

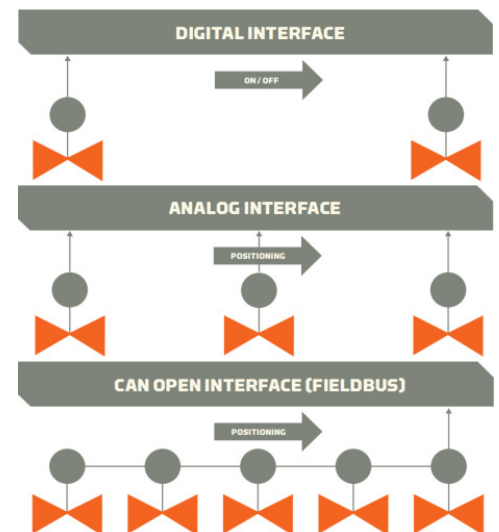
# QUARTER-TURN ACTUATORS

QT70/QT250/QT400/QT800/QT1000

The QT generation 2.5 quarter-turn actuators are suitable for butterfly and ball valves with an operating torque of 10-1000 Nm. Excellent control options, low cost of installation and operation and no need for maintenance make ELTORQUE actuators the obvious choice.

## Features:

- Max torque: 70/250/380/800/1000 Nm
- Valve range: DN50-DN400
- Absolute position feedback (true feedback)
- Removable cover for hand wheel protection
- IP68 enclosure
- Configurable torque, closing time and position
- Type approved
- Easy commissioning
- Savings on installation
- Compact design
- Maintenance free actuator
- Full valve control with positioning on IAS
- Low power consumption
- Manual emergency override as standard
- High efficiency, green solution



QT70 / QT250 / QT400



QT800 / QT1000

## OPTIONS:

Outdoor & Open Deck  
Dual Power, Failsafe

## General Specifications

	QT70	QT250	QT400	QT800	QT1000
<b>MIN-MAX TORQUE</b>	10 to 70 Nm	50 to 250 Nm	50 to 380 Nm	250 to 800 Nm	250 to 1000 Nm
<b>MIN-MAX CLOSING TIME 0-100% / 0-90°</b>	3-8 s	13-60 s	20-37 s	45-180 s	63-127 s
<b>VALVE SPINDLE ADAPTER</b>	SQ17 38 mm depth	SQ17 38 mm depth	SQ22 38 mm depth	SQ27 45 mm depth	SQ27 45 mm depth
<b>VALVE FLANGE (According to ISO5211)</b>	F05, F07, F10	F05, F07, F10	F07, F10	F10 & F12	F10 & F12
<b>VALVE APPLICATIONS</b>	DN25-DN80	DN50-DN200	DN80-DN300	DN250-DN400	DN250-DN400

	QT70/QT250/QT400	QT800/QT1000
<b>WEIGHT [kg]/[lb]</b>	12 / 26.5	21 / 44.1
<b>DIMENSIONS H/W/D [mm]/[in]</b>	229 x 156 x 209 / 9.01 x 6.14 x 8.23	333 x 200 x 239 / 13.11 x 7.87 x 9.41
<b>HOUSING</b>	IP68 (10 m - 100 h) - Corrosion protected aluminum and steel enclosure	
<b>COLOR</b>	Black	Black
<b>OPERATING CONDITIONS</b>	-25 °C to 55 °C	Not designed for use on open deck of ships, outdoor or exposure to corrosive chemicals
<b>TEMPERATURE PROTECTION</b>	Motor current is switched off in case of over-heating.	Stator coils serve as heating elements in case of low temperatures.
<b>STORAGE TEMPERATURE</b>	5 °C to 35 °C / 41 °F to 95 °F	
<b>OPERATING TEMPERATURE WITH FAILSAFE OPTION</b>	-25 to 55°C / -13 to 131°F	0 to 45°C / 32 to 113°F

## Specifications

ELECTRICAL AND CONTROL PROPERTIES	
<b>POWER SUPPLY</b>	110 - 240V AC/DC, 50/60 Hz. Max 240VA
<b>CABLE GLANDS</b>	Up to five M20 glands allows serial connection of power supply and fieldbus wiring. Threaded holes in actuator capsule. Use IP68 glands for all wires, EMC type for fieldbus wiring.
<b>POWER CONSUMPTION OPENING AND CLOSING WITH MAX TORQUE</b>	100 VA, PF 0.79
<b>POWER CONSUMPTION STANDBY</b>	9 VA, PF 0.37
<b>DUTY PERFORMANCE ACCORDING TO AN 15714-1 / IEC 60034-1</b>	Class A - 10 cycles per hour/52 - 15 min.
<b>POSITION SENSOR</b>	Resolution 0.39% / 0.35° & range 360°. Absolute position sensor, provides correct feedback even after a power failure.
<b>CONFIGURATION</b>	Connection to PC with Eltorque E3C software via USB adapter.
<b>CONFIGURABLE PARAMETERS</b>	Open and Closed positions. Actuator speed, torque, and valve position regions. Inverted IO or CAN bus parameters depending on control interface
<b>COMMUNICATION INTERFACE OPTIONS</b>	CAN bus communication allows positioning and other extended control of the actuator. Maximum theoretical number of devices allowed on the bus is 127. Digital: 2 DI (Open Close) and 3 DO (Open Close Alarm). Analog: AI (Set position) AO (Feedback position) and DO (Alarm) (4-20 mA) AI/AO signal. Modbus RTU: Allows for open and close operations of the actuators, max 31 devices on one bus.

EMERGENCY AND SAFETY	
<b>MANUAL OPERATION</b>	Standard feature using fixed hand-wheel. Mechanical valve position indicator.
<b>COVER OF HAND WHEEL</b>	Can be removed and refitted without tools. Protects mechanism against mechanical damage and foreign objects.
<b>NUMBER OF TURNS</b>	7.3(QT70) / 21(QT250) / 29 (QT400) / 74(QT800) / 103 (QT1000) for 0-100% / 0-90° valve operation
<b>CERTIFICATIONS/TYPE APPROVAL</b>	CE-marked. Type approved by DNV, CCS, ABS (PRODUCT DESIGN ASSESSMENT - PDA), BV, TL
<b>SELF-LOCK</b>	The actuators are equipped with a mechanical self-locking device that locks the valve to the target position when the actuator movement command is completed.

## OPTIONS SPECIAL VARIANTS

OPEN DECK OPTION	
<b>COLOR</b>	Silver - reflective paint that prevents heat buildup from sunlight exposure
<b>OPERATING CONDITIONS</b>	-25 °C to 70 °C

FAILSAFE OPTION	
<b>DIMENSIONS H/W/D</b>	QT70/250/400 with failsafe option: 229x156x284 mm / 9.01 x 6.14 x 11.18 in   QT800/1000 with failsafe option: 333/200/284 mm / 13.11 x 7.87 x 11.18 in
<b>POWER SUPPLY</b>	110 - 240 V AC/DC, 50/60 HZ, Max 240 VA, 100 VA while power consumption opening and closing with max torque, 9 VA while standby
<b>BATTERY LIFETIME</b>	QT70/250/400: Up to 6 months (shipping/external storage/installed on vessel). QT800/1000: Deep sleep up to 50 days, Service state up to 12 days, Failsafe state up to 36 hours
<b>OPERATIONAL STATES</b>	Deep Sleep State: non-operative state. Normal State: actuator is working and can receive commands. Failsafe State: product moves to predefined position. Service State: actuator non-responsive to commands and failsafe triggers.
<b>AVAILABLE FAILSAFE PROTOCOLS</b>	Fail-maintain: actuator self-lock keeps the position. Fail-to-open: actuator moves to valve open position. Fail-to-close: actuator moves to valve closed position.
<b>MAINTENANCE NOTE</b>	Recharging when mains AC power is reconnected. Smart battery control and monitoring. Annual inspection including full discharge-recharge cycle. Minimum 36 hours service time, minimum 4 open/close cycles.

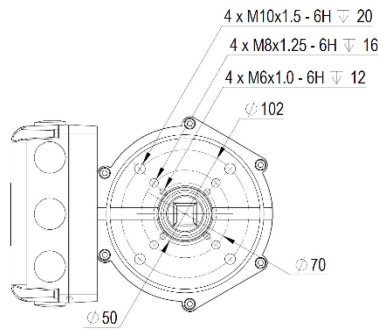
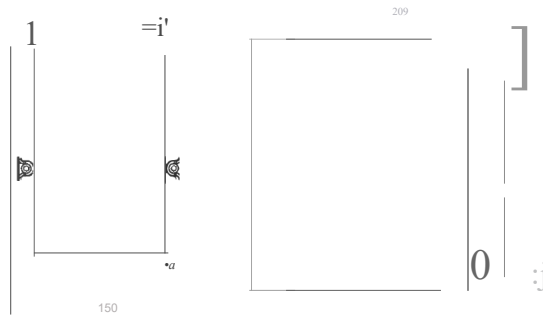
DUAL POWER OPTION	
<b>DESCRIPTION</b>	The Dual Power option is a functional extension of actuator adding 24 V DC power input to standard 115-230 V AC. Feature may be combined with Digital, Single CAN and Dual CAN configuration. Requires minimum 21 V DC on terminals. Max current consumption is 3 A.
<b>POWER SUPPLY</b>	24VDC

**QT250 WITH FAILSAFE OPTION**

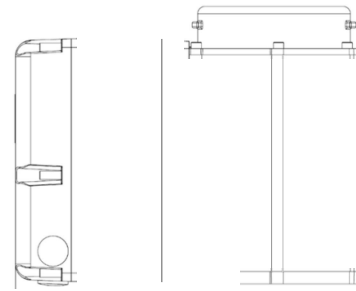


## DRAWINGS

### QT70 / QT2S0 / QT 400

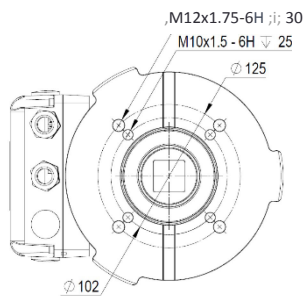
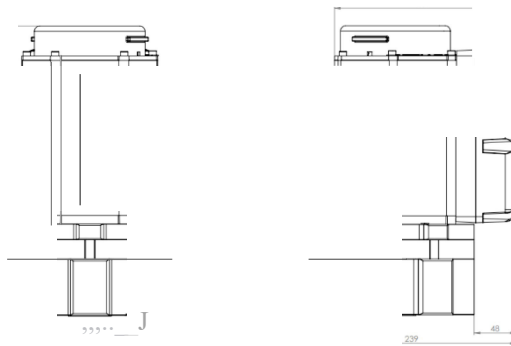


### WITH FAILSAFE OPTION

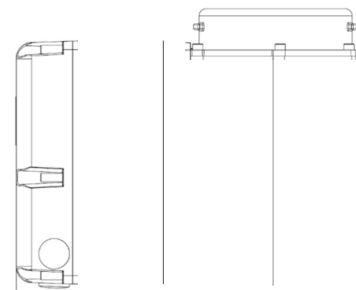


284 mm/11.2 in

### QTS00 / QT1000



### WITH FAILSAFE OPTION



284 mm/11.2 in