

Integrated Power Center 2 (IPC2)

Space saving designs that save time and reduce costs





What does IPC2 stand for?

The Integrated Power Center 2 (IPC2) is a family of Square D™ products offered by Integrated Power and Control Solutions™ (IPaCS). The IPC2 product line, includes free-standing front- and rear-aligned equipment available in multiple enclosure options, including NEMA® 1, NEMA 1 with driphood, and NEMA 3R.

These solutions increase the flexibility of our integrated equipment offer, providing you options for increasingly diverse applications, including retail, commercial, healthcare, education, and industrial.

Less and less square footage is being allocated in electrical rooms for consulting engineers these days. At the same time, there is also more pressure than ever to complete building projects fast, so building owners can start collecting return on their investment and reduce their payback period. This means less space and less time for the electrical distribution infrastructure installation.

Integrated line-ups are configured based upon customer-specific requirements. Electrical distribution equipment and building controls are factory-installed and pre-wired in a controlled environment saving valuable material handling and installation time at the job site. Close coupling between sections eliminates additional material, including wire, conduit, and fittings. And, because components are stacked, there is a reduced amount of floor and wall space required.

All in all, the IPC2 is an efficient, cost-effective solution. IPC2 line-ups can be applied throughout your facility wherever multiple panelboards, transformers, and/or lighting contactors are installed in close proximity.



The most trusted name in the industry for quality, service, and value.

IPC2 stands for Savings

Improved floor and wall space required

- Panels, transformers, contactors, automatic transfer switches, individually-mounted breakers, and meters can be configured, reducing the overall footprint and saving valuable floor and wall space.

Quick on-site installation

- All equipment is factory mounted, assembled, and cabled inside the enclosure(s), meaning installation can take hours rather than days.
- Contractor labor risk is minimized due to a reduction in installation hours.

Reduced material costs and handling

- There are fewer items to receive, inventory, retrieve, and install.
- Wiring between internal components of the section(s) is done in the factory, saving labor and eliminating conduit, wire, and fittings.

Saves design time

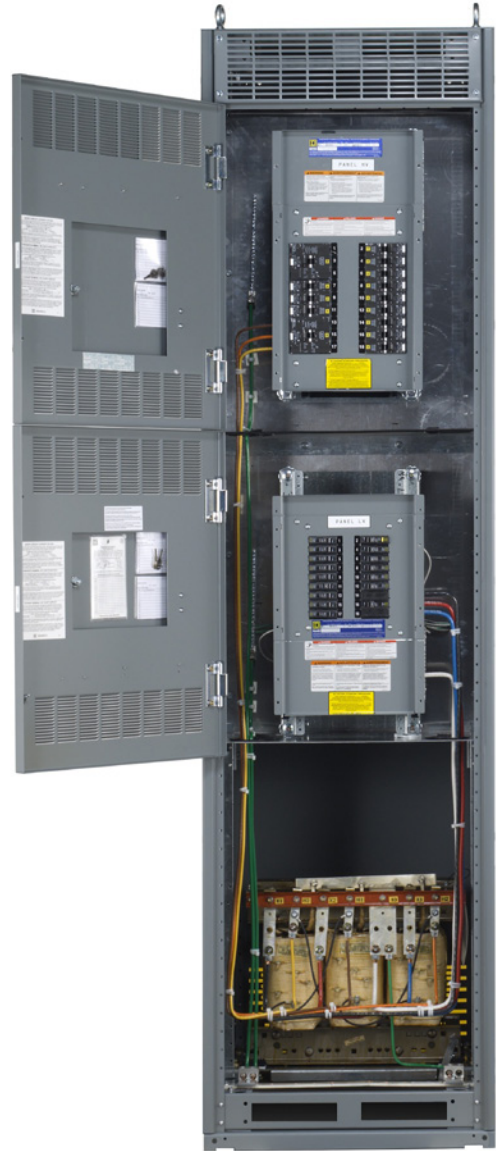
- Customer-specific designs can be standardized for multiple locations which optimizes installation performance.

Complies with NEC and UL requirements

- IPC2 equipment is designed and manufactured to comply with the National Electric Code® (NEC) and UL® requirements.
- IPC2 equipment is seismically certified to ICC ES AC 156 seismic testing protocol.
- Electrical distribution equipment is factory assembled and tested in a controlled factory environment, ensuring the highest quality standards.

Flexible conduit entry and/or exit

- The IPC2 product line provides the flexibility to enter and/or exit the section from either the top or bottom, saving installation time and materials.



IPC2 stands for Innovative Design

The IPC2 transformer combo was the first member of the IPC2 family, and is ideally suited for projects that have both 480Y/277V and 208Y/120V requirements. The panels and transformer are installed and pre-wired at the factory in a single enclosure, eliminating conduit, wire, and fittings. And because the IPC2 transformer combo is shipped as an integrated system, there are fewer pieces to receive, manage, and install, dramatically reducing installation time and material handling costs.

Improves floor and wall space requirements

Installing an IPC2 transformer combo configuration reduces the required floor and wall space by 40 percent or more when compared to a traditional stick-built installation.

Standard construction

- Hinged panelboard access door with keyed door lock
- Hinged panelboard wire gutter access door
- Factory-installed power cables
- Top and bottom conduit entry/exit space available
- Available as a stand-alone solution or can be close-coupled to Square D:
 - Integrated Power Center 2 (IPC2)
 - Integrated Power Center (IPC)
 - Modular Panelboard System (MPS)
 - QED Switchboards

Award-winning design

Recognized by the industry for its innovative space-savings and labor-savings design, the IPC2 Transformer Combo received two prestigious awards:

- The 2006 INNOVATION Award, given by Electrical Contracting Products magazine
- The 2006 Product of the Year Gold Award, given by Consulting-Specifying Engineer magazine



> Sections can be fed from the top or bottom.



IPC2 stands for **Flexibility**

For more complex designs, the IPC2 family allows for the customer-designed solutions with the integration of a variety of products, including electrical distribution equipment, HVAC controls, lighting controls, automatic transfer switches, power quality, power, conditioning products, surge suppression, and building management systems.

Key features of the IPC2 design

- "Panels over Panels" configurations
- "Panels over Transformer" configurations
- Integrated automatic transfer switches
- Freestanding construction that can be close-coupled to QED switchboards
- Front- and rear-aligned sections, available in multiple widths
- Available in NEMA 1, NEMA 1 with driphood and NEMA 3R construction
- Powerlink™ lighting control solutions
- PowerLogic™ power monitoring and control

As with all of our integrated solutions, IPC2 line-ups are shipped to the site pre-wired, fully assembled, pre-tested, and ready to install.

IPC2 line-ups provide maximum flexibility to meet customers' specifications. Sections are 91.5" high with varying widths and depths, depending on section configurations. Refer to the IPC2 Application Guide (document number 2230DB0601R03/09) for available interior options.

IPC2 stands for **Quality Construction**

UL 891 - deadfront switchboard

- Enclosure dimensions
 - All sections are 91.5" high
 - Standard widths: 24", 30", 36", 42", and 48"
 - Standard depths: 24" and 36"
- Corner sections are available
- Seismically qualified to meet IBC and ASCE 7 requirements
- Panelboard with door-in-door construction
 - Panelboard deadfront access door with keyed door lock
 - Hinged wire gutter access door with 135° door swing
- Factory-installed power cables
- IPC2 construction can be close-coupled to QED switchboards, Integrated Power Centers (IPC), and Modular Panelboard Systems (MPS)

Enclosure Options

- NEMA 1 indoor
- NEMA 1 with driphood
- NEMA 3R rainproof

Equipment Space

- Lighting contactors
- Building management systems
- Space for third-party equipment

Lighting Contactors

- Electrically or mechanically held
- 8903 Type L 20 A/30 A 2-12 pole
- 8903 Type S 30 A-200 A 2-4 pole
- Contactor options
 - Unwired — mounted in cell only
 - Line side wired — line side wired to branch breaker
 - Fully wired — line side wired to branch breaker; load side wired to terminal blocks

PowerLogic Monitoring/Metering

- Energy Meters — EM4800, BCM, BCPM
- Power meters — PM820, PM850, PM870
- Circuit Monitors — CM4000T
- System Display Meters — SDMs, MDMs

Panelboards

- NQ 600 A MLO max. and 600 A Main Breaker max.
- NF 600 A MLO and 600 A Main Breaker max.
- NF Powerlink 600 A MLO max. and 600 A Main Breaker max.
- I-Line™ 1200 A MLO max. and 1200 A Main Breaker max.
- Panelboard options
 - TVSS units
 - Subfeed circuit breaker
 - Subfeed lugs
 - Thru-feed lugs
 - Handle lockoffs
 - Key lock for panelboard access doors
 - Non-linear panelboards (200% neutral)
 - Branch circuits wired to terminal blocks (60 A max)

Transformers

- Energy Efficient
 - 15 kVA–300 kVA three phase 150 °C Rise
 - 15 kVA–167 kVA single phase 150 °C Rise
- K-4 and K13 non-linear
 - 15 kVA–225 kVA three phase 150 °C Rise
- Copper windings are available
- 80 °C and 115 °C rise transformers available

Automatic Transfer Switch

- 600 A 3P maximum
- Open transition
- Options include:
 - Programmable engine exerciser
 - Two utility and two generator auxiliary contacts
 - Strip heater with thermostat
 - Connectivity module (Ethernet TCP/IP network)

Individually-Mounted Circuit Breaker

- 15 A-1200 A two-pole and three-pole circuit breaker

IPC2 stands for **Reliability**

While integrating distribution equipment in a common enclosure is a simple concept, it requires extensive thermal, short circuit current, and seismic testing to assure applicable codes and standards are met. You can be confident that Square D integrated products have met all applicable codes and standards, including:

- cUL Listed
- UL 891 — Deadfront Switchboards
- UL 508A — Industrial Enclosures
- C22.2 - No. 244 — CSA Switchboards
- NFPA 70NEC — 2005 Edition
- ICC ES AC 156 — Seismic Acceptance Criteria

Square D IPaCS has a long history of providing integrated electrical distribution and control solutions. More than 30 years ago the company began manufacturing the W.A. Brown & Son Brown Box, the early version of the current IPC solution. In 2001, the W.A. Brown Electrical Controls Division became Powerbox Solutions LLC, a wholly owned subsidiary of Schneider Electric.™ In early 2005, as a fully integrated member of the Schneider Electric family, our name was changed to Square D Integrated Power and Control Solutions (IPaCS) to better reflect our capabilities and direction.



IPC2 stands for **The Right Solution for Your Application**

With over 50 different IPC2 section configurations, including stacked transformers and corner units, we have a solution to fit your needs! Refer to the IPC2 Application Guide for detailed descriptions as well as available interiors for each section.

Today, IPaCS offers the industry's most powerful combination of innovative products, electrical control expertise, technical service, and support. Why look to anyone else for your electrical equipment needs when you can rely on Square D, the most trusted name in the industry for quality, service, and value.

With an IPC2 solution, let us become your single point of contact for your entire electrical system requirements.



For more information contact your local Schneider Electric office, call **1-800-868-9662**, or, visit **www.schneider-electric.us/go/ipacs**

Schneider Electric USA

1415 S. Roselle Road
Palatine, IL 60067
Tel: 847-397-26 00
Fax: 847-925-7500
www.schneider-electric.com/us

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

☒

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 E0503, 504, 505, & 506.

c: Kelvin Patel
Kpatel@cannondesign.com

☐ Furnish as Submitted

☐ Furnish as Noted

☐ Rejected

☒ ***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.

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](tel:314.425.8797) • M
cannondesign.com

SUBMITTAL IDENTIFICATION SHEET

To be completed by Contractor/CM

PROJECT NAME	
ADDRESS	
NUMBER	
OWNER	
ARCHITECT / ENGINEER	
SUBMITTED BY	
CONTRACTOR / CM SUBMITTAL NO.	CANNON DESIGN SUBMITTAL NO.
DRAWING / DETAIL REFERENCE	SPECIFICATION SECTION / PARAGRAPH
MANUFACTURER / SUPPLIER	ITEM / PRODUCT ID
REQUIRED DATE	PRIORITY
CRITICAL	☐

To be completed by Reviewer

CANNON DESIGN SUBMITTAL NUMBER
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.

ITEM BEING SUBMITTED (check only one)

- ☐ Shop Drawings ☐ Certification / Qualifications ☐ Coordination Drawing
☐ Samples ☐ Record Documents ☐ Calculations
 (_____ copies) ☐ Product Data ☐ Schedules
☐ LEED Submittal ☐ 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 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.

Ry:

By:
Devin D. Gates

REVIEWED BY	DATE

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

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:

☒ 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:

☒ For Your Review & Comment

☐ Approved As Noted

☒ For Approval

☐ Returned For Corrections

☐ For Your File

☐ Approved As Submitted

☐ As Requested

☐

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



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2510FG

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