



Todd Richbourg

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ABB

Quote No.: UJI-00002602

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Project: CITY OF FOLEY

PO No.:

Quote Version: Original Version

Quote Expiration: Expired

Dear Valued Customer,

We are pleased to provide a submittal for **CITY OF FOLEY**. Please review the provided documentation and provide your approval. Thank you for allowing ABB to participate on this project. Please do not hesitate to contact us with any questions.

Best Regards,

Todd Richbourg

ABB

PROPRIETARY AND CONFIDENTIAL INFORMATION

This document contains confidential and proprietary information. Upon receipt of this document, the receiver agrees to not to reveal its content, except to those people inside of their own organization to who concerned to do the evaluation of this proposal. No copies of this document should be made without permission. This document shall be returned upon its written request.

Circuit Breaker Submittal Section

Item No.	Product Description	Mark(s)	Quantity
1	MCCB, ECB TMAX XT, XB7SQ380CFWW00F5XX	800 AMP ATS BKR	1
3	MCCB, ECB TMAX XT, XB5SQ340AFNN00F5XX	400 AMP ATS BKR	1

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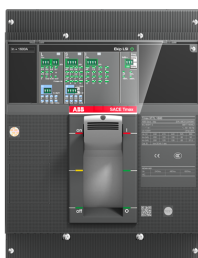
Bill of Material(s)

Item No.	Quantity	Description
1	1	MCCB, ECB TMAX XT, XB7SQ380CFWW00F5XX Marks: 800 AMP ATS BKR
		1 XT7SQ380CFFF000XXX XT7S 800 E.DIP LSI 800 3p UL100(1SDX103794R1) 1 Installed KXT7CUAL4X500K-3PC KIT FCCUAL4X500KCMIL XT7/M F 3PCS(1SDA104758R1) 1 Installed KXT7CUAL4X500K-3PC KIT FCCUAL4X500KCMIL XT7/M F 3PCS(1SDA104758R1) 1 XT7ENCL1200R ENCLOSURE TMAX XT7 NEMA 3R SURFACE(1SQA001285R0001) 1 TNIA1200 ASM NEUTRAL WITH GROUND STRAP(TNIA1200) 1 TGL6 EQUIPMENT GROUND KIT(TGL6) Breaker will be mounted in enclosure in factory. Global ID-(1SQA703487R0001)
3	1	MCCB, ECB TMAX XT, XB5SQ340AFNN00F5XX Marks: 400 AMP ATS BKR
		1 XT5SQ340AFF000XXX XT5S 400 E.DIP LSI 400 3p UL100(1SDX103704R1) 1 Installed KXT5CUAL2X500K-3PC FCCUAL 2X2/0-500KCMIL XT5 3PUL(1SDA113066R1) 1 Installed KXT5CUAL2X500K-3PC FCCUAL 2X2/0-500KCMIL XT5 3PUL(1SDA113066R1) 1 XT5ENCL600R ENCLOSURE TMAX XT5 600A NEMA 3R SURFACE(1SQA001283R0001) 1 TNIA400 400A-INSULATD GROUND BL NEUTRAL ONLY(TNIA400) 1 TGL6 EQUIPMENT GROUND KIT(TGL6) Breaker will be mounted in enclosure in factory. Global ID-(1SQA707549R0001)

PRODUCT-DETAILS

XT7S 800 Ekip Dip LSI In=800A 3p F F UL +
Acc

XT7S 800 Ekip Dip LSI In=800A 3p F F UL + Acc



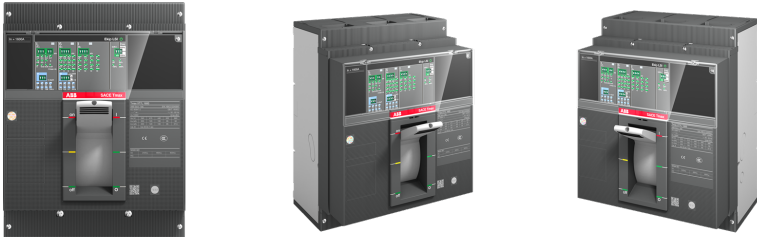
General Information

Extended Product Type	XT7S 800 Ekip Dip LSI In=800A 3p F F UL + Acc
Product ID	1SDX103794R1
EAN	8057558507941
Catalog Description	XT7S 800 Ekip Dip LSI In=800A 3p F F UL + Acc
Long Description	XT7S 800 Ekip Dip LSI In=800A 3p F F UL + XT7 UL 3p TARG.LASER PORT.100% lu

Additional Information

Order Code US and Canada	XT7SQ380CFFF000XXX
Battery Chemical Composition	Alkaline Manganese Lithium
Battery Type	Button Cell
Battery Weight	6.8 g
CN8	85362090
Country of Origin	Italy (IT)
Customs Tariff Number	85362090
EAN	8057558507941
Invoice Description	XT7S 800 Ekip Dip LSI In=800A 3p F F UL + Acc
Minimum Order Quantity	1 piece
Number of Batteries	1
Package Level 1 EAN	8057558507941
Package Level 1 Units	box 1 piece
Product Main Type	SACE Tmax XT
Product Name	Moulded Case Circuit Breaker

Selling Unit of Measure	piece
Short Description	XT7S 800 Ekip Dip LSI In=800A 3p F F UL + Acc
WEEE B2C / B2B	Business To Business
WEEE Category	5. Small Equipment (No External Dimension More Than 50 cm)



PRODUCT-DETAILS

XT7ENCL1200R

ENCLOSURE TMAX XT7 NEMA 3R SURFACE



General Information

Global Commercial Alias	XT7ENCL1200R
Extended Product Type	ENCLOSURE TMAX XT7 NEMA 3R SURFACE
Product ID	1SQA001285R0001
Catalog Description	ENCLOSURE TMAX XT7 NEMA 3R SURFACE
Long Description	ENCLOSURE TMAX XT7 NEMA 3R SURFACE

Additional Information

Product Main Type	ENCLOSURES
Product Name	ECB

Certificates and Declarations

Mechanical Drawings	1SQC930060D0201
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Classifications

UNSPSC	39121318
WEEE Category	Product Not in WEEE Scope

Categories

Low Voltage Products and Systems → Circuit Breakers → Moulded Case Circuit Breakers → Circuit Breaker Enclosures





Representative Image

Catalog No. TGL6

Description: EQUIPMENT GROUND KIT

UPC No 783164081862

Home > Switches & Disconnects > Disconnect & Safety Switches > Safety Switches > Accessories

- Ground Kit for Type 1 & 3R General Duty and Heavy Duty Safety Switches.

Descriptors

Category	Accessories
GO Schedule	S1

Specifications

Voltage	600 AC
Amperage	600 A
Wire Range (Cu/Al)	(3) 2-250kcmil Cu/Al
GSA Compliance	No



Representative Image

Catalog No. TNIA1200

Description: ASM NEUTRAL WITH GROUND STRAP

UPC No 783164054217

Home > Circuit Breakers > Circuit Breaker Enclosures

Industrial Breakers. Industrial Encl. Misc.. Industrial Enclosure Accessories 1200 Amps 12 A

Descriptors

Category	Circuit Breaker Enclosures
GO Schedule	B2

Specifications

Amperage	12 A
GSA Compliance	No

PRODUCT-DETAILS

KIT FCCuAl4x240mm2/500kcmil XT7/M F

3pcs

KIT FCCuAl4x240mm2/500kcmil XT7/M F

3pcs

General Information

Extended Product Type	KIT FCCuAl4x240mm2/500kcmil XT7/M F 3pcs
Product ID	1SDA104758R1
EAN	8015644068509
Catalog Description	KIT FCCuAl4x240mm2/500kcmil XT7/M F 3pcs
Long Description	FRONT TERMINALS FIXED FOR CABLES IN COPPER-ALUMINIUM 4x240mm2 3pcs FOR FIXE XT7/XT7M

Circular Value

Conflict Minerals Reporting Template (CMRT)	9AKK108467A5658
Toxic Substances Control Act - TSCA	9AKK108467A8326

Environmental

Environmental Information	9AKK108467A6707
REACH Declaration	9AKK108466A1425
RoHS Information	9AKK108466A1424
RoHS Status	Following EU Directive 2011/65/EU and Amendment 2015/863 July 22, 2019

Ordering

Order Code US and Canada	KXT7CUAL4X500K-3PC
EAN	8015644068509
Minimum Order Quantity	1 piece
Customs Tariff Number	85389099

Dimensions

Product Net Weight	0.332 kg
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Container Information

Package Level 1 Units	box 1 piece
Package Level 1 Width	170 mm
Package Level 1 Height	150 mm
Package Level 1 Depth / Length	300 mm
Package Level 1 Gross Weight	0.352 kg
Package Level 1 EAN	8015644068509

Additional Information

Configuration Type	Loose or configurable
Number of Poles	3
Order Multiple	1 piece
Product Main Type	Accessories for Tmax XT
Product Name	Accessory
Product Type	Accessory
Standards	IEC UL
Suitable For	XT7, XT7M
Suitable for Product Class	SACE Tmax XT
Terminal Connection Type	Front for Copper-Aluminium Cables

Certificates and Declarations

Data Sheet, Technical Information	1SDC210100D0206 1SDC210099D0206
Declaration of Conformity - CE	Refer to the EU Declaration of the relative Circuit Breaker
Instructions and Manuals	1SDH002013A1801

Classifications

ETIM 7	EC002019 - Connection vane/phase spreader
ETIM 8	EC002019 - Connection vane/phase spreader
ETIM 9	EC002019 - Connection vane/phase spreader
IDEA Granular Category Code (IGCC)	4603 >> Electrical terminals

UNSPSC	39121432
WEEE Category	5. Small Equipment (No External Dimension More Than 50 cm)
eClass	V11.1 : 27371305

Categories

Low Voltage Products and Systems → Circuit Breakers → Moulded Case Circuit Breakers → Accessories for Tmax XT

PRODUCT-DETAILS

KIT FCCuAl4x240mm2/500kcmil XT7/M F 3pcs

KIT FCCuAl4x240mm2/500kcmil XT7/M F 3pcs

General Information

Extended Product Type	KIT FCCuAl4x240mm2/500kcmil XT7/M F 3pcs
Product ID	1SDA104758R1
EAN	8015644068509
Catalog Description	KIT FCCuAl4x240mm2/500kcmil XT7/M F 3pcs
Long Description	FRONT TERMINALS FIXED FOR CABLES IN COPPER-ALUMINIUM 4x240mm2 3pcs FOR FIXE XT7/XT7M

Circular Value

Conflict Minerals Reporting Template (CMRT)	9AKK108467A5658
Toxic Substances Control Act - TSCA	9AKK108467A8326

Environmental

Environmental Information	9AKK108467A6707
REACH Declaration	9AKK108466A1425
RoHS Information	9AKK108466A1424
RoHS Status	Following EU Directive 2011/65/EU and Amendment 2015/863 July 22, 2019

Ordering

Order Code US and Canada	KXT7CUAL4X500K-3PC
EAN	8015644068509
Minimum Order Quantity	1 piece
Customs Tariff Number	85389099

Dimensions

Product Net Weight	0.332 kg
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Container Information

Package Level 1 Units	box 1 piece
Package Level 1 Width	170 mm
Package Level 1 Height	150 mm
Package Level 1 Depth / Length	300 mm
Package Level 1 Gross Weight	0.352 kg
Package Level 1 EAN	8015644068509

Additional Information

Configuration Type	Loose or configurable
Number of Poles	3
Order Multiple	1 piece
Product Main Type	Accessories for Tmax XT
Product Name	Accessory
Product Type	Accessory
Standards	IEC UL
Suitable For	XT7, XT7M
Suitable for Product Class	SACE Tmax XT
Terminal Connection Type	Front for Copper-Aluminium Cables

Certificates and Declarations

Data Sheet, Technical Information	1SDC210100D0206 1SDC210099D0206
Declaration of Conformity - CE	Refer to the EU Declaration of the relative Circuit Breaker
Instructions and Manuals	1SDH002013A1801

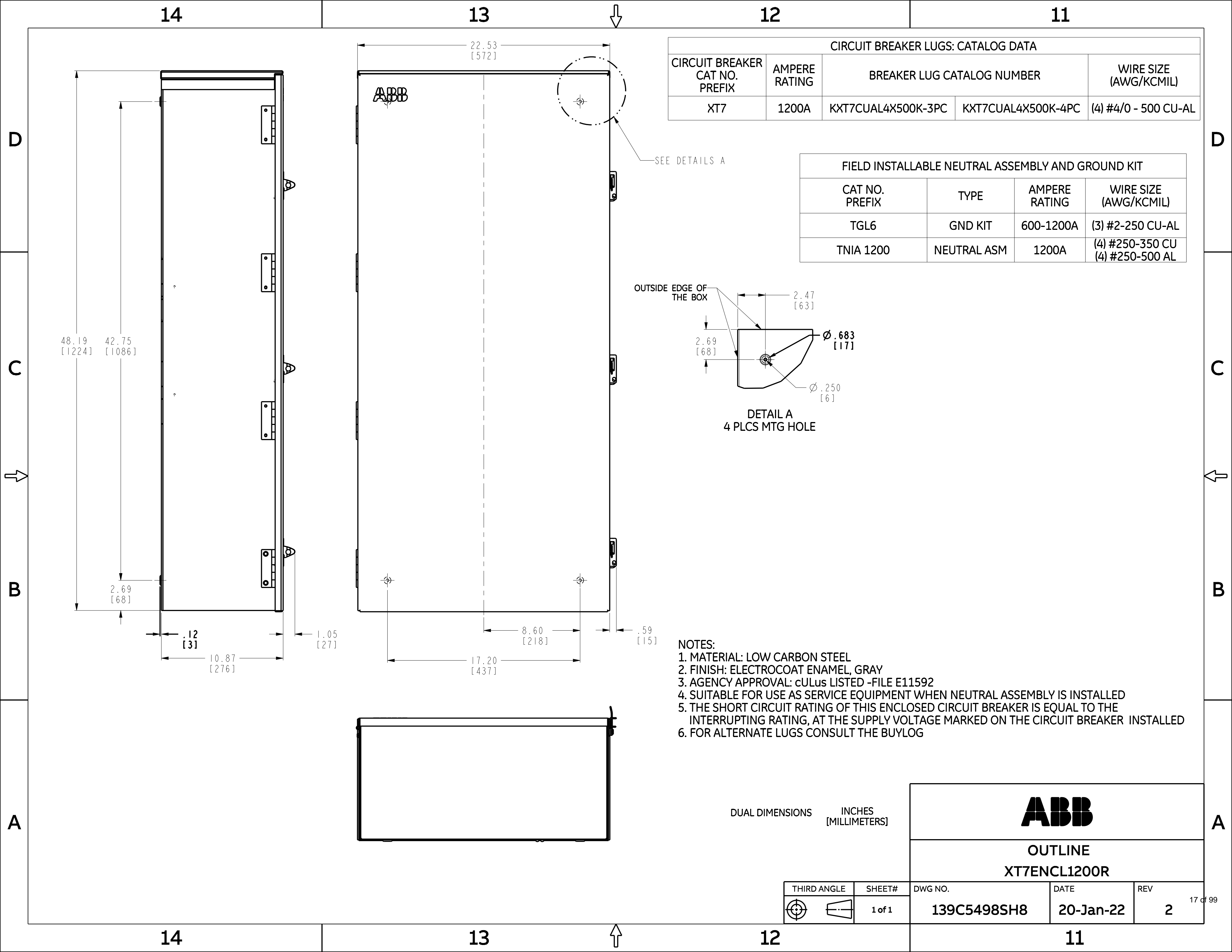
Classifications

ETIM 7	EC002019 - Connection vane/phase spreader
ETIM 8	EC002019 - Connection vane/phase spreader
ETIM 9	EC002019 - Connection vane/phase spreader
IDEA Granular Category Code (IGCC)	4603 >> Electrical terminals

UNSPSC	39121432
WEEE Category	5. Small Equipment (No External Dimension More Than 50 cm)
eClass	V11.1 : 27371305

Categories

Low Voltage Products and Systems → Circuit Breakers → Moulded Case Circuit Breakers → Accessories for Tmax XT



PRODUCT-DETAILS

XT5S 400 Ekip Dip LSI In400 3p FF UL/CSA + Acc

XT5S 400 Ekip Dip LSI In400 3p FF UL/CSA + Acc



General Information

Extended Product Type	XT5S 400 Ekip Dip LSI In400 3p FF UL/CSA + Acc
Product ID	1SDX103704R1
EAN	8057558507040
Catalog Description	XT5S 400 Ekip Dip LSI In400 3p FF UL/CSA + Acc
Long Description	XT5S 400 Ekip Dip LSI In400 3p FF UL/CSA + XT5 UL 3p ETIK.LASER 100% lu RATED

Additional Information

Order Code US and Canada	XT5SQ340AFF000XXX
CN8	85362090
Country of Origin	Italy (IT)
Customs Tariff Number	85362090
EAN	8057558507040
Invoice Description	XT5S 400 Ekip Dip LSI In400 3p FF UL/CSA + Acc
Minimum Order Quantity	1 piece
Package Level 1 EAN	8057558507040
Package Level 1 Units	box 1 piece
Product Main Type	SACE Tmax XT
Product Name	Moulded Case Circuit Breaker
Selling Unit of Measure	piece
Short Description	XT5S 400 Ekip Dip LSI In400 3p FF UL/CSA + Acc

WEEE B2C / B2B	Business To Business
WEEE Category	5. Small Equipment (No External Dimension More Than 50 cm)



PRODUCT-DETAILS

XT5ENCL600R

ENCLOSURE TMAX XT5 NEMA 3R SURFACE



General Information

Global Commercial Alias	XT5ENCL600R
Extended Product Type	ENCLOSURE TMAX XT5 NEMA 3R SURFACE
Product ID	1SQA001283R0001
Catalog Description	ENCLOSURE TMAX XT5 NEMA 3R SURFACE
Long Description	ENCLOSURE TMAX XT5 NEMA 3R SURFACE

Additional Information

Product Main Type	ENCLOSURES
Product Name	ECB

Certificates and Declarations

Mechanical Drawings	1SQC930058D0201
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Classifications

UNSPSC	39121318
WEEE Category	Product Not in WEEE Scope

Categories

Low Voltage Products and Systems → Circuit Breakers → Moulded Case Circuit Breakers → Circuit Breaker Enclosures





Representative Image

Catalog No. TNIA400

Description: 400A-INSULATD GROUND BL NEUTRAL ONLY

UPC No 783164018844

Home > Circuit Breakers > Accessories

Circuit Breaker Enclosures. Hubs and Other Accessories. Insulated Groundable Neutrals. Standard Package Quantity: 1. Lug Wire Size (Cu-Al) AWG/kcmil: (2) 1/0-250 or (1) 4-600.

Descriptors

Category	Accessories
GO Schedule	B2

Specifications

Amperage	400 A
GSA Compliance	No
Stock Status	A

PRODUCT-DETAILS

KIT FCCuAl 2x2/0-500kcmil XT5 3pcsUL/CSA

KIT FCCuAl 2x2/0-500kcmil XT5 3pcsUL/CSA



General Information

Extended Product Type	KIT FCCuAl 2x2/0-500kcmil XT5 3pcsUL/CSA
Product ID	1SDA113066R1
EAN	8056221030366
Catalog Description	KIT FCCuAl 2x2/0-500kcmil XT5 3pcsUL/CSA
Long Description	FRONT TERMINALS FOR CABLES IN COPPER-ALUMINIUM 2x 2/0AWG-500kcmil 3pcs XT5 UL/CSA

Circular Value

Conflict Minerals Reporting Template (CMRT)	9AKK108467A5658
Toxic Substances Control Act - TSCA	9AKK108467A8326

Environmental

Environmental Information	9AKK108467A6707
REACH Declaration	9AKK108466A1425
RoHS Information	9AKK108466A1424
RoHS Status	Following EU Directive 2011/65/EU and Amendment 2015/863 July 22, 2019

Ordering

Order Code US and Canada	KXT5CUAL2X500K-3PC
EAN	8056221030366
Minimum Order Quantity	1 piece
Customs Tariff Number	85389099

Dimensions

Product Net Weight	0.132 kg
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Container Information

Package Level 1 Units	box 1 piece
Package Level 1 Width	145 mm
Package Level 1 Height	30 mm
Package Level 1 Depth / Length	250 mm
Package Level 1 Gross Weight	0.139 kg
Package Level 1 EAN	8056221030366

Additional Information

Configuration Type	Loose or configurable
Number of Poles	3
Order Multiple	1 piece
Product Main Type	Accessories for Tmax XT
Product Name	Accessory
Product Type	Accessory
Standards	UL
Suitable For	XT5
Suitable for Product Class	SACE Tmax XT
Terminal Connection Type	Front for Copper-Aluminium Cables

Certificates and Declarations

Data Sheet, Technical Information	1SDC210200D0206 1SDC210199D0206
Declaration of Conformity - CE	Refer to the EU Declaration of the relative Circuit Breaker
Instructions and Manuals	1SDH002011A1806

Classifications

ETIM 7	EC002019 - Connection vane/phase spreader
ETIM 8	EC002019 - Connection vane/phase spreader
ETIM 9	EC002019 - Connection vane/phase spreader
IDEA Granular Category Code (IGCC)	4603 >> Electrical terminals
UNSPSC	39121432
WEEE Category	5. Small Equipment (No External Dimension More Than 50 cm)
eClass	V11.1 : 27371305

Categories

Low Voltage Products and Systems → Circuit Breakers → Moulded Case Circuit Breakers → Accessories for Tmax XT



PRODUCT-DETAILS

KIT FCCuAl 2x2/0-500kcmil XT5 3pcsUL/CSA

KIT FCCuAl 2x2/0-500kcmil XT5 3pcsUL/CSA



General Information

Extended Product Type	KIT FCCuAl 2x2/0-500kcmil XT5 3pcsUL/CSA
Product ID	1SDA113066R1
EAN	8056221030366
Catalog Description	KIT FCCuAl 2x2/0-500kcmil XT5 3pcsUL/CSA
Long Description	FRONT TERMINALS FOR CABLES IN COPPER-ALUMINIUM 2x 2/0AWG-500kcmil 3pcs XT5 UL/CSA

Circular Value

Conflict Minerals Reporting Template (CMRT)	9AKK108467A5658
Toxic Substances Control Act - TSCA	9AKK108467A8326

Environmental

Environmental Information	9AKK108467A6707
REACH Declaration	9AKK108466A1425
RoHS Information	9AKK108466A1424
RoHS Status	Following EU Directive 2011/65/EU and Amendment 2015/863 July 22, 2019

Ordering

Order Code US and Canada	KXT5CUAL2X500K-3PC
EAN	8056221030366
Minimum Order Quantity	1 piece
Customs Tariff Number	85389099

Dimensions

Product Net Weight	0.132 kg
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Container Information

Package Level 1 Units	box 1 piece
Package Level 1 Width	145 mm
Package Level 1 Height	30 mm
Package Level 1 Depth / Length	250 mm
Package Level 1 Gross Weight	0.139 kg
Package Level 1 EAN	8056221030366

Additional Information

Configuration Type	Loose or configurable
Number of Poles	3
Order Multiple	1 piece
Product Main Type	Accessories for Tmax XT
Product Name	Accessory
Product Type	Accessory
Standards	UL
Suitable For	XT5
Suitable for Product Class	SACE Tmax XT
Terminal Connection Type	Front for Copper-Aluminium Cables

Certificates and Declarations

Data Sheet, Technical Information	1SDC210200D0206 1SDC210199D0206
Declaration of Conformity - CE	Refer to the EU Declaration of the relative Circuit Breaker
Instructions and Manuals	1SDH002011A1806

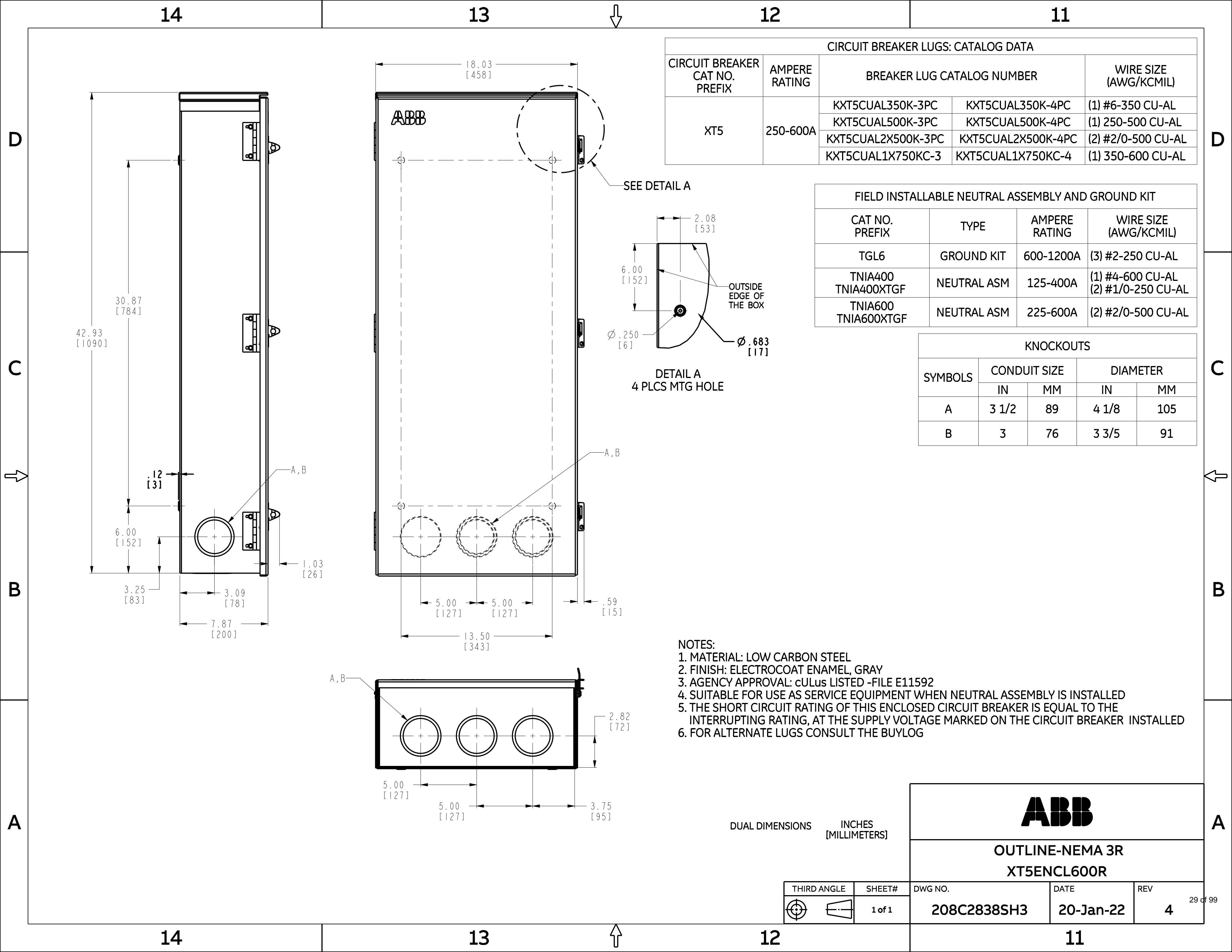
Classifications

ETIM 7	EC002019 - Connection vane/phase spreader
ETIM 8	EC002019 - Connection vane/phase spreader
ETIM 9	EC002019 - Connection vane/phase spreader
IDEA Granular Category Code (IGCC)	4603 >> Electrical terminals
UNSPSC	39121432
WEEE Category	5. Small Equipment (No External Dimension More Than 50 cm)
eClass	V11.1 : 27371305

Categories

Low Voltage Products and Systems → Circuit Breakers → Moulded Case Circuit Breakers → Accessories for Tmax XT





CIRCUIT BREAKER LUGS: CATALOG DATA				
CIRCUIT BREAKER CAT NO. PREFIX	AMPERE RATING	BREAKER LUG CATALOG NUMBER		WIRE SIZE (AWG/KCMIL)
XT5	250-600A	KXT5CUAL350K-3PC	KXT5CUAL350K-4PC	(1) #6-350 CU-AL
		KXT5CUAL500K-3PC	KXT5CUAL500K-4PC	(1) 250-500 CU-AL
		KXT5CUAL2X500K-3PC	KXT5CUAL2X500K-4PC	(2) #2/0-500 CU-AL
		KXT5CUAL1X750KC-3	KXT5CUAL1X750KC-4	(1) 350-600 CU-AL

FIELD INSTALLABLE NEUTRAL ASSEMBLY AND GROUND KIT			
CAT NO. PREFIX	TYPE	AMPERE RATING	WIRE SIZE (AWG/KCMIL)
TGL6	GROUND KIT	600-1200A	(3) #2-250 CU-AL
TNIA400 TNIA400XTGF	NEUTRAL ASM	125-400A	(1) #4-600 CU-AL (2) #1/0-250 CU-AL
TNIA600 TNIA600XTGF	NEUTRAL ASM	225-600A	(2) #2/0-500 CU-AL

KNOCKOUTS				
SYMBOLS	CONDUIT SIZE		DIAMETER	
	IN	MM	IN	MM
A	3 1/2	89	4 1/8	105
B	3	76	3 3/5	91

- NOTES:
1. MATERIAL: LOW CARBON STEEL
 2. FINISH: ELECTROCOAT ENAMEL, GRAY
 3. AGENCY APPROVAL: cULus LISTED -FILE E11592
 4. SUITABLE FOR USE AS SERVICE EQUIPMENT WHEN NEUTRAL ASSEMBLY IS INSTALLED
 5. THE SHORT CIRCUIT RATING OF THIS ENCLOSED CIRCUIT BREAKER IS EQUAL TO THE INTERRUPTING RATING, AT THE SUPPLY VOLTAGE MARKED ON THE CIRCUIT BREAKER INSTALLED
 6. FOR ALTERNATE LUGS CONSULT THE BUYLOG

THIRD ANGLE		SHEET#	DWG NO.	DATE	REV
		1 of 1	208C2838SH3	20-Jan-22	4

ABB		
OUTLINE-NEMA 3R XT5ENCL600R		
DWG NO.	DATE	REV
208C2838SH3	20-Jan-22	4

Automatic Transfer Switch Submittal Section

Item No.	Product Description	Mark(s)	Quantity
2	Automatic Transfer Switch, ZTG T-Series, 800 A-1200 A, ZGOM3BX32-XX5XR2XX	800 AMP ATS	1
4	Automatic Transfer Switch, ZTG T-Series, 400 A-600 A, ZGOK3BX32-XX5XR2XX	400 AMP ATS	1

Bill of Material(s)

Item No.	Quantity	Description
2	1	<p>Automatic Transfer Switch, ZTG T-Series, 800 A-1200 A, ZGOM3BX32-XX5XR2XX Marks: 800 AMP ATS</p> <p>ZTG OT 800A3PH Sld Neu N3R General Purpose Commercial and Industrial Automatic Transfer Switch 800 A, 3 Phase (3 Pole), Open Transition NEMA 3R Enclosure No Auxiliary Contacts Solid Neutral Bar No Meters GB5 - (8)#2-600 MCM Ground Bar Modbus RTU communications Additional 2 I/O, programmable T1-Panel Voltage agnostic, Rated for 200 to 480V line to line voltage Standard Application-Sources on Bottom UL 1008 listed up To 480VAC at 50/60Hz Seismic certified To IEEE-693-2005 at HIGH level With 2.5 amplification factor Seismic certified To IBC-2015 at Ip=1.5 For z/h less than Or equal To 1 Microprocessor activated Momentary test switch Programmable exerciser daily, 7-14-28-365 days user- selectable, with or without load Event log of last 250 events Adjustable over/under frequency sensor-Source 2-and Source 1 Frequency Indication - on the controller LED Source -2 - Position indication LED Source -1 - Position indication LED Source -2 - Source availability indication LED Source -1 - Source availability indication Engine start timer -adjustable up to 60sec Phase rotation sensing of Source 1 and Source 2 Under voltage sensing 3-phase Source 2 In Phase Monitor between Source 1 and Source 2 to allow transfer-with enable/disable Over voltage sensing-3 phase Source 2 Microprocessor activated Commit/no commit on transferring to Source 2-with enable/disable Adjustable time delay on transfer to Source 1 Engine stop/cool adjustable cool down timer Voltage imbalance between phases-applies to 3-phase only Adjustable time delay on transfer to Source 2 Bypass transfer timer function-soft switch in controller Programmable Input Modules: (Must be configured by user upon installation) E-Stop Remote Control to S1 (R15 Load Shed) Remote Control to S2 Programmable Output Modules: (Must be configured by user upon installation)</p>

Bill of Material(s)

Item No.	Quantity	Description
		Alarm / Product Availability
		Load Connected to S1
		Load Disconnected
4	1	Automatic Transfer Switch, ZTG T-Series, 400 A-600 A, ZGOK3BX32-XX5XR2XX Marks: 400 AMP ATS ZTG OT 400A3PH Sld Neu N3R General Purpose Commercial and Industrial Automatic Transfer Switch 400 A, 3 Phase (3 Pole), Open Transition NEMA 3R Enclosure No Auxiliary Contacts Solid Neutral Bar No Meters GB5 - (8)#2-600 MCM Ground Bar Modbus RTU communications Additional 2 I/O, programmable T1-Panel Voltage agnostic, Rated for 200 to 480V line to line voltage Standard Application-Sources on Bottom UL 1008 listed up To 480VAC at 50/60Hz Seismic certified To IEEE-693-2005 at HIGH level With 2.5 amplification factor Seismic certified To IBC-2015 at Ip=1.5 For z/h less than Or equal To 1 Microprocessor activated Momentary test switch Programmable exerciser daily, 7-14-28-365 days user- selectable, with or without load Event log of last 250 events Adjustable over/under frequency sensor-Source 2-and Source 1 Frequency Indication - on the controller LED Source -2 - Position indication LED Source -1 - Position indication LED Source -2 - Source availability indication LED Source -1 - Source availability indication Engine start timer -adjustable up to 60sec Phase rotation sensing of Source 1 and Source 2 Under voltage sensing 3-phase Source 2 In Phase Monitor between Source 1 and Source 2 to allow transfer-with enable/disable Over voltage sensing-3 phase Source 2 Microprocessor activated Commit/no commit on transferring to Source 2-with enable/disable Adjustable time delay on transfer to Source 1 Engine stop/cool adjustable cool down timer Voltage imbalance between phases-applies to 3-phase only Adjustable time delay on transfer to Source 2 Bypass transfer timer function-soft switch in controller Programmable Input Modules: (Must be configured by user upon installation) E-Stop

Bill of Material(s)

Item No.	Quantity	Description
----------	----------	-------------

		Remote Control to S1 (R15 Load Shed)
--	--	--------------------------------------

		Remote Control to S2
--	--	----------------------

		Programmable Output Modules:
--	--	-------------------------------------

		(Must be configured by user upon installation)
--	--	--

		Alarm / Product Availability
--	--	------------------------------

		Load Connected to S1
--	--	----------------------

		Load Disconnected
--	--	-------------------

1 General Terms

This Rider incorporates by reference ABBGTC052020 Terms and includes the following additional provisions contained herein. In the event of a conflict between this Rider and ABBGTC052020, the Rider shall take precedence. Refer to the Operations Manual of each Product for specific handling and storage requirements that may impact the warranty. This warranty is valid only in the United States.

2 Surge Protective Devices (SPD)

2.1 ABB Wall mount SPD, Box Extension, and Integral/Factory installed Product

The Warranty periods for the ABB OVRH Series SPD Products are as follows: The OVRHTP Series is ten (10) years. The OVRHMSU is five (5) years. The OVRHT3D is three (3) years. All warranty periods for these Products begin from the date of shipment from Seller's facility.

The Warranty period for the ABB TLE, TME, TPME, TPHE Series Wall Mount SPD Products, the ABB TPME and TPHE Series Integral Mount SPD Products, and the ABB TPME and TPHE Series Box Extension SPD Products is ten (10) years from the date of shipment from Seller's facility.

2.2 Current Technology SPD Products

The Warranty periods for Current Technology Series SPD Products are as follows: Series SL3 is twenty (20) years. Series TG3, PX3, CGP3, ISM and HPI are fifteen (15) years. Series CG3 is ten (10) years. All warranty periods for these Products begin from the date of shipment from Seller's facility.

3 Automatic Transfer Switches (ATS), Zenith, legacy or T-series

3.1 Z(B)TE, Z(B)TS, ZTG, and TruONE open style (level 3 or 4 controls)

The Warranty period for ZTE, ZBTE, ZTS, ZBTS, ZTG, and TruONE open style (level 3 or 4 controls) transfer switch Products is twenty-four (24) months from the date of shipment.

3.2 ZTX and TruONE Open Style (level 2 controls)

The Warranty period for ZTX and TruONE open style (level 2 controls) transfer switch Products is twelve (12) months from the date of shipment.

3.3 Replacement parts

Replacement parts are warranted for a period of ninety (90) days when installed by an authorized Seller factory or authorized Seller service station.

4 Uninterruptible Power Supply (UPS)

4.1 SG, DPA, TLE High Power, MegaFlex, PowerBuilt, UPS-I and HiPerGuard

The Warranty period for SG UL, DPA UL, TLE 160kW to 1MW UL, MegaFlex UL, PowerBuilt UL, UPS-I, and HiPerGuard UPS Products is eighteen (18) months from date of shipment from Seller's facility.

4.2 TLE Scalable, LP33, LP11, GT, VH Power Value Series

The Warranty period for TLE Scalable 40 – 150kW, LP33, LP11, GT, VH and Power Value Series UL UPS Products is twenty-four (24) months from the date of shipment from Seller's facility.

4.3 UPS BATTERIES & ACCESSORIES

The warranty for batteries and accessories will be passed through from the original manufacturer per the terms of the manufacturer's standard warranty conditions.

5 Static Transfer Switch (STS)

5.1 Cyberex SuperSwitch 4

The Warranty period for Cyberex SuperSwitch 4 is eighteen (18) months from date of shipment from Seller's facility.

6 Power Distribution Units (PDU)

6.1 Cyberex PDU and RPP

The Warranty period for Cyberex Power Distribution Units is eighteen (18) months from date of shipment from Seller's facility.

7 Power Conditioning Systems (PCS)

7.1 Active Voltage Conditioner (AVC)

The Warranty period for Active Voltage Conditioner Units is eighteen (18) months from date of shipment from Seller's facility.

7.2 Static Frequency Converter (SFC)

The Warranty period for Static Frequency Converter Units is eighteen (18) months from date of shipment from Seller's facility.

8 Prohibited uses

In addition to prohibitions on nuclear use, the Equipment, Products and Services sold by Seller are not intended for use in connection with any avionics or life support activity or equipment, and Buyer warrants that it shall not use or permit others to use Equipment, Products or Services for such purposes without the advance written consent of Seller. If, in breach of this, any such use occurs, Seller (and its parent, affiliates, suppliers and subcontractors) disclaims all liability for any claims, damages, or injuries (including death). In addition to any other rights of Seller, Buyer shall indemnify and hold Seller (and its parent, affiliates, suppliers and subcontractors) harmless against all such liability. Consent of Seller to any such use, if any, will be conditioned upon additional terms and conditions that Seller determines to be acceptable for protection against avionics or life support liability.

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electrification.us.abb.com/products

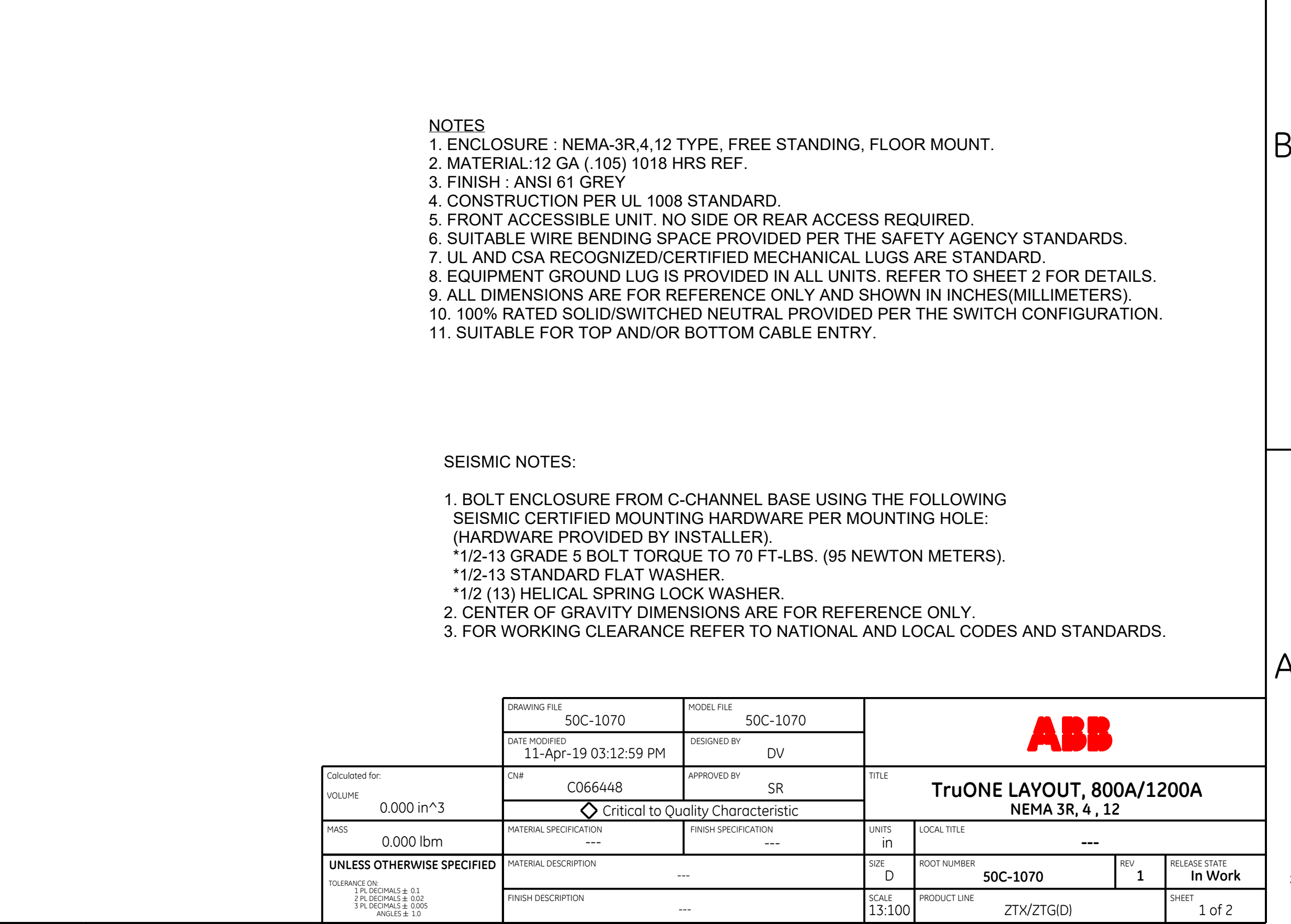
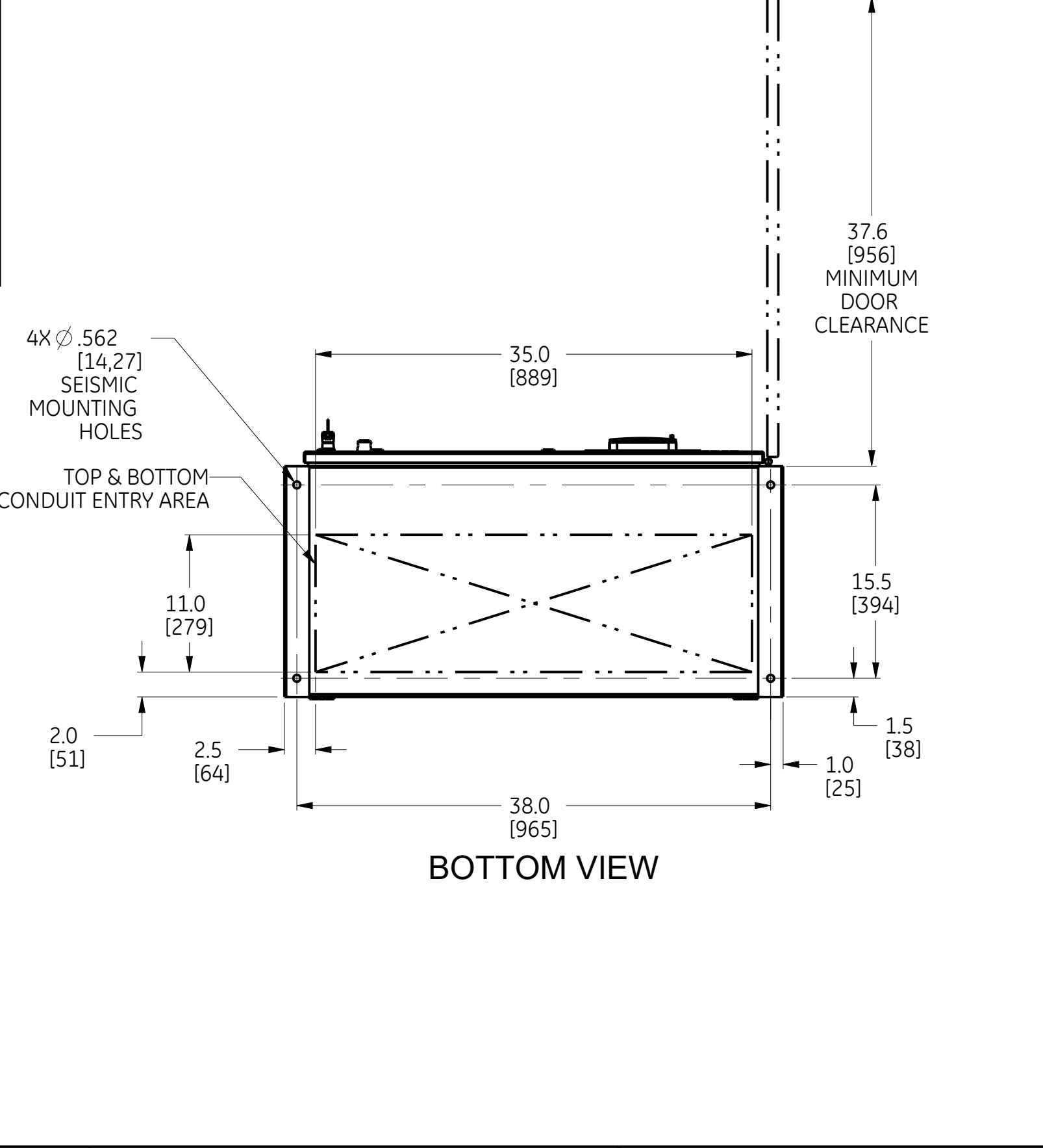
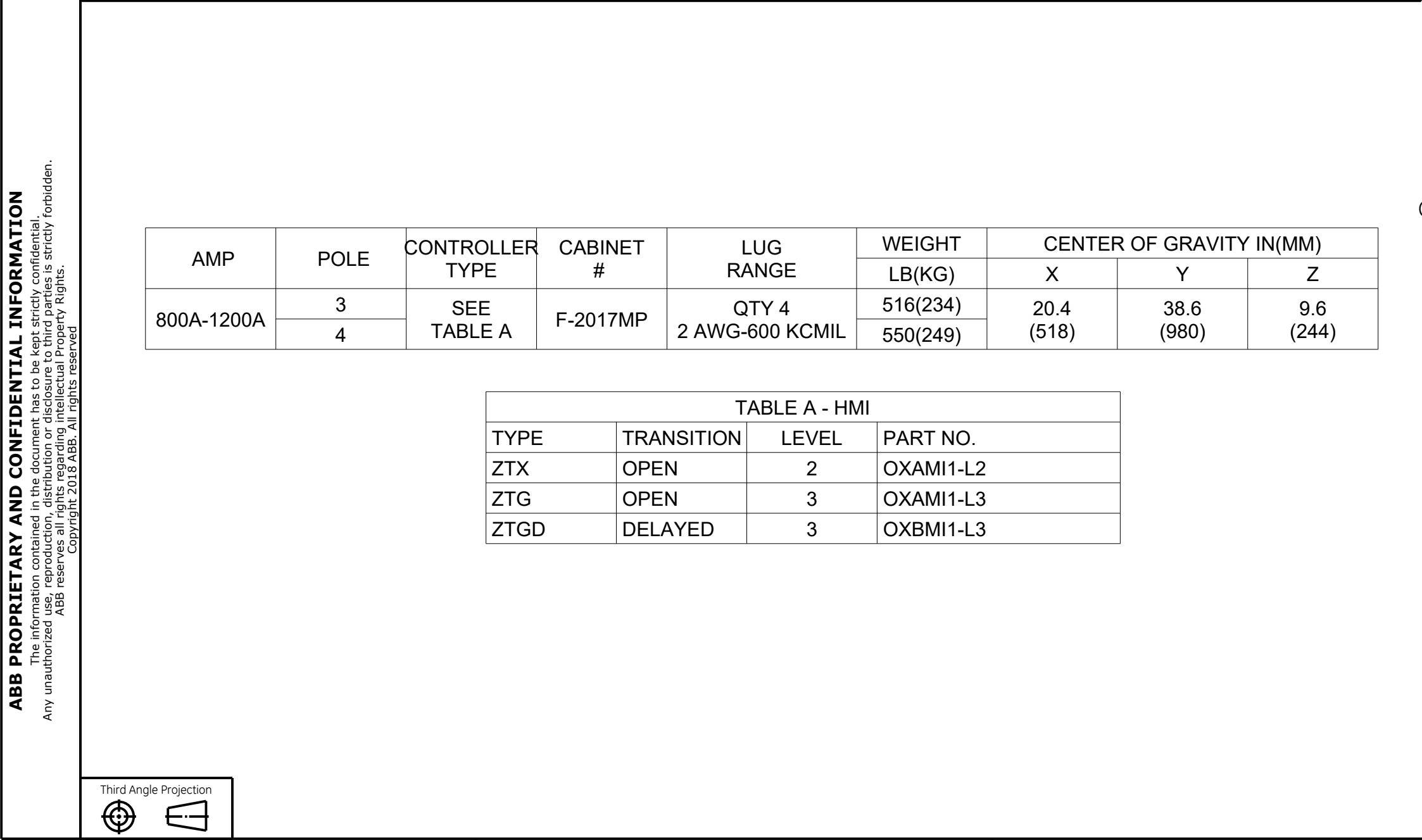


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HEATER
(OPTIONAL)

AUXILIARY
PANEL
FOR MOUNTING
OPTIONS

SECTION C-C
DOOR INSIDE VIEW

21.9
[556]
WIRE
BENDING
SPACE
(TOP)

19.2
[487]
WIRE
BENDING
SPACE
(BOTTOM)

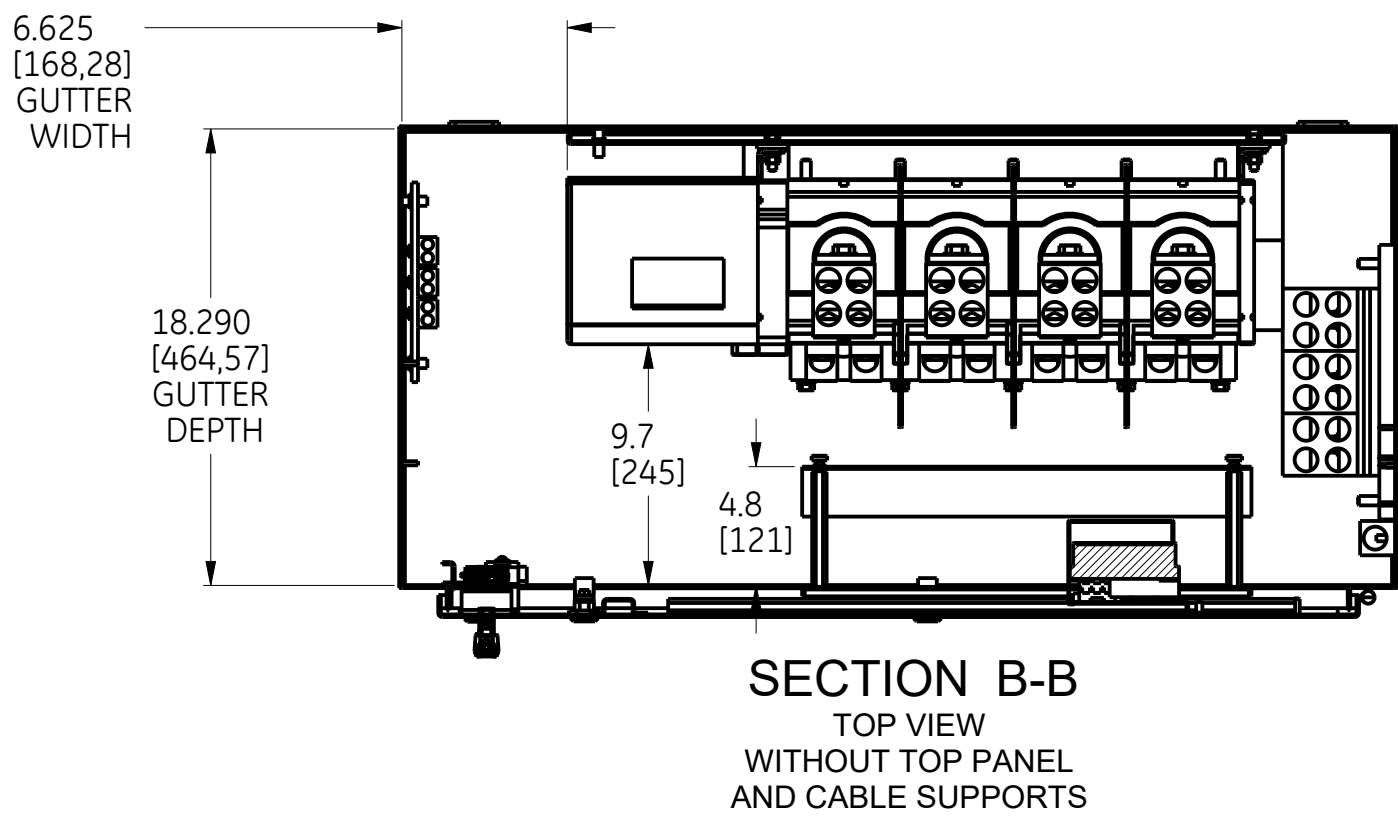
SECTION A-A
LEFT SIDE
WITHOUT SIDE PANEL

TruONE ATS
(4 POLE SHOWN)

NEUTRAL BAR
ASSEMBLY
PER VOLTAGE
CONFIGURATION

EQUIPMENT
GROUND LUG
QTY-1
(#2-600MCM)

FRONT VIEW
WITHOUT DOOR



LOAD
CABLE SUPPORT

SOURCE
CABLE SUPPORT

SOURCE 2
(S2)

LOAD (L)

SOURCE 1
(S1)

GROUND BAR
ASSEMBLY

SECTION D-D
RIGHT SIDE
WITHOUT SIDE PANEL

NOTE:
1. REFER TO SHEET (1) FOR COMPLETE NOTE DETAILS
2. MECHANICAL LUGS SHOWN IN ABOVE VIEWS ARE FOR REFERENCE ONLY.

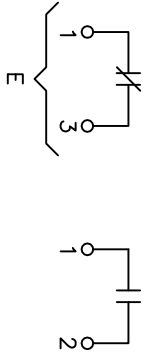
ABB

SIZE	NUMBER	REV
D	50C-1070	1
SCALE	PRODUCT LINE	SHEET
13:100	ZTX/ZTG(D)	2 of 2



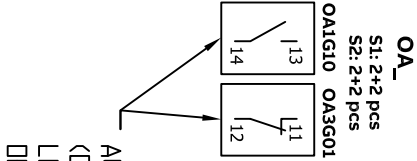
CUSTOMER CONNECTIONS

ENGINE START



CONTACT	RATING
E	5 AMP @ 240 VAC 5 AMP @ 30 VDC
OA1G10 (N.O.)	10 AMP @ 125, 250 VAC
OA3G01 (N.C.)	10 AMP @ 125, 250 VAC
Ekip Module (2K-1, 2, 3)	4 AMP @ 240 VAC 2 AMP @ 30 VDC

INTERCONNECT PLUG DIAGRAM



AUX CONTACTS
(OPTIONAL)
LOCATE RIGHT SIDE
OF PANEL

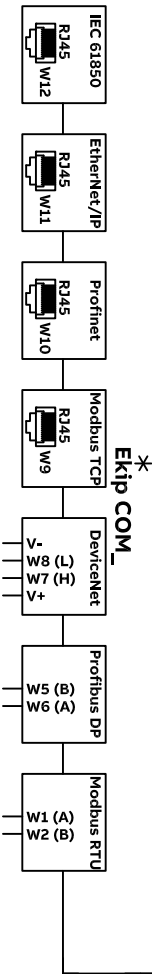
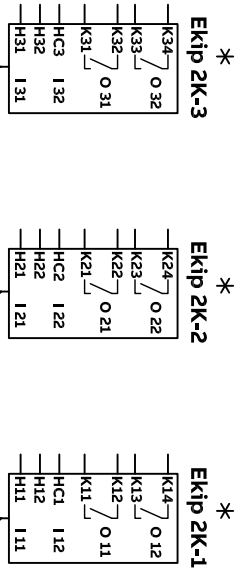
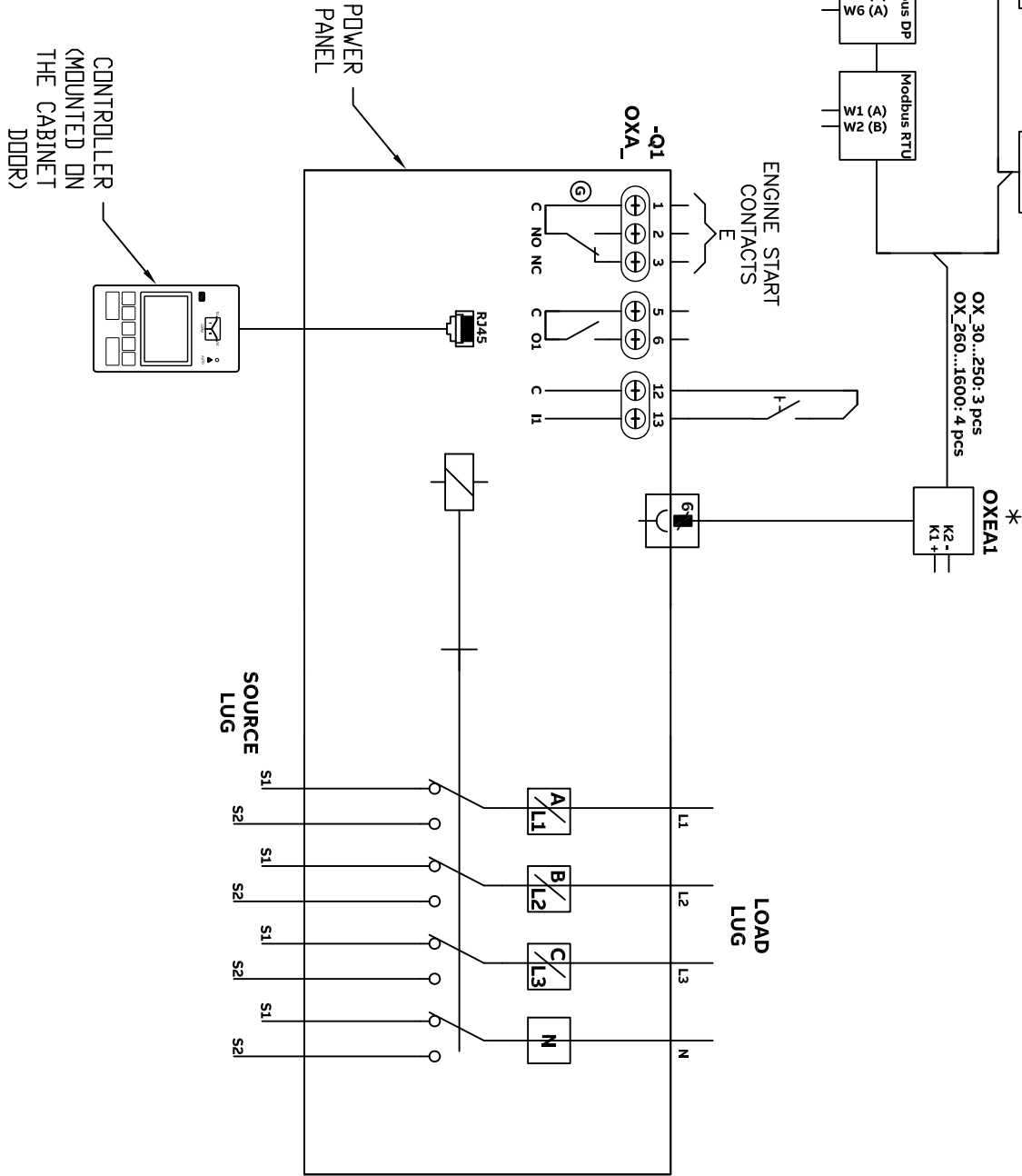
LEGEND	NOTES
* OPTIONAL	



OPEN TRANSITION ATS SCHEMATIC
FOR 30-1200A ZTG PRODUCT

TITLE	UNITS	LOCAL TITLE
SIZE	B	ROOT NUMBER
SCALE	1:1	PRODUCT LINE
1 of 1		

DRAWING FILE	77A-2000	MODEL FILE	77A-2000
DATE MODIFIED	27-Feb-19 07:54:08 AM	DESIGNED BY	----
CN#	CN-C067078	APPROVED BY	----
Critical to Quality Characteristic			
MATERIAL SPECIFICATION	UNASSIGNED	FINISH SPECIFICATION	----
MASS	0.000 lbm		
VOLUME	0.000 in^3		
Calculated for:			
TOLERANCE ON:	1 PL. DECIMALS ± 0.1 2 PL. DECIMALS ± 0.02 3 PL. DECIMALS ± 0.005 ANGLES ± 1.0		
UNLESS OTHERWISE SPECIFIED			
FINISH DESCRIPTION	----		



- NOTES:
1. ATS SHOWN IN SOURCE 1 POSITION WITH NO POWER AVAILABLE.
 2. REFER TO OPERATION AND MAINTENANCE MANUAL TO CONFIGURE THE OPTIONS.
 3. # OF N.O. CONTACTS ON POWER PANEL WILL BE DIFFERENT BASED ON THE SWITCH AMPERAGE. REVIEW THE PRODUCT BROCHURE FOR THE DETAILS.



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3D Model is the Master Document of Record
Article or Material Must Conform to REACH Procedure SI9000000 Sec.14
Article or Material Must Conform to ROHS Procedure SI9000000 Sec.13
Part Must Conform to SI9000000 Sec.4 Toxicity Procedure
Geometric Dimensioning & Tolerancing as per ASME Y14.5-2009



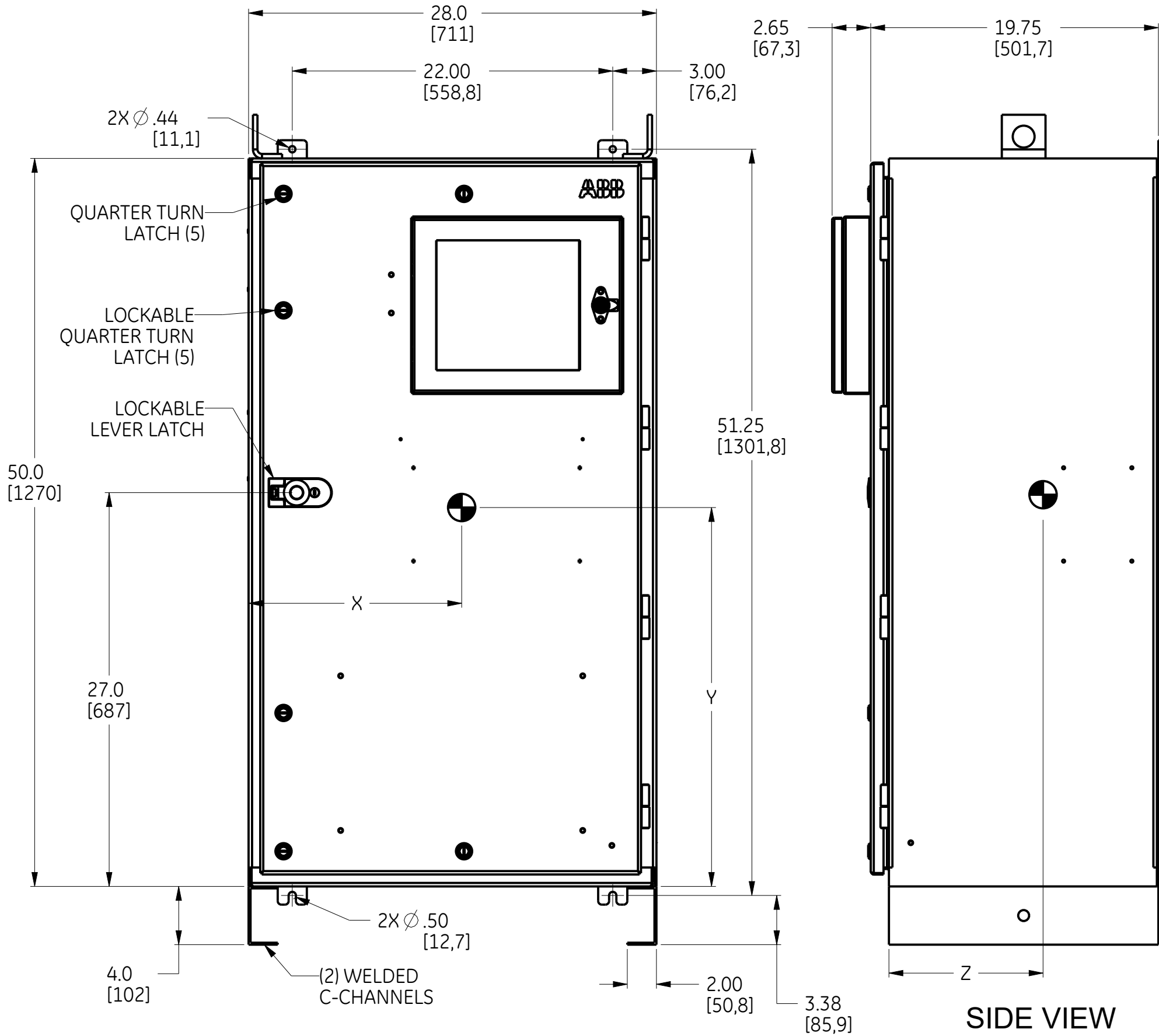
3D Model is the Master Document of Record
Article or National Must Conform to IEC 61439-1 Procedure 5000000 Sec.14
Part Must Conform to 3500000 Sec.4 Toxicity Procedure
Geometric Dimensioning & Tolerancing as per ASME Y14.5-2009

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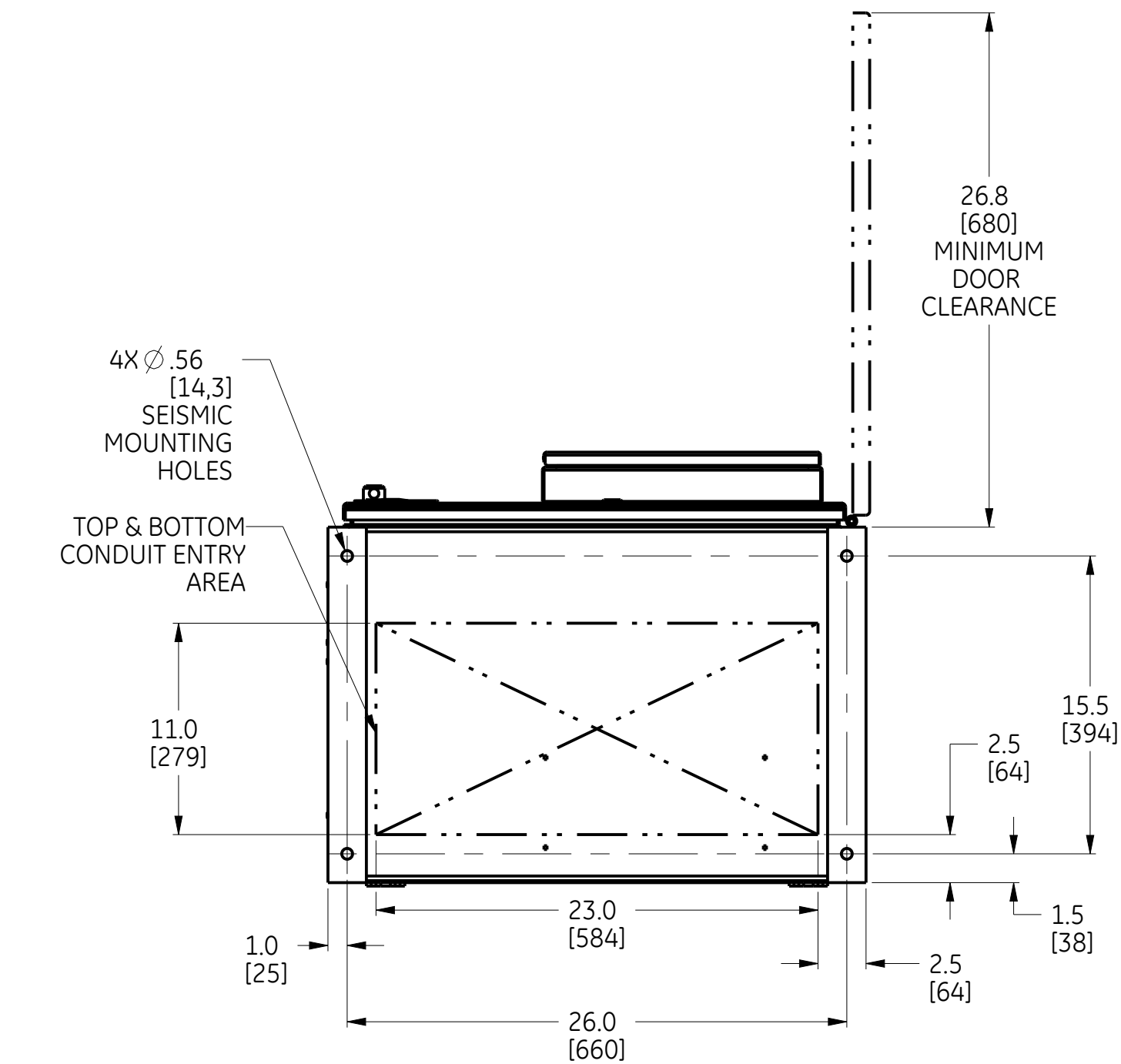
us_3rd.dfm

4 POLE - 400A
NEMA 4 / 12 SHOWN
SEE SHEET 3 FOR INSIDE DETAILS



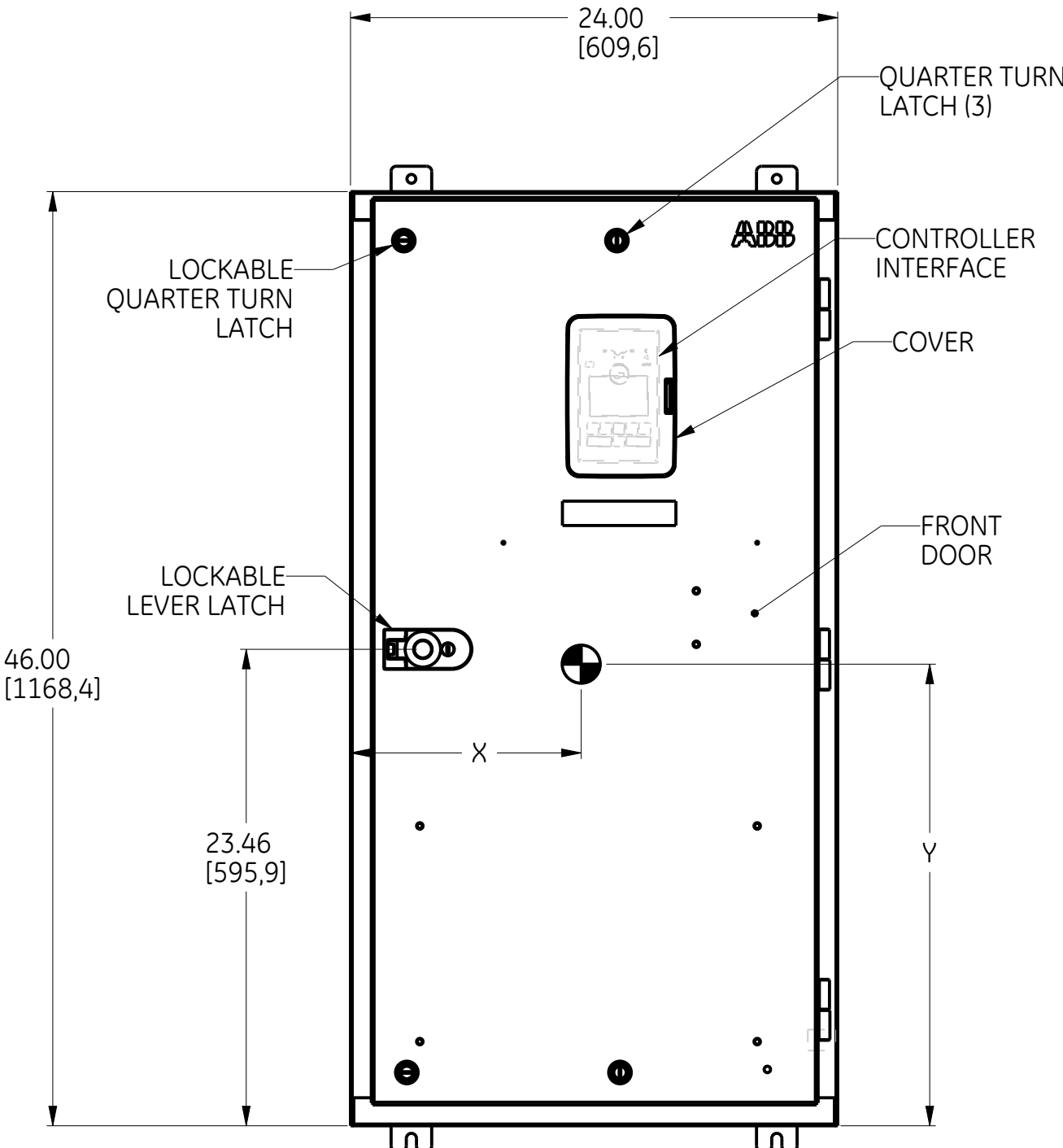
FRONT VIEW

SIDE VIEW

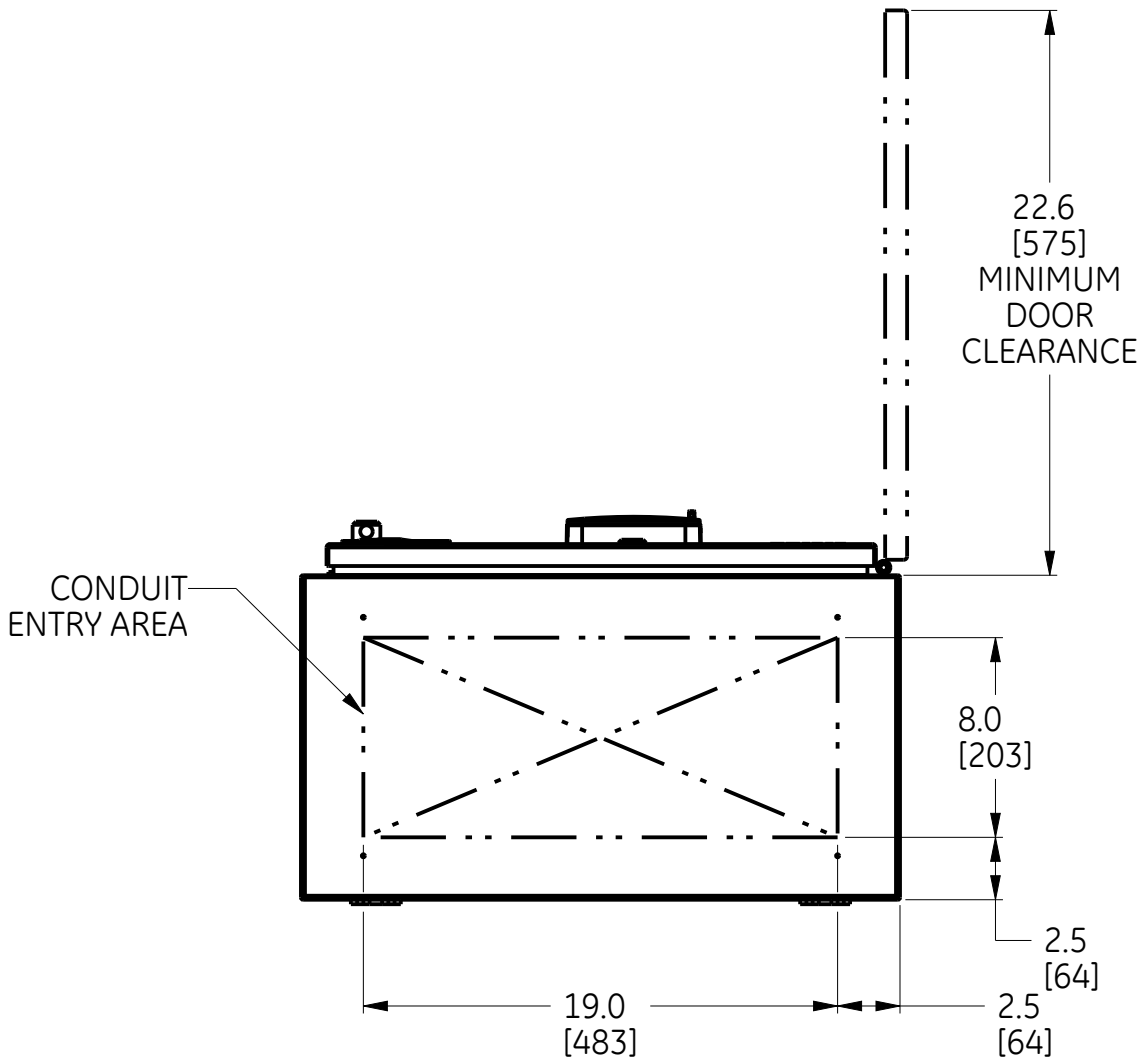


BOTTOM VIEW

- NOTES
1. ENCLOSURE : NEMA 3R TYPE, FREE STANDING, FLOOR MOUNT.
2. MATERIAL: 12 GA (.105) 1018 HRS REF.
3. FINISH : ANSI 61 GREY



FRONT VIEW



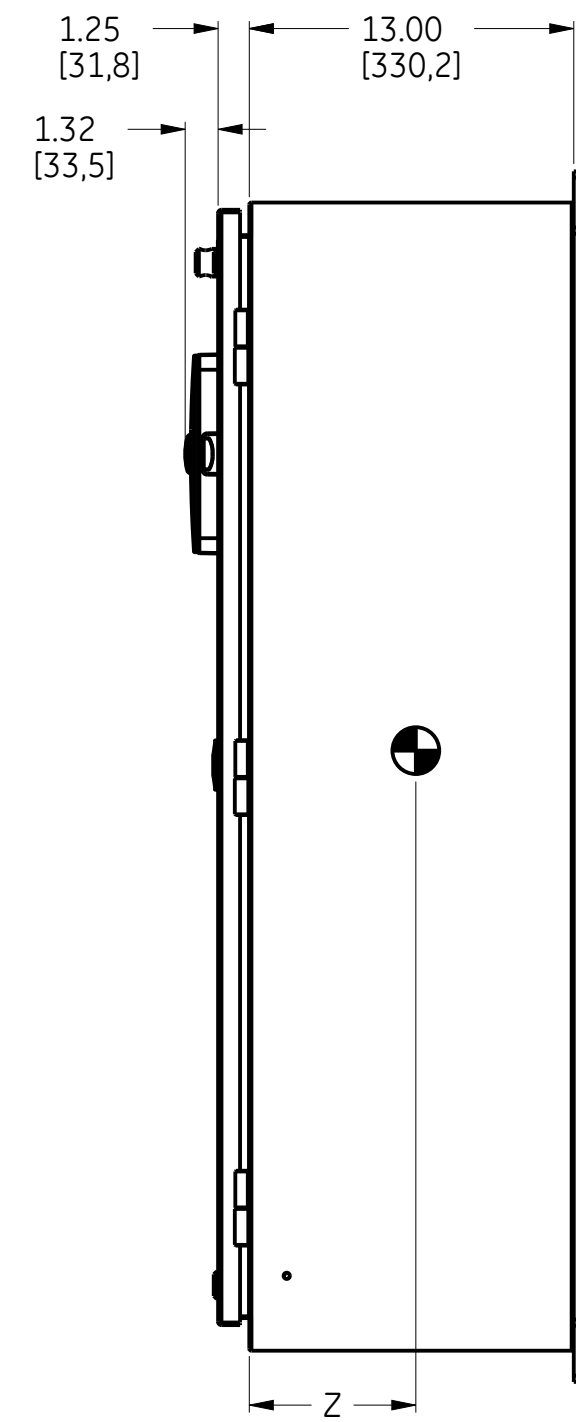
BOTTOM VIEW

- NOTES
1. ENCLOSURE : NEMA 3R TYPE, WALL MOUNT.
2. MATERIAL: 14 GA (.075) 1018 HRS REF.
3. FINISH : ANSI 61 GREY

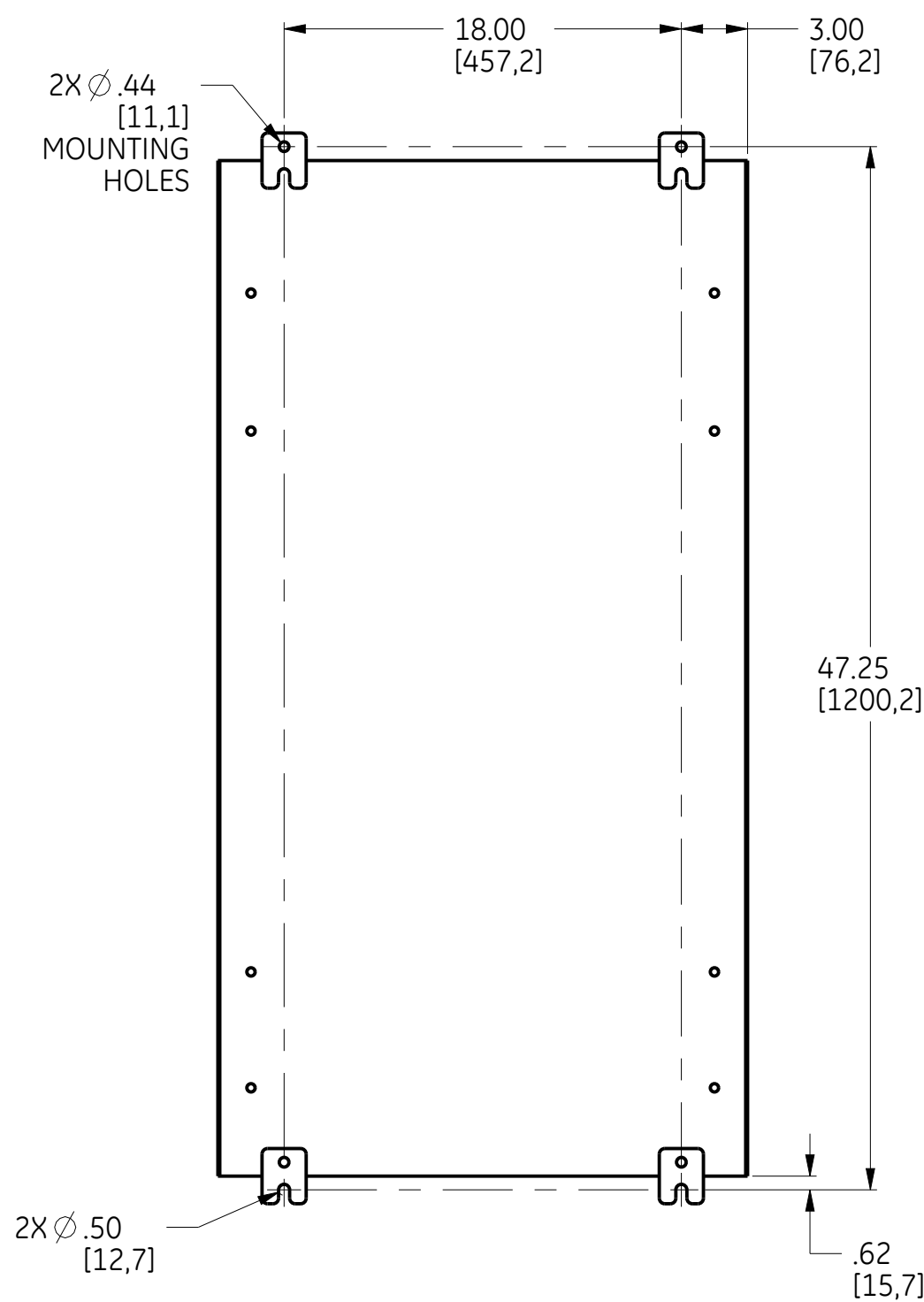
GENERAL NOTES:

- CONSTRUCTION PER UL 1008 STANDARD.
- FRONT ACCESSIBLE UNIT. NO SIDE OR REAR ACCESS REQUIRED.
- SUITABLE WIRE BENDING SPACE PROVIDED PER THE SAFETY AGENCY STANDARDS.
- UL AND CSA RECOGNIZED/CERTIFIED MECHANICAL LUGS ARE STANDARD.
- EQUIPMENT GROUND LUG IS PROVIDED IN ALL UNITS. SEE SHEETS 2 AND 3 FOR DETAILS.
- ALL DIMENSIONS ARE FOR REFERENCE ONLY AND SHOWN IN INCHES(MILLIMETERS).
- 100% RATED SOLID/SWITCHED NEUTRAL PROVIDED PER THE SWITCH CONFIGURATION.
- SUITABLE FOR TOP AND/OR BOTTOM CABLE ENTRY.

2, 3 & 4 POLE - 260A
2 & 3 POLE - 400A
NEMA 3R SHOWN
SEE SHEET 2 FOR INSIDE DETAILS



SIDE VIEW



REAR VIEW

AMP	POLE	CONTROLLER TYPE	CABINET #	LUG RANGE	WEIGHT	CENTER OF GRAVITY IN(MM)		
					LB(KG)	X	Y	Z
260A	2	SEE TABLE A	F-2013MP	QTY 1 350 KCMIL	174(79)	11.5 (292)	23.0 (584)	7.5 (190)
	3				178(81)			
	4				183(83)			
400A	2			QTY 1 600 KCMIL	182(82)			
	3				187(85)			
	4		F-2015MP		324(147)	13.7(348)	28.1(714)	9.7(246)

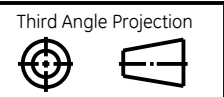
TABLE A - HMI			
TYPE	TRANSITION	LEVEL	PART NO.
ZTX	OPEN	2	OXAMI1-L2
ZTG	OPEN	3	OXAMI1-L3
ZTGD	DELAYED	3	OXBMI1-L3

SEISMIC NOTES:

- BOLT ENCLOSURES USING THE FOLLOWING SEISMIC CERTIFIED MOUNTING HARDWARE PER MOUNTING HOLE: (HARDWARE PROVIDED BY INSTALLER).
*1/2-13 GRADE 5 BOLT TORQUE TO 70 FT-LBS. (95 NEWTON METERS).
*1/2-13 STANDARD FLAT WASHER.
*1/2 (13) HELICAL SPRING LOCK WASHER.
- CENTER OF GRAVITY DIMENSIONS ARE FOR REFERENCE ONLY.
- FOR WORKING CLEARANCE REFER TO NATIONAL AND LOCAL CODES AND STANDARDS.

Calculated for: VOLUME 0.000 in^3 MASS 0.000 lbm UNLESS OTHERWISE SPECIFIED TOLERANCE ON: 1 PL DECIMALS ± .01 2 PL DECIMALS ± .002 3 PL DECIMALS ± .005 ANGLES ± .10	DRAWING FILE 50C-1064	MODEL FILE 50C-1064	TITLE ABB TruONE LAYOUT, 260A-400A WITH NEMA 3R, 4, 12 TYPE CABINET	
	DATE MODIFIED 01-May-19 03:19:59 PM	DESIGNED BY ---		
	CNR C068629 Critical to Quality Characteristic	APPROVED BY ---	UNITS in	LOCAL TITLE ---
	MATERIAL SPECIFICATION ---	FINISH SPECIFICATION ---	SIZE D	BOOT NUMBER 50C-1064
	FINISH DESCRIPTION ---	SCALE 11:100	PRODUCT LINE ZTX/ZTG(D)	REV 1 RELEASE STATE In Work SHEET 1 of 3

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HEATER
(OPTIONAL)

AUXILIARY
PANEL

SECTION D-D
DOOR INSIDE VIEW

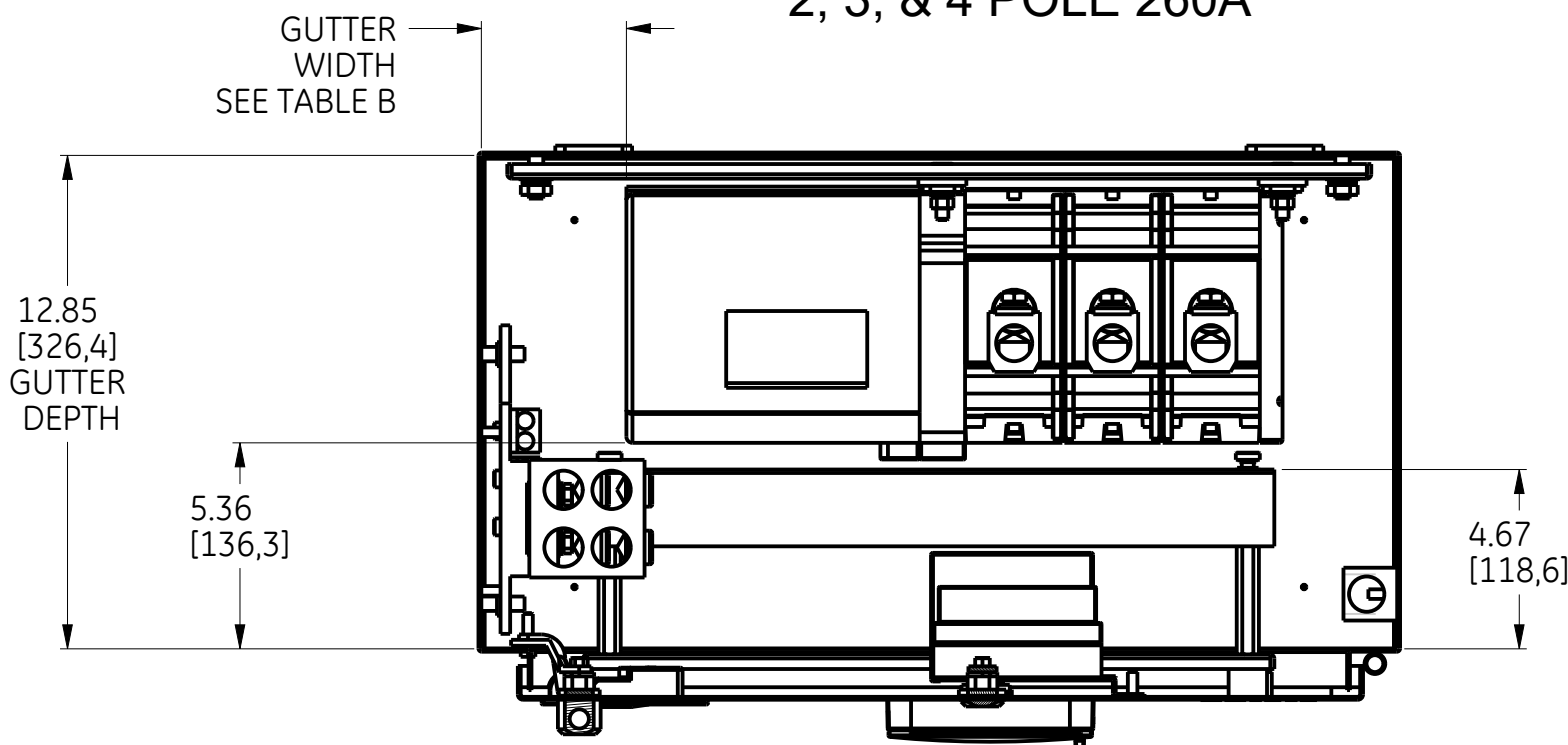
SECTION A-A
LEFT VIEW
WITHOUT SIDE PANEL

TruONE ATS
3 POLE 400A SHOWN

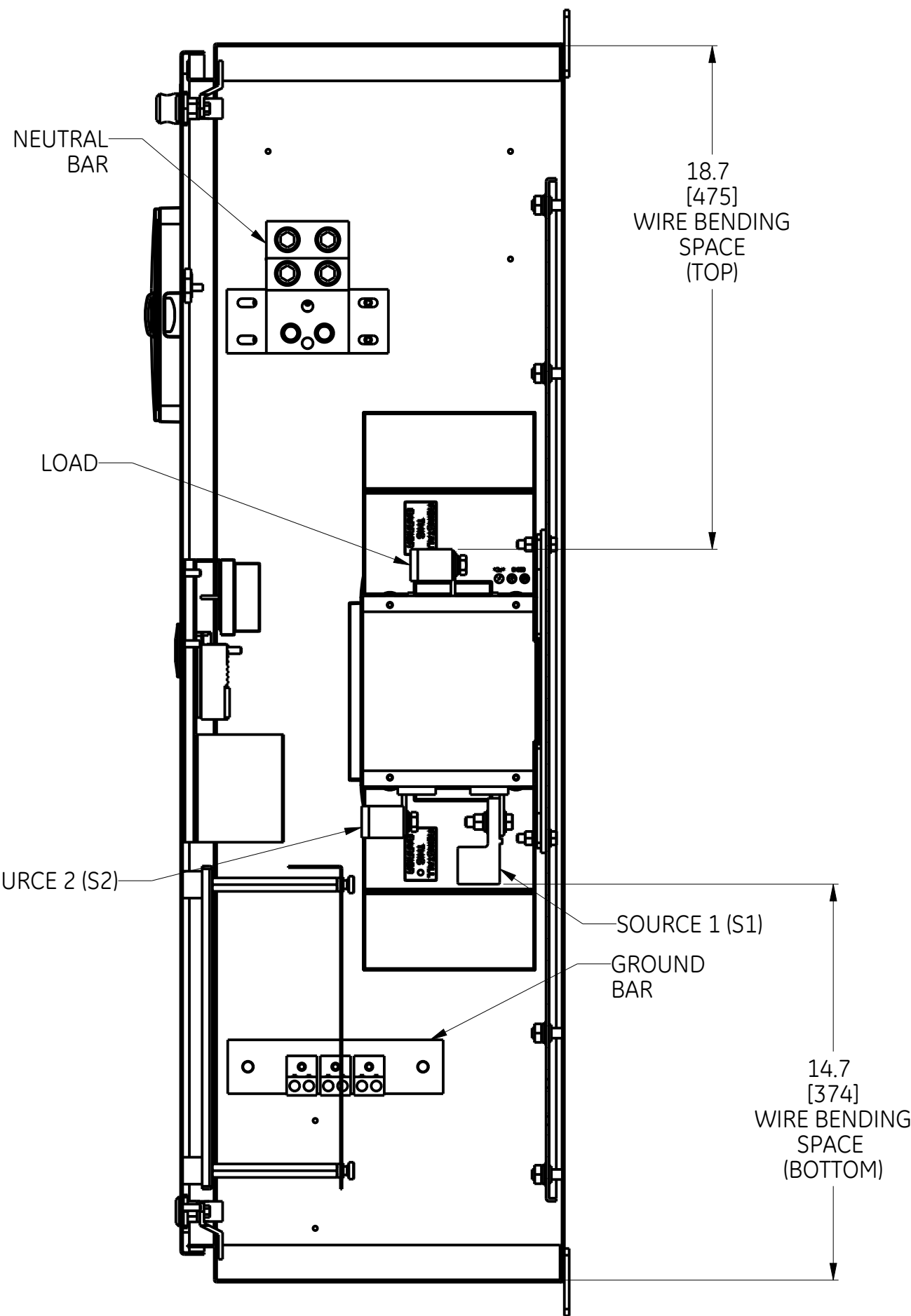
EQUIPMENT
GROUND LUG
(#2-600 MCM)

FRONT VIEW
WITHOUT DOOR

2 & 3 POLE 400A
2, 3, & 4 POLE 260A



SECTION B-B
TOP VIEW
WITHOUT TOP PANEL



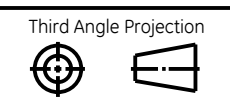
SECTION C-C
RIGHT SIDE VIEW
WITHOUT SIDE PANEL

NOTE:
1. REFER TO SHEET (1) FOR COMPLETE NOTE DETAILS
2. MECHANICAL LUGS SHOWN IN ABOVE VIEWS ARE FOR REFERENCE ONLY.

TABLE B - GUTTER WIDTH		
	POLES	
260A	4	3.4 (86)
400A	3	3.7 (94)

ABB			
SIZE	NUMBER	REV	
D	50C-1064	1	
SCALE	PRODUCT LINE	SHEET	
11:100	ZTX/ZTG(D)	2 of 3	

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AUXILIARY
PANEL

SECTION D-D
DOOR INSIDE VIEW

HEATER
(OPTIONAL)

SECTION A-A
LEFT SIDE
WITHOUT SIDE PANEL

EQUIPMENT
GROUND LUG
(#2-600 MCM)

TruONE ATS
(400A 4 POLE SHOWN)

FRONT VIEW
WITHOUT DOOR

SECTION B-B
TOP VIEW
WITHOUT TOP PANEL

SOURCE 2
(S2)

PHASE
BARRIERS (6)

SECTION C-C
RIGHT SIDE VIEW
WITHOUT SIDE PANEL
AND PHASE BARRIERS

ABB			
SIZE D	NUMBER 50C-1064	REV 1	
SCALE 9:100	PRODUCT LINE ZTX/ZTG(D)	SHEET 3 of 3	

NOTE:
1. REFER TO SHEET (1) FOR COMPLETE NOTE DETAILS
2. MECHANICAL LUGS SHOWN IN ABOVE VIEWS ARE FOR REFERENCE ONLY.

Panelboard Submittal Section

Item No.	Product Description	Mark(s)	Quantity
5	Power Panelboard, ReliaGear neXT	MDP-A	1
6	Power Panelboard, ReliaGear neXT	DPP	1
7	Power Panelboard, ReliaGear neXT	DPS	1
8	Lighting Panelboard, ReliaGear RE	HPP	1
9	Lighting Panelboard, ReliaGear RQ	LPP	1
10	Lighting Panelboard, ReliaGear RE	HPS	1
11	Lighting Panelboard, ReliaGear RQ	LPS	1
15	Power Panelboard, ReliaGear neXT	MDP-B	1
16	Lighting Panelboard, ReliaGear RE	HPA	1
17	Power Panelboard, ReliaGear neXT	DPM	1
18	Lighting Panelboard, ReliaGear RE	HPM	1
19	Lighting Panelboard, ReliaGear RQ	LPM	1
20	Lighting Panelboard, ReliaGear RE	HPB	1

Bill of Material(s)

Item No.	Quantity	Description
5	1	Power Panelboard, ReliaGear neXT Marks: MDP-A 1 Section(s), Nema 3R Cabinets 800 Amps, 3 Phase 4 Wire 480Y/277V, 50/60 Hz Minimum Interrupt Rating: 42kA Fully Rated Incoming Feed: Bottom Surface Mounted UL67 Certified Height: 72 Inches; Width: 40 Inches; Depth: 14.5 Inches; Est. Weight: 568 lbs 1 800 Amps Main Lugs Main Lug (4) #2-500 mcm, No Feed Through Main Option Details 1 Copper Bus Heat Rated 1 100% Rated Neutral 1 NEMA 3R Cabinets Feeders 2 Breaker Device 400 Amps 3 Poles XT5HU340ABYN000XXX 2 TMA 2 (2) 2/0 AWG - 500 MCM 2 Breaker Device 100 Amps 3 Poles XT1HU3100AYD000XXX 2 TMF 2 (1) 10 - 2/0 AWG 4 Breaker Space Device 200 Amps 3 Poles XT4HU3200AYJ000XXX 4 TMF 4 (1) 4 AWG-300 MCM 1 Ground: GDBG10AL 1 Bus: IN2408BL3H2 1 Neutral: NL12I0NSTNDAL 1 Enclosure: ER7240R 1 Frame: IF2440F 1 Front 1 of 2: FT40S00135 1 Front 2 of 2: FT40S00270 1 Gutter: GC40F24BLA 1 WirePost: BP40F 6 MLO and/or FTL Kit: LGML260A 1 Spacer: SR02BB 5 Spacer: SR03BB 3 Spacer: SR03BF 1 Spacer: SR1XBF 1 Spacer: SR1XBR 1 Lifting Bar: IL40F 1 PPXT FA INT 1 PPXT FA BOX
6	1	Power Panelboard, ReliaGear neXT Marks: DPP

Bill of Material(s)

Item No.	Quantity	Description
		1 Section(s), Nema 1 Enclosure
		400 Amps, 3 Phase 4 Wire 480Y/277V, 50/60 Hz
		Minimum Interrupt Rating: 25kA Fully Rated
		Incoming Feed: Bottom
		Surface Mounted
		UL67 Certified
		Height: 84 Inches; Width: 40 Inches; Depth: 11 Inches; Est. Weight: 631 lbs
1		400 Amps Main Lugs
		Main Lug (2) #2-500 mcm, No Feed Through
		Main Option Details
1		Copper Bus Heat Rated
1		100% Rated Neutral
1		NEMA 1 Enclosure
		Feeders
3		Breaker Device 50 Amps 3 Poles XT1NU3050AYD000XXX
3		TMF
3		(1) 10 - 2/0 AWG
1		Breaker Device 125 Amps 3 Poles XT1NU3125AYD000XXX
1		TMF
1		(1) 10 - 2/0 AWG
1		Breaker Device 200 Amps 3 Poles XT4NU3200AYJ000XXX
1		TMF
1		(1) 4 AWG-300 MCM
1		Breaker Device 100 Amps 3 Poles XT1NU3100AYD000XXX
1		TMF
1		(1) 10 - 2/0 AWG
2		Breaker Space Device 125 Amps 3 Poles XT1NU3125AYD000XXX
2		TMF
2		(1) 10 - 2/0 AWG
		Modifications
1		Door within Door
1		Key Lock
1		Ground: GDBG10AL
1		Bus: IN3204BL3H2
1		Neutral: NL04I0NSTNDAL
1		Enclosure: ER8440A
1		Frame: IF3240F
1		Door within Door Deadfront: DD4084AHFS
1		Door within Door Filler 1: DDFIL404509SF
1		Door within Door Filler 2: DDFIL404521SF
1		Door within Door Filler Support: DDSUP28
1		WirePost: BP40F
1		Surge Protection: SP277Y08X402
3		MLO and/or FTL Kit: LGML260A
1		Spacer: SR01BB
1		Spacer: SR01BF
6		Spacer: SR03BB
2		Spacer: SR03BF

Bill of Material(s)

Item No.	Quantity	Description
	2	Spacer: SR1XBR
	1	Spacer: SR5XBF
	2	Spacer: SRT1BB
	1	Lifting Bar: IL40F
	1	PPXT FA INT
	1	PPXT FA BOX
7	1	Power Panelboard, ReliaGear neXT
		Marks: DPS
		1 Section(s), Nema 1 Enclosure
		400 Amps, 3 Phase 4 Wire 480Y/277V, 50/60 Hz
		Minimum Interrupt Rating: 25kA Fully Rated
		Incoming Feed: Bottom
		Surface Mounted
		UL67 Certified
		Height: 84 Inches; Width: 40 Inches; Depth: 11 Inches; Est. Weight: 634 lbs
	1	400 Amps Main Lugs
		Main Lug (2) #2-500 mcm, No Feed Through
		Main Option Details
	1	Copper Bus Heat Rated
	1	100% Rated Neutral
	1	NEMA 1 Enclosure
		Feeders
	1	Breaker Device 25 Amps 3 Poles XT1NU3025AYD000XXX
	1	TMF
	1	(1) 10 - 2/0 AWG
	2	Breaker Device 50 Amps 3 Poles XT1NU3050AYD000XXX
	2	TMF
	2	(1) 10 - 2/0 AWG
	1	Breaker Device 125 Amps 3 Poles XT4NU3125AYJ000XXX
	1	TMF
	1	(1) 4 AWG-300 MCM
	1	Breaker Device 200 Amps 3 Poles XT4NU3200AYJ000XXX
	1	TMF
	1	(1) 4 AWG-300 MCM
	1	Breaker Device 100 Amps 3 Poles XT1NU3100AYD000XXX
	1	TMF
	1	(1) 10 - 2/0 AWG
	2	Breaker Space Device 125 Amps 3 Poles XT1NU3125AYD000XXX
	2	TMF
	2	(1) 10 - 2/0 AWG
		Modifications
	1	Door within Door
	1	Key Lock
	1	Ground: GDBG10AL
	1	Bus: IN3204BL3H2
	1	Neutral: NL04I0NSTNDAL

Bill of Material(s)

Item No.	Quantity	Description
	1	Enclosure: ER8440A
	1	Frame: IF3240F
	1	Door within Door Deadfront: DD4084AHFS
	1	Door within Door Filler 1: DDFIL404509SF
	1	Door within Door Filler 2: DDFIL404521SF
	1	Door within Door Filler Support: DDSUP28
	1	WirePost: BP40F
	1	Surge Protection: SP277Y08X402
	3	MLO and/or FTL Kit: LGML260A
	1	Spacer: SR01BB
	1	Spacer: SR01BF
	6	Spacer: SR03BB
	2	Spacer: SR03BF
	1	Spacer: SR1XBR
	1	Spacer: SR5XBF
	2	Spacer: SRT1BB
	1	Lifting Bar: IL40F
	1	PPXT FA INT
	1	PPXT FA BOX
8	1	Lighting Panelboard, ReliaGear RE
		Marks: HPP
		1 Section(s), Nema 1 Enclosure
		225 Amps, 3 Phase 4 Wire 480Y/277V, 50/60 Hz
		Minimum Interrupt Rating: 14kA Fully Rated
		Incoming Feed: Bottom
		Surface Mounted
		42 Circuits
		UL67 / CSA C22.2 No. 29 Certified
		cULus Certified
		Height: 43.5 Inches; Width: 20 Inches; Depth: 5.75 Inches
	1	225 Amps Main Lugs
		1-lug/phase 1-cable/lug #6 -350 kcmil
		Main Option Details
	1	Copper Bus Heat Rated
	4	Ground-Box bonded TGL2
	1	Ground main lug TGL20
	1	100% Rated Neutral
	1	NEMA 1 Enclosure
		Feeders
	7	Breaker Device 20 Amps 3 Poles TEY
	2	Breaker Device 30 Amps 3 Poles TEY
	15	Breaker Device 20 Amps 1 Poles TEY
		Modifications
	1	Front Hinged To Box
	1	Interior: AEF3422MBX AXB7
	1	Box: AB43B

Bill of Material(s)

Item No.	Quantity	Description
	1	Front: AF43SD
9	1	Lighting Panelboard, ReliaGear RQ Marks: LPP 1 Section(s), Nema 1 Enclosure 250 Amps, 3 Phase 4 Wire 208Y/120V, 50/60 Hz Minimum Interrupt Rating: 10kA Fully Rated Incoming Feed: Bottom Surface Mounted 60 Circuits UL67 / CSA C22.2 No. 29 Certified cULus Certified Height: 64.5 Inches; Width: 20 Inches; Depth: 5.75 Inches 1 250 Amps Main Breaker XT4N250 1 TMF 1-lug/phase 1-cable/lug 3/0 -350 kcmil Main Option Details 1 Copper Bus Heat Rated 5 Ground-Box bonded TGL2 1 Ground main lug TGL20 1 100% Rated Neutral 1 NEMA 1 Enclosure Feeders 4 Breaker Device 20 Amps 2 Poles THQB 5 Breaker Device 40 Amps 2 Poles THQB 42 Breaker Device 20 Amps 1 Poles THQB Modifications 1 Power Distribution Panel 1 Front Hinged To Box 1 Interior: AQF3602JBX AXB7 1 Box: AB64B 1 Front: AF64SD
10	1	Lighting Panelboard, ReliaGear RE Marks: HPS 1 Section(s), Nema 1 Enclosure 225 Amps, 3 Phase 4 Wire 480Y/277V, 50/60 Hz Minimum Interrupt Rating: 14kA Fully Rated Incoming Feed: Bottom Surface Mounted 48 Circuits UL67 / CSA C22.2 No. 29 Certified cULus Certified Height: 49.5 Inches; Width: 20 Inches; Depth: 5.75 Inches 1 225 Amps Main Lugs 1-lug/phase 1-cable/lug #6 -350 kcmil

Bill of Material(s)

Item No.	Quantity	Description
		Main Option Details
	1	Copper Bus Heat Rated
	4	Ground-Box bonded TGL2
	1	Ground main lug TGL20
	1	100% Rated Neutral
	1	NEMA 1 Enclosure
		Feeders
	10	Breaker Device 20 Amps 3 Poles TEY
	1	Breaker Device 30 Amps 3 Poles TEY
	15	Breaker Device 20 Amps 1 Poles TEY
		Modifications
	1	Power Distribution Panel
	1	Front Hinged To Box
	1	Interior: AEF3482MBX AXB7
	1	Box: AB49B
	1	Front: AF49SD
11	1	Lighting Panelboard, ReliaGear RQ
		Marks: LPS
		1 Section(s), Nema 1 Enclosure
		250 Amps, 3 Phase 4 Wire 208Y/120V, 50/60 Hz
		Minimum Interrupt Rating: 10kA Fully Rated
		Incoming Feed: Bottom
		Surface Mounted
		60 Circuits
		UL67 / CSA C22.2 No. 29 Certified
		cULus Certified
		Height: 64.5 Inches; Width: 20 Inches; Depth: 5.75 Inches
	1	250 Amps Main Breaker XT4N250
	1	TMF
		1-lug/phase 1-cable/lug 3/0 -350 kcmil
		Main Option Details
	1	Copper Bus Heat Rated
	5	Ground-Box bonded TGL2
	1	Ground main lug TGL20
	1	100% Rated Neutral
	1	NEMA 1 Enclosure
		Feeders
	4	Breaker Device 20 Amps 2 Poles THQB
	4	Breaker Device 40 Amps 2 Poles THQB
	44	Breaker Device 20 Amps 1 Poles THQB
		Modifications
	1	Power Distribution Panel
	1	Front Hinged To Box
	1	Interior: AQF3602JBX AXB7
	1	Box: AB64B
	1	Front: AF64SD

Bill of Material(s)

Item No.	Quantity	Description
15	1	Power Panelboard, ReliaGear neXT Marks: MDP-B 1 Section(s), Nema 3R Cabinets 400 Amps, 3 Phase 4 Wire 480Y/277V, 50/60 Hz Minimum Interrupt Rating: 42kA Fully Rated Incoming Feed: Bottom Surface Mounted UL67 Certified Height: 60 Inches; Width: 40 Inches; Depth: 14.5 Inches; Est. Weight: 466 lbs 1 400 Amps Main Lugs Main Lug (2) #2-500 mcm, No Feed Through Main Option Details 1 Copper Bus Heat Rated 1 100% Rated Neutral 1 NEMA 3R Cabinets Feeders 1 Breaker Device 350 Amps 3 Poles XT5HU340AFYN000XXX 1 Ekip Dip LSI 1 (2) 2/0 AWG - 500 MCM 3 Breaker Device 100 Amps 3 Poles XT1HU3100AYD000XXX 3 TMF 3 (1) 10 - 2/0 AWG 2 Breaker Space Device 200 Amps 3 Poles XT4HU3200AYJ000XXX 2 TMF 2 (1) 4 AWG-300 MCM 1 Ground: GDBG10AL 1 Bus: IN1604BL3H2 1 Neutral: NL04I0NSTNDAL 1 Enclosure: ER6040R 1 Frame: IF1640F 1 Front 1 of 2: FT40S00135 1 Front 2 of 2: FT40S00260 1 Gutter: GC40F16BLA 1 WirePost: BP40F 3 MLO and/or FTL Kit: LGML260A 3 Spacer: SR03BB 1 Spacer: SR03BF 1 Spacer: SR1XBR 1 Spacer: SR2XBF 1 Lifting Bar: IL40F 1 PPXT FA INT 1 PPXT FA BOX
16	1	Lighting Panelboard, ReliaGear RE Marks: HPA

Bill of Material(s)

Item No.	Quantity	Description
		1 Section(s), NEMA 3R Cabinets 125 Amps, 3 Phase 4 Wire 480Y/277V, 50/60 Hz Minimum Interrupt Rating: 14kA Fully Rated Incoming Feed: Bottom Surface Mounted 24 Circuits UL67 / CSA C22.2 No. 29 Certified cULus Certified Height: 37.5 Inches; Width: 20 Inches; Depth: 6.21 Inches
	1	100 Amps Main Breaker XT1N125
	1	TMF
		1-lug/phase 1-cable/lug #10 -2/0
		Main Option Details
	1	Copper Bus Heat Rated
	2	Ground-Box bonded TGL2
	1	Ground main lug TGL20
	1	100% Rated Neutral
	1	NEMA 3R Cabinets
		Feeders
	2	Breaker Device 30 Amps 3 Poles TEY
	12	Breaker Device 20 Amps 1 Poles TEY
	6	Breaker Space Device 20 Amps 1 Poles TEY
	1	Interior: AEF3241KBX AXB7
	1	Box: AB373
	1	Front : NONE
17	1	Power Panelboard, ReliaGear neXT Marks: DPM 1 Section(s), Nema 1 Enclosure 400 Amps, 3 Phase 4 Wire 480Y/277V, 50/60 Hz Minimum Interrupt Rating: 25kA Fully Rated Incoming Feed: Bottom Surface Mounted UL67 Certified Height: 84 Inches; Width: 40 Inches; Depth: 11 Inches; Est. Weight: 507 lbs
	1	400 Amps Main Lugs
		Main Lug (2) #2-500 mcm, No Feed Through
		Main Option Details
	1	Copper Bus Heat Rated
	1	100% Rated Neutral
	1	NEMA 1 Enclosure
		Feeders
	1	Breaker Device 200 Amps 3 Poles XT4NU3200AYJ000XXX
	1	TMF
	1	(1) 4 AWG-300 MCM
	1	Breaker Device 125 Amps 3 Poles XT4NU3125AYJ000XXX
	1	TMF

Bill of Material(s)

Item No.	Quantity	Description
	1	(1) 4 AWG-300 MCM
	2	Breaker Device 100 Amps 3 Poles XT1NU3100AYD000XXX
	2	TMF
	2	(1) 10 - 2/0 AWG
	1	Breaker Device 50 Amps 3 Poles XT1NU3050AYD000XXX
	1	TMF
	1	(1) 10 - 2/0 AWG
	3	Breaker Space Device 125 Amps 3 Poles XT1NU3125AYD000XXX
	3	TMF
	3	(1) 10 - 2/0 AWG
	1	Ground: GDBG10AL
	1	Bus: IN3204BL3H2
	1	Neutral: NL04I0NSTNDAL
	1	Enclosure: ER8440A
	1	Frame: IF3240F
	1	Front 1 of 2: FT40S00135
	1	Front 2 of 2: FT40S00280
	1	Gutter: GC40F32BLA
	1	WirePost: BP40F
	1	Surge Protection: SP277Y08X402
	3	MLO and/or FTL Kit: LGML260A
	1	Spacer: SR01BB
	1	Spacer: SR01BF
	6	Spacer: SR03BB
	2	Spacer: SR03BF
	1	Spacer: SR1XBR
	1	Spacer: SR5XBF
	3	Spacer: SRT1BB
	1	Lifting Bar: IL40F
	1	PPXT FA INT
	1	PPXT FA BOX
18	1	Lighting Panelboard, ReliaGear RE Marks: HPM 1 Section(s), NEMA 3R Cabinets 225 Amps, 3 Phase 4 Wire 480Y/277V, 50/60 Hz Minimum Interrupt Rating: 14kA Fully Rated Incoming Feed: Bottom Surface Mounted 48 Circuits UL67 / CSA C22.2 No. 29 Certified cULus Certified Height: 49.5 Inches; Width: 20 Inches; Depth: 6.21 Inches 1 225 Amps Main Lugs 1-lug/phase 1-cable/lug #6 -350 kcmil Main Option Details 1 Copper Bus Heat Rated

Bill of Material(s)

Item No.	Quantity	Description
	4	Ground-Box bonded TGL2
	1	Ground main lug TGL20
	1	100% Rated Neutral
	1	NEMA 3R Cabinets
		Feeders
	6	Breaker Device 20 Amps 2 Poles TEY
	2	Breaker Device 50 Amps 3 Poles TEY
	1	Breaker Device 60 Amps 3 Poles TEY
	2	Breaker Device 30 Amps 3 Poles TEY
	1	Breaker Device 20 Amps 3 Poles TEY
	14	Breaker Device 20 Amps 1 Poles TEY
	4	Breaker Space Device 20 Amps 1 Poles TEY
		Modifications
	1	Power Distribution Panel
	1	Interior: AEF3482MBX AXB7
	1	Box: AB493
	1	Front : NONE
19	1	Lighting Panelboard, ReliaGear RQ
		Marks: LPM
		1 Section(s), Nema 1 Enclosure
		250 Amps, 3 Phase 4 Wire 208Y/120V, 50/60 Hz
		Minimum Interrupt Rating: 10kA Fully Rated
		Incoming Feed: Bottom
		Surface Mounted
		60 Circuits
		UL67 / CSA C22.2 No. 29 Certified
		cULus Certified
		Height: 64.5 Inches; Width: 20 Inches; Depth: 5.75 Inches
	1	250 Amps Main Breaker XT4N250
	1	TMF
		1-lug/phase 1-cable/lug 3/0 -350 kcmil
		Main Option Details
	1	Copper Bus Heat Rated
	5	Ground-Box bonded TGL2
	1	Ground main lug TGL20
	1	100% Rated Neutral
	1	NEMA 1 Enclosure
		Feeders
	4	Breaker Device 30 Amps 2 Poles THQB
	3	Breaker Device 40 Amps 2 Poles THQB
	1	Breaker Device 20 Amps 2 Poles THQB
	3	Breaker Device 20 Amps 3 Poles THQB
	35	Breaker Device 20 Amps 1 Poles THQB
		Modifications
	1	Power Distribution Panel
	1	Front Hinged To Box

Bill of Material(s)

Item No.	Quantity	Description
	1	Interior: AQF3602JBX AXB7
	1	Box: AB64B
	1	Front: AF64SD
20	1	Lighting Panelboard, ReliaGear RE
		Marks: HPB
		1 Section(s), NEMA 3R Cabinets
		125 Amps, 3 Phase 4 Wire 480Y/277V, 50/60 Hz
		Minimum Interrupt Rating: 14kA Fully Rated
		Incoming Feed: Bottom
		Surface Mounted
		12 Circuits
		UL67 / CSA C22.2 No. 29 Certified
		cULus Certified
		Height: 31.5 Inches; Width: 20 Inches; Depth: 6.21 Inches
	1	100 Amps Main Breaker XT1N125
	1	TMF
	1	110-127V AC / 110-125V DC
		1-lug/phase 1-cable/lug #10 -2/0
		Main Option Details
	1	Copper Bus Heat Rated
	2	Ground-Box bonded TGL2
	1	Ground main lug TGL20
	1	100% Rated Neutral
	1	NEMA 3R Cabinets
		Feeders
	1	Breaker Device 30 Amps 3 Poles TEY
	6	Breaker Device 20 Amps 1 Poles TEY
	3	Breaker Space Device 20 Amps 1 Poles TEY
	1	Interior: AEF3121KBX AXB7
	1	Box: AB313
	1	Front : NONE

MDP-A

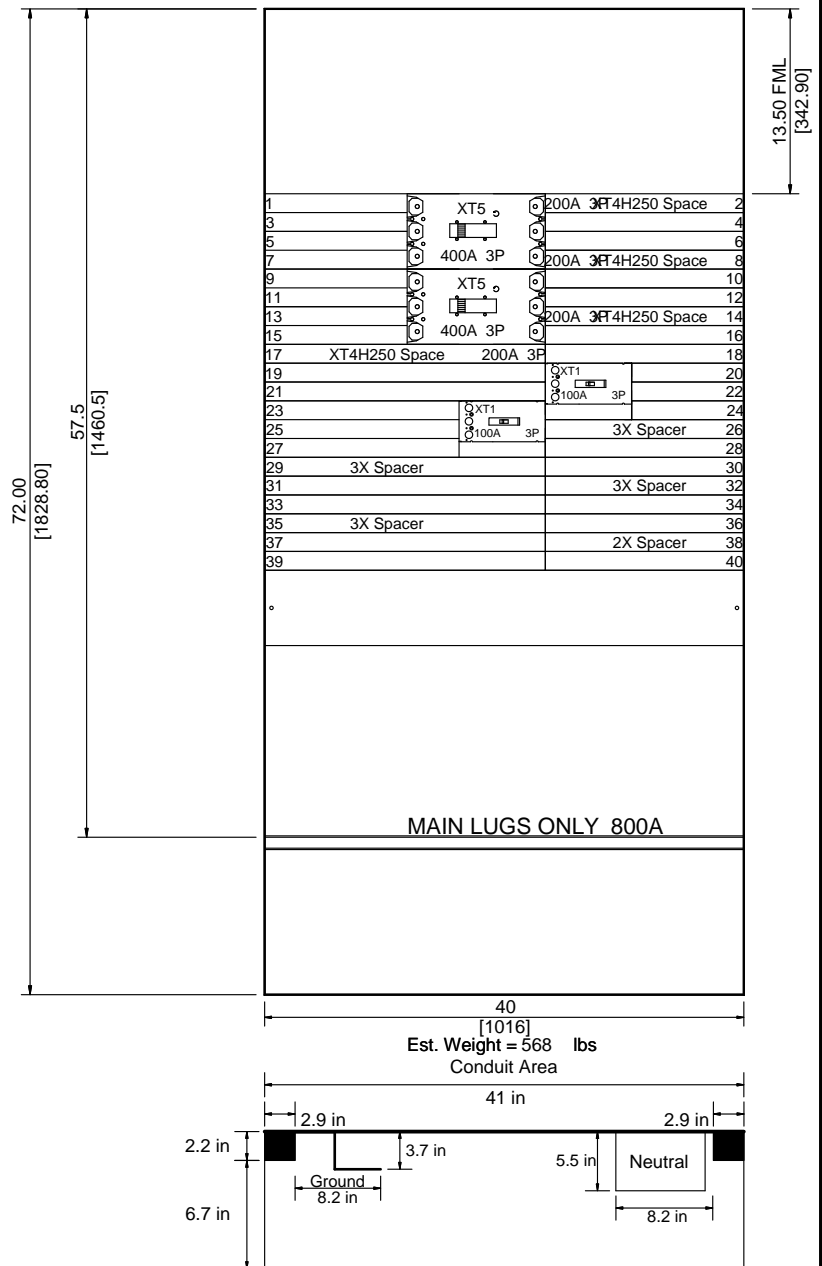
PANEL TYPE:	neXT Factory Assembled Interior
QUANTITY:	1
AMPS:	800A
VOLTAGE:	480Y/277V
SYSTEM:	3P4W
KAIC:	42 KAIC SC FULLY RATED
MATERIAL:	COPPER BUS
PLATE:	SILVER PLATE
ENCLOSURE:	NEMA 3R CABINETS
MOUNTING:	SURFACE
SECTION:	1
MAIN DISCONNECT DEVICE	

INTERIOR X-VALUES

OPTIONS INCLUDED

BOM


QTY	CAT #	DESCRIPTION
1	GDBG10AL	Ground
1	IN2408BL3H2	Bus
1	NL12I0NSTNDAL	Neutral
1	ER7240R	Enclosure
1	IF2440F	Frame
1	FT40S00135	Front 1 of 2
1	FT40S00270	Front 2 of 2
1	GC40F24BLA	Gutter
1	BP40F	WirePost
6	LGML260A	MLO and/or FTL Kit
1	SR02BB	Spacer
5	SR03BB	Spacer
3	SR03BF	Spacer
1	SR1XBF	Spacer
1	SR1XBR	Spacer
1	IL40F	Lifting Bar



PANEL INFORMATION	
INTERNAL DIMENSIONS	72"x42"x11"
NOTES	
EXTERNAL DIMENSIONS	73"x43.5"x16.7"

1. FML - FRAME MOUNTING LOCATION.
2. DRAWING NOT TO SCALE.
3. DIMENSIONS ARE IN INCHES[mm].
NEUTRAL CAN BE MOUNTED IN ANY CORNER

FACTORY AUTO-LAYOUT. THE LAYOUT IS NOT SPECIFIED, THE FACTORY MAY CHANGE THE LOCATION OF SOME OF THE BREAKERS. NEUTRAL ARE PRESSURE LUGS.

PROJECT NAME : CITY OF FOLEY		 Industrial Solutions by ABB	PANEL ID: neXT Panel Assembled Interior	PRODUCT NAME: <i>ReliaGear neXT</i> PANELBOARD	DRAWING NO: ITEM NO: 5 MARKS: MDP-A QUOTE NO: UJI-00002602 SHEET: 1
CUSTOMER: SEQUEL ELECTRICAL SUPPLY, FOLEY			CREATED BY: Richbourg, Todd DATE: 08/07/2023 12:13:46 REVISION NO.		

neXT Device Information

X Space	Breaker Catalog Number	Trip Amps	Sensor Amps	Trip Unit	Poles	Phases Used	Lug Cable Size/Neut Sensor/Grnd Fault Cable	Notes
1	XT5HU340ABYN000XXX	400	-	TMA	3	ABC	(2) 2/0 AWG - 500 MCM	
2	XT4HU3200AYJ000XXX	200	-	TMF	3	ABC	(1) 4 AWG-300 MCM	1
8	XT4HU3200AYJ000XXX	200	-	TMF	3	ABC	(1) 4 AWG-300 MCM	1
9	XT5HU340ABYN000XXX	400	-	TMA	3	ABC	(2) 2/0 AWG - 500 MCM	
14	XT4HU3200AYJ000XXX	200	-	TMF	3	ABC	(1) 4 AWG-300 MCM	1
17	XT4HU3200AYJ000XXX	200	-	TMF	3	ABC	(1) 4 AWG-300 MCM	1
20	XT1HU3100AYD000XXX	100	-	TMF	3	ABC	(1) 10 - 2/0 AWG	
23	XT1HU3100AYD000XXX	100	-	TMF	3	ABC	(1) 10 - 2/0 AWG	

NOTES:

1 This is a breaker space - breaker is not included

DPP

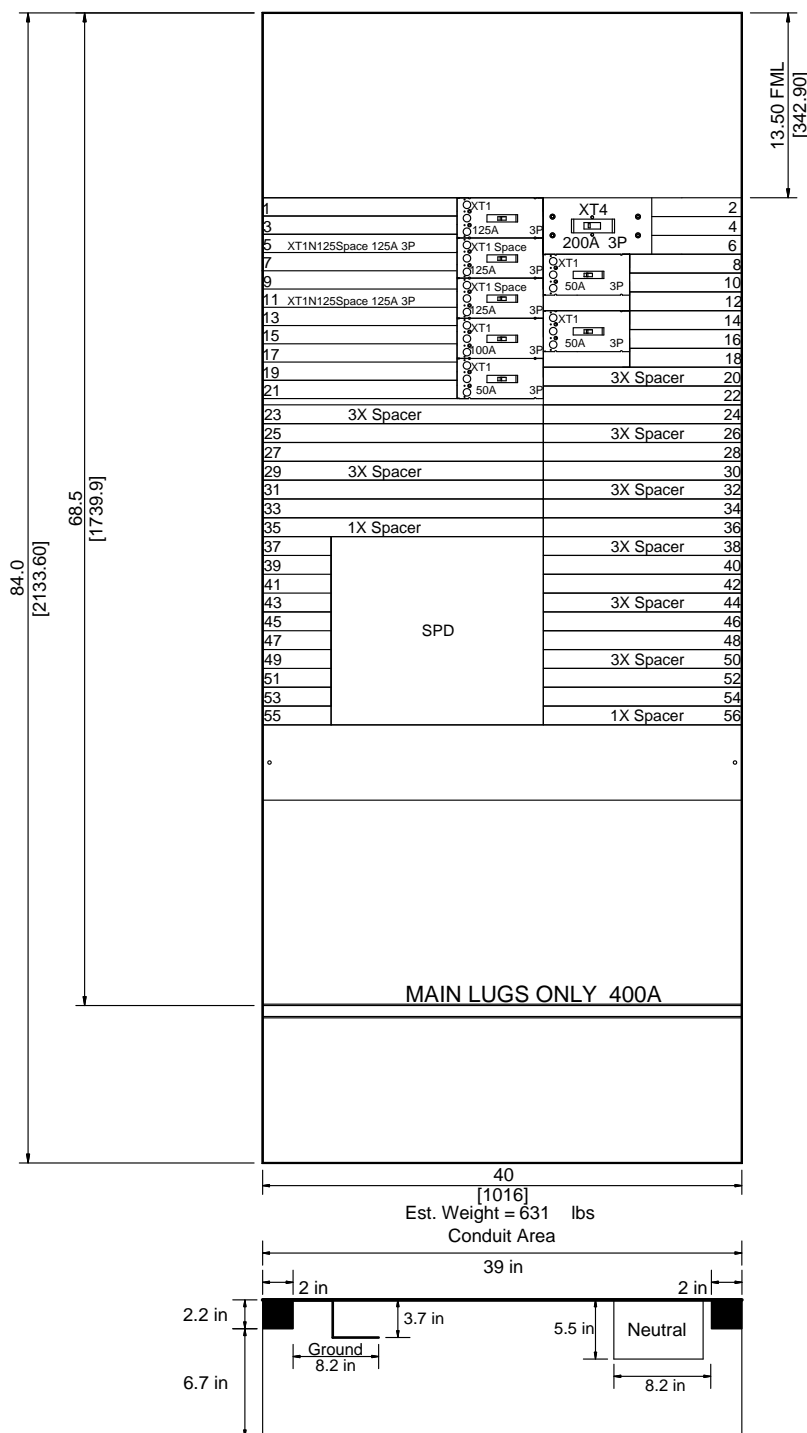
PANEL TYPE:	neXT Factory Assembled Interior
QUANTITY:	1
AMPS:	400A
VOLTAGE:	480Y/277V
SYSTEM:	3P4W
KAIC:	25 KAIC SC FULLY RATED
MATERIAL:	COPPER BUS
PLATE:	SILVER PLATE
ENCLOSURE:	NEMA 1 ENCLOSURE
MOUNTING:	SURFACE
SECTION:	1
MAIN DISCONNECT DEVICE	

FEED DIR.	Bottom
TYPE:	Lugs
AMPS/SENSOR:	400A/
CATALOG NO.:	LGML260A
POLES:	3
LUGS:	Main Lug (2) #2-500 mcm. No Feed Through

<u>TOTAL X BUS</u>	<u>AVAILABLE X BUS</u>
32	28

<u>QTY</u>	<u>DESCRIPTION</u>
1	Copper Bus Heat Rated
1	Grnd-Box bonded
1	Door within Door
1	ME, 80kA/mode,160kA/phase
1	Key Lock


QTY	CAT #	DESCRIPTION
1	GDBG10AL	Ground
1	IN3204BL3H2	Bus
1	NL0410NSTNDAL	Neutral
1	ER8440A	Enclosure
1	IF3240F	Frame
1	DD4084AHFS	Door within Door Deadfront
1	DDFIL404509SF	Door within Door Filler 1
1	DDFIL404521SF	Door within Door Filler 2
1	DDSUP28	Door within Door Filler Support
1	BP40F	WirePost
1	SP277Y08X402	Surge Protection
3	LGML260A	MLO and/or FTL Kit
1	SR01BB	Spacer
1	SR01BF	Spacer
6	SR03BB	Spacer
2	SR03BF	Spacer
2	SR1XBR	Spacer
1	SR5XBF	Spacer
2	SRT1BB	Spacer
1	IL40F	Lifting Bar



PANEL INFORMATION	
INTERNAL DIMENSIONS	84"x40"x11"
NOTES	Door in Door depth is 14.5", including knob 15.2"
EXTERNAL DIMENSIONS	84.3"x40.7"x15.2"

1. FML - FRAME MOUNTING LOCATION.
2. DRAWING NOT TO SCALE.
3. DIMENSIONS ARE IN INCHES[mm].
NEUTRAL CAN BE MOUNTED IN ANY CORNER

FACTORY AUTO-LAYOUT. THE LAYOUT IS NOT SPECIFIED, THE FACTORY MAY CHANGE THE LOCATION OF SOME OF THE BREAKERS. NEUTRAL ARE PRESSURE LUGS.

PROJECT NAME : CITY OF FOLEY		 Industrial Solutions by ABB	PANEL ID: neXT Panel Assembled Interior	PRODUCT NAME: <i>ReliaGear neXT</i> PANELBOARD	DRAWING NO:
CUSTOMER: SEQUEL ELECTRICAL SUPPLY, FOLEY			CREATED BY: Richbourg, Todd	REVISION NO.	ITEM NO: 6
8/9/2023 9:07:19 PM			DATE: 08/07/2023 12:13:46		QUOTE NO: UJI-00002602
				SAP ORDER:	SHEET:

neXT Device Information

X Space	Breaker Catalog Number	Trip Amps	Sensor Amps	Trip Unit	Poles	Phases Used	Lug Cable Size/Neut Sensor/Grnd Fault Cable	Notes
1.1	XT1NU3125AYD000XXX	125	-	TMF	3	ABC	(1) 10 - 2/0 AWG	
1.2	XT1NU3125AYD000XXX	125	-	TMF	3	ABC	(1) 10 - 2/0 AWG	1
1.3	XT1NU3125AYD000XXX	125	-	TMF	3	ABC	(1) 10 - 2/0 AWG	1
1.4	XT1NU3100AYD000XXX	100	-	TMF	3	ABC	(1) 10 - 2/0 AWG	
1.5	XT1NU3050AYD000XXX	50	-	TMF	3	ABC	(1) 10 - 2/0 AWG	
2	XT4NU3200AYJ000XXX	200	-	TMF	3	ABC	(1) 4 AWG-300 MCM	
8	XT1NU3050AYD000XXX	50	-	TMF	3	ABC	(1) 10 - 2/0 AWG	
14	XT1NU3050AYD000XXX	50	-	TMF	3	ABC	(1) 10 - 2/0 AWG	

NOTES:

1 This is a breaker space - breaker is not included

DPS

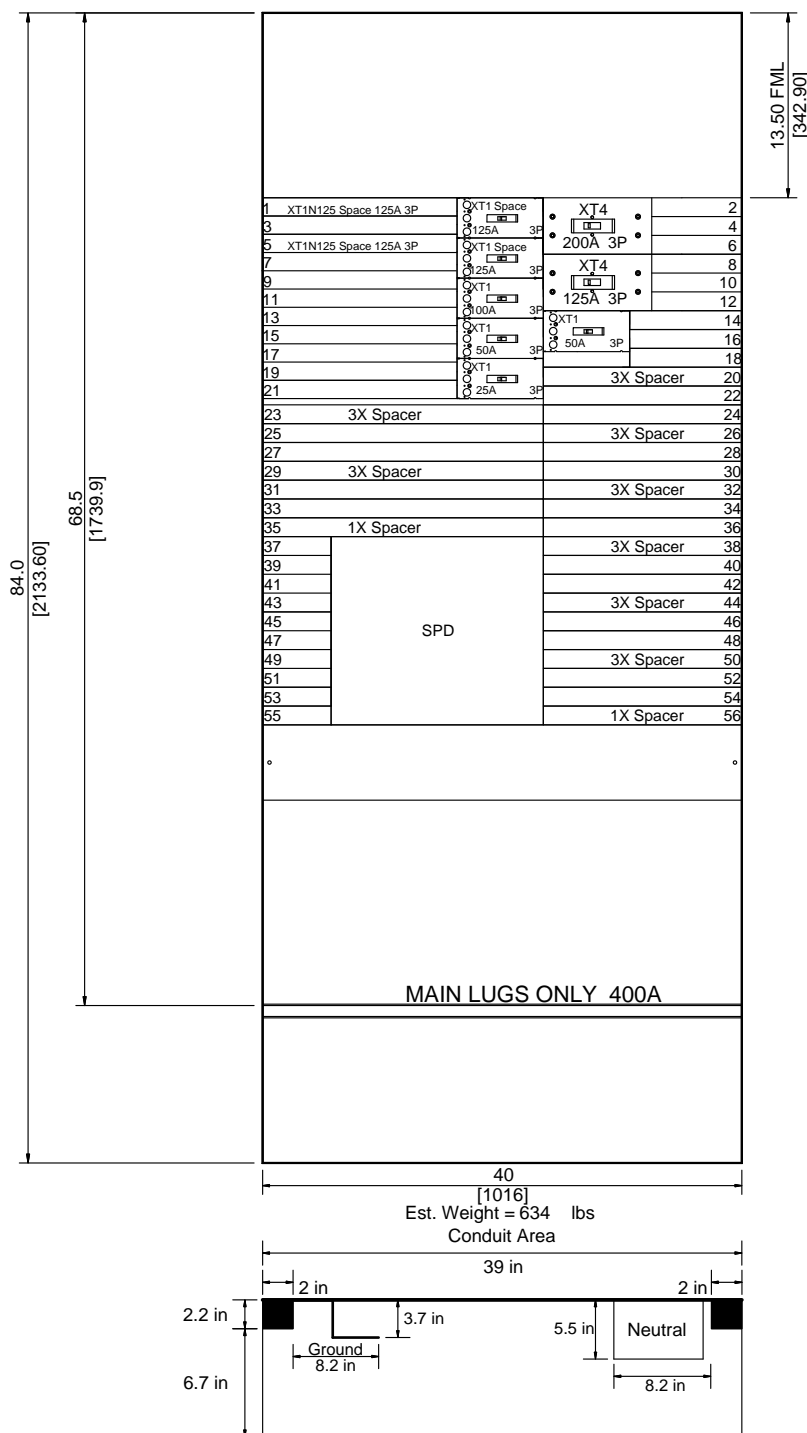
PANEL TYPE:	neXT Factory Assembled Interior
QUANTITY:	1
AMPS:	400A
VOLTAGE:	480Y/277V
SYSTEM:	3P4W
KAIC:	25 KAIC SC FULLY RATED
MATERIAL:	COPPER BUS
PLATE:	SILVER PLATE
ENCLOSURE:	NEMA 1 ENCLOSURE
MOUNTING:	SURFACE
SECTION:	1
MAIN DISCONNECT DEVICE	

FEED DIR.	Bottom
TYPE:	Lugs
AMPS/SENSOR:	400A/
CATALOG NO.:	LGML260A
POLES:	3
LUGS:	Main Lug (2) #2-500 mcm. No Feed Through

<u>TOTAL X BUS</u>	<u>AVAILABLE X BUS</u>
32	28

<u>QTY</u>	<u>DESCRIPTION</u>
1	Copper Bus Heat Rated
1	Grnd-Box bonded
1	Door within Door
1	ME, 80kA/mode,160kA/phase
1	Key Lock


QTY	CAT #	DESCRIPTION
1	GDBG10AL	Ground
1	IN3204BL3H2	Bus
1	NL0410NSTNDAL	Neutral
1	ER8440A	Enclosure
1	IF3240F	Frame
1	DD4084AHFS	Door within Door Deadfront
1	DDFIL404509SF	Door within Door Filler 1
1	DDFIL404521SF	Door within Door Filler 2
1	DDSUP28	Door within Door Filler Support
1	BP40F	WirePost
1	SP277Y08X402	Surge Protection
3	LGML260A	MLO and/or FTL Kit
1	SR01BB	Spacer
1	SR01BF	Spacer
6	SR03BB	Spacer
2	SR03BF	Spacer
1	SR1XBR	Spacer
1	SR5XBF	Spacer
2	SRT1BB	Spacer
1	IL40F	Lifting Bar



PANEL INFORMATION	
INTERNAL DIMENSIONS	84"x40"x11"
NOTES	Door in Door depth is 14.5", including knob 15.2"
EXTERNAL DIMENSIONS	84.3"x40.7"x15.2"

1. FML - FRAME MOUNTING LOCATION.
2. DRAWING NOT TO SCALE.
3. DIMENSIONS ARE IN INCHES[mm].
NEUTRAL CAN BE MOUNTED IN ANY CORNER

FACTORY AUTO-LAYOUT. THE LAYOUT IS NOT SPECIFIED, THE FACTORY MAY CHANGE THE LOCATION OF SOME OF THE BREAKERS. NEUTRAL ARE PRESSURE LUGS

PROJECT NAME : CITY OF FOLEY	 Industrial Solutions by ABB	PANEL ID: neXT Panel Assembled Interior	PRODUCT NAME:	DRAWING NO:
CUSTOMER: SEQUEL ELECTRICAL SUPPLY, FOLEY		CREATED BY: Richbourg, Todd	<i>ReliaGear neXT PANELBOARD</i>	ITEM NO: 7
8/9/2023 9:07:43 PM		DATE: 08/07/2023 12:13:46		MARKS: DPS
		REVISION NO.		QUOTE NO: UJI-00002602
			SAP ORDER:	SHEET:

neXT Device Information

X Space	Breaker Catalog Number	Trip Amps	Sensor Amps	Trip Unit	Poles	Phases Used	Lug Cable Size/Neut Sensor/Grnd Fault Cable	Notes
1.1	XT1NU3125AYD000XXX	125	-	TMF	3	ABC	(1) 10 - 2/0 AWG	1
1.2	XT1NU3125AYD000XXX	125	-	TMF	3	ABC	(1) 10 - 2/0 AWG	1
1.3	XT1NU3100AYD000XXX	100	-	TMF	3	ABC	(1) 10 - 2/0 AWG	
1.4	XT1NU3050AYD000XXX	50	-	TMF	3	ABC	(1) 10 - 2/0 AWG	
1.5	XT1NU3025AYD000XXX	25	-	TMF	3	ABC	(1) 10 - 2/0 AWG	
2	XT4NU3200AYJ000XXX	200	-	TMF	3	ABC	(1) 4 AWG-300 MCM	
8	XT4NU3125AYJ000XXX	125	-	TMF	3	ABC	(1) 4 AWG-300 MCM	
14	XT1NU3050AYD000XXX	50	-	TMF	3	ABC	(1) 10 - 2/0 AWG	

NOTES:

1 This is a breaker space - breaker is not included

PANEL MARKS: HPP

TECHNICAL SPECIFICATIONS

PANEL TYPE:	RE PANELBOARD
QUANTITY:	1
AMPS:	225A
VOLTAGE:	480Y/277V
SYSTEM:	3P4W
KAIC:	14 KAIC SC FULLY RATED
MATERIAL:	COPPER BUS
PLATE:	NO PLATE
ENCLOSURE:	NEMA 1 ENCLOSURE
MOUNTING:	SURFACE
SECTION:	1

MAIN DISCONNECT DEVICE

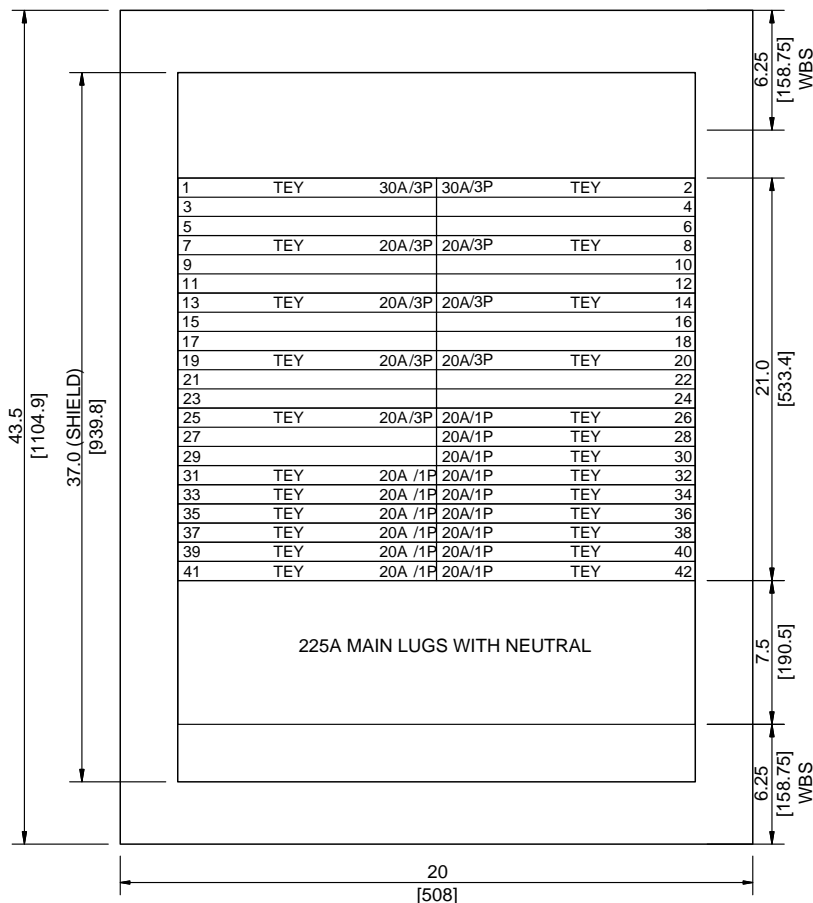
FEED DIR.	Bottom
TYPE:	Lugs
AMPS/SENSOR:	225A/-
CATALOG NO.:	
POLES:	3
LUGS:	1-lug/phase 1-cable/lug #6 -350 MCM

OPTIONS INCLUDED

QTY	DESCRIPTION
1	Copper Bus Heat Rated
4	Ground-Box bonded TGL2
1	Ground main lug TGL20
1	Front Hinged To Box

BRANCH DEVICES


QTY	AMPS/SENSOR/POLES	DESCRIPTION
7	20A /- / 3P	TEY320
2	30A /- / 3P	TEY330
15	20A /- / 1P	TEY120



PANEL INFORMATION		
INTERIOR		AEF3422MBX AXB7
INTERIOR		
BOX		AB43B
FRONT		AF43SD
TROUGH		
TROUGH END		
PULL BOX		
DIMENSIONS		43.5"X20"X5.75"

1. WBS - WIRE BENDING SPACE.
2. DRAWING NOT TO SCALE.
3. DIMENSIONS ARE IN INCHES[mm].

FACTORY AUTO-LAYOUT. THE LAYOUT IS NOT SPECIFIED, THE FACTORY MAY CHANGE THE LOCATION OF SOME OF THE BREAKERS.

PROJECT NAME : CITY OF FOLEY	 Industrial Solutions by ABB	PANEL ID: RE Panelboard APPROVED BY: DATE: 08/07/2023 12:13:46 REVISION NO.	PRODUCT NAME: RELIA GEAR LIGHTING PANELBOARD	DRAWING NO: ITEM NO: 8 MARKS: HPP QUOTE NO: UJI-00002602 SHEET: 1
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PANEL MARKS:

LPP

TECHNICAL SPECIFICATIONS

PANEL TYPE:	RQ PANELBOARD
QUANTITY:	1
AMPS:	250A
VOLTAGE:	208Y/120V
SYSTEM:	3P4W
KAIC:	10 KAIC SC FULLY RATED
MATERIAL:	COPPER BUS
PLATE:	NO PLATE
ENCLOSURE:	NEMA 1 ENCLOSURE
MOUNTING:	SURFACE
SECTION:	1

MAIN DISCONNECT DEVICE

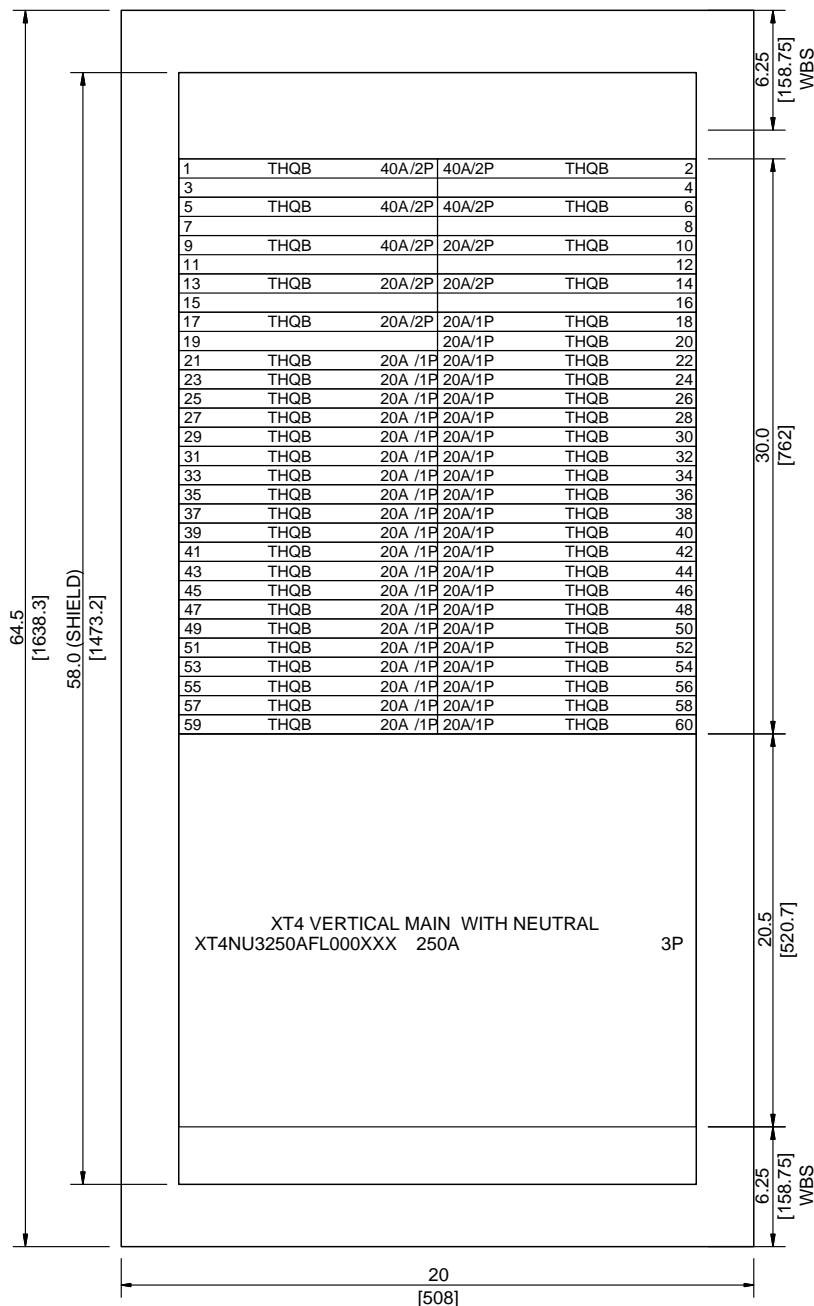
FEED DIR.	Bottom
TYPE:	Breaker
AMPS/SENSOR:	250A/-
CATALOG NO.:	XT4NU3250AFL000XXX
POLES:	3
LUGS:	1-lug/phase 1-cable/lug 3/0 -350 MCM
ACCESSORIES:	Trip Unit (TMF)

OPTIONS INCLUDED

QTY	DESCRIPTION
1	Copper Bus Heat Rated
5	Ground-Box bonded TGL2
1	Ground main lug TGL20
1	Power Distribution Panel
1	Front Hinged To Box

BRANCH DEVICES

QTY	AMPS/SENSOR/POLES	DESCRIPTION
4	20A /- /2P	THQB2120
5	40A /- /2P	THQB2140
42	20A /- /1P	THQB1120



PANEL INFORMATION

INTERIOR	AQF3602JBX AXB7
INTERIOR	
BOX	AB64B
FRONT	AF64SD
TROUGH	
TROUGH END	
PULL BOX	
DIMENSIONS	64.5"X20"X5.75"

1. WBS - WIRE BENDING SPACE.
2. DRAWING NOT TO SCALE.
3. DIMENSIONS ARE IN INCHES[mm].

FACTORY AUTO-LAYOUT. THE LAYOUT IS NOT SPECIFIED, THE FACTORY MAY CHANGE THE LOCATION OF SOME OF THE BREAKERS.

PROJECT NAME :
CITY OF FOLEY



Industrial
Solutions by ABB

PANEL ID:
RQ Panelboard
APPROVED BY:
DATE: 08/07/2023 12:13:46
REVISION NO.

PRODUCT NAME:
RELIA GEAR LIGHTING
PANELBOARD

DRAWING NO:
ITEM NO: 9
MARKS: LPP
QUOTE NO: UJI-00002602
SHEET: 1

8/7/2023 12:29:03 PM

PANEL MARKS:

HPS

TECHNICAL SPECIFICATIONS

PANEL TYPE:	RE PANELBOARD
QUANTITY:	1
AMPS:	225A
VOLTAGE:	480Y/277V
SYSTEM:	3P4W
KAIC:	14 KAIC SC FULLY RATED
MATERIAL:	COPPER BUS
PLATE:	NO PLATE
ENCLOSURE:	NEMA 1 ENCLOSURE
MOUNTING:	SURFACE
SECTION:	1

MAIN DISCONNECT DEVICE

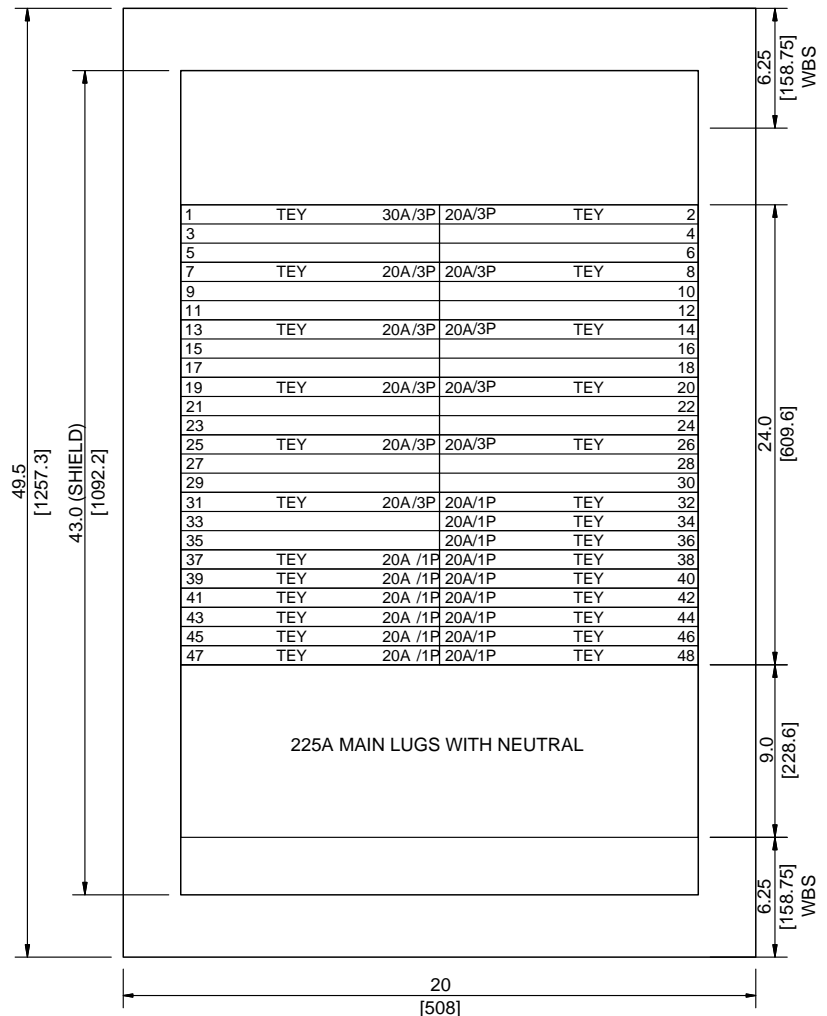
FEED DIR.	Bottom
TYPE:	Lugs
AMPS/SENSOR:	225A/-
CATALOG NO.:	
POLES:	3
LUGS:	1-lug/phase 1-cable/lug #6 -350 MCM

OPTIONS INCLUDED

QTY	DESCRIPTION
1	Copper Bus Heat Rated
4	Ground-Box bonded TGL2
1	Ground main lug TGL20
1	Power Distribution Panel
1	Front Hinged To Box

BRANCH DEVICES

QTY	AMPS/SENSOR/POLES	DESCRIPTION
10	20A /- / 3P	TEY320
1	30A /- / 3P	TEY330
15	20A /- / 1P	TEY120



PANEL INFORMATION

INTERIOR	AEF3482MBX AXB7
INTERIOR	
BOX	AB49B
FRONT	AF49SD
TROUGH	
TROUGH END	
PULL BOX	
DIMENSIONS	49.5"X20"X5.75"

1. WBS - WIRE BENDING SPACE.
2. DRAWING NOT TO SCALE.
3. DIMENSIONS ARE IN INCHES[mm].

FACTORY AUTO-LAYOUT. THE LAYOUT IS NOT SPECIFIED, THE FACTORY MAY CHANGE THE LOCATION OF SOME OF THE BREAKERS.

PROJECT NAME :
CITY OF FOLEY

CUSTOMER:
SEQUEL ELECTRICAL
SUPPLY, FOLEY



Industrial
Solutions by ABB

PANEL ID:
RE Panelboard
APPROVED BY:
DATE: 08/07/2023 12:13:46
REVISION NO.

PRODUCT NAME:
RELIA GEAR LIGHTING
PANELBOARD

DRAWING NO:
ITEM NO: 10
MARKS: HPS
QUOTE NO: UJI-00002602
SHEET: 1

8/9/2023 9:08:09 PM

PANEL MARKS:

LPS

TECHNICAL SPECIFICATIONS

PANEL TYPE:	RQ PANELBOARD
QUANTITY:	1
AMPS:	250A
VOLTAGE:	208Y/120V
SYSTEM:	3P4W
KAIC:	10 KAIC SC FULLY RATED
MATERIAL:	COPPER BUS
PLATE:	NO PLATE
ENCLOSURE:	NEMA 1 ENCLOSURE
MOUNTING:	SURFACE
SECTION:	1

MAIN DISCONNECT DEVICE

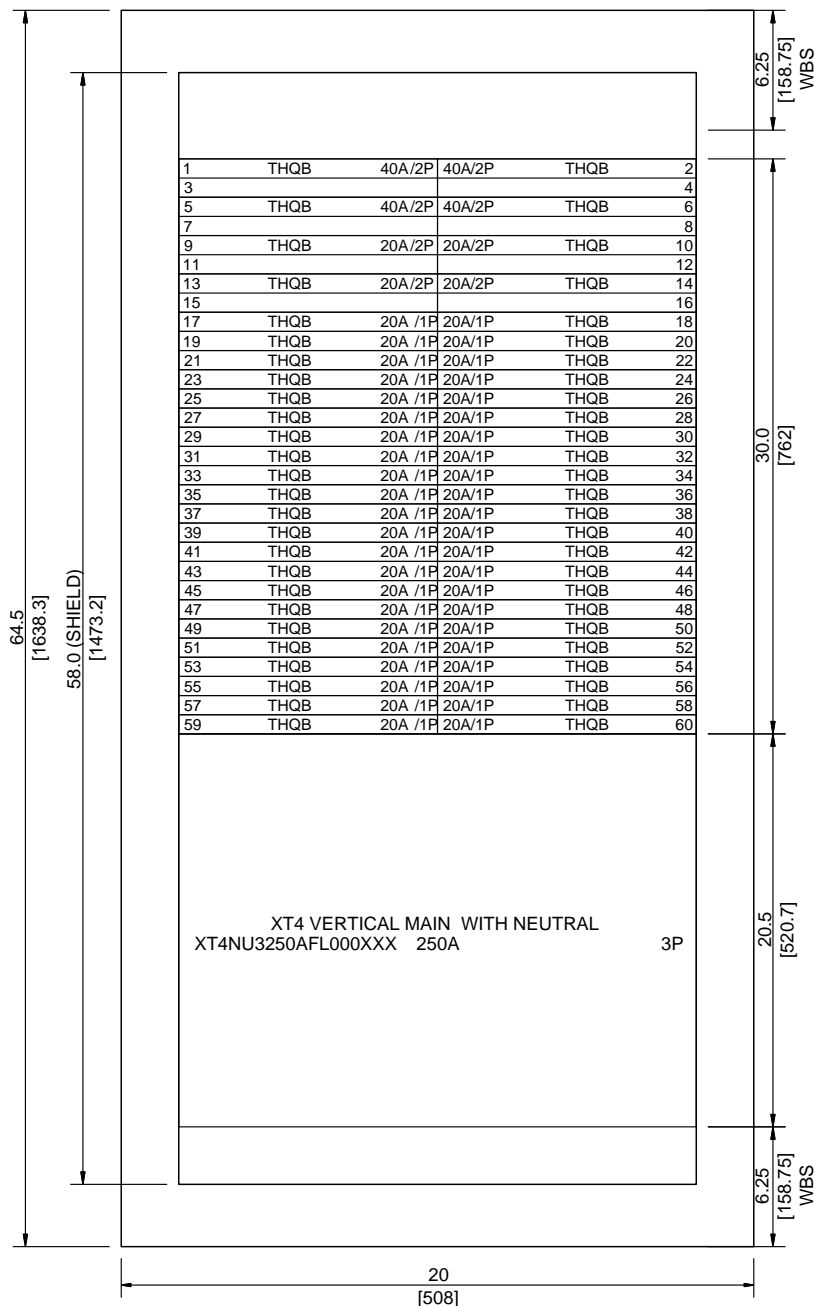
FEED DIR.	Bottom
TYPE:	Breaker
AMPS/SENSOR:	250A/-
CATALOG NO.:	XT4NU3250AFL000XXX
POLES:	3
LUGS:	1-lug/phase 1-cable/lug 3/0 -350 MCM
ACCESSORIES:	Trip Unit (TMF)

OPTIONS INCLUDED

QTY	DESCRIPTION
1	Copper Bus Heat Rated
5	Ground-Box bonded TGL2
1	Ground main lug TGL20
1	Power Distribution Panel
1	Front Hinged To Box

BRANCH DEVICES

QTY	AMPS/SENSOR/POLES	DESCRIPTION
4	20A /- / 2P	THQB2120
4	40A /- / 2P	THQB2140
44	20A /- / 1P	THQB1120



PANEL INFORMATION

INTERIOR	AQF3602JBX AXB7
INTERIOR	
BOX	AB64B
FRONT	AF64SD
TROUGH	
TROUGH END	
PULL BOX	
DIMENSIONS	64.5"X20"X5.75"

1. WBS - WIRE BENDING SPACE.
2. DRAWING NOT TO SCALE.
3. DIMENSIONS ARE IN INCHES[mm].

FACTORY AUTO-LAYOUT. THE LAYOUT IS NOT SPECIFIED, THE FACTORY MAY CHANGE THE LOCATION OF SOME OF THE BREAKERS.

PROJECT NAME :
CITY OF FOLEY

CUSTOMER:
SEQUEL ELECTRICAL
SUPPLY, FOLEY



Industrial
Solutions by ABB

PANEL ID:
RQ Panelboard
APPROVED BY:
DATE: 08/07/2023 12:13:46
REVISION NO.

PRODUCT NAME:
RELIA GEAR LIGHTING
PANELBOARD

DRAWING NO:
ITEM NO: 11
MARKS: LPS
QUOTE NO: UJI-00002602
SHEET: 1

8/7/2023 12:32:31 PM

PANEL MARKS:

MDP-B

TECHNICAL SPECIFICATIONS

PANEL TYPE: neXT Factory Assembled Interior
QUANTITY: 1
AMPS: 400A
VOLTAGE: 480Y/277V
SYSTEM: 3P4W
KAIC: 42 KAIC SC FULLY RATED
MATERIAL: COPPER BUS
PLATE: SILVER PLATE
ENCLOSURE: NEMA 3R CABINETS
MOUNTING: SURFACE
SECTION: 1
MAIN DISCONNECT DEVICE

FEED DIR. Bottom
TYPE: Lugs
AMPS/SENSOR: 400A/-
CATALOG NO.: LGML260A
POLES: 3
LUGS: Main Lug (2) #2-500 mcm, No Feed Through

INTERIOR X-VALUES

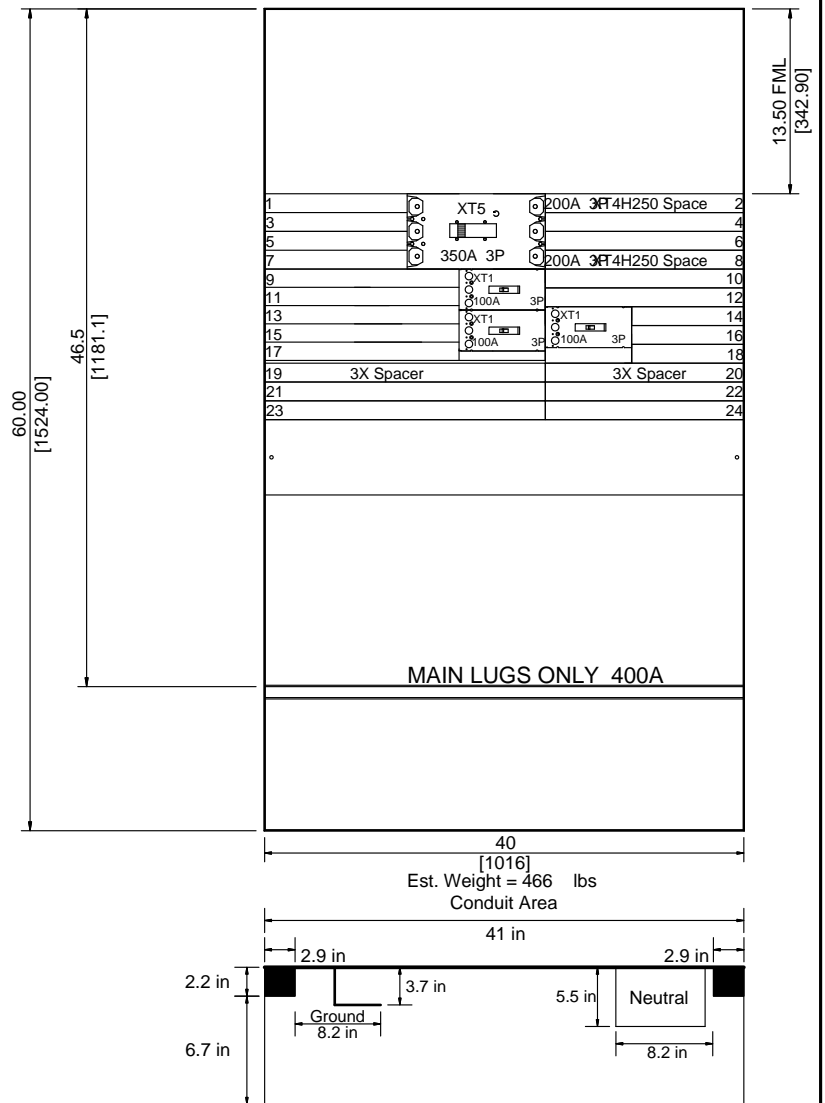
TOTAL X BUS AVAILABLE X BUS
16 12

OPTIONS INCLUDED

QTY	DESCRIPTION
1	Copper Bus Heat Rated
1	Grnd-Box bonded

BOM

QTY	CAT #	DESCRIPTION
1	GDBG10AL	Ground
1	IN1604BL3H2	Bus
1	NL0410NSTNDAL	Neutral
1	ER6040R	Enclosure
1	IF1640F	Frame
1	FT40S00135	Front 1 of 2
1	FT40S00260	Front 2 of 2
1	GC40F16BLA	Gutter
1	BP40F	WirePost
3	LGML260A	MLO and/or FTL Kit
3	SR03BB	Spacer
1	SR03BF	Spacer
1	SR1XBR	Spacer
1	SR2XBF	Spacer
1	IL40F	Lifting Bar



PANEL INFORMATION

INTERNAL DIMENSIONS 60"x42"x11"
NOTES
EXTERNAL DIMENSIONS 61"x43.5"x16.7"

1. FML - FRAME MOUNTING LOCATION.
 2. DRAWING NOT TO SCALE.
 3. DIMENSIONS ARE IN INCHES[mm].
- NEUTRAL CAN BE MOUNTED IN ANY CORNER

FACTORY AUTO-LAYOUT. THE LAYOUT IS NOT SPECIFIED, THE
FACTORY MAY CHANGE THE LOCATION OF SOME OF THE BREAKERS.
NEUTRAL ARE PRESSURE LUGS.

PROJECT NAME :
CITY OF FOLEY

CUSTOMER:
SEQUEL ELECTRICAL
SUPPLY, FOLEY



Industrial
Solutions by ABB

PANEL ID:
neXT Panel Assembled Interior
CREATED BY: Richbourg, Todd
DATE: 08/07/2023 12:13:46
REVISION NO.

PRODUCT NAME:
ReliaGear neXT
PANELBOARD

DRAWING NO:
ITEM NO: 15
MARKS: MDP-B
QUOTE NO: UJI-00002602
SHEET: 1

8/7/2023 12:38:21 PM

SAP ORDER:

neXT Device Information

X Space	Breaker Catalog Number	Trip Sensor Amps Amps		Trip Unit	Poles	Phases Used	Lug Cable Size/Neut Sensor/Grnd Fault Cable	Notes
1	XT5HU340AFYN000XXX	350	400	Ekip Dip LSI	3	ABC	(2) 2/0 AWG - 500 MCM	
2	XT4HU3200AYJ000XXX	200	-	TMF	3	ABC	(1) 4 AWG-300 MCM	1
8	XT4HU3200AYJ000XXX	200	-	TMF	3	ABC	(1) 4 AWG-300 MCM	1
9.1	XT1HU3100AYD000XXX	100	-	TMF	3	ABC	(1) 10 - 2/0 AWG	
9.2	XT1HU3100AYD000XXX	100	-	TMF	3	ABC	(1) 10 - 2/0 AWG	
14	XT1HU3100AYD000XXX	100	-	TMF	3	ABC	(1) 10 - 2/0 AWG	

NOTES:

1 This is a breaker space - breaker is not included

PANEL MARKS:

HPA

TECHNICAL SPECIFICATIONS

PANEL TYPE:	RE PANELBOARD
QUANTITY:	1
AMPS:	125A
VOLTAGE:	480Y/277V
SYSTEM:	3P4W
KAIC:	14 KAIC SC FULLY RATED
MATERIAL:	COPPER BUS
PLATE:	NO PLATE
ENCLOSURE:	NEMA 3R CABINETS
MOUNTING:	SURFACE
SECTION:	1

MAIN DISCONNECT DEVICE

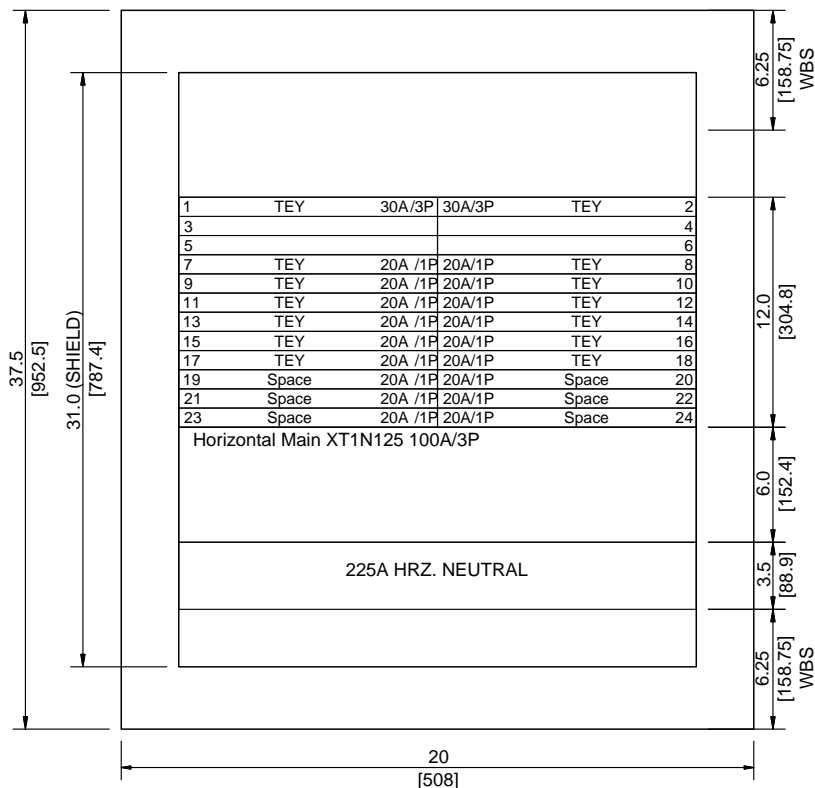
FEED DIR.	Bottom
TYPE:	Breaker
AMPS/SENSOR:	100A/-
CATALOG NO.:	XT1NU3100AFD000XXX
POLES:	3
LUGS:	1-lug/phase 1-cable/lug #10 -2/0
ACCESSORIES:	Trip Unit (TMF)

OPTIONS INCLUDED

QTY	DESCRIPTION
1	Copper Bus Heat Rated
2	Ground-Box bonded TGL2
1	Ground main lug TGL20

BRANCH DEVICES

QTY	AMPS/SENSOR/POLES	DESCRIPTION
2	30A /- / 3P	TEY330
12	20A /- / 1P	TEY120
6	20A /- / 1P	Space TEY120



PANEL INFORMATION

INTERIOR	AEF3241KBX AXB7
INTERIOR	
BOX	AB373
FRONT	NONE
TROUGH	
TROUGH END	
PULL BOX	
DIMENSIONS	37.5"X20"X6.21"

1. WBS - WIRE BENDING SPACE.
2. DRAWING NOT TO SCALE.
3. DIMENSIONS ARE IN INCHES[mm].

FACTORY AUTO-LAYOUT. THE LAYOUT IS NOT SPECIFIED, THE FACTORY MAY CHANGE THE LOCATION OF SOME OF THE BREAKERS.

PROJECT NAME :
CITY OF FOLEY

CUSTOMER:
SEQUEL ELECTRICAL
SUPPLY, FOLEY



Industrial
Solutions by ABB

PANEL ID:
RE Panelboard
APPROVED BY:
DATE: 08/07/2023 12:13:46
REVISION NO.

PRODUCT NAME:
RELIA GEAR LIGHTING
PANELBOARD

DRAWING NO:
ITEM NO: 16
MARKS: HPA
QUOTE NO: UJI-00002602
SHEET: 1

8/7/2023 12:40:51 PM

PANEL MARKS:

DPM

TECHNICAL SPECIFICATIONS

PANEL TYPE: neXT Factory Assembled Interior
 QUANTITY: 1
 AMPS: 400A
 VOLTAGE: 480Y/277V
 SYSTEM: 3P4W
 KAIC: 25 KAIC SC FULLY RATED
 MATERIAL: COPPER BUS
 PLATE: SILVER PLATE
 ENCLOSURE: NEMA 1 ENCLOSURE
 MOUNTING: SURFACE
 SECTION: 1
 MAIN DISCONNECT DEVICE

FEED DIR. Bottom
 TYPE: Lugs
 AMPS/SENSOR: 400A/-
 CATALOG NO.: LGML260A
 POLES: 3
 LUGS: Main Lug (2) #2-500 mcm, No Feed Through

INTERIOR X-VALUES

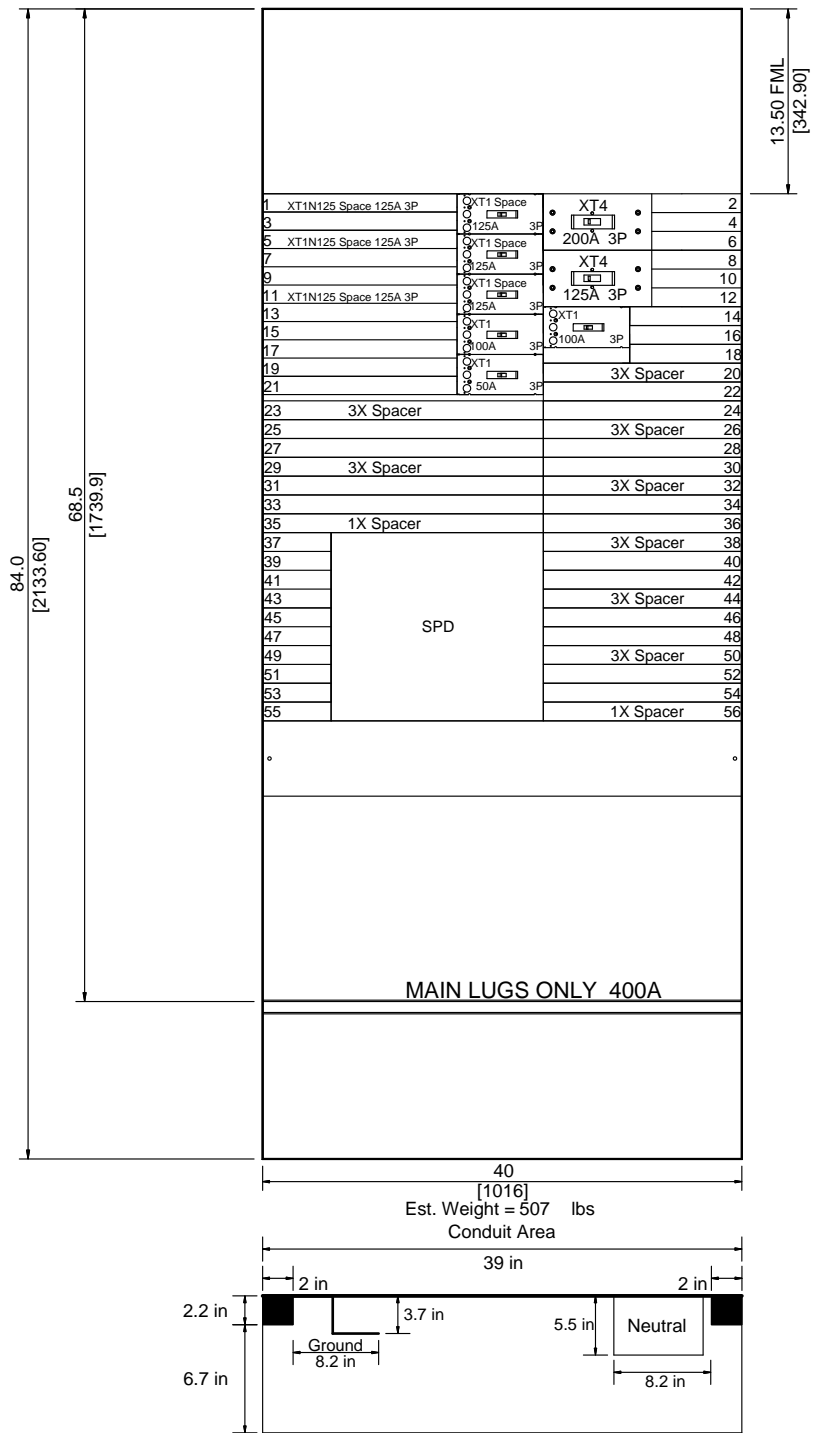
TOTAL X BUS AVAILABLE X BUS
 32 28

OPTIONS INCLUDED

QTY	DESCRIPTION
1	Copper Bus Heat Rated
1	Grnd-Box bonded
1	ME, 80kA/mode, 160kA/phase

BOM


QTY	CAT #	DESCRIPTION
1	GDBG10AL	Ground
1	IN3204BL3H2	Bus
1	NL04IONSTNDAL	Neutral
1	ER8440A	Enclosure
1	IF3240F	Frame
1	FT40S00135	Front 1 of 2
1	FT40S00280	Front 2 of 2
1	GC40F32BLA	Gutter
1	BP40F	WirePost
1	SP277Y08X402	Surge Protection
3	LGML260A	MLO and/or FTL Kit
1	SR01BB	Spacer
1	SR01BF	Spacer
6	SR03BB	Spacer
2	SR03BF	Spacer
1	SR1XBR	Spacer
1	SR5XBF	Spacer
3	SRT1BB	Spacer
1	IL40F	Lifting Bar



PANEL INFORMATION	
INTERNAL DIMENSIONS	84"X40"X11"
NOTES	
EXTERNAL DIMENSIONS	84.3"X40.7"X11"

- FML - FRAME MOUNTING LOCATION.
 - DRAWING NOT TO SCALE.
 - DIMENSIONS ARE IN INCHES[mm].
- NEUTRAL CAN BE MOUNTED IN ANY CORNER

FACTORY AUTO-LAYOUT. THE LAYOUT IS NOT SPECIFIED, THE FACTORY MAY CHANGE THE LOCATION OF SOME OF THE BREAKERS. NEUTRAL ARE PRESSURE LUGS.

PROJECT NAME : CITY OF FOLEY	 Industrial Solutions by ABB	PANEL ID: neXT Panel Assembled Interior	PRODUCT NAME: ReliaGear neXT PANELBOARD	DRAWING NO: ITEM NO: 17
CUSTOMER: SEQUEL ELECTRICAL SUPPLY, FOLEY		CREATED BY: Richbourg, Todd DATE: 08/07/2023 12:13:46 REVISION NO.		MARKS: DPM QUOTE NO: UJI-00002602 SHEET: 1

8/9/2023 9:09:06 PM

SAP ORDER:

neXT Device Information

X Space	Breaker Catalog Number	Trip Sensor		Trip Unit	Poles	Phases Used	Lug Cable Size/Neut Sensor/Grnd Fault Cable	Notes
1.1	XT1NU3125AYD000XXX	125	-	TMF	3	ABC	(1) 10 - 2/0 AWG	1
1.2	XT1NU3125AYD000XXX	125	-	TMF	3	ABC	(1) 10 - 2/0 AWG	1
1.3	XT1NU3125AYD000XXX	125	-	TMF	3	ABC	(1) 10 - 2/0 AWG	1
1.4	XT1NU3100AYD000XXX	100	-	TMF	3	ABC	(1) 10 - 2/0 AWG	
1.5	XT1NU3050AYD000XXX	50	-	TMF	3	ABC	(1) 10 - 2/0 AWG	
2	XT4NU3200AYJ000XXX	200	-	TMF	3	ABC	(1) 4 AWG-300 MCM	
8	XT4NU3125AYJ000XXX	125	-	TMF	3	ABC	(1) 4 AWG-300 MCM	
14	XT1NU3100AYD000XXX	100	-	TMF	3	ABC	(1) 10 - 2/0 AWG	

NOTES:

1 This is a breaker space - breaker is not included

PANEL MARKS:

HPM

TECHNICAL SPECIFICATIONS

PANEL TYPE:	RE PANELBOARD
QUANTITY:	1
AMPS:	225A
VOLTAGE:	480Y/277V
SYSTEM:	3P4W
KAIC:	14 KAIC SC FULLY RATED
MATERIAL:	COPPER BUS
PLATE:	NO PLATE
ENCLOSURE:	NEMA 3R CABINETS
MOUNTING:	SURFACE
SECTION:	1

MAIN DISCONNECT DEVICE

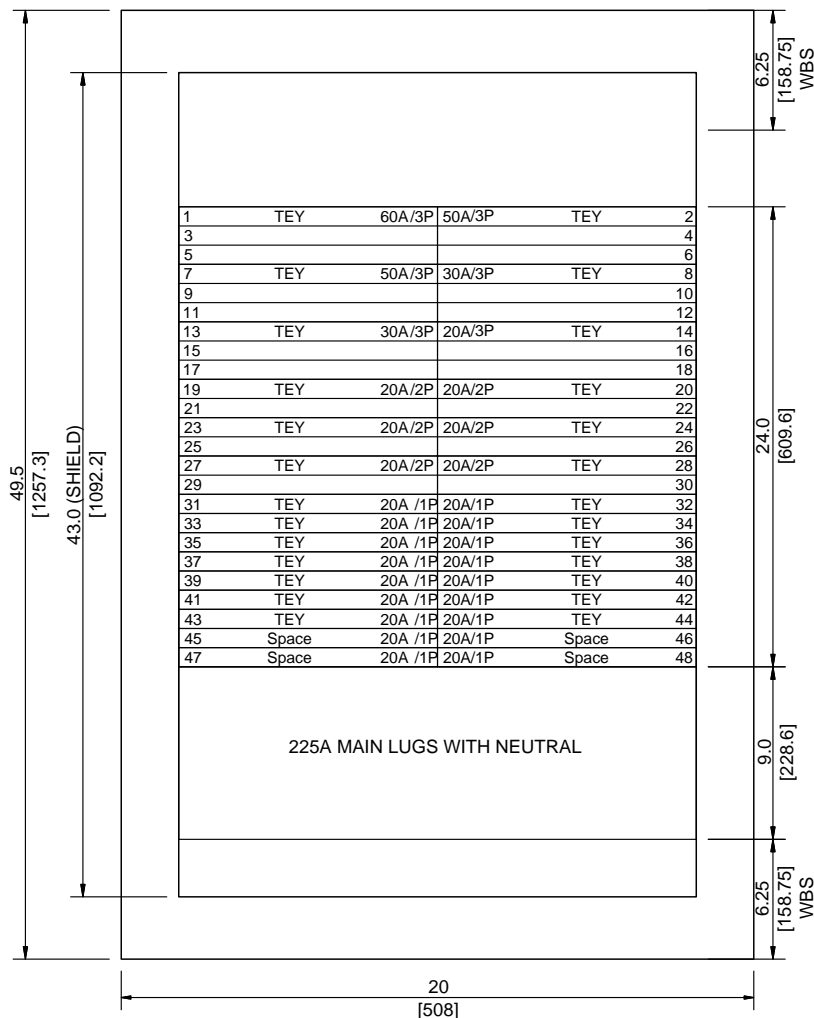
FEED DIR.	Bottom
TYPE:	Lugs
AMPS/SENSOR:	225A/-
CATALOG NO.:	
POLES:	3
LUGS:	1-lug/phase 1-cable/lug #6 -350 MCM

OPTIONS INCLUDED

QTY	DESCRIPTION
1	Copper Bus Heat Rated
4	Ground-Box bonded TGL2
1	Ground main lug TGL20
1	Power Distribution Panel

BRANCH DEVICES

QTY	AMPS/SENSOR/POLES	DESCRIPTION
6	20A /- / 2P	TEY220
2	50A /- / 3P	TEY350
1	60A /- / 3P	TEY360
2	30A /- / 3P	TEY330
1	20A /- / 3P	TEY320
14	20A /- / 1P	TEY120
4	20A /- / 1P	Space TEY120



PANEL INFORMATION

INTERIOR	AEF3482MBX AXB7
INTERIOR	
BOX	AB493
FRONT	NONE
TROUGH	
TROUGH END	
PULL BOX	
DIMENSIONS	49.5"X20"X6.21"

1. WBS - WIRE BENDING SPACE.
2. DRAWING NOT TO SCALE.
3. DIMENSIONS ARE IN INCHES[mm].

FACTORY AUTO-LAYOUT. THE LAYOUT IS NOT SPECIFIED, THE FACTORY MAY CHANGE THE LOCATION OF SOME OF THE BREAKERS.

PROJECT NAME :
CITY OF FOLEY

CUSTOMER:
SEQUEL ELECTRICAL
SUPPLY, FOLEY

8/7/2023 12:45:27 PM



Industrial
Solutions by ABB

PANEL ID:
RE Panelboard

APPROVED BY:

DATE: 08/07/2023 12:13:46

REVISION NO.

PRODUCT NAME:
RELIA GEAR LIGHTING
PANELBOARD

DRAWING NO:

ITEM NO: 18

MARKS: HPM

QUOTE NO: UJI-00002602

SHEET: 1

PANEL MARKS:

LPM

TECHNICAL SPECIFICATIONS

PANEL TYPE:	RQ PANELBOARD
QUANTITY:	1
AMPS:	250A
VOLTAGE:	208Y/120V
SYSTEM:	3P4W
KAIC:	10 KAIC SC FULLY RATED
MATERIAL:	COPPER BUS
PLATE:	NO PLATE
ENCLOSURE:	NEMA 1 ENCLOSURE
MOUNTING:	SURFACE
SECTION:	1

MAIN DISCONNECT DEVICE

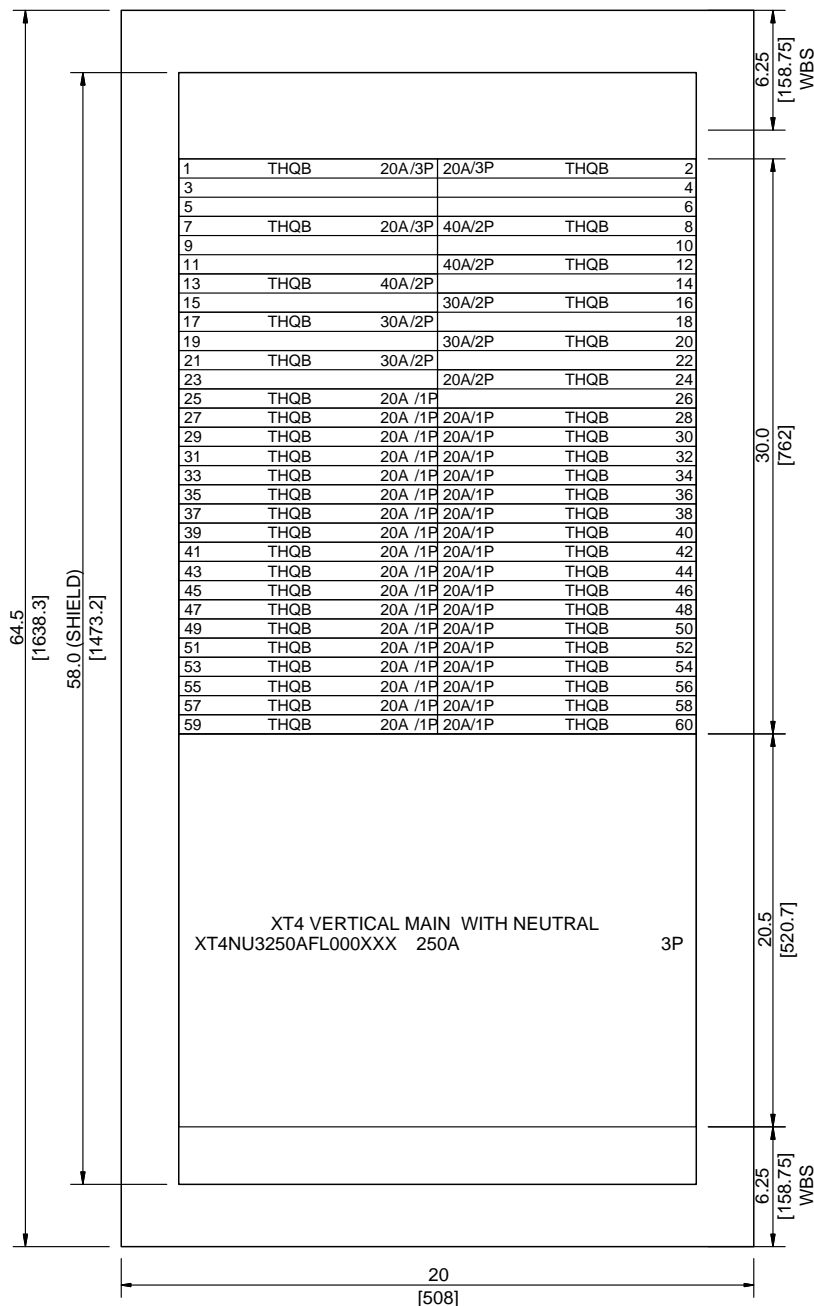
FEED DIR.	Bottom
TYPE:	Breaker
AMPS/SENSOR:	250A/-
CATALOG NO.:	XT4NU3250AFL000XXX
POLES:	3
LUGS:	1-lug/phase 1-cable/lug 3/0 -350 MCM
ACCESSORIES:	Trip Unit (TMF)

OPTIONS INCLUDED

QTY	DESCRIPTION
1	Copper Bus Heat Rated
5	Ground-Box bonded TGL2
1	Ground main lug TGL20
1	Power Distribution Panel
1	Front Hinged To Box

BRANCH DEVICES

QTY	AMPS/SENSOR/POLES	DESCRIPTION
4	30A /- /2P	THQB2130
3	40A /- /2P	THQB2140
1	20A /- /2P	THQB2120
3	20A /- /3P	THQB32020
35	20A /- /1P	THQB1120



PANEL INFORMATION

INTERIOR	AQF3602JBX AXB7
INTERIOR	
BOX	AB64B
FRONT	AF64SD
TROUGH	
TROUGH END	
PULL BOX	
DIMENSIONS	64.5"X20"X5.75"

1. WBS - WIRE BENDING SPACE.
2. DRAWING NOT TO SCALE.
3. DIMENSIONS ARE IN INCHES[mm].

FACTORY AUTO-LAYOUT. THE LAYOUT IS NOT SPECIFIED, THE FACTORY MAY CHANGE THE LOCATION OF SOME OF THE BREAKERS.

PROJECT NAME :
CITY OF FOLEY

CUSTOMER:
SEQUEL ELECTRICAL
SUPPLY, FOLEY



Industrial
Solutions by ABB

PANEL ID:
RQ Panelboard
APPROVED BY:
DATE: 08/07/2023 12:13:46
REVISION NO.

PRODUCT NAME:
RELIA GEAR LIGHTING
PANELBOARD

DRAWING NO:
ITEM NO: 19
MARKS: LPM
QUOTE NO: UJI-00002602
SHEET: 1

8/7/2023 12:50:21 PM

PANEL MARKS:

HPB

TECHNICAL SPECIFICATIONS

PANEL TYPE:	RE PANELBOARD
QUANTITY:	1
AMPS:	125A
VOLTAGE:	480Y/277V
SYSTEM:	3P4W
KAIC:	14 KAIC SC FULLY RATED
MATERIAL:	COPPER BUS
PLATE:	NO PLATE
ENCLOSURE:	NEMA 3R CABINETS
MOUNTING:	SURFACE
SECTION:	1

MAIN DISCONNECT DEVICE

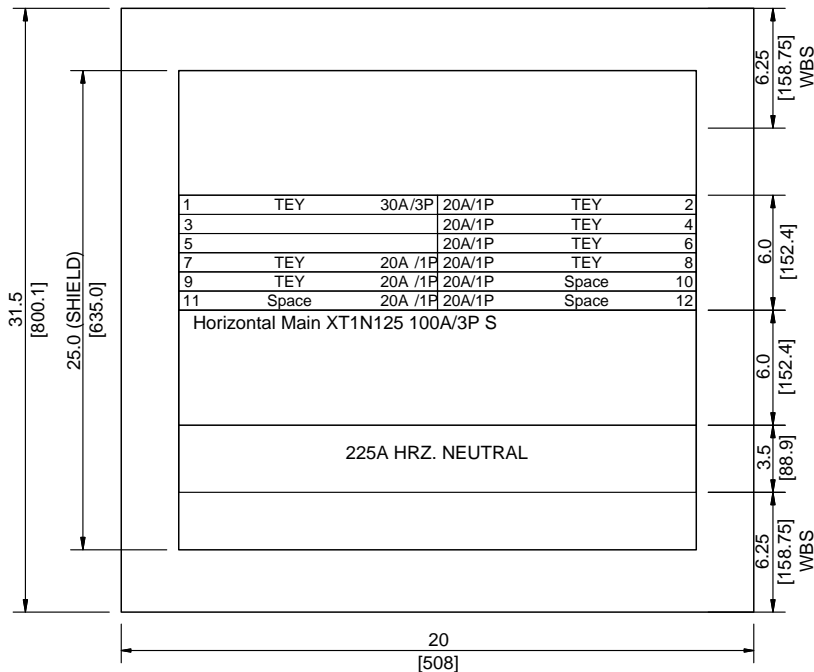
FEED DIR.	Bottom
TYPE:	Breaker
AMPS/SENSOR:	100A/-
CATALOG NO.:	XT1NU3100AFD000XXX
POLES:	3
LUGS:	1-lug/phase 1-cable/lug #10 -2/0
ACCESSORIES:	Trip Unit (TMF)
ACCESSORIES:	Shunt Trip (110-127V AC / 110-125V DC)

OPTIONS INCLUDED

QTY	DESCRIPTION
1	Copper Bus Heat Rated
2	Ground-Box bonded TGL2
1	Ground main lug TGL20

BRANCH DEVICES

QTY	AMPS/SENSOR/POLES	DESCRIPTION
1	30A /- / 3P	TEY330
6	20A /- / 1P	TEY120
3	20A /- / 1P	Space TEY120



PANEL INFORMATION

INTERIOR	AEF3121KBX AXB7
INTERIOR	
BOX	AB313
FRONT	NONE
TROUGH	
TROUGH END	
PULL BOX	
DIMENSIONS	31.5"X20"X6.21"

1. WBS - WIRE BENDING SPACE.
2. DRAWING NOT TO SCALE.
3. DIMENSIONS ARE IN INCHES[mm].

FACTORY AUTO-LAYOUT. THE LAYOUT IS NOT SPECIFIED, THE FACTORY MAY CHANGE THE LOCATION OF SOME OF THE BREAKERS.

PROJECT NAME :
CITY OF FOLEY

CUSTOMER:
SEQUEL ELECTRICAL
SUPPLY, FOLEY

8/7/2023 12:53:46 PM



Industrial
Solutions by ABB

PANEL ID:
RE Panelboard

APPROVED BY:

DATE: 08/07/2023 12:13:46

REVISION NO.

PRODUCT NAME:
RELIA GEAR LIGHTING
PANELBOARD

DRAWING NO:

ITEM NO: 20

MARKS: HPB

QUOTE NO: UJI-00002602

SHEET: 1

Transformer Submittal Section

Item No.	Product Description	Mark(s)	Quantity
12	Transformer, Copper, 9T10C1004	T-PWS, T-SS	2
21	Transformer, Aluminum, 9T17A0012	LPB	1
22	Transformer, Aluminum, 9T17A0012	LPA	1
23	Transformer, Aluminum, 9T17A0011	LPT	1
24	Transformer, Copper, 9T10C1004	T-MS	1

Bill of Material(s)

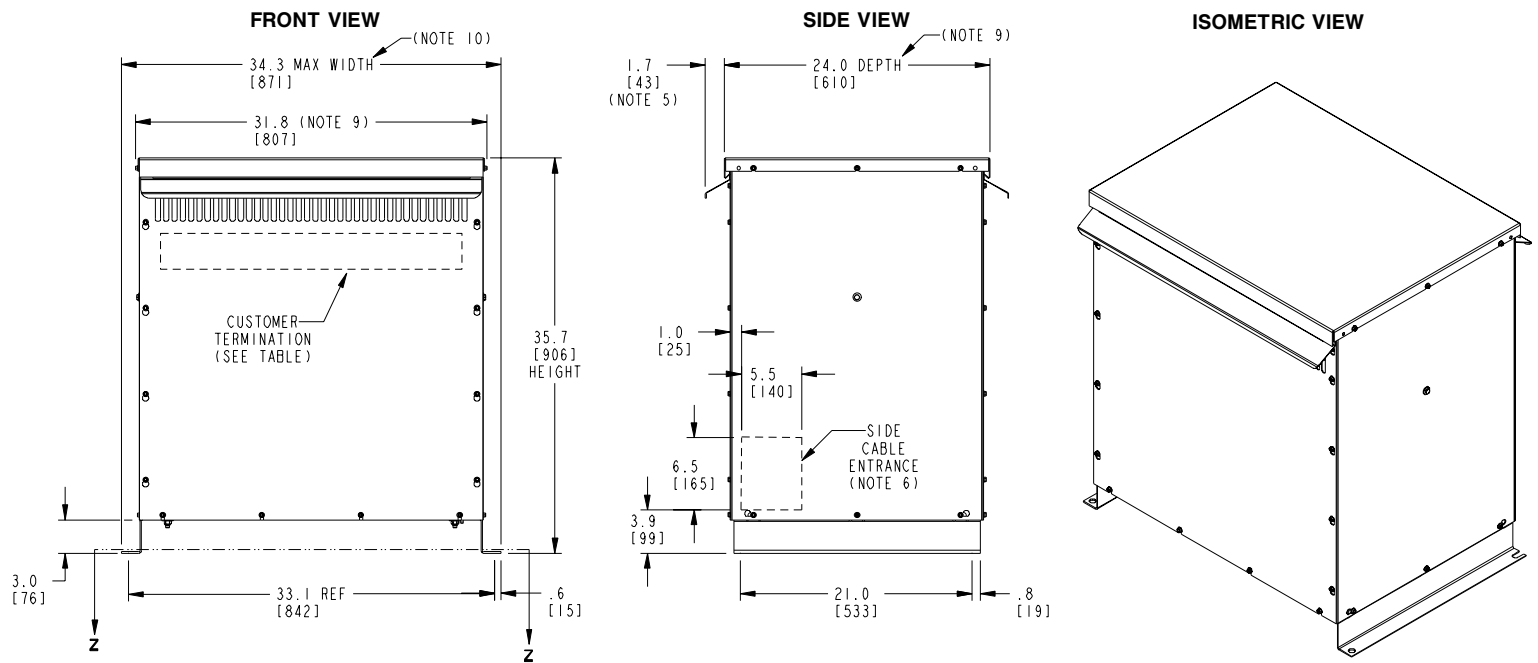
Item No.	Quantity	Description
12	2	Transformer, Copper, 9T10C1004 Marks: T-PWS, T-SS 1 3 Phase, 60 Hz, 75 kVA Ambient Temperature : 40°C Coil Material : Copper Primary Voltage : 480, Primary Connection : Delta Secondary Voltage : 208Y/120, Secondary Connection : Wye Temperature Rise : 150 Energy Efficiency : DOE 2016 (Std) Enclosure : NEMA 1/NEMA 2 Taps(Nominal) : 2 above 4 below 2.5% Impedance : 3.0% K Factor : K1 Sound Level : Std(50dB) UL : Yes, cUL : No, CE : No, Accessories : 1 9T18Y1074G10 Lug Kit included 1 9T18Y1074G11 Ground Bar Kit included Factory Individualized Transformer Test Reports : NEMA ST-20 Sound Level Test Report - Not Required IEEE std C57.12.91 Electrical Test Performance Report - Not Required
21	1	Transformer, Aluminum, 9T17A0012 Marks: LPB 1 3 Phase, 60 Hz, 22.5 kVA Ambient Temperature : 40°C Coil Material : Aluminum Primary Voltage : 480, Primary Connection : Delta Secondary Voltage : 208Y/120, Secondary Connection : Wye Temperature Rise : 150 Energy Efficiency : DOE 2016 Enclosure : NEMA 3R Taps(Nominal) : 2 above 4 below 2.5% Impedance : 3.6% Sound Level : Std(45dB) UL : Yes, cUL : No, CE : No, Accessories : 1 9T18Y1071G11 Ground Bar Kit included 1 9T18Y1072G10 Lug Kit included Factory Individualized Transformer Test Reports : NEMA ST-20 Sound Level Test Report - Not Required IEEE std C57.12.91 Electrical Test Performance Report - Not Required Breakers : 1 20 Amps, 2 Pole, THQL2120 16 20 Amps, 1 Pole, THQL1120

Bill of Material(s)

Item No.	Quantity	Description
22	1	Transformer, Aluminum, 9T17A0012 Marks: LPA 1 3 Phase, 60 Hz, 22.5 kVA Ambient Temperature : 40°C Coil Material : Aluminum Primary Voltage : 480, Primary Connection : Delta Secondary Voltage : 208Y/120, Secondary Connection : Wye Temperature Rise : 150 Energy Efficiency : DOE 2016 Enclosure : NEMA 3R Taps(Nominal) : 2 above 4 below 2.5% Impedance : 3.6% Sound Level : Std(45dB) UL : Yes, cUL : No, CE : No, Accessories : 1 9T18Y1071G11 Ground Bar Kit included 1 9T18Y1072G10 Lug Kit included Factory Individualized Transformer Test Reports : NEMA ST-20 Sound Level Test Report - Not Required IEEE std C57.12.91 Electrical Test Performance Report - Not Required Breakers : 1 30 Amps, 2 Pole, THQL2130 1 20 Amps, 2 Pole, THQL2120 9 20 Amps, 1 Pole, THQL1120
23	1	Transformer, Aluminum, 9T17A0011 Marks: LPT 1 3 Phase, 60 Hz, 15 kVA Ambient Temperature : 40°C Coil Material : Aluminum Primary Voltage : 480, Primary Connection : Delta Secondary Voltage : 208Y/120, Secondary Connection : Wye Temperature Rise : 150 Energy Efficiency : DOE 2016 Enclosure : NEMA 3R Taps(Nominal) : 2 above 4 below 2.5% Impedance : 3.7% Sound Level : Std(45dB) UL : Yes, cUL : No, CE : No, Accessories : 1 9T18Y1071G10 Lug Kit included 1 9T18Y1071G11 Ground Bar Kit included Factory Individualized Transformer Test Reports : NEMA ST-20 Sound Level Test Report - Not Required IEEE std C57.12.91 Electrical Test Performance Report - Not Required Breakers :

Bill of Material(s)

Item No.	Quantity	Description
		1 20 Amps, 3 Pole, THQL32020
		1 40 Amps, 2 Pole, THQL2140
		6 20 Amps, 1 Pole, THQL1120
24	1	Transformer, Copper, 9T10C1004 Marks: T-MS
		1 3 Phase, 60 Hz, 75 kVA Ambient Temperature : 40°C Coil Material : Copper Primary Voltage : 480, Primary Connection : Delta Secondary Voltage : 208Y/120, Secondary Connection : Wye Temperature Rise : 150 Energy Efficiency : DOE 2016 (Std) Enclosure : NEMA 1/NEMA 2 Taps(Nominal) : 2 above 4 below 2.5% Impedance : 3.0% K Factor : K1 Sound Level : Std(50dB) UL : Yes, cUL : No, CE : No, Accessories : 1 9T18Y1074G10 Lug Kit included 1 9T18Y1074G11 Ground Bar Kit included Factory Individualized Transformer Test Reports : NEMA ST-20 Sound Level Test Report - Not Required IEEE std C57.12.91 Electrical Test Performance Report - Not Required



BOTTOM VIEW OF MOUNTING AND CABLE ENTRANCE


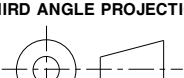
APPROX TOTAL WEIGHT LBS [KG]
PAINTED: 566 [257]
STAINLESS STEEL: 571 [259]

kVA RATING: 75
K-FACTOR: K1
PRI VOLTAGE: 480
SEC VOLTAGE: 208Y/120
FREQ (Hz): 60 Hz
TEMP RISE: 150C
WINDING MATL: Copper
ES SHIELD: NO
SOUND LVL (dB): Std (50)

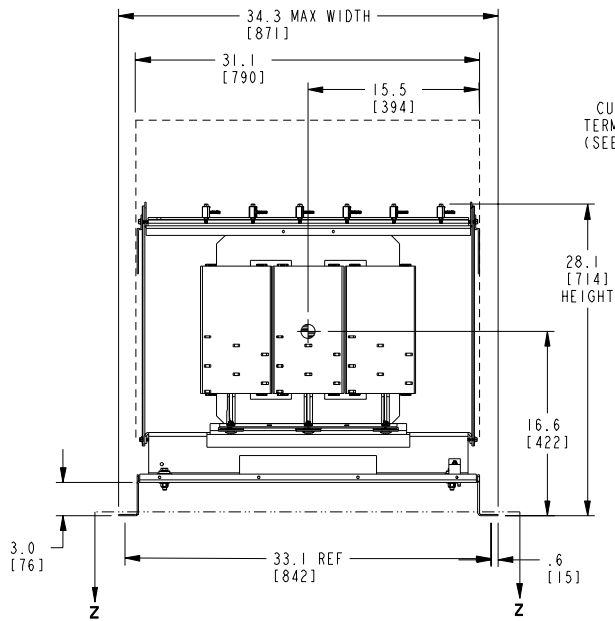
CUSTOMER TERMINATION			
LOCATION	CONNECTION TYPE	HOLE SIZE	HOLE QTY
PRIMARY BUS BARS	STANDARD BUS BAR (LUGS ARE OPTIONAL)	.40 [10.2] DIA	2 PER BUS BAR
SECONDARY BUS BARS			

NOTES:

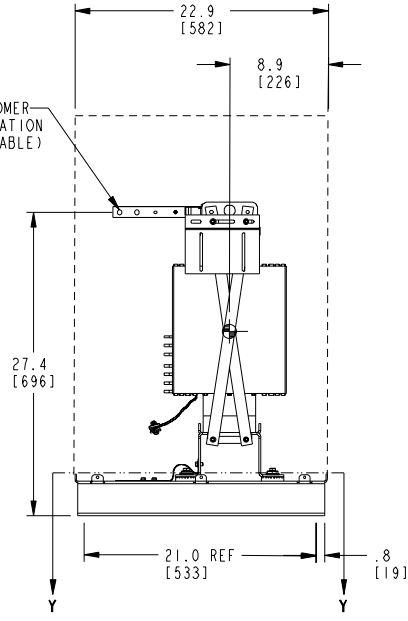
- 1) ALL UNITS ARE UL LISTED AND ARE DESIGNED PER NEMA ST-20 STANDARDS.
- 2) THE TEMPERATURE RISE LISTED WAS DETERMINED WHEN THE TRANSFORMER WAS MOUNTED IN A STANDARD NEMA-2 ENCLOSURE.
- 3) TRANSFORMER IS DESIGNED FOR FLOOR MOUNTING. OPTIONAL WALL MOUNTING BRACKETS ARE AVAILABLE.
- 4) TRANSFORMER IS DRY TYPE, CLASS AA, WITH VENTILATED ENCLOSURE FOR INDOOR USE. OPTIONAL RAINSHIELD KITS ARE AVAILABLE TO ADAPT UNIT FOR TYPE 3R OUTDOOR USE WITHOUT VOIDING THE WARRANTY.
- 5) APPLICABLE WHEN OPTIONAL RAINSHIELDS ARE INSTALLED. RAINSHIELDS ARE SHIPPED IN KITS FOR FIELD INSTALLATION.
- 6) CABLE ENTRANCE IS PERMITTED THROUGH THE LEFT SIDE, RIGHT SIDE AND/OR BOTTOM ENCLOSURE PANELS ONLY. CABLE ENTRANCE IS NOT PERMITTED THROUGH THE FRONT, REAR OR TOP PANELS.
- 7) FOR LIFTING OTHER THAN WITH A FORK TRUCK, REMOVE TOP COVER AND USE 1" [25 MM] DIAMETER HOLES IN THE TOP CORE CLAMPS.
- 8) ENCLOSURE PAINT COLOR IS ANSI #61 GRAY.
OPTIONAL STAINLESS STEEL ENCLOSURE IS AVAILABLE. FINISH IS 80 GRIT.
- 9) 6" [152 MM] MINIMUM CLEARANCE IS REQUIRED FROM ALL WALLS.
- 10) USE THIS DIMENSION WHEN PLANNING THE MOUNTING PAD.

JOB NAME:	UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE INCH [MM]	 Transformers	by ABB
SPEEDI PROP:	THIRD ANGLE PROJECTION 	DRY TYPE TRANSFORMER OUTLINE DRAWING TYPE QL, 3-PHASE, DOE 2016 EFFICIENCY (ENCLOSED UNIT)	
electrification.us.abb.com		76 of 99	
CAD DRAWING: 303B111GEUY14C	SHEET 1 OF 2	CATALOG # 9T10C1004	REV 1

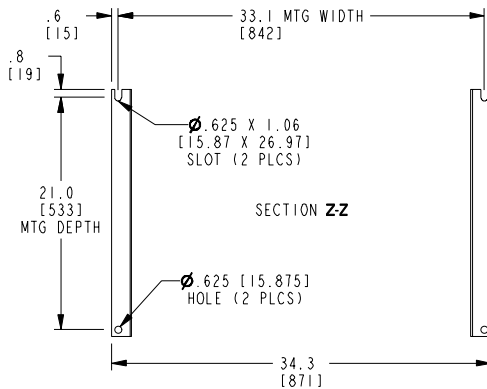
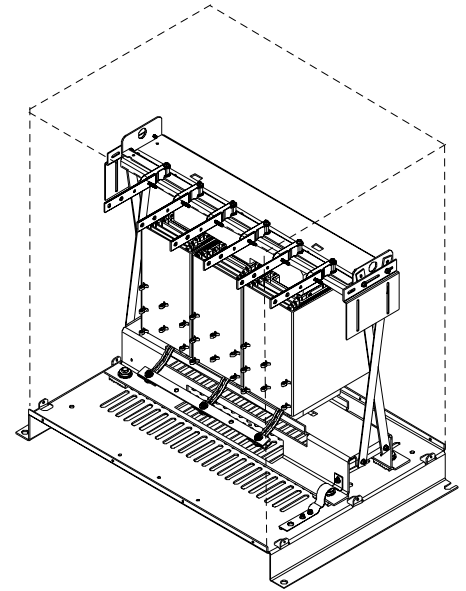
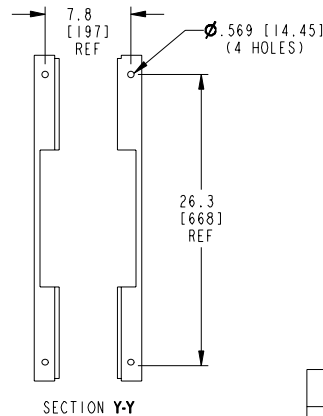
FRONT VIEW



SIDE VIEW



ISOMETRIC VIEW

BOTTOM VIEW OF
MOUNTING HOLE PATTERNBOTTOM VIEW OF
MOUNTING HOLE PATTERN
WITHOUT BASE ATTACHED

APPROX TOTAL WEIGHT LBS [KG]
PAINTED: 492 [223]

kVA RATING: 75
K-FACTOR: K1
PRI VOLTAGE: 480
SEC VOLTAGE: 208Y/120
FREQ (Hz): 60 Hz
TEMP RISE: 150C
WINDING MATL: Copper
ES SHIELD: NO
SOUND LVL (dB): Std (50)

CUSTOMER TERMINATION

LOCATION	CONNECTION TYPE	HOLE SIZE	HOLE QTY
PRIMARY BUS BARS	STANDARD BUS BAR (LUGS ARE OPTIONAL)	.40 [10.2] DIA	2 PER BUS BAR
SECONDARY BUS BARS			

NOTES:

- 1) ALL UNITS ARE UL LISTED AND ARE DESIGNED PER NEMA ST-20 STANDARDS.
- 2) THE TEMPERATURE RISE LISTED WAS DETERMINED WHEN THE TRANSFORMER WAS MOUNTED IN A STANDARD NEMA-2 ENCLOSURE.
- 3) TRANSFORMER IS DRY TYPE, CLASS AA FOR INDOOR USE.
- 4) FOR LIFTING OTHER THAN WITH A FORK TRUCK, USE 1" [25 MM] DIAMETER HOLES IN THE TOP CORE CLAMPS.
- 5) BASE PAINT COLOR IS ANSI #61 GRAY.
- 6) 6" [152 MM] MINIMUM CLEARANCE IS REQUIRED FROM ALL WALLS.
- 7) ⌀ INDICATES APPROXIMATE CENTER OF GRAVITY.

JOB NAME:

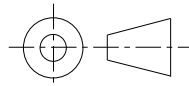
SPEEDI PROP:

electrification.us.abb.com

CAD DRAWING: 303B111GEUY14C

UNLESS OTHERWISE SPECIFIED
ALL DIMENSIONS ARE INCH [MM]

THIRD ANGLE PROJECTION



SHEET 2 OF 2



Transformers

by ABB

DRY TYPE TRANSFORMER OUTLINE DRAWING
TYPE QL, 3-PHASE, DOE 2016 EFFICIENCY
(CORE & COIL UNIT)

CATALOG # 9T10C1004

REV 1

77 of 99



Transformer

by ABB



1M0000000

Catalog Number

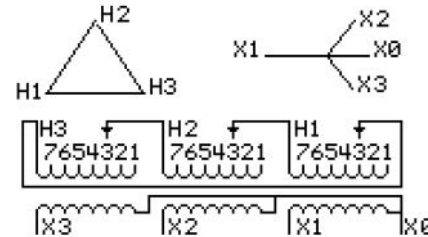
Type QL

9T10C1004

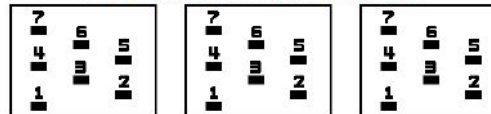
75.0 KVA 60 HZ 3 PH 4.5 % IMP
40 C AMB. 150 C RISE 220 C SYSTEM IS-19C

JUMPER CONNECTION	
TAP	VOLTS
1	502
2	491
3	480
4	469
5	455
6	444
7	433

PRIMARY (H) 480 VOLTS (LINE-LINE)
SECONDARY (X) 208 VOLTS (LINE-LINE)
120 VOLTS (LINE-NEUTRAL)



COIL TAP ARRANGEMENT



NET WGT
568 LB
257.6 Kg
90776
UY14C

INSPECTION & FINAL TEST
NP3
N232@
081722



ENCLOSURE TYPE 2 (IP20). OR RAINPROOF TYPE 3R (IP22) WHEN PROVIDED SHIELD 9T18Y1074G06

BEFORE HANDLING, INSTALLING AND OPERATING, SEE INSTRUCTION 475A667AAP001

COPPER CONDUCTOR PRIMARY: 10 KV BIL SECONDARY: 10 KV BIL

IN ACCORDANCE WITH NEC SECTION 450-9, ALLOW AT LEAST SIX INCHES CLEARANCE FOR VENTILATION.
CHECK ADDITIONAL NEC AND LOCAL CODE

NEMA CLASS AA DRY TYPE TRANSFORMER

Meets DOE 2016 efficiency

ASSEMBLED IN MEXICO

X3 H3 X2 H2 X1 H1

- - - - -

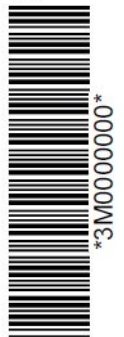
Note: X0 at the bottom

Outline: 303B111GEUY14C

X3	H3	X2	H2	X1	H1
.



2M0000000



3M0000000

X0

TYPICAL TEST DATA

LV Dry Type Transformer



MODEL #: 9T10C1004

Underwriters Laboratories Inc. Listed

RATINGS

KVA	75	Conductor	CU
Frequency (Hz)	60	Phase	3
Primary Voltage	480 (+2/-4 @2.5%)	Secondary Voltage	208Y/120
Current Line Primary (A)	90.20	Current Line Secondary (A)	208.20
Frame	UY14C	Insulation System (°C)	220
K Factor	1	Average Sound Level (dB)	50
Temp. Rise (°C)	150	Efficiency standards	DoE 2016 (10CFR 431)
Electrostatic shield	None		

LOSS DATA @ 100% LOAD

Core Loss or No Load Loss @ 100% voltage (Watts)	151.7
Impedance Loss or Coil Loss @ Rise + 20 °C reference (Watts)	<u>2,270.6</u>
Total Loss @ Rise + 20 °C reference (Watts)	2,422.3

DIELECTRIC AND PRODUCTION TESTING

Induce Test @ Twice rated voltage 400 Hz per UL1561 and NEMA ST-20
Hipot Test for High Voltage winding to Low Voltage and Ground @ 4000 volts 60 Hz, 60 Sec
Hipot Test for Low Voltage winding to High Voltage and Ground @ 2500 volts 60 Hz, 60 Sec
Polarity additive in accordance with UL1561 and NEMA ST-20

EFFICIENCY:

DoE 2016 (10CFR 431) efficiency levels

<u>Load (%)</u>	<u>Efficiency (%)</u>
16	98.39
25	98.63
35	98.63
50	98.46
75	98.02
100	97.53

IMPEDANCE:

Impedance at reference temperature of
Rise + 20 °C (Calculated)

%R	3.00
%X	3.30
%Z	4.50
X/R Ratio	1.10

REGULATION:

Regulation at reference temperature of
Rise + 20 °C (Calculated)

<u>Power Factor</u>	<u>Regulation (%)</u>
1	3.10
0.9	4.20
0.8	4.40

REFERENCE VALUES:

Peak Inrush Current (Calculated)
Imax @8.33 ms (A RMS)≈ 1047.4
Imax @ 100 ms (A RMS)≈ 373.4

**Catalog No. 9T10C1004****Description: "3C,75kVA,480-208Y,150C,N2,K1,DOE"****UPC No 783173907795****Home > Transformers > Dry Type Vented > General Purpose**

ABB's Type QL transformers meet DOE 2016 efficiency standards. They are available with aluminum or copper windings and utilize a UL recognized 220 degree centigrade insulation system-Quiet Performance-Outward-facing mounting feet-Core and coil assemblies are mounted on rubber isolation pads to reduce noise-Bolted coil terminations-Single-piece front/back is easily removable for service-NEMA 2 drip-proof enclosure is standard weathershield kits are available for conversion to NEMA 3R outdoor configuration--Copper or aluminum windings-Copper ground strap-Robust packaging with top and side protection protects against shipping damage-Accessible mounting flanges with front/back slotted mounting holes make installation easier-100 percentage factory tested for shorts and coil integrity, current and loss, voltage, impedance and noise.-Clear, comprehensive documentation and labeling.

Representative Image

Descriptors

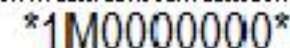
Category	General Purpose
GO Schedule	TZ

Specifications

TransType	DOE 2016
Phase	3
PriVoltage	480
SecVoltage	208Y/120
KVA	75.0 KVA
Coil Material	CU
TempRise	150.0 °C
Frequency	60 Hz
Impedance	4.5 %
AmbTemp	40.0 °C
EnergyEfficiency	DOE 2016
KFactor	K1
Enclosure Type	NEMA 2
Sound	Std

Classifications

CE	0
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82 of 9

82 of 99

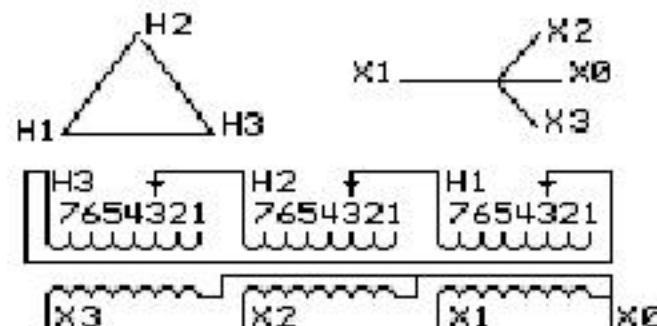
Type QL-WP

9T17A0012

22.5 KVA 60 HZ 3 PH 3.6 % IMP

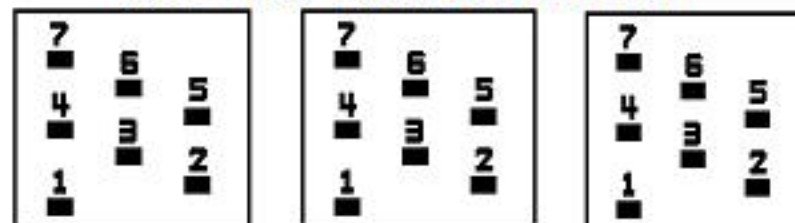
40 C AMB. 150 C RISE 220 C SYSTEM IS-19C

Note: Design is based on 30.00KVA & 115C Rise 4.9% Imp.



PRIMARY (H)	480 VOLTS (LINE-LINE)
SECONDARY (X)	208 VOLTS (LINE-LINE)
	120 VOLTS (LINE-NEUTRAL)

COIL TAP ARRANGEMENT



JUMPER
CONNECTION
TAP VOLTS

1	504
2	492
3	480
4	468
5	456
6	444
7	432

NET WGT

330 LB
149.7 Kg

64607

UX72A

NOG

091516

INSPECTION

FINAL TEST
N638!



LISTED 769G

ENCLOSURE TYPE 2 (IP20), OR RAINPROOF TYPE 3R (IP22) WHEN PROVIDED SHIELD

BEFORE HANDLING, INSTALLING AND OPERATING, SEE INSTRUCTION 475A667AAP008
ALUMINUM CONDUCTOR PRIMARY: 10 KV BIL SECONDARY: 10 KV BIL

Outline: 303B424AAP022

IN ACCORDANCE WITH NEC SECTION 450-9, ALLOW AT LEAST SIX INCHES
CLEARANCE FOR VENTILATION. CHECK ADDITIONAL NEC AND LOCAL CODE

Assembled in Mexico

X3 H3 X2 H2 X1 H1 X0

Note: standard

GE Energy Industrial Solutions

NEMA CLASS AA DRY TYPE TRANSFORMER

Meets DOE 2016 efficiency



Representative Image

Catalog No. 9T17A0012

Description: "3A,22.5kVA,480-208Y,150C,3R,SC18,70A,DOE"

UPC No 783173900314

Home > Transformers > Dry Type Vented > Service Center

ABB's Three Phase Servicer™: Integral Transformer and Distribution Panel is a convenient, economical way to meet your industrial and temporary power requirements. This unit incorporates a Type QL transformer (three phase), a primary main circuit breaker, a secondary main circuit breaker, and a load center style breaker panel. Everything is factory installed, saving the contractor time and money. This Servicer™ can be used wherever 240 Volt, 480 Volt or 600 Volt primary is available and 208Y/120 Volt secondary circuits are required.

Descriptors

Category	Service Center
----------	----------------

Specifications

TransType	DOE 2016
Phase	3
PriVoltage	480
SecVoltage	208Y/120
KVA	22.5 KVA
Coil Material	AL
TempRise	150.0 °C
Frequency	60 Hz
Impedance	3.6 %
AmbTemp	40.0 °C
EnergyEfficiency	DOE 2016
KFactor	K1
Enclosure Type	NEMA 3R
Sound	Std



Servicenter

—
by ABB



1M000000

Catalog Number
9T17A0011

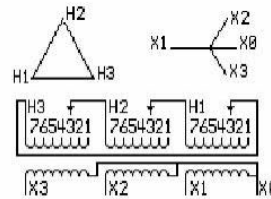
Type **QL-
WP**

15.0 KVA 60 HZ 3 PH 3.7 % IMP
40 C AMB. 150 C RISE 220 C SYSTEM IS-19C

Note: Design is based on 15.00KVA & 115C Rise 3.4% Imp.

PRIMARY (H) 480 VOLTS (LINE-LINE)
SECONDARY (X) 208 VOLTS (LINE-LINE)
120 VOLTS (LINE-NEUTRAL)

JUMPER CONNECTION TAP VOLTS	
1	504
2	493
3	480
4	468
5	455
6	445
7	432



NET WGT
231 LB
104.8 Kg
85468

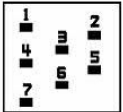
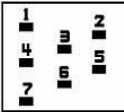
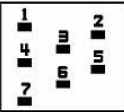
UX71A
NOG
060421

INSPECTION
&
FINAL TEST
N123!



LISTED 769G

COIL TAP ARRANGEMENT



ENCLOSURE TYPE 2 (IP20). OR RAINPROOF TYPE 3R (IP22) WHEN PROVIDED SHIELD

BEFORE HANDLING, INSTALLING AND OPERATING, SEE INSTRUCTION 475A667AAP001
ALUMINUM CONDUCTOR PRIMARY: 10 KV BIL SECONDARY: 10 KV BIL

IN ACCORDANCE WITH NEC SECTION 450-9, ALLOW AT LEAST SIX INCHES
CLEARANCE FOR VENTILATION. CHECK ADDITIONAL NEC AND LOCAL CODE

NEMA CLASS AA DRY TYPE TRANSFORMER

Meets DOE 2016 efficiency

ASSEMBLED IN MEXICO

X3 H3 X2 H2 X1 H1 X0

Note: standard

Outline: 303B424AAP015

X0

H1

X1

H2

X2

H3

X3

H3

X2

H2

X1

H1

X0

X3

H3

X2

H2

X1

H1

X0

X3

H3

X2

X0

H1

X1

H2

X2

H3

X3

H3

X2

H2

X1

H1

X0

X3

H3

X2

H2

X1

H1

X0

X3

H3

X2



2M000000



3M000000

TYPICAL TEST DATA

LV Dry Type Transformer



MODEL #: **9T17A0011**

Underwriters' Laboratories Inc. Listed

RATINGS

KVA	15	Conductor	AL
Frequency (Hz)	60	Phase	3
Primary Voltage	480D+2,-4(2.5%taps)	Secondary Voltage	208Y/120
Current Line Primary (A)	18.04	Current Line Secondary (A)	41.64
Frame	UX71A	Insulation System (°C)	220C
K Factor	1	Efficiency level	DoE 2016 (10CFR 431)
Temp. Rise (°C)	150	Average Sound Level (dB)	45

LOSS DATA @ 100% LOAD

Core Loss or No Load Loss @ 100% voltage (Watts)	63.0
Impedance Loss or Coil Loss @ Rise + 20 °C reference (Watts)	<u>473.3</u>
Total Loss @ Rise + 20 °C reference (Watts)	536.4

DIELECTRIC AND PRODUCTION TESTING

Induce Test @ Twice rated voltage 400 Hz per UL1561 and NEMA ST-20
Hipot Test for High Voltage winding to Low Voltage and Ground @ 4000 volts 60 Hz, 60 Sec
Hipot Test for Low Voltage winding to High Voltage and Ground @ 2500 volts 60 Hz, 60 Sec
Polarity additive in accordance with UL1561 and NEMA ST-20

EFFICIENCY:

DoE 2016 (10CFR 431) Efficiency Level

<u>Load (%)</u>	<u>Efficiency (%)</u>
16	97.10
25	97.81
35	97.89
50	98.08
75	97.81
100	97.42

IMPEDANCE:

Impedance at reference temperature of Rise + 20 °C (Calculated)

%R	3.2
%X	1.9
%Z	3.7
X/R Ratio	0.6

REGULATION:

Regulation at reference temperature of Rise + 20 °C (Calculated)

<u>Power Factor</u>	<u>Regulation (%)</u>
1	3.2
0.9	3.7
0.8	3.7

REFERENCE VALUES:

Inrush Current $t = 8.33\text{ms}$
(Calculated)
Imax(RMS) $\approx 440.72\text{ A}$



Representative Image

Catalog No. 9T17A0011

Description: "3A,15kVA,480-208Y,150C,3R,SC12,40A,DOE"

UPC No 783173900307

Home > Transformers > Dry Type Vented > Service Center

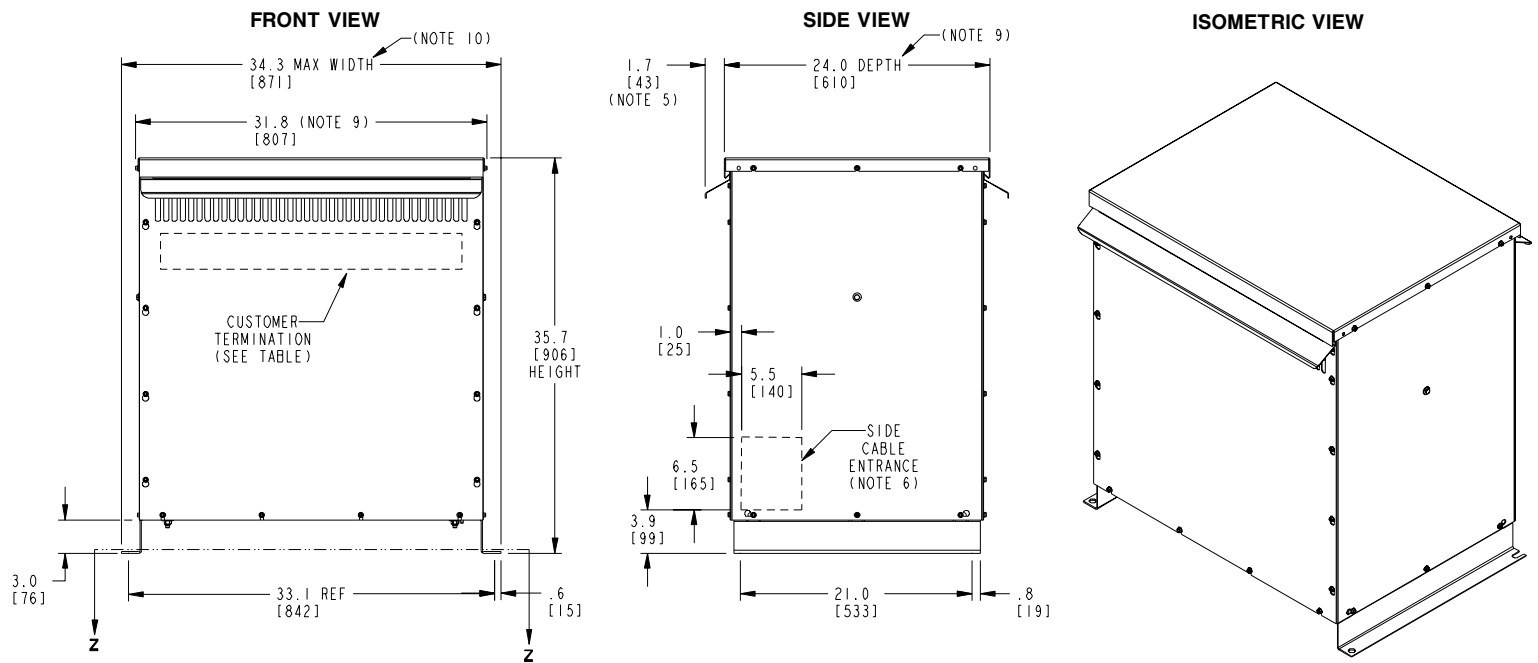
ABB's Three Phase Servicer™: Integral Transformer and Distribution Panel is a convenient, economical way to meet your industrial and temporary power requirements. This unit incorporates a Type QL transformer (three phase), a primary main circuit breaker, a secondary main circuit breaker, and a load center style breaker panel. Everything is factory installed, saving the contractor time and money. This Servicer™ can be used wherever 240 Volt, 480 Volt or 600 Volt primary is available and 208Y/120 Volt secondary circuits are required.

Descriptors

Category	Service Center
----------	----------------

Specifications

TransType	DOE 2016
Phase	3
PriVoltage	480
SecVoltage	208Y/120
KVA	15.0 KVA
Coil Material	AL
TempRise	150.0 °C
Frequency	60 Hz
Impedance	3.7 %
AmbTemp	40.0 °C
EnergyEfficiency	DOE 2016
KFactor	K1
Enclosure Type	NEMA 3R
Sound	Std



BOTTOM VIEW OF MOUNTING AND CABLE ENTRANCE

APPROX TOTAL WEIGHT LBS [KG]

PAINTED: 566 [257]

STAINLESS STEEL: 571 [259]


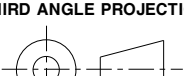
kVA RATING: 75
K-FACTOR: K1
PRI VOLTAGE: 480
SEC VOLTAGE: 208Y/120
FREQ (Hz): 60 Hz
TEMP RISE: 150C
WINDING MATL: Copper
ES SHIELD: NO
SOUND LVL (dB): Std (50)

CUSTOMER TERMINATION

LOCATION	CONNECTION TYPE	HOLE SIZE	HOLE QTY
PRIMARY BUS BARS	STANDARD BUS BAR (LUGS ARE OPTIONAL)	.40 [10.2] DIA	2 PER BUS BAR
SECONDARY BUS BARS			

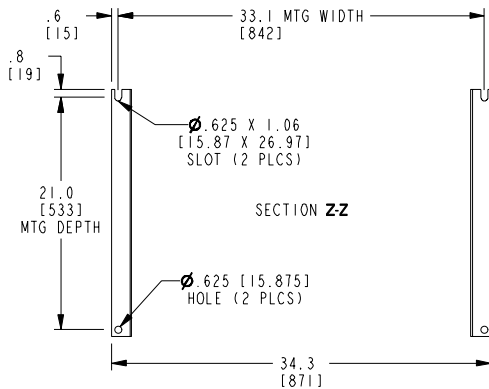
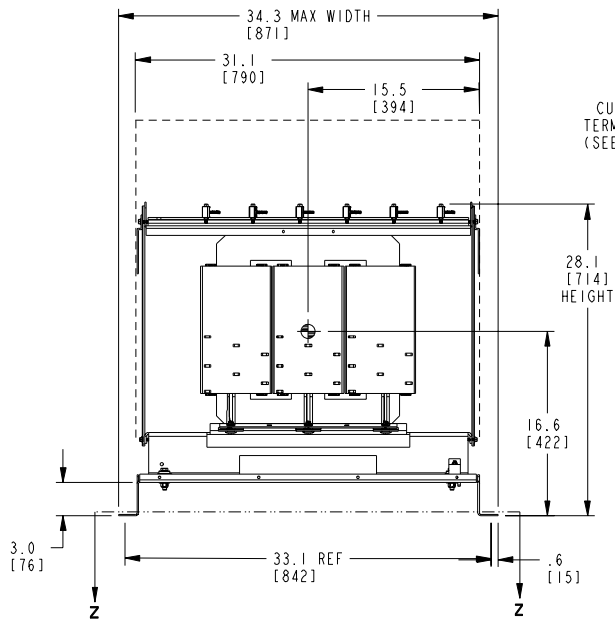
NOTES:

- 1) ALL UNITS ARE UL LISTED AND ARE DESIGNED PER NEMA ST-20 STANDARDS.
- 2) THE TEMPERATURE RISE LISTED WAS DETERMINED WHEN THE TRANSFORMER WAS MOUNTED IN A STANDARD NEMA-2 ENCLOSURE.
- 3) TRANSFORMER IS DESIGNED FOR FLOOR MOUNTING. OPTIONAL WALL MOUNTING BRACKETS ARE AVAILABLE.
- 4) TRANSFORMER IS DRY TYPE, CLASS AA, WITH VENTILATED ENCLOSURE FOR INDOOR USE. OPTIONAL RAINSHIELD KITS ARE AVAILABLE TO ADAPT UNIT FOR TYPE 3R OUTDOOR USE WITHOUT VOIDING THE WARRANTY.
- 5) APPLICABLE WHEN OPTIONAL RAINSHIELDS ARE INSTALLED. RAINSHIELDS ARE SHIPPED IN KITS FOR FIELD INSTALLATION.
- 6) CABLE ENTRANCE IS PERMITTED THROUGH THE LEFT SIDE, RIGHT SIDE AND/OR BOTTOM ENCLOSURE PANELS ONLY. CABLE ENTRANCE IS NOT PERMITTED THROUGH THE FRONT, REAR OR TOP PANELS.
- 7) FOR LIFTING OTHER THAN WITH A FORK TRUCK, REMOVE TOP COVER AND USE 1" [25 MM] DIAMETER HOLES IN THE TOP CORE CLAMPS.
- 8) ENCLOSURE PAINT COLOR IS ANSI #61 GRAY.
OPTIONAL STAINLESS STEEL ENCLOSURE IS AVAILABLE. FINISH IS 80 GRIT.
- 9) 6" [152 MM] MINIMUM CLEARANCE IS REQUIRED FROM ALL WALLS.
- 10) USE THIS DIMENSION WHEN PLANNING THE MOUNTING PAD.

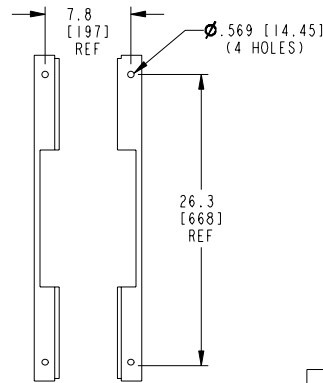
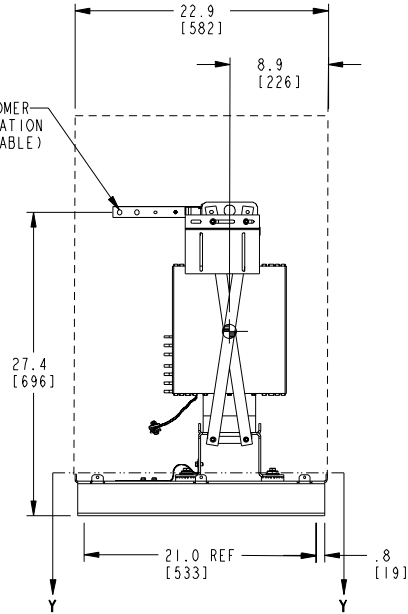
JOB NAME:	UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE INCH [MM]	 Transformers	by ABB
SPEEDI PROP:	THIRD ANGLE PROJECTION 	DRY TYPE TRANSFORMER OUTLINE DRAWING TYPE QL, 3-PHASE, DOE 2016 EFFICIENCY (ENCLOSED UNIT)	
electrification.us.abb.com			87 of 99
CAD DRAWING: 303B111GEUY14C	SHEET 1 OF 2	CATALOG # 9T10C1004	REV 1

87 of 99

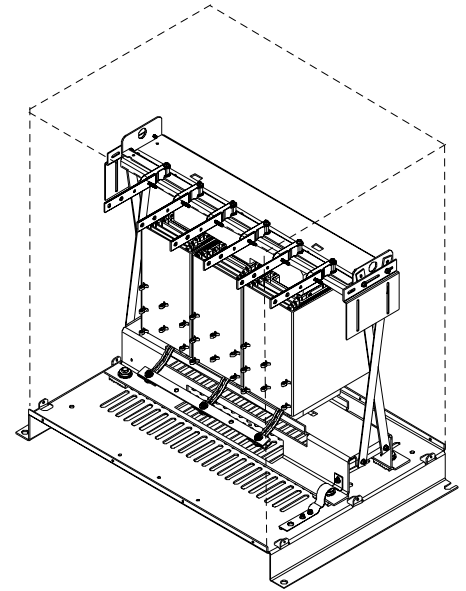
FRONT VIEW

BOTTOM VIEW OF
MOUNTING HOLE PATTERN

SIDE VIEW

BOTTOM VIEW OF
MOUNTING HOLE PATTERN
WITHOUT BASE ATTACHED

ISOMETRIC VIEW



APPROX TOTAL WEIGHT LBS [KG]
PAINTED: 492 [223]

kVA RATING: 75
K-FACTOR: K1
PRI VOLTAGE: 480
SEC VOLTAGE: 208Y/120
FREQ (Hz): 60 Hz
TEMP RISE: 150C
WINDING MATL: Copper
ES SHIELD: NO
SOUND LVL (dB): Std (50)

CUSTOMER TERMINATION

LOCATION	CONNECTION TYPE	HOLE SIZE	HOLE QTY
PRIMARY BUS BARS	STANDARD BUS BAR (LUGS ARE OPTIONAL)	.40 [10.2] DIA	2 PER BUS BAR
SECONDARY BUS BARS			

NOTES:

- 1) ALL UNITS ARE UL LISTED AND ARE DESIGNED PER NEMA ST-20 STANDARDS.
- 2) THE TEMPERATURE RISE LISTED WAS DETERMINED WHEN THE TRANSFORMER WAS MOUNTED IN A STANDARD NEMA-2 ENCLOSURE.
- 3) TRANSFORMER IS DRY TYPE, CLASS AA FOR INDOOR USE.
- 4) FOR LIFTING OTHER THAN WITH A FORK TRUCK, USE 1" [25 MM] DIAMETER HOLES IN THE TOP CORE CLAMPS.
- 5) BASE PAINT COLOR IS ANSI #61 GRAY.
- 6) 6" [152 MM] MINIMUM CLEARANCE IS REQUIRED FROM ALL WALLS.
- 7) ⌀ INDICATES APPROXIMATE CENTER OF GRAVITY.

JOB NAME:

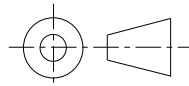
SPEEDI PROP:

electrification.us.abb.com

CAD DRAWING: 303B111GEUY14C

UNLESS OTHERWISE SPECIFIED
ALL DIMENSIONS ARE INCH [MM]

THIRD ANGLE PROJECTION



SHEET 2 OF 2



Transformers

by ABB

DRY TYPE TRANSFORMER OUTLINE DRAWING
TYPE QL, 3-PHASE, DOE 2016 EFFICIENCY
(CORE & COIL UNIT)

CATALOG # 9T10C1004

REV 1

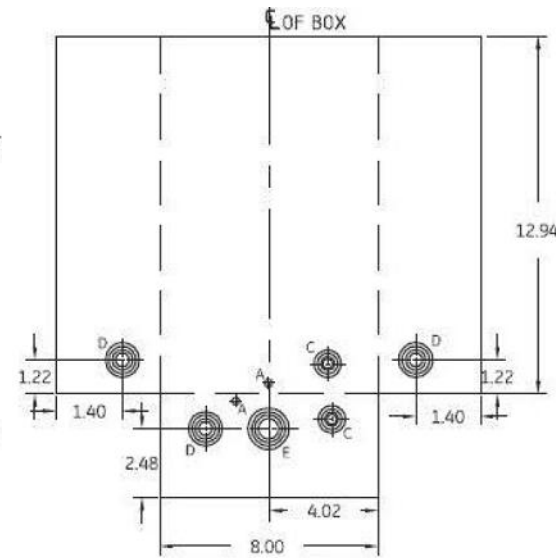
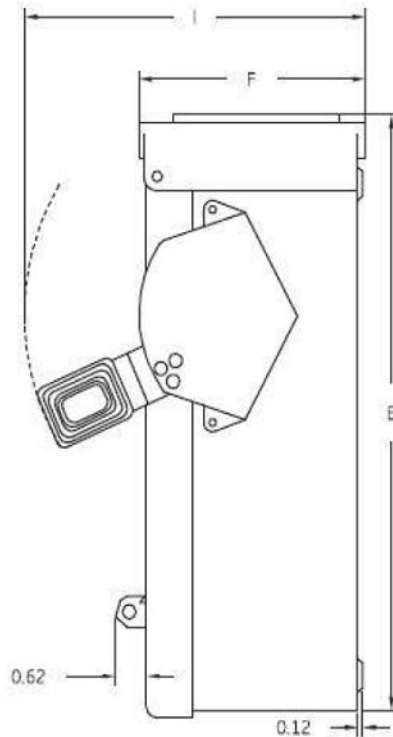
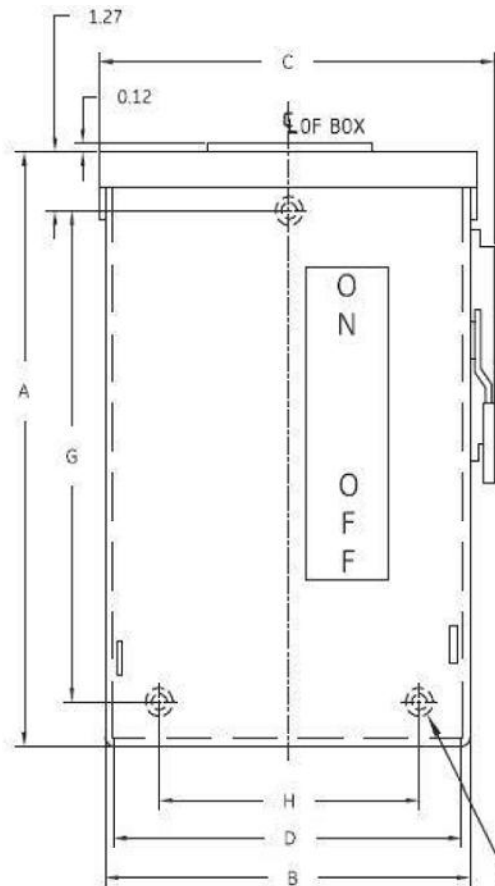
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Switches and Disconnects Submittal Section

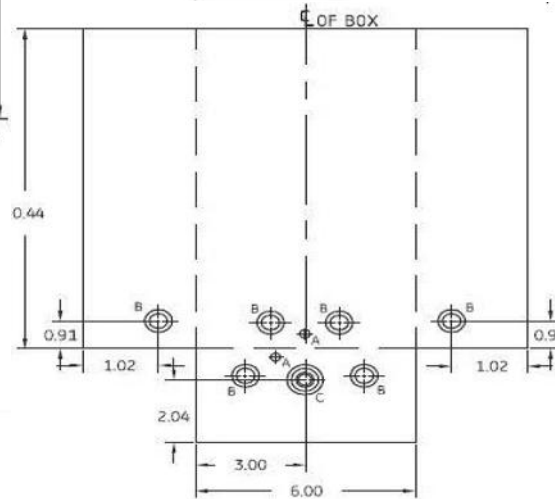
Item No.	Product Description	Mark(s)	Quantity
13	Switches and Disconnects, Heavy Duty Safety Switch, THN3362R	AHU 1-1, 1-2, 2-2	3
14	Switches and Disconnects, Heavy Duty Safety Switch, THN3361R	AHU 2-1	1
25	Switches and Disconnects, Heavy Duty Safety Switch, THN3361R	AHU 3-1	1

Bill of Material(s)

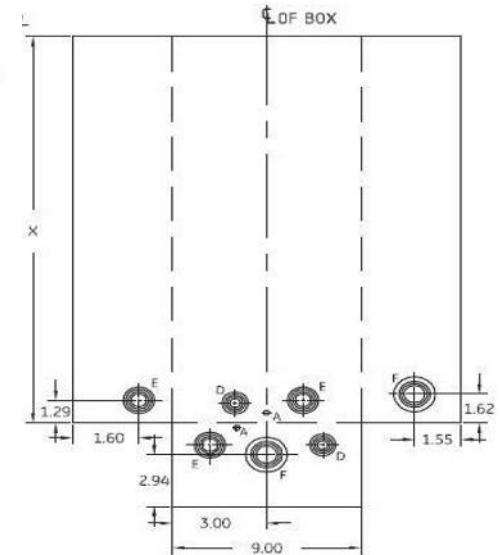
Item No.	Quantity	Description
13	3	Switches and Disconnects, Heavy Duty Safety Switch, THN3362R Marks: AHU 1-1, 1-2, 2-2 1 Suitable for use as Service Equipment Heavy Duty 60 Amps No Fuse 3 Poles 600VAC/250VDC NEMA 3R (Outdoor) For Use Size With 12-2 Copper or Size 12-2 Aluminum wire Height : 17.23 Width : 9.22 Depth : 4.83 Weight : 15 Accessories : 1 TGL1 , Equipment Ground Kit, (4) 14-8 AWG CU/12-8 AWG AL
14	1	Switches and Disconnects, Heavy Duty Safety Switch, THN3361R Marks: AHU 2-1 1 Suitable for use as Service Equipment Heavy Duty 30 Amps No Fuse 3 Poles 600VAC/250VDC NEMA 3R (Outdoor) For Use Size With 12-6 Copper or Size 12-6 Aluminum wire Height : 13.1 Width : 8.22 Depth : 4 Weight : 11 Accessories : 1 TGL1 , Equipment Ground Kit, (4) 14-8 AWG CU/12-8 AWG AL
25	1	Switches and Disconnects, Heavy Duty Safety Switch, THN3361R Marks: AHU 3-1 1 Suitable for use as Service Equipment Heavy Duty 30 Amps No Fuse 3 Poles 600VAC/250VDC NEMA 3R (Outdoor) For Use Size With 12-6 Copper or Size 12-6 Aluminum wire Height : 13.1 Width : 8.22 Depth : 4 Weight : 11 Accessories : 1 TGL1 , Equipment Ground Kit, (4) 14-8 AWG CU/12-8 AWG AL



KO VIEW 1



KO VIEW 3



KO VIEW 2

DIMENSION TABLE

GCAT NO.	KO VIEW	A	B	C	D	E	F	G	H	I	X
TH3361R TH2261RDC TH4361R	1	13.10	8.22	8.86	8.00	13.13	4.00	10.68	6.50	7.85	-
THN3361R THN2261RDC	1	13.10	8.22	8.86	8.00	13.13	4.00	10.68	6.50	7.85	-
TH3221R	3	10.50	6.20	6.64	6.00	10.63	3.14	8.31	4.50	7.66	-
TH4321R	3	10.50	6.20	6.64	6.00	10.63	3.14	8.31	4.50	7.66	-
TH4322R TH3222R THN3362R THN2262RDC	2	17.23	9.22	9.70	9.00	17.38	4.83	14.96	7.50	7.85	17.19
TH3362R TH2262RDC TH4362R	2	21.98	9.22	9.70	9.00	22.13	4.83	19.71	7.50	7.85	21.94

KNOCKOUT TABLE

SYM	SIZE	QTY		
		VIEW1	VIEW2	VIEW3
A	9/32 KO	2	2	2
B	1/2 X 3/4 KO	-	-	6
C	3/8 X 1/2 X 3/4 X 1 KO	2	-	1
D	1/2 X 3/4 X 1 X 1-1/4 KO	3	2	-
E	3/4 X 1 X 1-1/4 X 1-1/2 KO	1	3	-
F	1 X 1-1/4 X 1-1/2 X 2 KO	-	2	-

NOTE:

1. ALL DIMENSIONS ARE IN INCHES.
2. ALL DIMENSIONS HAVE ± 0.125 TOLERANCE.



**Industrial
Solutions**

by ABB

OUTLINE DRAWING-HEAVY DUTY SAFETY SWITCH
30 & 60A, NEMA - TYPE 3R ENCLOSURE

DWG NO.

10103091SH101

DATE

08/19

REV

04

THIRD ANGLE SHEET#

1 of 1





Representative Image

Catalog No. THN3362R**Description: 60A 3P HD N3R 600V NONFUSE SW****UPC No 783164011319****Home > Switches & Disconnects > Disconnect & Safety Switches > Safety Switches > Heavy Duty**

Designed for commercial and industrial applications where safety, high performance and continuity of service are essential. Listed to UL standard 98 enclosed and dead front switches. Suitable for use as service equipment when installed in accordance with the National Electrical Code. Certified to CSA standard 22.2 no. 4-04 enclosed and dead front switches. Meets or exceeds NEMA KS1 standard for enclosed switches, type HD. Fusible and non-fusible switches available (consult BuyLog for interrupt ratings). Quick-make, quick-break mechanism. 60/75 C conductor rating. Full cover interlocks. THN3362R

Descriptors

Category	Heavy Duty
GO Schedule	S1

Specifications

Voltage	600 AC
Amperage	60 A
Poles	3
Wires	3
Fusing	No Fuse
Enclosure	NEMA 3R (Outdoor)
Options	None
Wire Range (Cu/Al)	12-2
240 Vac, NEC Std, 1-ph	10.0 hp
240 Vac, NEC Std, 3-ph	20.0 hp
480 Vac, NEC Std, 1-ph	20.0 hp
480 Vac, NEC Std, 3-ph	50.0 hp
600 Vac, NEC Std, 1-ph	25.0 hp
600 Vac, NEC Std, 3-ph	60.0 hp
250 Vdc	10.0 hp
GSA Compliance	Yes

Classifications

cUL Listed	Yes
UL Listed	Yes

Dimensions

Height	17.2 in
Depth	4.8 in
Width	9.2 in
Weight	15.0 lb



Representative Image

Catalog No. THN3361R**Description: 30A 3P HD N3R 600V NONFUSE SW****UPC No 783164011296****Home > Switches & Disconnects > Disconnect & Safety Switches > Safety Switches > Heavy Duty**

Designed for commercial and industrial applications where safety, high performance and continuity of service are essential. Listed to UL standard 98 enclosed and dead front switches. Suitable for use as service equipment when installed in accordance with the National Electrical Code. Certified to CSA standard 22.2 no. 4-04 enclosed and dead front switches. Meets or exceeds NEMA KS1 standard for enclosed switches, type HD. Fusible and non-fusible switches available (consult BuyLog for interrupt ratings). Quick-make, quick-break mechanism. 60/75 C conductor rating. Full cover interlocks. THN3361R

Descriptors

Category	Heavy Duty
GO Schedule	S1

Specifications

Voltage	600 AC
Amperage	30 A
Poles	3
Wires	3
Fusing	No Fuse
Enclosure	NEMA 3R (Outdoor)
Options	None
Wire Range (Cu/Al)	12-2
240 Vac, NEC Std, 1-ph	3.0 hp
240 Vac, NEC Std, 3-ph	10.0 hp
480 Vac, NEC Std, 1-ph	7.5 hp
480 Vac, NEC Std, 3-ph	20.0 hp
600 Vac, NEC Std, 1-ph	10.0 hp
600 Vac, NEC Std, 3-ph	30.0 hp
250 Vdc	5.0 hp
GSA Compliance	Yes

Classifications

cUL Listed	Yes
UL Listed	Yes

Dimensions

Height	13.1 in
Depth	4.0 in
Width	8.2 in
Weight	11.0 lb

TERMS AND CONDITIONS

Policies and Conditions of Sale

1. This proposal is offered subject to a duly executed Master Supply Agreement (MSA) between ABB and Customer, as applicable. If no duly executed MSA exists, ABB Inc. General Terms and Conditions of Sale apply. In the event of any conflict between (i) a duly executed MSA between the Parties or (ii) ABB General Terms and Conditions of Sale and these TERMS AND CONDITIONS, (i) a duly executed MSA between the Parties or (ii) ABB General Terms and Conditions of Sale shall prevail, in that order.
2. The buyer (distributor or direct served customer, as applicable) warrants that there are no governmental contracting provisions, regulations, flow-downs, or requirements that apply to this transaction (including without limitation any Federal Acquisition Regulations), other than such terms that have been disclosed to Seller and agreed to by Seller in writing prior to Seller agreeing to this transaction. The buyer assumes responsibility for all costs associated with compliance of terms not disclosed to Seller and agreed to by Seller in writing.
3. This quotation expires in 30 calendar days unless terminated sooner by notice.
4. Orders not requiring engineered drawings for approval must be released for manufacture within 90 days of PO receipt. If engineered drawings are required, they must be returned and approved for release within 60 days of mailing. If not, and/or shipment is delayed for any reason the price will increase by 1.5% for each partial/full month that shipment release is delayed after the 90-day period. If project is delayed 6 months or more after PO receipt, project will be repriced based off current market values.
5. For MV Transformers (including Padmount, Substation, & Power transformers), refer to the factory proposal for applicable terms and conditions including, but not limited to: quote validity, price validity, escalation, warranty, cancellation, estimated delivery, and freight terms.

Payment Terms

1. Net 30 days or per Master Services Agreement with customer
2. For projects up to \$500,000 net, terms of payment are 100% upon invoicing.
3. If project value exceeds \$500,000 net, progress payments are required payable at the following milestones. These milestones will be applied at a line item level and will be tailored to the project schedule.
 - 20% upon delivery of drawings
 - 30% upon release of equipment
 - 50% upon shipment

Warranty

1. The warranty for Products shall expire one (1) year from first use or eighteen (18) months from shipment, whichever occurs first, except that software is warranted for ninety (90) days from delivery. The warranty for Services shall expire one (1) year after performance of the Service, except that software related Services are warranted for ninety (90) days.
2. Additional 12 months available for 2% adder, 24 months for 4% adder. Engage ABB representative if longer durations are needed.

Order Cancellation – Schedule of Charges

1. 10% - Order received and entered on factory, work not started, material not ordered.
2. 30% - Drawings for approval submitted.
3. 50% - Revisions to approval drawings submitted.
4. 80% - Approved drawings returned. Job released for manufacture and shipment.
5. 100% - Production started.

Delivery and Transportation

1. CPT/FCA ABB's facility, place of manufacture or warehouse (Incoterms 2020). Title passes upon shipment.
2. ABB will assume the risk of loss or damage to the destination for a 2% adder (but not less than \$500 net) applied to the total price of the equipment. "Destination" is defined as ABB's common carrier's delivery point nearest first destination or point of export within the continental U.S.
3. Unless otherwise noted in this quotation, normal transportation and handling is allowed on orders of \$1500 net or more to common carrier point nearest destination within the Contiguous US (excluding Alaska and Hawaii).
4. Shipment via Air or Open Top/Flatbed/Lift gate truck not included unless specifically listed herein.
5. Special Instruction - The Receiving Associate is required to sign, date and note specific visible or concealed damage on Bill of Lading at time of delivery. Freight Company Associate is required to witness Receiver's signature, date and damage claim annotations. ABB's Post Sales Service Department must be provided with copy of annotated BOL within five (5) days of delivery or Shipper's responsibility ends.

Other Notes

1. Standard factory test procedures will be performed. Customer inspections, customer witness tests, and any other non-standard test procedures are not included unless specifically noted herein.
2. The accompanying Bill of Material is our interpretation of what is required to meet the intent of the listed Drawings and Specifications. Please review thoroughly for accuracy and completeness and advise immediately if any revisions are required. This proposal is limited to the attached Bill of Material only.
3. The Parties are aware of the shortage of raw materials, electronic components worldwide which is likely to last for the foreseeable future, as well as, of market fluctuations in the availability and cost of other raw materials, commodities, other critical components, and transportation capacities. Notwithstanding anything to the contrary in the contract terms and conditions / purchase order, if after the date of ABB's proposal / offer or during the term of the performance of the contract / purchase order there are any changes to availability and / or market conditions for electronic components, raw materials, commodities, and transportation capabilities directly or indirectly affecting ABB's performance, ABB shall be entitled to relief in the schedule of the performance or delivery of the directly or indirectly affected scope of work under the contract / purchase order. In such circumstances, the Parties shall meet without delay and discuss in good faith to find a mutually agreeable solution, with equitable adjustment to the contract / purchase order date of delivery or completion. Customer hereby acknowledges and agrees that in said circumstances ABB may not be able to comply with the originally agreed delivery or completion schedule and that ABB shall not be liable for any liquidated or actual damages in connection thereto.

Schedule 1: ABB Inc. General Terms and Conditions of Sale

1. General

The terms and conditions contained herein, together with any additional or different terms contained in ABB's proposal, quotation and/or invoice ("Proposal"), if any, submitted to Purchaser (which Proposal, Policies, Addendum(s), if any, submitted to Purchaser shall control over any conflicting terms), constitute the entire agreement (the "Agreement") between the parties with respect to the purchase order and supersede all prior communications and agreements regarding the purchase order. Acceptance by ABB of the purchase order, or Purchaser's acceptance of ABB's Proposal, is expressly limited to and conditioned upon Purchaser's acceptance of these terms and conditions, payment for or acceptance of any performance by ABB being acceptance. These terms and conditions may not be changed or superseded by any different or additional terms and conditions proposed by Purchaser to which terms ABB hereby objects. Unless the context otherwise requires, the term "Equipment" as used herein means all of the equipment, parts, accessories sold, and all software and software documentation, if any, licensed to Purchaser by ABB ("Software") under the purchase order. Unless the context otherwise requires, the term "Services" as used herein means all labor, supervisory, technical and engineering, installation, repair, consulting or other services provided by ABB under the purchase order. As used herein, the term "Purchaser" shall also include the initial end user of the Equipment and/or services; provided, however, that Article 14(a) shall apply exclusively to the initial end user.

2. Prices

(a) Unless otherwise specified in writing, all Proposals expire thirty (30) days from the date thereof and may be modified or withdrawn by ABB before receipt of Purchaser's conforming acceptance. All quoted prices are subject to revision at any time in the event of any increase in raw material, energy costs or governmental actions such as tariffs.

(b) Unless otherwise stated herein, Services prices are based on normal business hours (8 a.m. to 5 p.m. Monday through Friday). Overtime and Saturday hours will be billed at one and one-half (1 1/2) times the hourly rate; and Sunday hours will be billed at two (2) times the hourly rate; holiday hours will be billed at three (3) times the hourly rate. If a Services rate sheet is attached hereto, the applicable Services rates shall be those set forth in the rate sheet. Rates are subject to change without notice.

(c) The price does not include any federal, state or local property, license, privilege, sales, use, excise, gross receipts, or other like taxes which may now or hereafter be applicable. Purchaser agrees to pay or reimburse any such taxes which ABB or its suppliers are required to pay or collect. If Purchaser is exempt from the payment of any tax or holds a direct payment permit, Purchaser shall, upon purchase order placement, provide ABB a copy, acceptable to the relevant governmental authorities of any such certificate or permit.

(d) The price includes customs duties and other importation or exportation fees, if any, at the rates in effect on the date of ABB's Proposal. Any change after that date in such duties, fees, or rates, shall increase the price by ABB's additional cost.

3. Payment

(a) Unless specified to the contrary in writing by ABB, payment terms are net cash, payable without offset, in United States Dollars, 30 days from date of invoice by wire transfer to the account designated by ABB in the Proposal. ABB is not required to commence or continue its performance unless and until invoiced payments have been received in a timely fashion. For each day of delay in receiving required payments, ABB shall be entitled to a matching extension of the schedule.

(b) If in the judgment of ABB the financial condition of Purchaser at any time prior to delivery does not justify the terms of payment specified, ABB may require payment in advance, payment security satisfactory to ABB and suspend its performance until said advance payment or payment security is received or may terminate the purchase order, whereupon ABB shall be entitled to receive reasonable cancellation charges. If delivery is delayed by Purchaser, payment shall be due on the date ABB is prepared to make delivery. Delays in delivery or nonconformities in any installments delivered shall not relieve Purchaser of its obligation to accept and pay for remaining installments.

(c) Purchaser shall pay, in addition to the overdue payment, a late charge equal to the lesser of 1 1/2% per month or any part thereof or the highest applicable rate allowed by law on all such overdue amounts plus ABB's attorneys' fees and court costs incurred in connection with collection. If Purchaser fails to make payment of any amounts due under any purchase order and fails to cure such default within ten (10) days after receiving written notice specifying such default, then ABB may by written notice, at its option, suspend its performance under the purchase order until such time as the full balance is paid or terminate the purchase order, as of a date specified in such notice. In the event of suspension, cancellation or termination hereunder, ABB will be entitled to recover all costs for work performed to date, costs associated with suspension, cancellation or termination of the work and all other costs recoverable at law.

4. Changes

(a) Any changes requested by Purchaser affecting the ordered scope of work must first be reviewed by ABB and any resulting adjustments to affected provisions, including price, schedule, and guarantees mutually agreed in writing prior to implementation of the change.

(b) ABB may, at its expense, make such changes in the Equipment or Services as it deems necessary, in its sole discretion, to conform the Equipment or Services to the applicable specifications. If Purchaser objects to any such changes, ABB shall be relieved of its obligation to conform to the applicable specifications to the extent that conformance may be affected by such objection.

5. Delivery

(a) All Equipment manufactured, assembled, or warehoused in the continental United States is delivered FCA ABB point of shipment, Incoterms® 2020 unless otherwise mutually agreed in writing. Equipment shipped outside the continental United States is delivered FCA Incoterms® 2020 United States port of export unless otherwise mutually agreed in writing. Purchaser shall be responsible for any and all demurrage or detention charges.

(b) If the scheduled delivery of Equipment is delayed by Purchaser or by Force Majeure, ABB may move the Equipment to storage for the account of and at the risk of Purchaser whereupon it shall be deemed to be delivered.

(c) Shipping and delivery dates are contingent upon Purchaser's timely approvals and delivery by Purchaser of any documentation required for ABB's performance hereunder.

(d) Claims for shortages or other errors in delivery must be made in writing to ABB within ten days of delivery. Equipment may not be returned except with the prior written consent of and subject to terms specified by ABB. Claims for damage after delivery shall be made directly by Purchaser with the common carrier.

6. Title & Risk of Loss

Except with respect to Software (for which title shall not pass, use being licensed) title to Equipment shall transfer to Purchaser upon delivery according to the applicable freight term. Notwithstanding any agreement with respect to delivery terms or payment of transportation charges, risk of loss or damage with respect to the sale of Equipment shall pass from ABB to Purchaser at delivery as defined in this Agreement. With respect to a purchase order that obligates ABB to complete the installation of purchased Equipment, risk of loss for the Equipment shall pass from ABB to Purchaser at the earlier of the time Purchaser puts the installation to its specified purpose or until the completion of the installation pursuant to this Agreement.

7. Inspection, Testing and Acceptance.

(a) Any inspection by Purchaser of Equipment on ABB's premises shall be scheduled in advance to be performed during normal working hours and subject to rules and regulations in place at the ABB premises.

(b) If the purchase order provides for factory acceptance testing, ABB shall notify Purchaser when ABB will conduct such testing prior to shipment. Unless Purchaser states specific objections in writing within ten (10) days after completion of factory acceptance testing, completion of the acceptance test constitutes Purchaser's factory acceptance of the Equipment and its authorization for shipment.

(c) If the purchase order provides for site acceptance testing, testing will be performed by ABB personnel to verify that the Equipment has arrived at site complete, without physical damage, and in good operating condition. Completion of site acceptance testing constitutes full and final acceptance of the Equipment. If, through no fault of ABB, acceptance testing is not completed within thirty (30) days after arrival of the Equipment at the site, the site acceptance test shall be deemed completed and the Equipment shall be deemed accepted.

8. Warranties and Remedies.

(a) Equipment and Services Warranty. ABB warrants that Equipment (excluding Software, which is warranted as specified in paragraph (d) below) shall be delivered free of defects in material and workmanship and that Services shall be free of defects in workmanship. The Warranty Remedy Period for Equipment (excluding Software and Spare Parts) shall end twelve (12) months after installation or eighteen (18) months after date of shipment, whichever first occurs. The Warranty Remedy Period for new spare parts shall end twelve (12) months after date of shipment. If the purchase order includes the sale of refurbished or repaired parts, the Warranty Remedy Period for such parts shall end ninety (90) days after date of shipment. The Warranty Remedy Period for Services shall end ninety (90) days after the date of completion of Services.

(b) Equipment and Services Remedy. If a nonconformity to the foregoing warranty is discovered in the Equipment or Services during the applicable Warranty Remedy Period, as specified above, under normal and proper use and provided the Equipment has been properly stored, installed, operated and maintained and written notice of such nonconformity is provided to ABB promptly after such discovery and within the applicable Warranty Remedy Period, ABB shall, at its option, either (i) repair or replace the nonconforming portion of the Equipment or re-perform the nonconforming Services or (ii) refund the portion of the price applicable to the nonconforming portion of Equipment or Services. If any portion of the Equipment or Services so repaired, replaced or re-performed fails to conform to the foregoing warranty, and written notice of such nonconformity is provided to ABB promptly after discovery and within the original Warranty Remedy Period applicable to such Equipment or Services or 30 days from completion of such repair, replacement or re-performance, whichever is later, ABB will repair or replace such nonconforming Equipment or re-perform the nonconforming Services. The original Warranty Remedy Period shall not otherwise be extended.

(c) Exceptions. ABB shall not be responsible for providing temporary power, removal, installation, reimbursement for labor costs or working access to the nonconforming Equipment, including disassembly and re-assembly of non-ABB supplied equipment, or for providing transportation to or from any repair facility, or for any other expenses incurred in connection with the repair or replacement, all of which shall be at Purchaser's risk and expense. ABB shall have no obligation hereunder with respect to any Equipment which (i) has been improperly repaired or altered; (ii) has been subjected to misuse, negligence or accident; (iii) has been used in a manner contrary to ABB's instructions; (iv) is comprised of materials provided by or a design specified by Purchaser; or (v) has failed as a result of ordinary wear and tear. Equipment supplied by ABB but manufactured by others is warranted only to the extent of the manufacturer's warranty, and only the remedies, if any, provided by the manufacturer will be allowed.

(d) Software Warranty and Remedies. ABB warrants that, except as specified below, the Software will, when properly installed, execute in accordance with ABB's published specification. If a nonconformity to the foregoing warranty is discovered during the period ending one (1) year after the date of shipment and written notice of such nonconformity is provided to ABB promptly after such discovery and within that period, including a description of the nonconformity and complete information about the manner of its discovery, ABB shall correct the nonconformity by, at its option, either (i) modifying or making available to the Purchaser instructions for modifying the Software; or (ii) making available at ABB's facility necessary corrected or replacement programs. ABB shall have no obligation with respect to any nonconformities resulting from (i) unauthorized modification of the Software or (ii) Purchaser-supplied software or interfacing. ABB does not warrant that the functions contained in the software will operate in combinations which may be selected for use by the Purchaser, or that the software products are free from errors in the nature of what is commonly categorized by the computer industry as "bugs".

(e) THE FOREGOING WARRANTIES ARE EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES OF QUALITY AND PERFORMANCE, WHETHER WRITTEN, ORAL OR IMPLIED, AND ALL OTHER WARRANTIES INCLUDING ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USAGE OF TRADE ARE HEREBY DISCLAIMED. THE REMEDIES STATED

HEREIN CONSTITUTE PURCHASER'S EXCLUSIVE REMEDIES AND ABB'S ENTIRE LIABILITY FOR ANY BREACH OF WARRANTY.

9. Intellectual Property Infringement.

(a) ABB shall defend at its own expense any action brought against Purchaser alleging that the Equipment or the use of the Equipment to practice any process for which such Equipment is specified by ABB (a "Process") directly infringes a patent in effect in the United States, an European Union member state or the country of the Site (provided there is a corresponding patent issued by the U.S., UK or an EU member state), or any copyright or trademark registered in the country of the Site and to pay all damages and costs finally awarded in any such action, provided that Purchaser has given ABB prompt written notice of such action, all necessary assistance in the defense thereof and the right to control all aspects of the defense thereof including the right to settle or otherwise terminate such action in behalf of Purchaser.

(b) ABB shall have no obligation hereunder and this provision shall not apply to: (i) any other equipment or processes, including Equipment or Processes which have been modified or combined with other equipment or process not supplied by ABB; (ii) any Equipment or Process supplied according to a design, other than an ABB design, required by Purchaser; (iii) any products manufactured by the Equipment or Process; (iv) any use of the Equipment or Process contrary to ABB instructions; (v) any patent issued after the date hereof; or (vi) any action settled or otherwise terminated without the prior written consent of ABB.

(c) If, in any such action, the Equipment is held to constitute an infringement, or the practice of any Process using the Equipment is finally enjoined, ABB shall, at its option and its own expense, procure for Purchaser the right to continue using said Equipment; or modify or replace it with non-infringing equipment or, with Purchaser's assistance, modify the Process so that it becomes non-infringing; or remove it and refund the portion of the price allocable to the infringing Equipment. THE FOREGOING PARAGRAPHS STATE THE EXCLUSIVE LIABILITY OF ABB AND EQUIPMENT MANUFACTURER FOR ANY INTELLECTUAL PROPERTY INFRINGEMENT.

(d) To the extent that said Equipment or any part thereof is modified by Purchaser, or combined by Purchaser with equipment or processes not furnished hereunder (except to the extent that ABB is a contributory infringer) or said Equipment or any part thereof is used by Purchaser to perform a process not furnished hereunder by ABB or to produce an article, and by reason of said modification, combination, performance or production, an action is brought against ABB, Purchaser shall defend and indemnify ABB in the same manner and to the same extent that ABB would be obligated to indemnify Purchaser under this "Intellectual Property Indemnification" provision.

10. Waiver of Consequential Damages.

In no event shall ABB, its suppliers or subcontractors be liable for special, indirect, incidental or consequential damages, whether in contract, warranty, tort, negligence, strict liability or otherwise, including, but not limited to, loss of profits or revenue, loss of data, loss of use, loss of use of any of the Equipment or any associated equipment, cost of capital, cost of substitute equipment, facilities or services, downtime costs, delays, and claims of customers of the Purchaser or other third parties for any damages.

11. Limitation of Liability.

a) ABB's aggregate liability for all claims whether in contract, warranty, tort, negligence, strict liability, or otherwise for any loss or damage arising out of, connected with, or resulting from this Agreement or the performance or breach thereof, or from the design, manufacture, sale, delivery, resale, repair, replacement, installation, technical direction of installation, inspection, operation or use of any equipment covered by or furnished under this Agreement, or from any services rendered in connection therewith, shall in no case (except as provided in the section entitled "Intellectual Property Indemnification") exceed the purchase order price.

(b) All causes of action against ABB arising out of or relating to this Agreement or the performance or breach hereof shall expire unless brought within one year of the time of accrual thereof.

(c) In no event, regardless of cause, shall ABB be liable for penalties or penalty clauses of any description or for indemnification of Purchaser or others for costs, damages, or expenses arising out of or related to the Equipment and/Services.

12. Laws and Regulations.

ABB does not assume any responsibility for compliance with federal, state or local laws and regulations, except as expressly set forth herein, and compliance with any laws and regulations relating to the operation or use of the Equipment or Software is the sole responsibility of the Purchaser. All laws and regulations referenced herein shall be those in effect as of the Proposal date. In the event of any subsequent revisions or changes thereto, ABB assumes no responsibility for compliance therewith. If Purchaser desires a modification as a result of any such change or revision, it shall be treated as a change per Article 4. Nothing contained herein shall be construed as imposing responsibility or liability upon ABB for obtaining any permits, licenses or approvals from any agency required in connection with the supply, erection or operation of the Equipment. This Agreement shall in all respects be governed by, and construed, interpreted and enforced in accordance with the laws of the State of New York, USA, excluding its conflicts of laws rules and the provisions of the United Nations Convention on Contracts for the International Sale of Goods, and both parties hereby agree that any litigation concerning, arising out of, or related to this Agreement, whether claims are based on contract, tort, equity or otherwise, shall be conducted only in the state or federal courts functioning in the State of New York, Manhattan County and waive the defense of an inconvenient forum in respect to any such litigation. If any provision hereof, partly or completely, shall be held invalid or unenforceable, such invalidity or unenforceability shall not affect any other provision or portion hereof and these terms shall be construed as if such invalid or unenforceable provision or portion thereof had never existed.

13. OSHA

ABB warrants that the Equipment will comply with the relevant standards of the Occupational Safety and Health Act of 1970 ("OSHA") and the regulations promulgated thereunder as of the date of the Proposal. Upon prompt written notice from the Purchaser of a breach of this warranty, ABB will replace the affected part or modify it so that it conforms to such standard or regulation. ABB's obligation shall be limited to such replacement or modification. In no event shall ABB be responsible for liability arising out of the violation of any OSHA standards relating to or caused by Purchaser's design, location, operation, or maintenance of the Equipment, its use in association with other equipment of Purchaser, or the alteration of the Equipment by any party other than ABB.

14. Software License.

(a) ABB owns all rights in or has the right to sublicense all of the Software, if any, to be delivered to Purchaser under this Agreement. As part of the sale made hereunder Purchaser hereby obtains a limited license to use the Software, subject to the following: (i) the Software may be used only in conjunction with equipment specified by ABB; (ii) the Software shall be kept strictly confidential; (iii) the Software shall not be copied, reverse engineered, or modified; (iv) the Purchaser's right to use the Software shall terminate immediately when the specified equipment is no longer used by the Purchaser or when otherwise terminated, e.g. for breach, hereunder; and (v) the rights to use the Software are non-exclusive and non-transferable, except with ABB's prior written consent.

(b) Nothing in this Agreement shall be deemed to convey to Purchaser any title to or ownership in the Software or the intellectual property contained therein in whole or in part, nor to designate the Software a "work made for hire" under the Copyright Act, nor to confer upon any person who is not a named party to this Agreement any right or remedy under or by reason of this Agreement. In the event of termination of this License, Purchaser shall immediately cease using the Software and, without retaining any copies, notes or excerpts thereof, return to ABB the Software and all copies thereof and shall remove all machine-readable Software from all of Purchaser's storage media.

15. Intellectual Property, Inventions and Information.

(a) "Intellectual Property Rights" means all current and future rights in copyrights, trade secrets, trademarks, mask works, patents, design rights, trade dress, and any other intellectual property rights that may exist anywhere in the world, including, in each case whether unregistered, registered or comprising an application for registration, and all rights and forms of protection of a similar nature or having equivalent or similar effect to any of the foregoing. "Technology" means all inventions, discoveries, ideas, concepts, methods, code, executables, manufacturing processes, unique compositions, mask works, designs, marks, and works of authorship fixed in the medium of expression, and materials pertaining to any of the preceding; whether or not patentable, copyrightable or subject to other forms of protection.

(b) ABB shall maintain all right, title and interest in any Technology and Intellectual Property Rights that ABB owned, created, conceived or discovered prior to entering into this Agreement, or owns, creates or discovers separately from the activities contemplated by this Agreement. Unless otherwise agreed in writing by ABB and Purchaser, ABB shall have all right, title and interest in any Technology and Intellectual Property Rights that ABB creates, conceives or discovers in furtherance of this Agreement, and ABB shall have all right, title and interest in any Technology and Intellectual Property Rights embodied in the Equipment and Services. Any design, manufacturing drawings or other information submitted to the Purchaser remains the exclusive property of ABB. Purchaser shall not, without ABB's prior written consent, copy or disclose such information to a third party, unless required by a public information request from a governmental body. Such information shall be used solely for the operation or maintenance of the Equipment and not for any other purpose, including the duplication thereof in whole or in part.

16. Force Majeure.

ABB shall neither be liable for loss, damage, detention or delay nor be deemed to be in default for failure to perform when prevented from doing so by causes beyond its reasonable control including but not limited to acts of war (declared or undeclared), delays attributable to outbreaks, epidemics and pandemics, Acts of God, fire, strike, labor difficulties, acts or omissions of any governmental authority or of Purchaser, compliance with government regulations, insurrection or riot, embargo, delays or shortages in transportation or inability to obtain necessary labor, materials, or manufacturing facilities from usual sources or from defects or delays in the performance of its suppliers or subcontractors due to any of the foregoing enumerated causes. In the event of delay due to any such cause, the date of delivery will be extended by period equal to the delay plus a reasonable time to resume production, and the price will be adjusted to compensate ABB for such delay.

17. Cancellation

Special order, custom designed, and made-to-order Equipment are non-cancelable and non-returnable. Any other purchase order may be cancelled by Purchaser only upon prior written notice and payment of termination charges as set forth in the cancellation schedule included in the Proposal or payment of, including but not limited to, the purchase price of the work performed prior to the effective date of notice of termination, the costs identified to the purchase order incurred by ABB for work not completed, and all expenses incurred by ABB attributable to the termination, plus a fixed sum of ten (10) percent of the final total price to compensate for disruption in scheduling, planned production and other indirect costs.

18. Termination

(a) No termination by Purchaser for material default shall be effective unless, within fifteen (15) days after receipt by ABB of Purchaser's written notice specifying such default, ABB shall have failed to initiate and pursue with due diligence correction of such specified default.

(b) If the event of termination for a material default, ABB shall reimburse Purchaser the difference between that portion of the Agreement price allocable to the terminated scope and the actual amounts reasonably incurred by Purchaser to complete that scope, and Purchaser shall pay to ABB the portion of the Agreement price allocable to Equipment completed and any amounts due for Services performed before the effective date of termination.

(c) ABB may terminate the Agreement (or any affected portion thereof) immediately for cause if Purchaser becomes insolvent/bankrupt, or materially breaches the Agreement, including, but not limited to, failure or delay in Purchaser making any payment when due, or fulfilling any payment conditions.

19. Export Control.

(a) Purchaser represents and warrants that the Equipment and Services provided hereunder and the "direct product" thereof are intended for civil use only and will not be used, directly or indirectly, for the production of chemical or biological weapons or of precursor chemicals for such weapons, or for any direct or indirect nuclear end use. Purchaser agrees not to disclose, use, export or re-export, directly or indirectly, any information provided by ABB or the "direct product" thereof as defined in the Export Control Regulations of the United States Department of Commerce, except in compliance with such Regulations.

(b) If applicable, ABB shall file for a U.S. export license, but only after appropriate documentation for the license application has been provided by Purchaser. Purchaser shall furnish such documentation within a reasonable time after purchase order acceptance. Any delay in obtaining such license shall suspend performance of this Agreement by ABB. If an export license is not granted or, if once granted, is thereafter revoked or modified by the appropriate authorities, this Agreement may be canceled.

by ABB without liability for damages of any kind resulting from such cancellation. At ABB's request, Purchaser shall provide to ABB a Letter of Assurance and End-User Statement in a form reasonably satisfactory to ABB.

20. Assignment

Any assignment of this Agreement or of any rights or obligations under the Agreement without prior written consent of ABB shall be void.

21. Nuclear

Equipment and Services sold hereunder are not intended for use in connection with any nuclear facility or activity, and Purchaser warrants that it shall not use or permit others to use Equipment or Services for such purposes, without the advance written consent of ABB. If, in breach of this, any such use occurs, ABB (and its parent, affiliates, suppliers and subcontractors) disclaims all liability for any nuclear or other damage, injury or contamination, including without limitation any physical damage to a nuclear facility itself, resulting from a nuclear incident and, in addition to any other rights of ABB, Purchaser shall indemnify and hold ABB (and its parent, affiliates, suppliers and subcontractors) harmless against all such liability including, but not limited to, any physical damage to the nuclear facility or surrounding properties, if any. Consent of ABB to any such use, if any, will be conditioned upon additional terms and conditions that ABB determines to be acceptable for protection against nuclear liability including but not limited to the requirement that the Purchaser and/or its end user customer shall have complete insurance protection against liability and property damage including without limitation physical damage to a nuclear facility itself or any surrounding properties, if any, resulting from a nuclear incident and shall indemnify ABB, its subcontractors, suppliers and vendors against all claims resulting from a nuclear incident including, but not limited to, any physical damage to the nuclear facility.

22. Resale

If Purchaser resells any of the Equipment or Services, the sale terms shall limit ABB's liability to the buyer to the same extent that ABB's liability to Purchaser is limited hereunder. Additionally, if the end-user intends to use the Equipment or Services in connection with any nuclear facility or activity, the Purchaser shall require the end-user comply with the financial requirements under Price-Anderson Act (PAA) and secure a written release of liability which flows from the end-user to the benefit of ABB.

23. Environmental, Health and Safety Matters.

(a) Purchaser shall be obligated to maintain safe working conditions at its facility or location (the "Site"), including the implementing of appropriate procedures regarding Hazardous Materials, confined space entry, and energization and de-energization of power systems (electrical, mechanical and hydraulic) using safe and effective lock-out/tag-out ("LOTO") procedures including physical LOTO or a mutually agreed upon alternative method.

(b) Purchaser shall immediately advise ABB in writing of all applicable Site-specific health, safety, security and environmental requirements and procedures. Without limiting Purchaser's responsibilities hereunder, ABB has the right but not the obligation to, from time to time, review, audit and inspect applicable health, safety, security and environmental documentation, procedures and conditions at the Site.

(c) If, in ABB's reasonable opinion, the health, safety, or security of personnel or the Site is, or is likely to be, imperiled by security risks, the presence of or threat of exposure to Hazardous Materials, or unsafe working conditions, ABB may, in addition to other rights or remedies available to it, remove some or all of its personnel from Site, suspend performance of all or any part of the purchase order, and/or remotely perform or supervise work. Any such occurrence shall be considered a Force Majeure event. Purchaser shall reasonably assist in ensuring the safe departure of personnel from the Site.

(d) Purchaser shall not require or permit ABB's personnel to operate Purchaser's equipment at Site.

(e) Purchaser will make its Site medical facilities and resources reasonably available to ABB personnel who need medical attention.

(f) ABB has no responsibility or liability for the pre-existing condition of Purchaser's equipment or the Site, which is the sole responsibility of Purchaser. Prior to ABB starting any work at Site, Purchaser will provide documentation that identifies the presence and condition of any Hazardous Materials existing in or about Purchaser's equipment or the Site that ABB may encounter while performing under this Agreement. The provision of such documentation shall in no way release Purchaser from its responsibility for said conditions. Purchaser shall disclose to ABB industrial hygiene and environmental monitoring data regarding conditions that may affect ABB's work or personnel at the Site. Purchaser shall keep ABB informed of changes in any such conditions.

(g) ABB shall promptly notify Purchaser if ABB becomes aware of: (i) conditions at the Site differing materially from those disclosed by Purchaser, or (ii) previously unknown physical conditions at Site differing materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the Agreement. If any such conditions cause an increase in ABB's cost of, or the time required for, performance of any part of the work under the Agreement, an equitable adjustment in price and schedule shall be made.

(h) If ABB encounters Hazardous Materials in Purchaser's equipment or at the Site that require special handling or disposal, ABB is not obligated to continue work affected by the hazardous conditions. In such an event, Purchaser shall at its sole cost and expense eliminate the hazardous conditions in accordance with applicable laws and regulations so that ABB's work under the Agreement may safely proceed, and ABB shall be entitled to an equitable adjustment of the price and schedule to compensate for any increase in ABB's cost of, or time required for, performance of any part of the work. Purchaser shall properly store, transport and dispose of all Hazardous Materials introduced, produced or generated in the course of ABB's work at the Site.

(i) Purchaser shall indemnify ABB for any and all claims, damages, losses, and expenses arising out of or relating to any Hazardous Materials which are or were (i) present in or about Purchaser's equipment or the Site prior to the commencement of ABB's work, (ii) improperly handled or disposed of by Purchaser or Purchaser's employees, agents, contractors or subcontractors, or (iii) brought, generated, produced or released on Site by parties other than ABB.

24. Confidentiality.

a) ABB and Purchaser (as to information disclosed, the "Disclosing Party") may each provide the other party (as to information received, the "Receiving Party") with Confidential Information in connection with this Agreement. "Confidential Information" means (a) information that is designated in writing as "confidential" or "proprietary" by Disclosing Party at the time of written disclosure, and (b) information that is orally designated as "confidential" or "proprietary" by Disclosing Party at the time of oral or visual disclosure and is confirmed to be "confidential" or "proprietary" in writing within fifteen (15) days after the oral or visual disclosure. In addition, prices for Products and Services shall be considered ABB's Confidential Information.

(b) Receiving Party agrees: (i) to use the Confidential Information only in connection with the Agreement and use of Products and Services, (ii) to take reasonable measures to prevent disclosure of the Confidential Information to third parties, and (iii) not to disclose the Confidential Information to a competitor of Disclosing Party. Notwithstanding these restrictions, each party shall permit access to the other's Confidential Information only to its employees who: (i) reasonably require access to Confidential Information for purposes approved by this Agreement, and (ii) have undertaken a binding obligation of confidentiality with respect to the confidential information of others entrusted to him or her, and (iii) have been apprised of the confidentiality obligations hereunder. ABB may disclose Confidential Information to its affiliates and subcontractors in connection with performance of the purchase order. A Receiving Party may only disclose Confidential Information to any other third party with the prior written permission of Disclosing Party, and in each case, only so long as the Receiving Party obtains a non-disclosure commitment from any such third party that prohibits disclosure of the Confidential Information and provided further that the Receiving Party remains responsible for any unauthorized use or disclosure of the Confidential Information. Receiving Party shall upon request return to Disclosing Party or destroy all copies of Confidential Information except to the extent that a specific provision of the Agreement entitles Receiving Party to retain an item of Confidential Information. ABB may also retain one archive copy of Purchaser's Confidential Information.

(c) The obligations under this Article 24 shall not apply to any portion of the Confidential Information that: (i) is or becomes generally available to the public other than as a result of disclosure by Receiving Party, its representatives or its affiliates; (ii) is or becomes available to Receiving Party on a non-confidential basis from a source other than Disclosing Party when the source is not, to the best of Receiving Party's knowledge, subject to a confidentiality obligation to Disclosing Party; (iii) is independently developed by Receiving Party, its representatives or affiliates, without reference to the Confidential Information; (iv) is required to be disclosed by law or valid legal process provided that the Receiving Party intending to make disclosure in response to such requirements or process shall promptly notify the Disclosing Party in advance of such disclosure and reasonably cooperate in attempts to maintain the confidentiality of the Confidential Information.

(d) As to any individual item of Confidential Information, the restrictions under this Article 24 shall expire five (5) years after the date of disclosure. This Article 24 does not supersede any separate confidentiality or nondisclosure agreement signed by the parties.

25. Non-Survival.

The following Articles shall not survive termination or cancellation of this Agreement: 5, 7, 8, 17 and 18. All other Articles shall survive the termination or cancellation of the Agreement.

26. Entire Agreement.

This Agreement constitutes the entire agreement between ABB and Purchaser. There are no agreements, understandings, restrictions, warranties, or representations between ABB and Purchaser other than those set forth herein or herein provided. As stated in Article 1 of this Agreement, ABB's Proposal, Policies, Addendum(s), if any, submitted to Purchaser, shall control over any conflicting terms. ABB specifically rejects any exceptions to this Agreement, Proposals, Policies, and/or Addendum(s) on the face of any purchase order. Purchaser shall advise ABB in writing of all conflicts, errors, omissions, or discrepancies among the Proposal, Policies, Addendum(s) and this Agreement immediately upon discovery. This Agreement shall supersede any standard, preprinted terms and conditions that are automatically attached to purchase orders issued by Purchaser.

27. US Government Contracts.

(a) This Article 27 applies only if the Agreement is for the direct or indirect sale to any agency of the U.S. government and/or is funded in whole or in part by any agency of the U.S. government.

(b) Purchaser agrees that all Equipment and Services provided by ABB meet the definition of "commercial-off-the-shelf" ("COTS") or "commercial item" as those terms are defined in Federal Acquisition Regulation ("FAR") 2.101. Purchaser agrees, consistent with FAR 12.212, that commercial computer software and commercial computer software documentation are licensed under ABB's Software License. To the extent the Buy America(n) Act, Trade Agreements Act, or other domestic preference requirements are applicable to this Agreement, the country of origin of Equipment is unknown unless otherwise specifically stated by ABB in this Agreement. Purchaser agrees any Services offered by ABB are exempt from the Service Contract Act of 1965 (FAR 52.222-41). The version of any applicable FAR clause listed in this Article 27 shall be the one in effect on the effective date of this Agreement.

(c) If Purchaser is an agency of the U.S. Government, then as permitted by FAR 12.302, Purchaser agrees that all paragraphs of FAR 52.212-4 (except those listed in 12.302(b)) are replaced with these Terms and Conditions. Purchaser further agrees the subparagraphs of FAR 52.212-5 apply only to the extent applicable for sale of COTS and/or commercial items and as appropriate for the Agreement price.

(d) If Purchaser is procuring the Equipment or Services as a contractor, or subcontractor at any tier, on behalf of any agency of the U.S. Government, then Purchaser agrees that FAR 52.212-5(e) or 52.244-6 (whichever is applicable) applies only to the extent applicable for sale of COTS and/or commercial items and as appropriate for the purchase order price.

28. Data Protection.

(a) The parties agree that the protection of Personal Data is very important. If Purchaser discloses Personal Data to ABB, ABB shall comply with all applicable data protection laws and regulations. Purchaser shall comply with all applicable data protection laws and regulations in respect of any Personal Data it receives from ABB in the course of receiving the Equipment or Services.

(b) The parties agree that neither will withhold or delay its consent to any changes to this clause which are required to be made in order to comply with applicable data protection laws and regulations and/or with guide-lines and order from any competent supervisory authority, and their application to the Equipment or Services from time to time, and agrees to implement any such changes at no additional cost to the other party.

(c) The parties acknowledge that the processing of Personal Data in accordance with this purchase order may require the conclusion of additional data processing agreements or additional data protection agreements. If and to the extent such additional data processing agreements or additional data protection agreements are not initially concluded as part of the purchase order, the parties shall, and shall ensure that their relevant affiliates or subcontractors shall, upon the other's request promptly enter into any such agreement with an affiliate, as designated by the other party and as required by mandatory law or a competent data protection or other competent authority.