



DATE ISSUED January 08, 2024

ADDENDUM # 1

ENGINEER Engineering Technologies, Inc.
1101 North 13th Street
Omaha, NE 68102

PROJECT WSC Morey Hall Electrical Upgrades

ETI PROJECT # 2023-236

The Architect issues this Addendum to all known bidders before receipt of proposals. Bidder shall acknowledge the receipt of this addendum on their proposal sheet and all information contained herein shall become a part of the contract documents.

ADDENDUM:**CLARIFICATIONS**

1. **Question:** Can work in the dorm rooms happen right away?
 - a. **Response:**
 - i. Procurement and limited work can begin as soon as contracts are signed, however, no work is allowed in the dorm rooms during the school year while the rooms are occupied. Work in common areas and the basement can be coordinated with the college during the Spring semester.
 - ii. During the Winter and Spring semesters, work can begin at 10am. There is no cutoff time for later in the day.
 - iii. The building will be empty after the Spring semester from May 13th thru August 9th of 2024.
 - iv. Work is to be completed by August 9th of 2024.
2. **Question:** Can core drilling be wet or dry cored?
 - a. **Response:**
 - i. Wet coring is acceptable. Precautions should be taken with either method such that water or dust is contained and does not cause any damage.
3. **Question:** Can we get shop drawings on the owner provided Distribution Panels, Panelboards, and Transformer?
 - a. **Response:**
 - i. Yes. Shop drawings for the Distribution Panels and Medium Voltage Transformer are attached.
 - ii. Anticipated delivery date:
 1. Medium Voltage Transformer: End of March 2024.
 2. Distribution Panels: End of May 2024.
 3. Panelboards: End of March 2024.
4. **Question:**
 - a. Can we upsize conduits to accommodate easier wire pulling?
 - b. **Response:**
 - i. Yes, sizes indicated on the plans are a minimum.
5. **Question:**
 - a. Will the electrical inspector allow the panels to be painted?
 - b. **Response:**
 - i. Yes, exterior surfaces only.
6. **Question:**
 - a. Will the electrical inspector allow a panel behind a door swing?
 - b. **Response:**
 - i. Yes, as long as the door can be locked in the closed position.
7. **Question:**
 - a. NETA testing is indicated in the medium voltage equipment specifications. Confirm this is required?

- b. **Response:**
i. NETA testing is not required and will be deleted.
8. **Question:**
a. Is there asbestos in the building?
b. **Response:**
i. The floor tiles in the dorm rooms contain asbestos. The glue does not. The College will abate select floor tiles that need to be removed for core drilling and will replace the tiles. The contractor is required to coordinate in advance which tiles need to be removed for core drilling.
9. **Question:**
a. The specs indicate for fault indicators to be provided on one side of the transformer primary feed. Should they be provided on both primary sides since this is a loop fed transformer and could be fed from either direction?
b. **Response:**
i. Yes. Fault indicators should be provided on both primary connections/sides of the transformer in case the transformer is energized from a different pathway on the campus loop.
10. **Question:**
a. Is fireproofing needed?
b. **Response:**
i. Yes, penetrations into any wall or floor/ceiling shall be fireproofed using fire rated sealant. Sealant that is visible in dorm rooms and corridors shall be covered with a paintable sealant that can be painted to match the adjacent surface.

SPECIFICATIONS

1. Section 261200 Medium Voltage Transformers:
 - a. Delete verbiage and work associated with NETA testing.

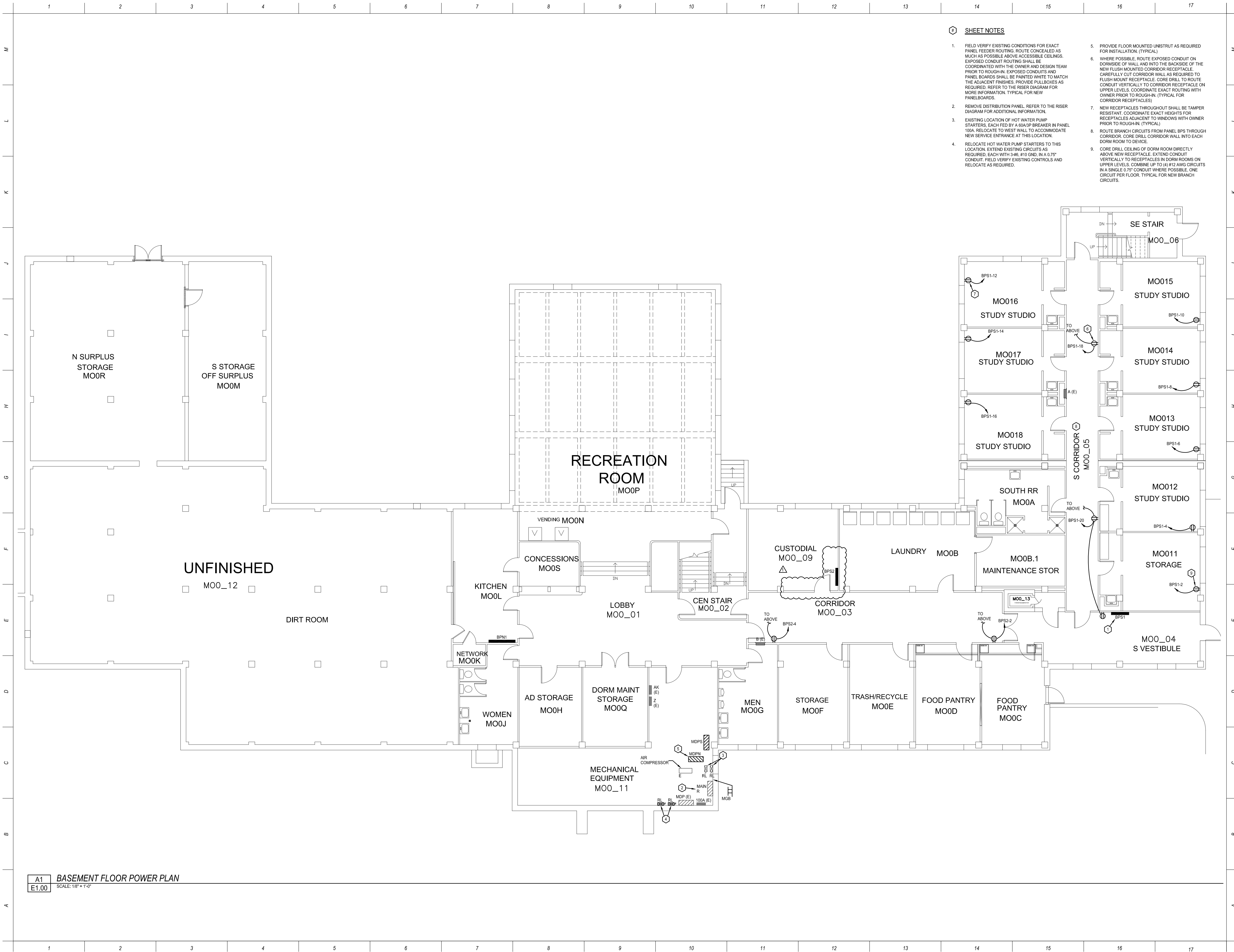
DRAWINGS

1. Sheet E1.00 Basement Floor Power Plan
 - a. Modify location of Panel BPS2.

END OF ADDENDUM

Attachments

- Sheet E1.00
- Pre-bid Sign in Sheet
- Medium Voltage Transformer Submittal
- Distribution Panels Submittal
- Panelboards Submittal



- SHEET NOTES
1.

FIELD VERIFY EXISTING CONDITIONS FOR EXACT PANEL FEEDER ROUTING. ROUTE CONCEALED AS MUCH AS POSSIBLE ABOVE ACCESSIBLE CEILINGS. EXPOSED CONDUIT ROUTING SHALL BE COORDINATED WITH THE OWNER AND DESIGN TEAM PRIOR TO ROUGH-IN. EXPOSED CONDUITS AND PANEL BOARDS SHALL BE PAINTED WHITE TO MATCH THE ADJACENT FINISHES. PROVIDE PULLBOXES AS REQUIRED. REFER TO THE RISER DIAGRAM FOR MORE INFORMATION. TYPICAL FOR NEW PANELBOARDS.

2.

REMOVE DISTRIBUTION PANEL. REFER TO THE RISER DIAGRAM FOR ADDITIONAL INFORMATION.

3.

EXISTING LOCATION OF HOT WATER PUMP STARTERS, EACH FED BY A 60A/3P BREAKER IN PANEL 100A. RELOCATE TO WEST WALL TO ACCOMMODATE NEW SERVICE ENTRANCE AT THIS LOCATION.

4.

RELOCATE HOT WATER PUMP STARTERS TO THIS LOCATION. EXTEND EXISTING CIRCUITS AS REQUIRED. EACH WITH 3-46, #10 GND, IN A 0.75" CONDUIT. FIELD VERIFY EXISTING CONTROLS AND RELOCATE AS REQUIRED.

5.

PROVIDE FLOOR MOUNTED UNISTRUT AS REQUIRED FOR INSTALLATION. (TYPICAL)

6.

WHERE POSSIBLE, ROUTE EXPOSED CONDUIT ON DORMSIDE OF WALL AND INTO THE BACKSIDE OF THE NEW FLUSH MOUNTED CORRIDOR RECEPTACLE. CAREFULLY CUT CORRIDOR WALL AS REQUIRED TO FLUSH MOUNT RECEPTACLE. CORE DRILL TO ROUTE CONDUIT VERTICALLY TO CORRIDOR RECEPTACLE ON UPPER LEVELS. COORDINATE EXACT ROUTING WITH OWNER PRIOR TO ROUGH-IN. (TYPICAL FOR CORRIDOR RECEPTABLES)

7.

NEW RECEPTABLES THROUGHOUT SHALL BE TAMPER RESISTANT. COORDINATE EXACT HEIGHTS FOR RECEPTABLES ADJACENT TO WINDOWS WITH OWNER PRIOR TO ROUGH-IN. (TYPICAL)

8.

ROUTE BRANCH CIRCUITS FROM PANEL BPS THROUGH CORRIDOR. CORE DRILL CORRIDOR WALL INTO EACH DORM ROOM TO DEVICE.

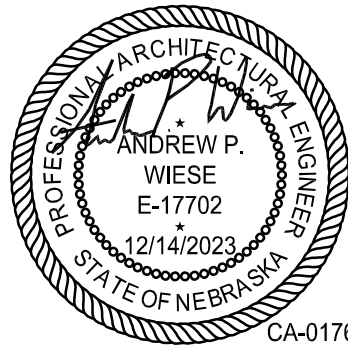
9.

CORE DRILL CEILING OF DORM ROOM DIRECTLY ABOVE NEW RECEPTACLE. EXTEND CONDUIT VERTICALLY TO RECEPTABLES IN DORM ROOMS ON UPPER LEVELS. COMBINE UP TO (4) #12 AWG CIRCUITS IN A SINGLE 0.75" CONDUIT WHERE POSSIBLE, ONE CIRCUIT PER FLOOR. TYPICAL FOR NEW BRANCH CIRCUITS.



WAYNE STATE
COLLEGE MOREY
HALL ELECTRICAL
UPGRADES

1111 MAIN ST
WAYNE, NE 68787



REV.	DESCRIPTION	DATE
1	ADDENDUM #1	01.08.2024

PROJECT NUMBER:	2023-236
DATE:	DECEMBER 14, 2023
DRAWN BY:	TMG
CHECKED BY:	APW

SHEET NAME:
**BASEMENT FLOOR POWER
PLAN**

SHEET NUMBER:
E1.00



SHOP DRAWING REVIEW

PROJECT NAME

WSC Morey Hall Electrical Upgrades

ETI PROJECT#

2023-163

SPEC. SECTION

261200

SUBMITTAL
NUMBER:

001

EQUIPMENT BEING REVIEWED

Medium Voltage Transformers

Shop drawing review applies to design arrangement and interpretation and does not relieve the Contractor of responsibility for adherence to the Contract Documents or for accuracy of details, dimensions, or quantities. Contractor is responsible for dimensions to be confirmed and coordinated at the job site, for information that pertains solely to the fabrication processes or to techniques or construction, and for all changes required in other trades to accommodate substituted equipment or materials which have been given prior approval to bid.

APPROVAL STATUS:

A. REVIEWED WITH NO COMMENTS

☐

See Note(s):

B. REVIEWED WITH COMMENTS

☒

See Note(s): 1

C. REVIEWED WITH COMMENTS, RESUBMIT

☐

See Note(s):

D. REJECTED, RESUBMIT

☐

See Note(s):

REVIEWED BY:

Andy Wiese

DATE:

12.08.2023

Notes on items included in this submittal:

1. Medium Voltage Transformers:

A. Per phone discussion with Jim Shafer (T&R Electric):

1. Low Voltage bushings will have 6-hole spades.
2. High voltage bushings will have (6) 200A wells and inserts.
3. 4-position switch will be provided.
4. Primary switching will be rated for 300A.
5. Bayonet fusing will be provided, sized for 500kVA transformer.
6. Surface rust will get sanded, buffed, and repainted.
7. Exterior meter box and accessories not needed, will get removed.
8. Old mineral oil will be removed, tank will be pressure tested, and new mineral oil will be poured into the tank.
9. Wells and inserts will get inspected and replaced if showing any signs of rust.
10. Any surfaces or components found to be damaged will get replaced.
11. Transformer will be electronically tested per ANSI standards.
12. Refurbished transformer will be UL listed after successful testing.

B. No exceptions taken.



"The Transformer People"

When Every Minute Counts

Call Toll Free 800-843-7994
(Outside U.S.) 605-534-3555
FAX 605-534-3861
Website <http://t-r.com>

Quote Rev. 114367-1

Date: 11/10/2023

Contact: Kyle Nelson

Company: Wayne State College

Phone: 402-375-7081

Fax:

Email: kynelse1@wsc.edu

Quote Summary

#	Item	Type	Qty	Category	Ph	KVA	Primary	Secondary	Price	Total
1	0	RC	1	PAD MOUNT	3	500	13800Y/7970	208Y/120		
Grand Total										

Additional Notes

1. All quotes are subject to the "Standard Terms and Conditions of Sale".
2. This quote is valid for 15 days.
3. Estimated manufacturing lead-time is a best estimate at time of quotation and may vary.
4. Upon completion of order, immediate shipment is available plus freight on a common carrier. Unless otherwise specified, freight on quotes is prepaid and allowed in the contiguous US on our next available truck going to your area.
5. Electrical Test reports available upon request.
6. Prices subject to change. Due to the current volatility of the transformer components market (including copper), prices are subject to change in the event a rapid or extreme fluctuation in price occurs between the time of order placement and sourcing of materials. A rapid or extreme fluctuation occurs when a component part increases by more than 5% from the time the order is placed, and the time materials are ordered. T&R Electric agrees to use its best efforts to obtain advantageous pricing from materials suppliers. In the event there is a price increase through no fault of T&R Electric, we will notify the customer as soon as practicable.
7. Note: In order for a Purchase Order to be entered into the work queue and receive a designated time slot for production, these conditions must be accepted, and a note of acknowledgement must be present on said purchase order.

If you have any questions or need any additional information please call me at 800-843-7994. You may also email me at jim.shafer@trelectric.com.

Sincerely,
Jim Shafer
Sales Representative



"The Transformer People"

When Every Minute Counts

Call Toll Free 800-843-7994
(Outside U.S.) 605-534-3555
FAX 605-534-3861
Website <http://t-r.com>

Quote Rev. 114367-1

Date: 11/10/2023

Contact: Kyle Nelson

Company: Wayne State College

Phone: 402-375-7081

Fax:

Email: kynelse1@wsc.edu

Item #1 - Three Phase 500 KVA Pad Mount

Product Type: Reconditioned

Transformer Type: Pad Mount

Specifications:

KVA:	500	Phase:	3
High Voltage:	13800Y/7970	Low Voltage:	208Y/120
Taps:	W/TAPS 2 X 2 1/2% +/-		

Accessories:

- Primary Bushings, Dead Front, Loop Feed
- Secondary Bushings, Standard Spade Connectors
- Bayonet Fusing
- Temperature Gauge
- Pressure/Vacuum Gauge
- Oil Level Gauge
- LBOR 4 Position Switch
- Pressure Relief Device
- Pentahead Entry Assembly
- Mineral Oil (standard)
- Non-PCB Label
- Drain Valve with Sampler
- Bell Green Paint
- Undercoating

Notes:

Expedited production adder included in quoted price
UL inspector deadline is March 2024. Unit will need to be in the shop Jan/Feb 2024
At time of quote T&R Electric has some openings available for this to happen
Adder for UL inspection \$8200.00 - NOT included in quoted price
A fuel surcharge will be added to all invoices

Quantity: **1**

Warranty: 36 Month Guarantee

Delivery: Fob: Destination

Price:

Manufacturing Time: 14 - 16 weeks (ARO)

After Release to Production

Electrical Tests:

1. Transformer Turns Ratio Test
2. Polarity and Phase Relation Test
3. DC HYPOT TEST
Performed at Two Times Rated Line Voltage Plus 1000 Volts
 - a. HV to LV
 - b. HV to Ground
 - c. LV to Ground

4. Core Loss and Excitation Test
5. Load and No Load Testing
6. Induced Potential Test at 400 Hertz for 7200 Cycles



**36 MONTHS
100%
Guarantee**

GUARANTEE

ALL T&R TRANSFORMERS ARE GUARANTEED TO BE FREE FROM DEFECTS IN WORKMANSHIP AND MATERIALS FOR 36 MONTHS UNDER NORMAL USE OR SERVICE ; THAT NORMAL USE OR SERVICE DOES NOT INCLUDE ABNORMAL STRESSES OR STRESS FROM SUCH CAUSES AS INCORRECT PRIMARY VOLTAGE, FREQUENCY OR IMPROPER LOAD.

We are not responsible for consequential losses or damages outside of this equipment nor for any repairs or replacements made by others without our written authorization. Should any unit fail within 36 months, we will either repair or replace the transformer or refund your money at our option.

Excluded under this guarantee are all newly-manufactured transformers and all transformers rebuilt by other rebuilders, in which case their guarantee will prevail.

This guarantee is expressly in lieu of other guarantees.

(605) 534-3555
(800) 843-7994
FAX: (605) 534-3861
E-MAIL: t-r@t-r.com

T&R Electric Supply Co., Inc.
STANDARD TERMS AND CONDITIONS OF SALE
Effective Date: January 23, 2020

1. Applicable Terms. These Terms and Conditions of Sale (the “Terms”) apply to and govern the sale of all material, equipment, components, products, goods and/or documents (the “Products”) sold by T&R Electric Supply Co., Inc. (“T&R”) to Customer, unless otherwise expressly agreed in a written agreement signed by T&R. T&R offers to sell the Products solely pursuant to these Terms, and any acceptance is expressly limited to these Terms. Any terms proposed by Customer in any offer, acceptance, confirmation or other document are rejected by T&R and do not bind the parties. If Customer objects to any provisions of these Terms, such objection must be in writing and received by T&R prior to commencement of performance by T&R. If Customer fails to timely provide a written objection, Customer will be deemed to have conclusively accepted these Terms. All dollar amounts referenced herein, or payments owed under the terms hereof, refer to and shall be paid in US dollars.

2. Quotations. Each quotation is valid for 30 days from its issue date unless otherwise stated in the quotation or unless revoked by T&R prior to the issuance of Customer’s purchase order.

3. Prices. Prices are subject to change by T&R without notice. Unless otherwise specified, prices will be the prices in effect at the time of written order acknowledgement by T&R, subject to any mutually agreed upon escalation formula and/or adjustment for any subsequent change to the Product requested by Customer and agreed to by T&R. Except as otherwise provided in Section 6 (Delivery/Shipment) or as otherwise agreed in writing by T&R, prices will include freight Prepaid and Allowed to the accessible common carrier point nearest the first destination designated by Customer in the 48 contiguous United States on the next available T&R truck delivering to Customer’s area, unless immediate shipping is required by Customer, in which case such charges are not included in the original quote and shall be additionally paid by Customer. In the event of a price change, the effective date of the change will be the date shown on the revised quotation. Where a price change is made by letter, fax or email, the effective date may be given as part of the letter, fax or email. Pallets are not included in the price of quote and must be requested separately by Customer. Pallets and export packaging provided by T&R will not be fumigated and any special requests shall be made in advance, and may not be available through T&R. Customer shall give at least two weeks’ notice to T&R in the event witness tests are required by Customer, and charges for such tests will be set by T&R but will be no less than \$1,000 per day.

4. Taxes. The price quoted by T&R for the Products 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 apply. Customer shall be solely responsible for paying all such applicable taxes. Payment by T&R of any such taxes will be for the account of Customer, and shall be immediately reimbursed by Customer to T&R. Where Customer’s or the end-user’s destination is located outside of the United States, Customer shall pay all customs, duties and local customs broker fees and costs (U.S. and/or non-U.S.), as well as all other non-U.S. taxes of any type.

5. Payment. Payment terms are 30 calendar days from the date of invoice, unless otherwise agreed in writing by T&R. If the financial condition of Customer at any time prior to shipment is reasonably questioned by T&R, T&R may require payment in advance by Customer or cancel any outstanding order, without any liability or obligation to Customer and whereupon, in the event of cancellation, T&R will be entitled to receive reasonable cancellation charges. If any payment is not made when due, Customer shall pay a late charge equal to the greater of 1½% per month cumulative or the highest applicable rate allowed by law on all principal outstanding and prior assessed late charges. In addition, Buyer shall pay T&R all costs and expenses incurred by T&R in enforcing these Terms, including reasonable attorneys’ fees.

6. Delivery/Shipment. Unless otherwise agreed in writing by T&R, all orders of Products with net invoice values of \$1,000 or more are shipped F.O.B. Colman, South Dakota Prepaid and Allowed, and all orders with net invoice values of less than \$1,000 are shipped F.O.B Colman, South Dakota Prepaid and Added. All shipments are F.O.B. accessible common carrier point nearest first destination designated by Customer in the 48 contiguous United States on the next available contracted carrier truck delivering to Customer’s area, unless immediate shipping is required by Customer (which charges are not included in the original quote, freight prepaid, and shall be paid by Customer).

Cartage (Store Door Delivery): Transportation charges incurred from the nearest accessible common carrier point to final destination or to shipside (in case of shipment to U.S. possessions) are the responsibility of Customer unless the common carrier furnishes store delivery at no extra charge.

Method of Shipment: T&R will determine the point of origin of shipment, the method of transportation, and the routing of shipment. Customers requiring shipment by a method or routing other than that of T&R’s selection will be billed any excess or premium in transportation charges. Any charges for special services, including special train, lighterage, coordinated arrival times of multiple trucks or other modes of conveyance shall be paid or reimbursed by Customer.

Shipping Dates: Shipping dates contained in quotations are approximate and are based on receipt of complete information with the order. If drawing approval by Customer is required, drawings must be returned to T&R by Customer and released to production within 14 days, in writing, by email, facsimile or first class mail. Upon release to production, a shipment date will be determined by work load level at the time of release and may not be the same as initially quoted. An acknowledgement shipment date will be provided upon Customer request.

Customer Pick-Up: No allowance will be made in lieu of transportation if Customer accepts shipment at the factory or warehouse or freight station.

Will Call Orders: Customer expressly consents that will-call orders (e.g. orders for which Customer elects to arrange for transportation) will be invoiced on the later of the contractually acknowledged shipment date or the date of Product completion. T&R will not be responsible in any way for Customer’s inability to secure timely transportation or any other delay by Customer or its service providers whatsoever. Any applicable storage charges of completed Products will be in accordance with Section 17 (Delayed Shipment).

Shipment Damage: Except in the event of F.O.B. Destination shipment, T&R will not participate in any settlement of claims for concealed or other shipment damage. When shipment has been made on an F.O.B. Destination basis, Customer shall unpack immediately and, if damage is discovered, shall: (i) not move the Product from the point of examination; (ii) retain shipping container and packing material (if applicable); (iii) notify the carrier of any apparent damage in writing on carrier’s delivery receipt and request carrier to make an inspection; (iv) notify T&R within 72 hours of delivery; and (v) send T&R a copy of the carrier’s inspection report.

Inspection and Acceptance: Products will be deemed accepted by Customer upon receipt. Should a Product not comply with required technical specifications, Customer shall notify T&R in writing of any alleged noncompliance within two calendar days of receipt and off-loading. Any notification of alleged noncompliance must cite each specification criteria that is alleged to be non-compliant, with evidence of the deviation. Correction of any confirmed noncompliance will be in accordance with T&R’s obligations under Section 8 (Warranty).

7. Force Majeure. T&R shall not be liable for failure to perform or for delay in performance due to any cause beyond its reasonable control, including but not limited to: acts of God; acts or omissions which are substantially attributable to Customer or Customer’s service providers; fire; floods, hurricanes, tornadoes or other unusually severe or harsh weather conditions; strikes or other labor difficulties; any act or failure to act or delay in acting on the part of any governmental authority or entity; changes in law; epidemics; quarantine restrictions; war; insurrection or riot; acts of a civil or military authority; title or environmental issues; embargoes; fuel or energy shortage; blockage; transportation delays or accidents; inability to obtain necessary labor, material or manufacturing facilities from usual sources; or delays of subcontractors. In the event of delay in performance due to any such cause, the date of shipment or time for completing will be extended by a period of time equal to the greater of (i) the time reasonably necessary to overcome the effect of such delay, or (ii) the time equal to the period of the delay.

8. Warranty. T&R warrants to Customer that, for the length of time stated in the quote given by T&R to Customer (or if no length of time is stated, for a period of one year from the date of invoice), the Products will be free from defects in material and workmanship under normal use, service and conditions. T&R shall have no liability for the failure of any Product to conform with this warranty if such failure is caused by abnormal stresses (such as stresses caused by incorrect primary voltage, frequency or improper overload), accident, misuse, neglect, alteration, improper installation or repair, inadequate maintenance, normal wear and tear, or use contrary to any product specifications or instructions of T&R. Customer may elect, at Customer’s sole expense, to install, use and maintain a metering device that will record values for current (amps), voltage (V), frequency (Hz), loading of the transformer (kW), and such other information as may be required by T&R (collectively, the “Metered Information”). In the event of a defect or other failure of the Product, Customer is required to provide Metered Information regarding the Product to T&R, and such Metered Information will be used by T&R to determine whether the alleged defect or failure is covered by this warranty. If Customer elects not to install, use, and maintain a metering device, or otherwise fails to provide Metered Information to T&R, T&R shall analyze the Product and make the determination, in its sole discretion, whether the alleged defect or failure is covered by this warranty. In the event a Product fails to conform to this warranty during the warranty period, T&R, at its sole option, will repair the Product, replace the Product, or refund the purchase price of the Product to Customer. Excluded from this warranty are all newly manufactured transformers, regulators, switches and other equipment and all transformers, regulators, switches and other equipment rebuilt by other rebuilders, in which case such other manufacturers’ or rebuilders’ warranties will apply and be Customer’s exclusive warranty to be enforced directly by Customer against such third party. TO THE MAXIMUM EXTENT PERMITTED BY LAW, THIS WARRANTY CONSTITUTES T&R’S SOLE LIABILITY, AND CUSTOMER’S SOLE REMEDY, FOR ANY BREACH OF WARRANTY OR OTHER NONCONFORMITY OF PRODUCTS. T&R MAKES NO OTHER WARRANTY, EXPRESS, IMPLIED OR STATUTORY, INCLUDING ANY WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NON-INFRINGEMENT, OR THAT MAY ARISE FROM COURSE OF DEALING, COURSE OF PERFORMANCE OR USAGE OF TRADE. T&R does not extend this warranty, and Customer may not transfer it, to any third party; in the event this warranty is deemed to extend to any third party, this warranty shall be subject to all conditions and limitations of these Terms.

9. Limitation of Liability. The total, aggregate, and cumulative liability of T&R, and its affiliates, parent, subsidiaries, shareholders, directors, officers, employees, agents, assigns and their respective predecessors and successors, to Customer or any third party, whether by indemnity, in contract, guaranty or tort (including negligence or strict liability), by statute or under any other legal theory, shall in no event exceed the amount paid by Customer for the Product giving rise to such liability. The existence of multiple claims with respect to the same Product will not enlarge this limit.

Under no circumstances will T&R be liable to Customer or any third party, whether by indemnity, in contract, guaranty or tort (including negligence or strict liability), by statute or under any other legal theory, for any punitive, special, incidental, indirect or consequential damages or losses of any nature, even if Customer advised T&R in advance of the possibility of such damages, including without limitation loss of profit, loss of production, loss of contract, loss of revenue, cost of replacement power or temporary equipment, claims of Customer’s customers, cost of money, loss of investment or business opportunity, increased operating costs, financing costs or government fines, penalties or sums due.

No action, regardless of form, arising with respect to any Product may be brought by Customer more than one year after the event giving rise to the cause of action occurred. T&R shall be entitled to the payment of its attorneys’ fees and costs in the event T&R is forced to defend a legal action by Customer on a claim precluded by this section. The remedies of Customer set forth in these Terms are exclusive and include anything done in connection with the Products, such as the performance or breach of these Terms or the manufacture, sale, repair, replacement, delivery, resale or use of the Products.

Customer acknowledges that T&R set its prices, and agreed to sell the Products to Customer, in reliance on the limitations of liability, disclaimer of warranties, and remedies set forth in these Terms,

and that such provisions form an essential basis of the bargain between the parties, without which T&R would not have agreed to sell the Products to Customer.

10. Delay Damages. In the event T&R fails to deliver a Product at the time required by an order, T&R's liability for such delay shall be limited by these Terms (including, but not limited to, Section 9 (Limitation of Liability)) and in no event shall exceed an amount equal to 5% of the purchase price of the Product at issue. Such compensation shall represent full and final satisfaction of T&R's liability for delay. Customer shall be entitled to the delay damages described in this section only if Customer substantiates through appropriate and reliable documents the damages it incurred due to the late performance of T&R. Customer shall be entitled to such damages only if T&R fails to meet the final shipment date of a Product; no delay damages shall apply with respect to any intermediate milestone or deliverable. Any amounts payable by T&R pursuant to this section shall be subject to the terms of Section 9 (Limitation of Liability), including the total, aggregate liability cap set forth therein. Customer shall use all reasonable efforts to mitigate the effect of any delay caused by T&R. In no event shall T&R be liable for delay damages where late shipment was caused by a force majeure event as defined in Section 7 (Force Majeure), a suspension of the work, a change order or modification to the Product requested by Customer, or any other act or omission of Customer or end-user which contributed to the delay at issue.

11. Intellectual Property. The sale by T&R of a Product does not convey or grant any license, express or implied, to Customer regarding any of T&R's intellectual property, including but not limited to any patents, copyrights, trademarks, trade secrets, designs, artwork or other proprietary rights, except Customer's non-exclusive right to use such intellectual property solely for the purpose of, and only to the extent necessary for, use of the Product in accordance with T&R's specifications or use documentation.

12. Transfer. In the event Customer sells, assigns or otherwise transfers a Product or any right or interest therein to a third party, such third party shall be bound by these Terms in the same manner as Customer. In the event such third party is for any reason determined to not be bound by these Terms, Customer shall indemnify, defend and hold harmless T&R from and against all liability of T&R to such transferee or any subsequent transferee in excess of what T&R's liability would have been if such transferee had been bound by these Terms in the same manner as Customer.

13. Title; Risk of Loss. Title to the Products will pass to Customer at the point of delivery to Customer. Risk of loss of the Products will pass to Customer upon the earlier of the invoicing date or the date of delivery to Customer. Until such time as Customer has paid T&R in full for a Product, Customer shall perform all acts necessary to protect the Product free of claims, demands, liens and encumbrances, to insure the Product for its full replacement value at Customer's expense, and, to the extent Customer owes T&R any amount under the purchase order, hold the proceeds of any insurance claim in respect of the Product in trust for T&R.

Without prejudice to any other remedy or right of T&R, if Customer fails to timely pay for a Product delivered to Customer, T&R may take possession of the Product and sell it. Customer irrevocably authorizes T&R or its agents to enter any premises owned, leased or otherwise occupied by Customer for the purpose of taking possession of the Product. If T&R takes possession of and sells a Product, Customer continues to be liable to T&R for an amount equal to the aggregate of the unpaid amounts and costs and expenses incurred by T&R in taking possession of, transporting, storing and selling the Product, less an amount equal to the proceeds of the sale.

14. Contract Variations. The following terms apply to purchase order variations.

Drawing Approval and Changes: If Customer approval of drawings is required, such review, comment or approval must be received by T&R no later than 14 calendar days after submittal of drawings by T&R to Customer. If Customer fails to meet this requirement, or if the Product has not otherwise been released to production within 30 calendar days of written order acknowledgement by T&R, the order shall be subject to adjustment of price and shipment terms. Where Customer's specifications are not sufficiently detailed, T&R reserves the right to design the Product in accordance with T&R's professional judgment and good commercial practices. If at any time Customer makes changes to a design as covered in Customer's specifications, the order shall be subject to adjustment of price and shipment terms to reasonably cover any additional costs and commitments caused by the change.

Hold: An order placed on hold by Customer for any reason, or by T&R while awaiting payment of overdue invoices, will be taken out of the production schedule. If/when the hold is removed, the order will be rescheduled from that subsequent release date at the then prevailing lead-time, and Customer shall be responsible for all additional costs and expenses associated therewith.

Change Order: A change order submitted by Customer for a previously acknowledged purchase order is subject to additional charges. Changes to purchase orders that have not been released for production are subject to price adjustments for changes to the Products and the costs of technical and administrative services, as well as applicable material and/or restocking costs. Changes made to purchase orders that have been released to production are subject to these same price adjustments, plus \$500 per change for production disruption and inefficiency costs. Lead-time extensions may result, depending on the nature of the changes.

Customer Supplied Material: In the event T&R agrees to install Customer-supplied material, the following additional terms shall apply:

- (i) T&R will not be responsible for delays in shipment caused by delays in the receipt of Customer-supplied material. Such delays will be subject to possible price adjustments due to Customer-induced delays and disruptions.
 - (ii) Customer shall supply T&R all applicable technical data and drawings, in sufficient detail as determined by T&R, at time of order entry, so as to ensure the Product design can be made to accommodate form, fit, function and interface with Customer-supplied material.
 - (iii) Failure by Customer to supply the correct material per the detailed technical data supplied at the time of order may result in delays in shipment and price adjustments.
- T&R will not be responsible for Customer-supplied material that is inferior, damaged or defective. In such an event, delays in shipment may result and shall be subject to price adjustments in favor of T&R.

Service Conditions: Liquid-filled transformer products supplied by T&R shall be suitable for operation within the "usual service conditions" as defined in IEEE Standard C57.12.00, Section 4.1. These usual service conditions include, without limitation, the following:

- (i) The transformer is designed for step down duty.

- (ii) The transformer is designed for operation at the rated kVA, at 3300 feet altitude, without exceeding temperature limits, provided the average temperature of the ambient air does not exceed the limits as listed below. The dielectric strength of the bushings and arrestors will be suitable to allow satisfactory operation at 3300 feet.
 - (iii) The temperature of the ambient air may not exceed 40 degrees C at any one time and the average temperature of the ambient air, for any 24 hour period, may not exceed 30 degrees C.
 - (iv) The input voltage when applied to any rated tap, at rated frequency, may not result in an output voltage greater than 110% at no load, and 105% at rated output load. The output load power factor must be 80% or better.
 - (v) When unusual or special service conditions occur or exist, such as damaging or explosive vapors, abnormal vibrations, shocks, transportation or storage conditions, poor wave form, unbalanced voltage, or planned regular short circuits, or service conditions other than those described in (i), (ii), (iii) or (iv) above, it is the responsibility of Customer to bring these conditions to the attention of T&R at the time a quotation is requested by Customer.
- Failure by Customer to expressly provide advance notice to T&R of any unusual or special service conditions which do not meet the above shall render the Product warranty void.

15. Termination by Customer. An order or contract may be terminated by Customer only by written notice to T&R and upon payment to T&R of the termination charges described in this section, which must be paid with 30 days of the notice of termination.

Where the order is in process, but the Product is not released for manufacture, cancellation charges paid by Customer to T&R shall equal the cost of materials that are not useable on other orders, plus 20% of the price of the Product noted on the purchase order.

Where the order is in process and the Product is released for manufacture, the following charges shall be paid by Customer to T&R, based on stage of production:

- If engineering is complete, 25% of the Product price
- If purchasing is complete, 50% of the Product price
- If materials have been received by T&R, 75% of the Product price
- Within six weeks of acknowledged date of shipment, 100% of the Product price

16. Suspension by Customer. Any order held or delayed or rescheduled at the request of Customer shall be subject to the prices and conditions of sale in effect at the time of the release of the hold or reschedule. Any such order held or delayed beyond 30 calendar days will be treated as a Customer termination pursuant to Section 15 (Termination by Customer).

17. Delayed Shipment; Storage. When a Product is ready for shipment and shipment cannot be made because of reasons beyond T&R's control, T&R shall submit an invoice for the Product due and payable in accordance with the agreed payment terms, and T&R, upon written notice to Customer, shall store the Product, subject to the terms of this section.

Notwithstanding anything to the contrary herein, risk of loss of the Product shall pass to Customer upon moving the Product to storage. All expenses incurred by T&R in connection with the storage of the Product, including demurrage, cost of preparation for storage, storage charges, insurance and handling charges, shall be payable by Customer upon submission of invoices by T&R.

T&R, in its sole discretion, may agree to store completed Products for a maximum of two weeks at no additional charge on a space available basis, with the understanding and the hereby expressed consent of Customer that the date of invoice will be the date the Product was originally scheduled to ship and that payment terms will not be changed. After such two-week timeframe, a storage charge of \$250 per Product per week, or part thereof, will be assessed and billed monthly to Customer.

18. Termination by T&R. T&R shall have the right to terminate an order at any time in the event Customer breaches these Terms. T&R shall notify Customer of termination by written notice.

19. Returning of Product. No Product may be returned to T&R by Customer, except with the prior written agreement of T&R and subject to the terms specified therein by T&R.

20. Product Notices. Customer shall provide the end-user of a Product with all T&R-supplied Product and patent notices, warnings, instructions, recommendations and similar materials. Under no circumstances shall Customer or the end-user remove any such information which may be affixed to the Product or to the related materials shipped with the Product.

21. United States Export Controls. Customer acknowledges that the Products and all documentation and other technical information delivered pursuant to these Terms is subject to export controls under U.S. laws, including but not limited to the Export Administration Act and the regulations promulgated thereunder. Customer shall comply with all legal requirements established under these controls and cooperate fully with T&R in any official or unofficial audit or inspection that relates to these controls. Customer shall not export, re-export, divert or transfer, directly or indirectly, the Products or any documentation or other technical information delivered pursuant to these Terms to any country, or to the nationals of any country, which the U.S. government determines is a country to which such export, re-export, diversion, transfer or disclosure is restricted. Customer shall defend, indemnify and hold harmless T&R from and against any claims, liability and expenses arising from or related to any breach of this section by Customer. T&R's obligation to deliver the Products to Customer is conditioned upon Customer's attainment of all required licenses and permits.

22. Testing and Acceptance of Goods. Testing of the Products before shipment is done in accordance with T&R's standard factory test procedures. Upon Customer's request, T&R will provide test reports for the Products. In the event Customer requests testing other than T&R's standard factory tests and/or requests witness testing and/or inspections, Customer shall pay for all such additional testing, witness costs, and all associated charges.

23. Severability. If any provision of these Terms is found to be in violation of law or unenforceable, the remainder of these Terms shall remain in full force and effect.

24. No Assignment. Neither these Terms nor any rights, interest or benefits of Customer hereunder may be assigned by Customer to any other party, except upon the prior written consent of T&R.

25. Disputes; Choice of Law; Venue. If any dispute arises under these Terms between Customer and T&R, no action, suit, arbitration or other proceeding may be commenced before the parties have attempted to resolve the dispute pursuant to mediation, unless immediate injunctive relief is being sought. The validity, performance, construction, and effect of any purchase order which is subject to

these Terms shall be governed by the laws of the State of South Dakota, without regard to its choice of law rules or those of any other jurisdiction. The parties agree that the United Nations Convention on Contracts for the International Sale of Goods shall not apply to any Products sold by T&R to Customer or any agreement or dispute between the parties. The sole and exclusive jurisdiction and venue for any legal action arising from or related to a dispute between T&R and Customer with respect to the Products, a purchase order, these Terms or any related matter shall be in the federal or state courts located in the State of South Dakota, and the parties consent to such jurisdiction and venue.

Three Phase 500 KVA Padmount

Primary: 13800Y/7970

Secondary: 208Y/120

Taps 2x2.5% Above and Below Normal

Impedance: 4.2

Weight: 5000

Make: RTE

Dimensions

Cabinet Width: 49"

Primary Cabinet Width: 29"

Secondary Cabinet Width: 20"

Cabinet Depth: 21"

Cabinet and Tank Depth: 50"

Overall Depth: 58"

Tank Width: 47"

Tank Depth: 29"

Left Cooling Fin: 8"

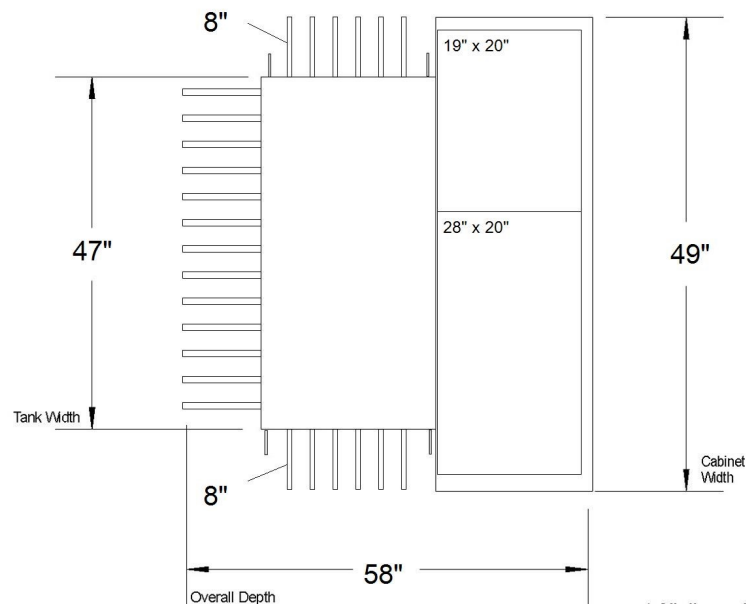
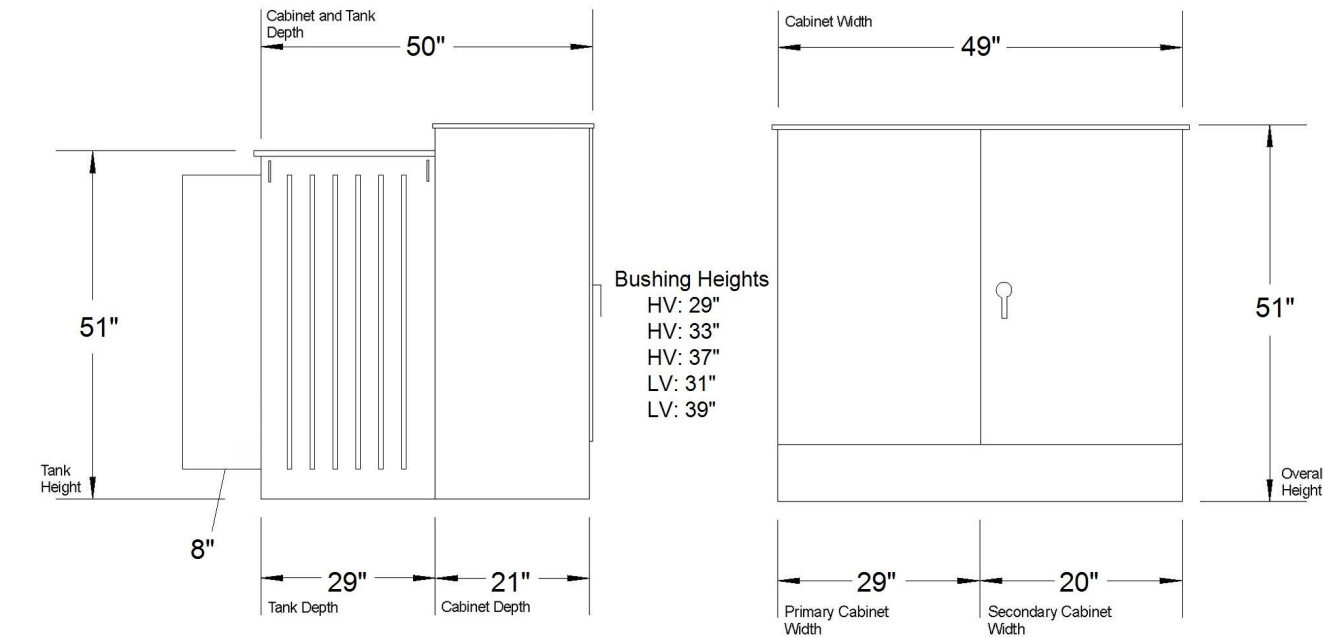
Right Cooling Fin: 8"

Back Cooling Fin: 8"

Overall Width: 63"

Cabinet Height: 51"

Tank Height: 51"



* All dimensions are approximate and should not be used for engineering purposes.
* Style of transformer and fins may vary from what is shown.



www.trelectric.com

Toll Free: 800-843-7994

Local: 605-534-3555

Fax: 605-534-3861

Three Phase 500 KVA Padmount

Primary: 13800Y/7970

Secondary: 208Y/120

Taps 2x2.5% Above and Below Normal

Stock Number

M872FW

Record ID

728768

Scale

NTS

Sales

sales@trelectric.com

11/10/2023



Transformer Re-wind/Re-condition Process Outline

- 1.) Brought into shop & unloaded
- 2.) Visual Inspection
 - a. Once unloaded in the shop, a visual inspection is done to check for any failed components (bushings, radiators, etc.) that may require immediate attention.
- 3.) Preliminary testing (if applicable)
 - a. In the case that it is unknown whether a unit needs to be repaired or must undergo a complete re-wind, preliminary testing is done to help determine the initial condition of the transformer.
 - b. The preliminary tests performed will depend on information gathered from the customer about the exposure/operation of the transformer and its condition.
 - i. Preliminary tests for this purpose can include (but are not limited to):
 1. Winding Resistance
 2. Winding Insulation Resistance
 3. Turns Ratio
 4. Core Insulation Resistance (core Ground)
 5. Insulation Power Factor (Moisture)
 6. Bushing Power Factor
 7. Sweep Frequency

At this point the transformer will be classified as either a re-condition or a re-wind – see the steps below for each scenario.

Re-condition

- 1.) If preliminary testing indicates that no further inspection is necessary, skip to step 4, otherwise continue on.
- 2.) Cut & Pull
 - a. The oil will be drained from the transformer, the lid will be cut off and the core/coils will be removed.
- 3.) Core/coil/lead structure inspection/evaluation
 - a. The core, coils and lead structure will be inspected for any defects, such as: insulation breakdown, core ground issues, structural failure, and clearance issues.

4.) Recommendations

- a. Based on the preliminary testing and/or evaluations T&R will make recommendations to the customer of any repair work needed to the unit.

5.) Repair unit

- a. Any repair work needed will be performed, including, but not limited to: tank fabrication, bushing repair/replacement, gauges, radiators, lead structure, core/coils, tap changer(s), and fans.

6.) Tanking

- a. The core/coils are then put back into the tank.

7.) New mineral oil

- a. The oil will be VAC processed back into the unit (if applicable, and according to the suitability of the tank).

8.) Testing

- a. The transformer will then be tested according to the latest ANSI/IEEE standards and/or T&R's standard process for testing re-condition units (see attached) and any specific tests requested by the customer.

9.) The unit will then be sanded/sandblasted and painted with ANSI 70 paint.

Re-wind

1.) Cut & Pull

- a. The oil will be drained from the transformer, the lid will be cut off and the core/coils will be removed.

2.) Data Collection

- a. All of the necessary data and measurements needed for the design process will be gathered.

3.) Dress down (disassembly)

- a. The core, coils and lead structured will all be dis-assembled.
 - i. The frame, lead structure, and tap changer will be removed and the core steel will be un-stacked (if necessary).
 - ii. The coils will be removed from the core steel.

4.) Design

- a. The transformer will be designed using the most recent ANSI/IEEE design standards and will account for any specific requirements as requested by the customer.
- b. Unless otherwise specified by customer, all re-wind designs are composed of new copper windings and insulation.

5.) RFQ materials

- a. T&R uses a variety of vendors for all new materials (copper, insulation, tap changers, gauges, etc.)

6.) Winding coils

- a. T&R has greatly experienced winders that specialize in all types of coil designs (layer, helical, disc, etc.).
- b. Quality assurance checks are made each step of the winding process to ensure accuracy and workmanship.

7.) Sizing Coils

- a. With winding complete, the coils are sized accordingly and prepared for the oven.

8.) Baking coils

- a. The coils are put in the oven for the specified amount of time to remove any moisture and improve the overall power factor (dissipation factor) of the transformer.

9.) Tank Fabrication

- a. The tank is leak checked and any/all radiators are checked for sufficient oil flow and fixed or replaced if needed.

10.) Core preparation

- a. The core is cleaned and baked (if necessary); the core insulation resistance is verified.

11.) Assembly

- a. The coils are landed onto the core and the steel is re-stacked.
- b. A TTR test is done at “half-stack” to verify accuracy of all voltages.
- c. A new lead structure is put into place using all new materials and utilizing the most recent clearance standards pertaining to the appropriate BIL of the transformer.
- d. During the assembly process, the core insulation resistance is checked several times to ensure sufficient results throughout.

12.) Tanking

- a. The core/coils are then put back into the tank.

13.) New mineral oil

- a. The oil will be VAC processed back into the unit (if applicable, and according to the suitability of the tank).

14.) Testing

- a. The transformer will then be tested according to the latest ANSI/IEEE standards and/or T&R's standard process for testing re-wind units (see attached) and any specific tests requested by the customer.

15.) The unit will then be sanded/sandblasted and painted with ANSI 70 paint.



SHOP DRAWING REVIEW

PROJECT NAME

WSC Morey Hall Electrical Upgrades

ETI PROJECT#

2023-163

SPEC. SECTION

261416

SUBMITTAL
NUMBER:

001

EQUIPMENT BEING REVIEWED

Distribution Panels

Shop drawing review applies to design arrangement and interpretation and does not relieve the Contractor of responsibility for adherence to the Contract Documents or for accuracy of details, dimensions, or quantities. Contractor is responsible for dimensions to be confirmed and coordinated at the job site, for information that pertains solely to the fabrication processes or to techniques or construction, and for all changes required in other trades to accommodate substituted equipment or materials which have been given prior approval to bid.

APPROVAL STATUS:

A. REVIEWED WITH NO COMMENTS

☒

See Note(s): 1

B. REVIEWED WITH COMMENTS

☐

See Note(s):

C. REVIEWED WITH COMMENTS, **RESUBMIT**☐

See Note(s):

D. REJECTED, **RESUBMIT**☐

See Note(s):

REVIEWED BY:

Andy Wiese

DATE:

12.06.2023

Notes on items included in this submittal:

1. Distribution Panels: No exceptions taken.



Engineering Submittal

PANELBOARDS

QUOTE # Q-4526817

MOREY HALL SERVICE UPGRADE

Wayne, NE

**Wayne State College
Wayne, NE**

Prepared By:

Jeremiah Johnson
600 W 7th St
Sioux City, IA 511034329
jeremiah.johnson@3e-co.com
D:7122020934

Proposal Name: MOREY HALL ELECTRICAL UPGRADES

Quote Name: MOREY HALL ELECTRICAL UPGRADES

Proposal Number: P-231107-4101849

Quote Number: Q-4526817

Quote Date: 12/06/2023

Through Addenda Number: 0

Sales Representative: Jacob Richter

Conditions of Sale

Except as otherwise provided below, this Quotation is subject to Coordinated Project Terms. See <https://www.schneider-electric.us/en/download/document/0100PL0043>

Notwithstanding any provision to the contrary in the referenced Coordinated Project Terms or any other documentation provided in connection with this proposal, this quote is valid for 30 days. Quoted lead times are approximate and subject to change.

Schneider Electric reserves the right to amend, withdraw or otherwise alter this submission without penalty or charge as a result of any event beyond its control arising from or due to the current Covid-19 epidemic or events subsequent to this epidemic / pandemic including changes in laws, regulations, by laws or direction from a competent authority.

TABLE OF CONTENTS

Panelboards

This Section Contains Products: Panelboards

**Proposal Name: MOREY HALL ELECTRICAL
UPGRADES
Quote Name: MOREY HALL ELECTRICAL
UPGRADES**

Quote Number: Q-4526817

Quote Date: 12/06/2023

Seq #	Qty	Product Description
1	1	Designation : MDPN

Product Details:

1-I-Line MB Panel (INTERIOR)-I-Line Panelboard
Consisting of
208Y/120V 3Ph 4W 60Hz SCCR: 35kA
Fully Rated
Suitable For Use As Service Entrance UL
Single Main: 1000AS/1000AT/3P RG Circuit
Breaker 100% Rated
Main Trip Function: LSI
Main Trip Unit: Standard Trip Unit
Incoming Conductors: 1 - (4) 3/0 - 600 kcmil
AL Ground Bar
Bus: 1200A Rated Copper: Tin Plated
108" of Mounting Inches
Type 1,Box: 86H x 49W x 9.5D
Incoming: Bottom Trim: Four-Piece Surface
Box Cat No: HC4486DBL5 Front Cat No: HCR86TSL5
Ref. Drawing: PBA414 Type: HCR-U
Feeders:
1 - 400A/3P LA Prepared Space
2 - 400AS/400AT/3P LG Std. LSI 80%
1 - 60A/3P BG
2 - 100A/3P BG Prepared Space
2 - 100A/3P QG
3 - 200A/3P JG Prepared Space
2 - 250A/3P JG Prepared Space
Optional Features:
Standard Panel (Box Ahead),Increase Left
Gutter 5",Standard Solid
Neutral,Standard Ground Bar,Standard
Mains and Feeders Mechanically
Restrained
1-HC4486DBL5 (BOX)-I-Line Standard TYPE 1 Box 86 H
1-HCR86TSL5-HCR SURFACE TRIM 5 EXT LEFT

Seq #	Qty	Product Description
2	1	Designation : MDPS

Product Details:

1-I-Line MB Panel (INTERIOR)-I-Line Panelboard
Consisting of
208Y/120V 3Ph 4W 60Hz SCCR: 35kA
Fully Rated
Suitable For Use As Service Entrance UL
Single Main: 1000AS/1000AT/3P RG Circuit
Breaker 100% Rated
Main Trip Function: LSI
Main Trip Unit: Standard Trip Unit
Incoming Conductors: 1 - (4) 3/0 - 600 kcmil
AL Ground Bar
Bus: 1200A Rated Copper: Tin Plated
108" of Mounting Inches
Type 1,Box: 86H x 49W x 9.5D
Incoming: Bottom Trim: Four-Piece Surface
Box Cat No: HC4486DBL5 Front Cat No: HCR86TSL5
Ref. Drawing: PBA414 Type: HCR-U
Feeders:
1 - 60A/3P BG
1 - 400A/3P LA Prepared Space
2 - 100A/3P BG Prepared Space
4 - 100A/3P BG
2 - 200A/3P QG Prepared Space
2 - 200A/3P QG
2 - 250A/3P JG Prepared Space
Optional Features:

**Proposal Name: MOREY HALL ELECTRICAL
UPGRADES
Quote Name: MOREY HALL ELECTRICAL
UPGRADES**

Quote Number: Q-4526817

Quote Date: 12/06/2023

Standard Panel (Box Ahead),Increase Left
Gutter 5",Standard Solid
Neutral,Standard Ground Bar,Standard
Mains and Feeders Mechanically
Restrained
1-HC4486DBL5 (BOX)-I-Line Standard TYPE 1 Box 86 H
1-HCR86TSL5-HCR SURFACE TRIM 5 EXT LEFT

REV	DESCRIPTION	BY	DATE	---	---	---	---	---	---
---	---	---	---	---	---	---	---	---	---

CKT NO	ACCESSORIES	TYPE	RATING AMP/P	PHASE BUS CONN	PHASE BUS CONN	RATING AMP/P	TYPE	ACCESSORIES	CKT NO
	4.50" BLANK								
	4.50" BLANK								
	4.50" BLANK								
	4.50" BLANK								
	4.50" BLANK								
	4.50" BLANK								
	1.50" BLANK								
1		BG	60/3	A B C					
3	PS (1) 4.50" FP (1) 1.50" FP	LA	400/3	A B C					
	BRANCH MOUNTED MAIN Std. LSI 100%	RG	1000AS 1000AT/3	A B C					

54.00"
MOUNTING
EACH SIDE
MAX FRAME
SIZE
R
ON LEFT
K
ON RIGHT

HCRU
PHASE BUS
FRONT

AØ
BØ
CØ

BACK

C	100 /3	BG	PS 4.50" FP	2
B	100 /3	BG	PS 4.50" FP	4
A	100 /3	BG		6
C	100 /3	BG		8
B	100 /3	BG		10
A	100 /3	BG		12
C	200 /3	QG	PS 4.50" FP	14
B	200 /3	QG	PS 4.50" FP	16
A	200 /3	QG		18
C	200 /3	QG		20
B	250 /3	JG	PS 4.50" FP	22
A	250 /3	JG	PS 4.50" FP	24

PHYSICAL DATA

UL Service Entrance
ENCLOSURE Type 1
Four-Piece Surface
FRONT CAT#: HCR86TSL5
BOX CAT#: HC4486DBL5

DIMENSIONS:
86"(2184mm)Hx49"Wx9.5"(241mm)D
WIRE BENDING SPACE:
TOP – 12.4"(315mm)
BOTTOM – 16.3"(414mm)
LEFT SIDE – 12.5"(318mm)
RIGHT SIDE – 5.2"(132mm)

PBA: 414
Tin Plated
OPTIONAL FEATURES:
ALUMINUM SOLID NEUTRAL
INCREASE LEFT SIDE GUTTER 5"
ALUMINUM GROUND BAR

ELECTRICAL DATA

SYSTEM: 208Y/120V 3Ph 4W 60Hz
System Ampacity: 1000A
35kA SYMS. SCCR
Fully Rated
MAIN: MAIN BREAKER RG 1000AS/1000AT
ACC: STD LSI
Bottom FEED
65kA AIR
INCOMING CONDUCTORS(S) PER NEC, CEC, NOM:
Wire Bending Space:
Phase Lugs:1 – (4) 3/0 – 600 kcmil

-----BRANCH SUMMATION-----
1 – 60A/3P BG
2 – 100A/3P-PS BG
2 – 200A/3P-PS QG
2 – 250A/3P-PS JG
1 – 400A/3P-PS LA
4 – 100A/3P BG
2 – 200A/3P QG

JOB NAME:	MOREY HALL ELECTRICAL UPGRADES	EQUIPMENT DESIGNATION:	MDPS
JOB LOCATION:		EQUIPMENT TYPE:	I-Line (Circuit Breaker Type) PANEL 1 OF 1
DRAWN BY:	(Q2C)	DRAWING TYPE:	ONE LINE DIAGRAM
ENGR:			
DATE:	December 06 2023		
DRAWING STATUS:	QUOTE	DWG#	0Q-4526817-132025571-01
		PG	1 OF 1
		REV	---

Life Is On

SQUARE D[™]

by Schneider Electric



INNOVATIVE DESIGN, SMART BUS TECHNOLOGY, AND SIMPLE INSTALLATION

I-Line panelboards

SMART: DESIGNED FOR EFFICIENT INSTALLATION

Simple: Efficient installation process

- **I-Line breakers**
 - **Main lugs:** Fixed-mounted main lugs are isolated from the branch breaker section for enhanced safety. Lugs are front-removable for ease of wiring. Mechanically connected main lugs mount in the branch circuit area.
 - **Main breakers:** Main lug interiors may be converted to main breaker interiors by simply back feeding a branch-mounted device. All Square D™ by Schneider Electric™ I-Line™ circuit breakers are UL® listed for use as a branch or back feed main device.
 - **Branch breakers:** I-Line breakers can be mounted independently, providing greater flexibility in breaker placement and future scalability. Branches may also be mounted anywhere on the bus stack, unlike conventional panel designs.
- **Breaker connections:** I-Line breaker connections are “blow-on” type, similar to medium-voltage equipment designs. The magnetic forces developed from high-level fault conditions force the jaws together, resulting in a firmer, more secure grip on the bus bar for improved uptime. Heavy-duty jaw connectors are plated to ensure good conductivity at the contact.
- **Breaker mounting:** A screwdriver is all that's needed to mount 15 A through 1,200 A I-Line circuit breakers, making installation fast and easy. Breakers ratchet firmly onto the bus stack with captive retaining screws to secure the circuit breaker to the mounting pan.

Delivery that works for you

- I-Line panelboards are available custom assembled at the factory or ready to install from local distributor stock. Either way, you get the same time-proven design in a complete line of boxes, interiors, fronts, breakers, and accessories on hand when you need them.
- Fast delivery from the factory, and get approval drawings with your Square D quote
 - For even faster service, ask your distributor about in-stock delivery options
 - Available with main lugs or main breakers through 1,200 A
 - Rated 600 Vac and 250 Vdc maximum
 - UL-listed SCCR, suitable for use on systems up to 200,000 RMS symmetrical amps when assembled with appropriately rated main or branch breakers

Cabinets

I-Line panelboard boxes are constructed of code-gauge steel with wiring gutters in accordance with UL and NEMA® standards. Boxes are made of galvanized steel in varying widths, while box sizes have removable end walls. Panelboard fronts are finished with gray baked enamel electrodeposited over clean phosphatized steel and attached with trim screws.

Solid neutral

The solid neutral assembly mounts at the same end of the interior as the main lugs or main breaker, or to the side for panels requiring ground fault. Branch neutral connections are provided for a wide variety of breaker combinations and suitable for copper or aluminum wires. The solid neutral is insulated but can be bonded to the enclosure with a full-capacity bonding strap for service entrance requirements.

Accessories

There is a wide variety of accessories available for field or factory installation into I-Line panelboards.

- Equipment ground bars for termination of equipment grounding conductors.
- Specifically designed QO™ distribution panels mount in I-Line panelboards allowing less expensive QO 15 A – 30 A breakers to feed lighting or receptacle circuits from I-Line panelboards applied on 240 V systems.
- UL-listed box extensions for additional wire bending space.
- Blank fillers and extensions are required to fill unused circuit breaker mounting space in I-Line panelboards and switchboards. Specially engineered blank fillers are used with PowerPact™ with Micrologic™ breakers to ensure easy visibility for metered data on the LCD screen.



SMART: BUILT-IN COMMUNICATION CAPABILITIES

PowerPact with Micrologic I-Line breakers

PowerPact with Micrologic breakers provide a smart, safe, and simple solution to the I-Line portfolio. These circuit breakers are available as a main breaker or branch breaker in Standard, Ammeter, and Energy electronic trip options.

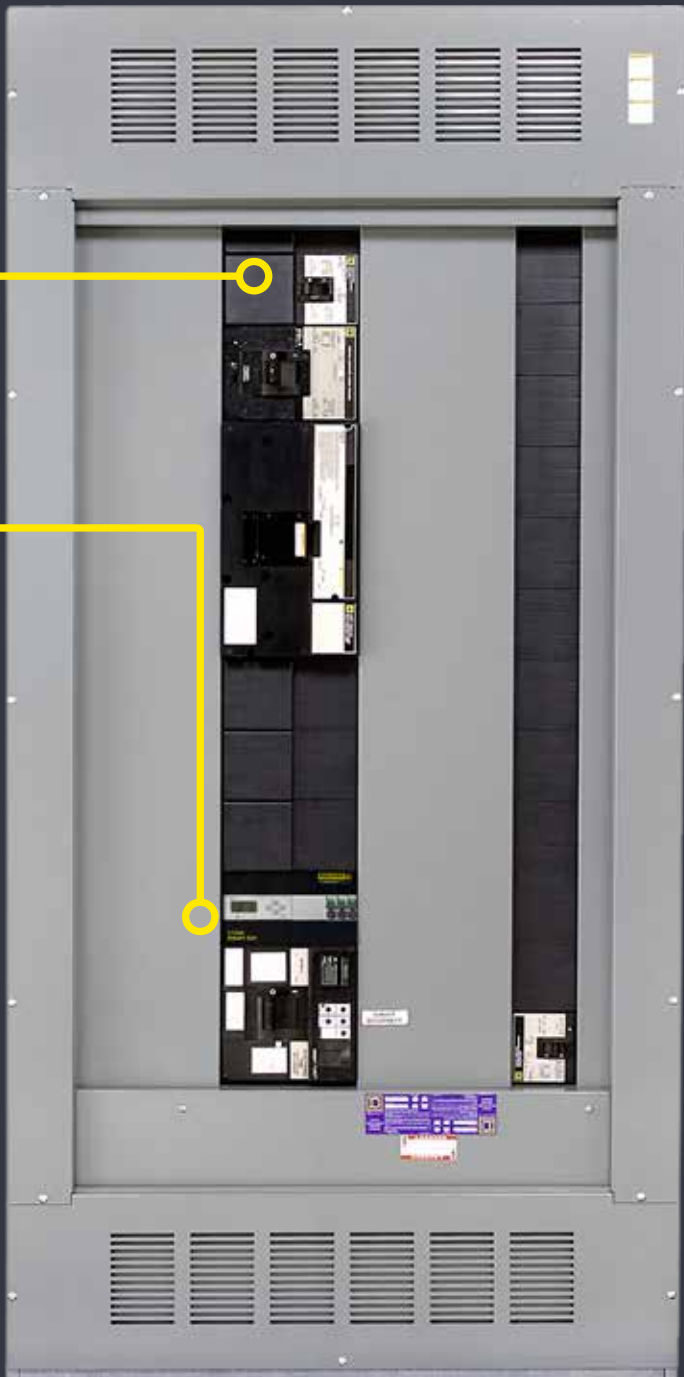
Smart Systems for electrical distribution

Schneider Electric Smart Systems brings digital communications to Square D I-Line panelboards, providing robust communication to breakers for status, metering, and energy trending — both locally and remotely.

Smart Systems uses Ethernet connectivity to send and receive data from PowerPact with Micrologic molded case circuit breakers.

This energy and status data is essential for promoting uptime and energy monitoring in a wide variety of power applications. Preconfigured email alerts can warn of urgent building performance issues or simple circuit breaker maintenance events.

Embedded web pages give users the ability to monitor and troubleshoot electrical distribution panels with only a PC and a Web browser. Breaker data can also be integrated into enterprise-level software.



I-LINE CIRCUIT BREAKERS — THE HEART OF ANY PANELBOARD

With a choice among thermal-magnetic circuit breakers and standard or advanced electronic trip unit circuit breakers, select the PowerPact circuit breakers that are right for the job.

Thermal-magnetic molded case circuit breakers

- Most common design; automatically opens circuit when it's overloaded or short-circuited.
- Uses bimetals and electromagnetic assemblies to provide protection.
- Ideal for applications where overload conditions are concern.

Standard electronic trip circuit breakers

- Provide long-time, short-time, and instantaneous trip protection.
- Allow the user to easily adjust settings of the circuit breaker per specific system requirements.

Advanced electronic trip circuit breakers

- Add communications and power metering and monitoring capabilities.
- Trip units allow the circuit breaker to communicate over modbus serial and Ethernet systems. These advanced trip units gather power information, monitor events, and provide the ability for predictive maintenance. These actions can help you reduce electrical operating costs.

SPACE-SAVING MODULE FOR VALUE-ADDED DIGITAL SOLUTIONS



The modular I-Line Smart Cell enables value-added solutions in I-Line panelboards in a variety of combinations. The space-saving unit fits into the I-Line bus in place of a breaker, and allows the I-Line panelboard to be transformed into a digital communication or metered electrical distribution solution.

The space-saving design means neither the box extension nor a sidecar is required to add communications. The I-Line Smart Cell fits into the I-Line bus in place of a breaker, and a screwdriver is all that's needed to mount the modular device.

The I-Line Smart Cell is available with these value-added solutions:

Smart Systems Communications facilitates Ethernet-connected electrical distribution devices to help customers reduce downtime, manage energy use, and improve operational efficiency. Smart Systems features real-time monitoring of Square D PowerPact with Micrologic circuit breakers, as well as a variety of other power distribution and monitoring devices.

The solution collects data in real time and can send configurable email alerts to allow remote monitoring. The data can be used to pinpoint and immediately address troublesome areas and help facilitate a predictive maintenance program.

Smart Systems includes the IFE Interface, which uses fast and reliable Ethernet connectivity to access breaker status, meter data, and energy trending, as well as send email alerts and control a breaker's on/off status (optional). The IFE works along with IFM serial interfaces to communicate with multiple circuit breakers.

The EM3555 with modbus or EM3560 with BACnet™ can be easily and conveniently installed in an I-Line panelboard. The EM3500 series DIN Rail meters have ANSI 12.20 0.2% accuracy, rated up to 600 Vac, and use Low-Voltage Current Transducers (LVCT).

The EM3555 modbus serial with logging includes bidirectional monitoring, real energy output, and phase loss alarm output. The EM3560 BACnet MS/TP with logging includes pulse inputs for WAGES.

Energy Reduction Maintenance Setting (ERMS) meets NEC 2014 code (Section 240.87) requirements to reduce arc energy during maintenance to improve electrical contractor safety. ERMS trip setting offers electronic adjustability for coordination.



EM3555 meter shown installed in I-Line. The larger I-Line Smart Cell is the new Smart Systems Communications.



Our mission is simple: To help electrical contractors deliver optimal solutions to their customers in an efficient, time-effective manner. We do that by offering innovative, world-class products of proven quality and reliability. You do business in a complex, ever-changing world. To stay competitive, you need to **THINK SQUARE D.**

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Schneider Electric USA

North American Division
Boston One Campus
800 Federal Street
Andover, MA 01810
888-SquareD (888-778-2733)
www.schneider-electric.com/us



SHOP DRAWING REVIEW

PROJECT NAME

WSC Morey Hall Electrical Upgrades

ETI PROJECT#

2023-163

SPEC. SECTION

261416

SUBMITTAL
NUMBER:

002

EQUIPMENT BEING REVIEWED

Panelboards

Shop drawing review applies to design arrangement and interpretation and does not relieve the Contractor of responsibility for adherence to the Contract Documents or for accuracy of details, dimensions, or quantities. Contractor is responsible for dimensions to be confirmed and coordinated at the job site, for information that pertains solely to the fabrication processes or to techniques or construction, and for all changes required in other trades to accommodate substituted equipment or materials which have been given prior approval to bid.

APPROVAL STATUS:

A. REVIEWED WITH NO COMMENTS

☐

See Note(s):

B. REVIEWED WITH COMMENTS

☒

See Note(s): 1

C. REVIEWED WITH COMMENTS, **RESUBMIT**☐

See Note(s):

D. REJECTED, **RESUBMIT**☐

See Note(s):

REVIEWED BY:

Andy Wiese

DATE:

01.07.2024

Notes on items included in this submittal:

1. Panelboards:
 - A. BPS1, BPS2, BPN1:
 1. Modify main incoming feed to be top fed.

Prepared By:

Jeremiah Johnson
600 W 7th St
Sioux City, IA 511034329
jeremiah.johnson@3e-co.com
D:7122020934

Proposal Name: WSC MOREY HALL AC PANEL UPGRADES

Quote Name: WSC MOREY HALL AC PANEL UPGRADES

Proposal Number: P-231205-4154062

Quote Number: Q-4590391

Quote Date: 12/06/2023

Through Addenda Number: 0

Sales Representative: Jacob Richter

Conditions of Sale

Except as otherwise provided below, this Quotation is subject to Coordinated Project Terms. See <https://www.schneider-electric.us/en/download/document/0100PL0043>

Notwithstanding any provision to the contrary in the referenced Coordinated Project Terms or any other documentation provided in connection with this proposal, this quote is valid for 30 days. Quoted lead times are approximate and subject to change.

Schneider Electric reserves the right to amend, withdraw or otherwise alter this submission without penalty or charge as a result of any event beyond its control arising from or due to the current Covid-19 epidemic or events subsequent to this epidemic / pandemic including changes in laws, regulations, by laws or direction from a competent authority.

TABLE OF CONTENTS

Panelboards

This Section Contains Products: Panelboards

Proposal Name: WSC MOREY HALL AC PANEL
UPGRADES
Quote Name: WSC MOREY HALL AC PANEL
UPGRADES

Quote Number: Q-4590391

Quote Date: 12/06/2023

Seq #	Qty	Product Description
1	1	<p>Designation : BPS1</p> <p>Product Details: 1-NQ ML Panel (INTERIOR) - A-NQ Panelboard Consisting of 208Y/120V 3Ph 4W 60Hz SCCR: 10kA Fully Rated Main Lug Only: 225A Main Acc: Sub-Feed Lugs Incoming Conductors: 1 - (2) 1/0 - 350 kcmil AL Ground Bar Bus: 225A Rated Copper: Silver/Tin Plated 42 Circuit Interior Type 1,Box: 44H x 20W x 5.75D Incoming: Bottom Trim: Surface - Hinged Box Cat No: MH44BE Front Cat No: NC44SHR Ref. Drawing: PBA701HR Feeders: 42 - 20A/1P QOB-CAFI Optional Features: Standard Panel (Box Ahead),Blank Endwalls,Same Height Boxes,Standard Solid Neutral,Standard Ground Bar Branch User Placement 1-MH44BE-PANELBOARD ENCLOSURE/BOX TYPE 1 44H 20W 1-NC44SHR-PNLBD COVER/TRIM NF T-1 S 44H 20W 1-NQ ML Panel (INTERIOR) - B-NQ Panelboard Consisting of 208Y/120V 3Ph 4W 60Hz SCCR: 10kA Fully Rated Main Lug Only: 225A Incoming Conductors: 1 - (2) 1/0 - 350 kcmil AL Ground Bar Bus: 225A Rated Copper: Silver/Tin Plated 42 Circuit Interior Type 1,Box: 44H x 20W x 5.75D Incoming: Bottom Trim: Surface - Hinged Box Cat No: MH44BE Front Cat No: NC44SHR Ref. Drawing: PBA701HR Feeders: 42 - 20A/1P QOB-CAFI Optional Features: Standard Panel (Box Ahead),Blank Endwalls,Same Height Boxes,Standard Solid Neutral,Standard Ground Bar Branch User Placement 1-MH44BE-PANELBOARD ENCLOSURE/BOX TYPE 1 44H 20W 1-NC44SHR-PNLBD COVER/TRIM NF T-1 S 44H 20W</p>
2	1	<p>Designation : BPS2</p> <p>Product Details: 1-NQ ML Panel (INTERIOR) - A-NQ Panelboard Consisting of 208Y/120V 3Ph 4W 60Hz SCCR: 22kA Fully Rated Main Lug Only: 225A Main Acc: Sub-Feed Lugs Incoming Conductors: 1 - (2) 1/0 - 350 kcmil AL Ground Bar Bus: 225A Rated Copper: Silver/Tin Plated 42 Circuit Interior Type 1,Box: 44H x 20W x 5.75D Incoming: Bottom Trim: Surface - Hinged Box Cat No: MH44BE Front Cat No: NC44SHR Ref. Drawing: PBA701HR</p>

Feeders:
42 - 20A/1P QOB-VH-CAFI
Optional Features:
Standard Panel (Box Ahead),Blank
Endwalls,Same Height Boxes,Standard
Solid Neutral,Standard Ground Bar
Branch User Placement
1-MH44BE-PANELBOARD ENCLOSURE/BOX TYPE 1 44H 20W
1-NC44SHR-PNLBD COVER/TRIM NF T-1 S 44H 20W
1-NQ ML Panel (INTERIOR) - B-NQ Panelboard
Consisting of
208Y/120V 3Ph 4W 60Hz SCCR: 22kA
Fully Rated
Main Lug Only: 225A
Incoming Conductors: 1 - (2) 1/0 - 350 kcmil
AL Ground Bar
Bus: 225A Rated Copper: Silver/Tin Plated
42 Circuit Interior
Type 1,Box: 44H x 20W x 5.75D
Incoming: Bottom Trim: Surface - Hinged
Box Cat No: MH44BE Front Cat No: NC44SHR
Ref. Drawing: PBA701HR
Feeders:
42 - 20A/1P QOB-VH-CAFI
Optional Features:
Standard Panel (Box Ahead),Blank
Endwalls,Same Height Boxes,Standard
Solid Neutral,Standard Ground Bar
Branch User Placement
1-MH44BE-PANELBOARD ENCLOSURE/BOX TYPE 1 44H 20W
1-NC44SHR-PNLBD COVER/TRIM NF T-1 S 44H 20W

Seq #	Qty	Product Description
3	1	Designation : BPN1 Product Details: 1-NQ ML Panel (INTERIOR) - A-NQ Panelboard Consisting of 208Y/120V 3Ph 4W 60Hz SCCR: 22kA Fully Rated Main Lug Only: 400A Main Acc: Feed Thru Lugs Incoming Conductors: 1 - 1/0 - 750, (2) 1/0 - 350 kcmil AL Ground Bar Bus: 400A Rated Copper: Silver/Tin Plated 42 Circuit Interior Type 1,Box: 56H x 20W x 5.75D Incoming: Bottom Trim: Surface - Hinged Box Cat No: MH56BE Front Cat No: NC56VSHR Ref. Drawing: PBA709HR Feeders: 42 - 20A/1P QOB-VH-CAFI Optional Features: Standard Panel (Box Ahead),Blank Endwalls,Same Height Boxes,Standard Solid Neutral,Standard Ground Bar Branch User Placement 1-MH56BE-PANELBOARD ENCLOSURE/BOX TYPE 1 56H 20W 1-NC56VSHR-PNLBD COVER/TRIM NF T-1 S 56H 20W 1-NQ ML Panel (INTERIOR) - B-NQ Panelboard Consisting of 208Y/120V 3Ph 4W 60Hz SCCR: 22kA Fully Rated Main Lug Only: 400A Main Acc: Feed Thru Lugs

**Proposal Name: WSC MOREY HALL AC PANEL
UPGRADES
Quote Name: WSC MOREY HALL AC PANEL
UPGRADES**

Quote Number: Q-4590391

Quote Date: 12/06/2023

Incoming Conductors: 1 - 1/0 - 750, (2) 1/0 -
350 kcmil
AL Ground Bar
Bus: 400A Rated Copper: Silver/Tin Plated
42 Circuit Interior
Type 1,Box: 56H x 20W x 5.75D
Incoming: Top Trim: Surface - Hinged
Box Cat No: MH56BE Front Cat No: NC56VSHR
Ref. Drawing: PBA709HR
Feeders:
42 - 20A/1P QOB-VH-CAFI
Optional Features:
Standard Panel (Box Ahead),Blank
Endwalls,Same Height Boxes,Standard
Solid Neutral,Standard Ground Bar
Branch User Placement
1-MH56BE-PANELBOARD ENCLOSURE/BOX TYPE 1 56H 20W
1-NC56VSHR-PNLBD COVER/TRIM NF T-1 S 56H 20W
1-NQ ML Panel (INTERIOR) - C-NQ Panelboard
Consisting of
208Y/120V 3Ph 4W 60Hz SCCR: 22kA
Fully Rated
Main Lug Only: 400A
Incoming Conductors: 1 - 1/0 - 750, (2) 1/0 -
350 kcmil
AL Ground Bar
Bus: 400A Rated Copper: Silver/Tin Plated
42 Circuit Interior
Type 1,Box: 56H x 20W x 5.75D
Incoming: Bottom Trim: Surface - Hinged
Box Cat No: MH56BE Front Cat No: NC56VSHR
Ref. Drawing: PBA709HR
Feeders:
42 - 20A/1P QOB-VH-CAFI
Optional Features:
Standard Panel (Box Ahead),Blank
Endwalls,Same Height Boxes,Standard
Solid Neutral,Standard Ground Bar
Branch User Placement
1-MH56BE-PANELBOARD ENCLOSURE/BOX TYPE 1 56H 20W
1-NC56VSHR-PNLBD COVER/TRIM NF T-1 S 56H 20W

REV	DESCRIPTION	BY	DATE	---	---	---	---
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CKT NO	ACCESSORIES	TYPE	RATING AMP/P		RATING AMP/P	TYPE	ACCESSORIES	CKT NO
1		QOB-CAFI	20 / 1		20 / 1	QOB-CAFI		2
3		QOB-CAFI	20 / 1		20 / 1	QOB-CAFI		4
5		QOB-CAFI	20 / 1		20 / 1	QOB-CAFI		6
7		QOB-CAFI	20 / 1		20 / 1	QOB-CAFI		8
9		QOB-CAFI	20 / 1		20 / 1	QOB-CAFI		10
11		QOB-CAFI	20 / 1		20 / 1	QOB-CAFI		12
13		QOB-CAFI	20 / 1		20 / 1	QOB-CAFI		14
15		QOB-CAFI	20 / 1		20 / 1	QOB-CAFI		16
17		QOB-CAFI	20 / 1		20 / 1	QOB-CAFI		18
19		QOB-CAFI	20 / 1		20 / 1	QOB-CAFI		20
21		QOB-CAFI	20 / 1		20 / 1	QOB-CAFI		22
23		QOB-CAFI	20 / 1		20 / 1	QOB-CAFI		24
25		QOB-CAFI	20 / 1		20 / 1	QOB-CAFI		26
27		QOB-CAFI	20 / 1		20 / 1	QOB-CAFI		28
29		QOB-CAFI	20 / 1		20 / 1	QOB-CAFI		30
31		QOB-CAFI	20 / 1		20 / 1	QOB-CAFI		32
33		QOB-CAFI	20 / 1		20 / 1	QOB-CAFI		34
35		QOB-CAFI	20 / 1		20 / 1	QOB-CAFI		36
37		QOB-CAFI	20 / 1		20 / 1	QOB-CAFI		38
39		QOB-CAFI	20 / 1		20 / 1	QOB-CAFI		40
41		QOB-CAFI	20 / 1		20 / 1	QOB-CAFI		42



PHYSICAL DATA

ENCLOSURE Type 1
Surface - Hinged
FRONT CAT#: NC44SHR
BOX CAT#: MH44BE

DIMENSIONS:
44"(1118mm)Hx20"(508mm)Wx5.75"(146mm)D

WIRE BENDING SPACE:
TOP - 17.2"(437)mm
BOTTOM - 9.26"(236)mm
SIDE - 6.13"(156)mm

PBA: 701HR

BUSSING: 225A RATED COPPER BUS
Silver/Tin Plated

OPTIONAL FEATURES:
BRANCH USER PLACEMENT
SAME HEIGHT BOXES
BLANK ENDWALLS
ALUMINUM SOLID NEUTRAL
ALUMINUM GROUND BAR

ELECTRICAL DATA

SYSTEM: 208Y/120V 3Ph 4W 60Hz
System Ampacity: 225A
10kA SYMS. SCCR
Fully Rated

MAIN: MAIN LUGS : 225A
ACC: SUBFEED LUGS
Bottom FEED
INCOMING CONDUCTORS(S) PER NEC, CEC, NOM:
Wire Bending Space:
Phase Lugs:1 - (2) 1/0 - 350 kcmil

-----BRANCH SUMMATION-----
42 - 20A/1P QOB-CAFI

JOB NAME:	WSC MOREY HALL AC PANEL UPGRADES	EQUIPMENT DESIGNATION:	BPS1
JOB LOCATION:		EQUIPMENT TYPE:	NQ (Circuit Breaker Type) PANEL 1 OF 2
DRAWN BY:	(Q2C)	DRAWING TYPE:	ONE LINE DIAGRAM
ENGR:			
DATE:	December 28 2023		
DRAWING STATUS:	QUOTE	DWG#	OQ-4590391-134113854-01
		PG 1	OF 1
		REV	-

REV	DESCRIPTION	BY	DATE	--	---	---	---
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CKT NO	ACCESSORIES	TYPE	RATING AMP/P		RATING AMP/P	TYPE	ACCESSORIES	CKT NO
43		QOB-CAFI	20 / 1		20 / 1	QOB-CAFI		44
45		QOB-CAFI	20 / 1		20 / 1	QOB-CAFI		46
47		QOB-CAFI	20 / 1		20 / 1	QOB-CAFI		48
49		QOB-CAFI	20 / 1		20 / 1	QOB-CAFI		50
51		QOB-CAFI	20 / 1		20 / 1	QOB-CAFI		52
53		QOB-CAFI	20 / 1		20 / 1	QOB-CAFI		54
55		QOB-CAFI	20 / 1		20 / 1	QOB-CAFI		56
57		QOB-CAFI	20 / 1		20 / 1	QOB-CAFI		58
59		QOB-CAFI	20 / 1		20 / 1	QOB-CAFI		60
61		QOB-CAFI	20 / 1		20 / 1	QOB-CAFI		62
63		QOB-CAFI	20 / 1		20 / 1	QOB-CAFI		64
65		QOB-CAFI	20 / 1		20 / 1	QOB-CAFI		66
67		QOB-CAFI	20 / 1		20 / 1	QOB-CAFI		68
69		QOB-CAFI	20 / 1		20 / 1	QOB-CAFI		70
71		QOB-CAFI	20 / 1		20 / 1	QOB-CAFI		72
73		QOB-CAFI	20 / 1		20 / 1	QOB-CAFI		74
75		QOB-CAFI	20 / 1		20 / 1	QOB-CAFI		76
77		QOB-CAFI	20 / 1		20 / 1	QOB-CAFI		78
79		QOB-CAFI	20 / 1		20 / 1	QOB-CAFI		80
81		QOB-CAFI	20 / 1		20 / 1	QOB-CAFI		82
83		QOB-CAFI	20 / 1		20 / 1	QOB-CAFI		84



PHYSICAL DATA

ENCLOSURE Type 1
Surface - Hinged
FRONT CAT#: NC44SHR
BOX CAT#: MH44BE
DIMENSIONS:
44"(1118mm)Hx20"(508mm)Wx5.75"(146mm)D
WIRE BENDING SPACE:
TOP - 5"(127)mm
BOTTOM - 9.26"(236)mm
SIDE - 6.13"(156)mm
PBA: 701HR
BUSSING: 225A RATED COPPER BUS
Silver/Tin Plated
OPTIONAL FEATURES:
BRANCH USER PLACEMENT
SAME HEIGHT BOXES
BLANK ENDWALLS
ALUMINUM SOLID NEUTRAL
ALUMINUM GROUND BAR

ELECTRICAL DATA

SYSTEM: 208Y/120V 3Ph 4W 60Hz
System Ampacity: 225A
10kA SYMS. SCCR
Fully Rated
MAIN: MAIN LUGS : 225A
Bottom FEED
INCOMING CONDUCTORS(S) PER NEC, CEC, NOM:
Wire Bending Space:
Phase Lugs:1 - (2) 1/0 - 350 kcmil
-----BRANCH SUMMATION-----
42 - 20A/1P QOB-CAFI

JOB NAME:	WSC MOREY HALL AC PANEL UPGRADES	EQUIPMENT DESIGNATION:	BPS1
JOB LOCATION:		EQUIPMENT TYPE:	NQ (Circuit Breaker Type) PANEL 2 OF 2
DRAWN BY:	(Q2C)	DRAWING TYPE:	ONE LINE DIAGRAM
ENGR:			
DATE:	December 28 2023		
DRAWING STATUS:	QUOTE	DWG#	OQ-4590391-134113854-02
		PG 1	OF 1
		REV	--

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

CKT NO	ACCESSORIES	TYPE	RATING AMP/P		RATING AMP/P	TYPE	ACCESSORIES	CKT NO
1		QOB-VHCAFI	20 / 1		20 / 1	QOB-VHCAFI		2
3		QOB-VHCAFI	20 / 1		20 / 1	QOB-VHCAFI		4
5		QOB-VHCAFI	20 / 1		20 / 1	QOB-VHCAFI		6
7		QOB-VHCAFI	20 / 1		20 / 1	QOB-VHCAFI		8
9		QOB-VHCAFI	20 / 1		20 / 1	QOB-VHCAFI		10
11		QOB-VHCAFI	20 / 1		20 / 1	QOB-VHCAFI		12
13		QOB-VHCAFI	20 / 1		20 / 1	QOB-VHCAFI		14
15		QOB-VHCAFI	20 / 1		20 / 1	QOB-VHCAFI		16
17		QOB-VHCAFI	20 / 1		20 / 1	QOB-VHCAFI		18
19		QOB-VHCAFI	20 / 1		20 / 1	QOB-VHCAFI		20
21		QOB-VHCAFI	20 / 1		20 / 1	QOB-VHCAFI		22
23		QOB-VHCAFI	20 / 1		20 / 1	QOB-VHCAFI		24
25		QOB-VHCAFI	20 / 1		20 / 1	QOB-VHCAFI		26
27		QOB-VHCAFI	20 / 1		20 / 1	QOB-VHCAFI		28
29		QOB-VHCAFI	20 / 1		20 / 1	QOB-VHCAFI		30
31		QOB-VHCAFI	20 / 1		20 / 1	QOB-VHCAFI		32
33		QOB-VHCAFI	20 / 1		20 / 1	QOB-VHCAFI		34
35		QOB-VHCAFI	20 / 1		20 / 1	QOB-VHCAFI		36
37		QOB-VHCAFI	20 / 1		20 / 1	QOB-VHCAFI		38
39		QOB-VHCAFI	20 / 1		20 / 1	QOB-VHCAFI		40
41		QOB-VHCAFI	20 / 1		20 / 1	QOB-VHCAFI		42



PHYSICAL DATA

ENCLOSURE Type 1
Surface – Hinged
FRONT CAT#: NC44SHR
BOX CAT#: MH44BE
DIMENSIONS:
44”(1118mm)Hx20”(508mm)Wx5.75”(146mm)D
WIRE BENDING SPACE:
TOP – 17.2”(437)mm
BOTTOM – 9.26”(236)mm
SIDE – 6.13”(156)mm
PBA: 701HR
BUSSING: 225A RATED COPPER BUS
Silver/Tin Plated
OPTIONAL FEATURES:
BRANCH USER PLACEMENT
SAME HEIGHT BOXES
BLANK ENDWALLS
ALUMINUM SOLID NEUTRAL
ALUMINUM GROUND BAR

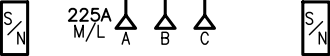
ELECTRICAL DATA

SYSTEM: 208Y/120V 3Ph 4W 60Hz
System Ampacity: 225A
22kA SYMS. SCCR
Fully Rated
MAIN: MAIN LUGS : 225A
ACC: SUBFEED LUGS
Bottom FEED
INCOMING CONDUCTORS(S) PER NEC, CEC, NOM:
Wire Bending Space:
Phase Lugs:1 – (2) 1/0 – 350 kcmil
-----BRANCH SUMMATION-----
42 – 20A/1P QOB-VHCAFI

JOB NAME:	WSC MOREY HALL AC PANEL UPGRADES	EQUIPMENT DESIGNATION:	BPS2
JOB LOCATION:		EQUIPMENT TYPE:	NQ (Circuit Breaker Type) PANEL 1 OF 2
DRAWN BY:	(Q2C)	DRAWING TYPE:	ONE LINE DIAGRAM
ENGR:			
DATE:	December 28 2023		
DRAWING STATUS:	QUOTE	DWG#	0Q-4590391-134114372-01
		PG 1	OF 1
		REV	-

REV	DESCRIPTION	BY	DATE	--	---	---	---
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CKT NO	ACCESSORIES	TYPE	RATING AMP/P		RATING AMP/P	TYPE	ACCESSORIES	CKT NO
43		QOB-VHCAFI	20 / 1		20 / 1	QOB-VHCAFI		44
45		QOB-VHCAFI	20 / 1		20 / 1	QOB-VHCAFI		46
47		QOB-VHCAFI	20 / 1		20 / 1	QOB-VHCAFI		48
49		QOB-VHCAFI	20 / 1		20 / 1	QOB-VHCAFI		50
51		QOB-VHCAFI	20 / 1		20 / 1	QOB-VHCAFI		52
53		QOB-VHCAFI	20 / 1		20 / 1	QOB-VHCAFI		54
55		QOB-VHCAFI	20 / 1		20 / 1	QOB-VHCAFI		56
57		QOB-VHCAFI	20 / 1		20 / 1	QOB-VHCAFI		58
59		QOB-VHCAFI	20 / 1		20 / 1	QOB-VHCAFI		60
61		QOB-VHCAFI	20 / 1		20 / 1	QOB-VHCAFI		62
63		QOB-VHCAFI	20 / 1		20 / 1	QOB-VHCAFI		64
65		QOB-VHCAFI	20 / 1		20 / 1	QOB-VHCAFI		66
67		QOB-VHCAFI	20 / 1		20 / 1	QOB-VHCAFI		68
69		QOB-VHCAFI	20 / 1		20 / 1	QOB-VHCAFI		70
71		QOB-VHCAFI	20 / 1		20 / 1	QOB-VHCAFI		72
73		QOB-VHCAFI	20 / 1		20 / 1	QOB-VHCAFI		74
75		QOB-VHCAFI	20 / 1		20 / 1	QOB-VHCAFI		76
77		QOB-VHCAFI	20 / 1		20 / 1	QOB-VHCAFI		78
79		QOB-VHCAFI	20 / 1		20 / 1	QOB-VHCAFI		80
81		QOB-VHCAFI	20 / 1		20 / 1	QOB-VHCAFI		82
83		QOB-VHCAFI	20 / 1		20 / 1	QOB-VHCAFI		84



PHYSICAL DATA

ENCLOSURE Type 1
Surface – Hinged
FRONT CAT#: NC44SHR
BOX CAT#: MH44BE

DIMENSIONS:
44”(1118mm)Hx20”(508mm)Wx5.75”(146mm)D
WIRE BENDING SPACE:
TOP – 5”(127)mm
BOTTOM – 9.26”(236)mm
SIDE – 6.13”(156)mm
PBA: 701HR
BUSSING: 225A RATED COPPER BUS
Silver/Tin Plated
OPTIONAL FEATURES:
BRANCH USER PLACEMENT
SAME HEIGHT BOXES
BLANK ENDWALLS
ALUMINUM SOLID NEUTRAL
ALUMINUM GROUND BAR

ELECTRICAL DATA

SYSTEM: 208Y/120V 3Ph 4W 60Hz
System Ampacity: 225A
22kA SYMS. SCCR
Fully Rated
MAIN: MAIN LUGS : 225A
Bottom FEED
INCOMING CONDUCTORS(S) PER NEC, CEC, NOM:
Wire Bending Space:
Phase Lugs:1 – (2) 1/0 – 350 kcmil
-----BRANCH SUMMATION-----
42 – 20A/1P QOB-VHCAFI

JOB NAME:	WSC MOREY HALL AC PANEL UPGRADES	EQUIPMENT DESIGNATION:	BPS2
JOB LOCATION:		EQUIPMENT TYPE:	NQ (Circuit Breaker Type) PANEL 2 OF 2
DRAWN BY:	(Q2C)	DRAWING TYPE:	ONE LINE DIAGRAM
ENGR:			
DATE:	December 28 2023		
DRAWING STATUS:	QUOTE	DWG#	OQ-4590391-134114372-02
		PG 1	OF 1
		REV	--

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

CKT NO	ACCESSORIES	TYPE	RATING AMP/P	FTL	RATING AMP/P	TYPE	ACCESSORIES	CKT NO
1		QOB-VHCAFI	20 / 1		20 / 1	QOB-VHCAFI		2
3		QOB-VHCAFI	20 / 1		20 / 1	QOB-VHCAFI		4
5		QOB-VHCAFI	20 / 1		20 / 1	QOB-VHCAFI		6
7		QOB-VHCAFI	20 / 1		20 / 1	QOB-VHCAFI		8
9		QOB-VHCAFI	20 / 1		20 / 1	QOB-VHCAFI		10
11		QOB-VHCAFI	20 / 1		20 / 1	QOB-VHCAFI		12
13		QOB-VHCAFI	20 / 1		20 / 1	QOB-VHCAFI		14
15		QOB-VHCAFI	20 / 1		20 / 1	QOB-VHCAFI		16
17		QOB-VHCAFI	20 / 1		20 / 1	QOB-VHCAFI		18
19		QOB-VHCAFI	20 / 1		20 / 1	QOB-VHCAFI		20
21		QOB-VHCAFI	20 / 1		20 / 1	QOB-VHCAFI		22
23		QOB-VHCAFI	20 / 1		20 / 1	QOB-VHCAFI		24
25		QOB-VHCAFI	20 / 1		20 / 1	QOB-VHCAFI		26
27		QOB-VHCAFI	20 / 1		20 / 1	QOB-VHCAFI		28
29		QOB-VHCAFI	20 / 1		20 / 1	QOB-VHCAFI		30
31		QOB-VHCAFI	20 / 1		20 / 1	QOB-VHCAFI		32
33		QOB-VHCAFI	20 / 1		20 / 1	QOB-VHCAFI		34
35		QOB-VHCAFI	20 / 1		20 / 1	QOB-VHCAFI		36
37		QOB-VHCAFI	20 / 1		20 / 1	QOB-VHCAFI		38
39		QOB-VHCAFI	20 / 1		20 / 1	QOB-VHCAFI		40
41		QOB-VHCAFI	20 / 1		20 / 1	QOB-VHCAFI		42



PHYSICAL DATA

ENCLOSURE Type 1
Surface - Hinged
FRONT CAT#: NC56VSHR
BOX CAT#: MH56BE
DIMENSIONS:
56''(1422mm)Hx20''(508mm)Wx5.75''(146mm)D
WIRE BENDING SPACE:
TOP - 15.6''(397)mm
BOTTOM - 17.1''(435)mm
SIDE - 5.9''(150)mm
PBA: 709HR
BUSSING: 400A RATED COPPER BUS
Silver/Tin Plated
OPTIONAL FEATURES:
BRANCH USER PLACEMENT
SAME HEIGHT BOXES
BLANK ENDWALLS
ALUMINUM SOLID NEUTRAL
ALUMINUM GROUND BAR

ELECTRICAL DATA

SYSTEM: 208Y/120V 3Ph 4W 60Hz
System Ampacity: 400A
22kA SYMS. SCCR
Fully Rated
MAIN: MAIN LUGS : 400A
ACC: FEED THRU LUGS
Bottom FEED
INCOMING CONDUCTORS(S) PER NEC, CEC, NOM:
Wire Bending Space:
Phase Lugs:1 - 1/0 - 750, (2) 1/0 - 350 kcmil
-----BRANCH SUMMATION-----
42 - 20A/1P QOB-VHCAFI

JOB NAME:	WSC MOREY HALL AC PANEL UPGRADES	EQUIPMENT DESIGNATION:	BPN1
JOB LOCATION:		EQUIPMENT TYPE:	NQ (Circuit Breaker Type) PANEL 1 OF 3
DRAWN BY:	(Q2C)	DRAWING TYPE:	ONE LINE DIAGRAM
ENGR:			
DATE:	December 28 2023		
DRAWING STATUS:	QUOTE	DWG#	OQ-4590391-134114625-01
		PG 1	OF 1
		REV	-

REV	DESCRIPTION	BY	DATE	---	---	---	---
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CKT NO	ACCESSORIES	TYPE	RATING AMP/P	S/N	400A M/L	A	B	C	S/N	RATING AMP/P	TYPE	ACCESSORIES	CKT NO
43		QOB-VHCAFI	20 / 1							20 / 1	QOB-VHCAFI		44
45		QOB-VHCAFI	20 / 1							20 / 1	QOB-VHCAFI		46
47		QOB-VHCAFI	20 / 1							20 / 1	QOB-VHCAFI		48
49		QOB-VHCAFI	20 / 1							20 / 1	QOB-VHCAFI		50
51		QOB-VHCAFI	20 / 1							20 / 1	QOB-VHCAFI		52
53		QOB-VHCAFI	20 / 1							20 / 1	QOB-VHCAFI		54
55		QOB-VHCAFI	20 / 1							20 / 1	QOB-VHCAFI		56
57		QOB-VHCAFI	20 / 1							20 / 1	QOB-VHCAFI		58
59		QOB-VHCAFI	20 / 1							20 / 1	QOB-VHCAFI		60
61		QOB-VHCAFI	20 / 1							20 / 1	QOB-VHCAFI		62
63		QOB-VHCAFI	20 / 1							20 / 1	QOB-VHCAFI		64
65		QOB-VHCAFI	20 / 1							20 / 1	QOB-VHCAFI		66
67		QOB-VHCAFI	20 / 1							20 / 1	QOB-VHCAFI		68
69		QOB-VHCAFI	20 / 1							20 / 1	QOB-VHCAFI		70
71		QOB-VHCAFI	20 / 1							20 / 1	QOB-VHCAFI		72
73		QOB-VHCAFI	20 / 1							20 / 1	QOB-VHCAFI		74
75		QOB-VHCAFI	20 / 1							20 / 1	QOB-VHCAFI		76
77		QOB-VHCAFI	20 / 1							20 / 1	QOB-VHCAFI		78
79		QOB-VHCAFI	20 / 1							20 / 1	QOB-VHCAFI		80
81		QOB-VHCAFI	20 / 1							20 / 1	QOB-VHCAFI		82
83		QOB-VHCAFI	20 / 1							20 / 1	QOB-VHCAFI		84

FTL


PHYSICAL DATA

ENCLOSURE Type 1
Surface – Hinged
FRONT CAT#: NC56VSHR
BOX CAT#: MH56BE

DIMENSIONS:
56”(1422mm)Hx20”(508mm)Wx5.75”(146mm)D
WIRE BENDING SPACE:
TOP – 17.1”(435)mm
BOTTOM – 15.6”(397)mm
SIDE – 5.9”(150)mm
PBA: 709HR
BUSSING: 400A RATED COPPER BUS
Silver/Tin Plated
OPTIONAL FEATURES:
BRANCH USER PLACEMENT
SAME HEIGHT BOXES
BLANK ENDWALLS
ALUMINUM SOLID NEUTRAL
ALUMINUM GROUND BAR
FEED THRU LUGS

ELECTRICAL DATA

SYSTEM: 208Y/120V 3Ph 4W 60Hz
System Ampacity: 400A
22kA SYMS. SCCR
Fully Rated
MAIN: MAIN LUGS : 400A
Top FEED
INCOMING CONDUCTORS(S) PER NEC, CEC, NOM:
Wire Bending Space:
Phase Lugs:1 – 1/0 – 750, (2) 1/0 – 350 kcmil
-----BRANCH SUMMATION-----
42 – 20A/1P QOB-VHCAFI

JOB NAME:	WSC MOREY HALL AC PANEL UPGRADES	EQUIPMENT DESIGNATION:	BPN1
JOB LOCATION:		EQUIPMENT TYPE:	NQ (Circuit Breaker Type) PANEL 2 OF 3
DRAWN BY:	(Q2C)	DRAWING TYPE:	ONE LINE DIAGRAM
ENGR:			
DATE:	December 28 2023		
DRAWING STATUS:	QUOTE	DWG#	OQ-4590391-134114625-02
		PG 1	OF 1
		REV	-

REV	DESCRIPTION	BY	DATE	--	---	---	---
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CKT NO	ACCESSORIES	TYPE	RATING AMP/P							RATING AMP/P	TYPE	ACCESSORIES	CKT NO
85		QOB-VHCAFI	20 / 1							20 / 1	QOB-VHCAFI		86
87		QOB-VHCAFI	20 / 1							20 / 1	QOB-VHCAFI		88
89		QOB-VHCAFI	20 / 1							20 / 1	QOB-VHCAFI		90
91		QOB-VHCAFI	20 / 1							20 / 1	QOB-VHCAFI		92
93		QOB-VHCAFI	20 / 1							20 / 1	QOB-VHCAFI		94
95		QOB-VHCAFI	20 / 1							20 / 1	QOB-VHCAFI		96
97		QOB-VHCAFI	20 / 1							20 / 1	QOB-VHCAFI		98
99		QOB-VHCAFI	20 / 1							20 / 1	QOB-VHCAFI		100
101		QOB-VHCAFI	20 / 1							20 / 1	QOB-VHCAFI		102
103		QOB-VHCAFI	20 / 1							20 / 1	QOB-VHCAFI		104
105		QOB-VHCAFI	20 / 1							20 / 1	QOB-VHCAFI		106
107		QOB-VHCAFI	20 / 1							20 / 1	QOB-VHCAFI		108
109		QOB-VHCAFI	20 / 1							20 / 1	QOB-VHCAFI		110
111		QOB-VHCAFI	20 / 1							20 / 1	QOB-VHCAFI		112
113		QOB-VHCAFI	20 / 1							20 / 1	QOB-VHCAFI		114
115		QOB-VHCAFI	20 / 1							20 / 1	QOB-VHCAFI		116
117		QOB-VHCAFI	20 / 1							20 / 1	QOB-VHCAFI		118
119		QOB-VHCAFI	20 / 1							20 / 1	QOB-VHCAFI		120
121		QOB-VHCAFI	20 / 1							20 / 1	QOB-VHCAFI		122
123		QOB-VHCAFI	20 / 1							20 / 1	QOB-VHCAFI		124
125		QOB-VHCAFI	20 / 1							20 / 1	QOB-VHCAFI		126



PHYSICAL DATA

ENCLOSURE Type 1
Surface – Hinged
FRONT CAT#: NC56VSHR
BOX CAT#: MH56BE
DIMENSIONS:
56”(1422mm)Hx20”(508mm)Wx5.75”(146mm)D
WIRE BENDING SPACE:
TOP – 12.25”(312)mm
BOTTOM – 17.1”(435)mm
SIDE – 5.9”(150)mm
PBA: 709HR
BUSSING: 400A RATED COPPER BUS
Silver/Tin Plated
OPTIONAL FEATURES:
BRANCH USER PLACEMENT
SAME HEIGHT BOXES
BLANK ENDWALLS
ALUMINUM SOLID NEUTRAL
ALUMINUM GROUND BAR

ELECTRICAL DATA

SYSTEM: 208Y/120V 3Ph 4W 60Hz
System Ampacity: 400A
22kA SYMS. SCCR
Fully Rated
MAIN: MAIN LUGS : 400A
Bottom FEED
INCOMING CONDUCTORS(S) PER NEC, CEC, NOM:
Wire Bending Space:
Phase Lugs:1 – 1/0 – 750, (2) 1/0 – 350 kcmil
-----BRANCH SUMMATION-----
42 – 20A/1P QOB-VHCAFI

JOB NAME:	WSC MOREY HALL AC PANEL UPGRADES	EQUIPMENT DESIGNATION:	BPN1
JOB LOCATION:		EQUIPMENT TYPE:	NQ (Circuit Breaker Type) PANEL 3 OF 3
DRAWN BY:	(Q2C)	DRAWING TYPE:	ONE LINE DIAGRAM
ENGR:			
DATE:	December 28 2023		
DRAWING STATUS:	QUOTE	DWG#	OQ-4590391-134114625-03
		PG 1	OF 1
		REV	--

Product data sheet

Characteristics

MH44BE

Enclosure box, NQ and NF panelboards, NEMA 1, blank end walls, 20in W x 44in H x 5.75in D



Product availability: Stock - Normally stocked in distribution facility

Price*: 113.00 USD



Main

Product or Component Type	Enclosure
Enclosure type	Blank end wall

Complementary

Enclosure Material	Steel
Height	44 In (1117.60 mm)
Width	20 In (508.00 mm)
Depth	5.75 In (146.05 mm)

Environment

NEMA Degree of Protection	NEMA 1
Product Certifications	cULus

Ordering and shipping details

Category	07969-RTA PANELBOARD BOX - STD NEMA 1
Discount Schedule	PE1A
GTIN	785901082699
Returnability	Yes
Country of origin	US

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	5.98 In (15.2 cm)
Package 1 Width	20.00 In (50.8 cm)
Package 1 Length	44.02 In (111.8 cm)
Package 1 Weight	31.40 Lb(US) (14.243 kg)

Offer Sustainability

Sustainable offer status	Green Premium product
REACH Regulation	 REACH Declaration
REACH free of SVHC	Yes
EU RoHS Directive	Compliant with Exemptions
Mercury free	Yes
China RoHS Regulation	 China RoHS Declaration
RoHS exemption information	 Yes
Environmental Disclosure	 Product Environmental Profile
Circularity Profile	No need of specific recycling operations

Contractual warranty

Warranty	18 months
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Product Life Status :	Commercialised
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Product data sheet

Characteristics

NC44SHR

Enclosure cover, NQ and NF panelboards, NEMA 1, surface, hinged, 20in W x 44in H



Product availability: Stock - Normally stocked in distribution facility

Price*: 830.00 USD



Main

Product or Component Type	Surface cover
Color	Gray
Cover type	Surface cover
Type of front plate	Hinged

Complementary

Enclosure Material	Steel
Height	44 In (1117.60 mm)
Width	20 In (508.00 mm)
Tightening torque	Cover 10...12 lb.in

Environment

NEMA Degree of Protection	NEMA 1
Product Certifications	cULus

Ordering and shipping details

Category	08352-NF / NQ TRIMS RTA
Discount Schedule	PE1A
GTIN	785901311706
Returnability	Yes
Country of origin	US

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	2.00 In (5.08 cm)
Package 1 Width	22.00 In (55.88 cm)
Package 1 Length	48.80 In (123.952 cm)
Package 1 Weight	22.00 Lb(US) (9.98 kg)
Unit Type of Package 2	PAL
Number of Units in Package 2	8
Package 2 Height	40.00 In (101.6 cm)
Package 2 Width	42.00 In (106.68 cm)
Package 2 Length	60.00 In (152.4 cm)
Package 2 Weight	200.00 Lb(US) (90.718 kg)

Offer Sustainability

Sustainable offer status	Green Premium product
California proposition 65	WARNING: This product can expose you to chemicals including: Nickel compounds, which is known to the State of California to cause cancer, and Bisphenol A (BPA), which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov
REACH Regulation	REACH Declaration
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope) EU RoHS Declaration
Toxic heavy metal free	Yes
Mercury free	Yes
China RoHS Regulation	China RoHS Declaration
RoHS exemption information	Yes
Environmental Disclosure	Product Environmental Profile
Circularity Profile	No need of specific recycling operations

Contractual warranty

Warranty	18 months
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Product Life Status : **Commercialised**

Product data sheet

Characteristics

MH56BE

Enclosure box, NQ and NF panelboards, NEMA 1, blank end walls, 20in W x 56in H x 5.75in D



Product availability: Stock - Normally stocked in distribution facility

Price*: 113.00 USD



Main

Product or Component Type	Enclosure
Enclosure type	Blank end wall

Complementary

Enclosure Material	Steel
Height	56 In (1422.40 mm)
Width	20 In (508.00 mm)
Depth	5.75 In (146.05 mm)

Environment

NEMA Degree of Protection	NEMA 1
Product Certifications	cULus

Ordering and shipping details

Category	07969-RTA PANELBOARD BOX - STD NEMA 1
Discount Schedule	PE1A
GTIN	785901082736
Returnability	Yes
Country of origin	US

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	5.79 In (14.7 cm)
Package 1 Width	20.00 In (50.8 cm)
Package 1 Length	55.98 In (142.2 cm)
Package 1 Weight	42.00 Lb(US) (19.051 kg)

Offer Sustainability

Sustainable offer status	Green Premium product
REACH Regulation	 REACH Declaration
REACH free of SVHC	Yes
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope)
Mercury free	Yes
China RoHS Regulation	 China RoHS Declaration
RoHS exemption information	 Yes
Environmental Disclosure	 Product Environmental Profile
Circularity Profile	No need of specific recycling operations

Contractual warranty

Warranty	18 months
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Product Life Status :	Commercialised
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Product data sheet

Characteristics

NC56VSHR

Enclosure cover, NQ and NF panelboards, NEMA 1, surface, ventilated, hinged, 20in W x 56in H



Product availability: Stock - Normally stocked in distribution facility

Price*: 983.00 USD



Main

Product or Component Type	Surface cover
Color	Gray
Cover type	Surface cover
Type of front plate	Ventilated Hinged

Complementary

Enclosure Material	Steel
Height	56 In (1422.40 mm)
Width	20 In (508.00 mm)
Tightening torque	Cover 10...12 lb.in

Environment

NEMA Degree of Protection	NEMA 1
Product Certifications	cULus

Ordering and shipping details

Category	08352-NF / NQ TRIMS RTA
Discount Schedule	PE1A
GTIN	785901002710
Returnability	Yes
Country of origin	US

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	1.81 In (4.6 cm)
Package 1 Width	22.28 In (56.6 cm)
Package 1 Length	57.80 In (146.8 cm)
Package 1 Weight	32.00 Lb(US) (14.515 kg)

Offer Sustainability

Sustainable offer status	Green Premium product
California proposition 65	WARNING: This product can expose you to chemicals including: Nickel compounds, which is known to the State of California to cause cancer, and Bisphenol A (B-PA), which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov
REACH Regulation	REACH Declaration
EU RoHS Directive	Compliant EU RoHS Declaration
Toxic heavy metal free	Yes
Mercury free	Yes
China RoHS Regulation	China RoHS Declaration
RoHS exemption information	Yes
Environmental Disclosure	Product Environmental Profile
Circularity Profile	No need of specific recycling operations

Contractual warranty

Warranty	18 months
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Product Life Status : **Commercialised**