The Flowserve Limitorque QX quarter-turn, smart electronic valve actuator mimics the state-of-the-art, non-intrusive, multi-turn MX actuator by including a patent-pending absolute encoder for tracking position without the use of troublesome batteries. The QX design provides enhanced safety and reduced downtime through improved diagnostics, built-in self-test (BIST) features and LimiGard™ fault protection.

The QX design builds on more than 14 years of experience with proven Limitorque MX technology—the first-generation double-sealed electronic valve actuator from Flowserve designed to provide control, ease of use and accuracy. The QX includes all the user-preferred features of the MX in a quarter-turn, smart actuator package.

**Features of the Limitorque QX include:**

- An absolute encoder that simplifies valve automation from configuration and setup into normal operations, diagnostics and troubleshooting. The QX encoder employs system-on-chip technology using a contactless magnet that excites Hall effect devices to provide redundant, 12-bit resolution over 360 degrees. This redundancy, part of the BIST feature, means the device can continue to function reliably until a number of faults has been accumulated.

- Advanced brushless DC motors eliminate sparks, reduce mechanical and electrical noise, and dissipate heat better than motors with brushes. Unique to the industry, the brushless actuator design lasts longer than conventional motors and allows for more accurate positioning while permitting a global range of voltages (single-phase and three-phase ACV and DCV) to be connected without modification.

- Graphical dot-matrix display allows 180-degree rotation of text, diagnostic graphs and supports 10 languages: English, Spanish, French, Italian, German, Portuguese, Japanese (Katakana), Mandarin, Russian and Malay.

- Optional Bluetooth® wireless connectivity with a range up to 10 meters. When used with Flowserve Limitorque Dashboard™ Windows®-based software, diagnostic information is easily transferred to a PDA, laptop computer or cell phone.

- Network communications such as Modbus, Foundation Fieldbus H1, DeviceNet, Profibus DP_V1 with redundancy and Profibus PA offer the user bit strobe I/O messaging and a host of other benefits. A Device Type Manager (DTM) is also available for Profibus and Foundation Fieldbus.

- Available in five distinct sizes from 100 ft-lbs (136Nm) to an industry-leading 1500 ft-lbs (2040 Nm).

- The QXM (multi-turn) is also available for unique applications that require up to 20 turns maximum in a small, compact and lower torque electronic actuator.

- Includes innovative handwheel parallel to the LCD screen to permit ease of manual setup and operation and the ability to be installed in areas with limited space.
Flowserve Corporation has established industry leadership in the design and manufacture of its products. When properly selected, this Flowserve product is designed to perform its intended function safely during its useful life. However, the purchaser or user of Flowserve products should be aware that Flowserve products might be used in numerous applications under a wide variety of industrial service conditions. Although Flowserve can (and often does) provide general guidelines, it cannot provide specific data and warnings for all possible applications. The purchaser/user must therefore assume the ultimate responsibility for the proper sizing and selection, installation, operation and maintenance of Flowserve products. The purchaser/user should read and understand the Installation Operation Maintenance (IOM) instructions included with the product, and train its employees and contractors in the safe use of Flowserve products in connection with the specific application.

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