



Certificate of Compliance

Certificate: 2648610

Master Contract: 153247

Project: 80004782

Date Issued: October 07, 2019

Issued to: Rotork Controls Inc.
675 Mile Crossing Blvd
Rochester,
NY 14624
USA

Attention: Ugo Onyechi

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: W Alemayehu
Wondwossen Alemayehu

PRODUCTS

CLASS 2252 06 - PROCESS CONTROL EQUIPMENT

CLASS 2252 86 - PROCESS CONTROL EQUIPMENT (Certified to U.S. Standards)

IQ Range of Electric Valve Actuators rated 600V or less, 3 phase 50 or 60Hz, with an output speed between 18 and 230 rpm; with a maximum duty cycle of 15 min with a 25% duration factor at 33% rated output load, maximum external remote control load 120Vac, 24Vdc, 5W; maximum external load contacts 150Vac 3.5A inductive, 5A resistive, no more than 8A in total for any four contacts fitted (as standard) and no more than 8A in total for any four additional contacts (if fitted), operating ambient temperature range -50°C to +70°C. The actuator range consisting of the following model types:

Model	Rated Output Torque (max). (lbs.ft.)	Motor Locked Rotor Current (max). (A)	Motor Locked Rotor Power Factor	Rated Output Current (max).(A)
IQ10	25	11.8	0.75 - 0.90	3.7
IQ12	60	11.8	0.75 - 0.90	5.0
IQ18	80	11.8	0.78 - 0.88	4.2
IQ19	100	50.0	0.73-0.89	4.6
IQ20	150	50.0	0.73 - 0.89	13.5
IQ25	295	60.0	0.79 - 0.89	19.0
IQ35	450	95.0	0.77 - 0.93	28.0
IQ40	750	155.0	0.74 - 0.93	42.0
IQ70	1100	200.0	0.70 - 0.93	72.0



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Model	Rated Output Torque (max). (lbs.ft.)	Motor Locked Rotor Current (max). (A)	Motor Locked Rotor Power Factor	Rated Output Current (max).(A)
IQ90	1500	250.0	0.75 – 0.97	90.0
IQ91*	1000	250.0	0.59 – 0.86	80.0
IQ95	2200	200.0	0.75 – 0.89	80.0

*IQ91 is not available for 3 phase voltages below 380V

IQH Range of Electric Valve Actuators are identical to the models above except for a lengthened motor cover to accommodate the addition of a high ratio gearbox fitted directly between the motor and main housing. The actuator range consisting of the following model types:

Model	Rated Output Torque (max). (lbs.ft.)	Motor Locked Rotor Current (max). (A)	Motor Locked Rotor Power Factor	Rated Output Current (max).(A)
IQH20	55	50.0	0.73 – 0.89	13.5
IQH25	80	60.0	0.79 – 0.89	19.0
IQH35	149	95.0	0.77 – 0.93	28.0
IQH40	293	155.0	0.74 – 0.93	42.0

IQ Range of Electric Valve Actuators rated 600V or less, 3 phase 50 or 60Hz, with an output speed between 18 and 86 rpm, with a maximum duty cycle of 1200 starts per hour with a 50% duration factor at rated output modulating load, maximum external remote control load 120Vac, 24Vdc, 5W; maximum external load contacts 150Vac 3.5A inductive, 5A resistive, no more than 8A in total for any four contacts (as standard) and no more than 8A in total for any four additional contacts (if fitted), operating ambient temperature range -50°C to +70°C. The actuator range consists of the following model types:

Model	Rated Output Modulating Torque max. (lbs.ft.)	Motor Locked Rotor Current (max). (A)	Motor Locked Rotor Power Factor	Rated Output Current (max). (A)
IQM10	12.5	2.6	0.82 – 0.89	0.7
IQM12	25	4.0	0.79 – 0.90	1.3
IQM20	60	6.3	0.74 – 0.88	1.7
IQM25	112.5	10.2	0.75 – 0.83	4.2
IQM35	200	26.0	0.83 – 0.90	6.2

IQ Range of Electric Valve Actuators rated 240V or less, 1 phase 50 or 60Hz, with an output speed between 18 and 173 rpm, with a maximum duty cycle of 15 min with a 25% duration factor at 33% rated output load, maximum external remote control load 120Vac, 24Vdc, 5W; maximum external load contacts 150Vac 3.5A inductive, 5A resistive, no more than 8A in total for any four contacts (as standard) and no more than 8A in total for any four additional contacts (if fitted), operating ambient temperature range -50°C to +70°C. The actuator range consists of the following model types:

Model	Rated Output Torque max. (lbs.ft.)	Motor Locked Rotor Current (max). (A)	Motor Locked Rotor Power Factor	Rated Output Current (max). (A)
IQS12	48	20.0	0.94 – 0.98	12.0
IQS20	122	48.0	0.92 – 0.98	26.5
IQS35*	332	70.0	0.82 – 0.98	27.0

*IQ35 is not available for 1 phase voltages below or equal to 115V



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Notes:

1. The above model is permanently connected, Equipment Class I, Pollution Degree 1/2.
2. Mode of operation: Intermittent.

CONDITIONS OF ACCEPTABILITY

- (1) Thermal protection devices are installed within the motor windings. There is a facility to override these devices should the user find it necessary. The overriding of the thermal protection devices is not covered by the scope of this approval.
- (2) The scope of this approval **does not** include any safety related function or reliability of the equipment, There are variants covered by this certification that have been subjected to a separate functional safety evaluation to IEC 61508, as per report R70004934A, which is outside of the scope of this report/certification. The IQ3 SIL variants are identifiable in the markings as indicated by wiring diagram numbers starting with a 7 or 8.
- (3) For safety reasons the same voltage level must be connected to all of the actuators indication relay terminals, remote input relay terminals and digital I/O terminals(if applicable). All external circuits must be provided with insulation suitable for the rated voltage whilst considering National Regulations and Statutory Provisions. In the event that this is not possible or you are in any doubt of how to comply the user must contact the manufacturer.
- (4) The user replaceable mains (line) fuse must be an approved type acceptable to the authorities where the equipment is sold.
- (5) If at any time there is a conflict between the system safety provisions and any relevant local (national or regional) requirements, the local requirements always take precedence.
- (6) The equipment can be used to an altitude up to 5000m for variants with voltages up to 24Vdc and 480Vac~ Input Range of IQ3 models only. No user input or output facilities except for 24VDC input I/O, Mains network system allowed limited to TT, IT, TN-C-S and 3 phase/wire systems as per Annex I of 61010-1.

APPLICABLE REQUIREMENTS

- | | |
|---|--|
| CAN/CSA-C22.2 No. 61010-1-12 | - Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use, Part 1: General Requirements |
| UL Std. No. 61010-1 (3 rd Edition) | - Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use - Part 1: General Requirements |

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MARKINGS

The manufacturer is required to apply the following markings:


- Products shall be marked with the markings specified by the particular product standard.
- Products certified for Canada shall have all Caution and Warning markings in both English and French.

Additional bilingual markings not covered by the product standard(s) may be required by the Authorities Having Jurisdiction. It is the responsibility of the manufacturer to provide and apply these additional markings, where applicable, in accordance with the requirements of those authorities.

The following markings appear on the product:

1. Submitter's identification (company name and/or file number and/or registered tradename);
2. Marking on the unit that indicates the manufacturing location if the equipment is manufactured at more than one factory location. Model designation;
3. Electrical rating;
4. Date of manufacture: Month and year of manufacture or date code.
5. The products listed 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:



6. PROTECTIVE BONDING TERMINAL is identified by the IEC 60417 No 5019 symbol  , adjacent to the TERMINAL;
7. Neutral is identified by the letter "N" (for units with a non-detachable supply cord or PERMANENTLY CONNECTED EQUIPMENT).(this is indicated in the wiring diagram which accompanied each product)
8. Wiring Diagram: Marking on the unit that indicates the options that the unit has been built with.

The following additional markings are also provided:

1. The warning "DO NOT OPEN WHILST ENERGISED" ("ATTENTION:NE PAS OUVRIR SOUS TENSION");
2. TERMINAL markings: The terminals are identified numerically, terminal number identification is supplied in the form of a inlay card included within the terminal enclosure which cross references with a wiring diagram supplied with each piece of equipment