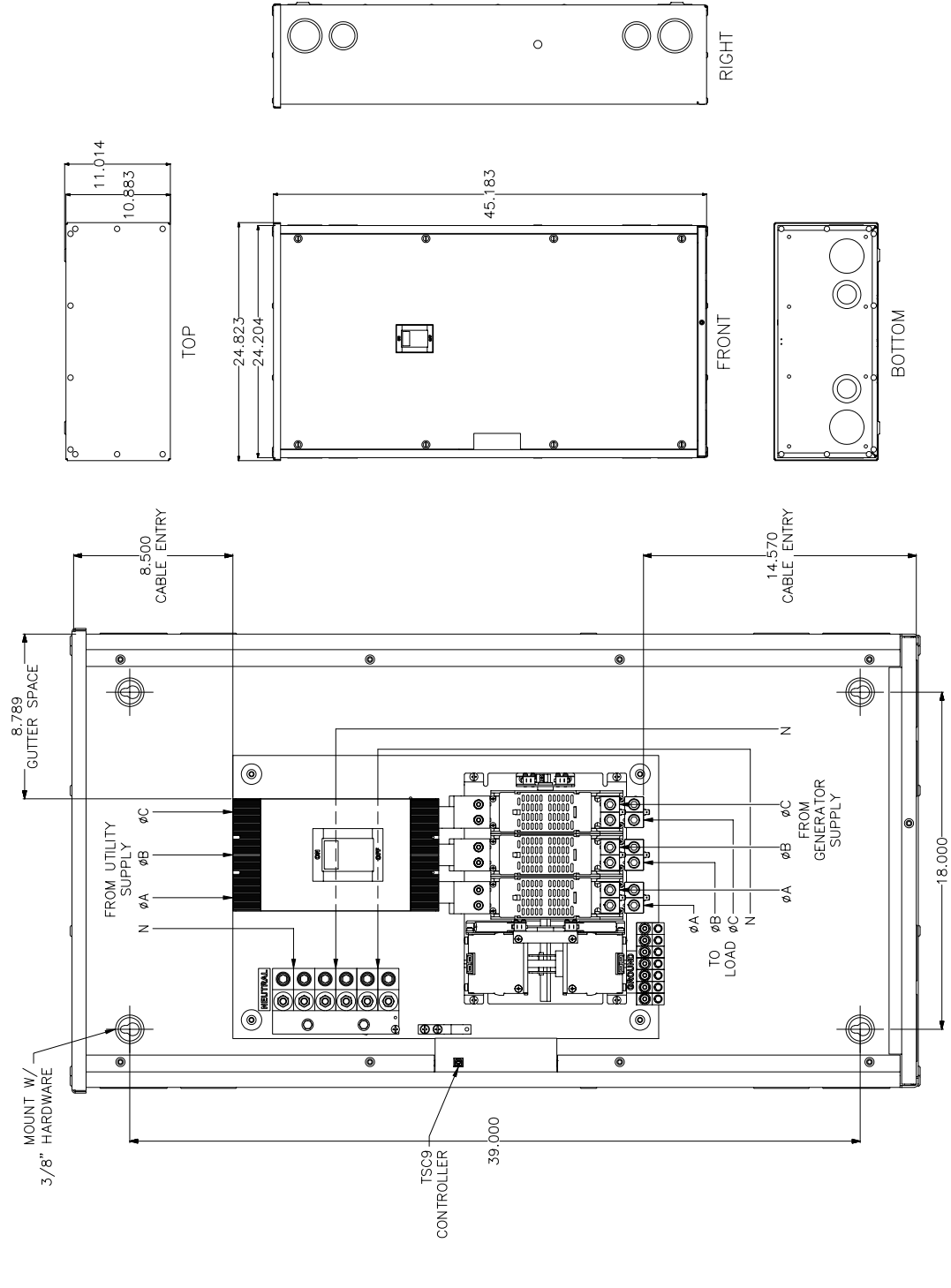
CONNECTION DATA  
 UTILTY: 2C #2-250MCM CU/AI  
 GEN: 2C #2-250MCM CU/AI  
 LOAD: 2C PER PHASE  
 NEUTRAL: 2C #2-250MCM CU/AI  
 PER SOURCE  
 GROUND: 2C #4-2/0 CU/AI

SPECIAL REQUIREMENTS

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DRAWN BY	DATE
CHECKED BY	DATE
DRAWING TITLE	NO. OF SHEETS
910M007	1/1



2.5" x 5"

**⚠ DANGER PELIGRO**

⚡

For Your and Others Safety

Always Use Proper Locking Technique

Always Use Proper Locking Technique

- NOTES:
- STANDARD CONFIGURATION SHOWN.
  - STANDARD SIDE CABLE ACCESS: MAX. 2c #250MCM
  - TOP CABLE ACCESS: MAX. 2c #3/0
  - CONDUIT KNOCKOUTS: 1.5", 2.5", 3"

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 MULTIPLE UNIT WORK ORDER  
 RELEASED FOR INFORMATION  
 AUTH. BY: COG DATE: 12-10-03  
 DRAWING NO. \_\_\_\_\_

NO.	REVISIONS	BY/AUTH.	DATE
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AUTOMATIC TRANSFER SWITCH  
 MODEL TS 910  
 PHYSICAL LAYOUT & INSTALLATION DETAILS  
 (TYPICAL)

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