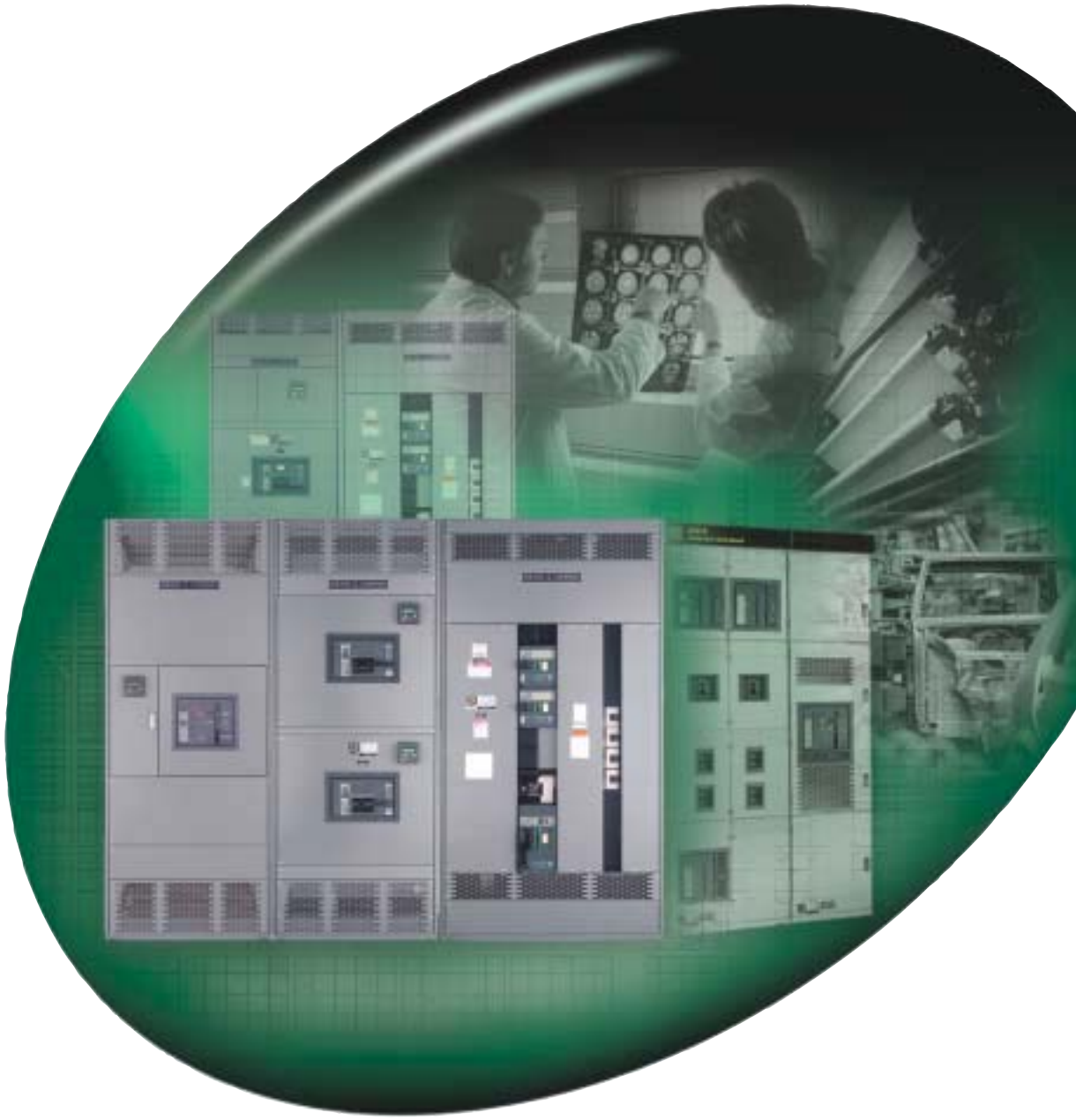
POWER-STYLE® QED Switchboards

Setting standards for today,
building foundations for tomorrow



SQUARE D
Schneider Electric

With a tradition of distinction

SQUARE D® POWER-STYLE® Switchboards set the standard for the system solutions of today and those of tomorrow

These **quality** products are built according to your specifications in strict adherence to NEC, NEMA and UL standards at factories certified to ISO 9002 quality standards. The **versatility** in our switchboard design helps you meet and exceed today's complex electrical distribution requirements. Features include front or rear accessibility, fixed or drawout construction, and individually or group-mounted circuit breakers or fusible switches. POWER-STYLE switchboards are also designed with **durability** in mind. Sturdy frames and standard bolted base channels all contribute to durability.

Quality, versatility and durability also define our SPEED-D® ready-to-assemble switchboards. Living up to its name, the SPEED-D line offers shipment of service section switchboards that's measured in days, not weeks.

One of the most important advantages you'll see in SQUARE D switchboards is our focus on system solutions. Our switchboards are designed to maximize the capabilities of our overcurrent protection devices, metering options and other switchboard accessories.

We also offer power monitoring and communications systems as simple or complex as your application requires. You can choose to communicate with a single PC, multiple PCs or over the Internet, using our Transparent Ready™ Internet communications system. Start with a simple monitoring and communications system and expand as your power system grows.

Our focus on customer needs does not stop here. SQUARE D Services offers a complete line of solutions through our national network of service locations. We can offer comprehensive solutions related to new installation, maintenance and testing services.

With Square D/Schneider Electric you can create an efficient electrical distribution system that meets your needs today, while building a foundation for the future. This is the SQUARE D difference.

We have an efficient solution designed to meet your needs

	Commercial	Industrial
QED-S	Office buildings Strip malls Retail stores Grocery stores Nursing homes Hospitals	Automotive plants Paper mills Manufacturing facilities Refineries Textile plants Pharmaceuticals
QED-2	Office buildings Strip malls Retail stores Grocery stores Nursing homes Hospitals	Automotive plants Paper mills Manufacturing facilities Refineries Textile plants Pharmaceuticals
QED-6	Universities Public buildings Communication Centers High-rise offices Hospitals	Automotive plants Manufacturing facilities Refineries Textile plants Chemical plants Pharmaceuticals Semiconductor manufacturing

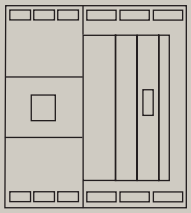
Standards

The POWER-STYLE QED switchboards in this brochure are designed, manufactured and tested to meet the latest revisions of the following appropriate standards.

UL 50	Enclosures for Electrical Equipment
UL 98	Enclosed and Deadfront Switches
UL 489	Molded Case Circuit Breakers
UL 891	Deadfront Switchboards
UL 943	Ground Fault Circuit Interrupters
UL 977	Fused Power Circuit Devices
UL 1053	Ground Fault Sensing and Relaying Equipment
NEC Article 834	Switchboards
NFPA 70	National Electrical Code® (NEC®)
ANSI/IEEE C12.1	Code for Electricity Metering
ANSI C39.1	Electrical Analog Indicating Instruments
ANSI C57.13	Instrument Transformers
NEMA AB 1	Molded Case Circuit Breakers and Molded Case Switches
NEMA PB 2	Switchboards

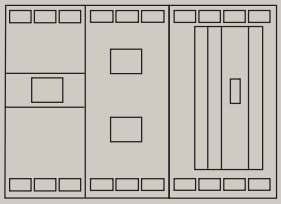
Federal Specifications

W-C-375B/GEN	Molded Case Circuit Breakers
W-C-870	Fuseholders
W-S-865	Enclosed Knife Switch



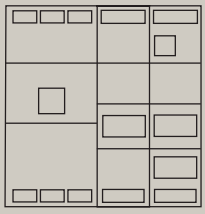
QED-S switchboard

Front accessible, group-mounted panels to 2,500 A



QED-2 switchboard

Individually mounted mains to 5,000 A, distribution sections to 4,000 A, group-mounted to 1,200 A



QED-6 switchboard

Individually mounted mains to 5,000 A, front and rear access with dedicated loadside cable entry

POWER-STYLE® QED-2

POWER-STYLE QED-2 switchboards are designed to distribute electrical power and give you economies of floor space without compromising performance or versatility. They provide circuit breaker or fusible overcurrent protection for services rated to 5,000 A with a maximum voltage of 600 VAC or 250 VDC. QED-2 switchboards can be used as service entrance equipment or as distribution centers in commercial, industrial or institutional applications. For additional flexibility, they can be customized to meet your specific application requirements.

A Solid Foundation

QED-2 switchboards are available as single or multiple mains or as distribution sections. Individually mounted mains use SQUARE D P- and R-frame electronic or MICROLOGIC® molded case circuit breakers through 2,500 A, MASTERPACT® NW two-step stored energy electronic trip circuit breakers, circuit breakers for fixed or drawout applications through 5,000 A and fusible switches through 5,000 A.

Efficient Distribution Options

QED-2 distribution sections include both I-LINE circuit breaker and QMB fusible switch group-mounted panels. With I-LINE plug-on circuit breaker construction, the line end of the circuit breaker plugs directly onto the I-LINE panel bus assembly. This design allows you to quickly install and wire circuit breakers from the fronts of the switchboard. In addition, I-LINE circuit breakers are keyed to mounting slots in the support pan for automatic alignment and faster installation. I-LINE switchboard sections are available in single- or double-row construction.

High Ampacities

If you require higher feeder ampacities, QED-2 switchboards are available with individually mounted branch devices up to 4,000 A. They include both thermal-magnetic and electronic trip molded case circuit breakers or BOLT-LOC Type BP fusible switches. For equipment ground fault protection, you can use electronic trip circuit breakers or fusible switches with the Type GC equipment ground fault system. With QED-2 switchboards, you can also specify options such as automatic throw-over systems.

QED-2 combination section

Features

- Front accessible load connections
- Front and rear alignment standard
- Switchboard fed by cable, busway, transformer, QED switchboard or other
- Switchboard ratings through 5000 A, 200kA; higher amperages available
- Thermal-magnetic, electronic, MICROLOGIC® or stored energy fix- and drawout-mounted circuit breaker mains and feeders
- Fix-mounted fusible switch mains and feeders
- Group-mounted circuit breaker and fusible switch mains and feeders
- Main devices in six sub-division or single main configurations
- Main and branch devices in single section configuration
- Main lugs in separate section in line-up or behind devices
- Group-mounted mains and branches
- Thermal-magnetic and electronic circuit breakers with standard, high, extra-high or current limiting capability
- Exclusive MICROLOGIC trip circuit breakers, 80% or 100% rated
- Zone selective interlocking on MICROLOGIC® circuit breakers, group-mounted 100 A/250 A thermal-magnetic circuit breakers with add-on ground fault and bolted pressure fusible switches
- POWERLOGIC® system customer metering including custom communications capability and interwiring
- All options available on circuit breakers and fusible switches
- Custom engineering including main-tie-mains, multiple sets of through bus, reduced heights and engineered houses
- Optional start-up service and training

Options

Hot and cold sequence utility metering, customer metering and the POWERLOGIC monitoring and control system, equipment ground fault protection, automatic throw-over systems, transfer switches and zone selective interlocking.

QED-2 switchboards provide versatility and performance for today's complex commercial, industrial and utility applications.

Solutions for Maximum Flexibility...

If you're looking for an overcurrent device to meet your specific application, no one matches the selection found in the POWER-STYLE® QED switchboard family. All QED switchboards feature a choice of molded case circuit breakers or fusible switches.

You can select thermal-magnetic, current limiting, electronic or MICROLOGIC® circuit breakers in a configuration designed to meet your specific needs. The unique I-LINE construction from Square D/ Schneider Electric, for example, gives you the capacity of group mounting circuit breakers (up to 1,200 A) for faster installation, mounting flexibility and efficient use of space. You can also select individually mounted circuit breakers rated up to 5,000 A in fixed or drawout construction.

You can further enhance the flexibility of POWER-STYLE QED switchboards with other options, such as equipment ground fault protection with MICROLOGIC® electronic trip circuit breakers or BOLT-LOC Type BP switches with the TYPE GC equipment ground fault system. On 100 A and 250 A circuit breakers, an equipment ground fault module is available with two levels of protection to give you the backup protection you need for power-critical operations.

POWER-STYLE® QED Metering Options

MICROLOGIC Trip Units

POWERLOGIC Circuit Monitor

Utility metering

You can see versatility in the number and types of metering options available for the POWER-STYLE® QED switchboard family. They include customer metering featuring the advanced capabilities of the POWERLOGIC® monitoring and control system and MICROLOGIC® trip units. Utility metering options are also available to meet local utility requirements.

Customer Metering from A to Z.

The POWERLOGIC system provides over 50 meter values, which can be displayed locally on multiple POWERLOGIC circuit monitors or remotely on personal computers. On-board event and data logging, waveform capture and automated controls are also provided by the POWERLOGIC system. Now Square D/Schneider Electric not only offers the toughest switchboard in the industry, but the smartest one as well!

Effective electrical distribution is more than just the transmission of power. Capturing, understanding and managing power information can substantially increase your system efficiency and lower life cycle costs.

These trip units provide advanced functionality such as communications interfaces, POWERLOGIC power metering, and local/remote monitoring capability, which allows for integration and coordination of your electrical system. With the appropriate MICROLOGIC trip unit, you can:

- Communicate with breakers
- Gather power information and energy usage patterns
- Monitor events and deviations from the norm
- Remotely control breakers for better process loading
- Perform predictive maintenance

Because the trip units, which offer increasing levels of functionality, are interchangeable, you can upgrade equipment easily as your needs expand.

Utility Metering.

Square D/Schneider Electric provides utility current transformer (UCT) metering compartments to meet your local utility specifications. The UCT compartment has either single- or double-hinged doors with sealable hasps and screws. UCTs are available in full-height (90") or half-height (45") compartments. Depending upon your utility's requirements, we will provide either hot sequence CT compartments (metering ahead of the main disconnect) or cold sequence CT compartments (metering on the load side of the main disconnect).

POWER-STYLE® QED Selection Information

	QED-S		QED-2		QED-6	
RATING	**RATING**		**RATING**		**RATING**	
400-4000 A		✓		✓		✓
400-5000 A				✓		✓
6000 A				✓		
INCOMING						
CABLE		✓		✓		✓
BUSWAY				✓		✓
TRANSFORMER				✓		✓
THROUGH BUS TO QED				✓		
MAIN DEVICE						
Individual Fixed						
BOLTED PRESSURE SWITCH	4000 A	✓	5000 A	✓		
THERMAL-MAGNETIC CIRCUIT BREAKER	2500 A	✓	2500 A	✓	2500 A	✓
ELECTRONIC CIRCUIT BREAKER	2500 A	✓	2500 A	✓	2500 A	✓
MICROLOGIC® CIRCUIT BREAKER	2500 A	✓	2500 A	✓		
STORED ENERGY	4000 A	✓	5000 A	✓	5000 A	✓
Individual Drawout						
MASTERPACT NW CIRCUIT BREAKER			5000 A	✓	5000 A	✓
Group						
THERMAL-MAGNETIC CIRCUIT BREAKER (I-LINE)	1200 A	✓	1200 A	✓		
ELECTRONIC CIRCUIT BREAKER (I-LINE)	1200 A	✓	1200 A	✓		
MICROLOGIC CIRCUIT BREAKER (I-LINE)	1200 A	✓	1200 A	✓		
FUSIBLE SWITCH (QMB)	1200 A	✓	1200 A	✓		
FEEDER						
Individual Fixed						
BOLTED PRESSURE SWITCH	4000 A	✓	4000 A	✓		
THERMAL-MAGNETIC CIRCUIT BREAKER	2500 A	✓	2500 A	✓	1200 A	✓
ELECTRONIC CIRCUIT BREAKER	2500 A	✓	2500 A	✓		
MICROLOGIC CIRCUIT BREAKER	2500 A	✓	2500 A	✓	1200 A	✓
STORED ENERGY CIRCUIT BREAKER	4000 A	✓	4000 A	✓		
Individual Drawout						
MASTERPACT® NT CIRCUIT BREAKER					1200 A	✓
MASTERPACT NW CIRCUIT BREAKER			4000 A	✓		
Group						
THERMAL-MAGNETIC CIRCUIT BREAKER (I-LINE)	1200 A	✓	1200 A	✓		
ELECTRONIC CIRCUIT BREAKER (I-LINE)	1200 A	✓	1200 A	✓		
MICROLOGIC CIRCUIT BREAKER (I-LINE)	1200 A	✓	1200 A	✓		
FUSIBLE SWITCH (QMB)	1200 A	✓	1200 A	✓		
UTILITIES						
SELECTED		✓				
ALL				✓		
CUSTOMER METERING						
POWER METER (A, V, W, COMM.)		✓		✓		✓
CIRCUIT MONITOR (A, V, W, WAVEFORM, COMM.)		✓		✓		✓
ACCESS						
FRONT		✓		✓		
FRONT & REAR		✓		✓		
COMPARTMENTALIZATION						
CIRCUIT BREAKER						✓
BUSSING						✓
LOAD LUGS						✓
OPTIONS						
SELECTED		✓				
ALL				✓		
ENGINEERING						
STANDARD		✓				
CUSTOM				✓		

You can create an efficient electrical distribution system that meets your needs today, while building a foundation for the future. This is the SQUARE D difference.

POWER-STYLE®
Switchboards

The Difference is in the Details

- 100% rated phase and neutral through bus
- No deration of through bus
- Through bus extends the entire section (no through bus extensions required for additional sections)
- Captive splice bars
- Continuously plated bussing
- Front and rear alignment
- I-LINE® group-mounted distribution requires no additional hardware kit to add future circuit breakers
- Sectionalized shipment available for easier handling
- Removable lifting bars on NEMA Type 1 Enclosures
- NEMA Type 1 or 3R Non-Walk-In Enclosures
- ANSI 49 corrosion-resistant paint finish
- Removable top plate
- UL891 Labeled
- Switchboard frame suitable for use as floor sills
- 80% and 100% rated MICROLOGIC® electronic trip circuit breakers through 1200 A for group-mounted distribution
- POWERLOGIC® system customer metering from ammeter, voltmeter, wattmeter to waveform capture, data logging, alarm/relay functions, disturbance monitoring and programmable logic

SPEED-D® Service Section Switchboards

UL listed and available from distributor or warehouse stock, these switchboards contain a EUSERC utility metering compartment and a main circuit breaker with either a 42-circuit NQOD interior or a 27" I-LINE interior. It is also available with a QMB interior for six circuit main applications. Each section is suitable for use as service entrance equipment and is available in either Type 1 or Type 3R construction. Accessories include an indoor underground pull section, outdoor (3R) underground pull section, lug landing kit and loadside wireway.

- Mains rating: 400, 600, or 800 A
- Voltage: 120/240, 208Y/120, 240/120, or 480Y/277 VAC
- Systems: 1ø3W or 3ø4W
- Dimensions: Type 1 enclosure – 90" high, 14" deep, 36" wide
- Type 3R enclosure – 90" high, 24.5" deep, 36" wide

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SQUARE D
Schneider Electric

Visit www.SquareD.com
for more information.

WM TAO & ASSOCIATES
CONSULTING ENGINEERS

Shop Drawing Submittal Review

Transmitted To: Cannon Design

Date: July 19, 2016

Attention: **stl-cac@cannondesign.com**

Contact Person / WTA Field Inspector: Patrick Garner

Project Name: Webster University-**ISB**

Reviewed by: Bill Shaw

Project No. WT 14127.01

[ ] UPS [ ] Courier [X] **Email**

Copies	No.	Description
1 PDF	264000E01	(Submittal No. 264000-001) Electrical Distribution

Submittal Review Comments

Circuit breaker size and position shall match panel schedules on sheets EO503, 504, 505, & 506.

c: **Kelvin Patel**
Kpatel@cannondesign.com

[ ] Furnish as Submitted [ ] Furnish as Noted

[ ] Rejected [X] ***Revise & Resubmit**

[ ] Reviewed [ ]

Corrections or comments made on shop drawings during this review do not relieve contractor from compliance with requirements of drawings and specifications. This check is only for review of general conformance with the design concept of project and general compliance with information given in contract documents. Contractor is responsible for: confirming and correlating all quantities and dimensions; selecting fabrication processes and techniques of construction; coordinating his work with that of all other trades; and performing his work in a safe and satisfactory manner.

7955 Manchester Road, Suite 125 • St. Louis, Missouri 63143-2711 • Phone: 314-884-7600 • Fax: 314-884-7601

If enclosures are not as noted, please notify us at once.

Sara Trout (314) 884-7645

WTASHOP - Webster ISB - 26 4000-001

From: STL-CAC <STL-CAC@CANNONDESIGN.COM>
To: 'Patrick Garner' <pgarner@wmtao.com>, WTASHOP <wtashop@wmtao.com>
Date: 7/5/2016 11:40 AM
Subject: Webster ISB - 26 4000-001
Cc: "Patel, Kelvin" <kpatel@CANNONDESIGN.COM>, "Grossman, Lynn" <lgrossman@C...
Attachments: 264000-001 Electrical Distribution.pdf

Attached for review.

Melissa Pirtle
Construction Admin
CANNONDESIGN
1100 Clark Ave
St. Louis, Missouri 63102
T 314.425.8797 • M
cannondesign.com

CANNONDESIGN

SUBMITTAL IDENTIFICATION SHEET

To be completed by Contractor/CM

WEBSTER UNIVERSITY ISB
PROJECT NAME

8274 BIG BEND BLVD
ADDRESS

NUMBER

WEBSTER UNIVERSITY
OWNER

CANNON DESIGN
ARCHITECT / ENGINEER

Joe Voypick
SUBMITTED BY

264000-001
CONTRACTOR / CM SUBMITTAL NO.

CANNON DESIGN SUBMITTAL NO.

DRAWING / DETAIL REFERENCE

264000
SPECIFICATION SECTION / PARAGRAPH

Guarantee Electrical
MANUFACTURER / SUPPLIER

ITEM / PRODUCT ID

REQUIRED DATE

PRIORITY

◯ CRITICAL

ITEM BEING SUBMITTED (check only one)

- ◯ Shop Drawings
- ◯ Samples (_____ copies)
- ◯ LEED Submittal
- ◯ Certification / Qualifications
- ◯ Record Documents
- ◉ Product Data
- ◯ Coordination Drawing
- ◯ Calculations
- ◯ Schedules
- ◯ O&M Manuals
- ◯ Other _____

ITEM BEING SUBMITTED FOR (check only one)

◉ Action ◯ Information Only ◯ Record

REMARKS OR DEVIATIONS

CONTRACTOR / CM CERTIFICATION
(SUBMITTALS NOT CERTIFIED WILL BE RETURNED WITHOUT REVIEW)

PARIC

PARIC CORPORATION
SUBMITTAL STAMP

THIS SHOP DRAWING HAS BEEN REVIEWED BY PARIC CORPORATION

Subcontractor remains responsible for dimensions, quantities, coordination with other trades and compliance with contract documents.

By:
Devin D. Gates

Joe Voypick
REVIEWED BY

7/5/16
DATE

To be completed by Reviewer

26 4000-001
CANNON DESIGN SUBMITTAL NUMBER

7/5/16
RECEIVED DATE

- ◯ A. No Exceptions Taken
  No further review of submittal is required.
- ◯ B. Make Corrections Noted
  Incorporate corrections in work; resubmission is not required.
- ◯ C. Revise and Resubmit
  Revise as noted, and resubmit for review.
- ◯ D. Rejected
  Submittal is not in compliance with Contract Documents; provide new submittal.
- ◯ E. For Record / Information Only
  Submittal was reviewed for Record / Information purposes only.
- ◯ F. Not Required for Review
  Submittal is not required by Contract Documents and has not been reviewed.

Review is for conformance with the design concept of this project and for general compliance with contract documents. Contractor is responsible for quantities, dimensions and compliance with contract documents and for information that pertains to fabrication processes, construction techniques and coordination of this work with all trades which will be affected thereby. This review is null and void if submittal deviates from contract documents and does not indicate or note deviations.

A/E COMMENTS ◯ See attached sheet(s) for additional comments

REVIEWED BY

DATE

77 Westport Plaza
Suite 250
St. Louis, MO 63146

TRANSMITTAL

No. 15051-0114

Paric Corporation

PROJECT: 15051-Webster University Interdisciplinary Science Building

DATE: 07/05/2016

TO: Cannon Design
1100 Clark Ave
St Louis MO 63102

RE: Electrical Distribution

ATTN: Kelvin Patel

JOB: 15051

WE ARE SENDING:	SUBMITTED FOR:	ACTION TAKEN:
☐ Shop Drawings	☑ Approval	☐ Approved as Submitted
☐ Letter	☐ Your Use	☐ Approved as Noted
☐ Prints	☐ As Requested	☐ Returned After Loan
☐ Change Order	☐ Review and Comment	☐ Resubmit
☐ Plans		☐ Submit
☐ Samples	**SENT VIA:**	☐ Returned
☐ Specifications	☐ Attached	☐ Returned for Corrections
☑ Other: Product Data	☐ Separate Cover Via:	☐ Due Date:

Item	*Package*	*Code*	*Rev.*	*Copies*	*Date*	*Description*	*Status*
Submittal		264000-001	1		07/05/2016	Electrical Distribution	Submitted

NOTES:

CC: Paric Corporation, Kathy Bathe

Project Coordinator: Paric Corporation, Kathy Bathe

Signed: _____
Devin Gates

GUARANTEE
ELECTRICAL CONSTRUCTION

3415 Bent Avenue
St. Louis, MO 63116
Phone: (314) 772-5400
Fax: (314) 772-2526

Transmittal

To Paric Corporation

Date 7/1/16

Job Number 11317

Job Name Webster Univ. ISB Building

Attention Devin Gates

Transmittal Number 11317-005

We are sending you:

- X Attached
- ___ Under separate cover, the following:
- ___ Preliminary Drawings
- ___ Samples
- ___ Construction Drawings
- ___ Copy of Letter
- ___ Specifications
- ___ Other

Quantity	Drawing #	Date/Revision	Description
1			Submittal for Distribution - Spec Section
			26 40 00

These are transmitted as checked:

- X For Your Review & Comment
- X For Approval
- ___ For Your File
- ___ As Requested
- ___ Approved As Noted
- ___ Returned For Corrections
- ___ Approved As Submitted
- ___

Copy: Transmittal Enclosure

___ ___
___ ___
___ ___

Rick Branstetter

Signed: Rick Branstetter, Project Manager

Webster University ISB

Approval Drawing Package

Factory Order #: 37999262

06/13/2016

Distributor:
Graybar

Contractor/Installer:
Guarantee Electric / TD4

Consulting Engineer:
Wm Tao & Associates

Lou Feldhaus
Sales Representative

Jake Kaufman
Project Manager
North American Operating Division
(636) 329-2265
jacob.kaufman@schneider-electric.com

Life Is On Schneider Electric

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UNIT SUBSTATIONS

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POWER-DRY II TRANSFORMER: US-1

SWITCHBOARD: US-1

UNIT SUBSTATION LITERATURE

Unit Substation Brochure

HVL 5…38 kV Load Interrupter Switchgear - Brochure

Power Dry II- Dry-Type, Small Power Transformer Brochure

Model 98A Digital Temperature ControllerFor Medium Voltage Transformers

Power-Style QED-2 Switchboard Brochure

Internal Modular SPD Brochure

PowerLogic PM8000 Series Intermediate Metering Technical Data Sheet

NW Breaker Brochure

Micrologic Trip Units for Masterpact Circuit Breakers Brochure

INTEGRATED POWER CENTERS

BILL OF MATERIALS AND DRAWINGS

SB1

SB2

1EH1 - 1EL1

1EL1

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Schneider Electric

LITERATURE

Integrated Power Center 2 (IPC2)

PANELBOARDS

PANELBOARD SCHEDULE AND DRAWINGS

LITERATURE

I-Line Panelboard Handout

NF Panelboard Handout

NQ Panelboard Handout

I-Line SPD

Internal Modular SPD Brochure

SurgeLoc SPD for NQ Panelboards

CONTACTORS AND STARTERS

BILL OF MATERIALS AND DRAWINGS

8538SCG

8538SCA - EF-1

8538SCA - KEF-1

2510FG

LITERATURE

Manual Starters - Type F

Manual Starters - Type M and T

8538 Combination Starter Catalog

SAFETY SWITCHES

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D211N

H365

HU361

H361

HU362

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MCTAS-485 Terminator

FUSE

BILL OF MATERIALS

LITERATURE

LPJ Fuses 1 - 60 Amps

LPJ Fuses 70 - 600 Amps