CASPER ELECTRIC
3150 E. YELLOWSTONE
CASPER, WY 82609
307-237-3003
FAX 307-237-3009

Kelly Walsh High School

Operation and Maintenance Manuals

Division 26 – Electrical – Volume II

Project: Kelly Walsh High School
3500 East 12th street
Casper, Wyoming 82609
(307) 253-2000

Owner: Natrona County School District
1038 North Glenn Road
Casper, Wyoming 82601
(307) 253-5317

Electrical Contractor: Casper Electric

Construction Manager: Sampson Construction
2701 Westland Court, Suite A
Cheyenne, Wyoming 82001
(307) 426-4050

Architect: RB+B Architect's
315 E. Mountain Avenue Suite 100
Fort Collins, Colorado 80524-2913
(970) 484-0117

Commissioning Authority: Beaudin Ganze Consulting Engineers
1626 Cole Boulevard, Suite 300
Lakewood, Colorado 80401
(303) 278-3820 Ext. 5407

Electrical Engineer: Engineering Design Associates
1607 CY Avenue
Casper, WY 82604
(307) 266-5033

October, 2015

Kelly Walsh High School

Operation and Maintenance Manual

Factory Order #: 34765053

12/16/2014

Casper, Wyoming

Distributor:
Crescent Electric

Contractor / Installer:
Casper Electric

Consulting Engineer:
Engineering Design Associates

Chad Yatch
Sales Representative

Mary Starliper
Project Manager
North American Operating Division
(303) 393-5832
mary.starliper@schneider-electric.com

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Schneider Electric

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Schneider Electric Conditions of Sale
Proposal-based Projects

Note
The following Conditions of Sale are subject to change. All transactions for all products sold by Schneider Electric USA ("Schneider Electric"), including all Schneider Electric brand products, are subject to the latest published Conditions of Sale of Schneider Electric and to any Special Conditions of Sale which may be contained in applicable Schneider Electric quotations and acknowledgments.

Schneider Electric Standard conditions of Sale will apply in all transactions between customers and Schneider Electric, unless the Proposal-based Project Conditions of Sale, apply as defined in the following paragraph.

Proposal-based Projects Definitions

Transactions that exhibit some or all of the following attributes: Unique customer requirements that are typically negotiated and quoted, requires approval drawings and project management by Schneider Electric, and for which there is a specific direct-ship address.

Governing Provisions and Acceptance

All quotations are subject to these conditions of sale. Acceptance of an order by Schneider Electric shall be expressly conditioned on Purchaser's assent to these conditions. Purchaser's direction to proceed with engineering, manufacture or shipment by Schneider Electric shall be deemed evidence of this assent. No modified or other conditions will be applicable unless those conditions are so stated in Schneider Electric's proposal or are specifically agreed to in writing and signed by an authorized official of Schneider Electric. Failure to object to provisions contained in any Purchase Order or other communication from the Purchaser (including, without limitation, penalty clauses of any kind) shall not be construed as a waiver of these Conditions nor an acceptance of any other provisions. These terms are a complete statement of the parties' agreement and may only be modified in writing signed by both parties. These terms may not be modified by course of dealing, course of performance or usage of trade. These terms supersede all previous written or oral quotations, statements or agreements. Any contract for sale by and between the parties shall be governed by and construed according to the laws of the State of Illinois without regard to its rules on the conflict of laws. The Convention on the International Sale of Goods is expressly excluded.

Quotations

Quotations shall be valid for no more than thirty (30) days from the date quotation is communicated from seller to purchaser, unless otherwise stated in the quotation. All quotations are subject to change by Schneider Electric Company at any time upon notice to Purchaser. Quotations are made based on Schneider Electric's interpretation of the plans and specifications submitted to Schneider Electric by the Purchaser. It is Purchaser's obligation to review the quotation carefully and to immediately advise Schneider Electric of any differing interpretation Purchaser has so any necessary change can be made.

Order Entry

A complete, signed purchase order must be received before entry of an order into Schneider Electric's system. Considerable detail is involved in the manufacture of power equipment. To facilitate timely shipment, complete details and information, including Purchaser's requested on-site dates must be provided at the time of order entry. Shipment dates are approximate and are based upon timely receipt of all necessary information from the Purchaser. Lack of complete information may result in delays of drawings or manufacture. Such delays shall relieve Schneider Electric from compliance with the quoted delivery dates and may lead to price escalation. Failure to provide a complete signed purchase order within twenty (20) days of notification of award may result in renegotiation of price or shipment dates.

Approval Drawings

When required by a specific Purchase Order, drawings will be submitted for approval per agreed upon schedules, and price policy, below, to assure Schneider Electric has designed the equipment as described in Purchaser's specifications, as modified by Schneider Electric's quotation. If at time of drawing approval Schneider Electric has not designed the equipment to meet the specifications, as modified by Schneider Electric's quotation, Schneider Electric will make the appropriate changes at no charge to Purchaser. Where the Purchaser's specification is not definitive, Schneider Electric shall have the right to design the product in line with good commercial practice, without further obligation to Purchaser. If at drawing approval, Purchaser makes changes outside the design as stated in the specifications, such changes shall be treated as a change order as provided below.

Price Policy

Quoted prices are firm provided: A) The order is received with complete engineering details and is released for manufacture within sixty (60) calendar days from the originally anticipated release date. B) All required approval drawings are returned and equipment released by Purchaser no later than sixty (60) calendar days from the original date of issuance of approval drawings by Schneider Electric. The returned drawings must be released for manufacture for shipment on the agreed date. Drawing re-submittals which are required for any reason other than to correct Schneider Electric errors will not extend the sixty (60) day deadline. If the Purchaser causes delay of shipment in any way or returns approval drawings beyond the time stated above, Purchaser may be subject to charges which shall not exceed 2% of the purchase order price for each full month or fraction thereof that shipment is delayed, as compensation to Schneider Electric for expenses created by such delay and not as a penalty. In addition to the 2% charge per month, if shipment is delayed through the fault of Purchaser for more than 180 days from the original date of issuance of approval drawings, the price may be subject to revision.

Pricing-Purchaser Changes

All prices cover a bill of material as described in Schneider Electric specifications or quotations to be designed and manufactured to Schneider Electric standard designs, unless otherwise agreed in writing between the parties. Purchaser may make minor changes not affecting the time or cost of performance without charge prior to the start of manufacture. If any changes are requested by the Purchaser after submission of the original Purchase Order which affect the cost or time of performance, additional billing will be made with the amount of price adder dependent on the change and status of the order when the change is made. Changes may also result in an extension of time for shipment. All changes will be agreed to by the parties, in writing, prior to implementation. Purchaser's rescheduling shipment will be considered a change. All expenses incurred by Schneider Electric in connection with the storage of equipment, including demurrage, packing, storage charges, insurance and handling charges by Schneider Electric will be paid by the Purchaser upon submission of invoices by Schneider Electric. Schneider Electric will issue price changes for any change requested by the Purchaser that affects modification of equipment, changes the bills of material, engineering or drawings or delivery schedule as follows: A) If Purchaser makes a change to an order prior to being released to engineering, the net price will be adjusted by re-pricing the equipment with prices in effect at the time of the change. A commensurate delay in the shipping date will be based on the changes involved. B) For changes made after the order is released to engineering, the net price and ship date will be adjusted as described in paragraph A above. An additional charge based on Schneider Electric standard engineering billing charges and cost of parts ($250 minimum) will be made to cover any extra engineering and drafting, scrap or rework of parts, or cost of modification. C) If during the drawing approval process, the Purchaser makes changes outside the design covered by the specifications, Schneider Electric will be reimbursed as described in paragraph A and B above, plus any additional charges for any extra cost incurred as a direct result of the changes and allowed a commensurate delay in shipping date based on the changes involved. Changes to the order can not be processed until a formal signed change order is received from the Purchaser.

Substitutions

Schneider Electric may furnish suitable substitutes for material unobtainable because of priorities or regulations established by governmental authority or non-availability of materials from suppliers, provided such substitutions do not adversely affect the technical soundness of the equipment. Schneider Electric assumes no liability for deviation from published dimensions and descriptive information not essential to proper performance of the product.

Taxes

Any manufacturer's tax, retailer's tax, occupation tax, use tax, sales tax, excise tax, (except federal excise tax on vehicles), duty, customs, inspecting or testing fee, or other tax, fee or charge of any nature whatsoever, imposed by any governmental authority or measured by any transaction between Schneider Electric and Purchaser, shall be paid by the Purchaser in addition to the prices quoted or invoiced, and such charges will appear as a separate line item on the invoice. In the event Schneider Electric will be required to pay any such tax, fee, or charge, Purchaser shall reimburse Schneider Electric or, in lieu of such payment, Purchaser shall supply Schneider Electric at the time the order is submitted with an exemption certificate or other document acceptable to the tax authority. Purchase Orders must state the existence and amount of any such tax, fee or charge for which Purchaser claims an exemption.

Terms of Payment

Acceptance of all Purchase Orders is subject to Purchaser meeting Schneider Electric credit standards. Terms are subject to change for failure to meet such standards. Terms are net thirty (30) days from date of invoice of each shipment, unless otherwise stated in Schneider Electric's quotation. For an authorized distributor or authorized reseller order, applicable terms of payment are stated in the quotation or applicable discount schedule. Schneider Electric reserves the right at any time to demand full or partial payment before proceeding with a contract of sale if, in its sole judgment, as a result of changes in the financial condition of the Purchaser the terms of payment originally specified are no longer justified.

Progress Payments/ Payment Term

All proposal-based projects are Net 30 days from date of invoice of each shipment. On projects exceeding $1,000,000 Net, progress payments are payable according to the following milestones:

- 30% Release to manufacturing
- 70% (balance) due at shipment

Payments

If delivery is delayed or deferred by the Purchaser beyond the scheduled date, payment shall be due in full when Schneider Electric is prepared to ship. The equipment may be stored at the risk and expense of the Purchaser. If the Purchaser defaults when any payment is due, then the whole contract price shall become due and payable upon demand, or Schneider Electric at its option, without prejudice to other lawful remedies, may defer delivery or cancel the contract for sale. If Purchaser become insolvent, or bankrupt or in the event any proceeding is brought against the Purchaser, voluntarily or involuntarily under the bankruptcy or any insolvency law, Schneider Electric may cancel any order then outstanding at any time and recover its proper cancellation charges from the Purchaser or the Purchaser's estate.

Delivery

F.O.B. Point of Shipment

When the Schneider Electric quotation is based on delivery F.O.B. point of shipment, freight prepaid and allowed for delivery within the continental United States, Product is sold F.O.B. point of shipment, freight prepaid and allowed for orders over $2000 net. Delivery by Schneider Electric to the point of shipment constitutes delivery to the Purchaser; and title and all risk of loss or damage in transit shall pass to the Purchaser at time of delivery at the F.O.B. point. Schneider Electric is not responsible for breakage or delays by carrier after having received "in good order" receipts from the carrier. Purchaser is responsible for pursuing any damage claims with the carrier. For orders under $2000 net the above terms apply except freight is prepaid not allowed. No allowance will be made in lieu of transportation if the Purchaser accepts shipment at factory, warehouse or freight station or otherwise supplies its own transportation. Freight prepaid is defined as: a) Shipments to destinations within the continental United States to the accessible common carrier point nearest the first destination. b) Shipments to U.S. destinations outside the continental United States shall be to the common carrier free delivery point in the United States nearest the original port of embarkation. All charges associated with F.A.S., C.I.F., or other charges such as pier transfer, lift, ocean freight, and marine or war insurance shall be paid by the Purchaser, unless otherwise specifically agreed in a specific Purchase Order. In no event will Schneider Electric be responsible for demurrage or detention charges.

Delivery: F.O.B. Destination

When the Schneider Electric quotation is based on delivery F.O.B. Destination, for shipments for delivery within the continental United States, Schneider Electric will retain title and all risk of loss or damage in transit to the common carrier free delivery point in the United States nearest the first destination for a price addition of 2% of the net price. If the Purchaser elects this Option, Purchaser's obligations shall be as follows: a) Purchaser shall have the responsibility of inspecting the equipment for apparent loss or damage immediately upon its arrival at the free delivery point. b) In the event of apparent shipping loss or damage, Purchaser shall make written notation of the loss on the carrier's delivery receipt and, within 72 hours of delivery shall notify the Schneider Electric Customer Information Center. Purchaser shall not remove product from the point of examination and shall retain the shipping container and packing

material. Purchaser shall request the carrier to make an inspection and send Schneider Electric a copy of the carrier's inspection report. c) In the event of concealed damage which occurred during transit and is discovered by the Purchaser after delivery, Purchaser shall report such damage immediately, but in no event later than 15 days after delivery, to the delivering carrier, and within 72 hours of discovery, shall notify the local Schneider Electric field office. If such notification is not made, Schneider Electric shall not be liable for loss or damage in transit.

Shipment and Routing
Schneider Electric shall select the point of origin of shipment, the method of transportation and the routing of the shipment. Purchasers that request expedited or special modes of transportation or routing involving air, premium or any other non-standard Schneider Electric shipping shall be assessed additional charges for shipping, handling, freight and expediting. Any rebates, allowances, discounts, or incentives received by Schneider Electric from its carriers shall be retained by Schneider Electric. All prices include domestic packaging only. When other than domestic packaging is required, contact your local Schneider Electric field office. Purchaser specified packaging and marking may be subject to additional charges.

Shortages

Claims for shortages or errors must be submitted to Schneider Electric within 30 days after invoice date, and failure to give such notice shall constitute unqualified acceptance and a waiver of all such claims by the Purchaser.

Installments

Schneider Electric reserves the right to make shipments in installments, unless otherwise expressly stipulated in a specific Purchase Order; and all such installments when separately invoiced shall be paid for when due per invoice without regard to subsequent shipments. Delay in shipment of any installment shall not relieve Purchaser of its obligation to accept remaining shipments.

Force Majeure

Schneider Electric shall not be liable for any damages as a result of any delays due to any causes beyond Schneider Electric's control, including, without limitation, an act of God; act of Purchaser or Schneider Electric supplier; embargo or other governmental act, regulation or request; fire; accident; strike; slowdown; flood; fuel or energy shortage; sabotage; war; riot; delay in transportation and inability to obtain necessary labor, materials or manufacturing facilities from usual sources. In the event of any such delay, the date of delivery shall be extended for a period of time reasonably necessary to overcome the effect of such delay.

Standard Warranty

Schneider Electric warrants equipment manufactured by it and sold through authorized sales channels to be free from defects in materials and workmanship for 12 months from the issuance of the customer provisional acceptance letter or 18 months from the invoice date of the last component of the order whichever occurs first. If within such period, any such equipment shall be proved to Schneider Electric's satisfaction to be non-conforming, such equipment shall be repaired or replaced at Schneider Electric's option. This warranty shall not apply (a) to equipment not manufactured by Schneider Electric, (b) to equipment that has been repaired or altered by other than Schneider Electric so as, in its judgment, to affect the same adversely, or (c) to equipment that has been subjected to negligence, accident, or damage by circumstances beyond Schneider Electric's control, or improper operation, maintenance or storage, or to other than normal use or service. With respect to equipment not manufactured by Schneider Electric, the warranty obligations of Schneider Electric shall in all respects conform and be limited to the warranty actually extended to Schneider Electric by its supplier. Non-conforming products must be returned at Schneider Electric's expense for evaluation unless this is waived in writing. Replacement products may be new or reconditioned. The foregoing warranties do not cover reimbursement for labor, transportation, removal, installation, temporary power, or any other expenses that may be incurred in connection with repair or replacement. Any part or component changed or repaired in the context of the contractual warranty will itself benefit of a 3 month warranty but shall not cause the warranty duration of the overall System / Solution to be extended.

Optional Warranties

(Only available on equipment to be located in the U.S.)
Option 1—Extended: 2 to 5 years from Shipment. If requested by the Purchaser, and specifically accepted in writing by Schneider Electric, the standard warranty will be extended to two (2) years from date of invoice for a price addition of 1% of the net face value of the Purchase Order, will be extended to three (3) years from date of invoice for a price addition of 3% of the net face value of the Purchase Order, will be extended to four (4) years from date of invoice for a price addition of 5% of the net face value of the Purchase Order, or will be extended to five (5) years from date of invoice for a price addition of 7% of the net face value of the Purchase Order.
Option 2—Special Warranty: If requested by the Purchaser, and specifically accepted in writing by

Schneider Electric, the standard warranty will be extended, for a price addition of 3% of the net face value of the Purchase Order, to cover reimbursement of the direct costs of: a) Removal of non-conforming equipment or part thereof; b) Transporting equipment or parts to and from the place of repair; c) Off-loading of truck and reinstallation at the original site. Such special warranty, which may be chosen to cover a period not exceeding that of the standard or extended warranty (see above) selected, will not include the cost of providing temporary power or removing or replacing other apparatus or structures, or costs of transportation beyond a common carrier free delivery point in the continental United States. Further, the obligation of Schneider Electric for expenses and costs arising under this special warranty coverage will not exceed 50% of the net invoice price on the equipment being repaired. This warranty does not change or affect the allocation of risk or loss during shipment.
Option 3—Extended Warranty: Preventative Maintenance Agreements. If requested by the Purchaser, and specifically accepted by Schneider Electric, a Preventative Maintenance Agreement is available to provide preventative maintenance on equipment covered by the agreement. Terms of the preventative maintenance agreement shall be as defined in a separate Services Agreement agreed to by the parties.

Software

Any software or computer information, in whatever form, provided with equipment manufactured by Schneider Electric is licensed to Purchaser solely pursuant to standard licenses of Schneider Electric or its supplier of such software or computer information, which licenses are, hereby incorporated by reference. Schneider Electric does not warrant that such software or computer information will operate error free or without interruption, and warrants only that during the warranty period applicable to the equipment that the software will perform its essential functions. If such software or computer information fails to conform to such warranty, Schneider Electric will, at its option, provide an update to correct the non-conformance or replace the software or computer information with the latest available version containing a correction. Schneider Electric shall have no other obligation to provide updates or revisions.

Limitations

These disclaimers and limitations of remedies apply to all warranties offered to Purchaser and to all Purchase Orders. **The warranties set forth above are exclusive and in lieu of all other expressed or implied warranties (except warranties of title), including, but not limited to implied warranties of merchantability and fitness for a particular purpose.** Except as may be expressly provided in an authorized writing by Schneider Electric, Schneider Electric shall not be subject to any other obligations or liabilities whatsoever other than as stated above with respect to equipment sold or services rendered by Schneider Electric. Notwithstanding anything to the contrary herein contained **Schneider Electric Company, its contractors and suppliers of any tier, shall not be liable in contract, in tort (including negligence or strict liability) or otherwise for lost time, lost profits, or special, indirect, incidental or consequential damages of any kind whatsoever.** The remedies of the Purchaser are exclusive and the total cumulative liability of Schneider Electric, its contractors and suppliers of any tier, with respect to this contract or anything done in connection therewith, such as the use of any product covered by or furnished under the contract, whether in contract, in tort (including negligence or strict liability) or otherwise, shall not exceed the price of the product, part, or service on which such liability is based.

Intellectual Property

As to equipment proposed and furnished by Schneider Electric, Schneider Electric shall defend any suit or proceeding brought against Purchaser so far as based on a claim that such equipment constitutes an infringement of any copyright, trademark or patent of the United States.

This obligation shall be effective only if Purchaser shall have made all payments then due hereunder and if Schneider Electric is notified promptly in writing and given authority, information, and assistance at Schneider Electric's expense for the defense of the same. In the event the use of such equipment by Purchaser is enjoined in such a suit, Schneider Electric shall, at its expense, and at its sole option, either (a) procure for the Purchaser the right to continue using such equipment (b) modify such equipment to render it non-infringing (c) replace such equipment with non-infringing equipment, or (d) refund the purchase price (less depreciation) and the transportation and installation costs of such equipment. Schneider Electric will not be responsible for any compromise or settlement made without its written consent. The foregoing states the entire liability of Schneider Electric for patent, trademark or copyright infringement, and in no event shall Schneider Electric be liable if any infringement charge is based on the use of Schneider Electric equipment for a purpose other than that for which it was sold by Schneider Electric. As to any equipment furnished by Schneider Electric to Purchaser and manufactured in accordance with designs proposed by Purchaser, the Purchaser shall indemnify Schneider Electric against any award made against Schneider Electric for patent, trademark, or copyright infringements.

Witness of Tests and Factory Inspections

Normal production schedules do not provide the opportunity for Purchaser to witness routine factory tests on equipment or make factory inspections. Witnessing of tests or factory inspections by the Purchaser may result in delays of production for which Schneider Electric will not be responsible. Witness testing and factory inspections must be requested at time of quotation and confirmed at order entry. Standard Schneider Electric factory testing and inspection will apply. Schneider Electric will notify Purchaser fourteen (14) calendar days prior to scheduled witness testing or inspection. In the event Purchaser is unable to attend, the Parties may mutually agree on a rescheduled date. However, Schneider Electric, at its sole option, may consider the witness tests and/or inspection waived, and ship and invoice the Products. Purchaser will be responsible for paying for all scheduled witness testing, whether or not Purchaser attends.

Return of Equipment

No equipment may be returned without first obtaining Schneider Electric's written permission and a returned material identification tag. Returned equipment must be of current manufacture, in the original packaging, unused, undamaged and in saleable condition, securely packed to reach Schneider Electric without damage and labeled with the return authorization number. Any cost incurred by Schneider Electric to put equipment in first class condition will be charged to the Purchaser. Returns will be credited at price invoiced by Schneider Electric less a restocking fee of 25% invoice price. Special Order and Custom equipment is not returnable. Schneider Electric shall bear the cost of returns resulting from Schneider Electric error, and method and route of return will be at the discretion of Schneider Electric. Costs incurred by failure to follow Schneider Electric direction will be borne by the Purchaser.

Nuclear Applications Terms and Conditions

Unless otherwise agreed in writing by a duly authorized representative of Schneider Electric, products sold hereunder are not intended for use in or in connection with any nuclear facility or activity. If so used, Schneider Electric disclaims all liability for any damage, injury or contamination; and Purchaser shall indemnify Schneider Electric against any such liability, whether arising as a result of breach of contract, warranty or tort (including negligence) or otherwise.

Patterns and Tools

Notice will be given if special patterns or tools are required to complete any order. Charges for such patterns or tools do not convey title thereto or the right to remove them from Schneider Electric's plant. If patterns or tools are not used for a period of two years, Schneider Electric shall have the right to scrap them without notice.

Product Notices

Purchaser shall promptly supply the user (including its employees) of the product with all Schneider Electric supplied product notices, warnings, instructions, recommendations and similar materials.

Errors

Schneider Electric reserves the right to correct errors or omissions in quotations, acknowledgments, invoices, or other documents.

OSHA Compliance

Compliance with OSHA or similar federal, state or local laws during the operation or use of the product(s) is the sole responsibility of the Purchaser.

Termination

Any order may be terminated by the Purchaser only upon written notice to Schneider Electric will be subject the following cancellation schedule:

- 20% after issuance of approval drawings
- 50% at release to manufacturing
- 100% at start of fabrication

Cancellation

Schneider Electric shall have the right to cancel any order or contract at any time by written notice for any material breach of the contract by the Purchaser, including material delays in releasing equipment for manufacture or approval drawings and excessive changes to specifications or drawings.

Schneider Electric USA, Inc.
1415 S. Roselle Road
Palatine, IL 60067 USA
1-888-778-2733
www.schneider-electric.us

0100PL0043R12/12
Replaces 0100PL0043R11/11

Square D by Schneider Electric
Surgelogic Surge Protective Devices (SPDs)

WARRANTY

Warranty to customers purchasing through authorized Square D distributors and customers purchasing directly from Square D. This warranty includes the following products: EMA, EBA, L-L Enhanced, IMA and HWA.

Protection Limits
With regard to any Square D Surgelogic Surge Protective Device ("SPD") that has been properly installed in compliance with all applicable electrical code requirements, Square D warrants the SPD to be free from defects in materials and workmanship for a period of ten (10) years from date of invoice from Square D or its authorized sales channel. If within the applicable warranty period, purchaser discovers such item was not as warranted and promptly notifies Square D in writing, Square D shall repair or replace the items or refund the purchase price, at Square D's option. This warranty shall not apply (a) to electrical equipment in which the SPD is installed, including, but not limited to panelboards, motor control centers, busway, switchboards, switchgear, (b) to equipment not manufactured by Square D, (c) to SPDs which shall have been repaired or altered by others, other than Square D, (d) to SPDs which shall have been subjected to negligence, accident, or damage by circumstances beyond Square D's control, or to improper operation, maintenance or storage, or to other than normal use or service. The foregoing warranty does not cover reimbursement for labor, transportation, removal, installation, or other expenses which may be incurred in connection with repair or replacement.

Except as may be expressly provided in an authorized writing by Square D, Square D shall not be subject to any other obligations or liabilities whatsoever with respect to equipment manufactured by Square D or services rendered by Square D.

THE FOREGOING WARRANTIES ARE EXCLUSIVE AND IN LIEU OF ALL OTHER EXPRESSED AND IMPLIED WARRANTIES EXCEPT WARRANTIES OF TITLE, INCLUDING BUT NOT LIMITED TO IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

Limitation of Liability
Notwithstanding anything to the contrary contained herein, SQUARE D COMPANY, ITS CONTRACTORS AND SUPPLIERS OF ANY TIER SHALL NOT BE LIABLE IN CONTRACT, IN TORT (INCLUDING NEGLIGENCE OR STRICT LIABILITY) OR OTHERWISE FOR ANY SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES WHATSOEVER. The remedies of the purchaser set forth herein are exclusive where so stated and the total cumulative liability of Square D, its contractors and suppliers of any tier, whether in contract, in tort (including negligence or strict liability) or otherwise, shall not exceed the price of the product or part on which such is based.

Item No.	Qty.	Catalog Number / Details

BILL OF MATERIALS

001-00 2

Designation: MAIN / UCT
Square D Standard Swbd
QED Switchboard

Square D Standard Swbd
Designed and Tested in accordance with:
UL 891/NATIONAL ELECTRIC CODE/NEMA PB-2
System Voltage - 480Y/277V 3Ph 4W 60Hz
Source Description - Single Main
System Ampacity - 3000A
Bussing - Aluminum Plated w/Tin and Copper Plated w/Silver
Neutral Bus - 100%
Max Available Fault Current (RMS) - 35kA
Enclosure - Type 3R Non-Walk-in
Accessibility: Front Only
Equipment Nameplate White Surface/Black Letters, Adhesive (Field Installed)
Rodent Barrier
Exterior Paint Color - ANSI 49
Mimic Nameplate - Power Flow Plastic
Ground Lug provided for each device
Aluminum Ground Bus
Lineup 1 BTU: 13801

Dimensions
---
1 - 48" Wide Section(s)
1 - 42" Wide Section(s)
1 - 36" Wide Section(s)
1 - Dimensions: 126.00" W X 47.5" D X 91.5"H
3 - 47.5" Deep Enclosure(s)
Approximate Weight: 3458.00

Incoming Requirements

Suitable for Use As Service Entrance
Entry Point: Left of Lineup, Through the Bottom
Connection Type: Cable in Bussed Auxiliary
Hot Sequence Utility: Rocky Mountain
Standard Door Pattern 15in Blank Top, 15in Blank Btm

Mains
---
1 - 3000AF/3000AT 100% 3 Pole Stored Energy, Fixed Mounted Circuit Breaker, UL: Type NW
Ammeter Trip Unit, Long Time, Short Time, Instantaneous, Ground Fault
Overcurrent Trip Switch 1A/1B Form C Contact (SDE)
Auxiliary Switches 4A-4B
Padlock Attachment
Contact Wear Indication - Visual

002-00 2

URSTS132C
MTR SKT 20A/13T HCP 2PC COVER

Item No.	Qty.	Catalog Number / Details
003-00	1	**Designation:** MDPH1 Square D Custom Swbd Series 2 QED Switchboard --- Square D Custom Swbd Series 2 Designed and Tested in accordance with: UL 891/NATIONAL ELECTRIC CODE/NEMA PB-2 System Voltage - 480Y/277V 3Ph 4W 60Hz Source Description - Main is Remote System Ampacity - 3000A Bussing - Aluminum Plated w/Tin and Copper Plated w/Silver Neutral Bus - 100% Max Available Fault Current (RMS) - 35kA Enclosure - Type 1 Accessibility: Front Only Equipment Nameplate White Surface/Black Letters, Adhesive (Field Installed) Exterior Paint Color - ANSI 49 Mimic Nameplate - Power Flow Plastic Ground Lug provided for each device Aluminum Ground Bus Lineup 1 BTU: 9980 Dimensions --- 1 - 48" Wide Section(s) 1 - 36" Wide Section(s) 2 - 36" Deep Enclosure(s) Dimensions: 84.00" W X 36" Max D X 91.5" H Approximate Weight: 2015.00 lbs / 914.00 kgs Incoming Requirements --- UL Dead Front Entry Point: Left of Lineup, Through the Bottom Connection Type: Cable Feeders --- Devices Associated with Remote Main: 3 - 70AT 480V 80% Rated 35 kA 3 Pole UL, Group Mounted Thermal Magnetic Circuit Breaker: Type HG 1 - 200AT 480V 80% Rated 35 kA 3 Pole UL, Group Mounted Thermal Magnetic Circuit Breaker: Type JG 1 - 225AT 480V 80% Rated 35 kA 3 Pole UL, Group Mounted Thermal Magnetic Circuit Breaker: Type JG 1 - 400AS/400AT 480V 80% Rated 35 kA 3 Pole UL, Group Mounted Electronic Trip Circuit Breaker: Type LG Standard Trip Unit, Long Time, Instantaneous 1 - 600AS/500AT 480V 80% Rated 35 kA 3 Pole UL, Group Mounted Electronic Trip Circuit Breaker: Type LG Standard Trip Unit, Long Time, Instantaneous

Item No.	Qty.	Catalog Number / Details
		1 - 1000AT 480V 80% Rated 35 kA 3 Pole UL, Group Mounted Basic Electronic Trip Circuit Breaker: Type PG Specials: no neural lug required Special no neural lug required #: 5979581 1 - 600AS/450AT 480V 80% Rated 35 kA 3 Pole UL, Group Mounted Electronic Trip Circuit Breaker: Type LG Standard Trip Unit, Long Time, Instantaneous 1 - 400AT 480V 80% Rated 35 kA 3 Pole UL, Group Mounted Electronic Prepared Space: Type LG Specials: provide 2 neutral lugs Special provide 2 neutral lugs #: 5979581 2 - 225AT 480V 80% Rated 3 Pole UL, Group Mounted Thermal Magnetic Prepared Space: Type JG 1 - 50AT 480V 80% Rated 35 kA 3 Pole UL, Group Mounted Thermal Magnetic Circuit Breaker: Type HG 1 - 60AT 480V 80% Rated 35 kA 3 Pole UL, Group Mounted Thermal Magnetic Circuit Breaker: Type HG 2 - 100AT 480V 80% Rated 35 kA 3 Pole UL, Group Mounted Thermal Magnetic Circuit Breaker: Type HG 1 - 150AT 480V 80% Rated 35 kA 3 Pole UL, Group Mounted Thermal Magnetic Circuit Breaker: Type HG 1 - 80AT 480V 80% Rated 35 kA 3 Pole UL, Group Mounted Thermal Magnetic Circuit Breaker: Type HG
004-00	1	**Designation:** SDPL1 Square D Custom Swbd QED Switchboard --- Square D Custom Swbd Designed and Tested in accordance with: UL 891/NATIONAL ELECTRIC CODE/NEMA PB-2 System Voltage - 208Y/120V 3Ph 4W 60Hz Source Description - Single Main System Ampacity - 2000A Bussing - Aluminum Plated w/Tin and Copper Plated w/Silver Neutral Bus - 100% Max Available Fault Current (RMS) - 35kA Enclosure - Type 1 Accessibility: Front Only Equipment Nameplate White Surface/Black Letters, Adhesive (Field Installed) Exterior Paint Color - ANSI 49 Mimic Nameplate - Power Flow Plastic Ground Lug provided for each device Aluminum Ground Bus Lineup 1 BTU: 7485 Dimensions --- 2 - 36" Wide Section(s) 2 - 24" Deep Enclosure(s) Dimensions: 72.00" W X 24" Max D X 91.5" H Approximate Weight: 1697.00

Item No.	Qty.	Catalog Number / Details
		Incoming Requirements --- Suitable for Use As Service Entrance Entry Point: Left of Lineup, Through the Bottom Connection Type: Cable SPD with Surge Rating 120kA SPD Dry Contacts Includes Surge Counter Mains --- 1 - 2000AT 208V 80% Rated 65 kA 3 Pole UL, Fixed Mounted Basic Electronic Trip Circuit Breaker: Type RG Feeders --- 3 - 125AT 208V 80% Rated 65 kA 3 Pole UL, Group Mounted Thermal Magnetic Circuit Breaker: Type QG 1 - 100AT 208V 80% Rated 65 kA 3 Pole UL, Group Mounted Thermal Magnetic Circuit Breaker: Type FH 2 - 225AT 208V 80% Rated 65 kA 3 Pole UL, Group Mounted Thermal Magnetic Circuit Breaker: Type QG 3 - 225AT 208V 80% Rated 3 Pole UL, Group Mounted Thermal Magnetic Prepared Space: Type QG 2 - 600AS/600AT 208V 80% Rated 65 kA 3 Pole UL, Group Mounted Electronic Trip Circuit Breaker: Type LG Standard Trip Unit, Long Time, Instantaneous 1 - 400AS/400AT 208V 80% Rated 65 kA 3 Pole UL, Group Mounted Electronic Trip Circuit Breaker: Type LG Standard Trip Unit, Long Time, Instantaneous Specials: two neutral lugs Special two neutral lugs #: 5979581
005-00	1	**Designation:** MDPH2 Square D Custom Swbd Series 2 QED Switchboard --- Square D Custom Swbd Series 2 Designed and Tested in accordance with: UL 891/NATIONAL ELECTRIC CODE/NEMA PB-2 System Voltage - 480Y/277V 3Ph 4W 60Hz Source Description - Main is Remote System Ampacity - 3000A Bussing - Aluminum Plated w/Tin and Copper Plated w/Silver Neutral Bus - 100% Max Available Fault Current (RMS) - 35kA Enclosure - Type 1 Accessibility: Front Only Equipment Nameplate White Surface/Black Letters, Adhesive (Field Installed) Exterior Paint Color - ANSI 49 Mimic Nameplate - Power Flow Plastic

Item No.	Qty.	Catalog Number / Details

Ground Lug provided for each device
Aluminum Ground Bus
Lineup 1 BTU: 9980

Dimensions
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1 - 48" Wide Section(s)
1 - 36" Wide Section(s)
2 - 36" Deep Enclosure(s)
Dimensions: 84.00" W X 36" Max D X 91.5" H
Approximate Weight: 2045.00 lbs / 927.61 kgs

Incoming Requirements

UL Dead Front
Entry Point: Left of Lineup, Through the Bottom
Connection Type: Cable

Feeders

Devices Associated with Remote Main:

2 - 225AT 480V 80% Rated 3 Pole UL, Group Mounted Thermal Magnetic Prepared Space: Type JG
1 - 400AS/400AT 480V 80% Rated 35 kA 3 Pole UL, Group Mounted Electronic Trip Circuit Breaker: Type LG
Standard Trip Unit, Long Time, Instantaneous
1 - 400AT 480V 80% Rated 35 kA 3 Pole UL, Group Mounted Electronic Prepared Space: Type LG
1 - 600AS/600AT 480V 80% Rated 35 kA 3 Pole UL, Group Mounted Electronic Trip Circuit Breaker: Type LG
Standard Trip Unit, Long Time, Instantaneous
Specials: no neutral lug
Special no neutral lug #: 5979581
2 - 1000AT 480V 80% Rated 35 kA 3 Pole UL, Group Mounted Basic Electronic Trip Circuit Breaker: Type PG
1 - 600AS/450AT 480V 80% Rated 35 kA 3 Pole UL, Group Mounted Electronic Trip Circuit Breaker: Type LG
Standard Trip Unit, Long Time, Instantaneous
1 - 400AS/400AT 480V 80% Rated 35 kA 3 Pole UL, Group Mounted Electronic Trip Circuit Breaker: Type LG
Standard Trip Unit, Long Time, Instantaneous
Specials: 2 neutral lugs
Special 2 neutral lugs #: 5979581
1 - 225AT 480V 80% Rated 35 kA 3 Pole UL, Group Mounted Thermal Magnetic Circuit Breaker: Type JG
1 - 50AT 480V 80% Rated 35 kA 3 Pole UL, Group Mounted Thermal Magnetic Circuit Breaker: Type HG
2 - 60AT 480V 80% Rated 35 kA 3 Pole UL,

Item No.	Qty.	Catalog Number / Details
		Group Mounted Thermal Magnetic Circuit Breaker: Type HG 1 - 150AT 480V 80% Rated 35 kA 3 Pole UL, Group Mounted Thermal Magnetic Circuit Breaker: Type HG
006-00	2	**Designation:** MDPH1 MDPH2 SPDS TVS4EMA32A EMA TVSS, 480Y/277V, 3 ph, 4 wire, 320kA
007-00	1	**Designation:** SDPH21 I-Line ML Panel (Interior) I-Line Panelboard Consisting of 480Y/277V 3Ph 4W 60Hz SCCR: 22kA Fully Rated Main Lug Only: 1000A Incoming Conductors: 1 - (4) 3/0 - 500kcmil Bus: Copper: Tin Plated CU Ground Bar 99" of Mounting Inches Type 1,Box: 86H x 42W x 9.5D Incoming: Bottom Trim: Surface - Hinged Box Cat No: HC4286DBP Ref. Drawing: PBA419HR Type: HCP Feeders: 1 - 50A/3P FH 4 - 100A/3P FH 1 - 600A/3P MG Prepared Space 1 - 600AS/600AT/3P LG STD LI 1 - 60A/3P FH 2 - 225A/3P JG Prepared Space Optional Features: Standard Panel (Box Ahead),Standard Solid Neutral,Copper Ground Bar,Standard Mains and Feeders Mechanically Restrained ANSI 49 grey box Standard Nameplate: Engraved as Follows Line 1: SDPH21 Size: 3.50" Wide x 1.00" High (Std) Color: White Surface / Black Letters Plastic/Adhesive - Screw-on
339-00	CANCLD	**Designation:** SDPH21 HC4286DBP (Box) I-Line Standard TYPE 1 Box 86 H
340-00	CANCLD	**Designation:** SDPH21 HC4286TSHR (Trim) Trim Surface Hinged 86"H
407-00	1	**Designation:** SDPH21 HC4286DBP (Box) I-Line Standard TYPE 1 Box 86 H
408-00	1	**Designation:** SDPH21 HC4286TSHR (Trim) Trim Surface Hinged 86"H

Item No.	Qty.	Catalog Number / Details
008-00	1	**Designation:** SDPH22 I-Line ML Panel (Interior) I-Line Panelboard Consisting of 480Y/277V 3Ph 4W 60Hz SCCR: 20kA Fully Rated Main Lug Only: 1000A Incoming Conductors: 1 - (4) 3/0 - 500kcmil Bus: Copper: Tin Plated CU Ground Bar 99" of Mounting Inches Type 1,Box: 86H x 42W x 9.5D Incoming: Bottom Trim: Surface - Hinged Box Cat No: HC4286DBP Ref. Drawing: PBA419HR Type: HCP Feeders: 2 - 100A/3P FH 1 - 600AS/600AT/3P LG STD LI 1 - 600A/3P MG Prepared Space 2 - 60A/3P FH 1 - 50A/3P FH 1 - 125A/3P HG 2 - 225A/3P JG Prepared Space Optional Features: Standard Panel (Box Ahead),Standard Solid Neutral,Copper Ground Bar,Standard Mains and Feeders Mechanically Restrained ANSI 49 grey box Standard Nameplate: Engraved as Follows Line 1: SDPH22 Size: 3.50" Wide x 1.00" High (Std) Color: White Surface / Black Letters Plastic/Adhesive - Screw-on
337-00	1	**Designation:** SDPH22 HC4286DBP (Box) I-Line Standard TYPE 1 Box 86 H
338-00	CANCLD	**Designation:** SDPH22 HC4286TSHR (Trim) Trim Surface Hinged 86"H
409-00	1	**Designation:** SDPH22 HC4286DBP (Box) I-Line Standard TYPE 1 Box 86 H
410-00	1	**Designation:** SDPH22 HC4286TSHR (Trim) Trim Surface Hinged 86"H
009-00	2	**Designation:** SDPH21 SDPH22 SPDS TVS4EMA12A EMA TVSS, 480Y/277V, 3 ph, 4 wire, 120kA
010-00	1	**Designation:** SDPL2 I-Line SPD Panel (Interior) I-Line Panelboard Consisting of 208Y/120V 3Ph 4W 60Hz SCCR: 42kA Fully Rated

Item No.	Qty.	Catalog Number / Details
		SPD 120kA per Phase/60kA per Mode SPD line to grd protect w/SPD Surge Counter w/SPD Dry Contacts Single Main: 1200A/3P PG Circuit Breaker Incoming Conductors: 1 - (4) 3/0 - 500kcmil Bus: Copper: Tin Plated CU Ground Bar 108" of Mounting Inches Type 1,Box: 86H x 44W x 9.5D Incoming: Bottom Trim: Surface - Hinged Box Cat No: HC4486DBP Ref. Drawing: PBA414HR Type: HCR-U Feeders: 1 - 400AS/400AT/3P LG Std. LI 80% 1 - 600AS/600AT/3P LG Std. LI 80% 1 - 100A/3P QG 3 - 225A/3P QG Prepared Space 1 - 225A/3P QG Optional Features: Standard Panel (Box Ahead),Standard Solid Neutral,Copper Ground Bar,Standard Mains and Feeders Mechanically Restrained ANSI 49 grey box Standard Nameplate: Engraved as Follows Line 1: SDPL2 Size: 3.50" Wide x 1.00" High (Std) Color: White Surface / Black Letters Plastic/Adhesive - Screw-on
341-00	1	**Designation:** SDPL2 HC4486DBP (Box) I-Line Standard TYPE 1 Box 86 H
342-00	1	**Designation:** SDPL2 HC4486TSHR (Trim) Trim Surface Hinged 86"H
010-01	1	SL I-LINE SPD PANEL (INTERIOR)
011-00	1	**Designation:** SDPL21 I-Line SPD Panel (Interior) I-Line Panelboard Consisting of 208Y/120V 3Ph 4W 60Hz SCCR: 35kA Fully Rated SPD 120kA per Phase/60kA per Mode SPD line to grd protect w/SPD Surge Counter w/SPD Dry Contacts Single Main: 1200A/3P PG Circuit Breaker Incoming Conductors: 1 - (4) 3/0 - 500kcmil Bus: Copper: Tin Plated CU Ground Bar 108" of Mounting Inches Type 1,Box: 86H x 44W x 9.5D Incoming: Bottom Trim: Surface - Hinged Box Cat No: HC4486DBP Ref. Drawing: PBA414HR Type: HCR-U

Item No.	Qty.	Catalog Number / Details
		Feeders: 1 - 60A/3P FH 1 - 100A/3P FH Prepared Space 7 - 150A/3P QG 3 - 225A/3P QG Prepared Space 2 - 225A/3P QG Optional Features: Standard Panel (Box Ahead),Standard Solid Neutral,Copper Ground Bar,Standard Mains and Feeders Mechanically Restrained ANSI 49 grey box Standard Nameplate: Engraved as Follows Line 1: SDPL21 Size: 3.50" Wide x 1.00" High (Std) Color: White Surface / Black Letters Plastic/Adhesive - Screw-on
343-00	1	**Designation:** SDPL21 HC4486DBP (Box) I-Line Standard TYPE 1 Box 86 H
344-00	1	**Designation:** SDPL21 HC4486TSHR (Trim) Trim Surface Hinged 86"H
011-01	1	SL I-LINE SPD PANEL (INTERIOR)
012-00	1	**Designation:** SDPL22 I-Line SPD Panel (Interior) I-Line Panelboard Consisting of 208Y/120V 3Ph 4W 60Hz SCCR: 30kA Fully Rated SPD 120kA per Phase/60kA per Mode SPD line to grd protect w/SPD Surge Counter w/SPD Dry Contacts Single Main: 1200A/3P PG Circuit Breaker Incoming Conductors: 1 - (4) 3/0 - 500kcmil Bus: Copper: Tin Plated CU Ground Bar 108" of Mounting Inches Type 1,Box: 86H x 44W x 9.5D Incoming: Bottom Trim: Surface - Hinged Box Cat No: HC4486DBP Ref. Drawing: PBA414HR Type: HCR-U Feeders: 1 - 60A/3P FH 1 - 100A/3P FH Prepared Space 10 - 150A/3P QG 3 - 225A/3P QG Prepared Space 1 - 225A/3P QG Optional Features: Standard Panel (Box Ahead),Standard Solid Neutral,Copper Ground Bar,Standard Mains and Feeders Mechanically Restrained ANSI 49 grey box Standard Nameplate:

Item No.	Qty.	Catalog Number / Details
		Engraved as Follows Line 1: SDPL22 Size: 3.50" Wide x 1.00" High (Std) Color: White Surface / Black Letters Plastic/Adhesive - Screw-on
345-00	1	**Designation:** SDPL22 HC4486DBP (Box) I-Line Standard TYPE 1 Box 86 H
346-00	1	**Designation:** SDPL22 HC4486TSHR (Trim) Trim Surface Hinged 86"H
012-01	1	SL I-LINE SPD PANEL (INTERIOR)
013-00	1	**Designation:** E1BL1 NQ SPD Panel (Interior) NQ Panelboard Consisting of 208Y/120V 3Ph 4W 60Hz SCCR: 10kA Fully Rated SPD 120kA per Phase/60kA per Mode SPD line to grd protect w/SPD Surge Counter w/SPD Dry Contacts Single Main: 100A/3P QOB Circuit Breaker Incoming Conductors: 1 - #4 - 2/0 AWG Bus: Aluminum: Tin Plated CU Ground Bar 42 Circuit Interior Type 1,Box: 38H x 20W x 5.75D Incoming: Bottom Trim: Surface - Hinged Box Cat No: MH38P Front Cat No: NC38SHR Ref. Drawing: PBA707HR Feeders: 1 - 60A/3P QOB 12 - 20A/1P QOB 1 - 30A/3P QOB Optional Features: Standard Panel (Box Ahead),SPD Model BIA,Standard Solid Neutral,Copper Ground Bar ANSI 49 grey box Standard Nameplate: Engraved as Follows Line 1: E1BL1 Size: 3.50" Wide x 1.00" High (Std) Color: White Surface / Black Letters Plastic/Adhesive - Screw-on
189-00	1	**Designation:** E1BL1 MH38P (Box) NQ Standard TYPE 1 Box 38 H
190-00	1	**Designation:** E1BL1 NC38SHR (Trim) NQ Standard TYPE 1 Box 38 H

Item No.	Qty.	Catalog Number / Details
014-00	1	**Designation:** E1L2 NF ML Panel (Interior) NF Panelboard Consisting of 480Y/277V 3Ph 4W 60Hz SCCR: 14kA Fully Rated Main Lug Only: 60A Incoming Conductors: 1 - #6 - 2/0 AWG Bus: Aluminum: Tin Plated CU Ground Bar 30 Circuit Interior Type 1,Box: 32H x 20W x 5.75D Incoming: Bottom Trim: Surface - Hinged Box Cat No: MH32P Front Cat No: NC32SHR Ref. Drawing: PBA550HR Feeders: 1 - 20A/3P EDB 27 - 20A/1P EDB Optional Features: Standard Panel (Box Ahead),Standard Solid Neutral,Copper Ground Bar ANSI 49 grey box Standard Nameplate: Engraved as Follows Line 1: E1L2 Size: 3.50" Wide x 1.00" High (Std) Color: White Surface / Black Letters Plastic/Adhesive - Screw-on
191-00	1	**Designation:** E1L2 MH32P (Box) NF Standard TYPE 1 Box 32 H
192-00	1	**Designation:** E1L2 NC32SHR (Trim) NF Standard TYPE 1 Box 32 H
015-00	1	**Designation:** E1BL2 NQ SPD Panel (Interior) NQ Panelboard Consisting of 208Y/120V 3Ph 4W 60Hz SCCR: 10kA Fully Rated SPD 120kA per Phase/60kA per Mode SPD line to grd protect w/SPD Surge Counter w/SPD Dry Contacts Main Lug Only: 60A Incoming Conductors: 1 - #6 - 2/0 AWG Bus: Aluminum: Tin Plated CU Ground Bar 30 Circuit Interior Type 1,Box: 32H x 20W x 5.75D Incoming: Top Trim: Surface - Hinged Box Cat No: MH32P Front Cat No: NC32SHR Ref. Drawing: PBA701HR Feeders: 1 - 30A/3P QOB 12 - 20A/1P QOB 1 - 20A/3P QOB Optional Features: Standard Panel (Box Ahead),SPD Model

Item No.	Qty.	Catalog Number / Details
		BIA,Standard Solid Neutral,Copper Ground Bar ANSI 49 grey box Standard Nameplate: Engraved as Follows Line 1: E1BL2 Size: 3.50" Wide x 1.00" High (Std) Color: White Surface / Black Letters Plastic/Adhesive - Screw-on
187-00	1	**Designation:** E1BL2 MH32P (Box) NQ Standard TYPE 1 Box 32 H
188-00	1	**Designation:** E1BL2 NC32SHR (Trim) NQ Standard TYPE 1 Box 32 H
016-00	1	**Designation:** H1L4 NF ML PNLB (INT,BOX,FRT) NF Panelboard Consisting of 480Y/277V 3Ph 4W 60Hz SCCR: 18kA Fully Rated Main Lug Only: 600A Incoming Conductors: 1 - (2) 1/0 - 600 kcmil Bus: Copper: Silver/Tin Plated CU Ground Bar 42 Circuit Interior Type 1,Box: 80H x 20W x 8.75D Incoming: Bottom Trim: Surface - Hinged Box Cat No: MH80D9P Front Cat No: NC80VSHR Ref. Drawing: PBA551HR Feeders: 1 - Sub-Feed One: 225A/3P JD STD LSI 1 - 125A/3P EDB 33 - 20A/1P EDB Optional Features: Ship Completely Assembled,Standard Solid Neutral,Copper Ground Bar ANSI 49 grey box Standard Nameplate: Engraved as Follows Line 1: H1L4 Size: 3.50" Wide x 1.00" High (Std) Color: White Surface / Black Letters Plastic/Adhesive - Screw-on
017-00	1	**Designation:** G/GA NQ ML Panel (Interior) NQ Panelboard Consisting of 208Y/120V 3Ph 4W 60Hz SCCR: 22kA Fully Rated Main Lug Only: 225A Incoming Conductors: 1 - #6 - 350 kcmil Bus: Aluminum: Tin Plated CU Ground Bar 84 Circuit Interior Type 1,Box: 50H x 20W x 5.75D Incoming: Top Trim: Surface - Hinged

Item No.	Qty.	Catalog Number / Details
		Box Cat No: MH50P Front Cat No: NC50SHR Ref. Drawing: PBA701HR Feeders: 1 - 100A/3P QOB-VH 1 - 20A/2P QOB-VH 74 - 20A/1P QOB-VH 2 - 20A/1P QOB-VH-GFI 1 - 30A/3P QOB-VH Optional Features: Standard Panel (Box Ahead),Standard Solid Neutral,Copper Ground Bar ANSI 49 grey box Standard Nameplate: Engraved as Follows Line 1: G/GA Size: 3.50" Wide x 1.00" High (Std) Color: White Surface / Black Letters Plastic/Adhesive - Screw-on
349-00	1	**Designation:** G/GA MH50P (Box) NQ Standard TYPE 1 Box 50 H
350-00	1	**Designation:** G/GA NC50SHR (Trim) NQ Standard TYPE 1 Box 50 H
018-00	1	**Designation:** H1L1 ILINE MB PNLB (INT,BOX,FRT) I-Line Panelboard Consisting of 480Y/277V 3Ph 4W 60Hz SCCR: 25kA Series Rated w/ LG Circuit Breaker Single Main: 400AS/400AT/3P LG Circuit Breaker 80% Rated Main Trip Function: LSI Main Trip Unit: Standard Trip Unit Main Acc: Shunt Trip 120Vac Incoming Conductors: 1 - (2) 2/0 - 500 kcmil Bus: Copper: Tin Plated CU Ground Bar 72" of Mounting Inches Type 1,Box: 91H x 32W x 9.5D Incoming: Bottom Trim: Flush - Hinged Box Cat No: HC3291DB9P Ref. Drawing: PBA403HR Type: HCM Feeders: 25 - 20A/1P FY 4 - 20A/3P FA 1 - 80A/3P FA 2 - 200A/3P JJ Optional Features: Ship Completely Assembled,Copper Solid Neutral,Copper Ground Bar,Standard Mains and Feeders Mechanically Restrained ANSI 49 grey box Standard Nameplate: Engraved as Follows Line 1: H1L1 Size: 3.50" Wide x 1.00" High (Std) Color: White Surface / Black Letters Plastic/Adhesive - Screw-on

Item No.	Qty.	Catalog Number / Details
221-00	CANCLD	**Designation:** H1L1 MH80P (Box) NF Standard TYPE 1 Box 80 H
222-00	CANCLD	**Designation:** H1L1 NC80VFHR (Trim) NF Standard TYPE 1 Box 80 H
019-00	1	**Designation:** H1L2 NF ML Panel (Interior) NF Panelboard Consisting of 480Y/277V 3Ph 4W 60Hz SCCR: 18kA Fully Rated Main Lug Only: 150A Incoming Conductors: 1 - #6 - 350 kcmil Bus: Aluminum: Tin Plated CU Ground Bar 42 Circuit Interior Type 1,Box: 44H x 20W x 5.75D Incoming: Bottom Trim: Flush - Hinged Box Cat No: MH44P Front Cat No: NC44FHR Ref. Drawing: PBA550HR Feeders: 1 - 50A/3P EDB 5 - 20A/3P EDB 24 - 20A/1P EDB Optional Features: Standard Panel (Box Ahead),Standard Solid Neutral,Copper Ground Bar ANSI 49 grey box Standard Nameplate: Engraved as Follows Line 1: H1L2 Size: 3.50" Wide x 1.00" High (Std) Color: White Surface / Black Letters Plastic/Adhesive - Screw-on
223-00	1	**Designation:** H1L2 MH44P (Box) NF Standard TYPE 1 Box 44 H
224-00	1	**Designation:** H1L2 NC44FHR (Trim) NF Standard TYPE 1 Box 44 H
020-00	1	**Designation:** L1L6 NQ SPD Panel (Interior) NQ Panelboard Consisting of 208Y/120V 3Ph 4W 60Hz SCCR: 10kA Fully Rated SPD 120kA per Phase/60kA per Mode SPD line to grd protect w/SPD Surge Counter w/SPD Dry Contacts Main Lug Only: 125A Incoming Conductors: 1 - #6 - 350 kcmil Bus: Aluminum: Tin Plated CU Ground Bar

Item No.	Qty.	Catalog Number / Details
		72 Circuit Interior Type 1,Box: 44H x 20W x 5.75D Incoming: Bottom Trim: Flush - Hinged Box Cat No: MH44P Front Cat No: NC44FHR Ref. Drawing: PBA701HR Feeders: 1 - 30A/2P QOB 58 - 20A/1P QOB Optional Features: Standard Panel (Box Ahead),SPD Model BIA,Standard Solid Neutral,Copper Ground Bar ANSI 49 grey box Standard Nameplate: Engraved as Follows Line 1: L1L6 Size: 3.50" Wide x 1.00" High (Std) Color: White Surface / Black Letters Plastic/Adhesive - Screw-on
264-00	1	**Designation:** L1L6 MH44P (Box) NQ Standard TYPE 1 Box 44 H
265-00	1	**Designation:** L1L6 NC44FHR (Trim) NQ Standard TYPE 1 Box 44 H
021-00	1	**Designation:** L1M1 NQ SPD Panel (Interior) NQ Panelboard Consisting of 208Y/120V 3Ph 4W 60Hz SCCR: 10kA Fully Rated SPD 120kA per Phase/60kA per Mode SPD line to grd protect w/SPD Surge Counter w/SPD Dry Contacts Main Lug Only: 125A Incoming Conductors: 1 - #6 - 350 kcmil Bus: Aluminum: Tin Plated CU Ground Bar 72 Circuit Interior Type 1,Box: 44H x 20W x 5.75D Incoming: Bottom Trim: Flush - Hinged Box Cat No: MH44P Front Cat No: NC44FHR Ref. Drawing: PBA701HR Feeders: 1 - 30A/3P QOB 52 - 20A/1P QOB 1 - 20A/1P QOB-GFI 1 - 30A/2P QOB 1 - 20A/2P QOB Optional Features: Standard Panel (Box Ahead),SPD Model BIA,Standard Solid Neutral,Copper Ground Bar ANSI 49 grey box Standard Nameplate: Engraved as Follows Line 1: L1M1 Size: 3.50" Wide x 1.00" High (Std) Color: White Surface / Black Letters

Item No.	Qty.	Catalog Number / Details
		Plastic/Adhesive - Screw-on
266-00	1	**Designation:** L1M1 MH44P (Box) NQ Standard TYPE 1 Box 44 H
267-00	1	**Designation:** L1M1 NC44FHR (Trim) NQ Standard TYPE 1 Box 44 H
022-00	1	**Designation:** L1L2 NQ MB PNLB (INT,BOX,TRIM) - A NQ Panelboard Consisting of 208Y/120V 3Ph 4W 60Hz SCCR: 22kA Series Rated w/ LG Circuit Breaker Single Main: 600AS/600AT/3P LG Circuit Breaker 80% Rated Main Trip Function: LI Main Trip Unit: Standard Trip Unit Main Acc: Shunt Trip 120Vac Main Acc: Feed Thru Lugs Incoming Conductors: 1 - (2) 3/0 - 500 kcmil Bus: Copper: Silver/Tin Plated CU Ground Bar 42 Circuit Interior Type 1,Box: 74H x 20W x 8.75D Incoming: Bottom Trim: Flush - Hinged Box Cat No: MH74D9P Front Cat No: NC74VFHR Ref. Drawing: PBA713HR Feeders: 1 - 30A/3P QOB-VH 7 - 20A/3P QOB-VH 18 - 20A/1P QOB Optional Features: Ship Completely Assembled,Standard Solid Neutral,Copper Ground Bar ANSI 49 grey box Standard Nameplate: Engraved as Follows Line 1: L1L2 Size: 3.50" Wide x 1.00" High (Std) Color: White Surface / Black Letters Plastic/Adhesive - Screw-on
028-00	CANCLD	**Designation:** L1L2 NQ ML PNLB (INT,BOX,TRIM) - B NQ Panelboard
252-00	1	**Designation:** L1L2 NQ ML PNLB (INT,BOX,TRIM) - B NQ Panelboard Consisting of 208Y/120V 3Ph 4W 60Hz SCCR: 22kA Series Rated w/ LG Circuit Breaker Main Lug Only: 600A Incoming Conductors: 1 - (2) 3/0 - 500 kcmil Bus: Copper: Silver/Tin Plated CU Ground Bar 42 Circuit Interior Type 1,Box: 74H x 20W x 8.75D

Item No.	Qty.	Catalog Number / Details
		Incoming: Top Trim: Flush - Hinged Box Cat No: MH74D9P Front Cat No: NC74VFHR Ref. Drawing: PBA709HR Feeders: 36 - 20A/1P QOB 1 - Sub-Feed One: 225A/3P QD 1 - Sub-Feed Two: 125A/3P QD Optional Features: Ship Completely Assembled,Standard Solid Neutral,Copper Ground Bar ANSI 49 grey box Standard Nameplate: Engraved as Follows Line 1: L1L2 Size: 3.50" Wide x 1.00" High (Std) Color: White Surface / Black Letters Plastic/Adhesive - Screw-on
023-00	1	**Designation:** L1L3 NQ MB PNLB (INT,BOX,FRT) NQ Panelboard Consisting of 208Y/120V 3Ph 4W 60Hz SCCR: 22kA Series Rated w/ LD Circuit Breaker Single Main: 400AS/400AT/3P LD Circuit Breaker 80% Rated Main Trip Function: LI Main Trip Unit: Standard Trip Unit Main Acc: Shunt Trip 120Vac Incoming Conductors: 1 - (2) 3/0 - 500 kcmil Bus: Copper: Silver/Tin Plated CU Ground Bar 84 Circuit Interior Type 1,Box: 86H x 20W x 8.75D Incoming: Bottom Trim: Flush - Hinged Box Cat No: MH86D9P Front Cat No: NC86VFHR Ref. Drawing: PBA713HR Feeders: 1 - 150A/3P QOB-VH 2 - 20A/3P QOB-VH 4 - 20A/2P QOB 57 - 20A/1P QOB 1 - 40A/3P QOB-VH 2 - 30A/2P QOB Optional Features: Ship Completely Assembled,Standard Solid Neutral,Copper Ground Bar ANSI 49 grey box Standard Nameplate: Engraved as Follows Line 1: L1L3 Size: 3.50" Wide x 1.00" High (Std) Color: White Surface / Black Letters Plastic/Adhesive - Screw-on
024-00	1	**Designation:** L1L31 NQ ML Panel (Interior) NQ Panelboard Consisting of 208Y/120V 3Ph 4W 60Hz SCCR: 22kA Series Rated w/ QOB-VH Circuit Breaker Main Lug Only: 150A

Item No.	Qty.	Catalog Number / Details
		Incoming Conductors: 1 - #6 - 350 kcmil Bus: Aluminum: Tin Plated CU Ground Bar 42 Circuit Interior Type 1,Box: 38H x 20W x 5.75D Incoming: Bottom Trim: Flush - Hinged Box Cat No: MH38P Front Cat No: NC38FHR Ref. Drawing: PBA701HR Feeders: 6 - 20A/2P QOB 30 - 20A/1P QOB Optional Features: Standard Panel (Box Ahead),Standard Solid Neutral,Copper Ground Bar ANSI 49 grey box Standard Nameplate: Engraved as Follows Line 1: L1L31 Size: 3.50" Wide x 1.00" High (Std) Color: White Surface / Black Letters Plastic/Adhesive - Screw-on
254-00	1	**Designation:** L1L31 MH38P (Box) NQ Standard TYPE 1 Box 38 H
255-00	1	**Designation:** L1L31 NC38FHR (Trim) NQ Standard TYPE 1 Box 38 H
025-00	1	**Designation:** L1L4 NQ ML Panel (Interior) NQ Panelboard Consisting of 208Y/120V 3Ph 4W 60Hz SCCR: 10kA Fully Rated Main Lug Only: 225A Incoming Conductors: 1 - #6 - 350 kcmil Bus: Aluminum: Tin Plated CU Ground Bar 72 Circuit Interior Type 1,Box: 44H x 20W x 5.75D Incoming: Bottom Trim: Flush - Hinged Box Cat No: MH44P Front Cat No: NC44FHR Ref. Drawing: PBA701HR Feeders: 1 - 30A/3P QOB 55 - 20A/1P QOB 1 - 30A/2P QOB Optional Features: Standard Panel (Box Ahead),Standard Solid Neutral,Copper Ground Bar ANSI 49 grey box Standard Nameplate: Engraved as Follows Line 1: L1L4 Size: 3.50" Wide x 1.00" High (Std) Color: White Surface / Black Letters Plastic/Adhesive - Screw-on
353-00	1	**Designation:** L1L4

Item No.	Qty.	Catalog Number / Details
		MH44P (Box) NQ Standard TYPE 1 Box 44 H
354-00	1	**Designation:** L1L4 NC44FHR (Trim) NQ Standard TYPE 1 Box 44 H
026-00	1	**Designation:** L1L1 NQ MB PNLB (INT,BOX,FRT) NQ Panelboard Consisting of 208Y/120V 3Ph 4W 60Hz SCCR: 25kA Series Rated w/ LD Circuit Breaker Single Main: 600AS/600AT/3P LD Circuit Breaker 80% Rated Main Trip Function: LI Main Trip Unit: Standard Trip Unit Main Acc: Shunt Trip 120Vac Incoming Conductors: 1 - (2) 3/0 - 500 kcmil Bus: Copper: Silver/Tin Plated CU Ground Bar 84 Circuit Interior Type 1,Box: 86H x 20W x 8.75D Incoming: Bottom Trim: Flush - Hinged Box Cat No: MH86D9P Front Cat No: NC86VFHR Ref. Drawing: PBA713HR Feeders: 2 - 150A/3P QOB-VH 2 - 50A/2P QOB 2 - 20A/2P QOB 52 - 20A/1P QOB 1 - 30A/3P QOB-VH 3 - 20A/3P QOB-VH Optional Features: Ship Completely Assembled,Copper Solid Neutral,Copper Ground Bar ANSI 49 grey box Standard Nameplate: Engraved as Follows Line 1: L1L1 Size: 3.50" Wide x 1.00" High (Std) Color: White Surface / Black Letters Plastic/Adhesive - Screw-on
251-00	CANCLD	**Designation:** L1L1 NQ ML PNLB (INT,BOX,TRIM) - B NQ Panelboard
027-00	3	TVS2EBA12A EBA TVSS, 208Y/120V, 3 ph, 4 wire, 120kA 120KA SPD FOR PANELS MD/G, G/GA AND L1L5
029-00	1	**Designation:** L2B1 NQ ML Panel (Interior) NQ Panelboard Consisting of 208Y/120V 3Ph 4W 60Hz SCCR: 25kA Series Rated w/ QG Circuit Breaker Main Lug Only: 100A Incoming Conductors: 1 - #6 - 2/0 AWG Bus: Aluminum: Tin Plated CU Ground Bar 42 Circuit Interior

Item No.	Qty.	Catalog Number / Details
		Type 1,Box: 38H x 20W x 5.75D Incoming: Bottom Trim: Surface - Hinged Box Cat No: MH38P Front Cat No: NC38SHR Ref. Drawing: PBA701HR Feeders: 1 - 40A/2P QOB 38 - 20A/1P QOB 2 - 20A/1P QOB-EPD Optional Features: Standard Panel (Box Ahead),Standard Solid Neutral,Copper Ground Bar ANSI 49 grey box Standard Nameplate: Engraved as Follows Line 1: L2B1 Size: 3.50" Wide x 1.00" High (Std) Color: White Surface / Black Letters Plastic/Adhesive - Screw-on
317-00	1	**Designation:** L2B1 MH38P (Box) NQ Standard TYPE 1 Box 38 H
318-00	1	**Designation:** L2B1 NC38SHR (Trim) NQ Standard TYPE 1 Box 38 H
030-00	1	**Designation:** L2B2 NQ ML Panel (Interior) NQ Panelboard Consisting of 208Y/120V 3Ph 4W 60Hz SCCR: 14kA Series Rated w/ QG Circuit Breaker Main Lug Only: 225A Incoming Conductors: 1 - #6 - 350 kcmil Bus: Aluminum: Tin Plated CU Ground Bar 42 Circuit Interior Type 1,Box: 38H x 20W x 5.75D Incoming: Bottom Trim: Surface - Hinged Box Cat No: MH38P Front Cat No: NC38SHR Ref. Drawing: PBA701HR Feeders: 6 - 20A/2P QOB 30 - 20A/1P QOB Optional Features: Standard Panel (Box Ahead),Standard Solid Neutral,Copper Ground Bar ANSI 49 grey box Standard Nameplate: Engraved as Follows Line 1: L2B2 Size: 3.50" Wide x 1.00" High (Std) Color: White Surface / Black Letters Plastic/Adhesive - Screw-on
319-00	1	**Designation:** L2B2 MH38P (Box) NQ Standard TYPE 1 Box 38 H

Item No.	Qty.	Catalog Number / Details
320-00	1	**Designation:** L2B2 NC38SHR (Trim) NQ Standard TYPE 1 Box 38 H
031-00	CANCLD	**Designation:** L2M1 ILINE ML PNLB (INT,BOX,TRIM) - A I-Line Panelboard Consisting of 208Y/120V 3Ph 4W 60Hz SCCR: 30kA Fully Rated SPD 120kA per Phase/60kA per Mode SPD line to grd protect w/SPD Surge Counter w/SPD Dry Contacts Main Lug Only: 600A Incoming Conductors: 1 - (2) #2 - 500kcmil Bus: Copper: Tin Plated CU Ground Bar 99" of Mounting Inches Type 1,Box: 86H x 42W x 9.5D Incoming: Bottom Trim: Surface - Hinged Box Cat No: HC4286DBP Front Cat No: HC4286TSHR Ref. Drawing: PBA418HR Type: HCP Feeders: 1 - SL800 Feeds Next Panel 41 - 20A/1P FH 1 - 400AS/300AT/3P LG Std. LI 80% 2 - 50A/3P FH Optional Features: Ship Completely Assembled,Standard Solid Neutral,Copper Ground Bar,Standard Mains and Feeders Mechanically Restrained ANSI 49 grey box Standard Nameplate: Engraved as Follows Line 1: L2M1 Size: 3.50" Wide x 1.00" High (Std) Color: White Surface / Black Letters Plastic/Adhesive - Screw-on
078-00	CANCLD	**Designation:** L2M1 ILINE ML PNLB (INT,BOX,TRIM) - B I-Line Panelboard Consisting of 208Y/120V 3Ph 4W 60Hz SCCR: 30kA Fully Rated Main Lug Only: 600A Bus: Copper: Tin Plated CU Ground Bar 63" of Mounting Inches Type 1,Box: 73H x 32W x 8.25D Incoming: Top Trim: Surface - Hinged Box Cat No: HC3273BP Front Cat No: HC3273TSHR Ref. Drawing: PBA402HR Type: HCM Feeders: 31 - 20A/1P FH Optional Features: Ship Completely Assembled,Standard Solid Neutral,Copper Ground Bar,Standard Mains and Feeders Mechanically Restrained ANSI 49 grey box Standard Nameplate:

Item No.	Qty.	Catalog Number / Details
		Engraved as Follows Line 1: L2M1 Size: 3.50" Wide x 1.00" High (Std) Color: White Surface / Black Letters Plastic/Adhesive - Screw-on
032-00	1	**Designation:** L2M11 NQ ML Panel (Interior) NQ Panelboard Consisting of 208Y/120V 3Ph 4W 60Hz SCCR: 22kA Series Rated w/ LG Circuit Breaker Main Lug Only: 400A Incoming Conductors: 1 - 1/0 - 750, (2) 1/0 - 350 kcmil Bus: Aluminum: Tin Plated CU Ground Bar 84 Circuit Interior Type 1,Box: 68H x 20W x 5.75D Incoming: Bottom Trim: Flush - Hinged Box Cat No: MH68P Front Cat No: NC68VFHR Ref. Drawing: PBA709HR Feeders: 3 - 30A/3P QOB-VH 2 - 20A/3P QOB-VH 2 - 20A/2P QOB 47 - 20A/1P QOB 14 - 20A/1P QOB-GFI 2 - 30A/2P QOB Optional Features: Standard Panel (Box Ahead),Standard Solid Neutral,Copper Ground Bar ANSI 49 grey box Standard Nameplate: Engraved as Follows Line 1: L2M11 Size: 3.50" Wide x 1.00" High (Std) Color: White Surface / Black Letters Plastic/Adhesive - Screw-on
326-00	1	**Designation:** L2M11 MH68P (Box) NQ Standard TYPE 1 Box 68 H
327-00	1	**Designation:** L2M11 NC68VFHR (Trim) NQ Standard TYPE 1 Box 68 H
033-00	1	**Designation:** L2M2 NQ ML Panel (Interior) NQ Panelboard Consisting of 208Y/120V 3Ph 4W 60Hz SCCR: 20kA Series Rated w/ LG Circuit Breaker Main Lug Only: 400A Incoming Conductors: 1 - 1/0 - 750, (2) 1/0 - 350 kcmil Bus: Aluminum: Tin Plated CU Ground Bar 84 Circuit Interior Type 1,Box: 68H x 20W x 5.75D

Item No.	Qty.	Catalog Number / Details
		Incoming: Bottom Trim: Flush - Hinged Box Cat No: MH68P Front Cat No: NC68VFHR Ref. Drawing: PBA709HR Feeders: 1 - 100A/3P QOB-VH 1 - 20A/3P QOB-VH 26 - 20A/1P QOB 5 - 30A/2P QOB 4 - 20A/2P QOB 31 - 20A/1P QOB-GFI 1 - 60A/3P QOB-VH Optional Features: Standard Panel (Box Ahead),Standard Solid Neutral,Copper Ground Bar ANSI 49 grey box Branch User Placement Standard Nameplate: Engraved as Follows Line 1: L2M2 Size: 3.50" Wide x 1.00" High (Std) Color: White Surface / Black Letters Plastic/Adhesive - Screw-on
357-00	CANCLD	**Designation:** L2M2 MH68P (Box) NQ Standard TYPE 1 Box 68 H
358-00	CANCLD	**Designation:** L2M2 NC68VFHR (Trim) NQ Standard TYPE 1 Box 68 H
401-00	1	**Designation:** L2M2 MH68P (Box) NQ Standard TYPE 1 Box 68 H
402-00	1	**Designation:** L2M2 NC68VFHR (Trim) NQ Standard TYPE 1 Box 68 H
034-00	1	**Designation:** L2M21 NQ MB Panel (Interior) NQ Panelboard Consisting of 208Y/120V 3Ph 4W 60Hz SCCR: 14kA Series Rated w/ HD Circuit Breaker Single Main: 60A/3P HD Circuit Breaker Main Acc: Shunt Trip 120Vac Incoming Conductors: 1 - #14 - 3/0 AWG Bus: Aluminum: Tin Plated CU Ground Bar 18 Circuit Interior Type 1,Box: 38H x 20W x 5.75D Incoming: Top Trim: Flush - Hinged Box Cat No: MH38P Front Cat No: NC38FHR Ref. Drawing: PBA705HR Feeders: 8 - 20A/1P QOB-GFI 10 - 20A/1P QOB Optional Features: Standard Panel (Box Ahead),Standard Solid Neutral,Copper Ground Bar ANSI 49 grey box Standard Nameplate:

Item No.	Qty.	Catalog Number / Details
		Engraved as Follows Line 1: L2M21 Size: 3.50" Wide x 1.00" High (Std) Color: White Surface / Black Letters Plastic/Adhesive - Screw-on
333-00	CANCLD	**Designation:** L2M21 MH38P (Box) NQ Standard TYPE 1 Box 38 H
334-00	CANCLD	**Designation:** L2M21 NC38SHR (Trim) NQ Standard TYPE 1 Box 38 H
371-00	1	**Designation:** L2M21 MH38P (Box) NQ Standard TYPE 1 Box 38 H
372-00	1	**Designation:** L2M21 NC38FHR (Trim) NQ Standard TYPE 1 Box 38 H
035-00	1	**Designation:** L21M1 NQ ML Panel (Interior) NQ Panelboard Consisting of 208Y/120V 3Ph 4W 60Hz SCCR: 10kA Fully Rated Main Lug Only: 225A Incoming Conductors: 1 - #6 - 350 kcmil Bus: Aluminum: Tin Plated CU Ground Bar 84 Circuit Interior Type 1,Box: 68H x 20W x 5.75D Incoming: Bottom Trim: Flush - Hinged Box Cat No: MH68P Front Cat No: NC68FHR Ref. Drawing: PBA701HR Feeders: 1 - Sub-Feed One: 100A/3P QG 1 - 30A/3P QOB 72 - 20A/1P QOB 2 - 20A/1P QOB-EPD 2 - 20A/2P QOB Optional Features: Standard Panel (Box Ahead),Standard Solid Neutral,Copper Ground Bar ANSI 49 grey box Standard Nameplate: Engraved as Follows Line 1: L21M1 Size: 3.50" Wide x 1.00" High (Std) Color: White Surface / Black Letters Plastic/Adhesive - Screw-on
270-00	1	**Designation:** L21M1 MH68P (Box) NQ Standard TYPE 1 Box 68 H
271-00	1	**Designation:** L21M1 NC68FHR (Trim)

Item No.	Qty.	Catalog Number / Details
		NQ Standard TYPE 1 Box 68 H
036-00	1	**Designation:** L21M11 NQ SPD Panel (Interior) NQ Panelboard Consisting of 208Y/120V 3Ph 4W 60Hz SCCR: 14kA Series Rated w/ QG Circuit Breaker SPD 120kA per Phase/60kA per Mode SPD line to grd protect w/SPD Surge Counter w/SPD Dry Contacts Main Lug Only: 100A Incoming Conductors: 1 - #6 - 2/0 AWG Bus: Aluminum: Tin Plated CU Ground Bar 42 Circuit Interior Type 1,Box: 38H x 20W x 5.75D Incoming: Bottom Trim: Flush - Hinged Box Cat No: MH38P Front Cat No: NC38FHR Ref. Drawing: PBA701HR Feeders: 27 - 20A/1P QOB 1 - 30A/3P QOB SPD DISC Optional Features: Standard Panel (Box Ahead),SPD Model BIA,Standard Solid Neutral,Copper Ground Bar ANSI 49 grey box Standard Nameplate: Engraved as Follows Line 1: L21M11 Size: 3.50" Wide x 1.00" High (Std) Color: White Surface / Black Letters Plastic/Adhesive - Screw-on
272-00	1	**Designation:** L21M11 MH38P (Box) NQ Standard TYPE 1 Box 38 H
273-00	1	**Designation:** L21M11 NC38FHR (Trim) NQ Standard TYPE 1 Box 38 H
037-00	1	**Designation:** L21M2 NQ ML Panel (Interior) NQ Panelboard Consisting of 208Y/120V 3Ph 4W 60Hz SCCR: 14kA Series Rated w/ QG Circuit Breaker Main Lug Only: 150A Incoming Conductors: 1 - #6 - 350 kcmil Bus: Aluminum: Tin Plated CU Ground Bar 84 Circuit Interior Type 1,Box: 50H x 20W x 5.75D Incoming: Bottom Trim: Flush - Hinged Box Cat No: MH50P Front Cat No: NC50FHR Ref. Drawing: PBA701HR Feeders: 1 - 30A/3P QOB 78 - 20A/1P QOB 3 - 20A/1P QOB-EPD

Item No.	Qty.	Catalog Number / Details
		Optional Features: Standard Panel (Box Ahead),Standard Solid Neutral,Copper Ground Bar ANSI 49 grey box Standard Nameplate: Engraved as Follows Line 1: L21M2 Size: 3.50" Wide x 1.00" High (Std) Color: White Surface / Black Letters Plastic/Adhesive - Screw-on
274-00	1	**Designation:** L21M2 MH50P (Box) NQ Standard TYPE 1 Box 50 H
275-00	1	**Designation:** L21M2 NC50FHR (Trim) NQ Standard TYPE 1 Box 50 H
038-00	1	**Designation:** L21M3 NQ ML Panel (Interior) NQ Panelboard Consisting of 208Y/120V 3Ph 4W 60Hz SCCR: 10kA Fully Rated Main Lug Only: 225A Incoming Conductors: 1 - #6 - 350 kcmil Bus: Aluminum: Tin Plated CU Ground Bar 84 Circuit Interior Type 1,Box: 50H x 20W x 5.75D Incoming: Bottom Trim: Flush - Hinged Box Cat No: MH50P Front Cat No: NC50FHR Ref. Drawing: PBA701HR Feeders: 1 - 30A/3P QOB 74 - 20A/1P QOB 3 - 20A/1P QOB-EPD 1 - 50A/2P QOB 1 - 30A/2P QOB Optional Features: Standard Panel (Box Ahead),Copper Solid Neutral,Copper Ground Bar ANSI 49 grey box Standard Nameplate: Engraved as Follows Line 1: L21M3 Size: 3.50" Wide x 1.00" High (Std) Color: White Surface / Black Letters Plastic/Adhesive - Screw-on
276-00	1	**Designation:** L21M3 MH50P (Box) NQ Standard TYPE 1 Box 50 H
277-00	1	**Designation:** L21M3 NC50FHR (Trim) NQ Standard TYPE 1 Box 50 H
039-00	1	**Designation:** L21M4

Item No.	Qty.	Catalog Number / Details
		NQ SPD Panel (Interior) NQ Panelboard Consisting of 208Y/120V 3Ph 4W 60Hz SCCR: 20kA Series Rated w/ QD Circuit Breaker SPD 120kA per Phase/60kA per Mode SPD line to grd protect w/SPD Surge Counter w/SPD Dry Contacts Main Lug Only: 150A Incoming Conductors: 1 - #6 - 350 kcmil Bus: Aluminum: Tin Plated CU Ground Bar 72 Circuit Interior Type 1,Box: 44H x 20W x 5.75D Incoming: Bottom Trim: Flush - Hinged Box Cat No: MH44P Front Cat No: NC44FHR Ref. Drawing: PBA701HR Feeders: 57 - 20A/1P QOB 1 - 30A/3P QOB SPD DISC Optional Features: Standard Panel (Box Ahead),SPD Model BIA,Standard Solid Neutral,Copper Ground Bar ANSI 49 grey box Standard Nameplate: Engraved as Follows Line 1: L21M4 Size: 3.50" Wide x 1.00" High (Std) Color: White Surface / Black Letters Plastic/Adhesive - Screw-on
278-00	1	**Designation:** L21M4 MH44P (Box) NQ Standard TYPE 1 Box 44 H
279-00	1	**Designation:** L21M4 NC44FHR (Trim) NQ Standard TYPE 1 Box 44 H
040-00	1	**Designation:** H22B1 NF ML Panel (Interior) NF Panelboard Consisting of 480Y/277V 3Ph 4W 60Hz SCCR: 14kA Fully Rated Main Lug Only: 60A Incoming Conductors: 1 - #6 - 2/0 AWG Bus: Aluminum: Tin Plated CU Ground Bar 18 Circuit Interior Type 1,Box: 26H x 20W x 5.75D Incoming: Bottom Trim: Surface - Hinged Box Cat No: MH26P Front Cat No: NC26SHR Ref. Drawing: PBA550HR Feeders: 1 - 25A/3P EDB 15 - 20A/1P EDB Optional Features: Standard Panel (Box Ahead),Standard Solid Neutral,Copper Ground Bar ANSI 49 grey box

Item No.	Qty.	Catalog Number / Details
		Standard Nameplate: Engraved as Follows Line 1: H22B1 Size: 3.50" Wide x 1.00" High (Std) Color: White Surface / Black Letters Plastic/Adhesive - Screw-on
233-00	1	**Designation:** H22B1 MH26P (Box) NF Standard TYPE 1 Box 26 H
234-00	1	**Designation:** H22B1 NC26SHR (Trim) NF Standard TYPE 1 Box 26 H
041-00	1	**Designation:** H22M1 NF ML Panel (Interior) NF Panelboard Consisting of 480Y/277V 3Ph 4W 60Hz SCCR: 10kA Fully Rated Main Lug Only: 60A Incoming Conductors: 1 - #6 - 2/0 AWG Bus: Aluminum: Tin Plated CU Ground Bar 18 Circuit Interior Type 1,Box: 26H x 20W x 5.75D Incoming: Bottom Trim: Flush - Hinged Box Cat No: MH26P Front Cat No: NC26FHR Ref. Drawing: PBA550HR Feeders: 18 - 20A/1P EDB Optional Features: Standard Panel (Box Ahead),Standard Solid Neutral,Copper Ground Bar ANSI 49 grey box Standard Nameplate: Engraved as Follows Line 1: H22M1 Size: 3.50" Wide x 1.00" High (Std) Color: White Surface / Black Letters Plastic/Adhesive - Screw-on
235-00	1	**Designation:** H22M1 MH26P (Box) NF Standard TYPE 1 Box 26 H
236-00	1	**Designation:** H22M1 NC26FHR (Trim) NF Standard TYPE 1 Box 26 H
042-00	1	**Designation:** H22U1 NF ML Panel (Interior) NF Panelboard Consisting of 480Y/277V 3Ph 4W 60Hz SCCR: 14kA Fully Rated Main Lug Only: 125A Incoming Conductors: 1 - #6 - 2/0 AWG Bus: Aluminum: Tin Plated

Item No.	Qty.	Catalog Number / Details
		CU Ground Bar 42 Circuit Interior Type 1,Box: 38H x 20W x 5.75D Incoming: Bottom Trim: Flush - Hinged Box Cat No: MH38P Front Cat No: NC38FHR Ref. Drawing: PBA550HR Feeders: 3 - 20A/3P EDB 33 - 20A/1P EDB Optional Features: Standard Panel (Box Ahead),Standard Solid Neutral,Copper Ground Bar ANSI 49 grey box Standard Nameplate: Engraved as Follows Line 1: H22U1 Size: 3.50" Wide x 1.00" High (Std) Color: White Surface / Black Letters Plastic/Adhesive - Screw-on
237-00	1	**Designation:** H22U1 MH38P (Box) NF Standard TYPE 1 Box 38 H
238-00	1	**Designation:** H22U1 NC38FHR (Trim) NF Standard TYPE 1 Box 38 H
043-00	1	**Designation:** L22M1 NQ ML Panel (Interior) NQ Panelboard Consisting of 208Y/120V 3Ph 4W 60Hz SCCR: 14kA Series Rated w/ QD Circuit Breaker Main Lug Only: 150A Incoming Conductors: 1 - #6 - 350 kcmil Bus: Aluminum: Tin Plated CU Ground Bar 84 Circuit Interior Type 1,Box: 50H x 20W x 5.75D Incoming: Bottom Trim: Flush - Hinged Box Cat No: MH50P Front Cat No: NC50FHR Ref. Drawing: PBA701HR Feeders: 1 - 30A/3P QOB 78 - 20A/1P QOB 3 - 20A/1P QOB-EPD Optional Features: Standard Panel (Box Ahead),Standard Solid Neutral,Copper Ground Bar ANSI 49 grey box Standard Nameplate: Engraved as Follows Line 1: L22M1 Size: 3.50" Wide x 1.00" High (Std) Color: White Surface / Black Letters Plastic/Adhesive - Screw-on
295-00	1	**Designation:** L22M1 MH50P (Box) NQ Standard TYPE 1 Box 50 H

Item No.	Qty.	Catalog Number / Details
296-00	1	**Designation:** L22M1 NC50FHR (Trim) NQ Standard TYPE 1 Box 50 H
044-00	1	**Designation:** L22M2 NQ SPD Panel (Interior) NQ Panelboard Consisting of 208Y/120V 3Ph 4W 60Hz SCCR: 10kA Fully Rated SPD 120kA per Phase/60kA per Mode SPD line to grd protect w/SPD Surge Counter w/SPD Dry Contacts Main Lug Only: 150A Incoming Conductors: 1 - #6 - 350 kcmil Bus: Aluminum: Tin Plated CU Ground Bar 72 Circuit Interior Type 1,Box: 44H x 20W x 5.75D Incoming: Bottom Trim: Flush - Hinged Box Cat No: MH44P Front Cat No: NC44FHR Ref. Drawing: PBA701HR Feeders: 2 - 20A/2P QOB 53 - 20A/1P QOB 1 - 30A/3P QOB SPD DISC Optional Features: Standard Panel (Box Ahead),SPD Model BIA,Standard Solid Neutral,Copper Ground Bar ANSI 49 grey box Standard Nameplate: Engraved as Follows Line 1: L22M2 Size: 3.50" Wide x 1.00" High (Std) Color: White Surface / Black Letters Plastic/Adhesive - Screw-on
297-00	1	**Designation:** L22M2 MH44P (Box) NQ Standard TYPE 1 Box 44 H
298-00	1	**Designation:** L22M2 NC44FHR (Trim) NQ Standard TYPE 1 Box 44 H
045-00	1	**Designation:** L22M3 NQ SPD Panel (Interior) NQ Panelboard Consisting of 208Y/120V 3Ph 4W 60Hz SCCR: 10kA Fully Rated SPD 120kA per Phase/60kA per Mode SPD line to grd protect w/SPD Surge Counter w/SPD Dry Contacts Main Lug Only: 150A Incoming Conductors: 1 - #6 - 350 kcmil Bus: Aluminum: Tin Plated CU Ground Bar

Item No.	Qty.	Catalog Number / Details
		72 Circuit Interior Type 1,Box: 44H x 20W x 5.75D Incoming: Bottom Trim: Flush - Hinged Box Cat No: MH44P Front Cat No: NC44FHR Ref. Drawing: PBA701HR Feeders: 56 - 20A/1P QOB 1 - 30A/3P QOB SPD DISC 1 - 20A/1P QOB-EPD Optional Features: Standard Panel (Box Ahead),SPD Model BIA,Standard Solid Neutral,Copper Ground Bar ANSI 49 grey box Standard Nameplate: Engraved as Follows Line 1: L22M3 Size: 3.50" Wide x 1.00" High (Std) Color: White Surface / Black Letters Plastic/Adhesive - Screw-on
299-00	1	**Designation:** L22M3 MH44P (Box) NQ Standard TYPE 1 Box 44 H
300-00	1	**Designation:** L22M3 NC44FHR (Trim) NQ Standard TYPE 1 Box 44 H
046-00	1	**Designation:** L22M4 NQ SPD Panel (Interior) NQ Panelboard Consisting of 208Y/120V 3Ph 4W 60Hz SCCR: 10kA Fully Rated SPD 120kA per Phase/60kA per Mode SPD line to grd protect w/SPD Surge Counter w/SPD Dry Contacts Main Lug Only: 150A Incoming Conductors: 1 - #6 - 350 kcmil Bus: Aluminum: Tin Plated CU Ground Bar 72 Circuit Interior Type 1,Box: 44H x 20W x 5.75D Incoming: Bottom Trim: Flush - Hinged Box Cat No: MH44P Front Cat No: NC44FHR Ref. Drawing: PBA701HR Feeders: 57 - 20A/1P QOB 1 - 30A/3P QOB SPD DISC Optional Features: Standard Panel (Box Ahead),Copper Solid Neutral,SPD Model BIA,Copper Ground Bar ANSI 49 grey box Standard Nameplate: Engraved as Follows Line 1: L22M4 Size: 3.50" Wide x 1.00" High (Std) Color: White Surface / Black Letters Plastic/Adhesive - Screw-on

Item No.	Qty.	Catalog Number / Details
301-00	1	**Designation:** L22M4 MH44P (Box) NQ Standard TYPE 1 Box 44 H
302-00	1	**Designation:** L22M4 NC44FHR (Trim) NQ Standard TYPE 1 Box 44 H
047-00	1	**Designation:** L22M5 NQ ML Panel (Interior) NQ Panelboard Consisting of 208Y/120V 3Ph 4W 60Hz SCCR: 10kA Fully Rated Main Lug Only: 225A Incoming Conductors: 1 - #6 - 350 kcmil Bus: Aluminum: Tin Plated CU Ground Bar 84 Circuit Interior Type 1,Box: 50H x 20W x 5.75D Incoming: Bottom Trim: Flush - Hinged Box Cat No: MH50P Front Cat No: NC50FHR Ref. Drawing: PBA701HR Feeders: 1 - 30A/3P QOB 1 - 30A/2P QOB 75 - 20A/1P QOB 2 - 50A/2P QOB Optional Features: Standard Panel (Box Ahead),Standard Solid Neutral,Copper Ground Bar ANSI 49 grey box Standard Nameplate: Engraved as Follows Line 1: L22M5 Size: 3.50" Wide x 1.00" High (Std) Color: White Surface / Black Letters Plastic/Adhesive - Screw-on
303-00	1	**Designation:** L22M5 MH50P (Box) NQ Standard TYPE 1 Box 50 H
304-00	1	**Designation:** L22M5 NC50FHR (Trim) NQ Standard TYPE 1 Box 50 H
048-00	1	**Designation:** L22M6 NQ SPD Panel (Interior) NQ Panelboard Consisting of 208Y/120V 3Ph 4W 60Hz SCCR: 10kA Fully Rated SPD 120kA per Phase/60kA per Mode SPD line to grd protect w/SPD Surge Counter w/SPD Dry Contacts Main Lug Only: 150A Incoming Conductors: 1 - #6 - 350 kcmil Bus: Aluminum: Tin Plated CU Ground Bar

Item No.	Qty.	Catalog Number / Details
		72 Circuit Interior Type 1,Box: 44H x 20W x 5.75D Incoming: Bottom Trim: Flush - Hinged Box Cat No: MH44P Front Cat No: NC44FHR Ref. Drawing: PBA701HR Feeders: 57 - 20A/1P QOB 1 - 30A/3P QOB SPD DISC Optional Features: Standard Panel (Box Ahead),SPD Model BIA,Standard Solid Neutral,Copper Ground Bar ANSI 49 grey box Standard Nameplate: Engraved as Follows Line 1: L22M6 Size: 3.50" Wide x 1.00" High (Std) Color: White Surface / Black Letters Plastic/Adhesive - Screw-on
305-00	1	**Designation:** L22M6 MH44P (Box) NQ Standard TYPE 1 Box 44 H
306-00	1	**Designation:** L22M6 NC44FHR (Trim) NQ Standard TYPE 1 Box 44 H
049-00	1	**Designation:** L22U1 NQ ML Panel (Interior) NQ Panelboard Consisting of 208Y/120V 3Ph 4W 60Hz SCCR: 10kA Fully Rated Main Lug Only: 150A Incoming Conductors: 1 - #6 - 350 kcmil Bus: Aluminum: Tin Plated CU Ground Bar 84 Circuit Interior Type 1,Box: 50H x 20W x 5.75D Incoming: Bottom Trim: Flush - Hinged Box Cat No: MH50P Front Cat No: NC50FHR Ref. Drawing: PBA701HR Feeders: 1 - 30A/3P QOB 78 - 20A/1P QOB 3 - 20A/1P QOB-GFI Optional Features: Standard Panel (Box Ahead),Standard Solid Neutral,Copper Ground Bar ANSI 49 grey box Standard Nameplate: Engraved as Follows Line 1: L22U1 Size: 3.50" Wide x 1.00" High (Std) Color: White Surface / Black Letters Plastic/Adhesive - Screw-on
307-00	1	**Designation:** L22U1 MH50P (Box) NQ Standard TYPE 1 Box 50 H

Item No.	Qty.	Catalog Number / Details
308-00	1	**Designation:** L22U1 NC50FHR (Trim) NQ Standard TYPE 1 Box 50 H
050-00	1	**Designation:** L22U2 NQ SPD Panel (Interior) NQ Panelboard Consisting of 208Y/120V 3Ph 4W 60Hz SCCR: 10kA Fully Rated SPD 120kA per Phase/60kA per Mode SPD line to grd protect w/SPD Surge Counter w/SPD Dry Contacts Main Lug Only: 150A Incoming Conductors: 1 - #6 - 350 kcmil Bus: Aluminum: Tin Plated CU Ground Bar 72 Circuit Interior Type 1,Box: 44H x 20W x 5.75D Incoming: Bottom Trim: Flush - Hinged Box Cat No: MH44P Front Cat No: NC44FHR Ref. Drawing: PBA701HR Feeders: 56 - 20A/1P QOB 1 - 30A/3P QOB SPD DISC 1 - 20A/1P QOB-EPD Optional Features: Standard Panel (Box Ahead),SPD Model BIA,Standard Solid Neutral,Copper Ground Bar ANSI 49 grey box Standard Nameplate: Engraved as Follows Line 1: L22U2 Size: 3.50" Wide x 1.00" High (Std) Color: White Surface / Black Letters Plastic/Adhesive - Screw-on
309-00	1	**Designation:** L22U2 MH44P (Box) NQ Standard TYPE 1 Box 44 H
310-00	1	**Designation:** L22U2 NC44FHR (Trim) NQ Standard TYPE 1 Box 44 H
051-00	1	**Designation:** H2M1 NF ML Panel (Interior) NF Panelboard Consisting of 480Y/277V 3Ph 4W 60Hz SCCR: 22kA Series Rated w/ JG Circuit Breaker Main Lug Only: 225A Incoming Conductors: 1 - #6 - 350 kcmil Bus: Aluminum: Tin Plated CU Ground Bar 66 Circuit Interior Type 1,Box: 62H x 20W x 5.75D Incoming: Bottom Trim: Flush - Hinged Box Cat No: MH62P Front Cat No: NC62FHR

Item No.	Qty.	Catalog Number / Details
		Ref. Drawing: PBA550HR Feeders: 8 - 20A/3P EDB 36 - 20A/1P EDB Optional Features: Standard Panel (Box Ahead),Standard Solid Neutral,Copper Ground Bar ANSI 49 grey box Standard Nameplate: Engraved as Follows Line 1: H2M1 Size: 3.50" Wide x 1.00" High (Std) Color: White Surface / Black Letters Plastic/Adhesive - Screw-on
243-00	1	**Designation:** H2M1 MH62P (Box) NF Standard TYPE 1 Box 62 H
244-00	1	**Designation:** H2M1 NC62FHR (Trim) NF Standard TYPE 1 Box 62 H
052-00	1	**Designation:** H2B1 NF ML Panel (Interior) NF Panelboard Consisting of 480Y/277V 3Ph 4W 60Hz SCCR: 22kA Fully Rated Main Lug Only: 60A Incoming Conductors: 1 - #6 - 2/0 AWG Bus: Aluminum: Tin Plated CU Ground Bar 30 Circuit Interior Type 1,Box: 32H x 20W x 5.75D Incoming: Bottom Trim: Surface - Hinged Box Cat No: MH32P Front Cat No: NC32SHR Ref. Drawing: PBA550HR Feeders: 1 - 25A/3P EGB 27 - 20A/1P EGB Optional Features: Standard Panel (Box Ahead),Standard Solid Neutral,Copper Ground Bar ANSI 49 grey box Standard Nameplate: Engraved as Follows Line 1: H2B1 Size: 3.50" Wide x 1.00" High (Std) Color: White Surface / Black Letters Plastic/Adhesive - Screw-on
239-00	1	**Designation:** H2B1 MH32P (Box) NF Standard TYPE 1 Box 32 H
240-00	1	**Designation:** H2B1 NC32SHR (Trim) NF Standard TYPE 1 Box 32 H

Item No.	Qty.	Catalog Number / Details
053-00	1	**Designation:** H2B2 NF ML Panel (Interior) NF Panelboard Consisting of 480Y/277V 3Ph 4W 60Hz SCCR: 25kA Series Rated w/ LG Circuit Breaker Main Lug Only: 400A Incoming Conductors: 1 - 1/0 - 750, (2) 1/0 - 350 kcmil Bus: Aluminum: Tin Plated CU Ground Bar 42 Circuit Interior Type 1,Box: 56H x 20W x 5.75D Incoming: Bottom Trim: Surface - Hinged Box Cat No: MH56P Front Cat No: NC56VSHR Ref. Drawing: PBA551HR Feeders: 1 - 90A/3P EDB 1 - 70A/3P EDB 4 - 20A/3P EDB 21 - 20A/1P EDB 1 - 80A/3P EDB Optional Features: Standard Panel (Box Ahead),Standard Solid Neutral,Copper Ground Bar ANSI 49 grey box Standard Nameplate: Engraved as Follows Line 1: H2B2 Size: 3.50" Wide x 1.00" High (Std) Color: White Surface / Black Letters Plastic/Adhesive - Screw-on
241-00	1	**Designation:** H2B2 MH56P (Box) NF Standard TYPE 1 Box 56 H
242-00	1	**Designation:** H2B2 NC56VSHR (Trim) NF Standard TYPE 1 Box 56 H
054-00	1	**Designation:** H2M2 NF ML Panel (Interior) NF Panelboard Consisting of 480Y/277V 3Ph 4W 60Hz SCCR: 22kA Series Rated w/ LG Circuit Breaker Main Lug Only: 400A Incoming Conductors: 1 - 1/0 - 750, (2) 1/0 - 350 kcmil Bus: Aluminum: Tin Plated CU Ground Bar 66 Circuit Interior Type 1,Box: 74H x 20W x 5.75D Incoming: Bottom Trim: Flush - Hinged Box Cat No: MH74P Front Cat No: NC74VFHR Ref. Drawing: PBA551HR Feeders: 2 - 50A/3P EDB 1 - 40A/3P EDB 8 - 20A/3P EDB 27 - 20A/1P EDB Optional Features:

Item No.	Qty.	Catalog Number / Details
		Standard Panel (Box Ahead),Standard Solid Neutral,Copper Ground Bar ANSI 49 grey box Branch User Placement Standard Nameplate: Engraved as Follows Line 1: H2M2 Size: 3.50" Wide x 1.00" High (Std) Color: White Surface / Black Letters Plastic/Adhesive - Screw-on
245-00	1	**Designation:** H2M2 MH74P (Box) NF Standard TYPE 1 Box 74 H
246-00	1	**Designation:** H2M2 NC74VFHR (Trim) NF Standard TYPE 1 Box 74 H
055-00	1	**Designation:** H21M1 NF ML Panel (Interior) NF Panelboard Consisting of 480Y/277V 3Ph 4W 60Hz SCCR: 10kA Fully Rated Main Lug Only: 100A Incoming Conductors: 1 - #6 - 2/0 AWG Bus: Aluminum: Tin Plated CU Ground Bar 30 Circuit Interior Type 1,Box: 32H x 20W x 5.75D Incoming: Bottom Trim: Flush - Hinged Box Cat No: MH32P Front Cat No: NC32FHR Ref. Drawing: PBA550HR Feeders: 1 - 20A/3P EDB 27 - 20A/1P EDB Optional Features: Standard Panel (Box Ahead),Standard Solid Neutral,Copper Ground Bar ANSI 49 grey box Standard Nameplate: Engraved as Follows Line 1: H21M1 Size: 3.50" Wide x 1.00" High (Std) Color: White Surface / Black Letters Plastic/Adhesive - Screw-on
229-00	1	**Designation:** H21M1 MH32P (Box) NF Standard TYPE 1 Box 32 H
230-00	1	**Designation:** H21M1 NC32FHR (Trim) NF Standard TYPE 1 Box 32 H
056-00	1	**Designation:** H21U1 NF ML Panel (Interior) NF Panelboard Consisting of

Item No.	Qty.	Catalog Number / Details
		480Y/277V 3Ph 4W 60Hz SCCR: 10kA Fully Rated Main Lug Only: 100A Incoming Conductors: 1 - #6 - 2/0 AWG Bus: Aluminum: Tin Plated CU Ground Bar 30 Circuit Interior Type 1,Box: 32H x 20W x 5.75D Incoming: Bottom Trim: Flush - Hinged Box Cat No: MH32P Front Cat No: NC32FHR Ref. Drawing: PBA550HR Feeders: 2 - 20A/3P EDB 24 - 20A/1P EDB Optional Features: Standard Panel (Box Ahead),Standard Solid Neutral,Copper Ground Bar ANSI 49 grey box Standard Nameplate: Engraved as Follows Line 1: H21U1 Size: 3.50" Wide x 1.00" High (Std) Color: White Surface / Black Letters Plastic/Adhesive - Screw-on
231-00	1	**Designation:** H21U1 MH32P (Box) NF Standard TYPE 1 Box 32 H
232-00	1	**Designation:** H21U1 NC32FHR (Trim) NF Standard TYPE 1 Box 32 H
057-00	1	**Designation:** H21B1 NF ML Panel (Interior) NF Panelboard Consisting of 480Y/277V 3Ph 4W 60Hz SCCR: 14kA Fully Rated Main Lug Only: 60A Incoming Conductors: 1 - #6 - 2/0 AWG Bus: Aluminum: Tin Plated CU Ground Bar 18 Circuit Interior Type 1,Box: 26H x 20W x 5.75D Incoming: Bottom Trim: Surface - Hinged Box Cat No: MH26P Front Cat No: NC26SHR Ref. Drawing: PBA550HR Feeders: 18 - 20A/1P EDB Optional Features: Standard Panel (Box Ahead),Standard Solid Neutral,Copper Ground Bar ANSI 49 grey box Standard Nameplate: Engraved as Follows Line 1: H21B1 Size: 3.50" Wide x 1.00" High (Std) Color: White Surface / Black Letters Plastic/Adhesive - Screw-on

Item No.	Qty.	Catalog Number / Details
227-00	1	**Designation:** H21B1 MH26P (Box) NF Standard TYPE 1 Box 26 H
228-00	1	**Designation:** H21B1 NC26SHR (Trim) NF Standard TYPE 1 Box 26 H
058-00	1	**Designation:** L21B1 NQ ML Panel (Interior) NQ Panelboard Consisting of 208Y/120V 3Ph 4W 60Hz SCCR: 14kA Fully Rated Main Lug Only: 60A Incoming Conductors: 1 - #6 - 2/0 AWG Bus: Aluminum: Tin Plated CU Ground Bar 18 Circuit Interior Type 1,Box: 26H x 20W x 5.75D Incoming: Bottom Trim: Surface - Hinged Box Cat No: MH26P Front Cat No: NC26SHR Ref. Drawing: PBA701HR Feeders: 2 - 30A/2P QOB-VH 14 - 20A/1P QOB-VH Optional Features: Standard Panel (Box Ahead),Standard Solid Neutral,Copper Ground Bar ANSI 49 grey box Standard Nameplate: Engraved as Follows Line 1: L21B1 Size: 3.50" Wide x 1.00" High (Std) Color: White Surface / Black Letters Plastic/Adhesive - Screw-on
268-00	1	**Designation:** L21B1 MH26P (Box) NQ Standard TYPE 1 Box 26 H
269-00	1	**Designation:** L21B1 NC26SHR (Trim) NQ Standard TYPE 1 Box 26 H
059-00	1	**Designation:** L21U5 NQ SPD Panel (Interior) NQ Panelboard Consisting of 208Y/120V 3Ph 4W 60Hz SCCR: 14kA Series Rated w/ QD Circuit Breaker SPD 120kA per Phase/60kA per Mode SPD line to grd protect w/SPD Surge Counter w/SPD Dry Contacts Main Lug Only: 150A Incoming Conductors: 1 - #6 - 350 kcmil Bus: Aluminum: Tin Plated CU Ground Bar 72 Circuit Interior Type 1,Box: 44H x 20W x 5.75D Incoming: Bottom Trim: Flush - Hinged

Item No.	Qty.	Catalog Number / Details
		Box Cat No: MH44P Front Cat No: NC44FHR Ref. Drawing: PBA701HR Feeders: 1 - 40A/3P QOB-VH 54 - 20A/1P QOB 1 - 30A/3P QOB SPD DISC Optional Features: Standard Panel (Box Ahead),SPD Model BIA,Standard Solid Neutral,Copper Ground Bar ANSI 49 grey box Standard Nameplate: Engraved as Follows Line 1: L21U5 Size: 3.50" Wide x 1.00" High (Std) Color: White Surface / Black Letters Plastic/Adhesive - Screw-on
355-00	1	**Designation:** L21U5 MH44P (Box) NQ Standard TYPE 1 Box 44 H
356-00	1	**Designation:** L21U5 NC44FHR (Trim) NQ Standard TYPE 1 Box 44 H
060-00	1	**Designation:** L21U1 NQ SPD Panel (Interior) NQ Panelboard Consisting of 208Y/120V 3Ph 4W 60Hz SCCR: 14kA Series Rated w/ QD Circuit Breaker SPD 120kA per Phase/60kA per Mode SPD line to grd protect w/SPD Surge Counter w/SPD Dry Contacts Main Lug Only: 150A Incoming Conductors: 1 - #6 - 350 kcmil Bus: Aluminum: Tin Plated CU Ground Bar 84 Circuit Interior Type 1,Box: 50H x 20W x 5.75D Incoming: Bottom Trim: Flush - Hinged Box Cat No: MH50P Front Cat No: NC50FHR Ref. Drawing: PBA701HR Feeders: 66 - 20A/1P QOB 1 - 30A/3P QOB SPD DISC 3 - 20A/1P QOB-EPD Optional Features: Standard Panel (Box Ahead),SPD Model BIA,Standard Solid Neutral,Copper Ground Bar ANSI 49 grey box Standard Nameplate: Engraved as Follows Line 1: L21U1 Size: 3.50" Wide x 1.00" High (Std) Color: White Surface / Black Letters Plastic/Adhesive - Screw-on

Item No.	Qty.	Catalog Number / Details
359-00	1	**Designation:** L21U1 MH50P (Box) NQ Standard TYPE 1 Box 50 H
360-00	1	**Designation:** L21U1 NC50FHR (Trim) NQ Standard TYPE 1 Box 50 H
061-00	1	**Designation:** L21U2 NQ SPD Panel (Interior) NQ Panelboard Consisting of 208Y/120V 3Ph 4W 60Hz SCCR: 10kA Fully Rated SPD 120kA per Phase/60kA per Mode SPD line to grd protect w/SPD Surge Counter w/SPD Dry Contacts Main Lug Only: 150A Incoming Conductors: 1 - #6 - 350 kcmil Bus: Aluminum: Tin Plated CU Ground Bar 72 Circuit Interior Type 1,Box: 44H x 20W x 5.75D Incoming: Bottom Trim: Flush - Hinged Box Cat No: MH44P Front Cat No: NC44FHR Ref. Drawing: PBA701HR Feeders: 57 - 20A/1P QOB 1 - 30A/3P QOB SPD DISC Optional Features: Standard Panel (Box Ahead),Copper Solid Neutral,SPD Model BIA,Copper Ground Bar ANSI 49 grey box Standard Nameplate: Engraved as Follows Line 1: L21U2 Size: 3.50" Wide x 1.00" High (Std) Color: White Surface / Black Letters Plastic/Adhesive - Screw-on
285-00	1	**Designation:** L21U2 MH44P (Box) NQ Standard TYPE 1 Box 44 H
286-00	1	**Designation:** L21U2 NC44FHR (Trim) NQ Standard TYPE 1 Box 44 H
062-00	1	**Designation:** L21U3 NQ SPD Panel (Interior) NQ Panelboard Consisting of 208Y/120V 3Ph 4W 60Hz SCCR: 10kA Fully Rated SPD 120kA per Phase/60kA per Mode SPD line to grd protect w/SPD Surge Counter w/SPD Dry Contacts Main Lug Only: 150A Incoming Conductors: 1 - #6 - 350 kcmil Bus: Aluminum: Tin Plated

Item No.	Qty.	Catalog Number / Details
		CU Ground Bar 72 Circuit Interior Type 1,Box: 44H x 20W x 5.75D Incoming: Bottom Trim: Flush - Hinged Box Cat No: MH44P Front Cat No: NC44FHR Ref. Drawing: PBA701HR Feeders: 57 - 20A/1P QOB 1 - 30A/3P QOB SPD DISC Optional Features: Standard Panel (Box Ahead),SPD Model BIA,Standard Solid Neutral,Copper Ground Bar ANSI 49 grey box Standard Nameplate: Engraved as Follows Line 1: L21U3 Size: 3.50" Wide x 1.00" High (Std) Color: White Surface / Black Letters Plastic/Adhesive - Screw-on
287-00	1	**Designation:** L21U3 MH44P (Box) NQ Standard TYPE 1 Box 44 H
288-00	1	**Designation:** L21U3 NC44FHR (Trim) NQ Standard TYPE 1 Box 44 H
063-00	1	**Designation:** L21U4 NQ SPD Panel (Interior) NQ Panelboard Consisting of 208Y/120V 3Ph 4W 60Hz SCCR: 10kA Fully Rated SPD 120kA per Phase/60kA per Mode SPD line to grd protect w/SPD Surge Counter w/SPD Dry Contacts Main Lug Only: 150A Incoming Conductors: 1 - #6 - 350 kcmil Bus: Aluminum: Tin Plated CU Ground Bar 72 Circuit Interior Type 1,Box: 44H x 20W x 5.75D Incoming: Bottom Trim: Flush - Hinged Box Cat No: MH44P Front Cat No: NC44FHR Ref. Drawing: PBA701HR Feeders: 56 - 20A/1P QOB 1 - 30A/3P QOB SPD DISC 1 - 20A/1P QOB-GFI Optional Features: Standard Panel (Box Ahead),SPD Model BIA,Standard Solid Neutral,Copper Ground Bar ANSI 49 grey box Standard Nameplate: Engraved as Follows Line 1: L21U4 Size: 3.50" Wide x 1.00" High (Std) Color: White Surface / Black Letters Plastic/Adhesive - Screw-on

Item No.	Qty.	Catalog Number / Details
289-00	1	**Designation:** L21U4 MH44P (Box) NQ Standard TYPE 1 Box 44 H
290-00	1	**Designation:** L21U4 NC44FHR (Trim) NQ Standard TYPE 1 Box 44 H
064-00	1	**Designation:** L22U3 NQ SPD Panel (Interior) NQ Panelboard Consisting of 208Y/120V 3Ph 4W 60Hz SCCR: 10kA Fully Rated SPD 120kA per Phase/60kA per Mode SPD line to grd protect w/SPD Surge Counter w/SPD Dry Contacts Main Lug Only: 150A Incoming Conductors: 1 - #6 - 350 kcmil Bus: Aluminum: Tin Plated CU Ground Bar 72 Circuit Interior Type 1,Box: 44H x 20W x 5.75D Incoming: Bottom Trim: Flush - Hinged Box Cat No: MH44P Front Cat No: NC44FHR Ref. Drawing: PBA701HR Feeders: 1 - 20A/3P QOB 54 - 20A/1P QOB 1 - 30A/3P QOB SPD DISC Optional Features: Standard Panel (Box Ahead),SPD Model BIA,Standard Solid Neutral,Copper Ground Bar ANSI 49 grey box Standard Nameplate: Engraved as Follows Line 1: L22U3 Size: 3.50" Wide x 1.00" High (Std) Color: White Surface / Black Letters Plastic/Adhesive - Screw-on
311-00	1	**Designation:** L22U3 MH44P (Box) NQ Standard TYPE 1 Box 44 H
312-00	1	**Designation:** L22U3 NC44FHR (Trim) NQ Standard TYPE 1 Box 44 H
065-00	1	**Designation:** L22U4 NQ SPD Panel (Interior) NQ Panelboard Consisting of 208Y/120V 3Ph 4W 60Hz SCCR: 10kA Fully Rated SPD 120kA per Phase/60kA per Mode SPD line to grd protect

Item No.	Qty.	Catalog Number / Details
		w/SPD Surge Counter w/SPD Dry Contacts Main Lug Only: 150A Incoming Conductors: 1 - #6 - 350 kcmil Bus: Aluminum: Tin Plated CU Ground Bar 72 Circuit Interior Type 1,Box: 44H x 20W x 5.75D Incoming: Bottom Trim: Flush - Hinged Box Cat No: MH44P Front Cat No: NC44FHR Ref. Drawing: PBA701HR Feeders: 56 - 20A/1P QOB 1 - 30A/3P QOB SPD DISC 1 - 20A/1P QOB-EPD Optional Features: Standard Panel (Box Ahead),SPD Model BIA,Standard Solid Neutral,Copper Ground Bar ANSI 49 grey box Standard Nameplate: Engraved as Follows Line 1: L22U4 Size: 3.50" Wide x 1.00" High (Std) Color: White Surface / Black Letters Plastic/Adhesive - Screw-on
313-00	1	**Designation:** L22U4 MH44P (Box) NQ Standard TYPE 1 Box 44 H
314-00	1	**Designation:** L22U4 NC44FHR (Trim) NQ Standard TYPE 1 Box 44 H
066-00	1	**Designation:** L22U5 NQ SPD Panel (Interior) NQ Panelboard Consisting of 208Y/120V 3Ph 4W 60Hz SCCR: 10kA Fully Rated SPD 120kA per Phase/60kA per Mode SPD line to grd protect w/SPD Surge Counter w/SPD Dry Contacts Main Lug Only: 150A Incoming Conductors: 1 - #6 - 350 kcmil Bus: Aluminum: Tin Plated CU Ground Bar 72 Circuit Interior Type 1,Box: 44H x 20W x 5.75D Incoming: Bottom Trim: Flush - Hinged Box Cat No: MH44P Front Cat No: NC44FHR Ref. Drawing: PBA701HR Feeders: 1 - 35A/3P QOB 54 - 20A/1P QOB 1 - 30A/3P QOB SPD DISC Optional Features: Standard Panel (Box Ahead),SPD Model BIA,Standard Solid Neutral,Copper Ground Bar ANSI 49 grey box

Item No.	Qty.	Catalog Number / Details
		Standard Nameplate: Engraved as Follows Line 1: L22U5 Size: 3.50" Wide x 1.00" High (Std) Color: White Surface / Black Letters Plastic/Adhesive - Screw-on
315-00	1	**Designation:** L22U5 MH44P (Box) NQ Standard TYPE 1 Box 44 H
316-00	1	**Designation:** L22U5 NC44FHR (Trim) NQ Standard TYPE 1 Box 44 H
067-00	1	**Designation:** E2B2 NF ML Panel (Interior) NF Panelboard Consisting of 480Y/277V 3Ph 4W 60Hz SCCR: 10kA Fully Rated Main Lug Only: 100A Incoming Conductors: 1 - #6 - 2/0 AWG Bus: Aluminum: Tin Plated CU Ground Bar 42 Circuit Interior Type 1,Box: 38H x 20W x 5.75D Incoming: Bottom Trim: Surface - Hinged Box Cat No: MH38P Front Cat No: NC38SHR Ref. Drawing: PBA550HR Feeders: 1 - 60A/3P EDB 2 - 40A/3P EDB 21 - 20A/1P EDB Optional Features: Standard Panel (Box Ahead),Standard Solid Neutral,Copper Ground Bar ANSI 49 grey box Standard Nameplate: Engraved as Follows Line 1: E2B2 Size: 3.50" Wide x 1.00" High (Std) Color: White Surface / Black Letters Plastic/Adhesive - Screw-on
195-00	1	**Designation:** E2B2 MH38P (Box) NF Standard TYPE 1 Box 38 H
196-00	1	**Designation:** E2B2 NC38SHR (Trim) NF Standard TYPE 1 Box 38 H
068-00	1	**Designation:** E2B1 NF MB Panel (Interior) NF Panelboard Consisting of 480Y/277V 3Ph 4W 60Hz SCCR: 20kA Fully Rated Single Main: 150A/3P JG Circuit Breaker

Item No.	Qty.	Catalog Number / Details
		Incoming Conductors: 1 - #4 - 4/0 AWG Bus: Aluminum: Tin Plated CU Ground Bar 30 Circuit Interior Type 1,Box: 50H x 20W x 5.75D Incoming: Top Trim: Surface - Hinged Box Cat No: MH50P Front Cat No: NC50SHR Ref. Drawing: PBA553HR Feeders: 2 - 100A/3P EGB 21 - 20A/1P EGB 1 - 40A/3P EGB Optional Features: Standard Panel (Box Ahead),Standard Solid Neutral,Copper Ground Bar ANSI 49 grey box Standard Nameplate: Engraved as Follows Line 1: E2B1 Size: 3.50" Wide x 1.00" High (Std) Color: White Surface / Black Letters Plastic/Adhesive - Screw-on
193-00	1	**Designation:** E2B1 MH50P (Box) NF Standard TYPE 1 Box 50 H
194-00	1	**Designation:** E2B1 NC50SHR (Trim) NF Standard TYPE 1 Box 50 H
069-00	1	**Designation:** E2M1 NF ML Panel (Interior) NF Panelboard Consisting of 480Y/277V 3Ph 4W 60Hz SCCR: 10kA Fully Rated Main Lug Only: 40A Incoming Conductors: 1 - #6 - 2/0 AWG Bus: Aluminum: Tin Plated CU Ground Bar 18 Circuit Interior Type 1,Box: 26H x 20W x 5.75D Incoming: Bottom Trim: Surface - Hinged Box Cat No: MH26P Front Cat No: NC26SHR Ref. Drawing: PBA550HR Feeders: 18 - 20A/1P EDB Optional Features: Standard Panel (Box Ahead),Standard Solid Neutral,Copper Ground Bar ANSI 49 grey box Standard Nameplate: Engraved as Follows Line 1: E2M1 Size: 3.50" Wide x 1.00" High (Std) Color: White Surface / Black Letters Plastic/Adhesive - Screw-on
207-00	1	**Designation:** E2M1 MH26P (Box)

Item No.	Qty.	Catalog Number / Details
		NF Standard TYPE 1 Box 26 H
208-00	1	**Designation:** E2M1 NC26SHR (Trim) NF Standard TYPE 1 Box 26 H
070-00	1	**Designation:** E2B3 NF ML Panel (Interior) NF Panelboard Consisting of 480Y/277V 3Ph 4W 60Hz SCCR: 10kA Fully Rated Main Lug Only: 60A Incoming Conductors: 1 - #6 - 2/0 AWG Bus: Aluminum: Tin Plated CU Ground Bar 18 Circuit Interior Type 1,Box: 26H x 20W x 5.75D Incoming: Bottom Trim: Surface - Hinged Box Cat No: MH26P Front Cat No: NC26SHR Ref. Drawing: PBA550HR Feeders: 2 - 40A/3P EDB 12 - 20A/1P EDB Optional Features: Standard Panel (Box Ahead),Standard Solid Neutral,Copper Ground Bar ANSI 49 grey box Standard Nameplate: Engraved as Follows Line 1: E2B3 Size: 3.50" Wide x 1.00" High (Std) Color: White Surface / Black Letters Plastic/Adhesive - Screw-on
197-00	1	**Designation:** E2B3 MH26P (Box) NF Standard TYPE 1 Box 26 H
198-00	1	**Designation:** E2B3 NC26SHR (Trim) NF Standard TYPE 1 Box 26 H
071-00	1	**Designation:** E2M2 NF ML Panel (Interior) NF Panelboard Consisting of 480Y/277V 3Ph 4W 60Hz SCCR: 10kA Fully Rated Main Lug Only: 40A Incoming Conductors: 1 - #6 - 2/0 AWG Bus: Aluminum: Tin Plated CU Ground Bar 18 Circuit Interior Type 1,Box: 26H x 20W x 5.75D Incoming: Bottom Trim: Flush - Hinged Box Cat No: MH26P Front Cat No: NC26FHR Ref. Drawing: PBA550HR Feeders: 18 - 20A/1P EDB Optional Features: Standard Panel (Box Ahead),Standard Solid

Item No.	Qty.	Catalog Number / Details
		Neutral,Copper Ground Bar ANSI 49 grey box Standard Nameplate: Engraved as Follows Line 1: E2M2 Size: 3.50" Wide x 1.00" High (Std) Color: White Surface / Black Letters Plastic/Adhesive - Screw-on
209-00	1	**Designation:** E2M2 MH26P (Box) NF Standard TYPE 1 Box 26 H
210-00	1	**Designation:** E2M2 NC26FHR (Trim) NF Standard TYPE 1 Box 26 H
072-00	1	**Designation:** E2M3 NF ML Panel (Interior) NF Panelboard Consisting of 480Y/277V 3Ph 4W 60Hz SCCR: 10kA Fully Rated Main Lug Only: 40A Incoming Conductors: 1 - #6 - 2/0 AWG Bus: Aluminum: Tin Plated CU Ground Bar 18 Circuit Interior Type 1,Box: 26H x 20W x 5.75D Incoming: Bottom Trim: Flush - Hinged Box Cat No: MH26P Front Cat No: NC26FHR Ref. Drawing: PBA550HR Feeders: 18 - 20A/1P EDB Optional Features: Standard Panel (Box Ahead),Standard Solid Neutral,Copper Ground Bar ANSI 49 grey box Standard Nameplate: Engraved as Follows Line 1: E2M3 Size: 3.50" Wide x 1.00" High (Std) Color: White Surface / Black Letters Plastic/Adhesive - Screw-on
211-00	1	**Designation:** E2M3 MH26P (Box) NF Standard TYPE 1 Box 26 H
212-00	1	**Designation:** E2M3 NC26FHR (Trim) NF Standard TYPE 1 Box 26 H
073-00	1	**Designation:** E2U1 NF ML Panel (Interior) NF Panelboard Consisting of 480Y/277V 3Ph 4W 60Hz SCCR: 10kA Fully Rated Main Lug Only: 40A

Item No.	Qty.	Catalog Number / Details
		Incoming Conductors: 1 - #6 - 2/0 AWG Bus: Aluminum: Tin Plated CU Ground Bar 18 Circuit Interior Type 1,Box: 26H x 20W x 5.75D Incoming: Bottom Trim: Flush - Hinged Box Cat No: MH26P Front Cat No: NC26FHR Ref. Drawing: PBA550HR Feeders: 18 - 20A/1P EDB Optional Features: Standard Panel (Box Ahead),Standard Solid Neutral,Copper Ground Bar ANSI 49 grey box Standard Nameplate: Engraved as Follows Line 1: E2U1 Size: 3.50" Wide x 1.00" High (Std) Color: White Surface / Black Letters Plastic/Adhesive - Screw-on
213-00	1	**Designation:** E2U1 MH26P (Box) NF Standard TYPE 1 Box 26 H
214-00	1	**Designation:** E2U1 NC26FHR (Trim) NF Standard TYPE 1 Box 26 H
074-00	1	**Designation:** E2U2 NF ML Panel (Interior) NF Panelboard Consisting of 480Y/277V 3Ph 4W 60Hz SCCR: 10kA Fully Rated Main Lug Only: 40A Incoming Conductors: 1 - #6 - 2/0 AWG Bus: Aluminum: Tin Plated CU Ground Bar 18 Circuit Interior Type 1,Box: 26H x 20W x 5.75D Incoming: Bottom Trim: Flush - Hinged Box Cat No: MH26P Front Cat No: NC26FHR Ref. Drawing: PBA550HR Feeders: 18 - 20A/1P EDB Optional Features: Standard Panel (Box Ahead),Standard Solid Neutral,Copper Ground Bar ANSI 49 grey box Standard Nameplate: Engraved as Follows Line 1: E2U2 Size: 3.50" Wide x 1.00" High (Std) Color: White Surface / Black Letters Plastic/Adhesive - Screw-on
215-00	1	**Designation:** E2U2 MH26P (Box) NF Standard TYPE 1 Box 26 H

Item No.	Qty.	Catalog Number / Details
216-00	1	**Designation:** E2U2 NC26FHR (Trim) NF Standard TYPE 1 Box 26 H
075-00	1	**Designation:** E2BL1 NQ SPD Panel (Interior) NQ Panelboard Consisting of 208Y/120V 3Ph 4W 60Hz SCCR: 10kA Fully Rated SPD 120kA per Phase/60kA per Mode SPD line to grd protect w/SPD Surge Counter w/SPD Dry Contacts Single Main: 200A/3P JD Circuit Breaker Incoming Conductors: 1 - 3/0 - 350 kcmil Bus: Aluminum: Tin Plated CU Ground Bar 54 Circuit Interior Type 1,Box: 50H x 20W x 5.75D Incoming: Bottom Trim: Surface - Hinged Box Cat No: MH50P Front Cat No: NC50SHR Ref. Drawing: PBA707HR Feeders: 1 - 150A/3P QOB-VH 24 - 20A/1P QOB 1 - 30A/3P QOB SPD DISC Optional Features: Standard Panel (Box Ahead),SPD Model BIA,Standard Solid Neutral,Copper Ground Bar ANSI 49 grey box Branch User Placement Standard Nameplate: Engraved as Follows Line 1: E2BL1 Size: 3.50" Wide x 1.00" High (Std) Color: White Surface / Black Letters Plastic/Adhesive - Screw-on
199-00	1	**Designation:** E2BL1 MH50P (Box) NQ Standard TYPE 1 Box 50 H
200-00	1	**Designation:** E2BL1 NC50SHR (Trim) NQ Standard TYPE 1 Box 50 H
076-00	1	**Designation:** E2BL2 NQ SPD Panel (Interior) NQ Panelboard Consisting of 208Y/120V 3Ph 4W 60Hz SCCR: 10kA Fully Rated SPD 120kA per Phase/60kA per Mode SPD line to grd protect w/SPD Surge Counter w/SPD Dry Contacts Main Lug Only: 150A Incoming Conductors: 1 - #6 - 350 kcmil Bus: Aluminum: Tin Plated CU Ground Bar

Item No.	Qty.	Catalog Number / Details
		42 Circuit Interior Type 1,Box: 38H x 20W x 5.75D Incoming: Bottom Trim: Surface - Hinged Box Cat No: MH38P Front Cat No: NC38SHR Ref. Drawing: PBA701HR Feeders: 1 - 100A/3P QOB 24 - 20A/1P QOB 1 - 30A/3P QOB SPD DISC Optional Features: Standard Panel (Box Ahead),SPD Model BIA,Standard Solid Neutral,Copper Ground Bar ANSI 49 grey box Standard Nameplate: Engraved as Follows Line 1: E2BL2 Size: 3.50" Wide x 1.00" High (Std) Color: White Surface / Black Letters Plastic/Adhesive - Screw-on
201-00	1	**Designation:** E2BL2 MH38P (Box) NQ Standard TYPE 1 Box 38 H
202-00	1	**Designation:** E2BL2 NC38SHR (Trim) NQ Standard TYPE 1 Box 38 H
077-00	1	**Designation:** E2BL3 NQ SPD Panel (Interior) NQ Panelboard Consisting of 208Y/120V 3Ph 4W 60Hz SCCR: 10kA Fully Rated SPD 120kA per Phase/60kA per Mode SPD line to grd protect w/SPD Surge Counter w/SPD Dry Contacts Main Lug Only: 100A Incoming Conductors: 1 - #6 - 2/0 AWG Bus: Aluminum: Tin Plated CU Ground Bar 42 Circuit Interior Type 1,Box: 38H x 20W x 5.75D Incoming: Bottom Trim: Surface - Hinged Box Cat No: MH38P Front Cat No: NC38SHR Ref. Drawing: PBA701HR Feeders: 27 - 20A/1P QOB 1 - 30A/3P QOB SPD DISC Optional Features: Standard Panel (Box Ahead),SPD Model BIA,Standard Solid Neutral,Copper Ground Bar ANSI 49 grey box Standard Nameplate: Engraved as Follows Line 1: E2BL3 Size: 3.50" Wide x 1.00" High (Std) Color: White Surface / Black Letters Plastic/Adhesive - Screw-on

Item No.	Qty.	Catalog Number / Details
203-00	1	**Designation:** E2BL3 MH38P (Box) NQ Standard TYPE 1 Box 38 H
204-00	1	**Designation:** E2BL3 NC38SHR (Trim) NQ Standard TYPE 1 Box 38 H
079-00	6	TVS2EBA12A EBA TVSS, 208Y/120V, 3 ph, 4 wire, 120kA
080-00	1	**Designation:** L22B1 NQ ML Panel (Interior) NQ Panelboard Consisting of 208Y/120V 3Ph 4W 60Hz SCCR: 10kA Fully Rated Main Lug Only: 60A Incoming Conductors: 1 - #6 - 2/0 AWG Bus: Aluminum: Tin Plated CU Ground Bar 18 Circuit Interior Type 1,Box: 26H x 20W x 5.75D Incoming: Bottom Trim: Surface - Hinged Box Cat No: MH26P Front Cat No: NC26SHR Ref. Drawing: PBA701HR Feeders: 2 - 30A/2P QOB 14 - 20A/1P QOB Optional Features: Standard Panel (Box Ahead),Standard Solid Neutral,Copper Ground Bar ANSI 49 grey box Standard Nameplate: Engraved as Follows Line 1: L22B1 Size: 3.50" Wide x 1.00" High (Std) Color: White Surface / Black Letters Plastic/Adhesive - Screw-on
293-00	1	**Designation:** L22B1 MH26P (Box) NQ Standard TYPE 1 Box 26 H
294-00	1	**Designation:** L22B1 NC26SHR (Trim) NQ Standard TYPE 1 Box 26 H
081-00	1	**Designation:** E1B1 NF MB Panel (Interior) NF Panelboard Consisting of 480Y/277V 3Ph 4W 60Hz SCCR: 14kA Series Rated w/ EDB Circuit Breaker Single Main: 100A/3P EDB Circuit Breaker Incoming Conductors: 1 - #14 - 2/0 AWG Bus: Aluminum: Tin Plated CU Ground Bar 42 Circuit Interior Type 1,Box: 38H x 20W x 5.75D

Item No.	Qty.	Catalog Number / Details
		Incoming: Top Trim: Surface - Hinged Box Cat No: MH38 Front Cat No: NC38SHR Ref. Drawing: PBA552HR Feeders: 1 - 60A/3P EDB 2 - 50A/3P EDB 1 - 40A/3P EDB 2 - 20A/3P EDB 15 - 20A/1P EDB Optional Features: Standard Panel (Box Ahead),Standard Solid Neutral,Copper Ground Bar Standard Nameplate: Engraved as Follows Line 1: E1B1 Size: 3.50" Wide x 1.00" High (Std) Color: White Surface / Black Letters Plastic/Adhesive - Screw-on
183-00	1	**Designation:** E1B1 MH38 (Box) NF Standard TYPE 1 Box 38 H
184-00	1	**Designation:** E1B1 NC38SHR (Trim) NF Standard TYPE 1 Box 38 H
082-00	1	**Designation:** E1L1 NF ML Panel (Interior) NF Panelboard Consisting of 480Y/277V 3Ph 4W 60Hz SCCR: 14kA Fully Rated Main Lug Only: 40A Incoming Conductors: 1 - #6 - 2/0 AWG Bus: Aluminum: Tin Plated CU Ground Bar 18 Circuit Interior Type 1,Box: 26H x 20W x 5.75D Incoming: Bottom Trim: Flush - Hinged Box Cat No: MH26 Front Cat No: NC26FHR Ref. Drawing: PBA550HR Feeders: 18 - 20A/1P EDB Optional Features: Standard Panel (Box Ahead),Standard Solid Neutral,Copper Ground Bar Standard Nameplate: Engraved as Follows Line 1: E1L1 Size: 3.50" Wide x 1.00" High (Std) Color: White Surface / Black Letters Plastic/Adhesive - Screw-on
185-00	1	**Designation:** E1L1 MH26 (Box) NF Standard TYPE 1 Box 26 H
186-00	1	**Designation:** E1L1 NC26FHR (Trim)

Item No.	Qty.	Catalog Number / Details
		NF Standard TYPE 1 Box 26 H
083-00	1	**Designation:** H1L3 NF ML Panel (Interior) NF Panelboard Consisting of 480Y/277V 3Ph 4W 60Hz SCCR: 18kA Fully Rated Main Lug Only: 225A Incoming Conductors: 1 - #6 - 350 kcmil Bus: Aluminum: Tin Plated CU Ground Bar 66 Circuit Interior Type 1,Box: 62H x 20W x 5.75D Incoming: Bottom Trim: Flush - Hinged Box Cat No: MH62 Front Cat No: NC62FHR Ref. Drawing: PBA550HR Feeders: 6 - 20A/3P EDB 42 - 20A/1P EDB Optional Features: Standard Panel (Box Ahead),Standard Solid Neutral,Copper Ground Bar Standard Nameplate: Engraved as Follows Line 1: H1L3 Size: 3.50" Wide x 1.00" High (Std) Color: White Surface / Black Letters Plastic/Adhesive - Screw-on
225-00	1	**Designation:** H1L3 MH62 (Box) NF Standard TYPE 1 Box 62 H
226-00	1	**Designation:** H1L3 NC62FHR (Trim) NF Standard TYPE 1 Box 62 H
084-00	1	**Designation:** H1B1 NF ML Panel (Interior) NF Panelboard Consisting of 480Y/277V 3Ph 4W 60Hz SCCR: 22kA Series Rated w/ EGB Circuit Breaker Main Lug Only: 100A Incoming Conductors: 1 - #6 - 2/0 AWG Bus: Aluminum: Tin Plated CU Ground Bar 30 Circuit Interior Type 1,Box: 32H x 20W x 5.75D Incoming: Bottom Trim: Surface - Hinged Box Cat No: MH32 Front Cat No: NC32SHR Ref. Drawing: PBA550HR Feeders: 30 - 20A/1P EDB Optional Features: Standard Panel (Box Ahead),Standard Solid Neutral,Copper Ground Bar Standard Nameplate: Engraved as Follows Line 1: H1B1 Size: 3.50" Wide x 1.00" High (Std) Color: White Surface / Black Letters

Item No.	Qty.	Catalog Number / Details
		Plastic/Adhesive - Screw-on
219-00	1	**Designation:** H1B1 MH32 (Box) NF Standard TYPE 1 Box 32 H
220-00	1	**Designation:** H1B1 NC32SHR (Trim) NF Standard TYPE 1 Box 32 H
085-00	1	**Designation:** L1L5 NQ ML Panel (Interior) NQ Panelboard Consisting of 208Y/120V 3Ph 4W 60Hz SCCR: 10kA Fully Rated Main Lug Only: 225A Incoming Conductors: 1 - #6 - 350 kcmil Bus: Aluminum: Tin Plated CU Ground Bar 84 Circuit Interior Type 1,Box: 50H x 20W x 5.75D Incoming: Bottom Trim: Surface - Hinged Box Cat No: MH50 Front Cat No: NC50SHR Ref. Drawing: PBA701HR Feeders: 1 - 30A/2P QOB 66 - 20A/1P QOB 1 - 30A/3P QOB 3 - 20A/3P QOB 4 - 20A/1P QOB-GFI Optional Features: Standard Panel (Box Ahead),Standard Solid Neutral,Copper Ground Bar Standard Nameplate: Engraved as Follows Line 1: L1L5 Size: 3.50" Wide x 1.00" High (Std) Color: White Surface / Black Letters Plastic/Adhesive - Screw-on
262-00	1	**Designation:** L1L5 MH50 (Box) NQ Standard TYPE 1 Box 50 H
263-00	1	**Designation:** L1L5 NC50SHR (Trim) NQ Standard TYPE 1 Box 50 H
086-00	1	**Designation:** L1B1 NQ ML Panel (Interior) NQ Panelboard Consisting of 208Y/120V 3Ph 4W 60Hz SCCR: 22kA Series Rated w/ QD Circuit Breaker Main Lug Only: 125A Incoming Conductors: 1 - #6 - 350 kcmil Bus: Aluminum: Tin Plated CU Ground Bar 42 Circuit Interior

Item No.	Qty.	Catalog Number / Details
		Type 1,Box: 38H x 20W x 5.75D Incoming: Top Trim: Surface - Hinged Box Cat No: MH38 Front Cat No: NC38SHR Ref. Drawing: PBA701HR Feeders: 1 - 30A/2P QOB 40 - 20A/1P QOB Optional Features: Standard Panel (Box Ahead),Standard Solid Neutral,Copper Ground Bar Standard Nameplate: Engraved as Follows Line 1: L1B1 Size: 3.50" Wide x 1.00" High (Std) Color: White Surface / Black Letters Plastic/Adhesive - Screw-on
247-00	1	**Designation:** L1B1 MH38 (Box) NQ Standard TYPE 1 Box 38 H
248-00	1	**Designation:** L1B1 NC38SHR (Trim) NQ Standard TYPE 1 Box 38 H
087-00	1	**Designation:** L1B2 NQ ML Panel (Interior) NQ Panelboard Consisting of 208Y/120V 3Ph 4W 60Hz SCCR: 10kA Fully Rated Main Lug Only: 100A Incoming Conductors: 1 - #6 - 2/0 AWG Bus: Aluminum: Tin Plated CU Ground Bar 30 Circuit Interior Type 1,Box: 32H x 20W x 5.75D Incoming: Top Trim: Surface - Hinged Box Cat No: MH32 Front Cat No: NC32SHR Ref. Drawing: PBA701HR Feeders: 1 - 30A/2P QOB 28 - 20A/1P QOB Optional Features: Standard Panel (Box Ahead),Standard Solid Neutral,Copper Ground Bar Standard Nameplate: Engraved as Follows Line 1: L1B2 Size: 3.50" Wide x 1.00" High (Std) Color: White Surface / Black Letters Plastic/Adhesive - Screw-on
249-00	1	**Designation:** L1B2 MH32 (Box) NQ Standard TYPE 1 Box 32 H
250-00	1	**Designation:** L1B2 NC32SHR (Trim) NQ Standard TYPE 1 Box 32 H

Item No.	Qty.	Catalog Number / Details
088-00	1	TVS2EBA12A EBA TVSS, 208Y/120V, 3 ph, 4 wire, 120kA
089-00	1	EE45T3H42DB TRFMR DRY TYPE 3PH 45KVA 480D208Y
090-00	1	DASKP100 LUG KIT
091-00	1	DASKGS250 MECHANICAL LUG KITS
092-00	1	EE75T3H47DB Transformer Dry Type 75kVA 480D208Y120
094-00	1	DASKP250 LUG KIT
095-00	1	DASKGS250 MECHANICAL LUG KITS
093-00	3	EE500T68H57DB Transformer Type: Energy Efficient Transformer Rating: 500kVA Transformer Phase: Three Phase Primary Voltage: 480V Delta Secondary Voltage: 208Y/120V Transformer Taps: 4 - 2.5% 2+2- Taps Frequency: 60Hz Transformer Winding Material: Aluminum Electrostatic Shield:Non-Shielded Sound Level: 57DB Insulation & Temperature: Class 220 (H), 150 Deg C Enclosure Material: Standard Enclosure Type: NEMA 2 Ventilated Indoor Enclosure UL Labeled Revision: 082912 - (01292014/01292014)
097-00	3	DASKGS2000 MECHANICAL LUG KITS
096-00	1	EE750T68H61DB Transformer Type: Energy Efficient Transformer Rating: 750kVA Transformer Phase: Three Phase Primary Voltage: 480V Delta Secondary Voltage: 208Y/120V Transformer Taps: 4 - 2.5% 2+2- Taps Frequency: 60Hz Transformer Winding Material: Aluminum Electrostatic Shield:Non-Shielded Sound Level: 61DB Insulation & Temperature: Class 220 (H), 150 Deg C Enclosure Material: Standard Enclosure Type: NEMA 2 Ventilated Indoor Enclosure UL Labeled Revision: 082912 - (01292014/01292014)
098-00	3	DASKP600

Item No.	Qty.	Catalog Number / Details
		LUG KIT
099-00	1	DASKGS2000 MECHANICAL LUG KITS
101-00	12	H221N SWITCH FUSIBLE HD 240V 30A 2P NEMA1 Enclosure Type: Type 1 Interrupting Rating (AIR): 50kA Fuse Capability: Class R Max System Voltage: 240 VAC Switch Current Rating: 30 Amp Number of Switching Poles: 2 Pole w/ Neutral Neutral Kit: Field or Factory Installed: Factory Fuse Kits: Class R Fuse Kit Field or Factory Installed: Field Fuse Puller: Include as kit Ground Lug: AL/CU Ground Lug: Field or Factory Installed: Field Processed by ACE 2.0 - 020114
129-00	12	RFK03H KIT CLASS R FUSE REJECTION
130-00	12	FPK03 HD SWITCH FUSE PULLER KIT 30A SERIES F
131-00	12	GTK03 KIT EQUIPMENT GROUND CU/AL
102-00	5	FRNR15 Class RK5 15A 250V Fuse (25413-00310)
103-00	15	FRNR20 Class RK5 20A 250V Fuse (25413-00330)
104-00	5	FRNR25 Class RK5 25A 250V Fuse (25413-00340)
105-00	5	FRNR10 Class RK5 10A 250V Fuse (25413-00290)
106-00	1	H362N SWITCH FUSIBLE HD 600V 60A 3P NEUTRAL Enclosure Type: Type 1 Interrupting Rating (AIR): 50kA Fuse Capability: Class R Max System Voltage: 600 VAC Switch Current Rating: 60 Amp Number of Switching Poles: 3 Pole w/ Neutral Neutral Kit: Field or Factory Installed: Factory Fuse Kits: Class R Fuse Kit Field or Factory Installed: Field Fuse Puller: Include as kit Ground Lug: AL/CU Ground Lug: Field or Factory Installed: Field Processed by ACE 2.0 - 020114
126-00	1	RFK06H KIT CLASS R FUSE REJECTION

Item No.	Qty.	Catalog Number / Details
127-00	1	FPK0610 HD SWITCH FUSE PULLER KIT 60A SERIES F
128-00	1	GTK03 KIT EQUIPMENT GROUND CU/AL
107-00	6	FRSR60 Class RK5 60A 600V Fuse (25414-00400)
108-00	16	8538SBA66V80CFF4P51P52TY75 Class 8538 Fused Combination Starter Class 8538 Fused Combination Starter 8538SBA66V80CFF4P51P52TY75 NEMA Size 0 Fused combination starter with Class R fuse clips (Fuses not included) Non-reversing single phase 2 pole device Y75 - DPDT auxiliary contact on disconnect Selected for 1/4 HP @ 230V 1Ph Type 12/3R Enclosure - external reset Melting alloy overload Starter will require 1 thermal unit Standard with NC overload contact Specified for 230V 1Ph power system Fused control transformer selected with 120V 60Hz coil T - Standard capacity 240 Volt primary 120 Volt secondary Fusing F4 - 2 primary control fuses F - 1 secondary control fuse Auxiliary contacts - None Internal NC auxiliary contact for off pilot light Control units supplied C - HAND-OFF-AUTO selector switch Pilot lights supplied P51 - Power ON red pilot light (LED) P52 - Power OFF green pilot light (LED) Revision: 120607 - (140129/140129)
109-00	1	8538SBA66V80CFF4P51P52TY75 Class 8538 Fused Combination Starter Class 8538 Fused Combination Starter 8538SBA66V80CFF4P51P52TY75 NEMA Size 0 Fused combination starter with Class R fuse clips (Fuses not included) Non-reversing single phase 2 pole device Y75 - DPDT auxiliary contact on disconnect Selected for 1/3 HP @ 230V 1Ph Type 12/3R Enclosure - external reset Melting alloy overload Starter will require 1 thermal unit Standard with NC overload contact Specified for 230V 1Ph power system Fused control transformer selected with 120V 60Hz coil T - Standard capacity

Item No.	Qty.	Catalog Number / Details
		240 Volt primary 120 Volt secondary Fusing F4 - 2 primary control fuses F - 1 secondary control fuse Auxiliary contacts - None Internal NC auxiliary contact for off pilot light Control units supplied C - HAND-OFF-AUTO selector switch Pilot lights supplied P51 - Power ON red pilot light (LED) P52 - Power OFF green pilot light (LED) Revision: 120607 - (140129/140129)
110-00	10	8538SBA66V80CFF4P51P52TY75 Class 8538 Fused Combination Starter Class 8538 Fused Combination Starter 8538SBA66V80CFF4P51P52TY75 NEMA Size 0 Fused combination starter with Class R fuse clips (Fuses not included) Non-reversing single phase 2 pole device Y75 - DPDT auxiliary contact on disconnect Selected for 1/2 HP @ 230V 1Ph Type 12/3R Enclosure - external reset Melting alloy overload Starter will require 1 thermal unit Standard with NC overload contact Specified for 230V 1Ph power system Fused control transformer selected with 120V 60Hz coil T - Standard capacity 240 Volt primary 120 Volt secondary Fusing F4 - 2 primary control fuses F - 1 secondary control fuse Auxiliary contacts - None Internal NC auxiliary contact for off pilot light Control units supplied C - HAND-OFF-AUTO selector switch Pilot lights supplied P51 - Power ON red pilot light (LED) P52 - Power OFF green pilot light (LED) Revision: 120607 - (140129/140129)
111-00	2	8538SBA66V80CFF4P51P52TY75 Class 8538 Fused Combination Starter Class 8538 Fused Combination Starter 8538SBA66V80CFF4P51P52TY75 NEMA Size 0 Fused combination starter with Class R fuse clips (Fuses not included) Non-reversing single phase 2 pole device Y75 - DPDT auxiliary contact on disconnect Selected for 3/4 HP @ 230V 1Ph

Item No.	Qty.	Catalog Number / Details
		Type 12/3R Enclosure - external reset Melting alloy overload Starter will require 1 thermal unit Standard with NC overload contact Specified for 230V 1Ph power system Fused control transformer selected with 120V 60Hz coil T - Standard capacity 240 Volt primary 120 Volt secondary Fusing F4 - 2 primary control fuses F - 1 secondary control fuse Auxiliary contacts - None Internal NC auxiliary contact for off pilot light Control units supplied C - HAND-OFF-AUTO selector switch Pilot lights supplied P51 - Power ON red pilot light (LED) P52 - Power OFF green pilot light (LED) Revision: 120607 - (140129/140129)
112-00	3	8538SBA66V80CFF4P51P52TY75 Class 8538 Fused Combination Starter Class 8538 Fused Combination Starter 8538SBA66V80CFF4P51P52TY75 NEMA Size 0 Fused combination starter with Class R fuse clips (Fuses not included) Non-reversing single phase 2 pole device Y75 - DPDT auxiliary contact on disconnect Selected for 1 HP @ 230V 1Ph Type 12/3R Enclosure - external reset Melting alloy overload Starter will require 1 thermal unit Standard with NC overload contact Specified for 230V 1Ph power system Fused control transformer selected with 120V 60Hz coil T - Standard capacity 240 Volt primary 120 Volt secondary Fusing F4 - 2 primary control fuses F - 1 secondary control fuse Auxiliary contacts - None Internal NC auxiliary contact for off pilot light Control units supplied C - HAND-OFF-AUTO selector switch Pilot lights supplied P51 - Power ON red pilot light (LED) P52 - Power OFF green pilot light (LED) Revision: 120607 - (140129/140129)
113-00	3	8538SBA42V80CFF4H30P51P52TY75 Class 8538 Fused Combination Starter Class 8538 Fused Combination Starter 8538SBA42V80CFF4H30P51P52TY75

Item No.	Qty.	Catalog Number / Details
		NEMA Size 0 Fused combination starter with Class R fuse clips (Fuses not included) Non-reversing 3 phase 3 pole device Y75 - DPDT auxiliary contact on disconnect Selected for 1.5 HP @ 230V 3Ph Type 12/3R Enclosure - external reset H3xx - SSOLR - Class 10/20 trip Range of 6-18 amps Standard with NC overload contact Specified for 230V 3Ph power system Fused control transformer selected with 120V 60Hz coil T - Standard capacity 240 Volt primary 120 Volt secondary Fusing F4 - 2 primary control fuses F - 1 secondary control fuse Auxiliary contacts - None Internal NC auxiliary contact for off pilot light Control units supplied C - HAND-OFF-AUTO selector switch Pilot lights supplied P51 - Power ON red pilot light (LED) P52 - Power OFF green pilot light (LED) Revision: 120607 - (140129/140129)
114-00	1	8538SCA43V80CFF4H30P51P52TY75 Class 8538 Fused Combination Starter Class 8538 Fused Combination Starter 8538SCA43V80CFF4H30P51P52TY75 NEMA Size 1 Fused combination starter with Class R fuse clips (Fuses not included) Non-reversing 3 phase 3 pole device Y75 - DPDT auxiliary contact on disconnect Selected for 7.5 HP @ 230V 3Ph Type 12/3R Enclosure - external reset H3xx - SSOLR - Class 10/20 trip Range of 9-27 amps Standard with NC overload contact Specified for 230V 3Ph power system Fused control transformer selected with 120V 60Hz coil T - Standard capacity 240 Volt primary 120 Volt secondary Fusing F4 - 2 primary control fuses F - 1 secondary control fuse Auxiliary contacts - None Internal NC auxiliary contact for off pilot light Control units supplied C - HAND-OFF-AUTO selector switch Pilot lights supplied P51 - Power ON red pilot light (LED)

Item No.	Qty.	Catalog Number / Details
		P52 - Power OFF green pilot light (LED) Revision: 120607 - (140129/140129)
115-00	1	8538SDA42V80CFF4H30P51P52TY75 Class 8538 Fused Combination Starter Class 8538 Fused Combination Starter 8538SDA42V80CFF4H30P51P52TY75 NEMA Size 2 Fused combination starter with Class R fuse clips (Fuses not included) Non-reversing 3 phase 3 pole device Y75 - DPDT auxiliary contact on disconnect Selected for 10 HP @ 230V 3Ph Type 12/3R Enclosure - external reset H3xx - SSOLR - Class 10/20 trip Range of 15-45 amps Standard with NC overload contact Specified for 230V 3Ph power system Fused control transformer selected with 120V 60Hz coil T - Standard capacity 240 Volt primary 120 Volt secondary Fusing F4 - 2 primary control fuses F - 1 secondary control fuse Auxiliary contacts - None Internal NC auxiliary contact for off pilot light Control units supplied C - HAND-OFF-AUTO selector switch Pilot lights supplied P51 - Power ON red pilot light (LED) P52 - Power OFF green pilot light (LED) Revision: 120607 - (140129/140129)
116-00	4	8538SBA43V81CFF4H309P51P52TY75 Class 8538 Fused Combination Starter Class 8538 Fused Combination Starter 8538SBA43V81CFF4H309P51P52TY75 NEMA Size 0 Fused combination starter with Class R fuse clips (Fuses not included) Non-reversing 3 phase 3 pole device Y75 - DPDT auxiliary contact on disconnect Selected for 2 HP @ 460V 3Ph Type 12/3R Enclosure - external reset H3xx - SSOLR - Class 10/20 trip Range of 3-9 amps Standard with NC overload contact Specified for 460V 3Ph power system Fused control transformer selected with 120V 60Hz coil T - Standard capacity 480 Volt primary 120 Volt secondary Fusing F4 - 2 primary control fuses F - 1 secondary control fuse

Item No.	Qty.	Catalog Number / Details
		Auxiliary contacts - None Internal NC auxiliary contact for off pilot light Control units supplied C - HAND-OFF-AUTO selector switch Pilot lights supplied P51 - Power ON red pilot light (LED) P52 - Power OFF green pilot light (LED) Revision: 120607 - (140129/140129)
117-00	4	8538SBA43V81CFF4H309P51P52TY75 Class 8538 Fused Combination Starter Class 8538 Fused Combination Starter 8538SBA43V81CFF4H309P51P52TY75 NEMA Size 0 Fused combination starter with Class R fuse clips (Fuses not included) Non-reversing 3 phase 3 pole device Y75 - DPDT auxiliary contact on disconnect Selected for 3 HP @ 460V 3Ph Type 12/3R Enclosure - external reset H3xx - SSOLR - Class 10/20 trip Range of 3-9 amps Standard with NC overload contact Specified for 460V 3Ph power system Fused control transformer selected with 120V 60Hz coil T - Standard capacity 480 Volt primary 120 Volt secondary Fusing F4 - 2 primary control fuses F - 1 secondary control fuse Auxiliary contacts - None Internal NC auxiliary contact for off pilot light Control units supplied C - HAND-OFF-AUTO selector switch Pilot lights supplied P51 - Power ON red pilot light (LED) P52 - Power OFF green pilot light (LED) Revision: 120607 - (140129/140129)
118-00	4	8538SBA43V81CFF4H309P51P52TY75 Class 8538 Fused Combination Starter Class 8538 Fused Combination Starter 8538SBA43V81CFF4H309P51P52TY75 NEMA Size 0 Fused combination starter with Class R fuse clips (Fuses not included) Non-reversing 3 phase 3 pole device Y75 - DPDT auxiliary contact on disconnect Selected for 5 HP @ 460V 3Ph Type 12/3R Enclosure - external reset H3xx - SSOLR - Class 10/20 trip Range of 3-9 amps Standard with NC overload contact Specified for 460V 3Ph power system

Item No.	Qty.	Catalog Number / Details
		Fused control transformer selected with 120V 60Hz coil T - Standard capacity 480 Volt primary 120 Volt secondary Fusing F4 - 2 primary control fuses F - 1 secondary control fuse Auxiliary contacts - None Internal NC auxiliary contact for off pilot light Control units supplied C - HAND-OFF-AUTO selector switch Pilot lights supplied P51 - Power ON red pilot light (LED) P52 - Power OFF green pilot light (LED) Revision: 120607 - (140129/140129)
119-00	4	8538SCA44V81CFF4H300P51P52TY75 Class 8538 Fused Combination Starter Class 8538 Fused Combination Starter 8538SCA44V81CFF4H300P51P52TY75 NEMA Size 1 Fused combination starter with Class R fuse clips (Fuses not included) Non-reversing 3 phase 3 pole device Y75 - DPDT auxiliary contact on disconnect Selected for 7.5 HP @ 460V 3Ph Type 12/3R Enclosure - external reset H3xx - SSOLR - Class 10/20 trip Range of 6-18 amps Standard with NC overload contact Specified for 460V 3Ph power system Fused control transformer selected with 120V 60Hz coil T - Standard capacity 480 Volt primary 120 Volt secondary Fusing F4 - 2 primary control fuses F - 1 secondary control fuse Auxiliary contacts - None Internal NC auxiliary contact for off pilot light Control units supplied C - HAND-OFF-AUTO selector switch Pilot lights supplied P51 - Power ON red pilot light (LED) P52 - Power OFF green pilot light (LED) Revision: 120607 - (140129/140129)
120-00	1	8538SEG33V81CFF4H30P51P52TY75 Class 8538 Fused Combination Starter Class 8538 Fused Combination Starter 8538SEG33V81CFF4H30P51P52TY75 NEMA Size 3 Fused combination starter with Class R fuse clips (Fuses not included) Non-reversing 3 phase

Item No.	Qty.	Catalog Number / Details
		3 pole device Y75 - DPDT auxiliary contact on disconnect Selected for 40 HP @ 460V 3Ph Type 1 Enclosure H3xx - SSOLR - Class 10/20 trip Range of 30-90 amps Standard with NC overload contact Specified for 460V 3Ph power system Fused control transformer selected with 120V 60Hz coil T - Standard capacity 480 Volt primary 120 Volt secondary Fusing F4 - 2 primary control fuses F - 1 secondary control fuse Auxiliary contacts - None Control units supplied C - HAND-OFF-AUTO selector switch Pilot lights supplied P51 - Power ON red pilot light (LED) P52 - Power OFF green pilot light (LED) Revision: 120607 - (140129/140129)
121-00	1	8538SEG33V81CFF4H30P51P52TY75 Class 8538 Fused Combination Starter Class 8538 Fused Combination Starter 8538SEG33V81CFF4H30P51P52TY75 NEMA Size 3 Fused combination starter with Class R fuse clips (Fuses not included) Non-reversing 3 phase 3 pole device Y75 - DPDT auxiliary contact on disconnect Selected for 50 HP @ 460V 3Ph Type 1 Enclosure H3xx - SSOLR - Class 10/20 trip Range of 30-90 amps Standard with NC overload contact Specified for 460V 3Ph power system Fused control transformer selected with 120V 60Hz coil T - Standard capacity 480 Volt primary 120 Volt secondary Fusing F4 - 2 primary control fuses F - 1 secondary control fuse Auxiliary contacts - None Control units supplied C - HAND-OFF-AUTO selector switch Pilot lights supplied P51 - Power ON red pilot light (LED) P52 - Power OFF green pilot light (LED) Revision: 120607 - (140129/140129)
122-00	43	2510FG1 MANUAL STARTER 277VAC
123-00	1	8903LG60V02 LIGHTING CONTACTOR 600VAC 30A L

Item No.	Qty.	Catalog Number / Details
		Class 8903 Multi-pole lighting contactor 8903LG60V02 Contactor rating - 20 amps Non-combination lighting contactor 6 pole device With 6 NO and 0 NC contacts. Type 1 Enclosure Separate control source selected with 120V 60Hz coil Auxiliary contacts - None Control units supplied None Pilot lights supplied None Revision: 120607 - (140129/140129)
124-00	1	8903LG42V02C6P51 Class 8903 Multi-pole lighting contactor Class 8903 Multi-pole lighting contactor 8903LG42V02C6P51 Contactor rating - 20 amps Non-combination lighting contactor 6 pole device With 4 NO and 2 NC contacts. Type 1 Enclosure Separate control source selected with 120V 60Hz coil Auxiliary contacts - None Control units supplied C6 - ON-OFF selector switch Pilot lights supplied P51 - Power ON red pilot light (LED) Revision: 120607 - (140430/140129)
125-00	3	8903LG42V02C6P51 Class 8903 Multi-pole lighting contactor Class 8903 Multi-pole lighting contactor 8903LG42V02C6P51 Contactor rating - 20 amps Non-combination lighting contactor 6 pole device With 4 NO and 2 NC contacts. Type 1 Enclosure Separate control source selected with 120V 60Hz coil Auxiliary contacts - None Control units supplied C6 - ON-OFF selector switch Pilot lights supplied P51 - Power ON red pilot light (LED) Revision: 120607 - (140430/140129)
132-00	2	H221N SWITCH FUSIBLE HD 240V 30A 2P NEMA1 Enclosure Type: Type 1 Interrupting Rating (AIR): 10kA Fuse Capability: Class R Max System Voltage: 240 VAC Switch Current Rating: 30 Amp Number of Switching Poles: 2 Pole w/ Neutral

Item No.	Qty.	Catalog Number / Details
		Neutral Kit: Field or Factory Installed: Factory Fuse Kits: Class R Fuse Kit Field or Factory Installed: Field Fuse Puller: Include as kit Ground Lug: AL/CU Ground Lug: Field or Factory Installed: Field Processed by ACE 2.0 - 020114
142-00	2	RFK03H KIT CLASS R FUSE REJECTION
143-00	2	FPK03 HD SWITCH FUSE PULLER KIT 30A SERIES F
144-00	2	GTK03 KIT EQUIPMENT GROUND CU/AL
133-00	7	FRNR20 Class RK5 20A 250V Fuse (25413-00330)
134-00	3	8538SBA66V80CFF4P51P52TY75 Class 8538 Fused Combination Starter Class 8538 Fused Combination Starter 8538SBA66V80CFF4P51P52TY75 NEMA Size 0 Fused combination starter with Class R fuse clips (Fuses not included) Non-reversing single phase 2 pole device Y75 - DPDT auxiliary contact on disconnect Selected for 1/4 HP @ 230V 1Ph Type 12/3R Enclosure - external reset Melting alloy overload Starter will require 1 thermal unit Standard with NC overload contact Specified for 230V 1Ph power system Fused control transformer selected with 120V 60Hz coil T - Standard capacity 240 Volt primary 120 Volt secondary Fusing F4 - 2 primary control fuses F - 1 secondary control fuse Auxiliary contacts - None Internal NC auxiliary contact for off pilot light Control units supplied C - HAND-OFF-AUTO selector switch Pilot lights supplied P51 - Power ON red pilot light (LED) P52 - Power OFF green pilot light (LED) Revision: 120607 - (140129/140129)
135-00	1	8538SBA66V80CFF4P51P52TY75 Class 8538 Fused Combination Starter Class 8538 Fused Combination Starter 8538SBA66V80CFF4P51P52TY75 NEMA Size 0 Fused combination starter with Class R fuse clips

Item No.	Qty.	Catalog Number / Details
		(Fuses not included) Non-reversing single phase 2 pole device Y75 - DPDT auxiliary contact on disconnect Selected for 3/4 HP @ 230V 1Ph Type 12/3R Enclosure - external reset Melting alloy overload Starter will require 1 thermal unit Standard with NC overload contact Specified for 230V 1Ph power system Fused control transformer selected with 120V 60Hz coil T - Standard capacity 240 Volt primary 120 Volt secondary Fusing F4 - 2 primary control fuses F - 1 secondary control fuse Auxiliary contacts - None Internal NC auxiliary contact for off pilot light Control units supplied C - HAND-OFF-AUTO selector switch Pilot lights supplied P51 - Power ON red pilot light (LED) P52 - Power OFF green pilot light (LED) Revision: 120607 - (140129/140129)
136-00	3	8538SBA66V80CFF4P51P52TY75 Class 8538 Fused Combination Starter Class 8538 Fused Combination Starter 8538SBA66V80CFF4P51P52TY75 NEMA Size 0 Fused combination starter with Class R fuse clips (Fuses not included) Non-reversing single phase 2 pole device Y75 - DPDT auxiliary contact on disconnect Selected for 1 HP @ 230V 1Ph Type 12/3R Enclosure - external reset Melting alloy overload Starter will require 1 thermal unit Standard with NC overload contact Specified for 230V 1Ph power system Fused control transformer selected with 120V 60Hz coil T - Standard capacity 240 Volt primary 120 Volt secondary Fusing F4 - 2 primary control fuses F - 1 secondary control fuse Auxiliary contacts - None Internal NC auxiliary contact for off pilot light Control units supplied C - HAND-OFF-AUTO selector switch Pilot lights supplied P51 - Power ON red pilot light (LED) P52 - Power OFF green pilot light (LED) Revision: 120607 - (140129/140129)

Item No.	Qty.	Catalog Number / Details
137-00	6	8538SBA42V80CFF4H30P51P52TY75 Class 8538 Fused Combination Starter Class 8538 Fused Combination Starter 8538SBA42V80CFF4H30P51P52TY75 NEMA Size 0 Fused combination starter with Class R fuse clips (Fuses not included) Non-reversing 3 phase 3 pole device Y75 - DPDT auxiliary contact on disconnect Selected for 1.5 HP @ 230V 3Ph Type 12/3R Enclosure - external reset H3xx - SSOLR - Class 10/20 trip Range of 6-18 amps Standard with NC overload contact Specified for 230V 3Ph power system Fused control transformer selected with 120V 60Hz coil T - Standard capacity 240 Volt primary 120 Volt secondary Fusing F4 - 2 primary control fuses F - 1 secondary control fuse Auxiliary contacts - None Internal NC auxiliary contact for off pilot light Control units supplied C - HAND-OFF-AUTO selector switch Pilot lights supplied P51 - Power ON red pilot light (LED) P52 - Power OFF green pilot light (LED) Revision: 120607 - (140129/140129)
138-00	1	8538SBA43V81CFF4H309P51P52TY75 Class 8538 Fused Combination Starter Class 8538 Fused Combination Starter 8538SBA43V81CFF4H309P51P52TY75 NEMA Size 0 Fused combination starter with Class R fuse clips (Fuses not included) Non-reversing 3 phase 3 pole device Y75 - DPDT auxiliary contact on disconnect Selected for 2 HP @ 460V 3Ph Type 12/3R Enclosure - external reset H3xx - SSOLR - Class 10/20 trip Range of 3-9 amps Standard with NC overload contact Specified for 460V 3Ph power system Fused control transformer selected with 120V 60Hz coil T - Standard capacity 480 Volt primary 120 Volt secondary Fusing F4 - 2 primary control fuses F - 1 secondary control fuse Auxiliary contacts - None Internal NC auxiliary contact for off pilot

Item No.	Qty.	Catalog Number / Details
		light Control units supplied C - HAND-OFF-AUTO selector switch Pilot lights supplied P51 - Power ON red pilot light (LED) P52 - Power OFF green pilot light (LED) Revision: 120607 - (140129/140129)
139-00	2	8538SBA43V81CFF4H309P51P52TY75 Class 8538 Fused Combination Starter Class 8538 Fused Combination Starter 8538SBA43V81CFF4H309P51P52TY75 NEMA Size 0 Fused combination starter with Class R fuse clips (Fuses not included) Non-reversing 3 phase 3 pole device Y75 - DPDT auxiliary contact on disconnect Selected for 3 HP @ 460V 3Ph Type 12/3R Enclosure - external reset H3xx - SSOLR - Class 10/20 trip Range of 3-9 amps Standard with NC overload contact Specified for 460V 3Ph power system Fused control transformer selected with 120V 60Hz coil T - Standard capacity 480 Volt primary 120 Volt secondary Fusing F4 - 2 primary control fuses F - 1 secondary control fuse Auxiliary contacts - None Internal NC auxiliary contact for off pilot light Control units supplied C - HAND-OFF-AUTO selector switch Pilot lights supplied P51 - Power ON red pilot light (LED) P52 - Power OFF green pilot light (LED) Revision: 120607 - (140129/140129)
140-00	1	8538SCA44V81CFF4H300P51P52TY75 Class 8538 Fused Combination Starter Class 8538 Fused Combination Starter 8538SCA44V81CFF4H300P51P52TY75 NEMA Size 1 Fused combination starter with Class R fuse clips (Fuses not included) Non-reversing 3 phase 3 pole device Y75 - DPDT auxiliary contact on disconnect Selected for 7.5 HP @ 460V 3Ph Type 12/3R Enclosure - external reset H3xx - SSOLR - Class 10/20 trip Range of 6-18 amps Standard with NC overload contact Specified for 460V 3Ph power system Fused control transformer selected with 120V 60Hz coil T - Standard capacity

Item No.	Qty.	Catalog Number / Details
		480 Volt primary 120 Volt secondary Fusing F4 - 2 primary control fuses F - 1 secondary control fuse Auxiliary contacts - None Internal NC auxiliary contact for off pilot light Control units supplied C - HAND-OFF-AUTO selector switch Pilot lights supplied P51 - Power ON red pilot light (LED) P52 - Power OFF green pilot light (LED) Revision: 120607 - (140129/140129)
141-00	15	2510FG1 MANUAL STARTER 277VAC
145-00	1	POWERBUSFOOTAGEFITTINGS POWERBUS FOOTAGE & FITTINGS
146-00	10	PBCE4A225AST120B 225A Busway Straight 10ft Blk 600V max
147-00	2	PBCF4A225ATBB Busway Tap Box 225A Blk 600V max
148-00	14	PB225FH Busway Standard Hanger 225 A
149-00	2	PB225AEC Busway End Closure 225A 600V
150-00	4	PBPQO4A100 Busway Plug-in Unit Enclosure
151-00	1	PBPFA4A100A050 Busway Circuit Breaker Plug-in Unit
152-00	8	PBPFA4A100A020 Busway Circuit Breaker Plug-in Unit
153-00	3	PBPFA4A100A030 Busway Circuit Breaker Plug-in Unit
154-00	12	QOB120 MINIATURE CIRCUIT BREAKER 120/240V 20A
155-00	1	POWERBUSFOOTAGEFITTINGS POWERBUS FOOTAGE & FITTINGS
162-00	9	PBCE4A225AST120B 225A Busway Straight 10ft Blk 600V max
163-00	2	PBCF4A225ATBB Busway Tap Box 225A Blk 600V max
164-00	13	PB225FH Busway Standard Hanger 225 A
165-00	2	PB225AEC Busway End Closure 225A 600V
166-00	5	PBPQO4A100

Item No.	Qty.	Catalog Number / Details
		Busway Plug-in Unit Enclosure
156-00	1	POWERBUSFOOTAGEFITTINGS POWERBUS FOOTAGE & FITTINGS
157-00	10	PBCE4A225AST120B 225A Busway Straight 10ft Blk 600V max
158-00	2	PBCF4A225ATBB Busway Tap Box 225A Blk 600V max
159-00	14	PB225FH Busway Standard Hanger 225 A
160-00	2	PB225AEC Busway End Closure 225A 600V
161-00	18	PBPFA4A100A020 Busway Circuit Breaker Plug-in Unit
167-00	5	QOB150 MINIATURE CIRCUIT BREAKER 120/240V 50A
168-00	8	QOB120 MINIATURE CIRCUIT BREAKER 120/240V 20A
169-00	4	H222N SWITCH FUSIBLE HD 240V 60A 2P NEMA1 Enclosure Type: Type 1 Interrupting Rating (AIR): 50kA Fuse Capability: Class R Max System Voltage: 240 VAC Switch Current Rating: 60 Amp Number of Switching Poles: 2 Pole w/ Neutral Neutral Kit: Field or Factory Installed: Factory Fuse Kits: Class R Fuse Kit Field or Factory Installed: Field Fuse Puller: Include as kit Ground Lug: AL/CU Ground Lug: Field or Factory Installed: Field Processed by ACE 2.0 - 020114
171-00	4	RFK06H KIT CLASS R FUSE REJECTION
172-00	4	FPK03 HD SWITCH FUSE PULLER KIT 30A SERIES F
173-00	4	GTK03 KIT EQUIPMENT GROUND CU/AL
170-00	11	FRNR60 Class RK5 60A 250V Fuse (25413-00400)
175-00	1	SIBS STARTUP
		Q2C or Reference Number - 34765053
		At your request and based upon the information you have provided, we are pleased to submit the following proposal for Schneider Electric Services to provide start-up and commissioning

Item No.	Qty.	Catalog Number / Details
		services on the electrical equipment being installed in your facility at in Casper, WY. Scope of Work ---------- Specifically, experienced field service technician(s) will perform visual, mechanical and electrical tests on the following equipment, as outlined in our Procedures for the Startup and Commissioning of Electrical Equipment (attached). You will receive a copy of the test reports which can serve as a benchmark for future preventive maintenance and testing activities. Workscopes to be Performed (On applicable Equipment) ---------- Circuit Breakers: Low Voltage Insulated Case/Molded Case Ground Fault Protection Systems Switchgear and Switchboard Assemblies: Low and Medium Voltage Additional Items ---------- Relavent Designations of Equipment Workscopes Listed Above ---------- 34765053-1, Equipment: Switchboards, Designation: MAIN / UCT Notes: ---------- Please refer to formal quote document for full details.
176-00	1	ES158929-ENGINEERING ANALYSIS SC TCC & AF
177-00	1	ES158929-LABEL COMP AF Bdy Lbl
182-00	1	**Designation:** L2M1 ILINE ML PNLB (INT,BOX,TRIM) - A I-Line Panelboard Consisting of 208Y/120V 3Ph 4W 60Hz SCCR: 30kA Fully Rated SPD 120kA per Phase/60kA per Mode SPD line to grd protect w/SPD Surge Counter w/SPD Dry Contacts Main Lug Only: 600A Incoming Conductors: 1 - (2) #2 - 500kcmil Bus: Copper: Tin Plated CU Ground Bar 99" of Mounting Inches Type 1,Box: 86H x 42W x 9.5D Incoming: Bottom Trim: Flush - Hinged Box Cat No: HC4286DBP Ref. Drawing: PBA418HR Type: HCP

Item No.	Qty.	Catalog Number / Details
		Feeders: 1 - SL800 Feeds Next Panel 32 - 20A/1P FH 2 - 20A/3P FH-GFI GF 1 - 400AS/300AT/3P LG STD LI 1 - 30A/3P FH 2 - 50A/3P FH Optional Features: Ship Together,Standard Solid Neutral,Copper Ground Bar,Standard Mains and Feeders Mechanically Restrained ANSI 49 grey box Standard Nameplate: Engraved as Follows Line 1: L2M1 Size: 3.50" Wide x 1.00" High (Std) Color: White Surface / Black Letters Plastic/Adhesive - Screw-on
406-00	1	**Designation:** L2M1 ILINE ML PNLB (INT,BOX,TRIM) - B I-Line Panelboard Consisting of 208Y/120V 3Ph 4W 60Hz SCCR: 30kA Fully Rated Main Lug Only: 600A Bus: Copper: Tin Plated CU Ground Bar 63" of Mounting Inches Type 1,Box: 73H x 32W x 8.25D Incoming: Top Trim: Flush - Hinged Box Cat No: HC3273BP Ref. Drawing: PBA402HR Type: HCM Feeders: 38 - 20A/1P FH Optional Features: Ship Together,Standard Solid Neutral,Copper Ground Bar,Standard Mains and Feeders Mechanically Restrained ANSI 49 grey box Standard Nameplate: Engraved as Follows Line 1: L2M1 Size: 3.50" Wide x 1.00" High (Std) Color: White Surface / Black Letters Plastic/Adhesive - Screw-on
347-00	1	**Designation:** 750 KVA TRANSFORMER DASKP1200 LUG KIT
348-00	1	8903LG42V02C6P51 Class 8903 Multi-pole lighting contactor Class 8903 Multi-pole lighting contactor 8903LG42V02C6P51 Contactor rating - 20 amps Non-combination lighting contactor 6 pole device With 4 NO and 2 NC contacts.

Item No.	Qty.	Catalog Number / Details
		Type 1 Enclosure Separate control source selected with 120V 60Hz coil Auxiliary contacts - None Control units supplied C6 - ON-OFF selector switch Pilot lights supplied P51 - Power ON red pilot light (LED) Revision: 120607 - (140430/140129)
366-00	1	**Designation:** L2M22 NQ ML Panel (Interior) NQ Panelboard Consisting of 208Y/120V 3Ph 4W 60Hz SCCR: 14kA Series Rated w/ HD Circuit Breaker Main Lug Only: 100A Incoming Conductors: 1 - #6 - 2/0 AWG Bus: Aluminum: Tin Plated CU Ground Bar 30 Circuit Interior Type 1,Box: 32H x 20W x 5.75D Incoming: Top Trim: Flush - Hinged Box Cat No: MH32P Front Cat No: NC32FHR Ref. Drawing: PBA701HR Feeders: 3 - 20A/1P QOB-GFI 25 - 20A/1P QOB 1 - 30A/2P QOB Optional Features: Standard Panel (Box Ahead),Standard Solid Neutral,Copper Ground Bar ANSI 49 grey box Standard Nameplate: Engraved as Follows Line 1: L2M22 Size: 3.50" Wide x 1.00" High (Std) Color: White Surface / Black Letters Plastic/Adhesive - Screw-on
397-00	1	**Designation:** L2M22 MH32P (Box) NQ Standard TYPE 1 Box 32 H
398-00	1	**Designation:** L2M22 NC32FHR (Trim) NQ Standard TYPE 1 Box 32 H
411-00	1	FFTKRPTV10 FFTK REPORT GENERATOR CD **Markings:** MARK: CASEPR ELECTRIC KELLY WALSH HS PO 103619418 MARK: CASEPR ELECTRIC KELLY WALSH HS PO 103619418

One-pole QO® and QOB Equipment Protective Device (EPD)
(30 mA Ground-fault Trip Level)

Dispositivo de protección del equipo (DPE) de un polo QO® y QOB
(nivel de disparo por falla a tierra de 30 mA)

Dispositif de protection des appareils (DPA) unipolaires QO®et QOB
(Niveau de déclenchement sur de fuite à la terre de 30 mA)

Retain for future use. / Conservar para uso futuro. / À conserver pour usage ultérieur.

⚠ DANGER / PELIGRO / DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

- Apply appropriate personal protective equipment (PPE) and follow safe electrical work practices. See NFPA 70E.
- This equipment must be installed and serviced only by qualified electrical personnel.
- Turn off all power supplying this equipment before working on or inside equipment.
- Always use a properly rated voltage sensing device to confirm power is off.
- Make sure wiring to load center or panelboard is correct. EPD circuit breaker must switch the ungrounded (HOT) conductor in order to provide ground-fault protection. Incoming line must be connected to load center bus.
- EPD circuit breakers are designed to protect equipment and do not protect people against hazards of electrical shock.
- Replace all devices, doors and covers before turning on power to this equipment.

Failure to follow these instructions will result in death or serious injury.

PELIGRO DE DESCARGA ELÉCTRICA, EXPLOSIÓN O DESTELLO POR ARQUEO

- Utilice equipo de protección personal (EPP) apropiado y siga las prácticas de seguridad eléctrica establecidas por su Compañía (consulte la norma NFPA 70E).
- Solamente el personal eléctrico especializado deberá instalar y prestar servicio de mantenimiento a este equipo.
- Desenergice el equipo antes de realizar cualquier trabajo en él.
- Siempre utilice un dispositivo detector de tensión nominal adecuado para confirmar la desenergización del equipo.
- Asegúrese de que el cableado del centro de carga o tablero esté correcto. El interruptor automático DPE deberá contar con características de desconexión de los conductore no aterrizados (ENERGIZADOS) para proporcionar protección contra fallas a tierra. La línea entrante deberá conectarse a la barra del centro de carga.
- Los interruptores automáticos DPE están diseñados para proteger al equipo y no protegen a las personas contra los peligros de descarga eléctrica.
- Vuelva a colocar todos los dispositivos, las puertas y las cubiertas antes de energizar el equipo.

El incumplimiento de estas instrucciones podrá causar la muerte o lesiones serias.

RISQUE D'ÉLECTROCUTION, D'EXPLOSION OU D'ÉCLAIR D'ARC

- Portez un équipement de protection personnel (ÉPP) approprié et observez les méthodes de travail électrique sécuritaire. Voir NFPA 70E.
- Seul un personnel qualifié doit effectuer l'installation et l'entretien de cet appareil.
- Coupez toute alimentation de cet appareil avant d'y travailler.
- Utilisez toujours un dispositif de détection de tension à valeur nominale appropriée pour s'assurer que l'alimentation est coupée.
- Assurez-vous que le câblage vers le centre de distribution ou le panneau de distribution est correct. Le disjoncteur DPA doit commuter le conducteur non mis à la terre (SOUS TENSION) de façon à fournir une protection contre les défauts à la terre. La ligne d'arrivée doit être raccordée au bus du centre de distribution.
- Les disjoncteurs DPA sont conçus pour protéger l'appareil et ils ne protègent pas les personnes contre les risques d'électrocution.
- Replacez tous les dispositifs, les portes et les couvercles avant de mettre l'appareil sous tension.

Si ces précautions ne sont pas respectées, cela entraînera la mort ou des blessures graves.

CIRCUIT BREAKER INSTALLATION

1. Turn off all power supplying this equipment before working on or inside equipment.
2. Turn EPD off.
3. Install EPD to panel mounting rail and line-side bus connections. See proper installation code for wire size. See EPD for torque value.

NOTE: The panel neutral wire (A) must be connected to load center or panelboard neutral bar for EPD to operate correctly.

4. For bolt-on circuit breakers, tighten screw (D).
5. Connect wiring as shown below. Tighten screw in neutral bar (E) to torque specified in load center or panelboard.

INSTALACIÓN DEL INTERRUPTOR AUTOMÁTICO

1. Desenergice el equipo antes de realizar cualquier trabajo en él.
2. Desconecte el DPE.
3. Instale el DPE en los rieles de montaje del tablero y a las conexiones de la barra en el lado de línea.Consulte el código de instalación correctopara obtener los valores de par de apriete del cable y consulte el DPE para obtener los valores de par de apriete.

NOTA: El conductor neutro del tablero (A) debe conectarse al centro de carga o a la barra del neutro del tablero para que el DPE funcione correctamente.

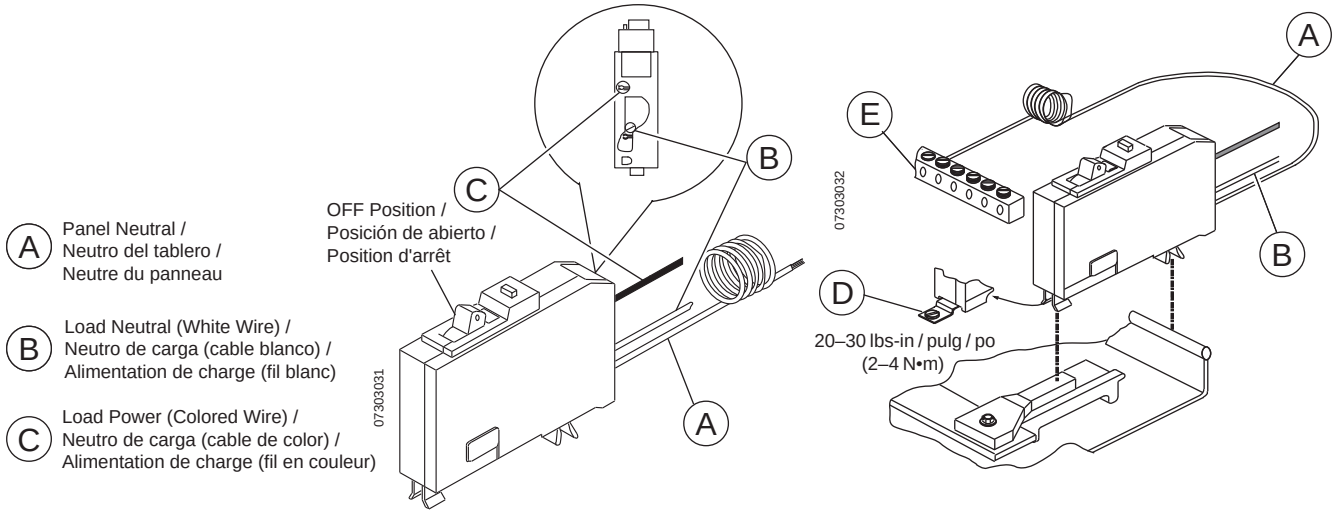
4. Apriete el tornillo (D) de los interruptores automáticos atornillables.
5. Conecte el cableado tal como se muestra abajo. Apriete el tornillo en la barra del neutro (E) según el valor de par de apriete especificado en el centro de carga o tablero.

INSTALLATION DU DISJONCTEUR

1. Couper l'alimentation de l'appareil avant d'y travailler.
2. Mettre en arrêt le DPA.
3. Installer le DPA sur les rails de montage du panneau et aux connexions de la barre-bus du côté du secteur. Se reporter au code d'installation approprié pour obtenir le calibre du fil et au DPA pour obtenir le couple.

REMARQUE : Le fil du neutre du panneau (A) \doit être raccordé au centre de distribution ou à la barre du neutre du panneau de distribution pour que le DPA fonctionne correctement.

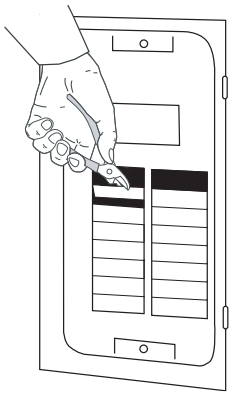
4. Serrer les vis (D) des disjoncteurs boulonnés.
5. Raccorder le câblage de la façon indiquée ci-dessous. Serrer la vis de la barre neutre (E) au couple spécifié sur le centre de distribution ou sur le panneau de distribution.



6. Remove appropriate twist-out panel in load center or panelboard trim.
7. Install trim.

6. Retire los rectángulos removibles apropiados en el marco del centro de carga o del tablero de alumbrado/distribución.
7. Instale el marco.

6. Retirer les plaquette à tordre appropriée de la garniture du centre ou du panneau de distribution.
7. Installer la garniture.



8. Install test instruction label supplied with the EPD.

8. Coloque la etiqueta de instrucciones de prueba provista con el DPE.

8. Installer l'étiquette du panneau fournies avec le DPA.

TEST CIRCUIT BREAKER

Test EPD after installation following procedure below. Test monthly thereafter following the procedure on the test instruction label.

PRUEBA DEL INTERRUPTOR AUTOMÁTICO

Pruebe el DPE después de la instalación de acuerdo con el procedimiento que se indica. Luego, pruebe el DPE mensualmente siguiendo el procedimiento indicado en la etiqueta de instrucciones de prueba.

ESSAI DU DISJONCTEUR

Vérifier le DPA après l'instalation selon les directives ci-dessous. Ensuite, vérifier le DPA mensuellement en suivant les directives indiquées sur l'étiquette du panneau.

⚠ CAUTION / PRECAUCIÓN / ATTENTION

HAZARD OF EQUIPMENT DAMAGE

Megger, high-voltage, or hi-pot tests will damage EPD. Turn off all power supplying the equipment and isolate the equipment protection device before performing these types of tests.

Failure to follow this instruction can result in damage to the circuit breaker electronic module.

PELIGRO DE DAÑO AL EQUIPO

La utilización de un megóhmetro, aplicación de alta tensión o la realización de pruebas de rigidez dieléctrica producirán daño el DPE. Desenergice el equipo y aísle el dispositivo de protección del equipo antes de realizar estos tipos de pruebas.

El incumplimiento de esta precaución puede producir daño al módulo electrónico del interruptor automático.

RISQUE DE DOMMAGES MATÉRIELS

Les essais au mégohmètre, à haute tension ou de rupture diélectrique endommageront le DPA. Coupez l'alimentation des appareils et isolez le dispositif de protection des appareils avant d'effectuer ces types d'essais.

Si cette précaution n'est pas respectée, cela peut entraîner des dommages matériels au module électronique du disjoncteur.

1. Turn off all loads downstream of EPD. Turn on power to load center or panelboard. Turn equipment protective device on (I).

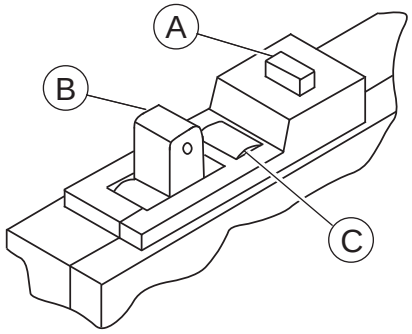
1. Desconecte todas las cargas derivadas del DPE. Energice el centro de carga o tablero. Conecte (I) el dispositivo de protección del equipo.

1. Mettre hors tension toutes les charges en aval du DPA. Mettre sous tension le centre ou le panneau de distribution. Mettre le dispositif de protection des appareils en marche (I).

2. Press TEST button (A). If EPD is operating correctly:
   - — power will be disconnected
   - — handle (B) will move to the center (tripped) position and
   - — red trip indicator (C) will appear.
3. If EPD is not operating correctly, recheck wiring and installation.
4. To reset equipment protective device, push handle (B) to off (O) and then to on (I).

2. Presione el botón TEST (prueba) (A). Si el DPE está funcionando correctamente:
   - — se desconectará la alimentación
   - — se desplazará la palanca (B) a la posición intermedia (de disparo) y
   - — se mostrará el indicador rojo de disparo (C).
3. Si el DPE no funciona correctamente, vuelva a revisar el cableado y la instalación.
4. Para restablecer el dispositivo de protección del equipo, mueva la palanca (B) a la posición de abierto (O) y luego a la posición de cerrado (I).

2. Appuyer sur le bouton TEST (essai) (A). Si le DPA fonctionne correctement:
   - — l'alimentation se coupera
   - — la manette (B) se placera en position centrale (déclenchée) et
   - — le voyant de déclenchement rouge (C) apparaîtra.
3. Si le DPA ne fonctionne pas correctement, revérifier le câblage et l'installation.
4. Pour réarmer le dispositif de protection des appareils, amener la manette (B) sur la position d'arrêt (O), puis sur la position de marche (I).



CIRCUIT BREAKER REMOVAL

1. Turn off all power supplying this equipment before working on or inside equipment.
2. Remove EPD in reverse order of installation.
3. If EPD is not replaced, install a QOFP filler plate (not provided) to fill opening in load center or panelboard trim.

DESMONTAJE DEL INTERRUPTOR AUTOMÁTICO

1. Desenergice el equipo antes de realizar cualquier trabajo en él.
2. Desmonte el DPE en el orden inverso al de su instalación.
3. Si no se vuelve a colocar el DPF, instale una placa de relleno (no provista) para llenar el espacio en el centro de carga o en el marco del tablero.

DÉMONTAGE DU DISJONCTEUR

1. Couper l'alimentation de l'appareil avant d'y travailler.
2. Démonter le DPA dans l'ordre inverse de l'installation.
3. Si le DPA n'est pas remplacé, installer un plaque de remplissage QOFP (non fournies) pour remplir l'espace dans la garniture du centre de distribution ou du panneau de distribtion.

Schneider Electric
3700 Sixth Street SW
Cedar Rapids, IA 52404 USA
1-888-SquareD (1-888-778-2733)
www.SquareD.com

Importado en México por:
Schneider Electric México, S.A. de C.V.
Calz. J. Rojo Gómez 1121-A
Col. Gpe. del Moral 09300 México, D.F.
Tel. 55-5804-5000
www.schneider-electric.com.mx

Schneider Canada Inc.
19 Waterman Avenue, M4B 1 Y2
Toronto, Ontario
1-800-565-6699
www.schneider-electric.ca

QO® and QOB Miniature Circuit Breakers

Catalog
0730CT9801R1/08
2008
Class 730

CONTENTS

SQUARE D
by Schneider Electric

Schneider Electric

General Information

QO® and QOB Circuit Breakers

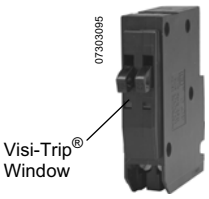
QO® (plug-on) and QOB (bolt-on) one-, two- and three-pole thermal-magnetic circuit breakers provide overcurrent protection and switching on ac and dc systems. Plug-on QO circuit breakers are for use in QO load centers, NQ and NQOD panelboards, OEM mounting bases, and Speed-D® switchboard distribution panels. Bolt-on QOB circuit breakers are for use in NQO and NQOD panelboards.

Operating mechanism

QO Circuit Breakers

QO and QOB circuit breakers have an overcenter, trip-free toggle mechanism with quick-make, quick-break action and positive handle indication. The tripping mechanisms in two-and three-pole circuit breakers operate such that an overcurrent on any pole of the circuit breaker will cause all poles of the circuit breaker to open simultaneously. Each pole has an individual thermal-magnetic trip element calibrated for 40°C ambient temperature.

Trip Indication



QO and QOB circuit breakers have Visi-Trip® trip indication, which provides a visual indication that the circuit breaker has tripped and interrupted the circuit. When the circuit breaker has tripped, the handle assumes a center position and the red Visi-Trip indicator appears in a window in the circuit breaker case. The Visi-Trip indicator is only visible when the circuit breaker has tripped. Trip indication immediately distinguishes the circuit from any other circuit which is merely in the on or off position. The circuit breaker can be reset by pushing the handle to OFF and then to ON.

Construction Standards

QO and QOB circuit breakers are built to comply with UL Standard 489, CSA 22.2 No. 5, NOM/ANCE and NEMA Standard AB1 and to meet Federal Specification W-C-375B/GEN. QO circuit breakers are UL Listed under UL File E84967 and are CSA Certified under CSA Master Contract 153555.

QO Circuit Breaker	UL Type
QO280–QO210	QOA, QOB
QO2110–QO2125	QOC, QOCB
QO2150–QO2200	QOC (no bolt-on version)

Ratings

When designing an electrical distribution system, overcurrent protective devices are generally selected based on performance requirements. Factors influencing this selection include system voltage, continuous current, interrupting rating, and frequency.

Voltage Rating

The circuit breaker must have a voltage rating greater than, or equal to, the system voltage. When a circuit breaker clears an overcurrent, it is done in two steps. First, the current sensing system identifies the overcurrent and releases the tripping mechanism. This results in a parting of the contacts. The circuit breaker must then extinguish the voltage arc across the contacts. If the circuit breaker has the correct voltage rating, it can efficiently extinguish this voltage arc. QO and QOB circuit breakers are rated for use in the following voltage systems:

- 120 Vac
- 208/120 Vac
- 120/240 Vac
- 240 Vac
- 48 Vdc (10–70 A for 1 and 2 pole circuit breakers, 10–60 A for 3 pole circuit breakers)

Continuous Current Rating

The continuous current rating of a circuit breaker is the maximum current in amperes (dc or rms ac at rated frequency) which a device will carry continuously without exceeding the specified allowable temperature rise. Sometimes referred to as the ampere rating or handle rating of the circuit breaker, the continuous current rating relates to the system current flow under normal conditions.

UL and CSA require that circuit breakers must be able to carry their continuous current rating indefinitely at 40°C in free air in order to achieve a UL Listing/CSA Certification. The National Electrical Code (NEC) and the Canadian Electrical Code (CEC) recognize that devices applied in end-use equipment can be affected by heat build up during normal operating conditions. For this reason, the codes require that circuit breakers be selected based on the characteristics of the load (particularly, the portion of the load which will be on continuously for three hours or more at a time).

Frequency Rating

The standard rated frequency for circuit breakers is 60 Hz. Circuit breakers are also rated for dc applications as shown in Table 1. Many Square D circuit breakers can also be applied on 50 Hz systems without derating. GFCI, AFCI and EPD devices are rated for 60 Hz operation only. Frequencies can affect the thermal, magnetic and short-circuit characteristics of circuit breakers. See Data Bulletin 0100DB0101 *Determining Current Carrying Capacity in Special Applications*. Contact the Field Sales office before applying circuit breakers on systems at frequencies other than 50/60 Hz.

Interrupting Rating

The interrupting rating of a circuit breaker is the highest current at rated voltage that the circuit breaker is intended to interrupt under standard test conditions. A circuit breaker must be chosen so that the interrupting rating is equal to or greater than the maximum available short-circuit current at the point where the circuit breaker is applied in the system.

Table 1: Interrupting Ratings

Circuit Breaker Type	Number of Poles	Ampere Rating	UL Listed Interrupting Rating[1]			
			120 Vac	120/240 Vac	240 Vac	48 Vdc[2]
QO	1	10–70 A	10 kA	10 kA	—	5 kA
	2	10–70 A	10 kA	10 kA	10 kA	5 kA
		80–100 A	10 kA	10 kA	10 kA	—
		110—200 A	10 kA	10 kA	—	—
	3	15–60 A	10 kA	10 kA	10 kA	5 kA
		70–100 A	10 kA	10 kA	10 kA	—
QOB	1	10–70 A	10 kA	10 kA	—	5 kA
	2	10–70 A	10 kA	10 kA	10 kA	5 kA
		80–100 A	10 kA	10 kA	10 kA	—
		110—125 A	10 kA	10 kA	—	—
	3	15–60 A	10 kA	10 kA	10 kA	5 kA
		70–100 A	10 kA	10 kA	10 kA	—
QO-H, QOB-H	2	15–100 A	10 kA[3]	10 kA[3]	10 kA[3]	—
QO-VH	1	15–30 A	22 kA	22 kA	—	—
	2	15–200 A	22 kA	22 kA	—	—
	3	15–100 A	22 kA	22 kA	22 kA	—
QOB-VH	1	15–30 A	22 kA	22 kA	—	—
	2	15–125 A	22 kA	22 kA	—	—
	3	15–150 A	22 kA	22 kA	22 kA	—
QOH	1	40–125 A	42 kA	42 kA	—	—
QH, QHB	1	15–30 A	65 kA	65 kA	—	—
	2	15–30 A	65 kA	65 kA	—	—
	3	15–30 A	65 kA	65 kA	65 kA	—
QO-GFI, QOB-GFI	1	15–30 A	10 kA	—	—	—
	2	15–60 A	10 kA	10 kA	—	—
QO-VHGFI, QOB-GFI	1	15–30 A	22 kA	—	—	—
QO-AFI, QOB-AFI	1	15–30 A	10 kA	—	—	—
QO-CAFI, QOB-CAFI	1	15–30 A	10 kA	—	—	—
QO-VHCAFI, QOB-VHCAFI	1	15–30 A	22 kA	—	—	—
QO-EPD, QOB-EPD	1	15–30 A	10 kA	—	—	—
	2	15–60 A	10 kA	10 kA	—	—
QO-PL	1	15–30 A	10 kA	10 kA	10 kA	—
	2	15–30 A	10 kA	10 kA	10 kA	—
	3	15–30 A	10 kA	10 kA	10 kA	—

1 10 kA and 5 kA are 1Ø-3Ø.

2 DC ratings do not apply to circuit breakers rated 10 A.

3 UL Listed 5,000 AIR on 3Ø grounded B-Phase Delta system.

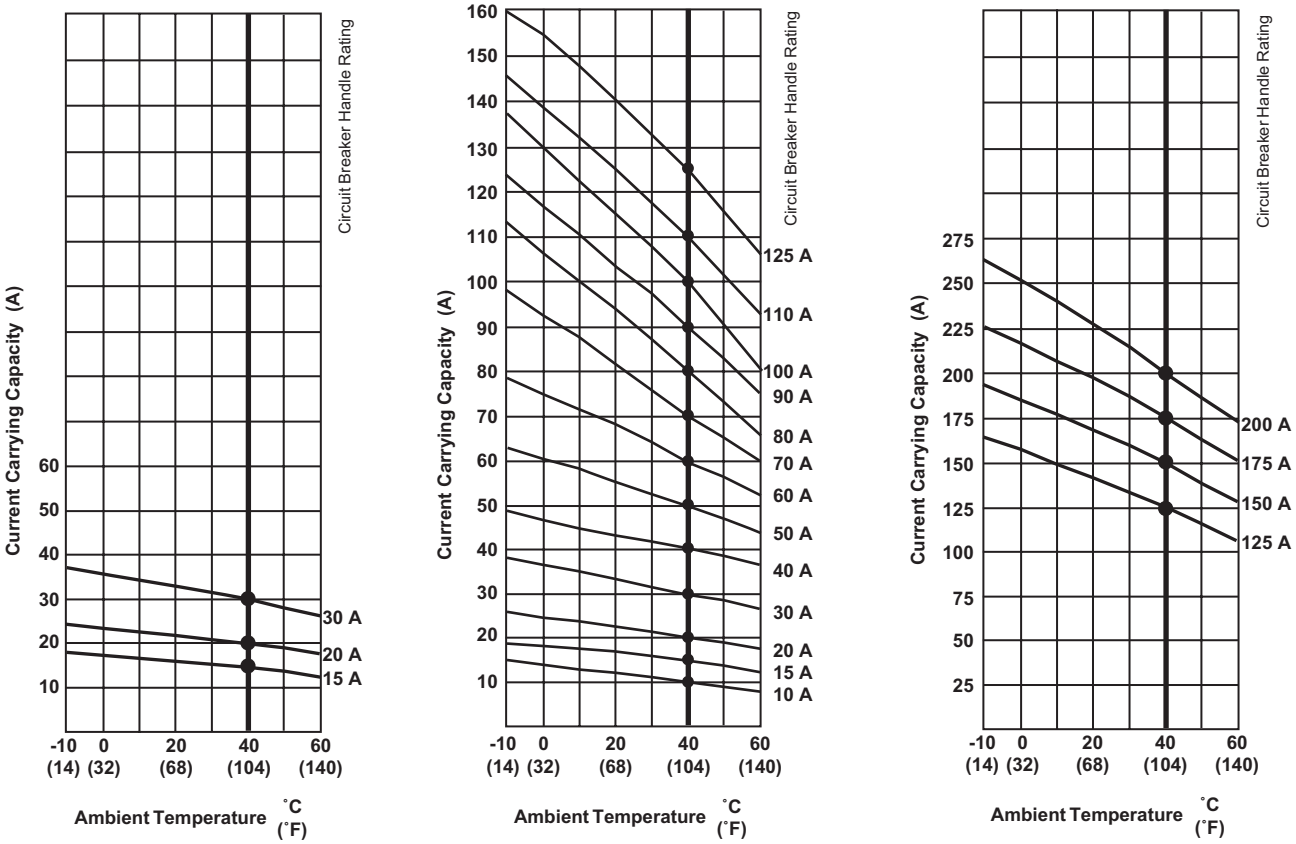
DC Voltage Rating

QO and QOB circuit breakers are available with a UL Listed 48 Vdc rating. See Table 1. Refer to Square D Data Bulletin 0601DB0401 for additional information on dc-rated circuit breakers.

Temperature Rating

To meet the requirements of Underwriters Laboratories Standard 489, molded case circuit breakers are designed, built, and calibrated for us on 60 Hz ac systems in 40°C (104°F) ambient temperature. When applied at ambient temperatures other than 40°C, the current-carrying capacity and/or trip charasteristics of the circuit breaker may vary.

Figure 1: Ambient Rerating Curves



QOT Circuit Breakers | QO, QOB Circuit Breakers | QE Circuit Breakers

IEC Rating

IEC rated QO circuit breakers are available. For further information contact the Field Sales office.

Terminology

HACR

HACR is a term used to designate circuit breakers which have been certified to be used on multi-motor and combination loads such as are found in heating, air conditioning and refrigeration equipment. QO circuit breakers meet the UL requirements for HACR circuit breakers and are suitable for group motor applications requiring HACR listing.

This means that QO and QOB circuit breakers meet the code requirements that HACR circuit breaker must be of the inverse time type and be approved for group installation. QO and QOB circuit breakers, except for GFI, AFI and EPD, are Listed with UL as HACR Type and are labeled accordingly.

Switching Duty (SWD) Circuit Breakers

QO and QOB circuit breakers are suitable for switching 120 Vac fluorescent lighting loads. The switching duty (SWD) listing applies only to one-pole 15 and 20 A circuit breakers rated at 347 Vac or less. The circuit breakers are subjected to specified temperature rise tests at predetermined periods during the endurance operations.

Terminations

The 10–30 A circuit breakers have pressure plate terminals suitable for single or two-wire terminations. Copper or aluminum conductors may be used as outlined in Table 2. QO-GFI 15–30 A and QO-AFI circuit breakers have pressure plate terminals suitable for single-wire terminations. These circuit breakers are suitable for use with 60°C or 75°C conductors.

The QO 35–200 A and all QO-PL and QOT tandem circuit breakers have box-type lugs suitable for single-wire terminations. These circuit breakers are suitable for use with 75°C conductors.

Table 2: Terminations

Circuit Breaker Types	Rating	Wire Size
QO, QOB, QO-VH, QOB-VH	10–30 A	(1) 14–8 AWG (1.5–3.3 mm^2) Al/Cu (2) 14–10 AWG (1.5–2.6 mm^2) Cu
	35–70 A	(1) 8–2 AWG (3.3–6.5 mm^2) Al/Cu
	80–125 A	(1) 4–2/0 AWG (5.2–9.3 mm^2) Al/Cu
QO, QOB, QO-VH	150–200 A	(1) 4 AWG–300 kcmil (5.2–50 mm^2) Al/Cu
QOB-VH	110–175 A	(1) 4 AWG–300 kcmil (5.2–50 mm^2) Al/Cu
QOT	15–20 A	(1) 12–8 AWG (2.0–3.3 mm^2) Al (1) 14–8 AWG (1.6–3.3 mm^2) Cu
QO-CAFI, QO-AFI, QO-GFI, QO-EPD, QOB-CAFI, QOB-AFI, QOB-GFI, QOB-EPD	15–30 A	(1) 12–8 AWG (2.0–3.3 mm^2) Al (1) 14–8 AWG (1.6–3.3 mm^2) Cu
QO-GFI, QO-EPD, QOB-GFI, QOB-EPD	40–60 A	(1) 12–4 AWG (2.0–4.1 mm^2) Al (1) 14–6 AWG (1.6–4.1 mm^2) Cu
QO-PL	10–60 A	(1) 12–2 AWG (2.0–6.5 mm^2) Al

Special Application Circuit Breakers

There are several special application circuit breakers in the QO family:

- QO-HM and QOB-HM High-Magnetic Circuit Breakers
- QO-HID and QOB-HID Circuit Breakers
- QO and QOB Miniature Switches
- QOK and QOBK Key-Operated Circuit Breakers
- QO-GFI and QOB-GFI Qwik-Gard® Circuit Breakers
- QO-EPD and QOB-EPD Equipment Protection Devices
- QO-SWN and QOB-SWN Switch Neutral Circuit Breakers
- QOT Tandem Circuit Breakers
- QO-PL and QOB-PL Powerlink® Circuit Breakers
- QO-AFI and QOB-AFI Branch Feeder Arc-Fault Circuit Interrupters (AFCI)
- QO-CAFI, QOB-CAFI Combination Arc-Fault Circuit Interrupters (AFCI)

This following sections describe the special application circuit breakers and provides application information for their use.

QO-HM and QOB-HM High Magnetic Circuit Breakers

QO-HM and QOB-HM high-magnetic circuit breakers are recommended for area lighting (such as athletic fields, parking lots, and outdoor signs), when using lamps of inherent high inrush current, individual dimmer applications or other applications where high inrush currents exceed standard tripping conditions. These circuit breakers are available in one-pole 15 and 20 A ratings only. QO-HM and QOB-HM circuit breakers are physically interchangeable with standard QO and QOB circuit breakers and accommodate the complete range of QO accessories.

QO-HM and QOB-HM circuit breakers are manufactured with the magnetic trip point calibrated at a much higher level than standard QO and QOB circuit beakers, as shown in Table 3.

Table 3: QO-HM and QOB-HM Circuit Breaker Magnetic Hold Levels

Continuous Current Rating	Maximum Full Cycle Magnetic Hold Level
15 A	315–525 A
20 A	322–537 A

QO-HID and QOB-HID High Intensity Discharge Circuit Breakers

QO-HID and QOB-HID circuit breakers are for use in high intensity discharge (HID) lighting systems, such as systems using mercury vapor, metal halide or high-pressure sodium lighting units. These circuit breakers are designed to handle the high inductive loads, harmonic currents and cycling which are inherent in HID lighting systems. QO-HID and QOB-HID circuit breakers are physically interchangeable with standard QO circuit breakers and accommodate the complete range of QO accessories.

QO-HID and QOB-HID circuit breakers are manufactured with larger contacts than standard QO and QOB circuit breakers to allow switching of high inductive loads. They also have magnetic characteristics similar to QO-HM and QOB-HM high-magnetic circuit breakers to allow the circuit breaker to hold in against the high starting inrush currents which are typical in HID lighting systems.

QO and QOB Miniature Switches

Miniature switches are intended for use as disconnecting devices only. They provide no overcurrent protection. QO and QOB switches are UL Certified for use on circuits capable of delivering not more than 10 kA when protected by an equivalent rated circuit breaker or fuse. These switches are available in 60 and 100 A rating.

QO and QOB switches are available with auxiliary switches only. (Shunt trip and bell alarm electrical accessories are not available on QO and QOB miniature switches.) QO and QOB switches are available with the complete range of handle accessories.

QOK and QOBK Key-Operated Circuit Breakers

1P QOK
Circuit Breaker

Key-operated QOK and QOBK circuit breakers provide an alternative means for turning a circuit breaker ON or OFF, as well as for resetting a tripped circuit breaker. The circuit breaker is turned on, off or reset with a special key included with the circuit breaker. Key-operated circuit breakers are available in one-pole construction only and can be mounted in any one-pole space which will accept a standard QO circuit breaker. These circuit breakers are available in 10–30 A ratings, with interrupting ratings of 10 kA at 120 Vac.

Replacement keys are available separately. Factory-installed or field-installable accessories are not available on key-operated circuit breakers.

1P QO-GFI
Circuit Breaker

2P QO-GFI
Circuit Breaker

QO-GFI and QOB-GFI Qwik-Gard® Ground-Fault Circuit Interrupters

Qwik-Gard® Ground-Fault Circuit Interrupters offer a means of providing ground-fault protection for people. Qwik-Gard “people protection” ground-fault circuit interrupters are built as Class A devices in accordance with UL Standard 489 and CSA C22.2 #144 for ground-fault circuit interrupters (GFCIs). Class A devices must trip at 6 milliamperes of ground-fault current and above, and hold below 4 milliamperes of ground-fault current.

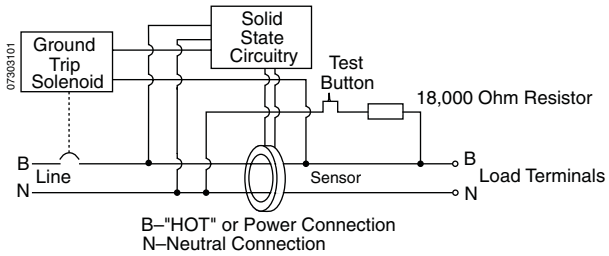
Qwik-Gard GFCIs provide the same branch circuit protection as standard QO circuit breakers. They are longer than standard QO circuit breakers, and thus require more gutter space. All QO electrical accessories except shunt trip and all QO mechanical accessories are available for QO-GFI and QOB-GFI circuit breakers.

Qwik-Gard circuit breakers are UL Listed and CSA Certified and available in both one- and two-pole constructions.

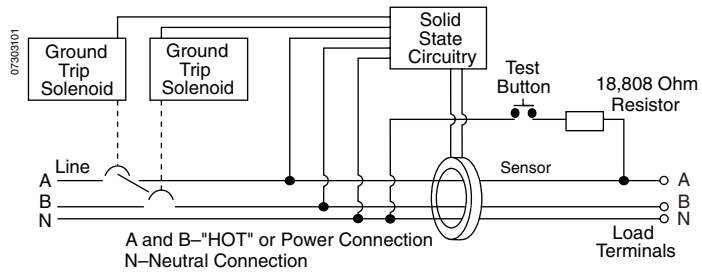
Qwik-Gard Ground-Fault Circuit Interrupter Operation

The ground-fault sensor in a Qwik-Gard GFCI continuously monitors the current flow in the load and neutral conductors. The sensor compares the current flow in all directions. If the current flowing back to the source is less than the current flowing out to the load, a ground fault exists. When the difference in current flow exceeds 6 milliamperes, the sensor sends a signal to trip the GFCI. The trip will be indicated by the Visi-Trip® indicator and the operating handle will move to the center tripped position.

Qwik-Gard Class A GFCIs include a self-contained means of testing the ground-fault circuitry. If the GFCI is connected correctly, with the pigtail connected to the neutral assembly in the load center or panelboard, pressing the test button will trip the GFCI and show a trip indication. UL requires that GFCIs must be operational at 85% of the rated voltage.



One-Pole Qwik-Gard Circuit Breaker



Two-Pole Qwik-Gard Circuit Breaker

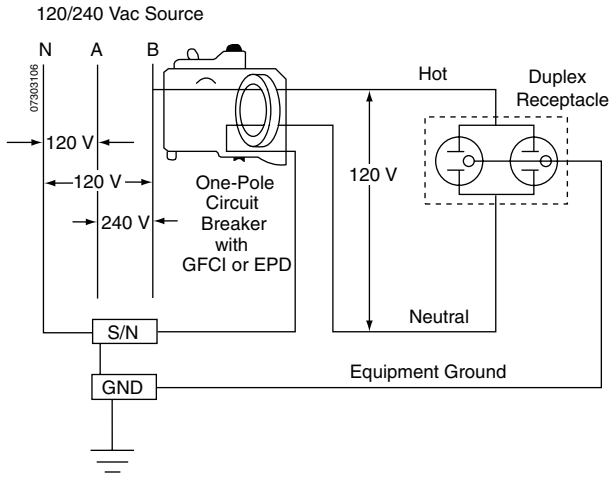
Proper Application of Qwik-Gard GFCIs

- Do not connect to swimming pool equipment installed before adoption of the 1965 National Electric Code
- Do not connect to electrical ranges or clothes dryers whose frames are grounded by a connection to the grounded circuit conductor.
- Do not use as a main circuit breaker in a panelboard or in reverse connected (backfed) applications.
- Do not megger, high-voltage or hi-pot test. Any voltage in excess of 240 Vac will damage the GFCI electronics so that the circuit breaker will not protect against low-level ground faults.
- Must be located no more than 250 ft. (76 m) from the load being served.
- RequiresS the same mounting space as standard QO circuit breakers.

One-Pole Qwik-Gard Ground-Fault Circuit Interrupters

One-pole Qwik-Gard GFCIs must be installed on independent circuits. Circuits which have a neutral common to more than one panel circuit conductor cannot be protected against ground faults by a one-pole GFCI because the current returning to the source through the neutral cannot be effectively split to prevent the Qwik-Gard GFCI from tripping under normal use.

Figure 2: Typical One-Pole Qwik-Gard GFCI Wiring

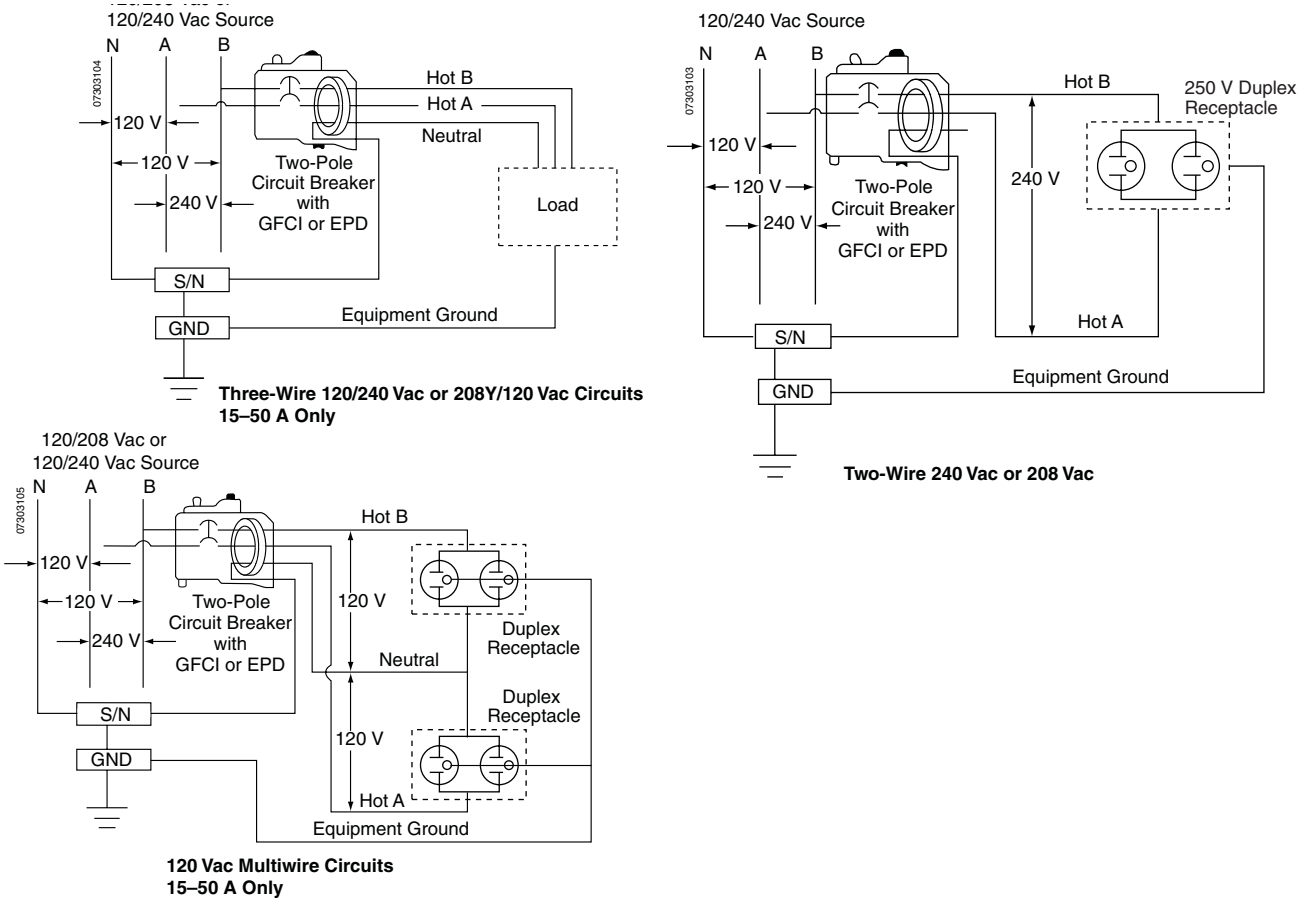


Two-Pole Qwik-Gard GFCIs

Two-pole Qwik-Gard GFCIs can be installed on a 120/240 Vac 1Ø3W system, the 120/240 Vac portion of a 120/240 Vac 3Ø4W system, or two phases and neutral of a 208Y/120 Vac 3Ø4W system. Regardless of the application, connections must be made to two “hot” busses and the panel neutral assembly. When installed on these systems, protection is provided for two-wire 240 Vac or 208 Vac circuit, three-wire 120/240 Vac or 208Y/120 Vac circuits and 120 Vac multiwire circuits.

The 60 A QO260GFI and QOB260GFI GFCIs are limited for use on 208 Vac and 240 Vac two-wire systems. These GFCIs require the panel neutral connection to provide the 120 Vac power necessary for testing the ground-fault circuitry.

Figure 3: Typical Two-Pole Qwik-Gard GFCI Wiring



QO-EPD and QOB-EPD Equipment Protection Devices

QO-EPD and QOB-EPD circuit breakers are one- and two-pole thermal-magnetic circuit breakers with integral **equipment** ground-fault protection. These circuit breakers are rated for use on 120/240 Vac and 120/208 Vac electrical systems to provide overcurrent protection, short-circuit protections and equipment ground-fault protection.

EPD circuit breakers are built in accordance with UL Standard 489. QO-EPD and QOB-EPD circuit breakers are not designed to protect people from the hazards of electrical shock. The ground-fault protection level is 30 milliamperes to protect electrical equipment such as heat trace tape.

QO-EPD and QOB-EPD circuit breakers include a self-contained means of testing the ground-fault circuitry. If the circuit breaker is connected correctly, with the pigtail connected to the neutral assembly in the load center or panelboard, pressing the test button will trip the circuit breaker and show a trip indication. EPD circuit breakers must be operational at 85% of the rated voltage.

EPD circuit breakers provide the same branch circuit protection as standard QO and QOB circuit breakers. They are longer than standard QO circuit breakers, and thus require more gutter space. All QO electrical accessories except shunt trip and all QO mechanical accessories are available for QO-EPD and QOB-EPD circuit breakers.

QO-SWN and QOB-SWN Switch Neutral Circuit Breakers

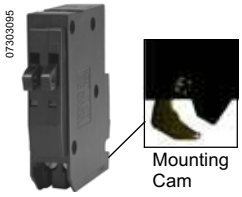
2 Wire and 3 Wire
QO-SWN Circuit Breaker

The QO-SWN and QOB-SWN switch neutral circuit breakers are designed to protect gas pump assemblies.These circuit breakers have provisions for switching the grounded conductor as outlined in the National Electrical Code.

The QO-SWN and QOB-SWN circuit breakers are designed to simultaneously open all grounded and ungrounded conductors. All branch circuit wiring is terminated on the load side of the circuit breaker. The panel neutral connection is made using the pigtail lead built into the circuit breaker. Two-wire circuit breakers require two pole spaces; three-wire circuit breaker require three pole spaces.

QO-SWN and QOB-SWN circuit breakers are available with the complete range of QO accessories.

QOT Tandem Circuit Breakers



1P QOT Tandem
Circuit Breaker

QOT tandem circuit breakers are manufactured so two one-pole, thermal-magnetic circuit breakers occupy only one QO pole space. They are used in applications where circuit loading is light and/or noncontinuous, as in residential applications. QOT circuit breakers are available in 15/15 ampere, 15/20 ampere and 20/20 ampere construction.

QOT circuit breakers have a mounting cam to limit their installation in QO load centers to only those positions having a mounting rail slot. This physically limits the total number of circuit beakers permitted in the panelboard for safe operation.

Each one-pole QOT circuit breaker provides individual switching and tripping action. Individual trip, two-pole circuit with common switching may be assembled by using a handle tie (kit QOTHT) between two adjacent QOT circuit breakers.

QO-PL and QOB-PL Powerlink® Remotely Operated CIrcuit Breakers

1P QO-PL
Circuit Breaker

2P QO-PL
Circuit Breaker

QOPLPS
Power Supply

QO-PL and QOB-PL circuit breakers combine overcurrent and short-circuit protection with remote switching. These circuit breakers are ideal for lighting loads or wherever power switching is required.

These circuit breakers are designed to be used with many types of control devices, from simple push buttons to programmable controllers and energy management systems. QO-PL and QOB-PL circuit breakers have all of the features of standard QO circuit breakers including Visi-Trip®, plus the added ability to be remotely switched on and off. They are rated for a minimum of 30,000 remote operations.

Remote switching is accomplished using a 24 Vdc power supply. Square D offers QOPLPS and QOBPLPS power supplies. These power supplies mount directly in any QO load center or NQ or NQOD panelboard just like a QO circuit breaker. They provide power to switch up to three QO-PL or QOB-PL circuit breakers simultaneously. A minimum of two seconds recharge time must be allowed between operation for non-simultaneous operations of circuit breakers being supplied by a power supply.

Table 4: Maximum Circuit Breakers per Power Supply

Voltage	Maximum QO-PL and QOB-PL Circuit Breakers Recommended per QOPLPS[1]
208Y/120 Vac	2
240 Vac	3

1 At ambient temperature of -25° through 40°C.

QO Arc-Fault Circuit Interrupter Circuit Breakers

1P QO-AFI
Circuit Breaker

QO arc-fault circuit interrupters (AFCI) quickly detects a wide range of arc-fault conditions, recognizes the nature and specific wave-form of an arc fault and trips the circuit breaker. Traditional circuit breakers and fuses are designed to detect overloads and short circuits. Arc-fault circuit breakers are designed to detect overloads, short circuits and arc faults.

An arc-fault circuit breaker opens the circuit and stops the arcing and high intensity heat before a fire is likely to ignite. It is designed with the same quick-open and Visi-Trip® features and reliability of other QO circuit breaker products, fits into most existing Square D load centers, and can generally be used as a direct replacement for a standard Square D circuit breakers. The AFCI overall size is larger than an equivalent QO circuit breaker.

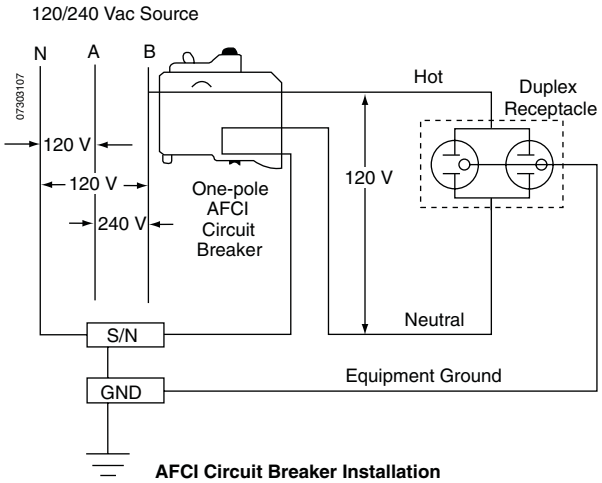
Arc-fault circuit breakers:

- Have special microprocessor-based arc identification to differentiate necessary operational arcs (associated with loads such as electric motors, switches and receptacles) from actual arc faults which can cause damage and fires.
- Differentiate true arc faults from chopped wave-forms associated with switched-mode power supplies on electrical appliances, computers and lamp dimmers.

QO AFCI's are available as Branch Feeder Type and Combination Type. Branch AFCI circuit breakers provide arc-fault protection of the branch circuit wiring. Combination AFCI circuit breakers provide arc-fault protection for the branch circuit and also provides protection of cord sets and power-supply cords.

The AFCI type required for an installation is generally governed by the installation codes which are adopted by local inspection authorities. Consult local building codes and inspection authorities to determine which type is required in your area.

Figure 4: Typical AFCI Circuit Breaker Installation



AFCI Circuit Breaker Installation

Accessories

Most QO and QOB circuit breakers can be supplied with electrical accessories factory-installed on one-, two- or three-pole circuit breakers. Electrical accessories are not available on AFCI circuit breakers.

Handle accessories are also available for field installation on QO and QOB circuit breakers. All field-installed handle accessories must be ordered separately.

Electrical Accessories

Only one electrical accessory can be installed per circuit breaker, and are factory-installed only. All electrical accessories occupy one additional pole space. The proper suffix number must be added to the circuit breaker catalog number to order an accessory. No field modification or field installation is possible on electrical accessories.

Table 5: Factory-Installed Electrical Accessory Suffix Numbers

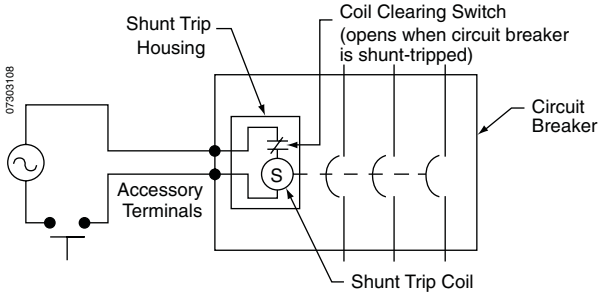
Accessory	Description	Voltage	Coil Burden	Max. Load	Catalog Suffix
Shunt Trip	Trips the circuit breaker from a remote location by means of a trip coil energized from a separate circuit. All shunt trips will operate at 75% or more of rated voltage. • For use with momentary or maintained push button. • Not available on QO-GF or QO-EPD circuit breakers. • Shunt trip terminals accept (2) 14–12 AWG Cu leads.	12 Vac/dc 24 Vac/dc	60 VA 168 VA	—	1042
		120 Vac 208 Vac 240 Vac	72 VA 228 VA 288 VA	—	1021
Auxiliary Switch “A” Contact	Circuit breaker open—One contact only, opens when circuit breaker is off or tripped. 5 A max at 120 Vac.	120 Vac	—	5 A	1200
Auxiliary Switch “B” Contact	Circuit breaker open—One contact only, closed when circuit breaker is off or tripped. 5 A max at 120 Vac.	120 Vac	—	5 A	1201
Alarm Switch	Used with control circuits and is actuated only when the circuit breaker has tripped. Standard construction includes a normally-open contact. • Alarm switch terminals accept (2) 14–12 AWG Cu leads.	120 Vac	—	5 A	2100

Shunt Trip

The shunt trip is used to trip the circuit breaker from a remote location by using a tripping coil energized from a separate circuit. When energized by a push-button or other pilot device, the shunt trip caused the circuit breaker to trip. The handle moves to the tripped position and the Visi-Trip® indicator appears. The trip coil has a coil clearing contact to break the coil circuit when the circuit breaker trips.

Shunt trips are available for QO and QOB circuit breakers only with standard control voltage ratings up to 240 Vac or 24 Vdc. (Shunt trips are not available on QO and QOB GFCI, AFCI, EPD and miniature switches.) Shunt trips operate at 75% or more of rated voltage.

Figure 5: Shunt Trip Wiring Diagram

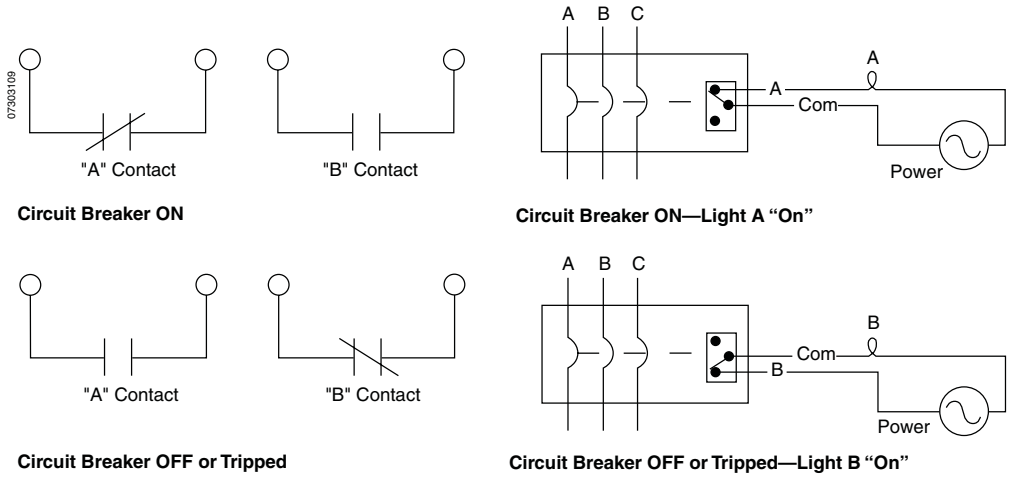


Auxiliary Switch

The auxiliary switch accessory monitors the circuit breaker contact status and provides a remote signal indicating whether the circuit breaker contacts are open or closed. When the circuit breaker is off or tripped, the auxiliary switch with an “A” contact is open and the auxiliary switch with a “B” contact is closed. When the circuit breaker is on, the auxiliary switch with an “A” contact is closed and the auxiliary switch with a “B” contact is open.

Auxiliary switches are available for QO and QOB circuit breakers and miniature switches. (Auxiliary switches are not available on QO and QOB AFI and CAFI products.)

Figure 6: Auxiliary Switch Wiring Diagrams



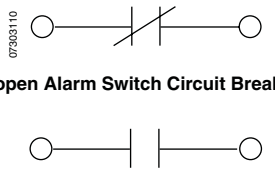
Alarm Switch

The alarm switch accessory monitors the circuit breaker trip status and is used to provide a remote warning signal indicating that the circuit breaker has tripped. This signal can be used in conjunction with a horn, pilot light, or some other indicator.

The contact on the standard alarm switch is open when the circuit breaker is in the off or on position and is closed when the circuit breaker is in the tripped position.

Alarm switches are actuated when the circuit breaker has tripped as a result of an overload, short circuit or shunt trip operation. Alarm switches are available for QO and QOB circuit breakers and miniature switches. (Alarm switches are not available on QO and QOB AFI and CAFI products.)

Figure 7: Alarm Switch Wiring Diagram



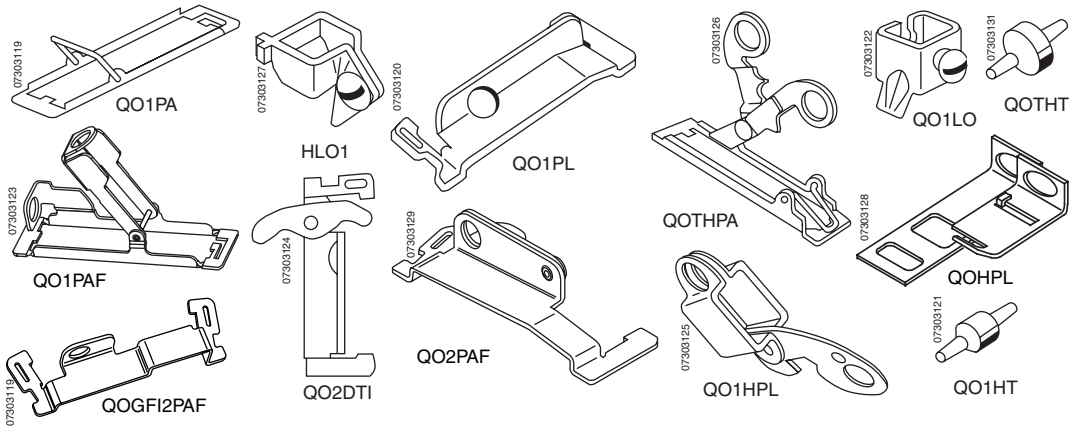
Handle Accessories

Field-installed handle accessories are also available.

Table 6: Field-Installable Handle Accessories

Accessory	Description	Catalog Number
Handle Tie	Converts any two adjacent 120/240 Vac 1P QO circuit breakers to independent trip 2P.	QO1HT
	Converts any two adjacent 120/240 Vac 1P side-by-side QOT circuit breakers to independent trip 2P.	QOTHT
Handle Clamp	Clamp for holding QO 1P handle in ON or OFF position.	QO1LO
	Clamp for holding QO or Q1 (1P, 2P, or 3P) circuit breaker handle in ON or OFF position.	HLO1
Handle Padlock Attachment for Padlocking in ON or OFF Position	Loose attachment for padlocking 1P QO circuit breaker in ON or OFF position.	QOHPL
	Fixed attachment for padlocking 1P QO circuit breaker in ON or OFF position.	QO1PA
	Attachment for padlocking 1P side-by-side QOT circuit breaker in ON or OFF position.	QOTHPA
	Fixed attachment for padlocking 2P QO-GFI circuit breaker in ON or OFF position.	GF12PA
	Loose attachment for padlocking 2P and 3P standard QO circuit breaker in ON or OFF position.	QO1HPL
	Fixed attachment for padlocking 2P and 3P standard QO circuit breaker in ON or OFF position.	QO1PL
Handle Padlock Attachment for Padlocking in OFF Position	Fixed attachment for padlocking 1P QO circuit breaker in OFF position only.	QO1PAF
	Fixed attachment for padlocking 2P and 3P QO circuit breakers in OFF position only.	QO2PAF
	Fixed attachment for padlocking 1P QO-GFI, QO-AFCI and QO-EPD circuit breakers in OFF position only.	QOGFI1PAF
	Fixed attachment for padlocking 2P QO-GFI and QO-EPD circuit breakers in OFF position only.	QOGFI12PAF
Sub-Feed Lugs	60 A 2P plug-on—2 spaces required (6–2 Al/Cu)	QO60SL
	125 A 2P plug-on—2 spaces required (12–2/0 Al/Cu)	QO2125SL
	225 A 2P plug-on—4 spaces required (4–300 Al/Cu)	QO2225SL
	125 A 3P plug-on—3 spaces required (12–2/0 Al/Cu)	QO3125SL
Mechanical Interlock Attachment	For interlocking the handles of two 2P or one 2P and one 1P QO and Q1 circuit breaker mounted side-by-side so that only one circuit breaker can be ON at a time (Not for QOU)	QO2DTI
Mechanical Interlock with Retaining Kit	For securing two adjacent back-fed circuit breakers in dual power supply applications. Can be used with two 2P or one 2P and one 1P QO circuit breaker in QO816L100 load center.	QO2DTIM

Figure 8: Handle Accessories



Handle Tie

The handle tie accessory converts any two adjacent one-pole QO circuit breakers to one independent trip multi-pole circuit breaker.

Handle Lock-Off (Clamp)

The handle lock-off accessories fasten the handle in the ON or OFF position. These handle lock-offs cannot be padlocked.

Handle Padlock Attachment

The handle padlock attachment allows padlocking the circuit breaker handles in either the ON or OFF position or in the OFF only position. Handle padlock attachments are available in two styles: removable and fixed.

The removable style is intended to be a temporary device. Once work on the circuit breaker has been completed, the attachment can be removed from the circuit breaker to resume normal operation.

The fixed style is intended to be a permanent device. Once the work on the circuit has been completed, the padlock can be removed for the circuit breaker to resume normal operation, but the attachment stays in place.

Mechanical Interlock Attachment

The mechanical interlock attachment locks the handles of two adjacent circuit breakers to prevent both circuit breakers from being on at the same time. Both circuit breakers may be switched to the off position with the mechanical interlock in place.

Mechanical Interlock Attachment with Retaining Kit

The mechanical interlock attachment locks the handles of two adjacent back-fed circuit breakers in dual power supply applications.

Trip Curves

The tripping characteristics of QO and QOB circuit breakers can be represented by a characteristic tripping curve that plots tripping time versus current level. The curve shows the amount of time required by a circuit breaker to trip at a given overcurrent level. The curve has a performance band that is bound by a minimum and a maximum value of clearing time. Total clearing time is the sum of the sensing time, unlatching time, mechanical operating time and arcing time of the circuit breaker. For currents in excess of 135% of the circuit breaker rating at rated ambient temperature (40°C), the circuit breaker will automatically open the circuit within limits specified by the band.

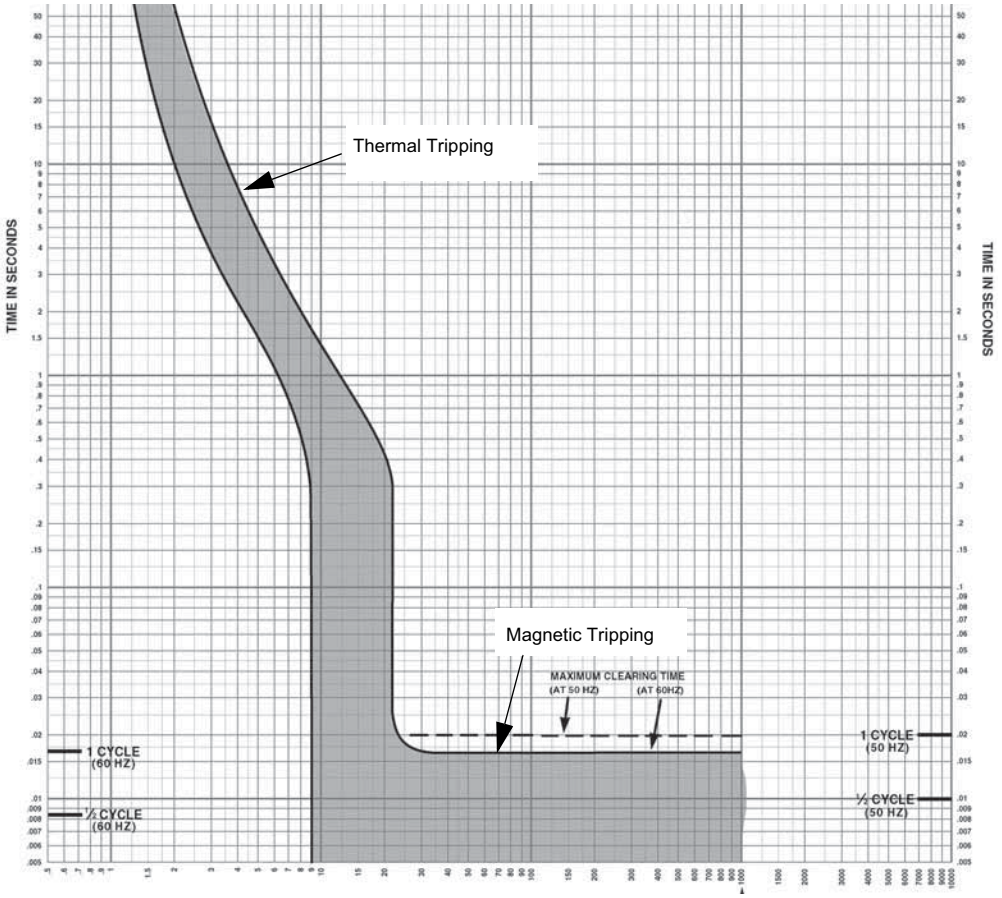
Thermal Tripping Characteristics

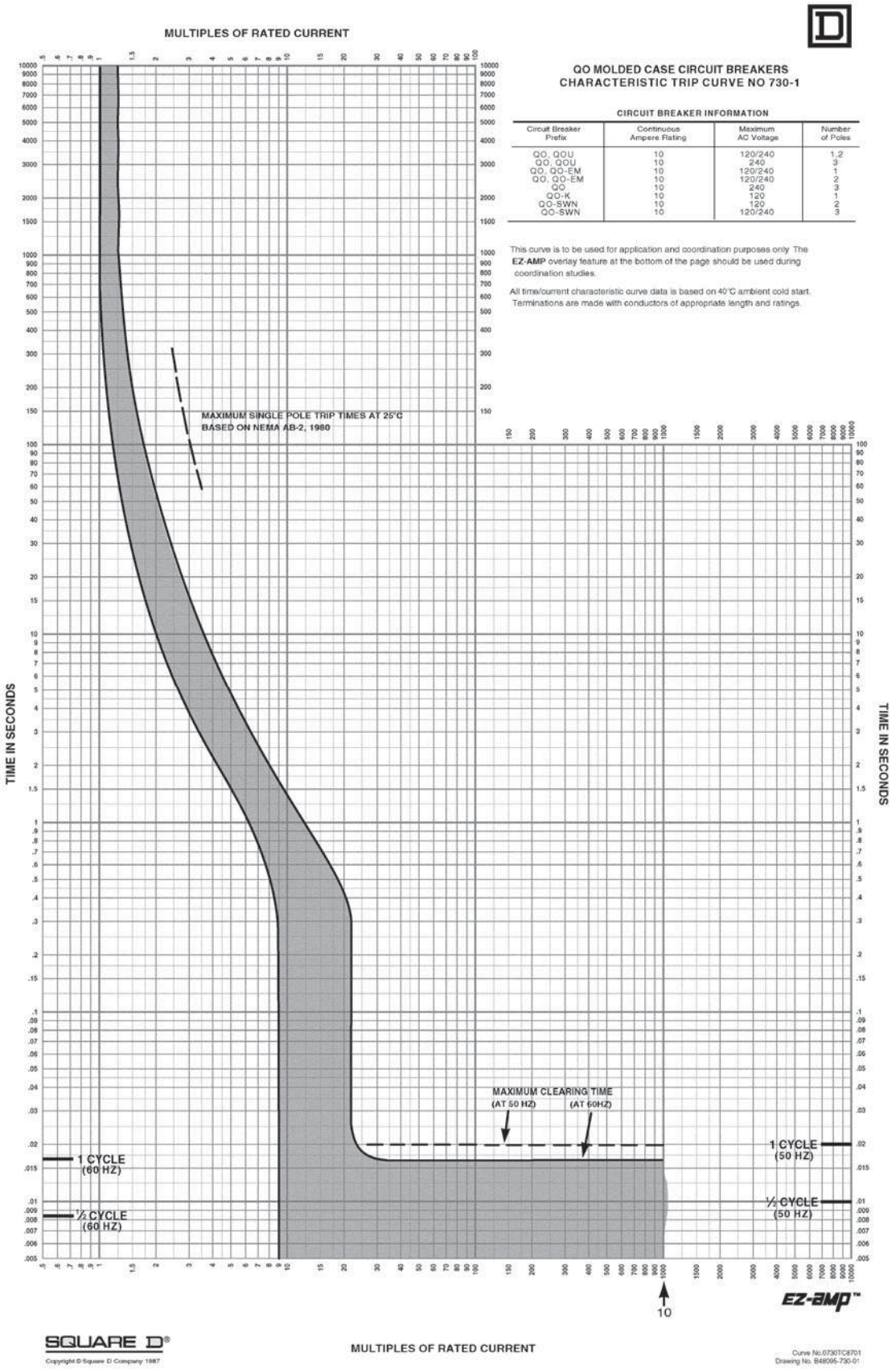
The upper left portion of each trip curve displays the thermal response of the circuit breaker. On low-fault current levels, up to the magnetic tripping level, thermal tripping occurs when a bimetal in the circuit breaker responds to heat associated with the overcurrent. The bimetal deflects, unlatching the mechanism and mechanically causing the circuit breaker to trip and open the circuit. The greater the overcurrent, the faster the circuit breaker will operate to clear the circuit.

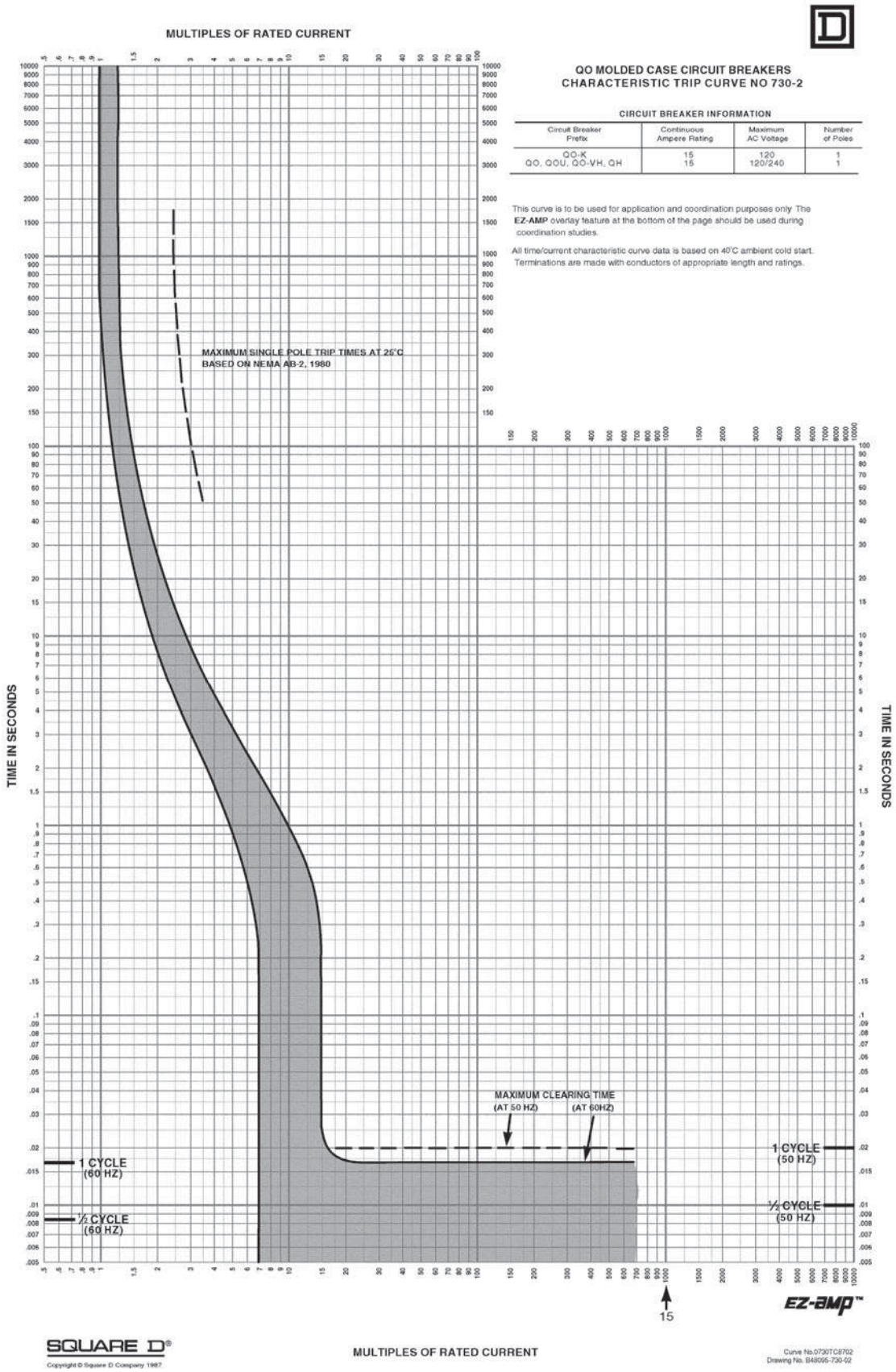
Magnetic Tripping Characteristics

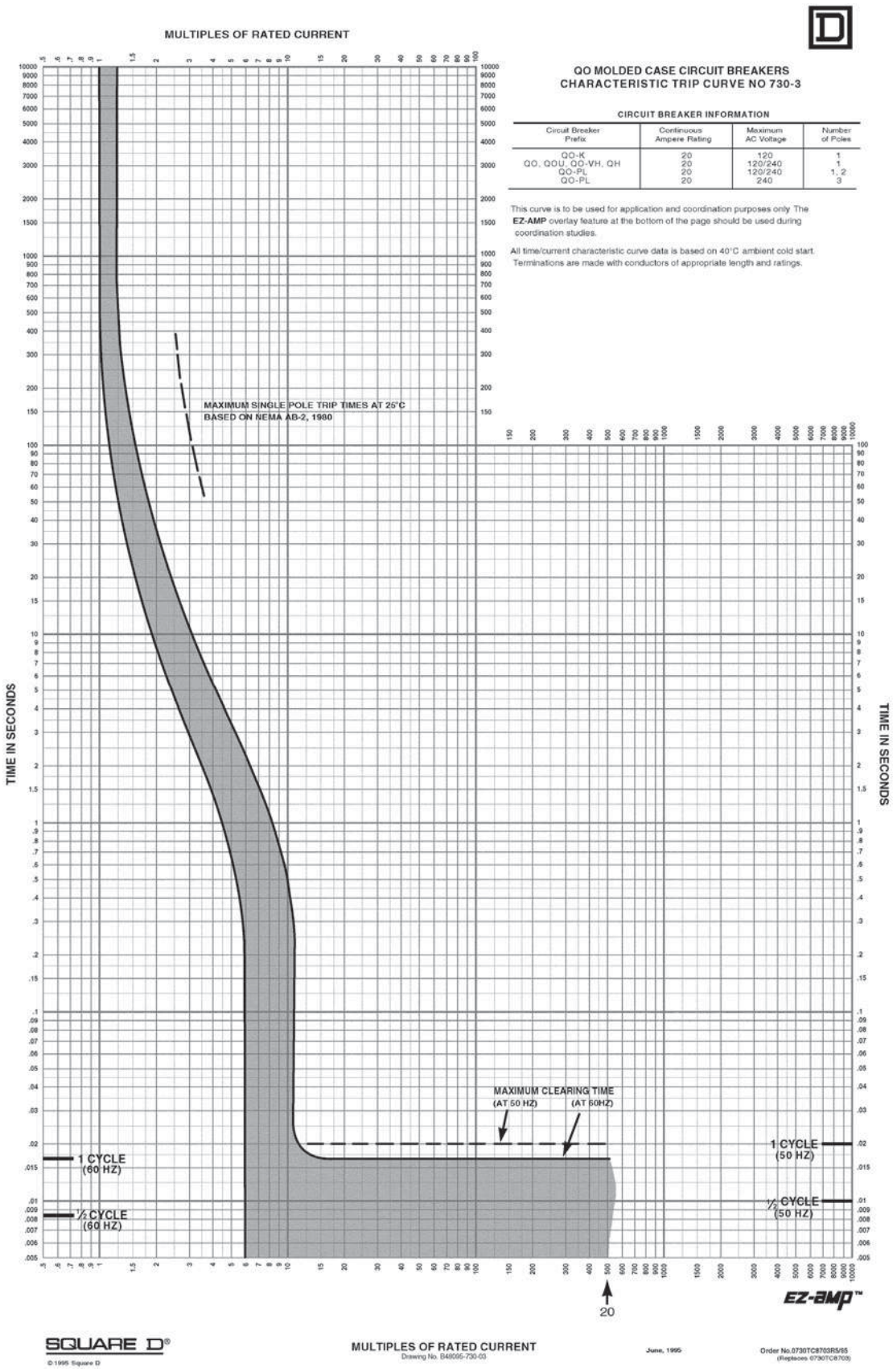
The lower right portion of each trip curve displays the magnetic tripping response of the circuit breaker. This takes place when overcurrents of sufficient magnitude operate in an internal magnetic armature which unlatches the mechanism. Magnetic tripping occurs with no intentional time delay.

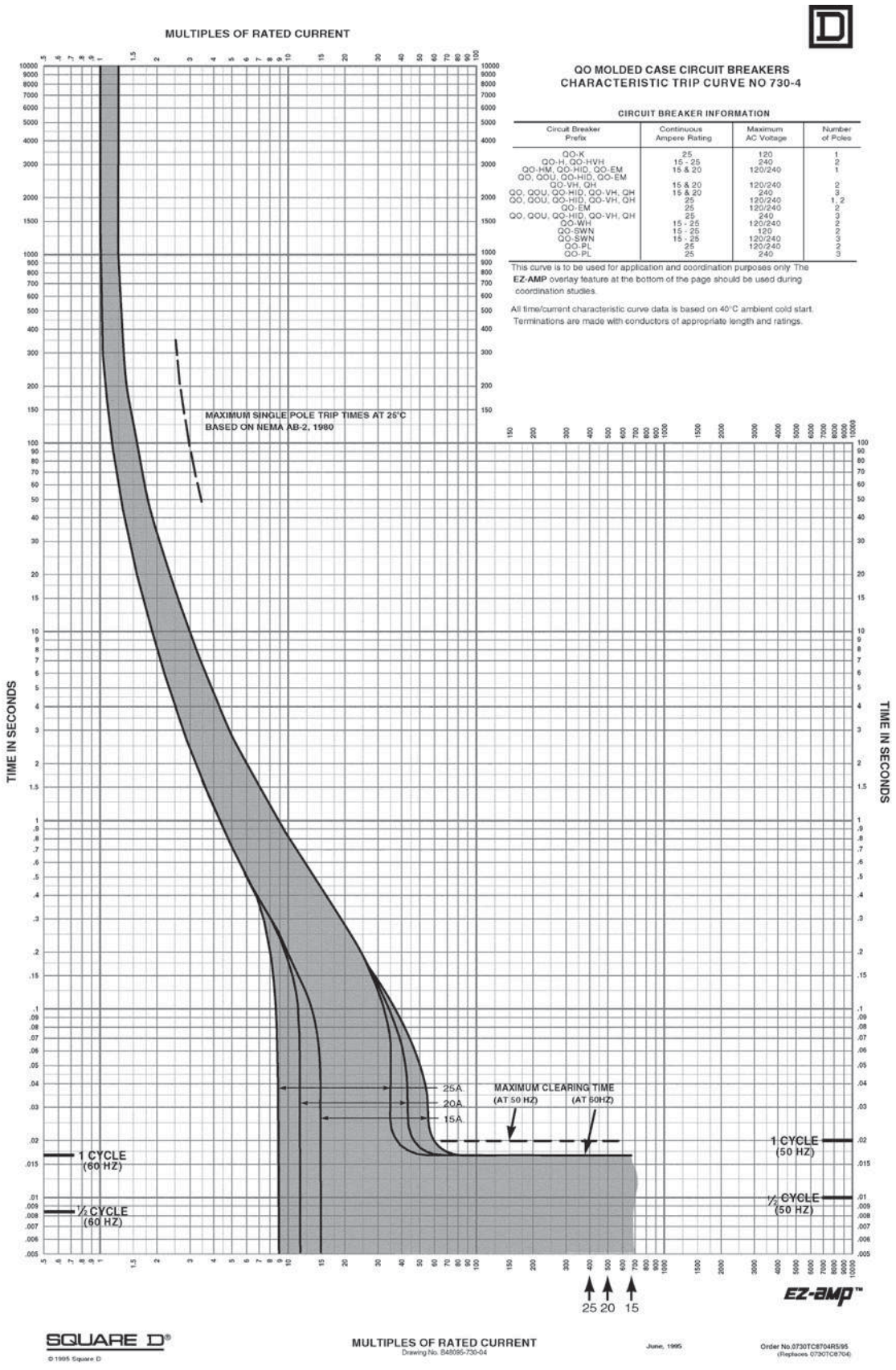
Figure 9: Typical QO Trip Curve

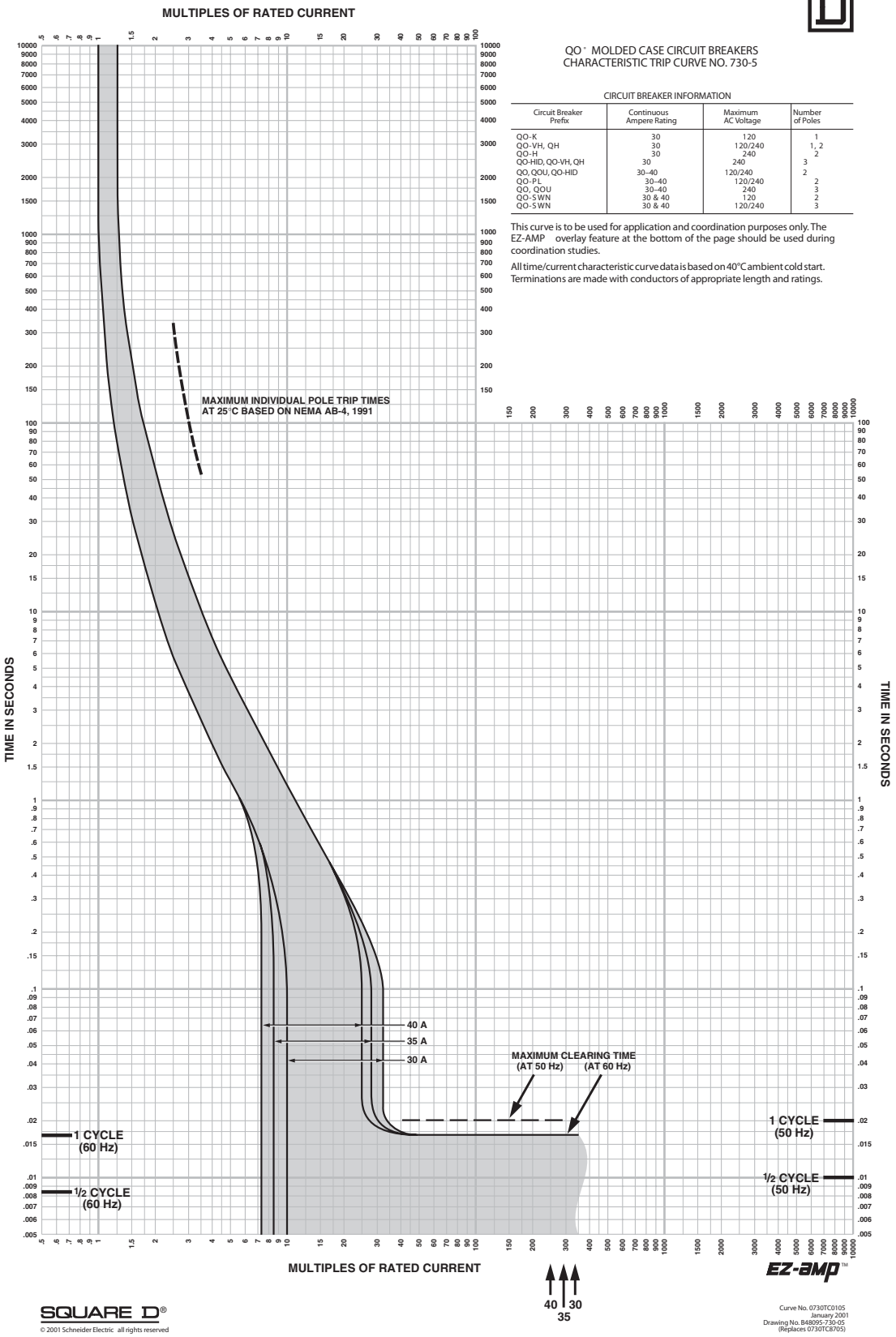












QO® MOLDED CASE CIRCUIT BREAKERS
CHARACTERISTIC TRIP CURVE NO. 730-5

CIRCUIT BREAKER INFORMATION

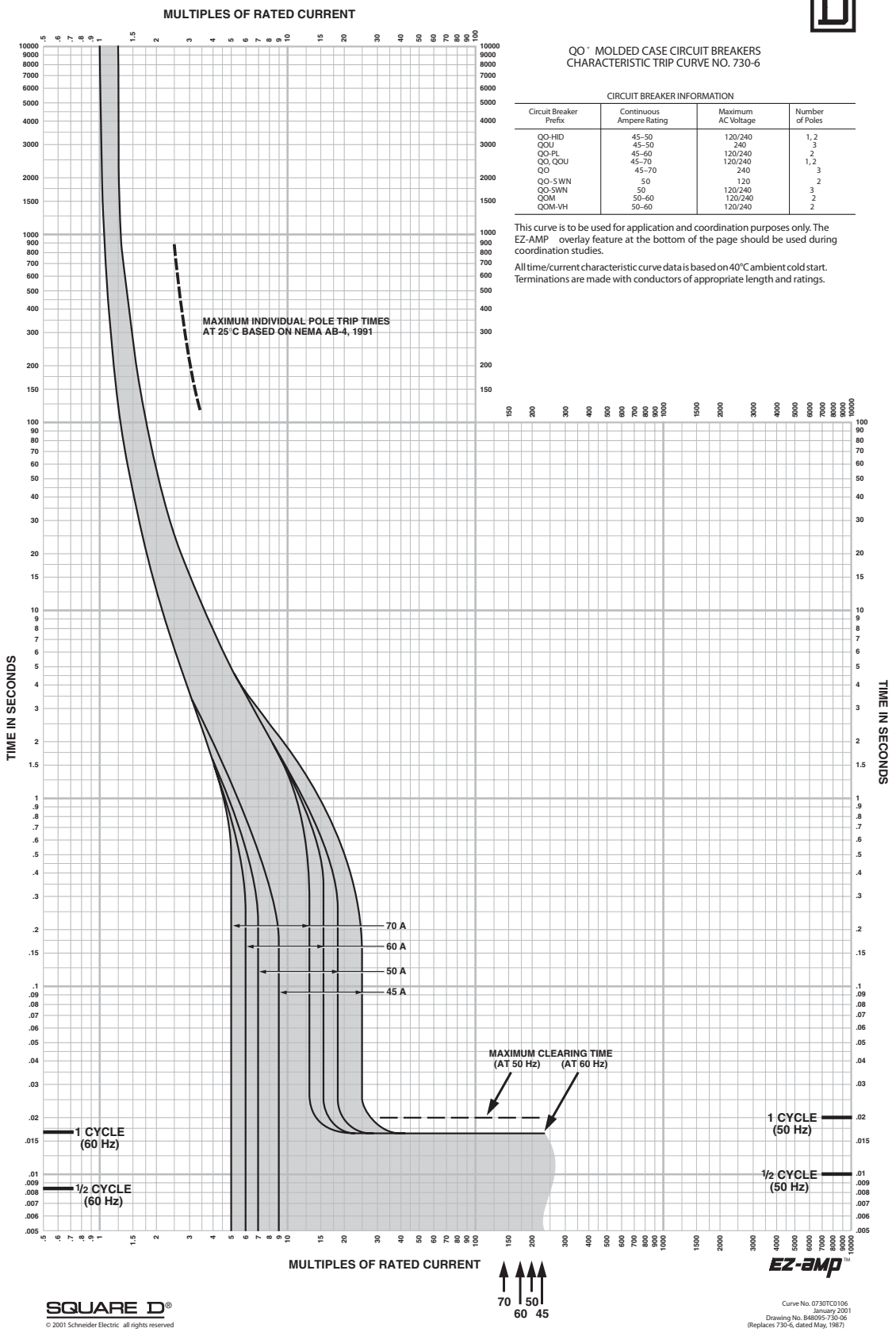
Circuit Breaker Prefix	Continuous Ampere Rating	Maximum AC Voltage	Number of Poles
QO-K	30	120	1
QO-VH, QH	30	120/240	1, 2
QO-H	30	240	2
QO-HID, QO-VH, QH	30	240	3
QO, QOU, QO-HID	30–40	120/240	2
QO-PL	30–40	120/240	2
QO, QOU	30–40	240	3
QO-SWN	30 & 40	120	2
QO-SWN	30 & 40	120/240	3

This curve is to be used for application and coordination purposes only. The EZ-AMP overlay feature at the bottom of the page should be used during coordination studies.

All time/current characteristic curve data is based on 40°C ambient cold start. Terminations are made with conductors of appropriate length and ratings.

SQUARE D®

Curve No. 0730TC0105
January 2001
Drawing No. B48095-730-05
(Replaces 0730TC8705)



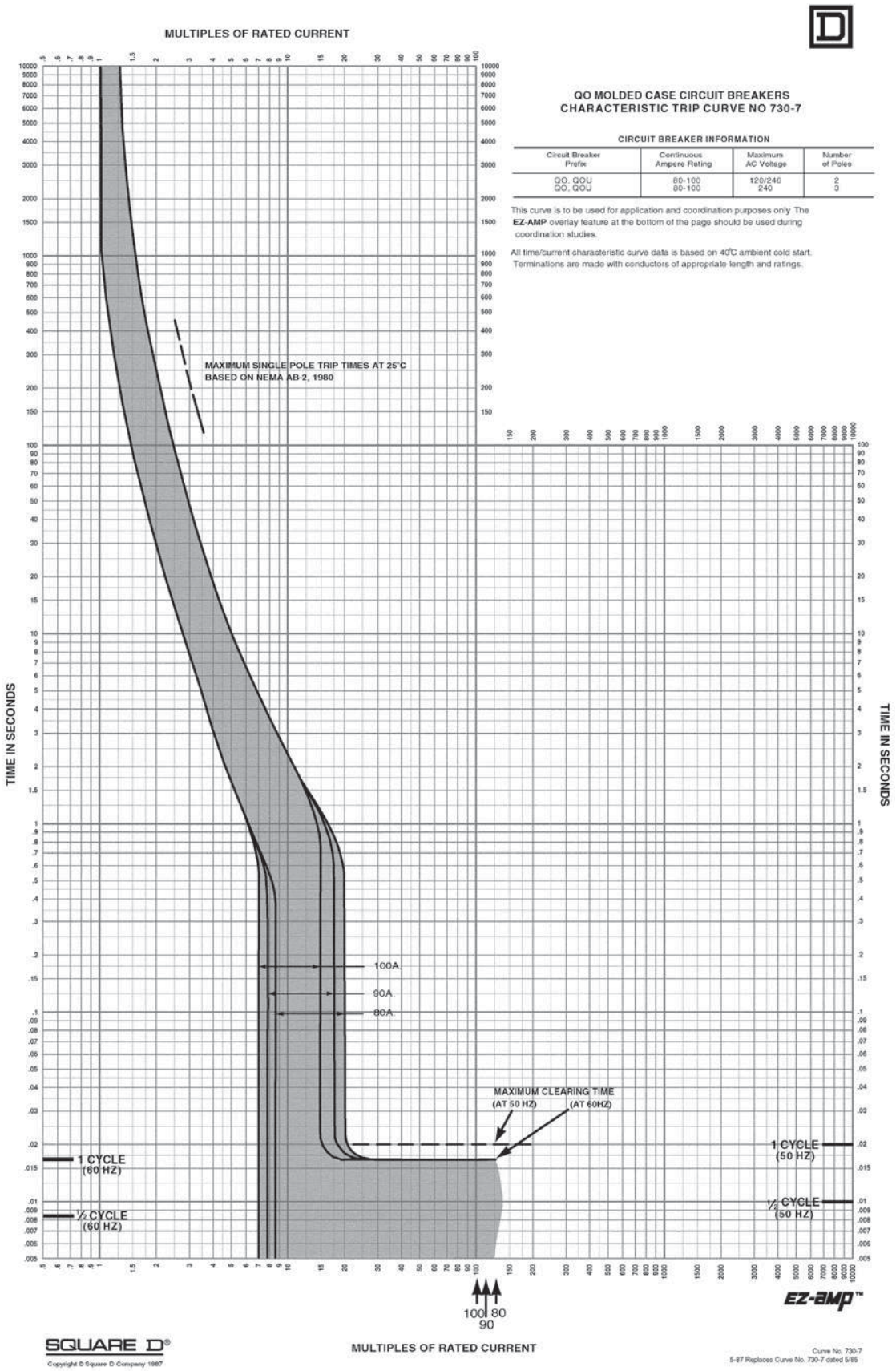
QO® MOLDED CASE CIRCUIT BREAKERS
CHARACTERISTIC TRIP CURVE NO. 730-6

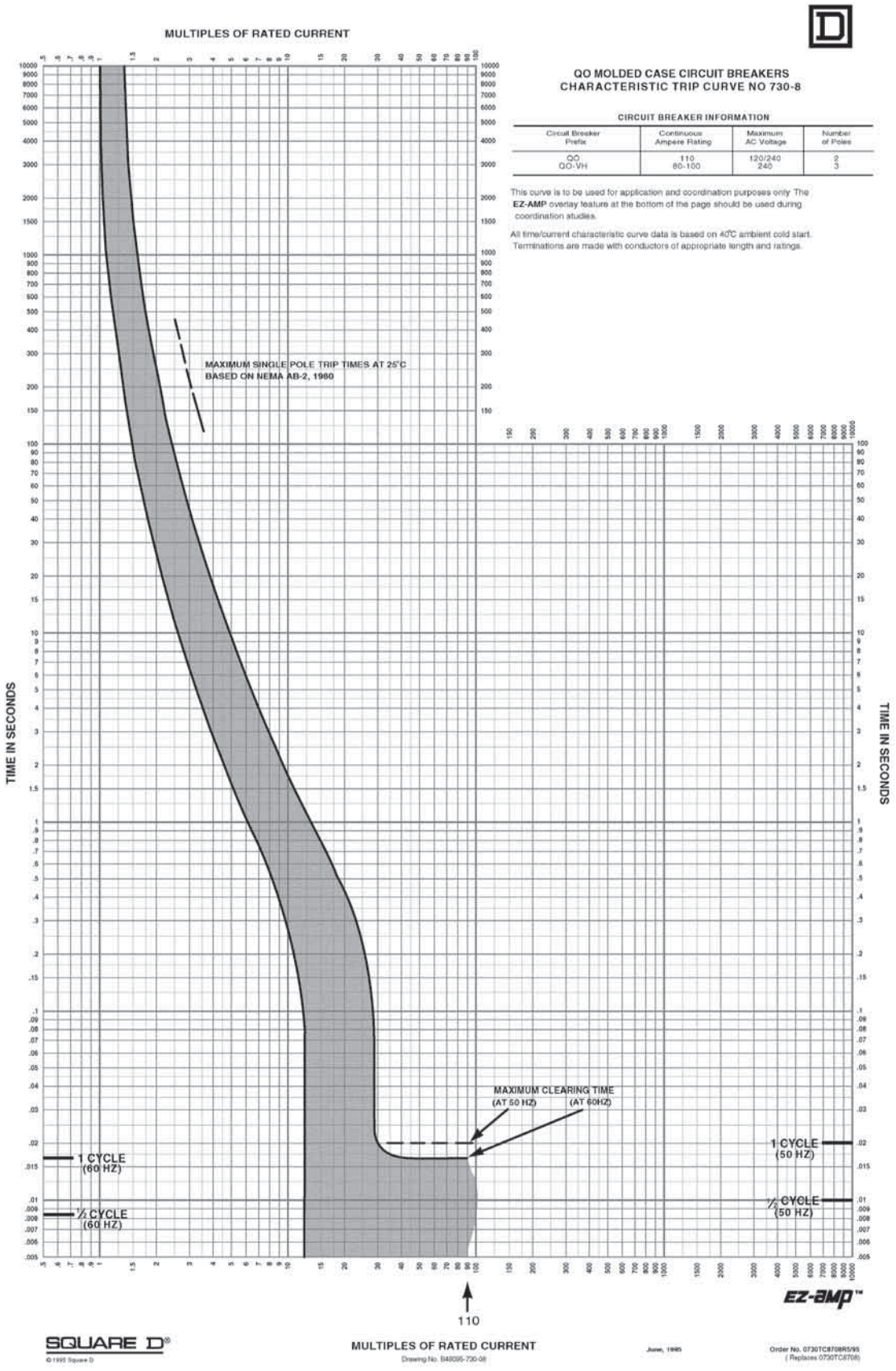
CIRCUIT BREAKER INFORMATION

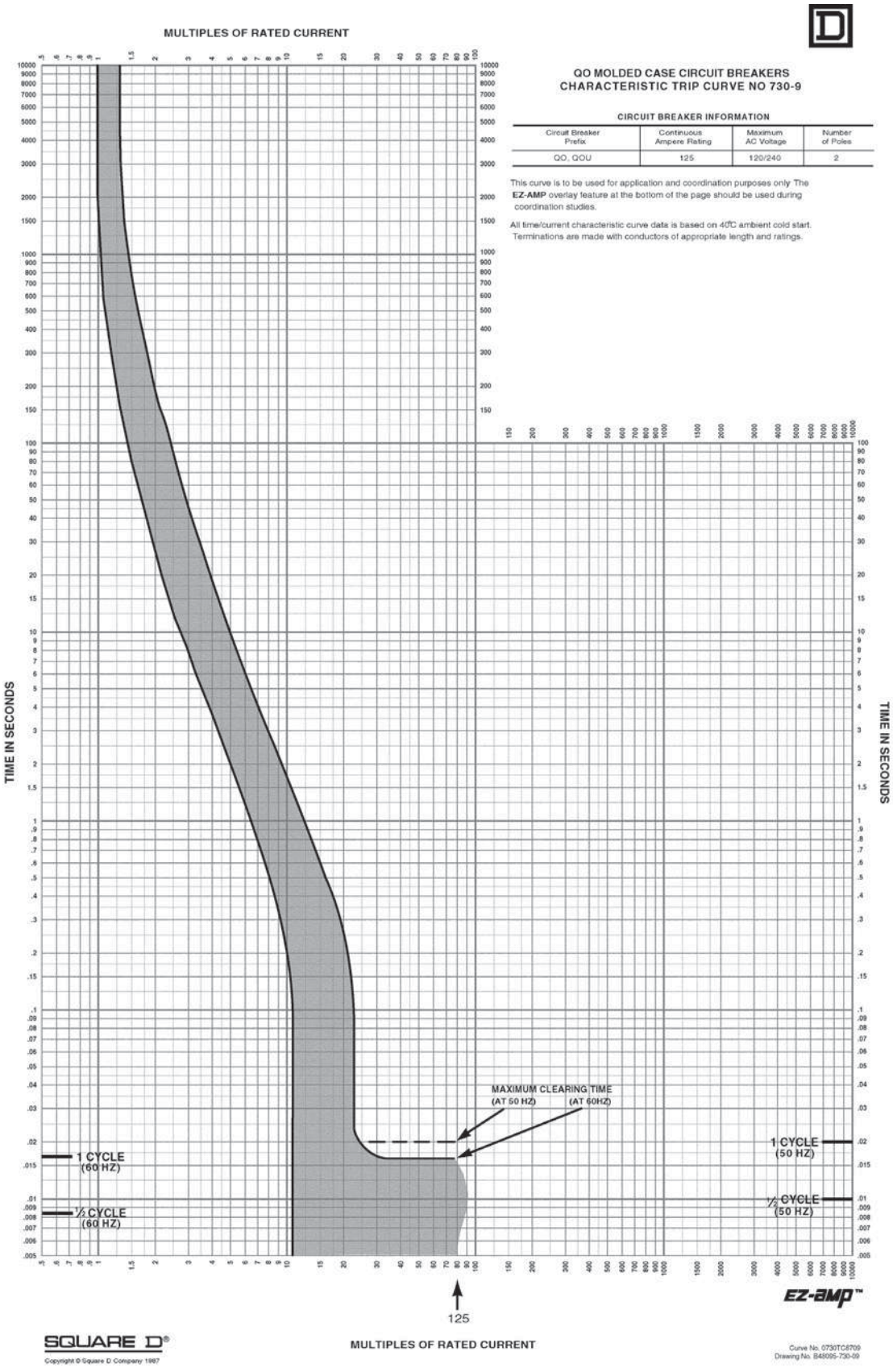
Circuit Breaker Prefix	Continuous Ampere Rating	Maximum AC Voltage	Number of Poles
QO-HID	45–50	120/240	1, 2
QOU	45–50	240	3
QO-PL	45–60	120/240	2
QO, QOU	45–70	120/240	1, 2
QO	45–70	240	3
QO-SWN	50	120	2
QO-SWN	50	120/240	3
QOM	50–60	120/240	2
QOM-VH	50–60	120/240	2

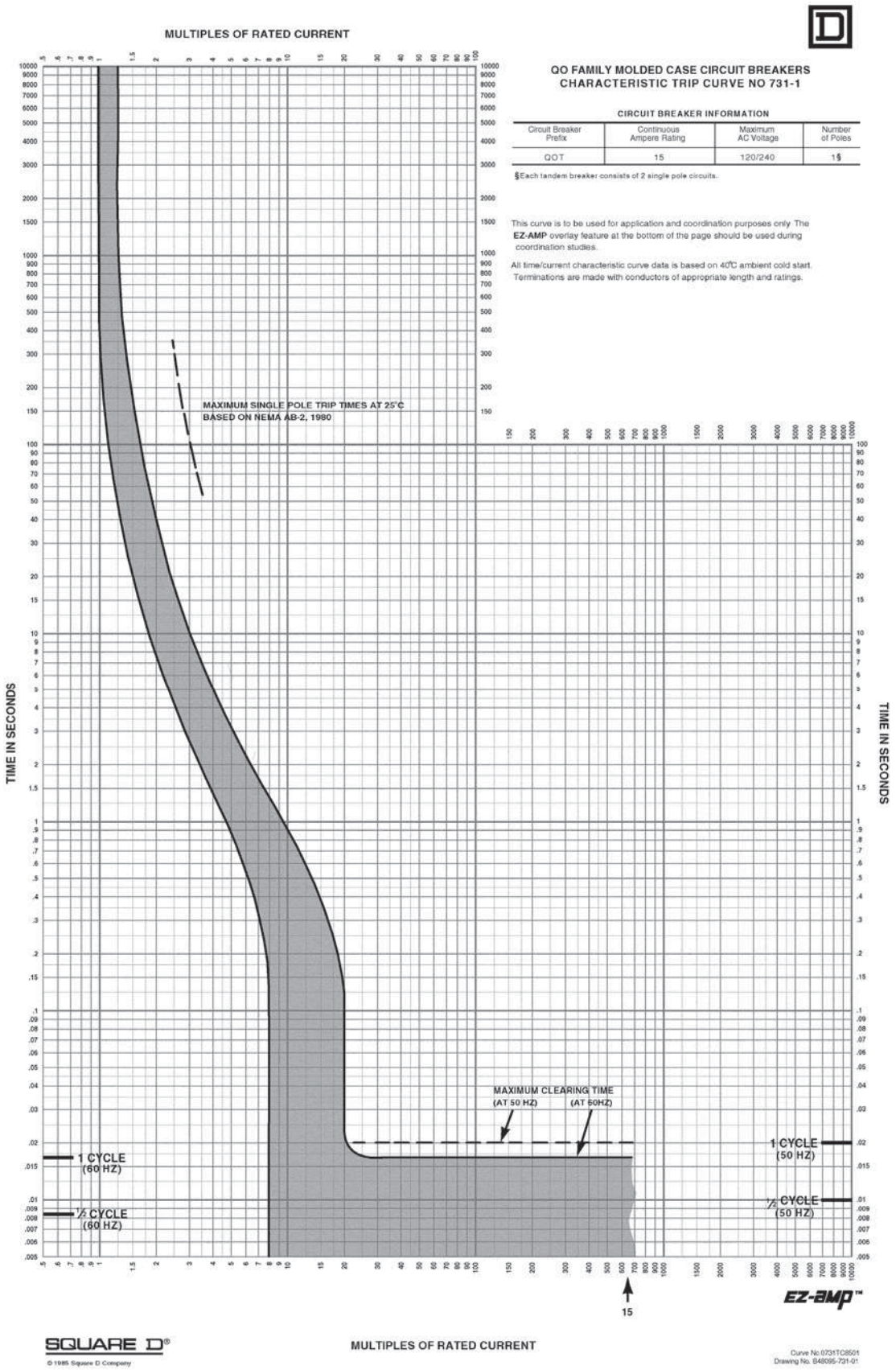
This curve is to be used for application and coordination purposes only. The EZ-AMP overlay feature at the bottom of the page should be used during coordination studies.

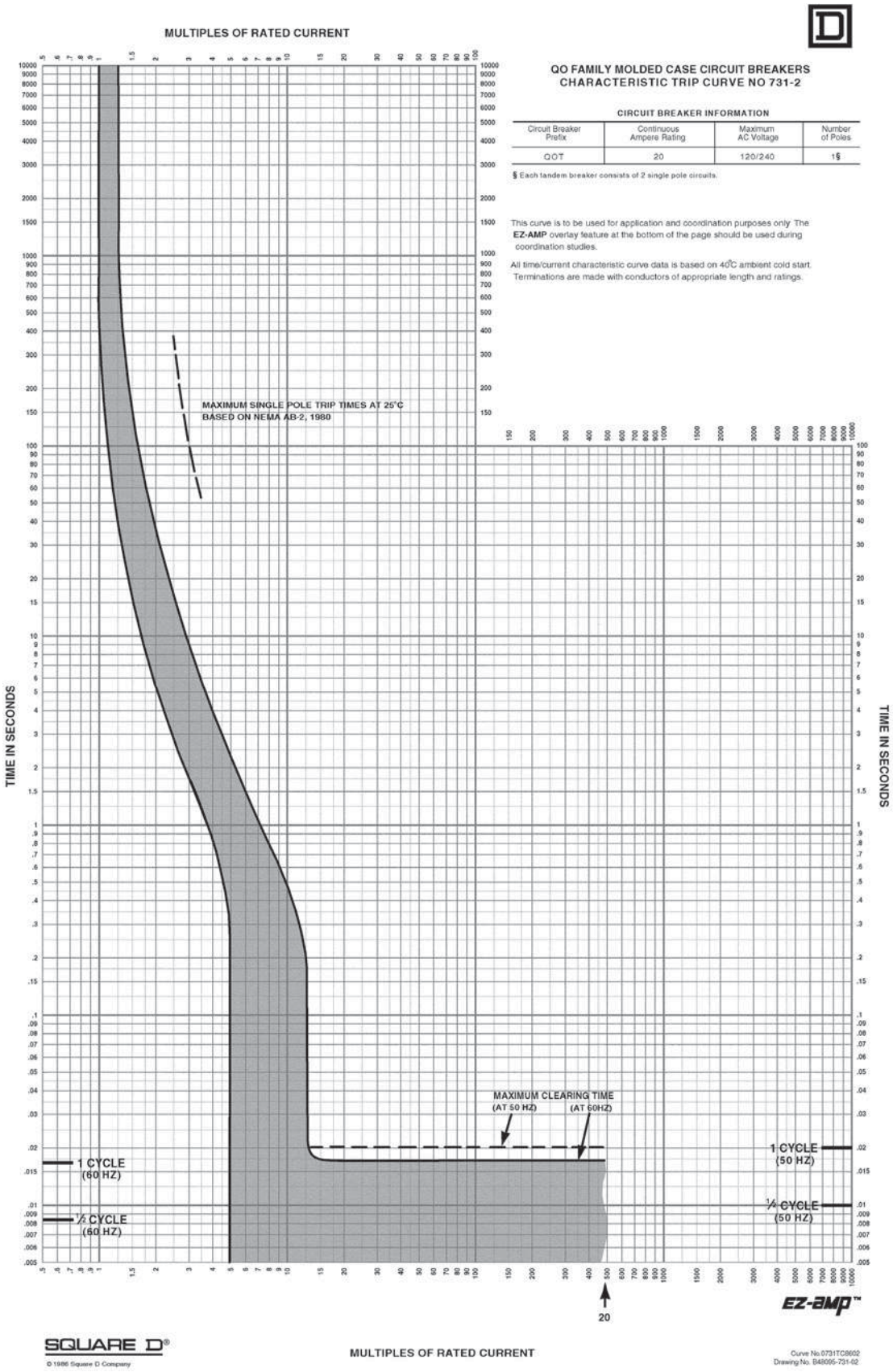
All time/current characteristic curve data is based on 40°C ambient cold start. Terminations are made with conductors of appropriate length and ratings.

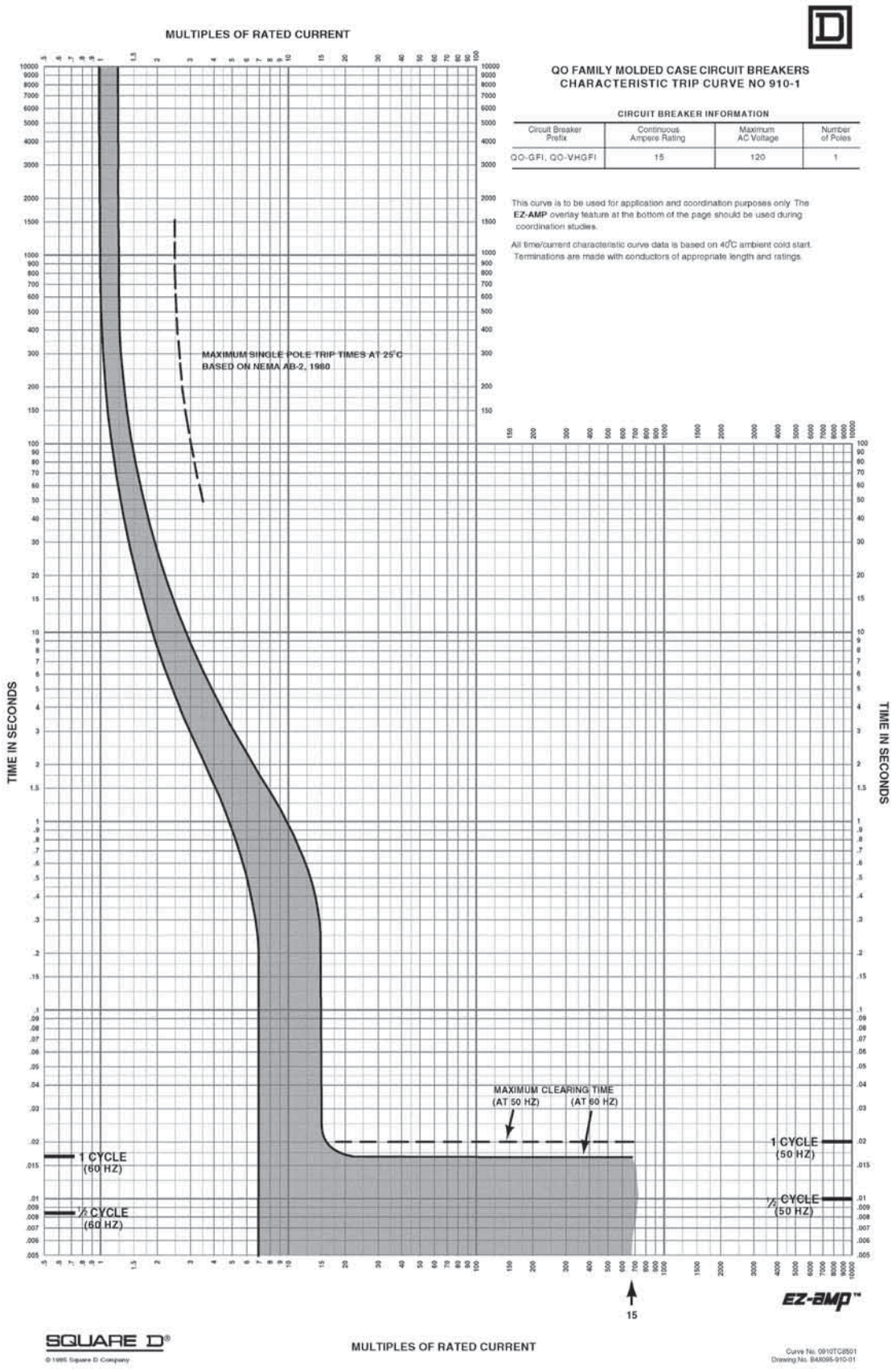


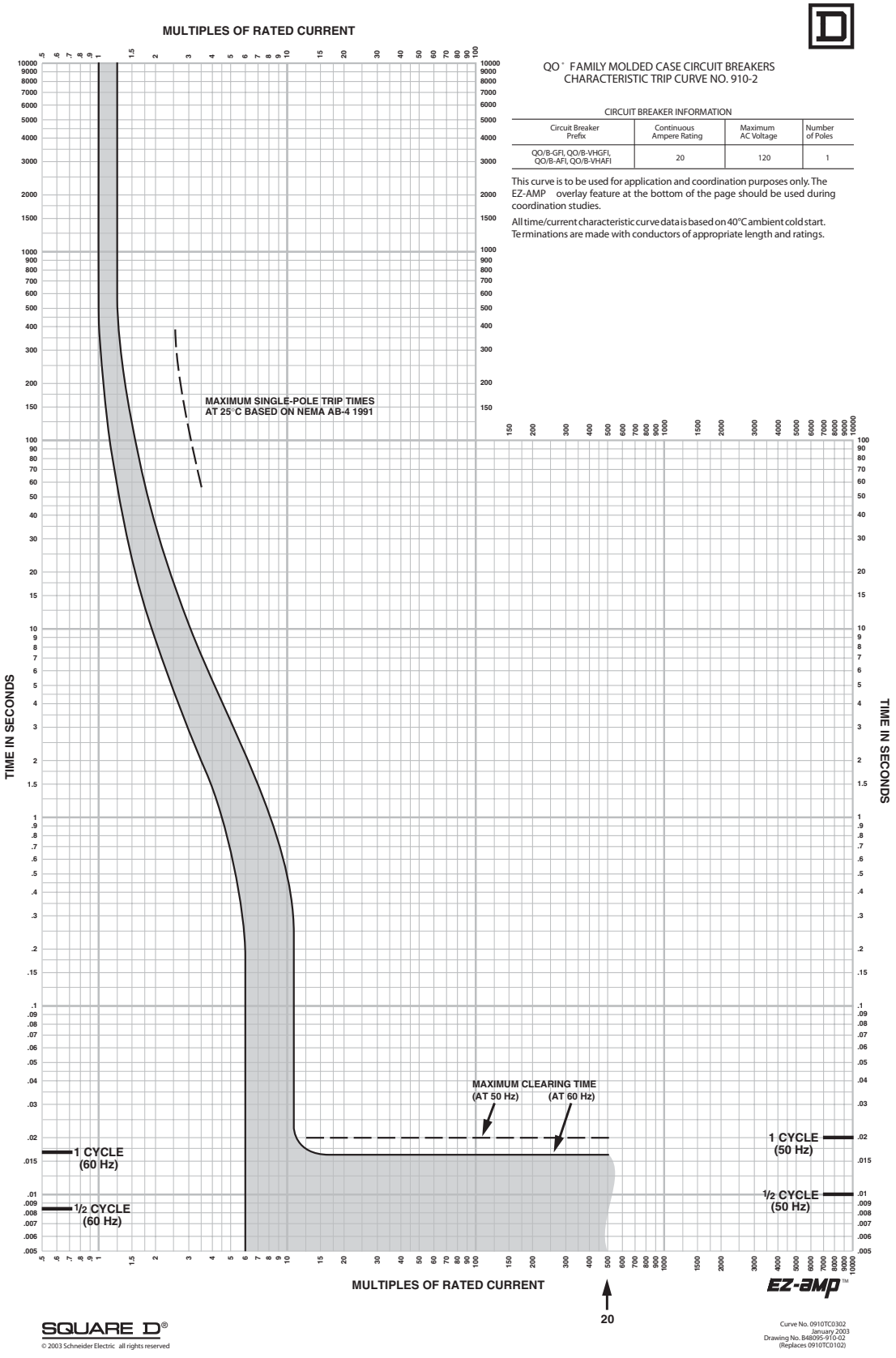












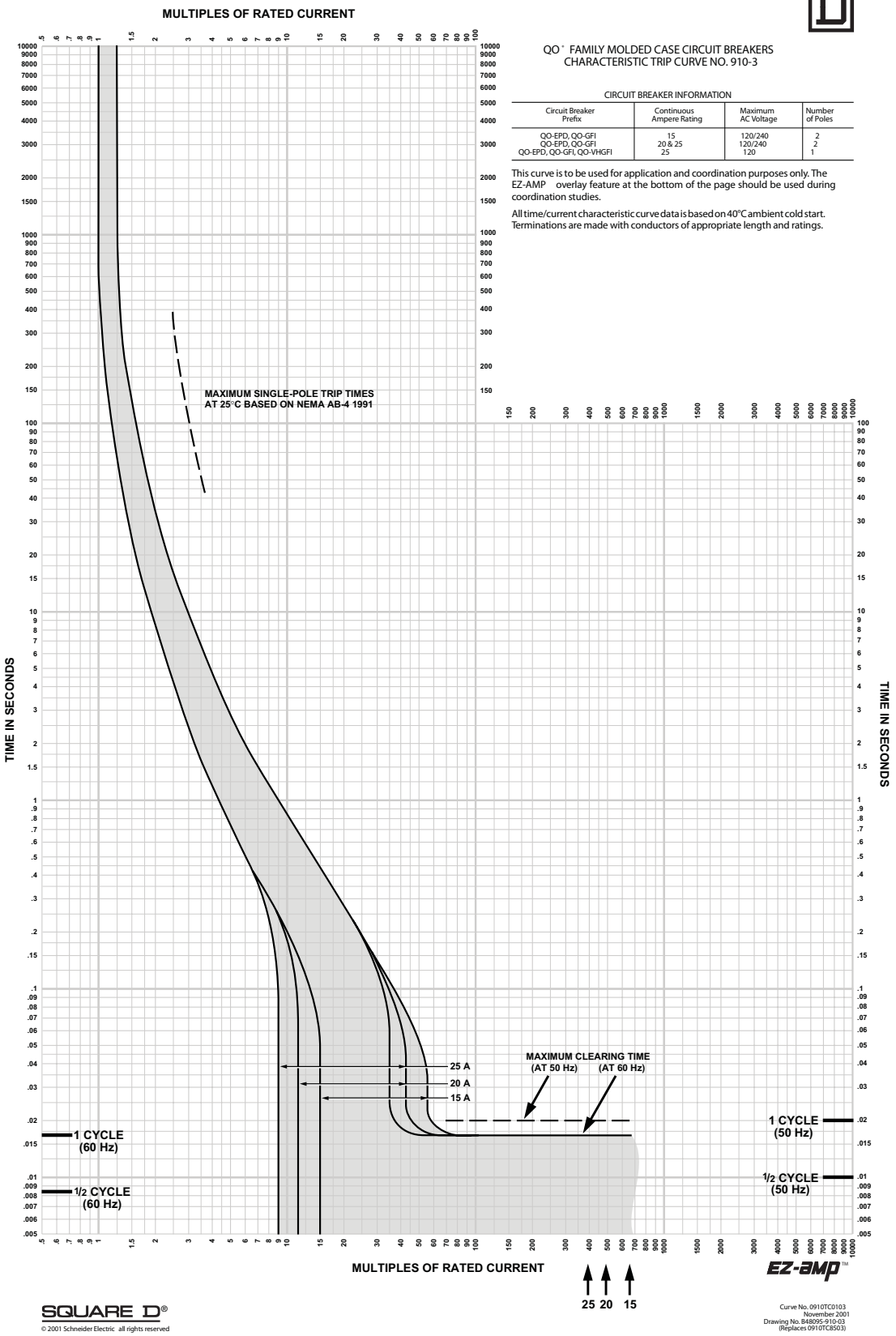
QO® FAMILY MOLDED CASE CIRCUIT BREAKERS
CHARACTERISTIC TRIP CURVE NO. 910-2

CIRCUIT BREAKER INFORMATION

Circuit Breaker Prefix	Continuous Ampere Rating	Maximum AC Voltage	Number of Poles
QO/B-GFI, QO/B-VHGFI, QO/B-AFI, QO/B-VHAFI	20	120	1

This curve is to be used for application and coordination purposes only. The EZ-AMP® overlay feature at the bottom of the page should be used during coordination studies.

All time/current characteristic curve data is based on 40°C ambient cold start. Terminations are made with conductors of appropriate length and ratings.



QO ˚ FAMILY MOLDED CASE CIRCUIT BREAKERS
CHARACTERISTIC TRIP CURVE NO. 910-3

CIRCUIT BREAKER INFORMATION

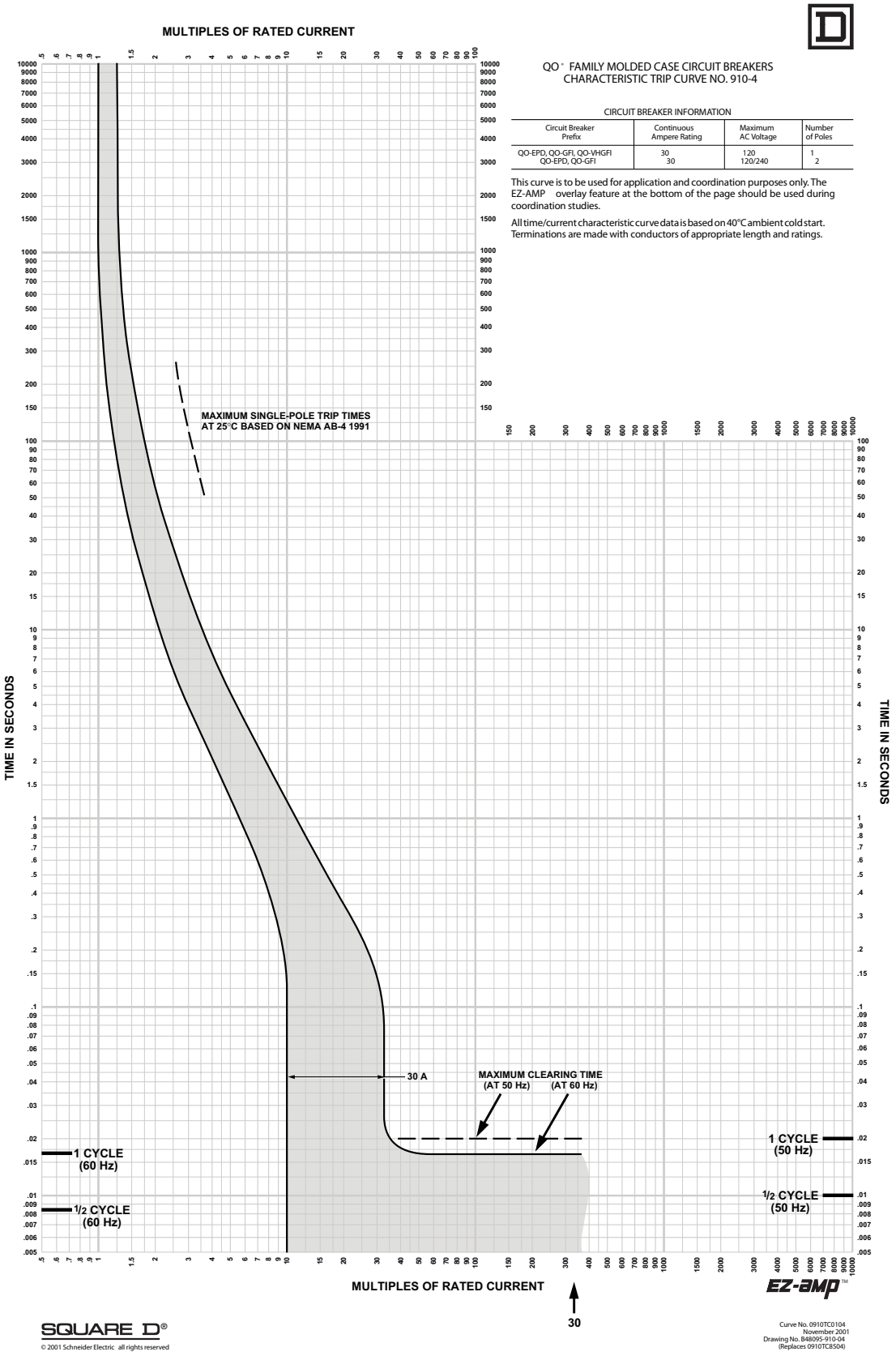
Circuit Breaker Prefix	Continuous Ampere Rating	Maximum AC Voltage	Number of Poles
QO-EPD, QO-GFI	15	120/240	2
QO-EPD, QO-GFI	20 & 25	120/240	2
QO-EPD, QO-GFI, QO-VHGFI	25	120	1

This curve is to be used for application and coordination purposes only. The EZ-AMP overlay feature at the bottom of the page should be used during coordination studies.

All time/current characteristic curve data is based on 40ºC ambient cold start. Terminations are made with conductors of appropriate length and ratings.

SQUARE D®

Curve No. 0910TC0103
November 2001
Drawing No. B48095-910-03
(Replaces 0910TC8503)



QO™ FAMILY MOLDED CASE CIRCUIT BREAKERS
CHARACTERISTIC TRIP CURVE NO. 910-5

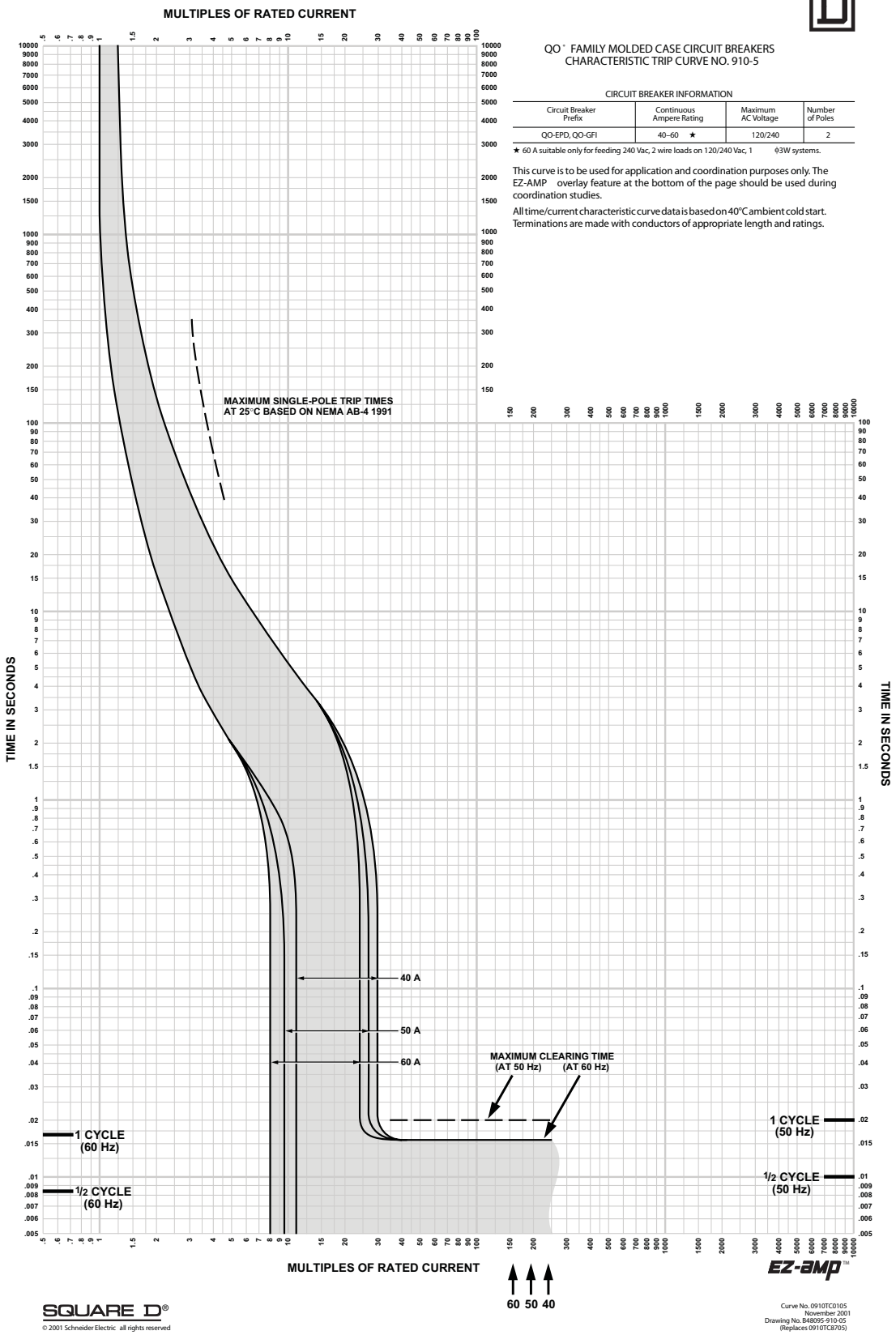
CIRCUIT BREAKER INFORMATION

Circuit Breaker Prefix	Continuous Ampere Rating	Maximum AC Voltage	Number of Poles
QO-EPD, QO-GFI	40–60 ★	120/240	2

★ 60 A suitable only for feeding 240 Vac, 2 wire loads on 120/240 Vac, 1 ϕ3W systems.

This curve is to be used for application and coordination purposes only. The EZ-AMP™ overlay feature at the bottom of the page should be used during coordination studies.

All time/current characteristic curve data is based on 40°C ambient cold start. Terminations are made with conductors of appropriate length and ratings.



SQUARE D®

Curve No. 0910TC0105
November 2001
Drawing No. B48095-910-05
(Replaces 0910TC8705)

Dimensions

Figure 10: Type QO Plug-On Circuit Breaker

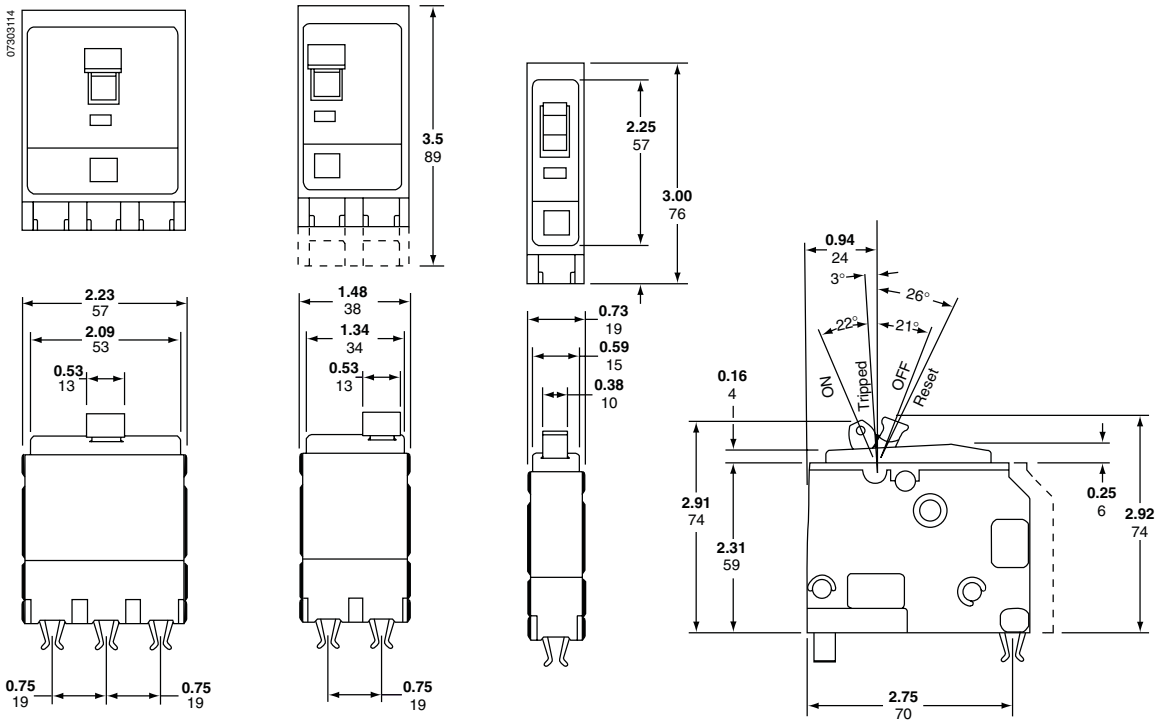


Figure 11: Type QOB Bolt-On Circuit Breaker

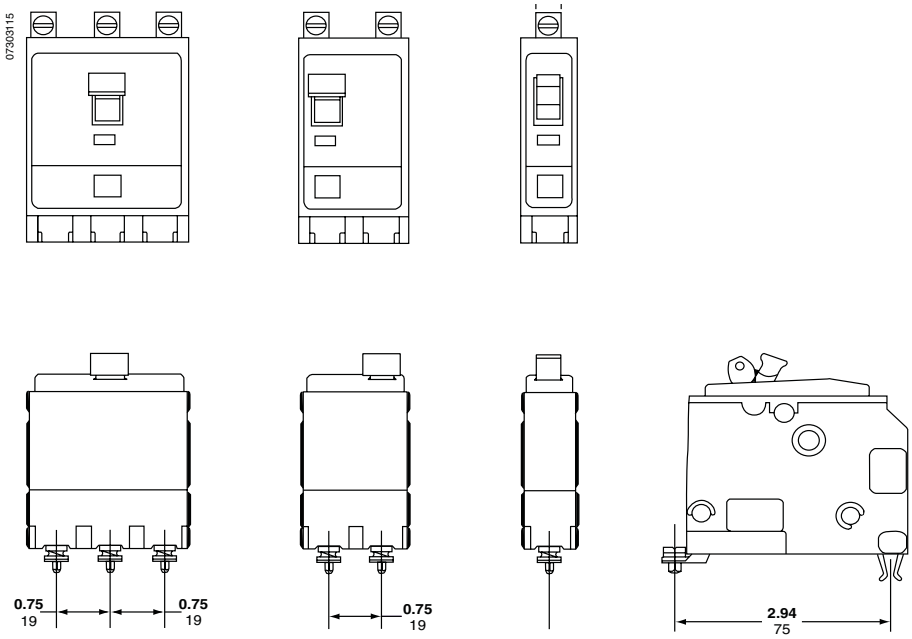


Figure 12: Type QO-GFI Circuit Breaker

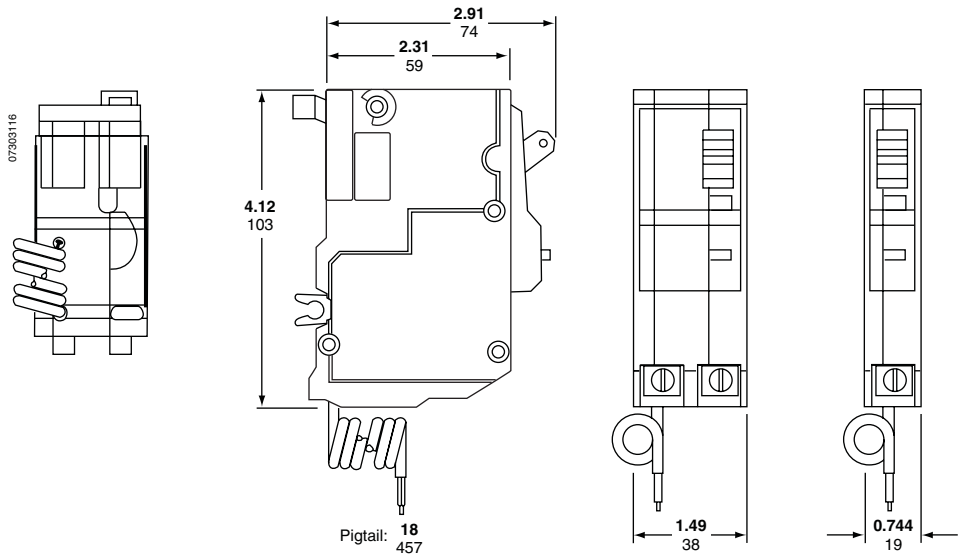


Figure 13: Type QO-AFI and QO-AFCI Circuit Breakers

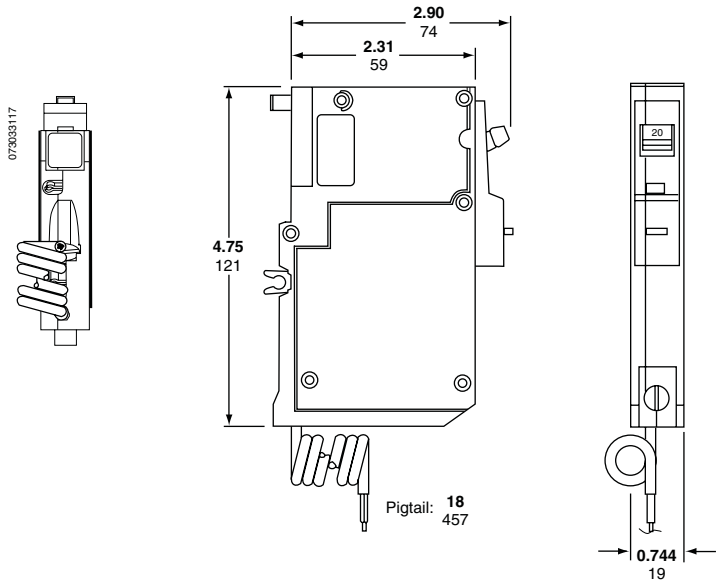
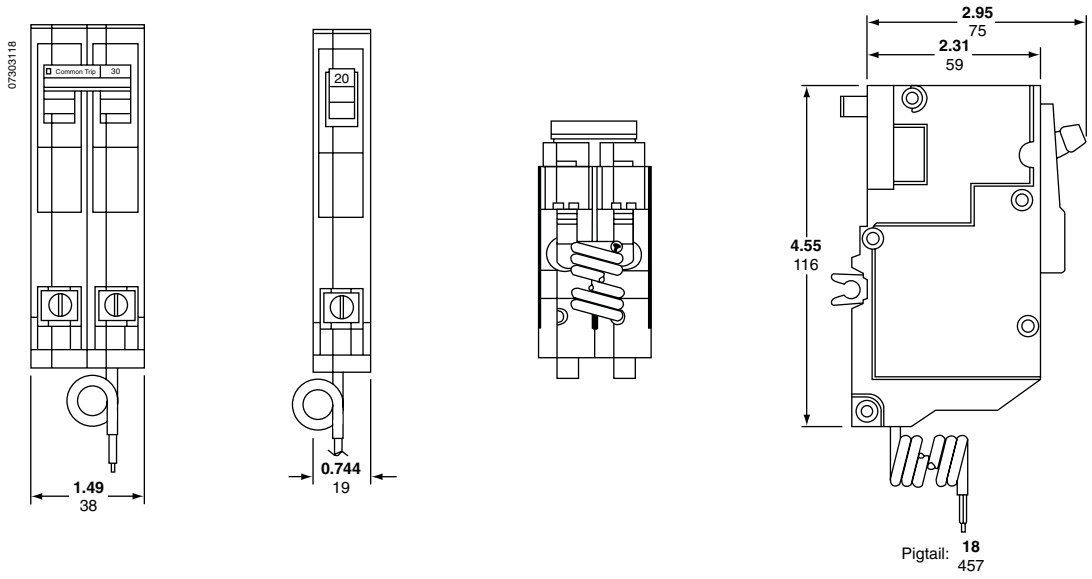


Figure 14: Type QO-PL Remote Control Circuit Breaker



Schneider Electric USA
3700 Sixth St. SW
Cedar Rapids, IA 52404 USA
1-888-Square D
1-888-778-2733
www.schneider-electric.us

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