



Certificate of Compliance

Certificate: 70193270

Master Contract: 273325

Project: 70193270

Date Issued: 2018-08-13

Issued to: Innovative Actuation Incorporated
1-215 Traders Boulevard East,
Mississauga, ON L4Z 3K5
Canada
Attention: Frank Thormeyer

The products listed below are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US (indicating that products have been manufactured to the requirements of both Canadian and US Standards) or with adjacent indicator 'US' for US only or without either indicator for Canada only



Issued by:

Timon Chen
Timon Chen

PRODUCTS

CLASS 3221 02 - VALVES - Actuators

CLASS 3221 82 - VALVES - Actuators - CERTIFIED TO U.S. STANDARDS

NOMENCLATURE

1. Models iVQ-abcd-ef, where:
 - iV: iV stands for iVact
 - Q: Q stands for Quarter-Turn Actuator.
 - a: Size (A stands for 6Nm; B stands for 15Nm; C stands for 35Nm; D stands for 50Nm; E stands for 65Nm; F stands for 90Nm; G stands for 120Nm; H stands for 150Nm; I stands for 300Nm; J stands for 400Nm; K stands for 500 Nm; L stands for 650Nm; M stands for 1000Nm; N stands for 1500Nm; O stands for 2000Nm; P stands for 2500Nm; Q stands for 3000Nm; R stands for 3500Nm).
 - b: Manual Override (N stands for None; L stands for Lever; H stands for Handwheel; C stands for Chainwheel).
 - c: Enclosure Type (W stands for Watertight to CSA and NEMA 4X; E stands for Watertight & Explosion-proof to CSA and NEMA 4X, 7 & 9).
 - d: Local Controls (N stands for None; L stands for Local Controls).



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- e: Voltage
(A stands for 24V AC;
B stands for 24V DC;
C stands for 110V AC or 120V AC;
D stands for 220V AC or 240V AC).
- f: Service / Duty
(A stands for ON/OFF / 30% Duty;
B stands for Modulating / 30% Duty;
C stands for ON/OFF / 50% Duty;
D stands for Modulating / 50% Duty;
E stands for ON/OFF / 75% Duty;
F stands for Modulating / 75% Duty).

2. Models iVS-abcd-ef, where:

- iV: iV stands for iVact
- S: S stands for Spring Return Actuator.
- a: Size (A stands for 50Nm; B stands for 130Nm; C stands for 200Nm; D stands for 260Nm).
- b: Manual Override (N stands for None, H stands for Handwheel).
- c: Enclosure Type (W stands for Watertight to CSA and NEMA 4X;
E stands for Watertight & Explosion-proof to CSA and NEMA 4X, 7, 9).
- d: Local Controls (N stands for None).
- e: Voltage / Action on Main Power Loss
(A stands for 24V AC / Fail Clockwise on Main Power Loss;
B stands for 24V DC / Fail Clockwise on Main Power Loss;
C stands for 110V AC / Fail Clockwise on Main Power Loss;
D stands for 220V AC / Fail Clockwise on Main Power Loss;
E stands for 24V AC / Fail CounterClockwise on Main Power Loss;
F stands for 24V DC / Fail CounterClockwise on Main Power Loss;
G stands for 110V AC / Fail CounterClockwise on Main Power Loss;
H stands for 220V AC / Fail CounterClockwise on Main Power Loss).
- f: Service / Duty
(A stands for TWO POSITION / 50% Duty;
B stands for ON/OFF / 50% Duty;
C stands for Modulating / 50% Duty)

3. Models iVL-abcd-ef, where:

- iV: iV stands for iVact
- L: L stands for Linear Actuator.
- a: Size (A stands for 250N; B stands for 500N; C stands for 1000N; D stands for 2000N).
- b: Manual Override (N stands for None; H stands for Handwheel).
- c: Enclosure Type (W stands for Watertight to CSA and NEMA 4X).
- d: Local Controls (N stands for None).
- e: Voltage
(A stands for 24V AC;
B stands for 24V DC;



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C stands for 110V AC or 120V AC;
D stands for 220V AC or 240V AC).

f: Service / Duty

(A stands for On/Off / 75% Duty (1200 starts per hour) / None;

B stands for Modulating / 75% Duty (1200 starts per hour) / Hold in Last Position on Signal Loss;

C stands for Modulating / 75% Duty (1200 starts per hour) / Fail Extend Downward on Signal Loss;

D stands for Modulating / 75% Duty (1200 starts per hour) / Fail Retract Upward on Signal Loss.

LISTED MODELS:

- Quarter-turn electric valve actuators for indoor or outdoor use, enclosure type 4X and 5; rated 24V AC/DC, 110V AC or 220V AC, 60Hz, max. 1.4A; torque up to 15 Nm; 30% duty cycle for ON/OFF type. Ambient temperature range: -30C to + 65C.

Models:

iVQ-ALWN-AA	iVQ-ALWN-BA	iVQ-ALWN-CA	iVQ-ALWN-DA
iVQ-BLWN-AA	iVQ-BLWN-BA	iVQ-BLWN-CA	iVQ-BLWN-DA

- Quarter-turn electric valve actuators for indoor or outdoor use, enclosure use type 4X and 5; rated 24V AC/DC, 110V to 120V AC or 220V to 240V AC, 60 Hz, max. 15 A; torque up to 4500 Nm; 30%, 50% or 75% duty cycle for ON/OFF and Modulating type.

Models:

iVQ-CLWN-AE	iVQ-CLWN-AF	iVQ-CLWN-BE	iVQ-CLWN-BF	iVQ-CLWN-CA
iVQ-CLWN-CE	iVQ-CLWN-CF	iVQ-CLWN-DA	iVQ-CLWN-DF	iVQ-DLWN-AD
iVQ-DLWN-AE	iVQ-DLWN-AF	iVQ-DLWN-BD	iVQ-DLWN-BE	iVQ-DLWN-BF
iVQ-DLWN-CA	iVQ-DLWN-CF	iVQ-DLWN-DA	iVQ-DLWN-DF	iVQ-DNWN-AD
iVQ-DNWN-AE	iVQ-DNWN-AF	iVQ-DNWN-BD	iVQ-DNWN-BE	iVQ-DNWN-BF
iVQ-DNWN-CA	iVQ-DNWN-CF	iVQ-DNWN-DA	iVQ-DNWN-DF	iVQ-FCWN-AE
iVQ-FCWN-AF	iVQ-FCWN-BE	iVQ-FCWN-BF	iVQ-FCWN-CA	iVQ-FCWN-CB
iVQ-FCWN-CF	iVQ-FCWN-DA	iVQ-FCWN-DB	iVQ-FCWN-DF	iVQ-FHWN-AE
iVQ-FHWN-AF	iVQ-FHWN-BE	iVQ-FHWN-BF	iVQ-FHWN-CA	iVQ-FHWN-CB
iVQ-FHWN-CF	iVQ-FHWN-DA	iVQ-FHWN-DB	iVQ-FHWN-DF	iVQ-HCWN-AE
iVQ-HCWN-AF	iVQ-HCWN-BE	iVQ-HCWN-BF	iVQ-HCWN-CA	iVQ-HCWN-CB
iVQ-HCWN-CE	iVQ-HCWN-CF	iVQ-HCWN-DA	iVQ-HCWN-DB	iVQ-HCWN-DE
iVQ-HCWN-DF	iVQ-HHWN-AE	iVQ-HHWN-AF	iVQ-HHWN-BE	iVQ-HHWN-BF
iVQ-HHWN-CA	iVQ-HHWN-CB	iVQ-HHWN-CE	iVQ-HHWN-CF	iVQ-HHWN-DA
iVQ-HHWN-DB	iVQ-HHWN-DE	iVQ-HHWN-DF	iVQ-JCWN-AE	iVQ-JCWN-AF
iVQ-JCWN-BE	iVQ-JCWN-BF	iVQ-JCWN-CA	iVQ-JCWN-CB	iVQ-JCWN-CF
iVQ-JCWN-DA	iVQ-JCWN-DB	iVQ-JCWN-DF	iVQ-JHWN-AE	iVQ-JHWN-AF
iVQ-JHWN-BE	iVQ-JHWN-BF	iVQ-JHWN-CA	iVQ-JHWN-CB	iVQ-JHWN-CF
iVQ-JHWN-DA	iVQ-JHWN-DB	iVQ-JHWN-DF	iVQ-KCWN-AE	iVQ-KCWN-AF
iVQ-KCWN-BE	iVQ-KCWN-BF	iVQ-KCWN-CA	iVQ-KCWN-CB	iVQ-KCWN-CF
iVQ-KCWN-DA	iVQ-KCWN-DB	iVQ-KCWN-DF	iVQ-KHWN-AE	iVQ-KHWN-AF



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iVQ-KHWN-BE	iVQ-KHWN-BF	iVQ-KHWN-CA	iVQ-KHWN-CB	iVQ-KHWN-CF
iVQ-KHWN-DA	iVQ-KHWN-DB	iVQ-KHWN-DF	iVQ-LCWN-AE	iVQ-LCWN-AF
iVQ-LCWN-BE	iVQ-LCWN-BF	iVQ-LCWN-CA	iVQ-LCWN-CB	iVQ-LCWN-CF
iVQ-LCWN-DA	iVQ-LCWN-DB	iVQ-LCWN-DF	iVQ-LHWN-AE	iVQ-LHWN-AF
iVQ-LHWN-BE	iVQ-LHWN-BF	iVQ-LHWN-CA	iVQ-LHWN-CB	iVQ-LHWN-CF
iVQ-LHWN-DA	iVQ-LHWN-DB	iVQ-LHWN-DF	iVQ-MCWN-AE	iVQ-MCWN-AF
iVQ-MCWN-BE	iVQ-MCWN-BF	iVQ-MCWN-CA	iVQ-MCWN-CB	iVQ-MCWN-CF
iVQ-MCWN-DA	iVQ-MCWN-DB	iVQ-MCWN-DF	iVQ-MHWN-AE	iVQ-MHWN-AF
iVQ-MHWN-BE	iVQ-MHWN-BF	iVQ-MHWN-CA	iVQ-MHWN-CB	iVQ-MHWN-CF
iVQ-MHWN-DA	iVQ-MHWN-DB	iVQ-MHWN-DF	iVQ-NCWN-AE	iVQ-NCWN-AF
iVQ-NCWN-BE	iVQ-NCWN-BF	iVQ-NCWN-CA	iVQ-NCWN-CB	iVQ-NCWN-CF
iVQ-NCWN-DA	iVQ-NCWN-DB	iVQ-NCWN-DF	iVQ-NHWN-AE	iVQ-NHWN-AF
iVQ-NHWN-BE	iVQ-NHWN-BF	iVQ-NHWN-CA	iVQ-NHWN-CB	iVQ-NHWN-CF
iVQ-NHWN-DA	iVQ-NHWN-DB	iVQ-NHWN-DF	iVQ-OCWN-AC	iVQ-OCWN-AD
iVQ-OCWN-BC	iVQ-OCWN-BD	iVQ-OCWN-CA	iVQ-OCWN-CD	iVQ-OCWN-DA
iVQ-OCWN-DD	iVQ-OHWN-AC	iVQ-OHWN-AD	iVQ-OHWN-BC	iVQ-OHWN-BD
iVQ-OHWN-CA	iVQ-OHWN-CD	iVQ-OHWN-DA	iVQ-OHWN-DD	iVQ-PCWN-AC
iVQ-PCWN-AD	iVQ-PCWN-BC	iVQ-PCWN-BD	iVQ-PCWN-CA	iVQ-PCWN-CD
iVQ-PCWN-DA	iVQ-PCWN-DD	iVQ-PHWN-AC	iVQ-PHWN-AD	iVQ-PHWN-BC
iVQ-PHWN-BD	iVQ-PHWN-CA	iVQ-PHWN-CD	iVQ-PHWN-DA	iVQ-PHWN-DD
iVQ-QCWN-AC	iVQ-QCWN-AD	iVQ-QCWN-BC	iVQ-QCWN-BD	iVQ-QCWN-CA
iVQ-QCWN-CD	iVQ-QCWN-DA	iVQ-QCWN-DD	iVQ-QHWN-AC	iVQ-QHWN-AD
iVQ-QHWN-BC	iVQ-QHWN-BD	iVQ-QHWN-CA	iVQ-QHWN-CD	iVQ-QHWN-DA
iVQ-QHWN-DD	iVQ-RCWN-AC	iVQ-RCWN-AD	iVQ-RCWN-BC	iVQ-RCWN-BD
iVQ-RCWN-CA	iVQ-RCWN-CD	iVQ-RCWN-DA	iVQ-RCWN-DD	iVQ-RHWN-AC
iVQ-RHWN-AD	iVQ-RHWN-BC	iVQ-RHWN-BD	iVQ-RHWN-CA	iVQ-RHWN-CD
iVQ-RHWN-DA	iVQ-RHWN-DD			

- Quarter-turn electric valve actuators for indoor or outdoor use, enclosure type 4X and 5; rated 24 V AC/DC, 110V to 120V AC or 220V to 240V AC, 60 Hz, max. 4.4 A, torque up to 120 Nm, 30% or 75% duty cycle for ON/OFF and Modulating type. Ambient temperature range: -30C to + 65C.

Models:

iVQ-ECWN-AA	iVQ-ECWN-AF	iVQ-ECWN-BA	iVQ-ECWN-BF	iVQ-ECWN-CA
iVQ-ECWN-CB	iVQ-ECWN-DA	iVQ-ECWN-DB	iVQ-EHWN-AA	iVQ-EHWN-AF
iVQ-EHWN-BA	iVQ-EHWN-BF	iVQ-EHWN-CA	iVQ-EHWN-CB	iVQ-EHWN-DA
iVQ-EHWN-DB	iVQ-GCWN-AA	iVQ-GCWN-AF	iVQ-GCWN-BA	iVQ-GCWN-BF
iVQ-GCWN-CA	iVQ-GCWN-CB	iVQ-GCWN-DA	iVQ-GCWN-DB	iVQ-GHWN-AA
iVQ-GHWN-AF	iVQ-GHWN-BA	iVQ-GHWN-BF	iVQ-GHWN-CA	iVQ-GHWN-CB
iVQ-GHWN-DA	iVQ-GHWN-DB			

- Fail-safe spring return electric valve actuators for indoor or outdoor use, enclosure type 4X and 5; rated 24V AC/DC, 110V to 120V AC or 220V to 240V AC, 60 Hz, max. 11.3A; torque up to 260 Nm; 50% duty cycle for Two Position, ON/OFF and Modulating type.



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Models:

iVS-AHWN-AA	iVS-AHWN-BA	iVS-AHWN-CA	iVS-AHWN-CB	iVS-AHWN-CC
iVS-AHWN-DA	iVS-AHWN-DB	iVS-AHWN-DC	iVS-AHWN-EA	iVS-AHWN-FA
iVS-AHWN-GA	iVS-AHWN-GB	iVS-AHWN-GC	iVS-AHWN-HA	iVS-AHWN-HB
iVS-AHWN-HC	iVS-ANWN-AA	iVS-ANWN-BA	iVS-ANWN-CA	iVS-ANWN-CB
iVS-ANWN-CC	iVS-ANWN-DA	iVS-ANWN-DB	iVS-ANWN-DC	iVS-ANWN-EA
iVS-ANWN-FA	iVS-ANWN-GA	iVS-ANWN-GB	iVS-ANWN-GC	iVS-ANWN-HA
iVS-ANWN-HB	iVS-ANWN-HC	iVS-BHWN-AA	iVS-BHWN-BA	iVS-BHWN-CA
iVS-BHWN-CB	iVS-BHWN-CC	iVS-BHWN-DA	iVS-BHWN-DB	iVS-BHWN-DC
iVS-BHWN-EA	iVS-BHWN-FA	iVS-BHWN-GA	iVS-BHWN-GB	iVS-BHWN-GC
iVS-BHWN-HA	iVS-BHWN-HB	iVS-BHWN-HC	iVS-BNWN-AA	iVS-BNWN-BA
iVS-BNWN-CA	iVS-BNWN-CB	iVS-BNWN-CC	iVS-BNWN-DA	iVS-BNWN-DB
iVS-BNWN-DC	iVS-BNWN-EA	iVS-BNWN-FA	iVS-BNWN-GA	iVS-BNWN-GB
iVS-BNWN-GC	iVS-BNWN-HA	iVS-BNWN-HB	iVS-BNWN-HC	iVS-CHWN-AA
iVS-CHWN-BA	iVS-CHWN-CA	iVS-CHWN-CB	iVS-CHWN-CC	iVS-CHWN-DA
iVS-CHWN-DB	iVS-CHWN-DC	iVS-CHWN-EA	iVS-CHWN-FA	iVS-CHWN-GA
iVS-CHWN-GB	iVS-CHWN-GC	iVS-CHWN-HA	iVS-CHWN-HB	iVS-CHWN-HC
iVS-CNWN-AA	iVS-CNWN-BA	iVS-CNWN-CA	iVS-CNWN-CB	iVS-CNWN-CC
iVS-CNWN-DA	iVS-CNWN-DB	iVS-CNWN-DC	iVS-CNWN-EA	iVS-CNWN-FA
iVS-CNWN-GA	iVS-CNWN-GB	iVS-CNWN-GC	iVS-CNWN-HA	iVS-CNWN-HB
iVS-CNWN-HC	iVS-DHWN-AA	iVS-DHWN-BA	iVS-DHWN-CA	iVS-DHWN-CB
iVS-DHWN-CC	iVS-DHWN-DA	iVS-DHWN-DB	iVS-DHWN-DC	iVS-DHWN-EA
iVS-DHWN-FA	iVS-DHWN-GA	iVS-DHWN-GB	iVS-DHWN-GC	iVS-DHWN-HA
iVS-DHWN-HB	iVS-DHWN-HC	iVS-DNWN-AA	iVS-DNWN-BA	iVS-DNWN-CA
iVS-DNWN-CB	iVS-DNWN-CC	iVS-DNWN-DA	iVS-DNWN-DB	iVS-DNWN-DC
iVS-DNWN-EA	iVS-DNWN-FA	iVS-DNWN-GA	iVS-DNWN-GB	iVS-DNWN-GC
iVS-DNWN-HA	iVS-DNWN-HB	iVS-DNWN-HC		

- Linear electric valve actuators for indoor or outdoor use, enclosure type 4X and 5; rated 110V AC or 220V AC, 60Hz, max. 1.0 A, thrust up to 2000 kgf; 75% duty cycle for ON/OFF and Modulating type. Ambient temperature range: -30C to + 65C.

Models:

iVL-AHWN-CA	iVL-AHWN-CB	iVL-AHWN-CC	iVL-AHWN-CD	iVL-AHWN-DA
iVL-AHWN-DB	iVL-AHWN-DC	iVL-AHWN-DD	iVL-BHWN-CA	iVL-BHWN-CB
iVL-BHWN-CC	iVL-BHWN-CD	iVL-BHWN-DA	iVL-BHWN-DB	iVL-BHWN-DC
iVL-BHWN-DD	iVL-CHWN-CA	iVL-CHWN-CB	iVL-CHWN-CC	iVL-CHWN-CD
iVL-CHWN-DA	iVL-CHWN-DB	iVL-CHWN-DC	iVL-CHWN-DD	iVL-DHWN-CA
iVL-DHWN-CB	iVL-DHWN-CC	iVL-DHWN-CD	iVL-DHWN-DA	iVL-DHWN-DB
iVL-DHWN-DC	iVL-DHWN-DD			



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APPLICABLE REQUIREMENTS

CSA C22.2 No. 139-1982	- Electrically Operated Valves
CSA C22.2 No. 139-10	- Electrically Operated Valves
CSA C22.2 No. 139-13	- Electrically Operated Valves
UL 429, 5 th Edition	- Electrically Operated Valves
UL 429, 7 th Edition	- Electrically Operated Valves

MARKINGS

Each unit shall bear all the required markings identified in the applicable certification report(s).