



Certificate of Compliance

Certificate: 70005763

Master Contract: 153247

Project: 80075382

Date Issued: 2021-07-09

Issued To: Rotork Controls Inc.
675 Mile Crossing Blvd
Rochester, New York, 14624
United States

Attention: Matt Cogill

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: *Wardell Dumas*
Wardell Dumas



PRODUCTS

CLASS - C225206 - PROCESS CONTROL EQUIPMENT

CLASS - C225286 - PROCESS CONTROL EQUIPMENT Certified to US Standards

Electric Valve Actuators, IQT Range, Models:

IQT125, IQT250, IQT500, IQT1000 and IQT2000: IQTF50, IQTF100, IQTF125, IQTF250, IQTF500, IQTF1000 and IQTF2000, rated 24Vdc or < 600V three/single phase 50/60Hz. 15 Minutes rated based upon a nominal 75% of rated torque.

IQT1500, IQTF1500, IQT3000 and IQTF3000, rated 24Vdc or < 600V three/single phase 50/60Hz. 15 Minutes rated based upon a nominal 50% of rated torque.

Electric Valve Actuators, IQTM Range, Models:



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IQTM125, IQTM250, IQTM500, IQTM1000 and IQTM2000: IQTFM125, IQTFM250, IQTFM500, IQTFM1000 and IQTFM2000, rated 24Vdc or < 600V three/single phase 50/60Hz. 50% duty cycle based upon 50% of modulating rated torque.

IQTM1500, IQTFM1500, IQTM3000 and IQTFM3000, rated 24Vdc or < 600V three/single phase 50/60Hz. 50% duty cycle based upon 33% of modulating rated torque.

Actuator Size		IQTF50		IQTF100		IQT125		IQT250		IQT500		IQT1000		IQT2000		IQT 3000	
Torque Nm	IQTF	50		100		125		250		500		1000		2000		3000	
	IQTM	25		50		62.5		125		250		500		1000		1000	
Supply Voltage		Current Amps	Power kW	Current Amps	Power kW	Current Amps	Power kW	Current Amps	Power kW	Current Amps	Power kW	Current Amps	Power kW	Current Amps	Power kW	Current Amps	Power kW
24 Vdc		10.0	0.24	10.0	0.24	10.0	0.24	12.0	0.29	13.0	0.32	13.0	0.32	15.0	0.36	15.0	0.36
100		2.8	0.22	1.4	0.11	3.5	0.33	4.5	0.43	4.5	0.43	4.7	0.45	5.3	0.50	6.0	0.6
110		2.5	0.22	1.3	0.11	3.2	0.33	4.1	0.43	4.1	0.43	4.3	0.45	4.8	0.50	5.4	0.6
120		2.3	0.22	1.2	0.11	2.9	0.33	3.7	0.43	3.7	0.43	3.9	0.45	4.4	0.50	5.0	0.6
200		1.4	0.22	0.7	0.11	1.7	0.33	2.2	0.43	2.2	0.43	2.4	0.45	2.6	0.50	3.0	0.6
208		1.4	0.22	0.7	0.11	1.7	0.33	2.2	0.43	2.2	0.43	2.4	0.45	2.6	0.50	3.0	0.6
220		1.4	0.22	0.7	0.11	1.7	0.33	2.2	0.43	2.2	0.43	2.4	0.45	2.6	0.50	3.0	0.6
230		1.2	0.22	0.6	0.11	1.5	0.33	1.9	0.43	1.9	0.43	2.1	0.45	2.3	0.50	2.6	0.6
240		1.2	0.22	0.6	0.11	1.5	0.33	1.9	0.43	1.9	0.43	2.1	0.45	2.3	0.50	2.6	0.6
270		1.2	0.22	0.6	0.11	1.5	0.33	1.9	0.43	1.9	0.43	2.1	0.45	2.3	0.50	2.6	0.6
380		0.7	0.22	0.4	0.11	0.9	0.33	1.2	0.43	1.2	0.43	1.2	0.45	1.4	0.50	1.6	0.6
400		0.7	0.22	0.4	0.11	0.9	0.33	1.2	0.43	1.2	0.43	1.2	0.45	1.4	0.50	1.6	0.6
415		0.7	0.22	0.4	0.11	0.9	0.33	1.2	0.43	1.2	0.43	1.2	0.45	1.4	0.50	1.6	0.6
440		0.7	0.22	0.4	0.11	0.9	0.33	1.2	0.43	1.2	0.43	1.2	0.45	1.4	0.50	1.6	0.6
460		0.7	0.22	0.4	0.11	0.9	0.33	1.2	0.43	1.2	0.43	1.2	0.45	1.4	0.50	1.6	0.6
480		0.6	0.22	0.3	0.11	0.7	0.33	0.9	0.43	0.9	0.43	1.0	0.45	1.1	0.50	1.2	0.6
500		0.6	0.22	0.3	0.11	0.7	0.33	0.9	0.43	0.9	0.43	1.0	0.45	1.1	0.50	1.2	0.6
550		0.6	0.22	0.3	0.11	0.7	0.33	0.9	0.43	0.9	0.43	1.0	0.45	1.1	0.50	1.2	0.6
575		0.6	0.22	0.3	0.11	0.7	0.33	0.9	0.43	0.9	0.43	1.0	0.45	1.1	0.50	1.2	0.6
660		0.6	0.22	0.3	0.11	0.7	0.33	0.9	0.43	0.9	0.43	1.0	0.45	1.1	0.50	1.2	0.6
690		0.6	0.22	0.3	0.11	0.7	0.33	0.9	0.43	0.9	0.43	1.0	0.45	1.1	0.50	1.2	0.6

The IQT1500 is identical to the IQT3000, only the maximum output torque rating is 1500 Nm instead of 3000 Nm.

- Standard remote control: 20-60 Vac/Vdc 5mA per input
120Vac, 12mA per input
- Options
- Actuator derived customer supply: 109 Vac, 15VA or 24 Vdc
- Remote control: 125 Vdc, 20mA input
- Negative switching: 20-60 Vac/Vdc, 5mA per input
120Vac, 12mA per input
- Analogue control – option folomatic: 0 to 5/10/20 mA or volt range
- Standard remote indication contacts: 120Vac/ 30Vdc, 5A
- Options
- Analogue position feedback 4 to 20 mA
- Analogue torque feedback 4 to 20 mA
- Auxiliary power supply 24 Vdc,1A, switching inrush 8A max



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Rated Ambient Temp $-50^{\circ}\text{C} \leq T_{\text{amb.}} \leq +70^{\circ}\text{C}$, IP68
Altitude: 2000m MAX (All Variants)
5000m MAX (No user input or output facilities except for 24VDC I/O.)

Note: If the actuator has a Shutdown Battery Pack installed, the actuator can only operate certain number of strokes when battery is in use or during mains power loss. Below is the number of strokes the battery pack can be sustained and time to recharge in reference to utilized strokes. The Shutdown Battery Pack is used only to either open or close the end-application valve once even during manual adjustment.

Size	IQT - Number of strokes	Discharging Duration (mins)	IQT Time to recharge per Stroke (mins)
IQT50	80	4	2
IQT100	72	4	2
IQT125	30	4	5
IQT250	14	4	11
IQT500	8	4	19
IQT1000	4	4	38
IQT2000	2	4	75

When the shutdown Battery Pack is installed, the actuator powered from mains shall operate as follows:

- IQT/IQTF series up to 2000 models: - 15 minutes (25% duty cycle) rated based at 60°C ambient temperature and 10 minutes (10% duty cycle) rated based at 70°C on a nominal torque of 75% of rated torque.
- IQTM/IQTFM series up to 2000 models: - 50% duty cycle rated based at 60°C ambient temperature and 20% duty cycle rated based at 70°C on a nominal torque of 50% of rated torque.

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.
- (3) The ambient temperature in the field wiring enclosure may reach 85°C when the equipment is utilized in a 70°C local ambient. This must be considered when selecting field wiring conductors.
- (4) 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



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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.

- (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) When the shutdown Battery Pack is installed, the actuator powered from mains shall operate as follows:
 - IQT/IQTF series up to 2000 models: - 15 minutes (25% duty cycle) rated based at 60°C ambient temperature and 10 minutes (10% duty cycle) rated based at 70°C on a nominal torque of 75% of rated torque.
 - IQTM/IQTFM series up to 2000 models: - 50% duty cycle rated based at 60°C ambient temperature and 20% duty cycle rated based at 70°C on a nominal torque of 50% of rated torque.
- (7) Model IQT3 series can be used to an altitude up to 5000m for variants with voltages up to 24Vdc and 480 (600)Vac~ input range, 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

CSA Standards:

CAN/CSA-C22.2 No. 61010-1-12,
UPD1: 2015, UPD2: 2016

Safety Requirements for Electrical Equipment for Measurement,
Control, and Laboratory Use, Part 1: General Requirements

UL Standards:

UL 61010-1, 3rd edition (2016)

Safety Requirements for Electrical Equipment for Measurement,
Control, and Laboratory Use - Part 1: General Requirement

MARKINGS

(see report)



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
80075382	2021-07-09	Update to Report 70005763 to cover correction to critical component list and addition of alternate components.
80059795	2020-11-09	Update to Report 70005763 to cover changes of product description and CoA for clarification.
80032579	2020-02-07	Update to Report 70005763 is to add Fail Safe Feature (battery back-up) option of the equipment under 5000m altitude. No additional evaluation or assessment required, since the "Remote Input" and "Remote Signals" of battery back-up board are utilized for 24Vdc only.
80004783	2019-12-16	Update to Report 70005763 to make the following changes for IQT3 series only; Altitude change from 2000m to 5000m only applicable to variants with voltage up to 24Vdc and 600Vac~ Input Range, no battery back-up option, no user input or output facilities except for voltages up to 24VDC I/O. No testing was conducted on Rotork Actuators, IQT3 Series due to the altitude change and adding alternate material to the primary double sleeveings in all the transformers for Model IQT3.
70185069	2019-09-23	Update to Report 70005763 is to add an optional Fail Safe Feature in the equipment, which is incorporating a battery pack to supply power in the absence of mains power. Operating conditions are modified to fit with battery pack operations.
80002415	2019-05-16	Update to Report 70005763 to cover addition of alternative model IQT1500: Variants IQT1500, IQTF1500, IQTM1500, IQTFM1500.
000070173095	2018-09-04	Update to Report 70005763 to cover incorporation of changes made as result of the RoHs assessments. Addition of optional isolating boards. Report re-issued.
000070106423	2017-11-23	Update to Report 70005763 to cover addition of new design of terminal bung /plug/socket for IQ range. Report re-issued.



000070125079	2017-03-27	Update to Report 70005763 is the introduction of an alternative motor rated at 36 Vdc for the IQT3000, single and 3 phase versions only.
000070076060	2016-09-07	Update to Report 70005763 to cover addition of the IQT3000 Actuator. Report re-issued.
000070005763	2015-09-14	Original Certification of Electric Valve Actuators, IQT Range, Models, IQT125, IQT250, IQT500, IQT1000 and IQT2000: IQTF50, IQTF100, IQTF125, IQTF250, IQTF500, IQTF1000 and IQTF2000 for Ordinary locations. Applicable Requirements: CAN/CSA-C22.2 No. 61010-1-12 & UL Std. No. 61010-1 (3rd Edition).