SQUARE D
by Schneider Electric

Job Name:	WEBSTER UNIVERSITY ISB	Square D Quotation #:	37999262
Job Location:	WEBSTER GROVES, MO	Quotation Revision #:	
		Sales Contact:	LNP
		Sales Contact Location:	400
Purchaser:	GRAYBAR ELECT CO 5818836	Customer:	GUARANTEE ELECTRIC
Purchaser PO #:	4702257122	Customer PO #:	
User:	WEBSTER UNIVERSITY	Architect:	WILLIAM TAO & ASSOC INC
User Location:		Cons. Engineer:	
Drawing Status:	RECORD		

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SQUARE D FACTORY ORDER NUMBER: 37999262–001

Equipment Designation	Equipment Type	Drawing Type	Drawing Number	Page	Revision Level
US–1	METAL ENCLOSED SWITCHGEAR	ELECTRICAL BILL OF MATERIAL	T37999262–001–BM	1	–
		ENGRAVED NAMEPLATES	T37999262–001–EP	1	–
		ELEVATION	F37999262–001–01	1	–
		TOP VIEW/FLOOR PLAN	F37999262–001–02	1	–
		GENERAL NOTES	F37999262–001–03	1	–
		DETAIL VIEW	F37999262–001–51	1	–
		ONE LINE DIAGRAM	O37999262–001–01	1	–
		CONTROL SCHEMATIC	C37999262–001–01	1	–
		RATING NAMEPLATE	N37999262–001–01	1	–

Summary Bill of Material

Printed 10/14/16 3:38:02 PM by SESA245059

Find #	Part Number	Qty Per	Total Qty	Function	Supplier	Description	Rev
001	44036-325-50	1.00	1.00	89	SQUARE D COMPANY	SWITCH, TYPE HVL,15KV, 600A, 40KA, UPRIGHT, GLASS POLYESTER, SILVER PLATED.	
002	55GFMSJD200E	3.00	3.00	FU	SQUARE D COMPANY	FUSE, CURRENT LIMITING, 200E, 5.5KV, 65KAIC, 17.4" CLIP SPACING, SINGLE BARREL, TYPE DIN/E.	
003	44038-249-50	1.00	1.00	89/a,b	SQUARE D COMPANY	10 POLE AUXILIARY CONTACT ASSEMBLY (5a/5b.)	
004	DLA350	2.00	2.00	LUG	CONNECTOR MFG INC.	LUG, SET SCREW, ALUMINUM, TYPE DLA, (2) #6-350 MCM AL/CU, 1 HOLE (1/2") PAD.	
005	YA26A3	3.00	3.00	LUG	BURNDY	LUG, CRIMP, #1-2/0 AL/CU, (2) 1/2" HOLES, OLIVE.	
006	44036-412-02	1.00	1.00	UL LABEL	SQUARE D COMPANY	UL LABEL (U.S. & CANADA).	

Job Name:	**WEBSTER UNIVERSITY ISB**			Engineer:	IVK
Order Qty:	1	Rev:	0	Order:	**017-37999262-001-00-01**
Status:	RA	Catalog No:	Metal Enclosed Switchgear	Doc Nbr:	T37999262-001-BM

ENGRAVED NAMEPLATES DATA SHEET

Doc No. 10277
Rev Date 2/15/13

AE: IVK

PRODUCT CODE (MC, ME, MCC) ME

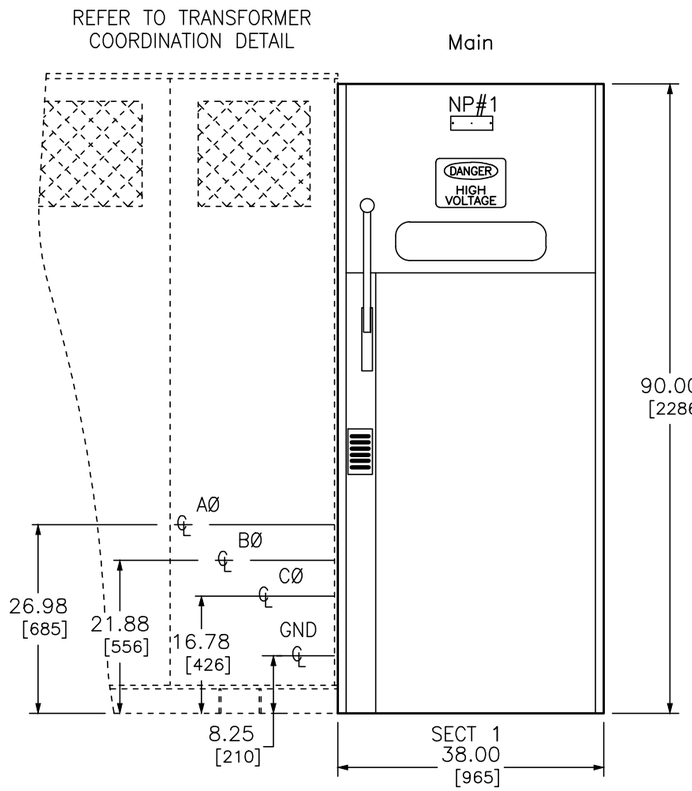
TYPE (TY)	FIELD/ LETTERS		SIZE (S)	NP HEIGHT	NP WIDTH	CHAR HEIGHT	MAX. LINES	MAX. CHAR/LINE
WB	WHITE/BLACK		A	0.75"	4.6"	3/16"	2	26
BW	BLACK/WHITE		B	0.75"	2.0"	1/8"	3	11
RW	RED/WHITE		C	9001 DEVICE		1/8"	3	14
			D	2.0"	6.0"	5/16"	4	19
			E	1.0"	2.5"	1/8"	4	16
			F	0.75"	2.0"	1/8"	3	11

CODES A-E ARE FOR DOOR MOUNTED DEVICES.
CODE F APPLIES TO INTERNALLY MOUNTED DEVICES.
SPECIAL NAMEPLATES ARE CODED SA, SB, SC, ... WITH ASSOCIATED DETAILS NOTED.

SPECIAL NAMEPLATE WITH 2.5” HEIGHT AND GREATER SHALL BE PROVIDED WITH FOUR 0.125” MOUNTING HOLES. 0.25” FROM EACH END (TOP, BOTTOM, LEFT OR RIGHT OF THE EDGE) TO THE CENTER OF THE MOUNTING HOLES.

NP #	TYPE	SIZE	QTY	TEXT CONTENT
1	WB	D	1	US-1

REV	DESCRIPTION	BY	DATE	–	----	--	--/--/--	–	----	--	--/--/--
–	----	--	--/--/--	–	----	--	--/--/--	–	----	--	--/--/--



FRONT ELEVATION

DUAL DIMENSIONS: INCHES
MILLIMETERS

JOB NAME:	WEBSTER UNIVERSITY ISB	EQUIPMENT DESIGNATION:	US-1
JOB LOCATION:	WEBSTER GROVES MO	EQUIPMENT TYPE:	METAL ENCLOSED SWITCHGEAR
DRAWN BY:	CAD	DRAWING TYPE:	ELEVATION
ENGR:	VINAY KUMAR		
DATE:	OCTOBER 14, 2016		
DRAWING STATUS:	RECORD	DWG# F37999262-001-01	PG 1 OF 1 REV –

REV	DESCRIPTION	BY	DATE	–	----	--	--/--/--	–	----	--	--/--/--	–	----	--	--/--/--
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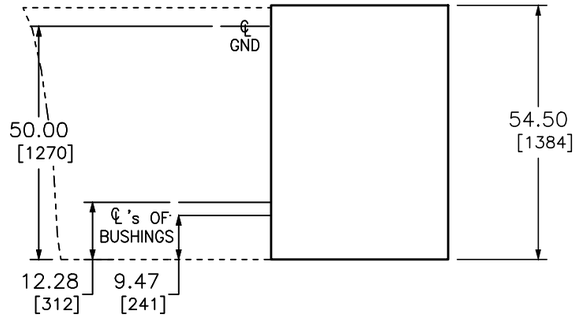
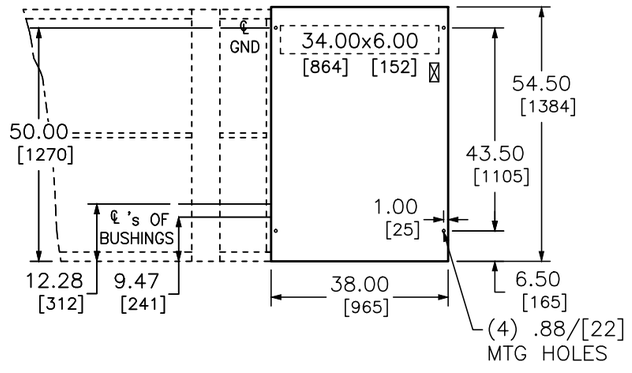


TOP VIEW



FLOOR PLAN

DUAL DIMENSIONS: INCHES
MILLIMETERS

JOB NAME:	WEBSTER UNIVERSITY ISB	EQUIPMENT DESIGNATION:	US–1
JOB LOCATION:	WEBSTER GROVES MO	EQUIPMENT TYPE:	METAL ENCLOSED SWITCHGEAR
DRAWN BY:	CAD	DRAWING TYPE:	TOP VIEW/FLOOR PLAN
ENGR:	VINAY KUMAR		
DATE:	OCTOBER 14, 2016		
DRAWING STATUS:	RECORD	DWG# F37999262–001–02	PG 1 OF 1 REV –

REV	DESCRIPTION	BY	DATE	–	----	--	--/--/--	–	----	--	--/--/--
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GENERAL NOTES:

PRODUCT DESCRIPTION AND RATINGS:

POWER SYSTEM DATA:

4160 VOLTS, 3 PHASE, 3 WIRE WYE SOLIDLY GROUNDED
5.0 kV MAXIMUM VOLTAGE RATING
60 kV BIL, 60 HERTZ FREQUENCY
CONTROL POWER NOT REQUIRED

BUS SYSTEM DATA:

600A COPPER, SILVER PLATED MAIN BUS
GLASS POLYESTER BUS SUPPORTS
SILVER PLATED COPPER GROUND BUS
40 kA Asym (25 kA Sym) MAIN BUS BRACING

ENCLOSURE DATA:

TYPE 1 INDOOR CONSTRUCTION
CATEGORY "B" ENCLOSURE
ANSI #61 FINISH
FRONT AND REAR ACCESS IS AVAILABLE
PADLOCK PROVISIONS

HANDLING:

SWITCHGEAR SECTIONS ARE FURNISHED WITH LIFTING ANGLES AND ARE SHIPPED ON SKIDS.
ROLLERS OR FORKLIFT SHALL ONLY BE USED WITH SKID IN PLACE.
LINEUP WEIGHT 1300.00 LBS/589.68 KG
Shipping Split – 1, 1300.00 LBS/589.68 KG

CODE STANDARDS:

THIS EQUIPMENT BEARS THE UL LISTING MARK FOR THE UNITED STATES.

PRODUCT INFORMATION:

#12 AWG, TYPE SIS CURRENT CIRCUIT WIRING

AIR COOLED TRANSFORMER CLARIFICATION:

PLEASE NOTE: ALL TRANSFORMER CONNECTION
QUOTATIONS ARE BASED ON "AIR COOLED" KVA
RATINGS. "FORCED AIR" RATINGS ARE NOT IN THE
PRODUCT SELECTOR. "FORCED AIR" RATINGS MAY
REQUIRE DIFFERENT FUSE/ENCLOSURE.
CONTACT MVQG OR ORDER ENGINEERING
FOR ADDITIONAL INFORMATION.

INSTRUCTION BULLETIN:

MANUAL HVL INST. MANUAL

OPTIONS/ACCESSORIES:

LIST OF MISC. ACCESSORIES:

1 SET OF CERTIFIED TEST REPORTS
2a/2b AUXILIARY CONTACTS WIRED OUT TO CUSTOMER TERMINAL BLOCK IN Section 1

LIST OF MISC. STRUCTURE OPTIONS:

SEISMIC QUALIFIED.

JOB NAME:	WEBSTER UNIVERSITY ISB	EQUIPMENT DESIGNATION:	US-1
JOB LOCATION:	WEBSTER GROVES MO	EQUIPMENT TYPE:	METAL ENCLOSED SWITCHGEAR
DRAWN BY:	CAD	DRAWING TYPE:	GENERAL NOTES
ENGR:	VINAY KUMAR		
DATE:	OCTOBER 14, 2016		
DRAWING STATUS:	RECORD	DWG# F37999262-001-03	PG 1 OF 1 REV –

REV	DESCRIPTION	BY	DATE	–	----	--	--/--/--	–	----	--	--/--/--
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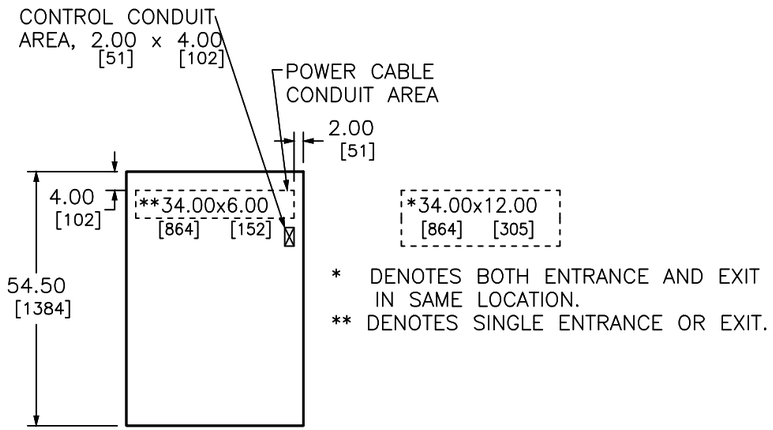
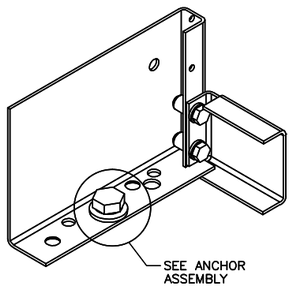
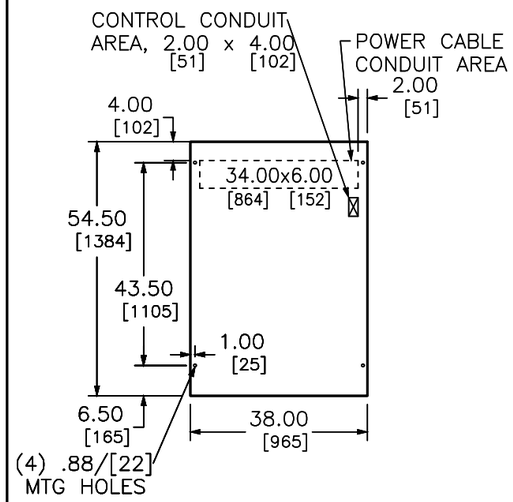
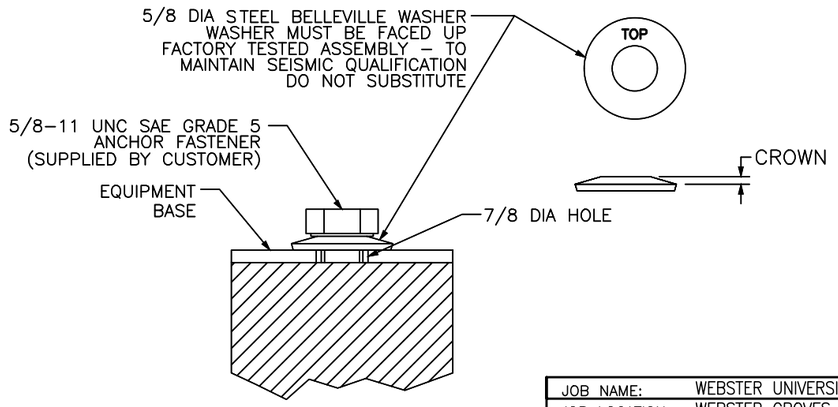


* DENOTES BOTH ENTRANCE AND EXIT IN SAME LOCATION.
** DENOTES SINGLE ENTRANCE OR EXIT.



MOUNTING DETAILS





ANCHOR ASSEMBLY

SITE PREPARATION – SWITCHGEAR INSTALLATION

GOOD SITE PREPARATION IS NECESSARY TO ELIMINATE COSTLY, TIME–CONSUMING INSTALLATION PROBLEMS AND ENSURE PROPER SWITCHGEAR OPERATION. COMPARE THE SITE PLANS AND SPECIFICATIONS WITH THE SWITCHGEAR DRAWINGS TO BE SURE THERE ARE NO DISCREPANCIES. CHECK THE SITE TO ENSURE THAT THE EQUIPMENT WILL FIT PROPERLY.

THE FLOOR SHOULD BE FLAT AND LEVEL WITHIN $\frac{1}{16}$ INCH PER FOOT, OR A MAXIMUM OF $\frac{1}{4}$ INCH WITHIN THE AREA OF THE SWITCHGEAR, TO PREVENT DISTORTION OF THE ENCLOSURES. ALLOW AISLE SPACE AT THE FRONT, BACK, AND ENDS OF THE SWITCHGEAR TO PERMIT ACCESS FOR EQUIPMENT MAINTENANCE; USUALLY A MINIMUM OF FIVE FEET IS NEEDED ON ALL SIDES.

PROVIDE AREA VENTILATION AT ALL TIMES TO MAINTAIN THE AMBIENT TEMPERATURE AROUND THE EQUIPMENT BETWEEN –30°C AND +40°C.

ADEQUATE LIGHTING AND CONVENIENCE OUTLETS SHOULD BE AVAILABLE NEAR THE SWITCHGEAR. ROUTE SEWER, WATER, AND STEAM LINES AWAY FROM THE EQUIPMENT. PROVIDE FLOOR DRAINS TO PREVENT WATER BUILDUP.

REVIEW THE ASSEMBLY DRAWINGS TO ENSURE THAT THE SWITCHGEAR SECTIONS WILL BE ASSEMBLED IN THE CORRECT ORDER. IF THE SWITCHGEAR WILL CONNECT TO AN EXISTING LINEUP, MOUNT THE CONNECTING SECTIONS FIRST.

MOUNT THE VARIOUS SHIPPING SECTIONS ON THE SAME PLANE AND LEVEL THEM TO ENSURE PROPER CONNECTION. AFTER LEVELING EACH SECTION, BOLT IT TO THE PREVIOUSLY INSTALLED SWITCHGEAR.

EACH SECTION INCLUDES THE NECESSARY MEANS FOR ANCHORING IT TO THE FLOOR. FASTEN INDOOR UNITS TO THE FLOOR USING THE HOLES LOCATED IN THE BOTTOM FLANGES OF THE ENCLOSURE. FASTEN OUTDOOR ENCLOSURES TO THE FOUNDATION USING THE HOLES LOCATED IN THE BOTTOM CROSS CHANNELS.

REMOVE THE LIFTING ANGLES FROM THE SIDE OF THE BASE AND STORE. TO BLOCK ENTRY OF WATER, EXTRANEOUS OBJECTS, OR WILDLIFE, REPLACE HARDWARE IN THE HOLES WHERE THE LIFTING ANGLES WERE REMOVED. THE BUS CONNECTORS FOR THE SHIPPING SPLITS ARE INCLUDED WITH THE SWITCHGEAR.

DUAL DIMENSIONS: INCHES
MILLIMETERS

JOB NAME:	WEBSTER UNIVERSITY ISB	EQUIPMENT DESIGNATION:	US–1
JOB LOCATION:	WEBSTER GROVES MO	EQUIPMENT TYPE:	METAL ENCLOSED SWITCHGEAR
DRAWN BY:	CAD	DRAWING TYPE:	DETAIL VIEW
ENGR:	VINAY KUMAR		
DATE:	OCTOBER 14, 2016		
DRAWING STATUS:	RECORD	DWG# F37999262–001–51	PG 1 OF 1 REV –

REV	DESCRIPTION	BY	DATE	–	----	--	--/--/--	–	----	--	--/--/--
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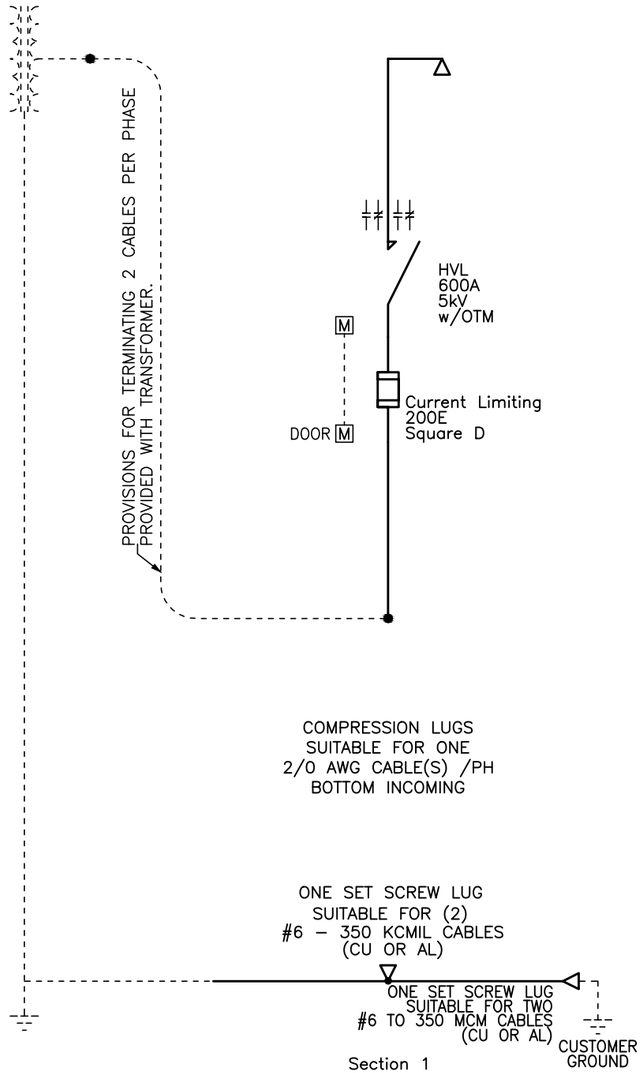
Power–Dry
TRANSFORMER
1000/1333 kVA

Main
UL/C–UL LABEL



Section 1

JOB NAME:	WEBSTER UNIVERSITY ISB	EQUIPMENT DESIGNATION:	US–1
JOB LOCATION:	WEBSTER GROVES MO	EQUIPMENT TYPE:	METAL ENCLOSED SWITCHGEAR
DRAWN BY:	CAD	DRAWING TYPE:	ONE LINE DIAGRAM
ENGR:	VINAY KUMAR		
DATE:	OCTOBER 14, 2016		
DRAWING STATUS:	RECORD	DWG# 037999262–001–01	PG 1 OF 1 REV –

REV	DESCRIPTION	BY	DATE	—	————	——	——/——/——	—	————	——	——/——/——
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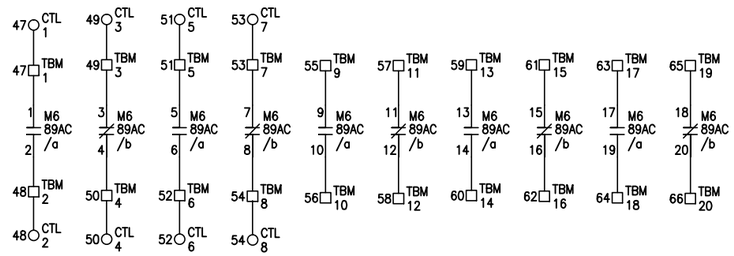

HVL SWITCH AUXILIARY CONTACTS
CONTACTS SHOWN WITH SWITCH OPEN
○ CTL– SPARE CONTACT WIRED TO CUSTOMER TERMINAL BLOCK

SECT 01

JOB NAME:	WEBSTER UNIVERSITY ISB	EQUIPMENT DESIGNATION:	US–1
JOB LOCATION:	WEBSTER GROVES MO	EQUIPMENT TYPE:	METAL ENCLOSED SWITCHGEAR
DRAWN BY:	CAD	DRAWING TYPE:	CONTROL SCHEMATIC
ENGR:	VINAY KUMAR		
DATE:	OCTOBER 14, 2016		
DRAWING STATUS:	RECORD	DWG# C37999262–001–01	PG 1 OF 1 REV —

REV	DESCRIPTION	BY	DATE	–	----	--	--/--/--
–	----	--	--/--/--	–	----	--	--/--/--

HVL

LOAD CURRENT INTERRUPTER SWITCH

FACTORY ORDER NO.		0
SWITCH PART NO.		44036-325-50
MANUFACTURE DATE		
RATED MAXIMUM VOLTAGE	kV	5.0
IMPULSE WITHSTAND (BIL)	kV	60
NORM. FREQ. WITHSTAND	kV	19
FREQUENCY	HZ	60
CONTINUOUS CURRENT	A SYM	600
LOAD INTERRUPTING CURRENT	A SYM	600
MOMENTARY CURRENT	kA ASYM	40
SHORT TIME – CURRENT	kA SYM	25
– TIME	SEC	2
FAULT CLOSING CURRENT	kA ASYM	40

FUSE/RATING		SQ D 200E
FUSE CATALOG NO.		55GFMSJD200E
INTEGRATED SWITCH & FUSE SHORT CIRCUIT CURRENT	kA SYM	65

METAL ENCLOSED SWITCHGEAR

MAIN BUS AMPACITY	A	600
MAIN BUS BRACING	kA ASYM	40

SQUARE D COMPANY
SMYRNA, TN USA
44036-437-01

Section 1

JOB NAME:	WEBSTER UNIVERSITY ISB	EQUIPMENT DESIGNATION:	US-1
JOB LOCATION:	WEBSTER GROVES MO	EQUIPMENT TYPE:	METAL ENCLOSED SWITCHGEAR
DRAWN BY:	CAD	DRAWING TYPE:	RATING NAMEPLATE
ENGR:	VINAY KUMAR		
DATE:	OCTOBER 14, 2016		
DRAWING STATUS:	RECORD	DWG# N37999262-001-01	PG 1 OF 1 REV –

JOB NAME: WEBSTER UNIVERSITY ISB
JOB LOCATION: WEBSTER GROVES, MO

PURCHASER: GRAYBAR ELECT CO 5818836
PURCHASER PO #:

USER: WEBSTER UNIVERSITY
USER LOCATION:

DRAWING STATUS: RECORD

SQUARE D QUOTATION NUMBER: 37999262
QUOTATION REVISION #:
SALES CONTACT: LNP
SALES CONTACT LOCATION: 400

CUSTOMER: GUARANTEE ELECTRIC
CUSTOMER PO #:

ARCHITECT: WILLIAM TAO & ASSOC INC
CONS. ENGINEER:

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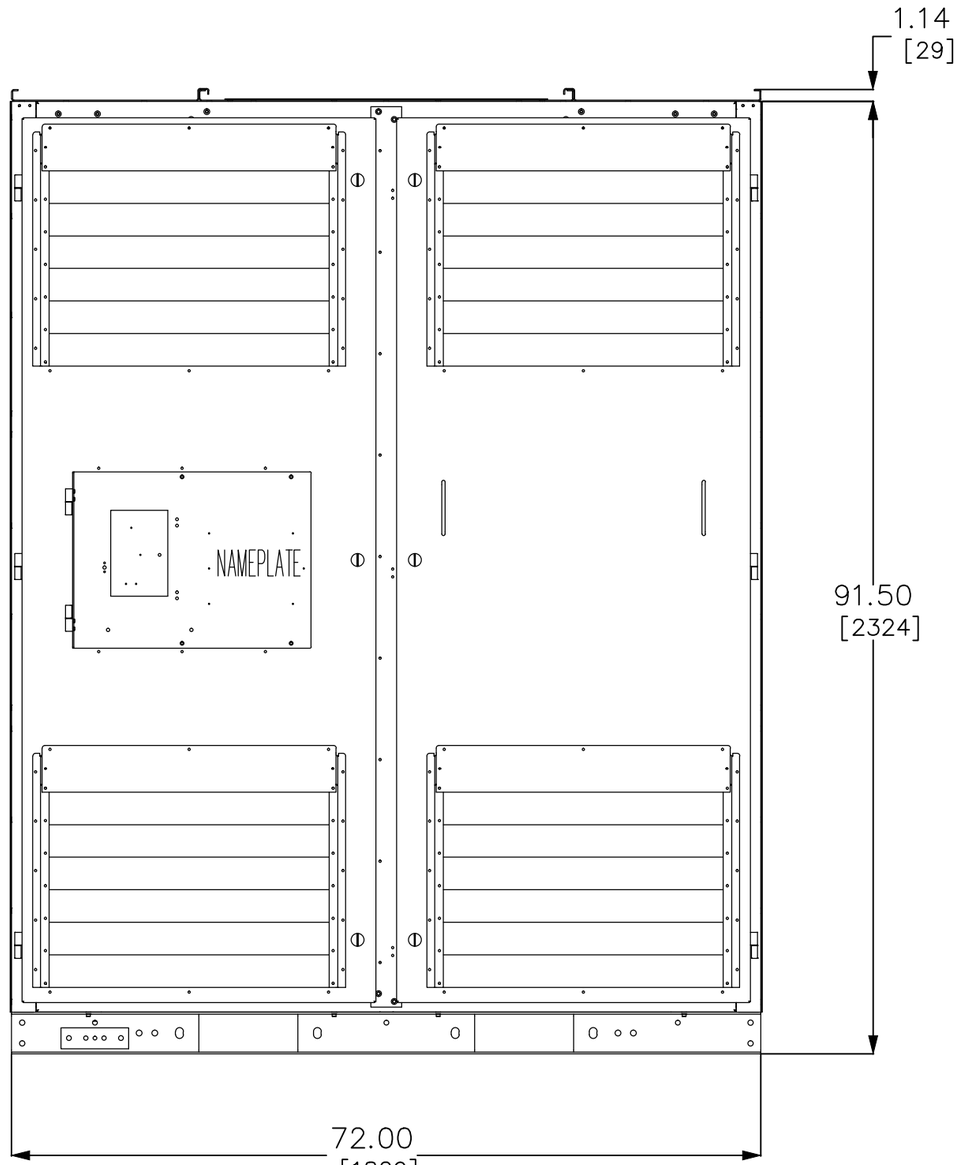
SQUARE D FACTORY ORDER NUMBER: 37999262–002

EQUIPMENT DESIGNATION:	EQUIPMENT TYPE:	DRAWING TYPE:	DRAWING NUMBER:	PAGE:	REVISION LEVEL:
US–1	UNIT SUBSTATION TRANSFORMER	ELEVATION	F37999262–002–01–1	1	A
		FLOOR PLAN AND NOTES	F37999262–002–01–2	2	A
		LEFT/RIGHT VIEW	F37999262–002–01–3	3	A
		RATING NAMEPLATE	N37999262–002–01–1	1	A
		WIRING DIAGRAM	W37999262–002–01–1	1	A
		WIRING DIAGRAM	–NA–	2	–
		WIRING DIAGRAM	–NA–	3	–
		WIRING DIAGRAM	–NA–	4	–
		WIRING DIAGRAM	–NA–	5	–
		WIRING DIAGRAM	–NA–	6	–
		WIRING DIAGRAM	–NA–	7	–
		WIRING DIAGRAM	–NA–	8	–

REV.: A

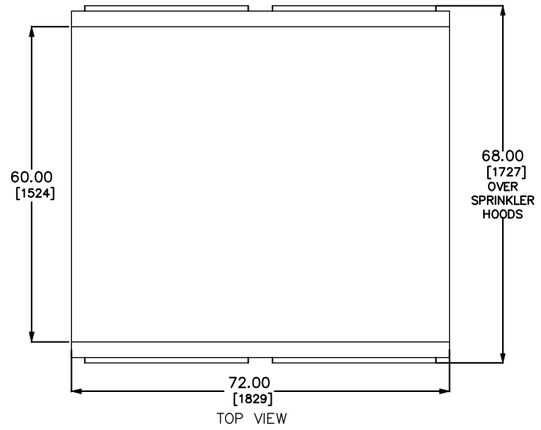
REV	DESCRIPTION	BY	DATE
A	ADD SEISMIC VIEWS, CHNGD TO NEW VIEWS, CHNGD TO RECORD	DG	10/04/16



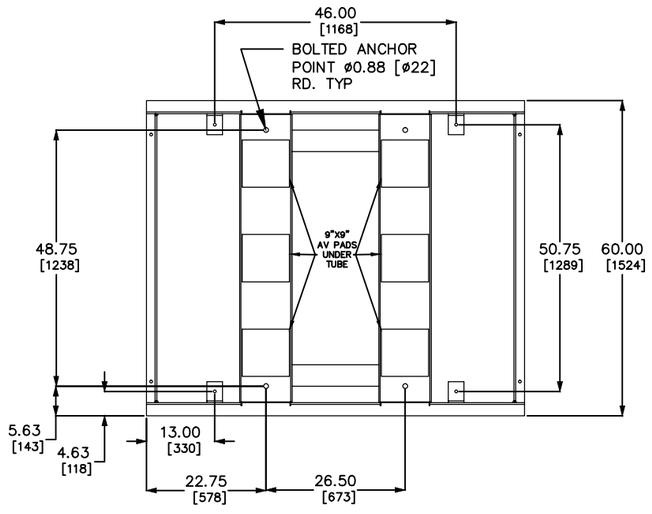
DUAL DIMENSIONS: INCHES
MILLIMETERS

JOB NAME:	WEBSTER UNIVERSITY ISB	EQUIPMENT DESIGNATION:	US-1
JOB LOCATION:	WEBSTER GROVES, MO	EQUIPMENT TYPE:	UNIT SUBSTATION TRANSFORMER
DRAWN BY:	GSV	DRAWING TYPE:	ELEVATION
ENGR:	JF		SQUARE D Schneider Electric
DATE:	06/29/16		
DRAWING STATUS:	RECORD	DWG# F37999262-002-01-1	PG 1 OF 3 REV A

REV	DESCRIPTION	BY	DATE
A	ADD SEISMIC VIEWS, CHNGD TO NEW VIEWS, CHNGD TO RECORD	DG	10/04/16



TOP VIEW



FLOOR PLAN

ENCLOSURE : NEMA 1 (INDOOR VENTILATED) WITH OUTDOOR GRILLS
FINISH TYPE : ANSI 61 PAINT
PRODUCT TYPE : VPI
KVA : 1000/1333
HV : 4160V
HV KVBIL : 30
HV CONNECTION : D
LV : 480Y/277V
LV KVBIL : 10
LV CONNECTION : Y
TAPS : 4368/4264/4160/4056/3952
IMPEDANCE : 5.75%
TEMPERATURE RISE : 115/115°C
COOLING CLASS : AA/FA
HERTZ : 60
PHASE : 3
LV WINDINGS : CU
HV WINDINGS : CU
SOUND LEVEL : 64 dB
INSULATION CLASS : 220°C
APPROXIMATE WEIGHT CORE AND COIL : 6300 / 2859 lbs/kg
APPROXIMATE WEIGHT TOTAL : 8000 / 3630 lbs/kg
MINIMUM CORE & COIL DIMENSIONS WILL BE : 60"W x 49"H x 28"D

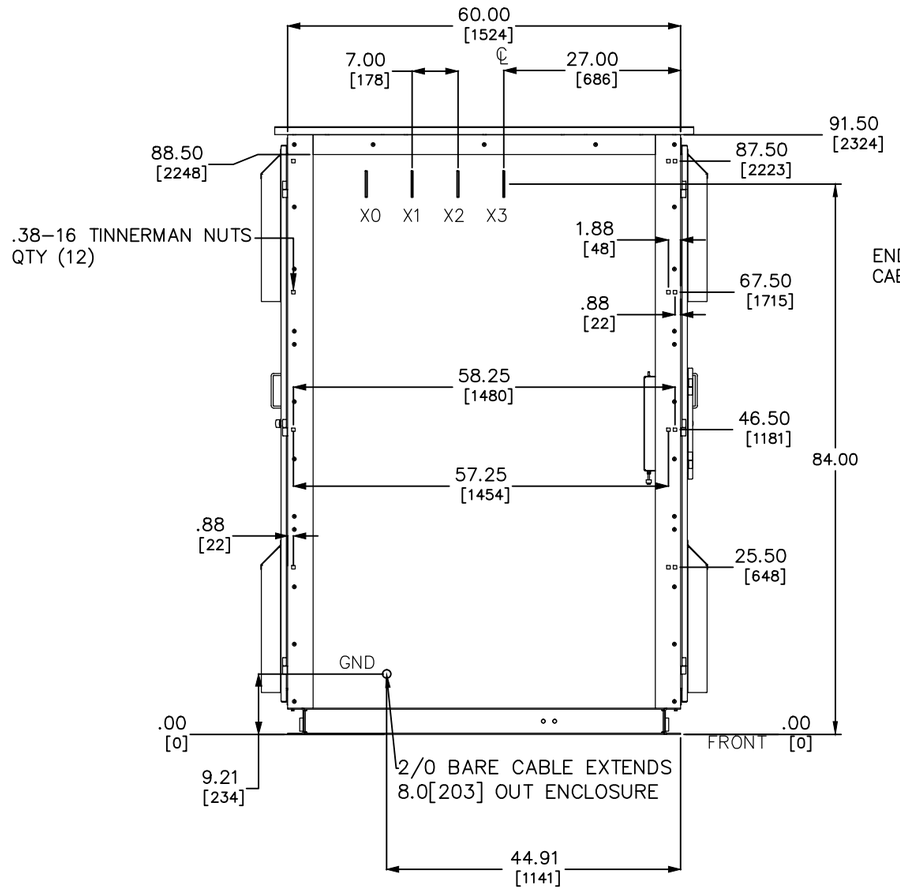
FEATURES:
SILVER FLASH PHASE BUS EXCEPT COIL BUS
GROUND CABLE
EXTERNAL GROUND PADS
ALUMINUM NAMEPLATE
STANDARD ISOLATION PADS
ANSI STANDARDS
UL LISTING
220 DEGREE C INSULATION
SQUARE D TEMPERATURE MONITOR 98A W/FANS
INTERMEDIATE CLASS LIGHTING ARRESTER OF 3 KV QTY (3)
INDOOR CABINET WITH DRIP HOOD & SPRINKLER HOODS
SEISMIC SDS 1.85
LAMACOID ID TAG T-US1

NOTES:
: MAINTAIN 24.00" VENTILATION FROM ANY VENTILATED SURFACE.
: CUSTOMER MOUNTING HOLE PATTERNS ARE ± 1/16".ALL OTHER MEASUREMENTS UNLESS OTHERWISE SPECIFIED ARE ± 1 /
: STAINLESS STEEL GROUND PADS LOCATED ON (2) CORNERS WITH (2) .50-13 TAPPED HOLES ON 1.75 CENTERS
: ENCLOSURES FRONT AND REAR PROVIDED WITH HINGED DOORS & DRIP HOOD & SPRINKLER HOODS
: UNIT SUITABLE FOR ROLLING AND SKIDDING IN ANY DIRECTION
: LIFTING & JACKING PROVIDED

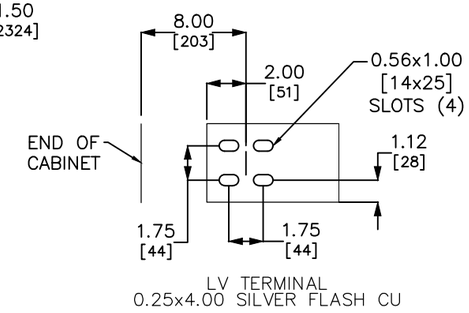
DUAL DIMENSIONS: INCHES
MILLIMETERS

JOB NAME:	WEBSTER UNIVERSITY ISB	EQUIPMENT DESIGNATION:	US-1
JOB LOCATION:	WEBSTER GROVES, MO	EQUIPMENT TYPE:	UNIT SUBSTATION TRANSFORMER
DRAWN BY:	GSV	DRAWING TYPE:	FLOOR PLAN AND NOTES
ENGR:	JF		SQUARE D Schneider Electric
DATE:	06/29/16		
DRAWING STATUS:	RECORD	DWG#	F37999262-002-01-2

REV	DESCRIPTION	BY	DATE
A	ADD SEISMIC VIEWS, CHNGD TO NEW VIEWS, CHNGD TO RECORD	DG	10/04/16

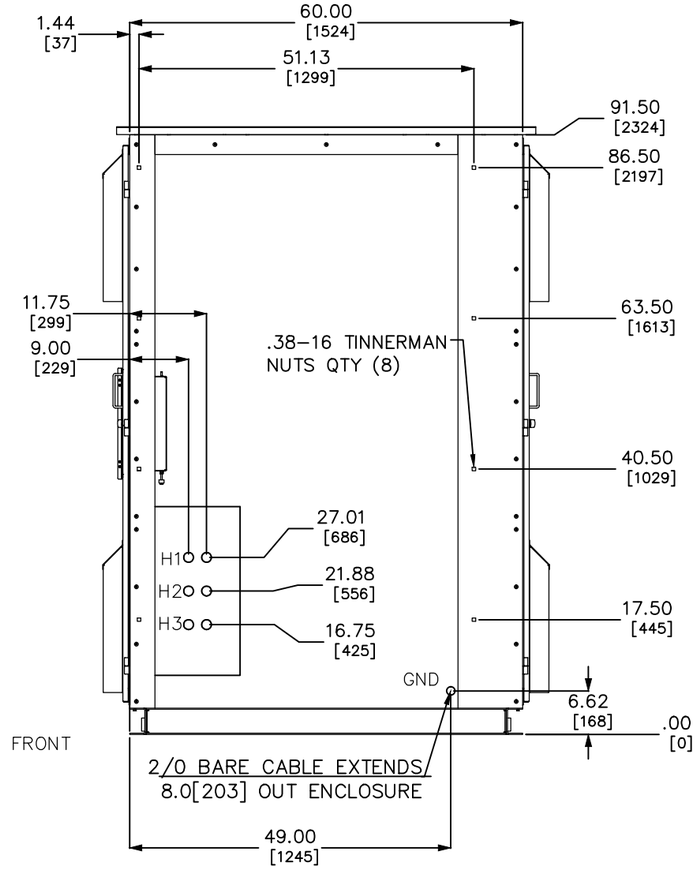


LV SIDE



LV TERMINAL
0.25x4.00 SILVER FLASH CU

HV TERMINAL
#2 15KV CABLE
HV CABLE LENGTHS
OUT OF THE ENCLOSURE
H1 – 25.00[635]
H2 – 35.00[889]
H3 – 50.00[1270]
CABLE SIZE – (1) – #2
(SHIPPED LOOSE)



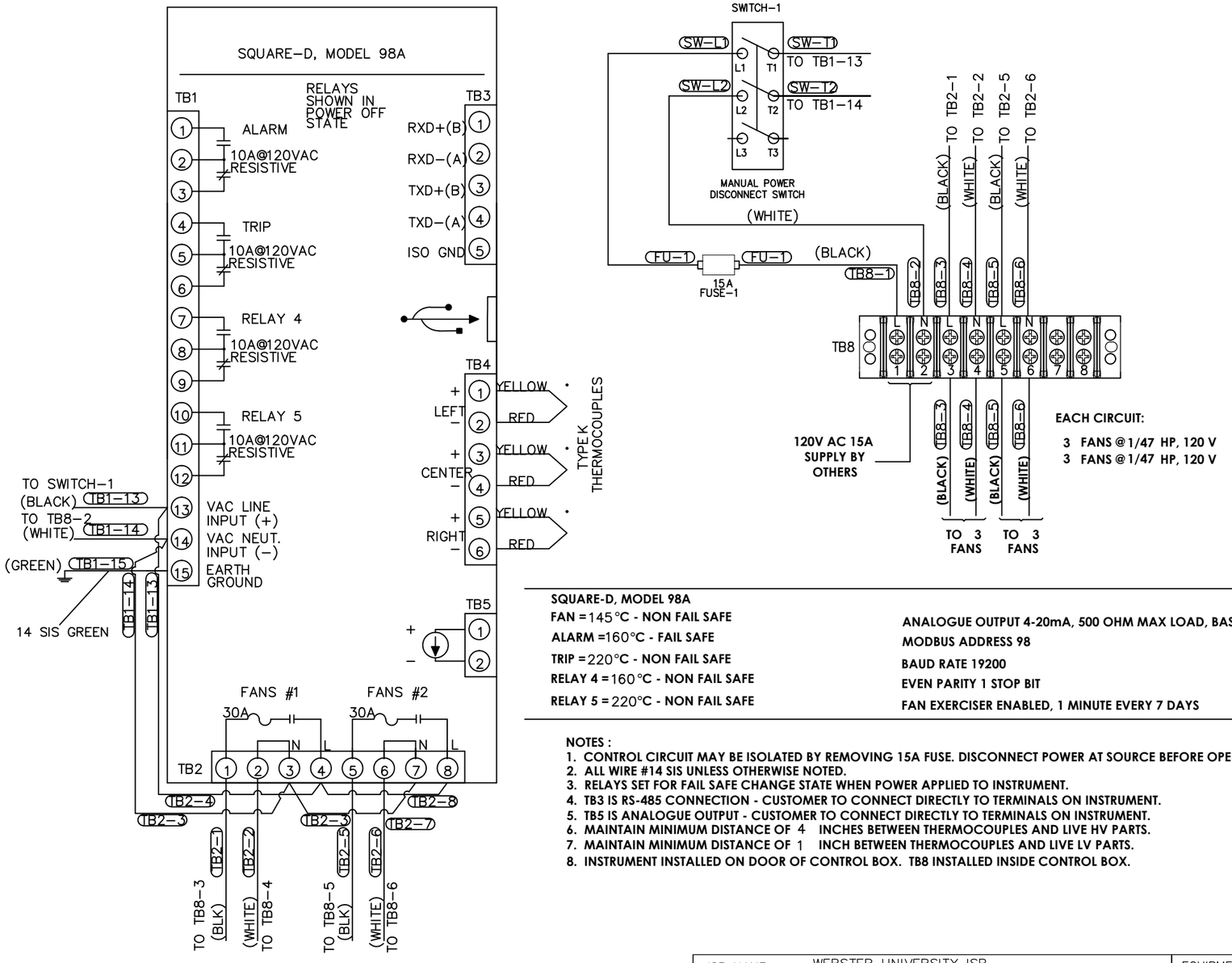
HV SIDE

DUAL DIMENSIONS: INCHES
MILLIMETERS

JOB NAME:	WEBSTER UNIVERSITY ISB	EQUIPMENT DESIGNATION:	US–1
JOB LOCATION:	WEBSTER GROVES, MO	EQUIPMENT TYPE:	UNIT SUBSTATION TRANSFORMER
DRAWN BY:	GSV	DRAWING TYPE:	LEFT/RIGHT VIEW
ENGR:	JF		
DATE:	06/29/16		
DRAWING STATUS:	RECORD	DWG#	F37999262–002–01–3

PG 3 OF 3 REV A

REV	DESCRIPTION	BY	DATE
A	ADD SEISMIC VIEWS, CHNGD TO NEW VIEWS, CHNGD TO RECORD	DG	10/04/16



SQUARE-D, MODEL 98A

FAN = 145°C - NON FAIL SAFE

ALARM = 160°C - FAIL SAFE

TRIP = 220°C - NON FAIL SAFE

RELAY 4 = 160°C - NON FAIL SAFE

RELAY 5 = 220°C - NON FAIL SAFE

ANALOGUE OUTPUT 4-20mA, 500 OHM MAX LOAD, BASED ON HOTTEST WINDING

MODBUS ADDRESS 98

BAUD RATE 19200

EVEN PARITY 1 STOP BIT

FAN EXERCISER ENABLED, 1 MINUTE EVERY 7 DAYS

NOTES :

1. CONTROL CIRCUIT MAY BE ISOLATED BY REMOVING 15A FUSE. DISCONNECT POWER AT SOURCE BEFORE OPENING FUSE HOLDER.
2. ALL WIRE #14 SIS UNLESS OTHERWISE NOTED.
3. RELAYS SET FOR FAIL SAFE CHANGE STATE WHEN POWER APPLIED TO INSTRUMENT.
4. TB3 IS RS-485 CONNECTION - CUSTOMER TO CONNECT DIRECTLY TO TERMINALS ON INSTRUMENT.
5. TB5 IS ANALOGUE OUTPUT - CUSTOMER TO CONNECT DIRECTLY TO TERMINALS ON INSTRUMENT.
6. MAINTAIN MINIMUM DISTANCE OF 4 INCHES BETWEEN THERMOCOUPLES AND LIVE HV PARTS.
7. MAINTAIN MINIMUM DISTANCE OF 1 INCH BETWEEN THERMOCOUPLES AND LIVE LV PARTS.
8. INSTRUMENT INSTALLED ON DOOR OF CONTROL BOX. TB8 INSTALLED INSIDE CONTROL BOX.

DUAL DIMENSIONS: INCHES / MILLIMETERS

JOB NAME:	WEBSTER UNIVERSITY ISB	EQUIPMENT DESIGNATION:	US-1
JOB LOCATION:	WEBSTER GROVES, MO	EQUIPMENT TYPE:	UNIT SUBSTATION TRANSFORMER
DRAWN BY:	GSV	DRAWING TYPE:	WIRING DIAGRAM
ENGR:	JF		SQUARE D Schneider Electric
DATE:	06/29/16		
DRAWING STATUS:	RECORD	DWG#	W37999262-002-01-1

PG 1 OF 1 REV A

REV	DESCRIPTION	BY	DATE
A	ADD SEISMIC VIEWS, CHNGD TO NEW VIEWS, CHNGD TO RECORD	DDG	10/04/16

NAMEPLATE MATERIAL = 0.031 ALUMINUM

SQUARE D
Schneider Electric

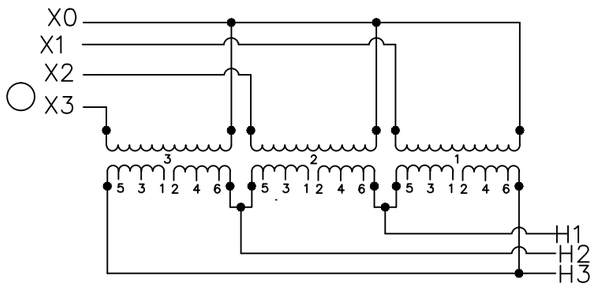
POWER DRY II™ SER.NO. 37999262-002-01

SORGEL® TRANSFORMER

DRY TYPE TRANSFORMER

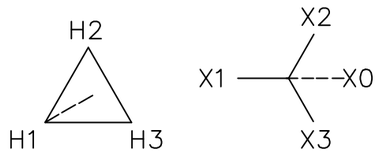
DISTRIBUTION TRANSFORMER
56Y1
E147879
LISTED

kVA	1000/1333	CLASS	AA/FA	TEMP. RISE	115/115 °C	CONDUCTOR	CU/CU
HV	4160V	TYPE	VPI	NEMA-1 ENCLOSURE		APROX. WT. (LBS/kg)	
kV BIL	30HV/10LV	PHASE	3	EXPOSURE CATEGORY	C	CORE & COIL	6300/2858
LV	480Y/277V	IMP.....	5.75 %	INST. BOOK	43500-054-20R2	TOTAL	8000/3629
LV AMP.	1203/1604	HZ	60	JOB. NO.			
AVG./MAX.AMB.	30 / 40 °C	DATE		Manufactured in MEXICO			



DE-ENERGIZE TRANSFORMER BEFORE CHANGING TAPS

VOLTS	HV AMPERES AA	HV AMPERES FA		CONN TAP EACH COIL
4368	132	176		1-2
4264	135	180		2-3
4160	139	185		3-4
4056	142	189		4-5
3952	146	194		5-6



UL TYPE K
TEMPERATURE CLASS: 220

nsdpl826

CUSTOMER NOTE: NAMEPLATE DRAWING IS FOR YOUR INFORMATION AND REVIEW. THE IMPEDANCE IS LEFT BLANK SINCE THE DRAWING IS SUBMITTED PRIOR TO MANUFACTURING. THE ACTUAL TESTED VALUE IS ENGRAVED ON THE METAL NAMEPLATE AT THE TIME OF SHIPMENT. THIS DRAWING IS NOT SUBSEQUENTLY REVISED TO ADD THE TESTED VALUE.

DUAL DIMENSIONS: INCHES / MILLIMETERS

JOB NAME:	WEBSTER UNIVERSITY ISB	EQUIPMENT DESIGNATION:	US-1
JOB LOCATION:	WEBSTER GROVES, MO	EQUIPMENT TYPE:	UNIT SUBSTATION TRANSFORMER
DRAWN BY:	GSV	DRAWING TYPE:	RATING NAMEPLATE
ENGR:	JF		SQUARE D Schneider Electric
DATE:	06/29/16	DWG#	N37999262-002-01-1
DRAWING STATUS:	RECORD	PG	1 OF 1
		REV	A

SQUARE D
by Schneider Electric

Job Name:	WEBSTER UNIVERSITY ISB	Square D Quotation #:	37999262
Job Location:	WEBSTER GROVES, MO	Quotation Revision #:	
		Sales Contact:	LNP
		Sales Contact Location:	400
Purchaser:	GRAYBAR ELECT CO 5818836	Customer:	GUARANTEE ELECTRIC
Purchaser PO #:		Customer PO #:	
User:	WEBSTER UNIVERSITY	Architect:	WILLIAM TAO & ASSOC INC
User Location:		Cons. Engineer:	
Drawing Status:	RECORDL		

TABLE OF CONTENTS

SQUARE D FACTORY ORDER NUMBER: 37999262–003

Equipment Designation	Equipment Type	Drawing Type	Drawing Number	Page	Revision Level
US–1	QED Switchboard	GENERAL NOTES	F37999262–003–01	1	–
		SIDE, TOP VIEW & FLOOR PLAN	F37999262–003–01	2	–
		CENTER OF GRAVITY	F37999262–003–01	3	–
		ONE LINE	O37999262–003–01	1	–
		SCHEDULE	O37999262–003–01	2	–
		ELEMENTARY DIAGRAM	E37999262–003–01	1	–
			E37999262–003–01	2	A
			E37999262–003–02	1	–
			E37999262–003–03	1	–
			E37999262–003–07	1	–
			E37999262–003–08	1	–
		WIRING DIAGRAM	W37999262–003–02	1	–
			W37999262–003–03	1	A

REV	DESCRIPTION	BY	DATE	–	----	--	--/--/--	–	----	--	--/--/--
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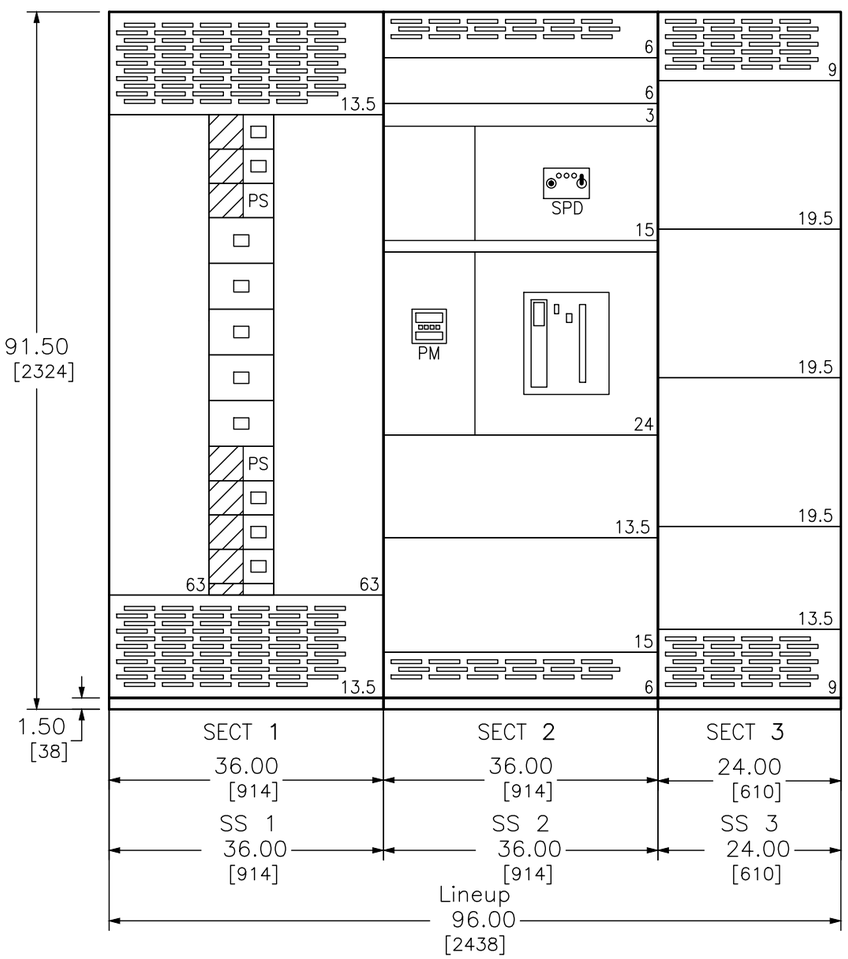

SWITCHBOARD GENERAL NOTES

PRODUCT DESCRIPTION & RATINGS

Power System Data

480Y/277V 3Ph 4W 60Hz / 3 Phase Wye
Solidly Grounded
System Short Circuit Current Rating: 35kA RMS
Incoming Section 3 Close Coupled to Transformer Through the Side/Right of Lineup

Bus System Data

1600A Silver Plated Copper Main Bus
(2) .25x2.00 IN/6x51 mm Cu Bus Bar Per Phase/Neutral
(1) .25x.875 IN/6x22 mm Cu Ground Bus
Insulated/Taped bus

Enclosure Data

Type 1 Free Standing
Exterior Paint Color: ANSI 61
Front & Rear Accessibility Required
Handling: Rollers & Lifting Assemblies
Nameplate Mounting Type: Adhesive (Field Installed)
Equipment Nameplate: White Surface/Black Letters
Device Nameplate: White Surface / Black Letters

Estimated Shipping Weight

Shipping Split 1 1090.00 lbs / 494.42 kgs
Shipping Split 2 1105.00 lbs / 501.23 kgs
Shipping Split 3 630.00 lbs / 285.77 kgs
Complete Lineup 2825.00 lbs / 1281.42 kgs

Code Standards

U.L. Deadfront and suitable for use as Service Entrance
when not more than six (6) disconnecting means are provided.

Rating Nameplates

ST1– Deadfront– Section Bus 1600A
ST2– Service Entrance – Section Bus 1600A
ST3– Deadfront– Section Bus 300A

PRODUCT INFORMATION

Wiring

All wiring to be SIS Wire type

Instruction Bulletins

Reference 80043–055 For Handling, Installation,
Anchoring, Inspection And Maintenance Information

Product Accessories/Options

Certified Test Report
Seismic Qualified
24V Trip Unit Display Power
Masterpact NW 3–Pole Breaker Lifting Bar Assembly
Test Kit (Handheld)

DUAL DIMENSIONS: INCHES
MILLIMETERS

JOB NAME:	WEBSTER UNIVERSITY ISB	EQUIPMENT DESIGNATION:	US–1
JOB LOCATION:	WEBSTER GROVES MO	EQUIPMENT TYPE:	QED SWITCHBOARD
DRAWN BY:	ROW	DRAWING TYPE:	GENERAL NOTES
ENGR:	R.WOLFE		
DATE:	OCTOBER 21, 2016		
DRAWING STATUS:	RECORD	DWG# F37999262–003–01	PG 1 OF 3 REV –

REV	DESCRIPTION	BY	DATE	–	----	--	--/--/--	–	----	--	--/--/--
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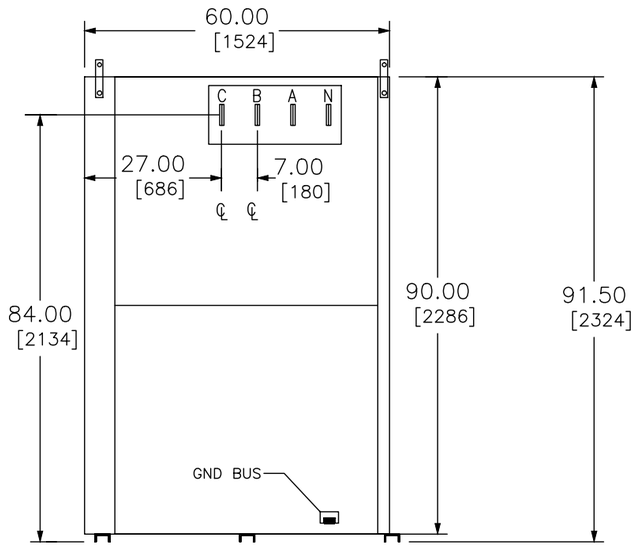
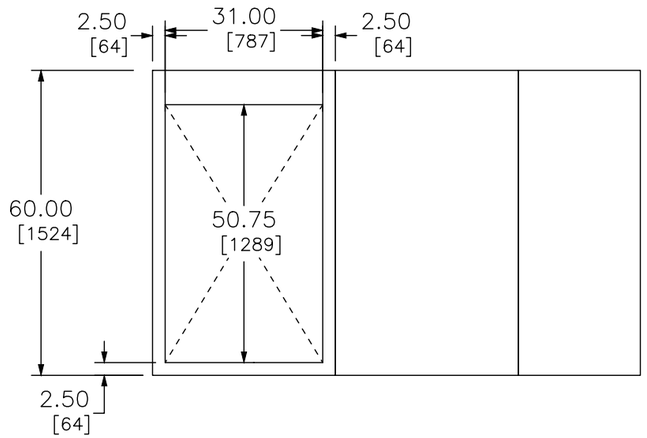
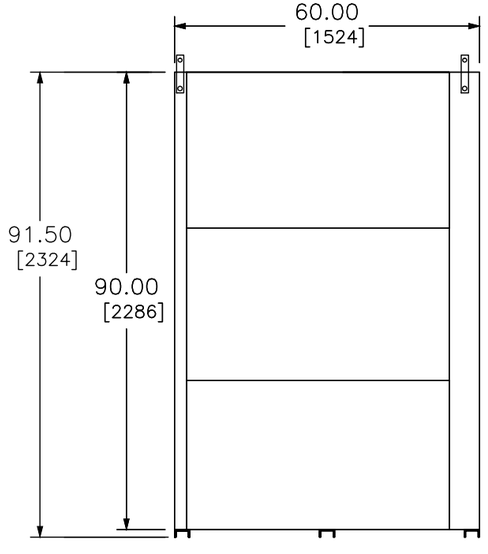


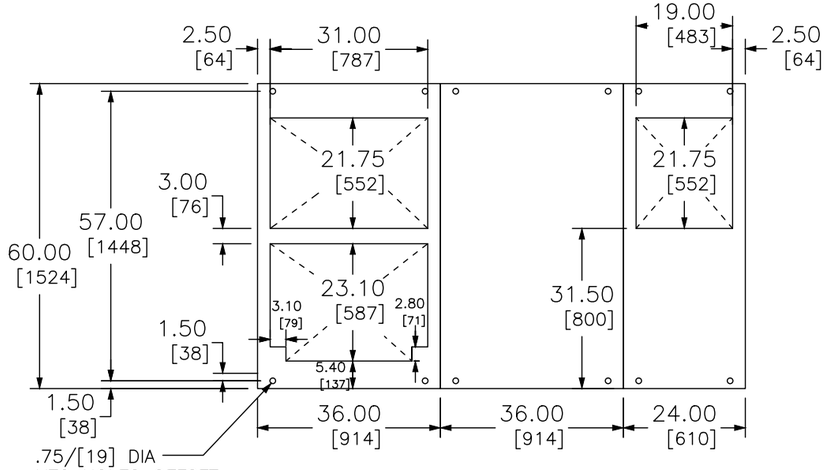
RIGHT SIDE VIEW



TOP VIEW – FRONT



LEFT SIDE VIEW



FLOOR PLAN – FRONT

DUAL DIMENSIONS: INCHES
MILLIMETERS

JOB NAME:	WEBSTER UNIVERSITY ISB	EQUIPMENT DESIGNATION:	US-1
JOB LOCATION:	WEBSTER GROVES MO	EQUIPMENT TYPE:	QED SWITCHBOARD
DRAWN BY:	ROW	DRAWING TYPE:	SIDE, TOP VIEW & FLOOR PLAN
ENGR:	R.WOLFE		
DATE:	OCTOBER 24, 2016		
DRAWING STATUS:	RECORD	DWG# F37999262-003-01	PG 2 OF 3 REV –

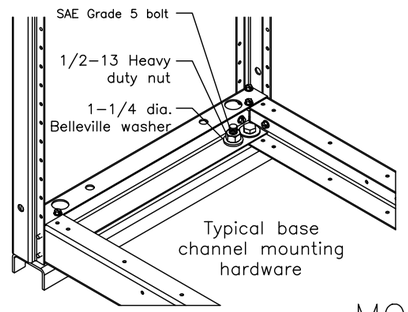
REV	DESCRIPTION	BY	DATE	–	----	--	--/--/--	–	----	--	--/--/--
–	----	--	--/--/--	–	----	--	--/--/--	–	----	--	--/--/--

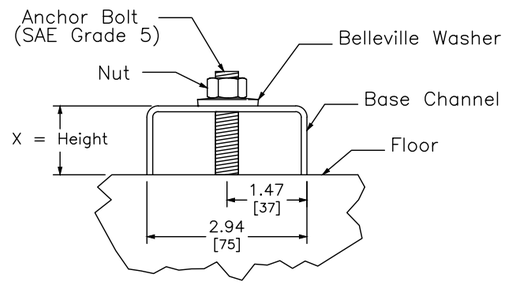
REQUIREMENTS FOR SEISMIC RATING

ANCHORING CONDITIONS:

To Maintain Seismic Qualifications, Equipment Must Be Installed Per Manual (See General Notes) And Per Any Seismic Anchoring Details Provided By Others. Do Not Install Equipment Before Approved Seismic Anchoring Details Have Been Obtained And Site Prepararations Have Been Made In Accordance With The Approved Seismic Anchoring Details. All Post–Installed Anchors Shall Be Approved For Seismic Loads.

Consideration Must Be Made For Conduit Entry Into Each Section When Developing Mounting Pad Reinforcement Locations. See Conduit Entry Details (Floor Plan) For Dimensional Information.





MOUNTING DETAILS

Each Section Must Be Anchored At All Locations (Refer To Floor Plan And Mounting Detail Above). Anchor Bolt Mounting Points Are .75/[19] Diameter Holes Located 1.50/[38] Or 3.00/[76] Above The Base of the Section. Use Dimensions From The Floor Plan To Determine Mounting Locations.

The Belleville Washer (Shown In Detail Above) Used For Anchoring Connections Is A Tested Component And Is Required To Maintain Position Retention Of The Equipment. The Slip Critical Connection Performance Of The Bolted Connection Was Established To The Shake Table Tested Seismic Capacity Of The Equipment As Shown On The Equipment Seismic Certificate Supplied At The Time Of Order.

CENTER OF GRAVITY CALCULATIONS:

Elevation Center Of Gravity: 55 in. (1387.00mm) Up From Floor
Vertical Center Of Gravity: Use Centerline Of Section From Left To Right
Depth Center Of Gravity: Use CenterLine Of The Section From Front To Rear

SECTION WEIGHT:

The Weights Given Below Are The Maximum For Each Section And Should Be Used For Calculating Seismic Anchoring Requirements

Section 1	1090.00 lbs	/ 494.42	kgs
Section 2	1105.00 lbs	/ 501.23	kgs
Section 3	630.00 lbs	/ 285.77	kgs

DUAL DIMENSIONS: INCHES
MILLIMETERS

JOB NAME:	WEBSTER UNIVERSITY ISB	EQUIPMENT DESIGNATION:	US–1
JOB LOCATION:	WEBSTER GROVES MO	EQUIPMENT TYPE:	QED SWITCHBOARD
DRAWN BY:	ROW	DRAWING TYPE:	CENTER OF GRAVITY
ENGR:	R.WOLFE		
DATE:	SEPTEMBER 30, 2016		
DRAWING STATUS:	RECORD	DWG# F37999262–003–01	PG 3 OF 3 REV –

REV	DESCRIPTION	BY	DATE	–	----	--	--/--/--	–	----	--	--/--/--
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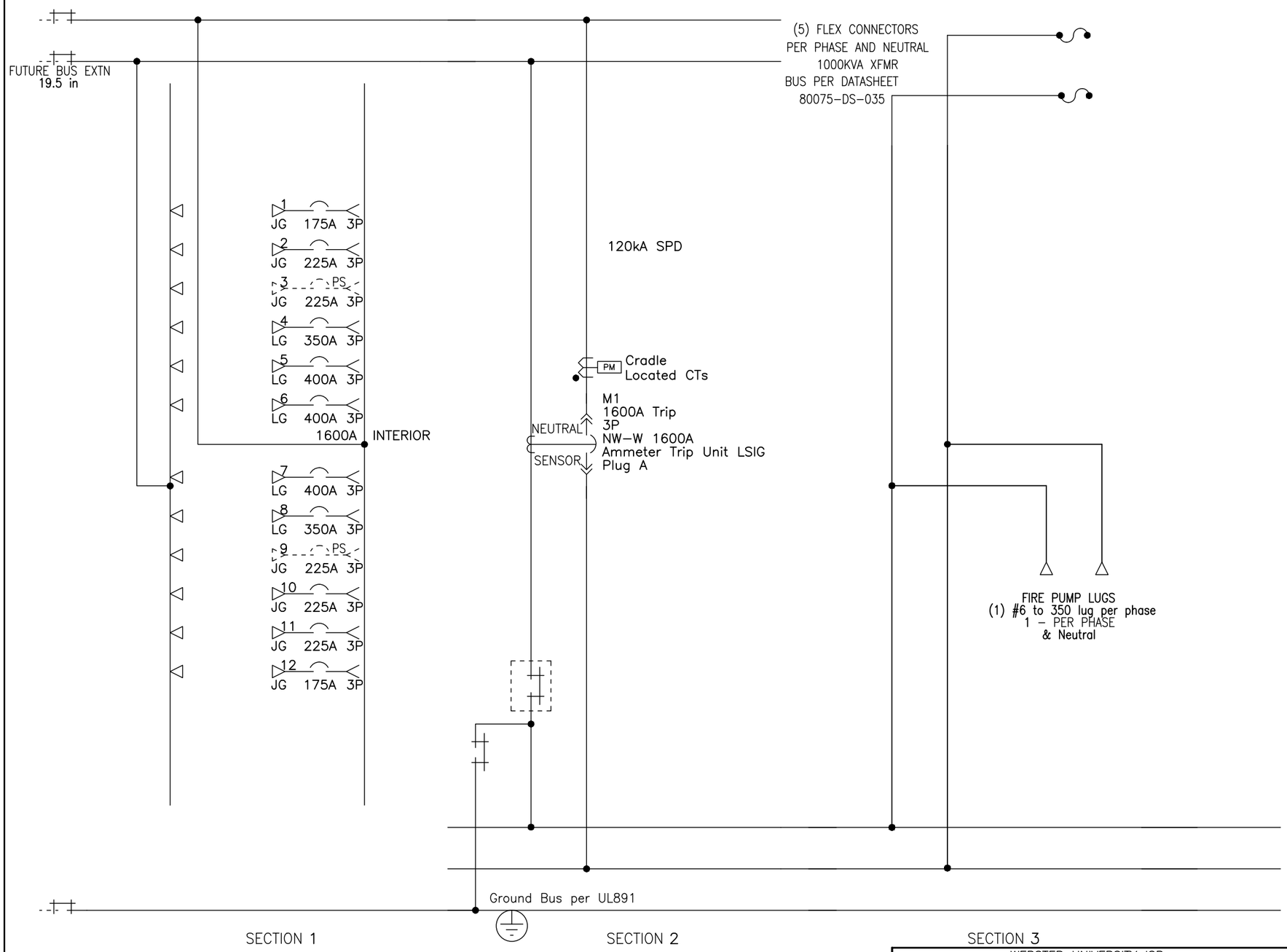

JOB NAME:	WEBSTER UNIVERSITY ISB	EQUIPMENT DESIGNATION:	US-1
JOB LOCATION:	WEBSTER GROVES MO	EQUIPMENT TYPE:	QED SWITCHBOARD
DRAWN BY:	ROW	DRAWING TYPE:	ONE LINE
ENGR:	R.WOLFE		
DATE:	SEPTEMBER 30, 2016		
DRAWING STATUS:	RECORD	DWG# 037999262-003-01	PG 1 OF 2 REV –

REV	DESCRIPTION	BY	DATE
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–	----	--	--/--/--
–	----	--	--/--/--

POWER STYLE QED–2 SWITCHBOARD

SECT NO	CKT NO	GMD HEIGHT	DEVICE/FRAME RATING	TRIP AMP	FUSE/ TRIP	#P	DESIGNATION	N/P	LUG/WIRE INFORMATION				ACCESSORIES / NOTES
									QTY	PHASE WIRE RANGE	QTY	NEUT WIRE RANGE	
–	–	–	Equipment Nameplate	–	–	–	US–1	Yes	–	–	–	–	– –
1	1	4.5 in	JG 250A	175A	S–LI	3P	1NH1–4NH1	Yes	1	3/0 – 350 kcmil	1	3/0 – 350kcmil	
1	2	4.5 in	JG 250A	225A	S–LI	3P	SPARE	Yes	1	3/0 – 350 kcmil	1	3/0 – 350kcmil	
1	3	4.5 in	JG 250A (PS)	(225A)	(LI)	3P	Blank Nameplate	Yes	1	3/0 – 350 kcmil	1	3/0 – 350kcmil	
1	4	6 in	LG 400A	350A	S–LI	3P	SB1	Yes	1	600 kcmil (Cu Only)	1	600 kcmil (Cu Only)	LK5
1	5	6 in	LG 400A	400A	S–LI	3P	ATSSB	Yes	2	3/0 – 250 kcmil	2	3/0 – 250 kcmil	
1	6	6 in	LG 400A	400A	S–LI	3P	SPARE	Yes	2	3/0 – 250 kcmil	2	3/0 – 250 kcmil	
1	7	6 in	LG 400A	400A	S–LI	3P	BNH1	Yes	2	3/0 – 250 kcmil	2	3/0 – 250 kcmil	
1	8	6 in	LG 400A	350A	S–LI	3P	SB2	Yes	1	600 kcmil (Cu Only)	1	600 kcmil (Cu Only)	LK5
1	9	4.5 in	JG 250A (PS)	(225A)	(LI)	3P	Blank Nameplate	Yes	1	3/0 – 350 kcmil	1	3/0 – 350kcmil	
1	10	4.5 in	JG 250A	225A	S–LI	3P	1NH2	Yes	1	3/0 – 350 kcmil	1	3/0 – 350kcmil	
1	11	4.5 in	JG 250A	225A	S–LI	3P	ATSLS	Yes	1	3/0 – 350 kcmil	1	3/0 – 350kcmil	
1	12	4.5 in	JG 250A	175A	S–LI	3P	SPARE	Yes	1	3/0 – 350 kcmil	1	3/0 – 350kcmil	
2	–	–	120kA SPD	–	–	–	–	–	–	–	–	–	SPD
2	M1	–	NW 1600A Plug A	1600A	A–LSIG	3P	MAIN	Yes	–	–	–	–	CP,GF,SDE1,OF4,MX1,CCKK PM8K,TU
3	–	–	Incoming Connection	–	–	–	–	–	–	XFMR	–	XFMR	CPF
3	–	–	Fire Pump Lugs	–	–	–	–	–	1	#6 – 350 kcmil	1	#6 – 350 kcmil	

LEGEND	
CCKK	Cradle Cell Key Kit
CP	Control Power
CPF	Control Power – Xfmr Fan
GF	Ground Fault
LK5	AL400L61K3 Lug Kit
MX1	Shunt Trip
OF4	4 Form C Breaker Aux Contacts
PM8K	Power Meter PM8XXX
SDE1	Over Current Trip Switch
SPD	Surge Protection Device
TU	24V Trip Unit Display Power

NAMEPLATE INFORMATION:	JOB NAME: WEBSTER UNIVERSITY ISB	EQUIPMENT DESIGNATION: US–1
MOUNTING TYPE: Adhesive (Field Installed)	JOB LOCATION: WEBSTER GROVES MO	EQUIPMENT TYPE: QED SWITCHBOARD
EQUIPMENT: White Surface/Black Letters	DRAWN BY: ROW	DRAWING TYPE: SCHEDULE
DEVICE: White Surface / Black Letters	ENGR: R.WOLFE	
	DATE: SEPTEMBER 30, 2016	
	DRAWING STATUS: RECORD	DWG# 037999262–003–01 PG 2 OF 2 REV –

REV	DESCRIPTION	BY	DATE	–	----	--	--/--	–	----	--	--/--
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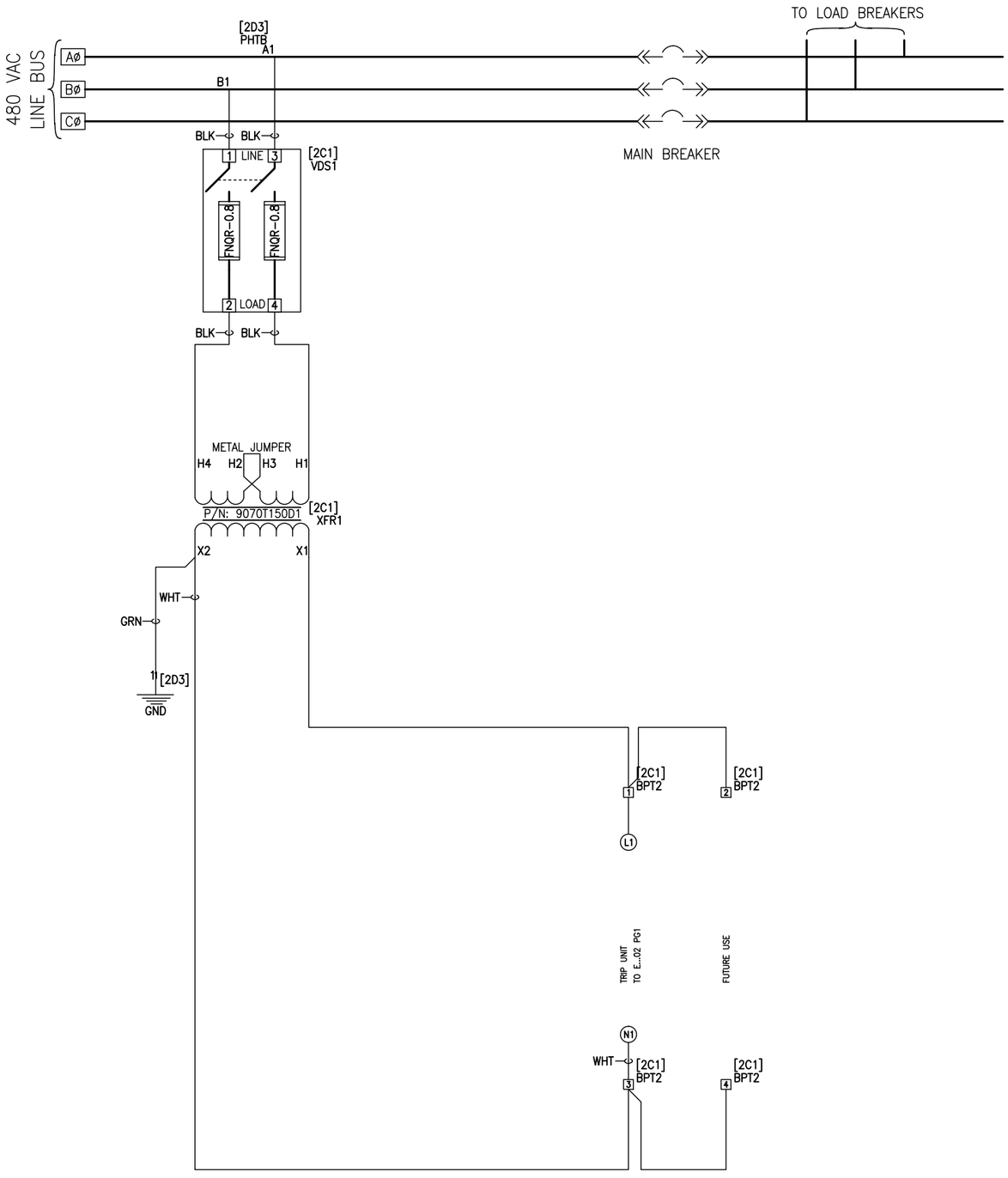
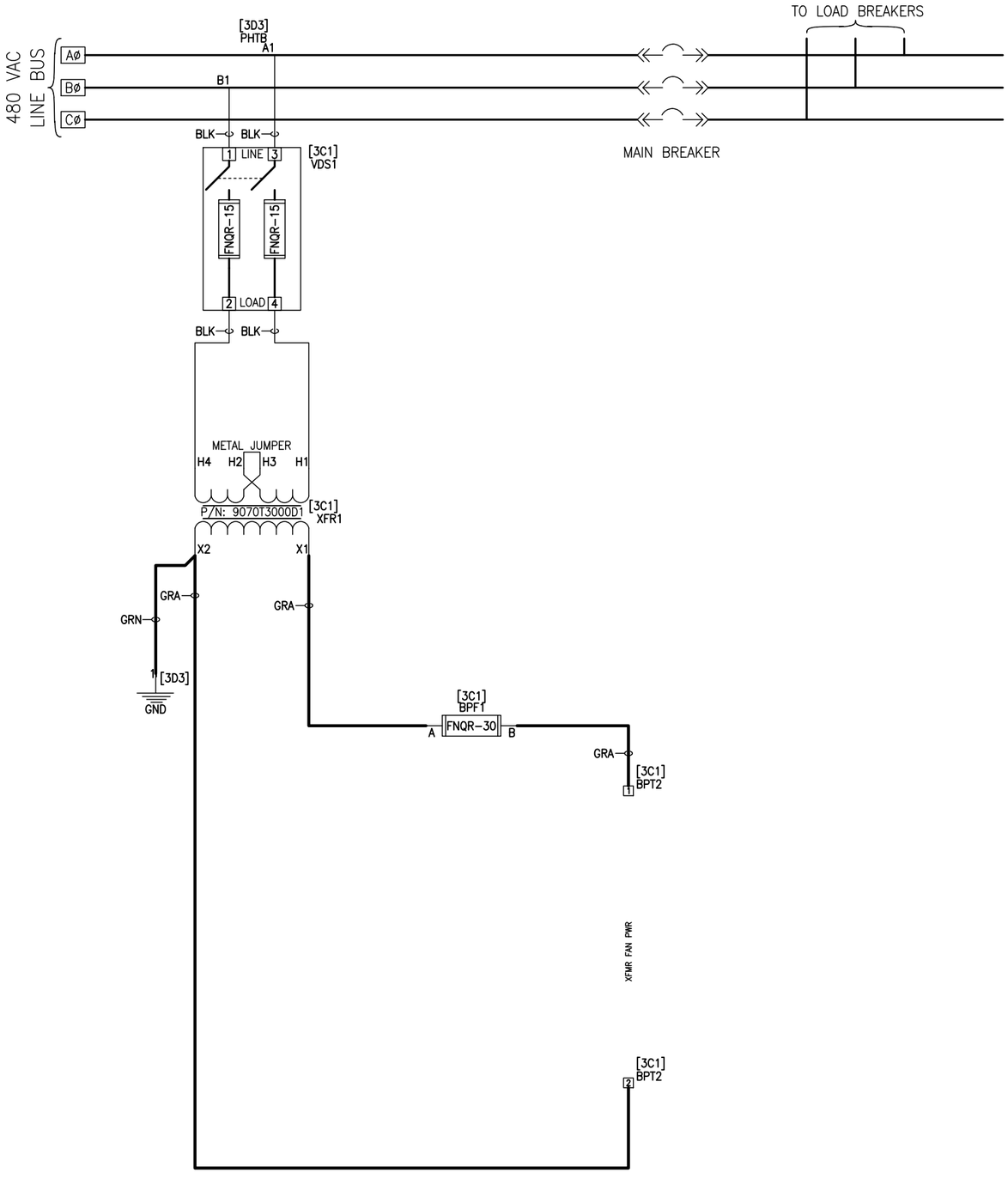


NOTES:
1. ALL CONTROL WIRING TO BE TYPE "SIS" (UL LISTED) UNLESS OTHERWISE NOTED.
2. ALL CONTROL FUSES MOUNTED IN FUSED PULLOUTS.
3. USE #14 AWG WIRE UNLESS OTHERWISE NOTED.
4. ALL CONDUCTORS TO BE RED WIRE UNLESS OTHERWISE NOTED.

150 VA CONTROL POWER (480:120VAC)

JOB NAME:	WEBSTER UNIVERSITY ISB	EQUIPMENT DESIGNATION:	US-1
JOB LOCATION:	WEBSTER GROVES MO	EQUIPMENT TYPE:	QED SWITCHBOARD
DRAWN BY:	ROW	DRAWING TYPE:	ELEMENTARY DIAGRAM
ENGR:	R.WOLFE		SQUARE D Schneider Electric
DATE:	OCTOBER 04, 2016		
DRAWING STATUS:	RECORD	DWG# E37999262-003-01	PG 1 OF 2 REV –

REV	DESCRIPTION	BY	DATE	–	----	--	--/--	–	----	--	--/--
A	CHANGE PAGE DESCRIPTION FROM 150VA TO 3000VA	RW	10/27/2016	–	----	--	--/--	–	----	--	--/--

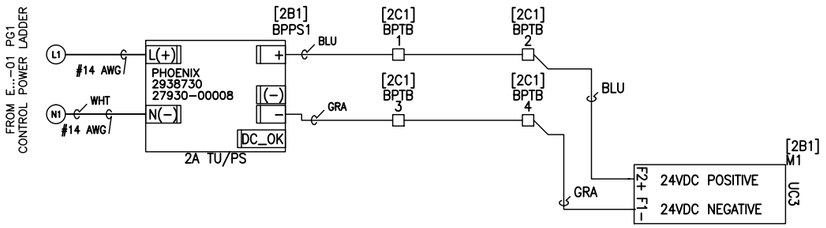


NOTES:
1. ALL CONTROL WIRING TO BE TYPE "SIS" (UL LISTED) UNLESS OTHERWISE NOTED.
2. ALL CONTROL FUSES MOUNTED IN FUSED PULLOUTS.
3. USE #14 AWG WIRE UNLESS OTHERWISE NOTED.
4. ALL CONDUCTORS TO BE RED WIRE UNLESS OTHERWISE NOTED.

3000 VA CONTROL POWER (480:120VAC)

JOB NAME:	WEBSTER UNIVERSITY ISB	EQUIPMENT DESIGNATION:	US-1
JOB LOCATION:	WEBSTER GROVES MO	EQUIPMENT TYPE:	QED SWITCHBOARD
DRAWN BY:	ROW	DRAWING TYPE:	ELEMENTARY DIAGRAM
ENGR:	R.WOLFE		SQUARE D Schneider Electric
DATE:	OCTOBER 04, 2016		
DRAWING STATUS:	RECORD	DWG# E37999262-003-01	PG 2 OF 2 REV A

REV	DESCRIPTION	BY	DATE								
—	————	——	——/——	—	————	——	——/——	—	————	——	——/——



NOTES:

1. POWER SUPPLY CAN ONLY PROVIDE POWER FOR CIRCUIT BREAKER TRIP UNITS.
2. SEPARATE ALL AC CONTROL WIRING FROM COMMUNICATIONS CIRCUIT.
3. ALL CONDUCTORS TO BE #16 SIS UNLESS OTHERWISE NOTED.
4. TWIST SHIELDS TOGETHER, FOLD BACK AGAINST THE OUTER INSULATION, AND HEAT SHRINK SHIELDS AND CABLES.
5. ALL WIRING TO BE RED WIRE UNLESS OTHERWISE NOTED.
6. ALL SHIPPING SPLIT TERMINAL BLOCKS ARE LOCATED ON FRONT LOWER TIE CHANNEL BEHIND BOTTOM FRONT COVER.

Trip Unit External Power Wiring Elementary

JOB NAME:	WEBSTER UNIVERSITY ISB	EQUIPMENT DESIGNATION:	US-1
JOB LOCATION:	WEBSTER GROVES MO	EQUIPMENT TYPE:	QED SWITCHBOARD
DRAWN BY:	ROW	DRAWING TYPE:	ELEMENTARY DIAGRAM
ENGR:	R.WOLFE		SQUARE D Schneider Electric
DATE:	OCTOBER 04, 2016		
DRAWING STATUS:	RECORD	DWG# E37999262-003-02	PG 1 OF 1 REV —

REV	DESCRIPTION	BY	DATE
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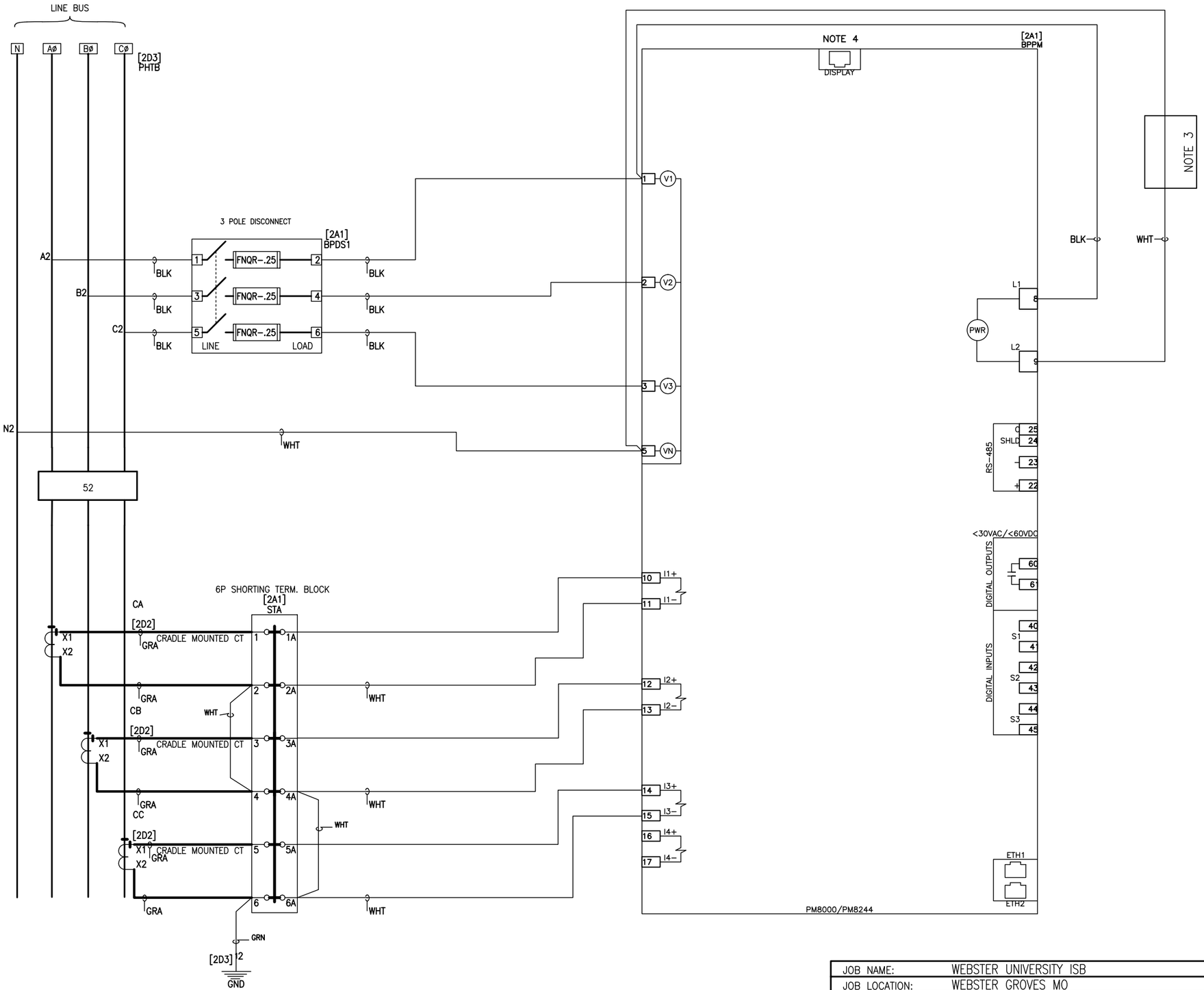

NOTE
1. USE 14 GAUGE RED WIRE MINIMUM, UNLESS OTHERWISE NOTED, USE 12 GAUGE GROUND WIRE FOR CANADIAN ORDERS.
2. SEPARATE ALL AC CONTROL WIRING FROM COMMUNICATIONS CIRCUIT.
3. CONTROL POWER CAN BE DRAWN FROM FUSED VOLTAGE INPUTS ONLY WHEN LINE–TO–NEUTRAL VOLTAGE IS BELOW 457V AC. SEPARATELY DERIVED 120V CONTROL POWER ALSO ACCEPTABLE. ALWAYS FUSE L1 (PIN 8), FUSE L2 (PIN 9) WHEN USING AN UNGROUNDED NEUTRAL.
4. USE DISPLAY CABLE SUPPLIED WITH POWER METER.
5. FOR ADDITIONAL INFORMATION AND COMMUNICATION WIRING SEE POWERLOGIC POWER METER SERIES 800 INSTRUCTION 7EN02–0336–00 – PM8000 USER MANUAL.
6. MULTIPLE METERS MAY BE FED BY SAME DISCONNECT. INDIVIDUAL FUSING IS REQUIRED.
7. SPLICE THE SHIELD WIRES WHEN CONNECTING THE BELDEN 8723 (OR EQUIVALENT) CABLE FOR COMMUNICATIONS.
8. GROUNDED TERMINAL OF THE SHORTING BLOCK TO BE A PAN HEAD SCREW.
9. ALL CONTROL WIRING TO BE "SIS" (UL LISTED) UNLESS OTHERWISE NOTED.

PowerLogic Power Meter Wiring Elementary

JOB NAME:	WEBSTER UNIVERSITY ISB	EQUIPMENT DESIGNATION:	US–1
JOB LOCATION:	WEBSTER GROVES MO	EQUIPMENT TYPE:	QED SWITCHBOARD
DRAWN BY:	ROW	DRAWING TYPE:	ELEMENTARY DIAGRAM
ENGR:	R.WOLFE		SQUARE D Schneider Electric
DATE:	OCTOBER 04, 2016		
DRAWING STATUS:	RECORD	DWG# E37999262–003–03	PG 1 OF 1 REV —

REV	DESCRIPTION	BY	DATE								
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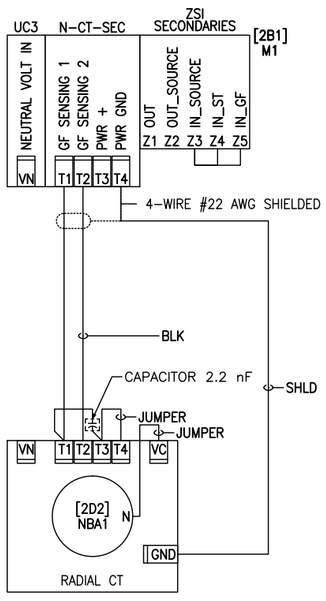

NOTES:
1. ALL CONTROL WIRING TO BE TYPE "SIS" (UL LISTED) UNLESS OTHERWISE NOTED.
2. USE #22 AWG SHIELDED WIRE UNLESS OTHERWISE NOTED.
3. ALL SYMBOLS ARE SHOWN WITH CIRCUIT BREAKER OPEN, CONNECTED AND CHARGED.
4. JUMPER BETWEEN T1 & T2 IS ONLY PRESENT WHEN NEUTRAL CT IS NOT CONNECTED.
5. ALL CONDUCTORS TO BE RED WIRE UNLESS OTHERWISE NOTED.
6. Vn CONNECTION ONLY REQUIRED FOR 5.0P,6.0P,5.0H,AND 6.0H TRIP UNITS.

4 Vn CONNECTION ONLY REQUIRED FOR 5.0P,6.0P,5.0H,AND 6.0H TRIP UNITS.

RADIAL GROUND FAULT

JOB NAME:	WEBSTER UNIVERSITY ISB	EQUIPMENT DESIGNATION:	US-1
JOB LOCATION:	WEBSTER GROVES MO	EQUIPMENT TYPE:	QED SWITCHBOARD
DRAWN BY:	ROW	DRAWING TYPE:	ELEMENTARY DIAGRAM
ENGR:	R.WOLFE		SQUARE D Schneider Electric
DATE:	OCTOBER 04, 2016		
DRAWING STATUS:	RECORD	DWG# E37999262-003-07	PG 1 OF 1 REV —

REV	DESCRIPTION	BY	DATE								
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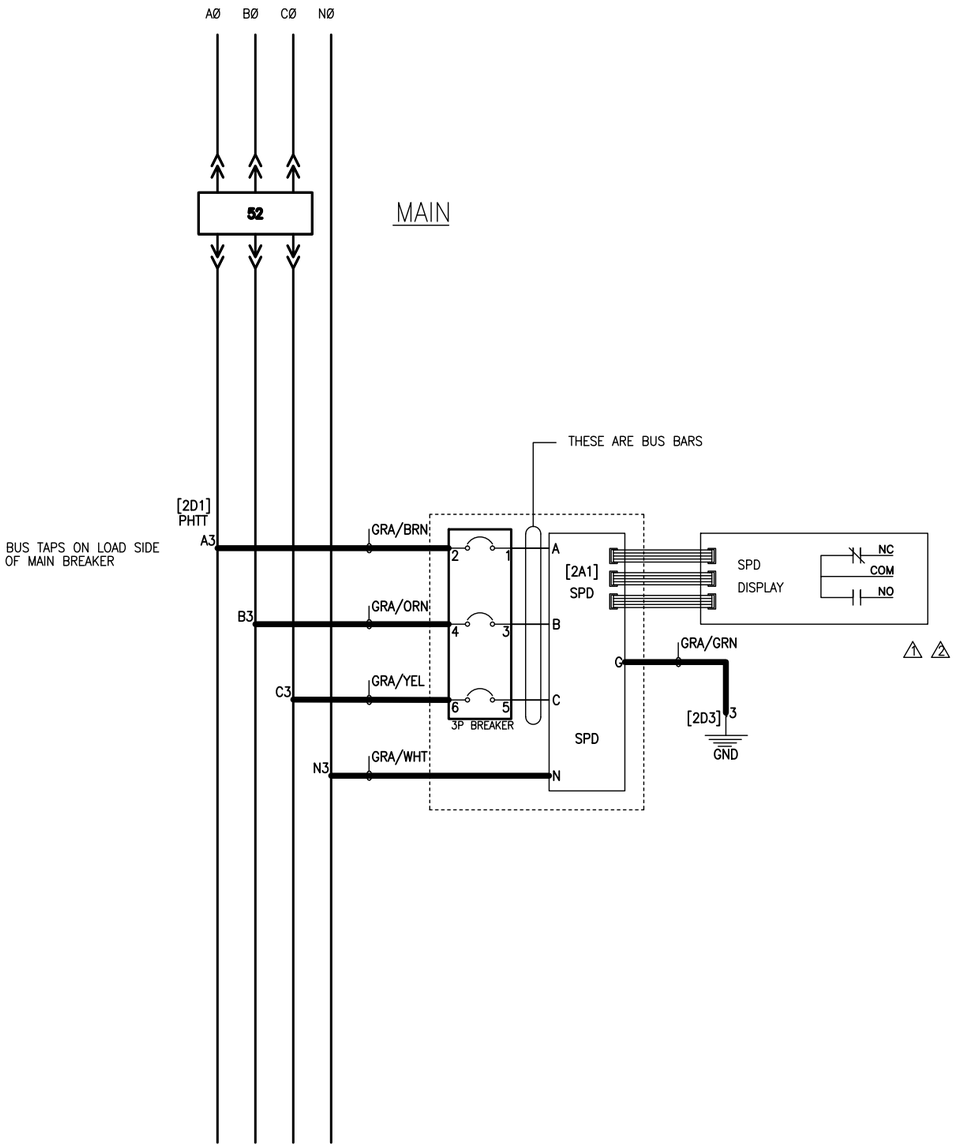

NOTES:

1. ALL WIRING TO BE TYPE #6 AWG RED SIS (UL LISTED) WIRE UNLESS OTHERWISE NOTED.
2. DISPLAY FORM C DRY CONTACTS ARE RATED @ 24VDC/AC – 2 AMPS.
3. CABLES MUST BE AS SHORT AS POSSIBLE WITH A MINIMUM NUMBER OF LARGE RADIUS BENDS. MAXIMUM LENGTH OF CABLE FROM NEUTRAL AND GROUND BUS CONNECTIONS TO TVSS UNIT SHALL NOT EXCEED 8 FEET. MAXIMUM NUMBER OF BENDS SHALL NOT EXCEED 4. MINIMUM RADIUS SHALL BE 3 INCHES. CABLES MUST BE SECURELY FASTENED THROUGHOUT THEIR LENGTH.
4. FOR EQUIPMENT BUILT TO ANSI C37.20.1 OR CSA C22.2 NO. 31–M89, SINGLE CONDUCTOR CABLE MAY BE TYPE SIS AND COLOR CODES MAY BE DISREGARDED FOR SINGLE CONDUCTORS.
5. PATCH CABLES MUST BE PROTECTED WHERE THEY CROSS THE HINGE SIDE DOOR FLANGE FROM DISPLAY TO INSTRUMENT COMPARTMENT, PATCH CABLES MUST BE KEPT SEPARATED FROM POWER WIRING.

SPD Wiring Elementary

JOB NAME:	WEBSTER UNIVERSITY ISB	EQUIPMENT DESIGNATION:	US-1
JOB LOCATION:	WEBSTER GROVES MO	EQUIPMENT TYPE:	QED SWITCHBOARD
DRAWN BY:	ROW	DRAWING TYPE:	ELEMENTARY DIAGRAM
ENGR:	R.WOLFE		SQUARE D Schneider Electric
DATE:	OCTOBER 04, 2016		
DRAWING STATUS:	RECORD	DWG# E37999262-003-08	PG 1 OF 1 REV —

REV	DESCRIPTION	BY	DATE
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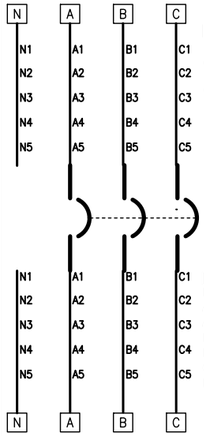
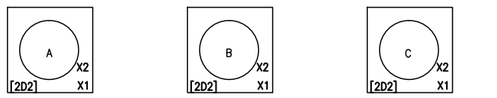
BUS CONNECTION



[2D1]
PHTT
A3=[2A1]SPD–2#6*GRA/BRN
B3=[2A1]SPD–4#6*GRA/ORN
C3=[2A1]SPD–6#6*GRA/YEL
N3=[2A1]SPD–N#6*GRA/WHT

[2D3]
PHTB
A1=[2C1]VDS1–3#14*BLK
A2=[2A1]BPDS1–1#14*BLK
B1=[2C1]VDS1–1#14*BLK
B2=[2A1]BPDS1–3#14*BLK
C2=[2A1]BPDS1–5#14*BLK
N2=[2A1]BPPM–5#14*WHT

CURRENT TRANSFORMERS



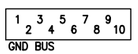
CA
X1=[2A1]STA–1#10*GRA
X2=[2A1]STA–2#10*GRA

CB
X1=[2A1]STA–3#10*GRA
X2=[2A1]STA–4#10*GRA

CC
X1=[2A1]STA–5#10*GRA
X2=[2A1]STA–6#10*GRA

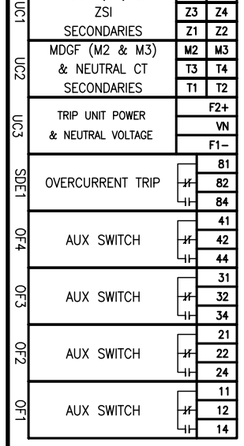
[2D2]
NBA1
GND=[2B1]M1–T4#22*SHLD
T1=[2B1]M1–T1#22
T2=[2B1]M1–T2#22*BLK
JUMP N & VC*JUMPER
JUMP T3 & T4*JUMPER

GROUND BUS



[2D3]
GND
1=[2C1]XFR1–X2#14*GRN
2=[2A1]STA–6#14*GRN
3=[2A1]SPD–G#6*GRA/GRN

BREAKER CELL

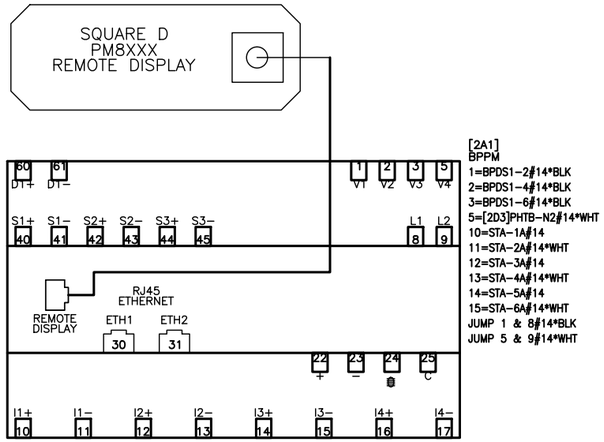


[2B1]
M1
F1–=[2C1]BPTB–4*GRA
F2+=[2C1]BPTB–2*BLU
T1=[2D2]NBA1–T1#22
T2=[2D2]NBA1–T2#22*BLK
T4=[2D2]NBA1–GND#22*SHLD
JUMP Z3 & Z4
JUMP Z3 & Z5

SHIPPING SPLIT

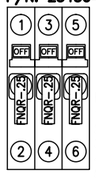
NOTES:
1. ALL CONTROL WIRING TO BE TYPE "SIS" (UL LISTED) UNLESS OTHERWISE NOTED.
2. ALL CONTROL FUSES MOUNTED IN FUSED PULLOUTS.
3. USE #16 AWG WIRE UNLESS OTHERWISE NOTED.
4. ALL WIRES TO BE RED UNLESS OTHERWISE NOTED.

MOUNTING PAN(S)



[2A1]
BPPM
1=BPDS1–2#14*BLK
2=BPDS1–4#14*BLK
3=BPDS1–6#14*BLK
5=[2D3]PHTB–N2#14*WHT
10=STA–1A#14
11=STA–2A#14*WHT
12=STA–3A#14
13=STA–4A#14*WHT
14=STA–5A#14
15=STA–6A#14*WHT
JUMP 1 & 8#14*BLK
JUMP 5 & 9#14*WHT

P/N: HUA21788
P/N: 25430–20025



[2A1]
BPDS1
1=[2D3]PHTB–A2#14*BLK
2=BPPM–1#14*BLK
3=[2D3]PHTB–B2#14*BLK
4=BPPM–2#14*BLK
5=[2D3]PHTB–C2#14*BLK
6=BPPM–3#14*BLK

P/N: 27110–00000

[2A1]
STA

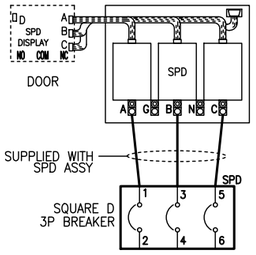
[2D2]CA–X1#10*GRA	1	1A	BPPM–10#14
[2D2]CA–X2#10*GRA	2	2A	BPPM–11#14*WHT
[2D2]CB–X1#10*GRA	3	3A	BPPM–12#14
[2D2]CB–X2#10*GRA	4	4A	BPPM–13#14*WHT
[2D2]CC–X1#10*GRA	5	5A	BPPM–14#14
[2D3]GND–2#14*GRN	6	6A	BPPM–15#14*WHT

[2D2]CC–X2#10*GRA,

JUMP 2 & 4#14*WHT
JUMP 4A & 6A#14*WHT

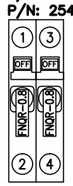
INSTRUMENT COMPARTMENT

PHASE, NEUTRAL, AND GND CONDUCTORS MUST BE TWISTED TOGETHER WITH A WIRE LENGTH LESS THAN 8 FT.



[2A1]
SPD
2=[2D1]PHTT–A3#6*GRA/BRN
4=[2D1]PHTT–B3#6*GRA/ORN
6=[2D1]PHTT–C3#6*GRA/YEL
G=[2D3]GND–3#6*GRA/GRN
N=[2D1]PHTT–N3#6*GRA/WHT

P/N: HUA21787
P/N: 25430–20080



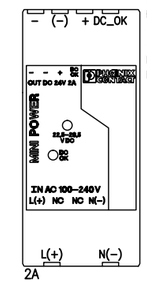
[2C1]
VDS1
1=[2D3]PHTB–B1#14*BLK
2=XFR1–H4#14*BLK
3=[2D3]PHTB–A1#14*BLK
4=XFR1–H1#14*BLK

P/N: HUA22509
P/N: HUA17403, HUA22512

[2C1]
BPT2

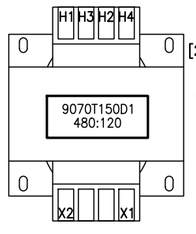
XFR1–X1#14	1	[2B1]BPPS1–L(+)#14
	2	
XFR1–X2#14*WHT	3	[2B1]BPPS1–N(–)#14*WHT
	4	

JUMP 1 & 2 [L]
JUMP 3 & 4 [L]



[2B1]
BPPS1
+=[2C1]BPTB–1*BLU
–=[2C1]BPTB–3*GRA
L(+)=[2C1]BPT2–1#14
N(–)=[2C1]BPT2–3#14*WHT

2A



[2C1]
XFR1
H1=VDS1–4#14*BLK
H4=VDS1–2#14*BLK
X1=BPT2–1#14
X2=BPT2–3*WHT,[2D3]GND–1##14*GRN
JUMP H2 & H3

P/N: HUA22509
P/N: HUA17403, HUA22512

[2C1]
BPTB

	1	[2B1]BPPS1–+*BLU
	2	[2B1]M1–F2+*BLU
	3	[2B1]BPPS1––*GRA
	4	[2B1]M1–F1–*GRA

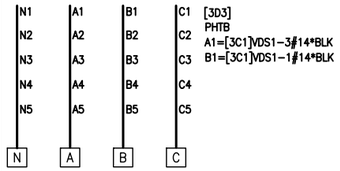
JUMP 1 & 2 [L]
JUMP 3 & 4 [L]

Section 2 Wiring Diagram

JOB NAME:	WEBSTER UNIVERSITY ISB	EQUIPMENT DESIGNATION:	US–1
JOB LOCATION:	WEBSTER GROVES MO	EQUIPMENT TYPE:	QED SWITCHBOARD
DRAWN BY:	ROW	DRAWING TYPE:	WIRING DIAGRAM
ENGR:	R.WOLFE		SQUARE D Schneider Electric
DATE:	SEPTEMBER 30, 2016		
DRAWING STATUS:	RECORD	DWG# W37999262–003–02	PG 1 OF 1 REV –

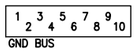
REV	DESCRIPTION	BY	DATE	–	----	--	--/--	–	----	--	--/--
A	CHANGE TEXT: MTW TO SIS	RW	10/27/2016	–	----	--	--/--	–	----	--	--/--

BUS CONNECTION



CURRENT TRANSFORMERS

GROUND BUS



[3D3]
GND
1=[3C1]XFR1-X2#10*GRN

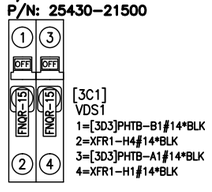
BREAKER CELL

SHIPPING SPLIT

NOTES:
1. ALL CONTROL WIRING TO BE TYPE "SIS" (UL LISTED) UNLESS OTHERWISE NOTED.
2. ALL CONTROL FUSES MOUNTED IN FUSED PULLOUTS.
3. USE #16 AWG WIRE UNLESS OTHERWISE NOTED.
4. ALL WIRES TO BE RED UNLESS OTHERWISE NOTED.

MOUNTING PAN(S)

P/N: HUA21787
P/N: 25430-21500

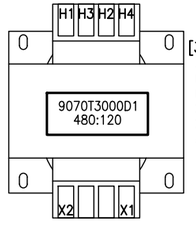


[3C1]
VDS1
1=[3D3]PHTB-B1#14*BLK
2=XFR1-H4#14*BLK
3=[3D3]PHTB-A1#14*BLK
4=XFR1-H1#14*BLK

P/N: 9080GC6
P/N: 9080GC6B
[3C1]
BPT2

BPF1-B#10*GRA		1
XFR1-X2#10*GRA		2

[3C1]
BPF1
A=XFR1-X1#10*GRA
B=BPT2-1#10*GRA



[3C1]
XFR1
H1=VDS1-4#14*BLK
H4=VDS1-2#14*BLK
X1=BPF1-A#10*GRA
X2=BPT2-2*GRA,[3D3]GND-1##10*GRN
JUMP H2 & H3

Section 3 Wiring Diagram

JOB NAME:	WEBSTER UNIVERSITY ISB	EQUIPMENT DESIGNATION:	US-1
JOB LOCATION:	WEBSTER GROVES MO	EQUIPMENT TYPE:	QED SWITCHBOARD
DRAWN BY:	ROW	DRAWING TYPE:	WIRING DIAGRAM
ENGR:	R.WOLFE		SQUARE D Schneider Electric
DATE:	OCTOBER 04, 2016		
DRAWING STATUS:	RECORD	DWG# W37999262-003-03	PG 1 OF 1 REV A