

QL-SENTRY MOV Online Valve Monitoring



QL-SENTRY reduces manpower requirements for heavily resource loaded Motor Operated Valve (MOV) diagnostic tests. The system is compact, lightweight, and can be accessed remotely by USB, ethernet, or wireless connection. The QL-SENTRY includes the following features:

Key Features

- 4 or 8 analog input channels
- Unattended data acquisition for unlimited time periods
- Records all valve strokes
- Variable trigger levels
- Removable data storage (USB flash)
- Ethernet or wireless communication to laptop or plant network for local or remote operation
- Compact and lightweight hardware

The next generation nuclear diagnostic testing will help the industry move forward toward condition-based monitoring instead of the previous time-based monitoring.

Benefits

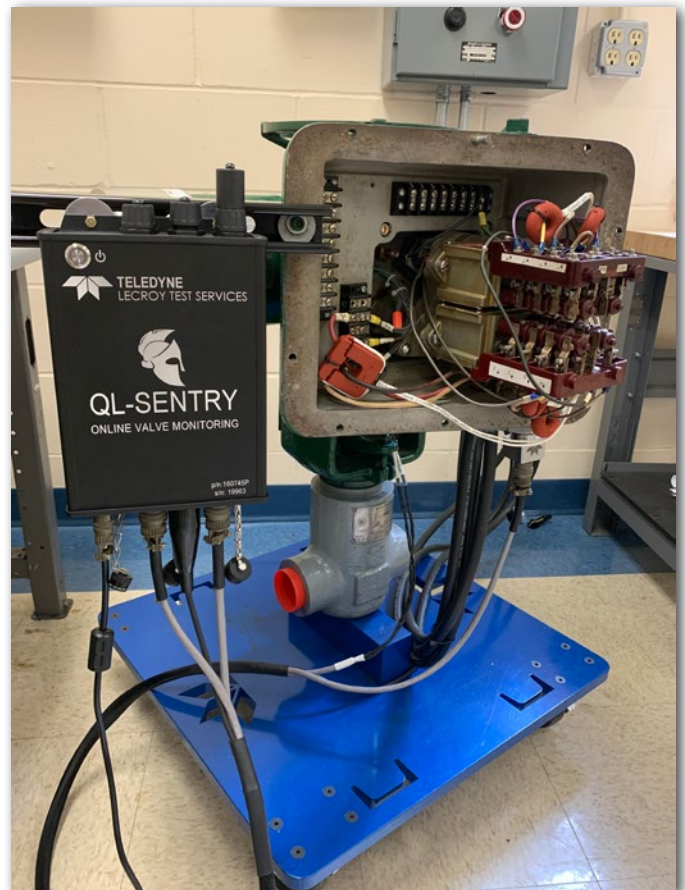
- Reduces at the valve manned testing
- Reduce number of workorders for:
 - scaffolding
 - MOV testing
 - clearance orders
 - walkdowns
- Decrease supplemental workers during outages
- Reduce outage scope, saving time and money

Applications

- GL 96-05 valves
- Supports ALARA radiation safety principle

Specifications

- Accuracy: 1% of reading
- Size: 8.7" x 6.5" x 2.2"
- Sample rate: 2048 s/s
- System weight: 3.25 lbs.



QL-SENTRY placed 3rd at the 2019 Exelon Innovation Expo.

The system hardware will consist of a data acquisition device, a permanently-installed torque/thrust sensor, and a sensor harness pre-wired with five current transformers (CT's): one high capacity CT for motor current and four low current CT's for indicator lights and control switches. These 5 channels can be directly accessed by a QL3-FS system without removing the limit switch cover.

The SENTRY will be configured to continuously monitor Torque, Thrust, Motor Current, and light/switch current on analog input channels. The system will include a third cable for power, which may be connected to the actuator or an external source depending on the installation.



Current Sensor Assembly

- Quick Disconnect 1" NPT Manifold
- (4) low current CT's for indicator lights & control switches
- (1) 20 Amp or 200 Amp motor CT
- Switch CT weight: 1.1 oz.
- Motor CT weight: 3.8 oz.

<i>Xcel QL-Sentry Dashboard</i> 06/03/19			
	Total	Status	Trend
MOV Program Valves	87	84 2 1	84 3
Required Thrust (C14)	87	86 1 0	86 1
Maximum Thrust (C16)	87	86 1 0	86 1
COF	63	63 0 0	63 0
Stem Nut Wear	54	53 0 1	53 1
Running Loads	87	87 0 0	87 0
Unseating (O9)	45	44 0 0	44 0
¼ Turn Torque (C14)	33	33 0 0	33 0
¼ Turn Max Torque (T16)	33	33 0 0	33 0

QL-SENTRY Dashboard

The QL-SENTRY Dashboard is a trending and analysis tool that can analyze and store test results. The software is configurable and will use a red, yellow, or green light to display the value status.

Ordering Information

Product Description	Product Number
QL-SENTRY System, 4Ch, Ext PS	160745
QL-SENTRY System, 4Ch, Ext PS	160746
QL-SENTRY Sensor ASM, 5 CT's	160748
QL-SENTRY Sensor ASM, 5 CT's	160749
QL-SENTRY Cable Set	160750

In most applications, the QL-SENTRY will be connected to the plant network via WiFi or ethernet. The device will run unattended, capable of triggering, acquiring, and storing test files locally without a host PC. The DAQ will trigger off the motor CT each time the valve strokes, storing resultant data file on an external USB thumb drive.

The SENTRY online monitoring system will include a software application that will run in the background on a network server or PC. The application will periodically query each QL-SENTRY in the plant, retrieve new test files, and place them in a dedicated folder on a network drive. There may be plants where a network is not available or practical, the test files can be retrieved from a USB thumb drive.



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