



Certificate of Compliance

Certificate: 70170959 **Master Contract:** 271899
Project: 80203580 **Date Issued:** 2024-04-29
Issued to: RINGSPANN GmbH
Schaberweg 30-34
Bad Homburg, Hesse 61348
Germany
Attention: Achim Mayer

The products listed below are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US or with adjacent indicator 'US' for US only or without either indicator for Canada only.



Issued by: Azad Hacika
Azad Hacika

PRODUCTS

Class 3211 07 INDUSTRIAL CONTROL EQUIPMENT - Miscellaneous Apparatus

Class 3211 87 INDUSTRIAL CONTROL EQUIPMENT - Miscellaneous Apparatus - Certified to US Standards

Electromechanical Brake Systems Types:

Model(s)	Current (A)	Duty Cycle	Enclosure Type	Frequency (Hz)	Power (W)	Voltage (VAC)
DH 012 FEM-440	0.6	Max. 600 switches / hour (3 seconds ON, 3 seconds OFF)	3R	50/60	15	110..120
DH 012 FEM-450	0.6	Max. 600 switches / hour (3 seconds ON, 3 seconds OFF)	3R	50/60	15	230..240
DV 020 FEM-460	0.6	Max. 600 switches / hour (3 seconds ON, 3 seconds OFF)	3R	50/60	15	230..240

Electromechanical Brake Systems:



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Model(s)	Current (A)	Duty Cycle	Enclosure Type	Frequency (Hz)	Power (W)	Voltage (VAC)
EV/EH 018 FEM/EFM-240	0.5	360 switches / hour (5 seconds ON, 5 seconds OFF)	3R	50/60	15	220...240
EV/EH 018 FEM/EFM-480	0.5	360 switches / hour (5 seconds ON, 5 seconds OFF)	3R	50/60	30	380...480
EV/EH 024 FEM/EFM-240	0.6	360 switches / hour (5 seconds ON, 5 seconds OFF)	3R	50/60	20	220...240
EV/EH 024 FEM/EFM-480	0.5	360 switches / hour (5 seconds ON, 5 seconds OFF)	3R	50/60	20	380...480
EV/EH 028 FEM/EFM-240	0.5	360 switches / hour (5 seconds ON, 5 seconds OFF)	3R	50/60	15	220...240
EV/EH 028 FEM/EFM-480	0.5	360 switches / hour (5 seconds ON, 5 seconds OFF)	3R	50/60	20	380...480
EV/EH 038 FEM/EFM-240	0.5	360 switches / hour (5 seconds ON, 5 seconds OFF)	3R	50/60	20	220...240
EV/EH 038 FEM/EFM-480	0.6	360 switches / hour (5 seconds ON, 5 seconds OFF)	3R	50/60	25	380...480

Notes:

1. Solely electrical safety has been evaluated.
2. The type designation may have suffixes indicating mechanical details.
3. The FEM brake is of the normally closed (NC) type. The EFM brake is of the normally open (NO) type.

Electromechanical Brake Systems

Model(s)	Current (A)	Duty Cycle	Enclosure Type	Frequency (Hz)	Power (W)	Voltage (VAC)
EV/EH 018 FEM/EFM-240	0.5	360 switches / hour (5 seconds ON, 5 seconds OFF)	3R	50/60	15	220...240
EV/EH 018 FEM/EFM-480	0.5	360 switches / hour (5 seconds ON, 5 seconds OFF)	3R	50/60	30	380...480
EV/EH 024 FEM/EFM-240	0.6	360 switches / hour (5 seconds ON, 5 seconds OFF)	3R	50/60	20	220...240
EV/EH 024 FEM/EFM-480	0.5	360 switches / hour (5 seconds ON, 5 seconds OFF)	3R	50/60	20	380...480
EV/EH 028 FEM/EFM-240	0.5	360 switches / hour (5 seconds ON, 5 seconds OFF)	3R	50/60	15	220...240
EV/EH 028 FEM/EFM-480	0.5	360 switches / hour (5 seconds ON, 5 seconds OFF)	3R	50/60	20	380...480



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EV/EH 038 FEM/EFM-240	0.5	360 switches / hour (5 seconds ON, 5 seconds OFF)	3R	50/60	20	220...240
EV/EH 038 FEM/EFM-480	0.6	360 switches / hour (5 seconds ON, 5 seconds OFF)	3R	50/60	25	380...480

Notes:

1. Solely electrical safety has been evaluated
2. The type designation may have suffixes indicating mechanical details
3. The FEM brake is of the normally closed (NC) type. The EFM brake is of the normally open (NO) type

Electromechanical Brake Systems Types

Model(s)	Current (A)	Duty Cycle	Enclosure Type	Frequency (Hz)	Power (W)	Voltage (VAC)
DH 012 FEM-440	0.6	max duty cycle:600 switches / hour (3 seconds ON, 3 seconds OFF)	3R	50/60	15	110..120
DH 012 FEM-450	0.6	max duty cycle:600 switches / hour (3 seconds ON, 3 seconds OFF)	3R	50/60	15	230..240
DV 020 FEM-460	0.6	max duty cycle:600 switches / hour (3 seconds ON, 3 seconds OFF)	3R	50/60	15	230..240

Notes:

1. The type designation may have suffixes indicating mechanical details.
2. Mechanical aspects are not part of this Certification.

APPLICABLE REQUIREMENTS

CSA C22.2 No. 14-18+Upd.1 (Thirteenth Edition)(R2022) - Industrial control equipment - Thirteenth Edition; Update No. 1: June 2022

UL 508 (Eighteenth Edition; Reprint with revisions through and including July 8, 2021) - UL Standard for Safety Industrial Control Equipment



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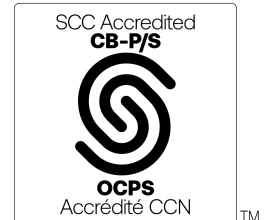
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Notes:

Products certified under Class(es) C321107 have been certified under CSA's ISO/IEC 17065 accreditation with the Standards Council of Canada (SCC). www.scc.ca





Supplement to Certificate of Compliance

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*The products listed, including the latest revision described below,
are eligible to be marked in accordance with the referenced Certificate.*

Product Certification History

Project	Date	Description
80203580	2024-04-29	Update to Report 70170959 for increase of capacitor C2, C3 from 82 uf to 100 uf and addition of alternative components.
70207409	2020-06-16	Update to Report 70170959 to add electronic Brake Systems Series EH / EV with enclosure Type 3R.
70170959	2018-11-12	Original cCSAus Certification of electronic Brake Systems Series DH/DV and Series EH/EV with enclosure Type 3R.