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for Future Generations



IQT3 Pro Shutdown Battery

Fail-to-position functionality in the event of a mains power loss in hazardous and non-hazardous environments

The IQT3 Pro Shutdown Battery option provides fail-to-position functionality for IQT3 Pro actuators in the event of a mains power loss in both hazardous and non-hazardous environments. The integral battery pack provides a compact, explosionproof shutdown solution.

A lithium-ion battery supplies backup power from within the double-sealed actuator enclosure. Housing the battery within the actuator enclosure maintains the actuator's ingress protection and hazardous area classification.

In the event of mains power loss, the Shutdown Battery can continue to function automatically to a configurable end of travel position, providing fail-to-position functionality. The failure mode can change depending on customer requirements. It can, as desired, be fail-closed, fail-open, stayput or go to an intermediate position.

The UPS mode provides an option of the actuator continuing to operate as normal on loss of power (until battery charge runs out). This means there is no impact to operations during this time, maintaining crucial operating time and preventing costly restarts.

The same functionality as standard existing IQT3 Pro actuators is provided, including partial stroking, *Bluetooth*[®] wireless communication, site configurable speed setting and non-intrusive IP68 double-sealed enclosure.

- ▶ Battery shutdown will facilitate fail close, open, stayput or go to % position on loss of power
- ▶ Internal lithium-ion battery pack
- ▶ UPS mode allows operation to continue as normal while the battery charge lasts
- ▶ Ingress protection and hazardous area classification (explosionproof)
- ▶ Battery charge level/health can be monitored both locally and remotely
- ▶ Operation can continue if power drops out temporarily, preventing costly restarts
- ▶ Quarter-turn (IQT) torque range up to 2,000 Nm, full-turn (IQTF) torque range up to 1,000 Nm
- ▶ Intuitive setup is accessible locally or via Insight 2 software

Fail-to-position functionality in the event of a mains power loss in hazardous and non-hazardous environments



Applications

- Isolating, inching and modulating control valves
- PSD valves, including Partial Stroke Testing
- Where process operational uptime is crucial e.g. oil and gas production, tank farms, chemical refining, industrial processes, water treatment/distribution
- Replacement for remote, process gas (methane) powered pneumatic actuators
- Plants dependent on unreliable power supplies
- Solar-powered applications (to mitigate fluctuating power supplies) e.g. remote pipeline pump stations
- Wellhead choke valves
- Diverter valves e.g. for Lease Automatic Custody Transfer
- Compact alternative to spring-return actuators
- Applications with expensive external batteries

Specification

- Operating temperature: -40 to +70 °C. For the -20 °C build, charging can only take place if the ambient temperature is -10 °C or above. For the charging times, please refer to the IQT Safe Use Manual [PUB002-065](#)
- Explosionproof shutdown operation is now available with increased torque capacity:
 - Quarter-turn 2,000 Nm
 - Linear (IQTF) 75 kN
 - Full-turn (IQTF) 1,000 Nm
- Weight: 22 - 37 kg
- Size: IQT125 to IQT2000 and IQTF125 to IQTF1000
- Duty: S2-15 min up to S4-50 %
- Enclosure:
 - Hazardous area: ATEX, IECEx, CSA, CSAus
 - IP68 (7 m for 72 hours)
 - Contact Rotork for more certification options

Battery

- Type: sealed and managed Li-ion pack
- Operating life: average of seven years, up to 20 years when installed in optimal environmental conditions
- Storage life: up to five years (based on 100% charged battery stored at up to 30 °C)
- Battery automatically charges from the actuator mains supply during normal actuator service
- IQT software manages the battery to ensure the desired function on power loss
- Normal operation can be automatically restored on return of power, if desired

*The IQT3 Pro Shutdown Battery is intended to maintain process control during a temporary interruption to mains power supply. It is **not** intended for use in safety-critical applications where a loss of flow control could result in personal injury or risk to life. Should this functionality be required, please contact your Rotork sales representative to discuss other products within Rotork's range.

Refer to [PUB002-065](#) for details of operations under battery power and duty restrictions.

A full listing of the Rotork sales and service network is available on our website.

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