



# Certificate of Compliance

Certificate Number: LR 84625-1

Revision: LR 84625-9

Date Issued: December 9, 1994

Issued To: Siemens Energy & Automation, Inc.  
Circuit Protection & Controls Div.  
3496 Montreal Industrial Way  
Tucker, GA 30084

*The products listed below are eligible to bear the CSA Mark.*

Issued By: C. Law, P. Eng.  
Toronto, ON Canada

Signature

CLASS 4652 04 - SWITCHES - Miscellaneous

## PRODUCTS

Miscellaneous switches, open type device, 30A and 60A; 240V and 600V ac, 50 hp max, fused and unfused, Series FK with suffixes.

## APPLICABLE REQUIREMENTS

|                   |        |   |                              |
|-------------------|--------|---|------------------------------|
| CAN/CSA-C22.2 No. | 4-M89  | - | Enclosed Switches            |
| CAN/CSA-C22.2 No. | 14-M91 | - | Industrial Control Equipment |



# Descriptive and Test Report

Moncton ■ Montréal ■ Toronto ■ Winnipeg ■ Edmonton ■ Vancouver ■ Brussels ■ Tokyo ■ Hong Kong

REPORT NO: LR 84625-1

**Edition 5:** November 18, 1991; Application No LR 84625-5 - Rexdale  
Issued by C. Law, P. Eng.

Pages Replaced: Report Reissued  
Attachments Replaced: Appendix A (Pages 3A, 9, Fig 6, Page 10,  
Ill 8, T1-3)  
Attachments Added: Appendix A (Page 11, Fig 7, T3-1)

**Edition 6:** June 22, 1992; Application No LR 84625-6 - Rexdale  
Issued by C. Law, P. Eng.

Pages Replaced: Report Reissued  
Appendix A Replaced/Added: 1, 3A/3B

**Edition 7:** March 11, 1993; Application No LR 84625-7 - Rexdale  
Issued by C. Law, P. Eng.

Pages Replaced: Report Reissued  
Pages Replaced (Appendix A): Page 10 of Appendix A  
Attachment Added: Appendix C (10 Pgs.)

**Edition 8:** August 10, 1993; Application No LR 84625-8 - Rexdale  
Issued by C. Law, P. Eng.

Pages Replaced: 1, 3, 4, 6

**Edition 9:** December 9, 1994; Application No LR 84625-9 - Rexdale  
Issued by C. Law, P. Eng.

Pages Replaced/Added: Report Re-Issued

Certificate of Compliance has been issued.

Contents: Pages - 1 to 5  
Attachments - Appendices A, B and C



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MARKINGS

The submitter's name, catalogue number, wire connector, wire range and torque requirement and CSA Monogram appear on labels secured permanently to the front of the subject devices. For details refer to Appendix A attached.

ALTERATIONS

None required.

FACTORY TESTS

(Samples selected at random, a minimum of 1 percent of production, but not less than 1 sample per batch). The equipment at the conclusion of manufacture, before shipment, shall withstand for one min, without breakdown, the application of twice the max rated voltage plus 1000V ac between;

- (a) Live parts and grounded metal parts, switch closed;
- (b) Live parts of opposite polarity, switch closed;
- (c) Line and Load terminals, switch open.

As an alternative, a potential 20 percent higher may be applied for one sec.

Warning: The factory test(s) specified may present a hazard of injury to personnel and/or property and should only be performed by persons knowledgeable of such hazards and under conditions designed to minimize the possibility of injury.

DESCRIPTION

Miscellaneous switches, open type device 30A and 60A; 240V and 600V; 50 hp max fused and unfused, Series FK with suffixes.

Notes:

1. Open-type devices are Certified, as components, for use only in other Certified equipment where the suitability of the final combination is to be determined by the Canadian Standards Association. Ratings appear in Appendix A.

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2. May be complete devices with catalogue Suffix FK or as component parts with catalogue Suffix FCK or FCRK load base assemblies, catalogue Suffix MCS line base assemblies, and catalogue Number TMK606 wire connector.
3. The subject device may have factory installed auxiliary contact switches, kit Cat Nos MCSAKR136, MCSAKR236, MCSAKL136 and MCSAKL236.

Application LR 84625-9: This report records revised markings.

Application LR 84625-8: This report records addition of component handle operators, Cat No FDH10, FDH104, FDH20 and FDH204 to the subject miscellaneous switches. For detailed description of the handle operator, refer to UL Inc. File E57501, Vol 1, Sec 21, attached to Report LR 84625-5, Appendix C.

Application LR 84625-7: This report records general updating of UL Inc., File E121152, Vol. 1, Sec. 1, page 10 and addition of addition of auxiliary contact switches, kit Cat Nos MCSAKR136, MCSAKR236, MCSAKL136 and MCSAKL236. Details refer to UL Inc File E121152, Vol. 1, Sec 2, attached as Appendix C.

Application LR 84625-6: This report records general updating of UL Inc. File E121152, Vol 1, Sec. 1, Pages 1 and 3A and addition of fuse clip assembly Cat Nos as new Page 3B in Appendix A.

Application LR 84625-5: This report records:

1. General updating of Report LR 84625-1. Changes are reflected in UL Inc. File E121152, Vol 1, Sec 1, pages 3A, 9, Fig 6, pages 10, 11, Fig 7, Ill 8, pages T1-3 and T3-1.
2. Addition of factory location - Drummondville, Quebec. For detailed address refer to Certification Record.

Application LR 84625-4: This report records general updating of Report LR 84625-1. Changes are reflected on UL Inc. File E121152, Vol 1, Sec 1, (Pgs 3, 4, Ill 3, Ill 4 and Ill 5) attached as Appendix A.

Application LR 84625-3: This report records minor alternate construction of the subject device and addition of OFCK fuse kit, Page 10 of U.L. Inc., File E121152, Vol. 1, Sec. 1 (Appendix A).

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Application LR 84625-2: This report records change of series prefixes and minor constructional changes.

The subject device is a disconnect switch intended for use in motor control centres or general purpose combination starters under the following conditions:

1. These devices should be mounted in equipment which provides a suitable overall enclosure.
2. These switch units have been tested with the units mounted on a vertical flat surface with the line side of the switch positioned at the top. Suitability of these units in all other positions shall be determined.
3. The voltage and horsepower ratings specified in table of catalogue numbers may be assigned to the switch unit when it is installed in an enclosure or compartment if the following are met:
  - Minimum inside dimensions of enclosure or compartment are 17-1/4 in long by 7-3/4 wide by 3-3/4 in deep. These dimensions are for heating considerations only.
4. The 30 and 60A switch units have been investigated without fuse clips as motor circuit switches.
5. The suitability of any other operating handle linkage provided beyond the switch unit handle shall be determined. Consideration should be given to performing a no-load endurance test.

In detailed description of the switch units, refer to UL Inc. File E121152, Vol 1 Sec 1 dated 6-15-89 attached as Appendix A.

No further description considered necessary.

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TESTS

Application LR 84625-1: The following tests were satisfactory performed at the submittor's laboratory at Tucker GA and were witnessed by CSA representative.

1. Temperature on 60A sample.
2. Overload on 60A sample.
3. Endurance on 60A sample.
4. Dielectric on 60A sample.
5. Overload (50 hp rating).

Test data attached as Appendix B.

Tests performed by UL Inc. Laboratory and recorded in test record No 1 File E121152 were considered satisfactory, no further tests required.

Application LR 84625-2: No tests required.

Application LR 84625-3: Short circuit test performed by U.L. Inc. laboratory at 100kA, 600V on representative sample was considered satisfactory (refer to Appendix A). No further tests required.

Application LR 84625-4: No tests required.

Application LR 84625-5: Short circuit test performed by UL Inc. laboratory at 10 kA, 600V on a 60A switch with over fused kit was considered satisfactory. Refer to Test T3-1 for details.

Application LR 84625-6: No tests required.

Application LR 84625-7: Endurance Test performed by UL Inc, laboratory on auxiliary switch, Cat No MCSAKR136 mounted on a switch unit was considered satisfactory. Results, refer to Test Record No 1 in Appendix C.

Application LR 84625-8: Endurance test performed on handle operator Cat No FDH10 by UL Inc. laboratory was considered satisfactory, test results refer to Test Records 1 and 3 in Appendix C of Report LR 84625-5.

Application LR 84625-9: No tests required.

REPLACES

Page No: 6  
Page Date: March 11, 1993  
Application No: LR 84625-7

REPORT NO: LR 84625-1  
Page No: 6  
Date Issued: August 10, 1993  
Application No: LR 84625-8

Issued By: C. Law, P. Eng.

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TESTS

Application LR 84625-1: The following tests were satisfactory performed at the submittor's laboratory at Tucker GA and were witnessed by CSA representative.

1. Temperature on 60A sample.
2. Overload on 60A sample.
3. Endurance on 60A sample.
4. Dielectric on 60A sample.
5. Overload (50 hp rating).

Test data attached as Appendix B.

Tests performed by UL Inc. Laboratory and recorded in test record No 1 File E121152 were considered satisfactory, no further tests required.

Application LR 84625-2: No tests required.

Application LR 84625-3: Short circuit test performed by U.L. Inc. laboratory at 100kA, 600V on representative sample was considered satisfactory (refer to Appendix A). No further tests required.

Application LR 84625-4: No tests required.

Application LR 84625-5: Short circuit test performed by UL Inc. laboratory at 10 kA, 600V on a 60A switch with over fused kit was considered satisfactory. Refer to Test T3-1 for details.

Application LR 84625-6: No tests required.

Application LR 84625-7: Endurance Test performed by UL Inc, laboratory on auxiliary switch, Cat No MCSAKR136 mounted on a switch unit was considered satisfactory. Results, refer to Test Record No 1 in Appendix C.

Application LR 84625-8: Endurance test performed on handle operator Cat No FDH10 by UL Inc. laboratory was considered satisfactory, test results refer to Test Records 1 and 3 in Appendix C of Report LR 84625-5.