Read and retain for future reference

Power Module™ Switch Elevator Disconnect

Instruction Leaflet

COOPER Bussmann
3A1341RevB

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For more information, visit the Cooper Bussmann online at
www.cooperbussmann.com/DatasheetsEle for Data Sheet #1145

DANGER

Hazardous Voltage

Will cause severe injury or death.

Working on or near energized circuits poses a serious risk of electrical shock. De-energize all circuits before installing or servicing this equipment and follow all prescribed safety procedures.

IMPORTANT

These procedures do not claim to cover all possible details or variations encountered with the Power Modules™ Switch elevator disconnect. Nor do they provide for all possible conditions that may be encountered. If further information is desired or needed to address any particular issue not covered in this document, contact your Cooper Bussmann representative. The information in this document does not relieve the user from exercising good judgment, nor from using sound safety practices.

Note: Because Cooper Bussmann has a policy of continuous product improvement, we reserve the right to change design specifications without notice. Should a conflict arise between the general information in this document and the contents of drawings or supplementary material, or both, the latter shall take precedence. For the latest version of this Instruction Leaflet, download "Instruction Leaflet" from the Cooper Bussmann website at: www.cooperbussmann.com/PowerMod.

The contents of this Instruction Leaflet are not part of, nor do they modify, any prior or existing agreement, commitment or relationship. The Cooper Bussmann terms and conditions of sale constitute the entire obligation of Cooper Bussmann. The warranty in the terms and conditions of sale is the sole warranty of Cooper Bussmann. Any statements in this document do not create new warranties or modify any existing warranty.

QUALIFIED PERSON

For the purpose of this Instruction Leaflet, a qualified person:

(a) is familiar with the subject equipment and the hazards involved with their application, use, administration and maintenance.

(b) is trained and authorized to de-energize, clear, ground, and tag circuits and equipment in accordance with established safety practices.

(c) is trained in the proper care and use of personal protective equipment such as rubber gloves, hard hat, safety glasses or face shields, arc flash clothing, etc., in accordance with established safety practices.

(d) is trained to render first aid.

(e) has received safety training to recognize and avoid the hazards involved.

(f) has the skills and knowledge pertaining to the construction and operation of this equipment and its installation.

Signal Words

The signal words “DANGER,” “WARNING,” “CAUTION” and “NOTICE” (along with their assigned symbol) throughout this manual indicate the degree of hazard the user may encounter.

These symbols and words are defined as:

DANGER: Indicates a hazardous situation which, if not avoided, will result in death or serious injury.

WARNING: Indicates a hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION: Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

NOTICE: Indicates a hazardous situation which, if not avoided, could result in property damage.

Safety Concerns

The following are important safety precautions that Power Modules™ Switch elevator disconnect users should observe at all times. This summary is not comprehensive. It is assumed the Power Modules Switch elevator disconnect user will follow standard safety precautions for working in an electrical environment. For more information on safety precautions and procedures, consult the following sources:

Cooper Bussmann Safety BASICs™ Handbook for Electrical Safety, Edition 2, 2005.

Websites:

National Fire Protection Association (NFPA): www.nfpa.org.

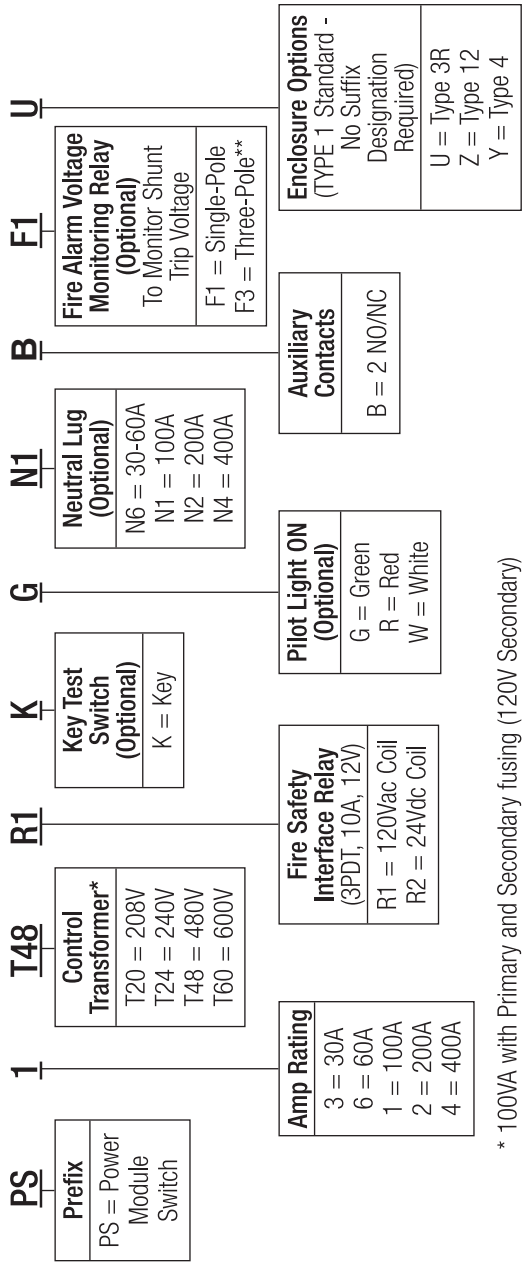
Underwriters Laboratories (UL): www.ul.com.

National Electrical Manufacturers Association (NEMA): www.nema.org.

International Electrotechnical Commission (IEC): www.iec.ch.

Catalog Number System

The following catalog numbering system defines a Power Module Switch construction.



Transformer Fuse Table

Power Module Voltage/ Transformer Voltage	Primary Fuse (amps)	Secondary Fuse (amps)
208/120	FNQ-R-2	FNM-1 1/4
240/120	FNQ-R-2	FNM-1 1/4
480/120	FNQ-R-1	FNM-1 1/4
600/120	FNQ-R-1	FNM-1 1/4

Lug Torque Specifications (Lb-In)

Lugs*	30A PS	60A PS	100A PS	200A PS	400A PS
MCCB Lug Torque	50	50	50	200	275
Fuse Lug Torque	25	45	120	275	275
Neutral Lug Torque	35	45-120	120	275	500
Ground Lug Torque	35	45	50	375	375

* Specifications only apply to mechanical (screw) lugs. Attaching lugs and accessories to these devices may require other torque specifications.

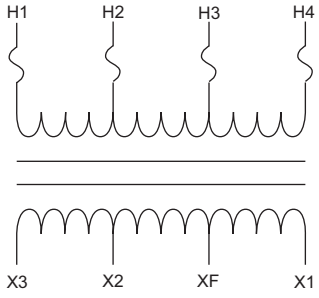
Connection Table

Single Output - Fuse Installed

Primary		Secondary			
Volt	Term.	Volt	Term.	Volt	Term
200	H4-H3	23	XF-X2	110	XF-X1
208	H4-H3	24	XF-X2	115	XF-X1
220	H4-H2	23	XF-X2	110	XF-X1
230	H4-H2	24	XF-X2	115	XF-X1
240	H4-H2	25	XF-X2	120	XF-X1
440	H4-H1	23	XF-X2	110	XF-X1
460	H4-H1	24	XF-X2	115	XF-X1
480	H4-H1	25	XF-X2	120	XF-X1

Note: If both outputs are used simultaneously, fusing should be done off of the transformer, with X3 replacing XF.

Move Lead H to Select Input Voltage



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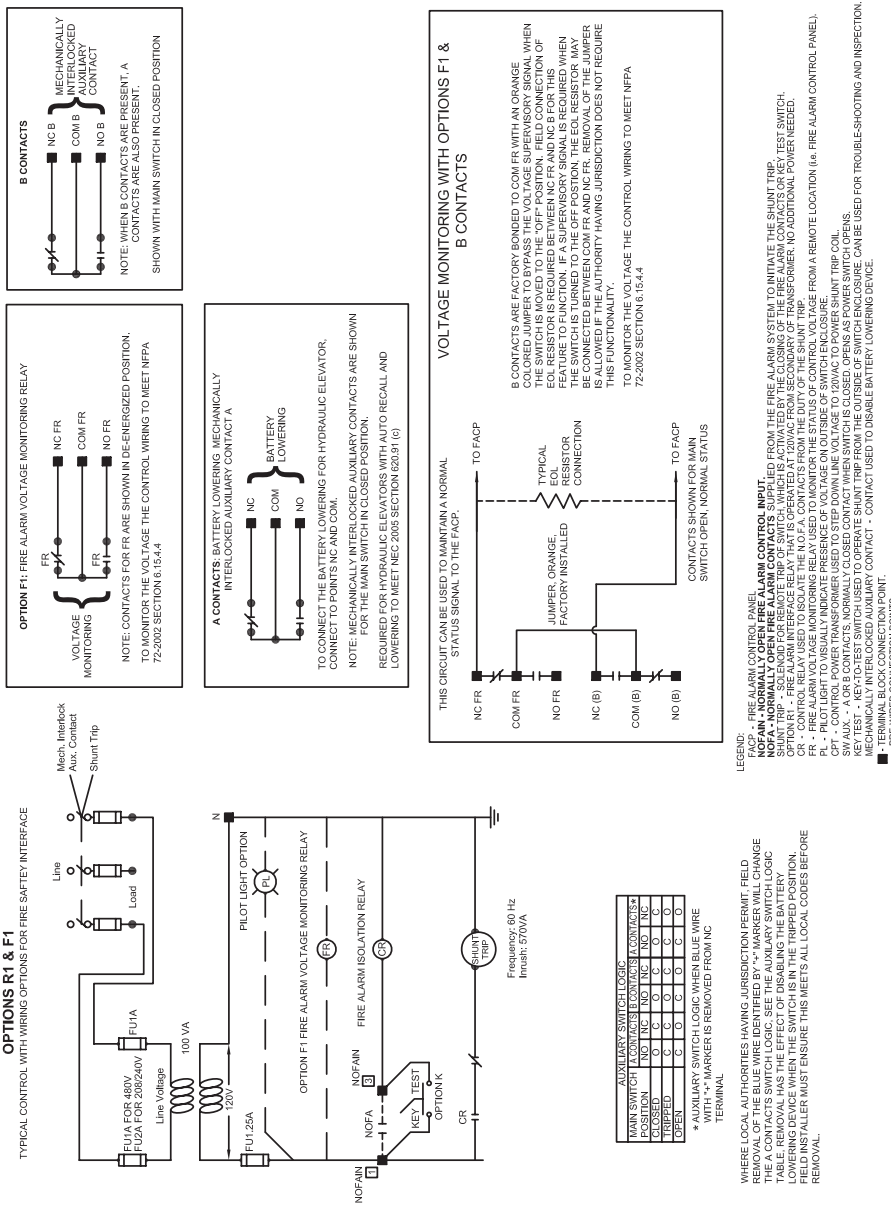
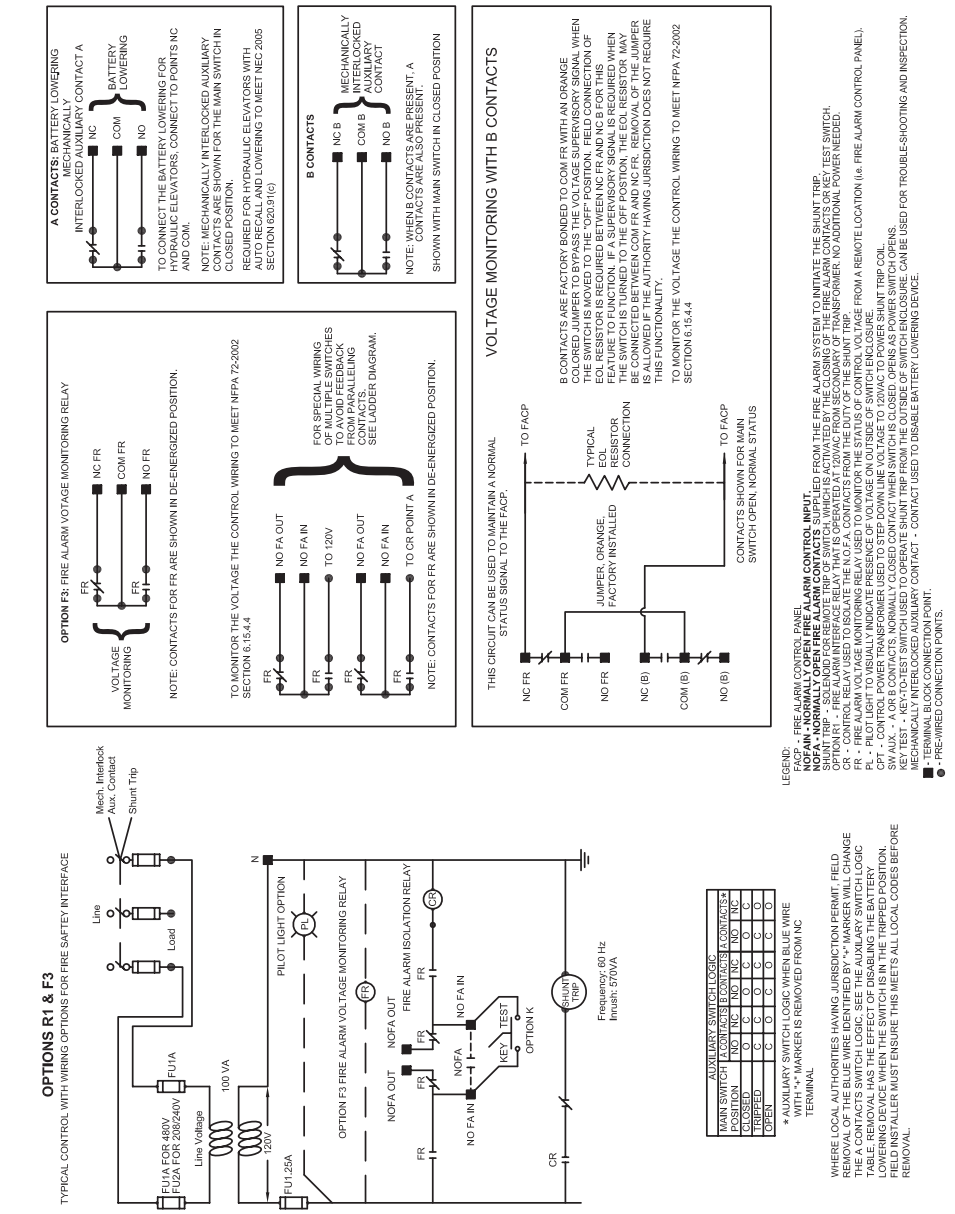
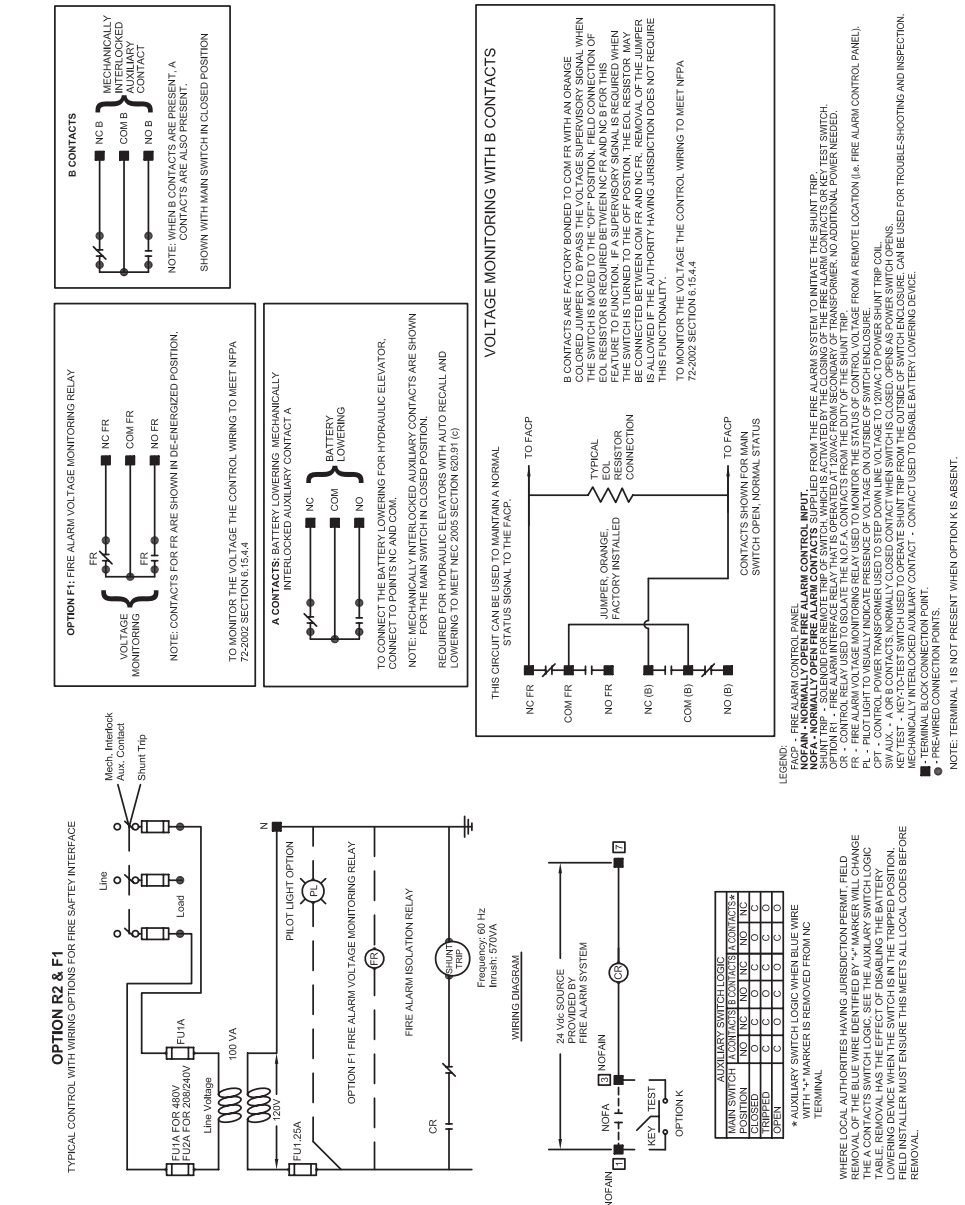
R1 & F1 Options



R1 & F3 Options



R2 & F1 Options



⚠ DANGER **Electrical Shock Hazard**

Electrical equipment may contain hazardous voltages. These can cause electrical shock, burn or death.
Only qualified personnel should perform procedures involving electrical equipment. Always properly ground equipment and lockout electric power (de-energize) before accessing electrical equipment and enclosures. All deadfronts and other shielding must be in place before energizing this disconnect switch. Take note of and follow all safety instructions in this Instruction Leaflet.

Maintenance

To help assure proper operation of the Cooper Bussmann Power Module Switch, all components should be tested and inspected on an annual basis by a qualified person. Cooper Bussmann suggests the following*:

Testing

- Performing these steps helps verify the Power Module Switch is properly operating. If you are unable to successfully completed these steps, contact Cooper Bussmann.
- Make sure the system is energized and turned ON.
- Activate the fire alarm system contacts for shunt trip. (A fire alarm technician may be required for this step.) If the Power Module Switch has a key test switch, use it to shunt trip the unit without activating the fire alarm system.
- Shunt trip will energize the fire alarm isolation relay and close contact points 4 and 7.
- Closuring relay points 4 and 7 will energize the shunt trip coil, opening the switch contacts, and actuating the switch and handle into the TRIP position.
- Verify that power is disconnected and the handle is in the TRIP position.
- Move the handle position to RESET, then allow handle to assume the OFF position.
- Move the handle from the OFF position to the ON position.
- Verify that power is restored.

Inspection

- Keep switch exterior and interior clean. Always follow prevailing safety rules when servicing this product throughout the year.
- Periodically check lug torque values and keep them in specification. The chart on page 6 contains the torque values for the various switch amp ratings.
- Preventative maintenance should include a thermal-scan to uncover any portion generating excessive heat that indicates an underlying problem.
- Any unexpected temperature increase, not related to load variations or ambient temperature could signal a lug torque issue.
- Maximum temperature at any lug should never exceed 75°C under any operating condition or load.

* Before performing any inspection or testing, notify affected building occupants that the elevator is being taken out of service.

NOTES

Cooper Bussmann: Leading the Industry in Downtime Reduction, Workplace Safety & Code Compliance Solutions

Customer Assistance

Customer Satisfaction Team

The Cooper Bussmann Customer Satisfaction Team is available to answer questions regarding Cooper Bussmann products and services. Calls should be made Monday – Friday, 8:00 a.m. – 4:30 p.m. for all US time zones.

The Customer Satisfaction Team can be reached via:

- Phone: 636-527-3877
- Toll-free fax: 800-544-2570
- E-mail: busscustsat@cooperindustries.com

Emergency and After-Hours Orders

To accommodate time-critical needs, Cooper Bussmann offers emergency and after-hours service for next flight out or will call. Customers pay only standard price for the circuit protection device, rush freight charges and a modest emergency fee for this service. Emergency and after-hours orders should be placed through the Customer Satisfaction Team. Call:

- Monday – Friday, 8:00 a.m. – 4:30 p.m. Central Time 636-527-3877
- After hours 314-995-1342

Application Engineering

Application Engineering assistance is available to all customers. The Application Engineering team is staffed by degreed engineers and available by phone with technical and application support Monday – Friday, 8:00 a.m. – 5:00 p.m. Central Time.

Application Engineering can be reached via:

- Phone: 636-527-1270
- Fax: 636-527-1607
- E-mail: fusetech@cooperindustries.com

Services

- Engineering: electrical system review, arc-flash hazards, selective coordination, labeling requirements
- Training: electrical safety and safety programs, code compliance
- Testing: component testing for agency certifications

Contact us for more information on services:

- Phone: 636-207-3294
- E-mail: services@cooperindustries.com

Online Resources

Visit www.cooperbussmann.com for the following resources:

- Product cross reference
- OSCAR™ 2.0 compliance software
- Selective coordination application materials
- Arc-flash calculator
- Training modules

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