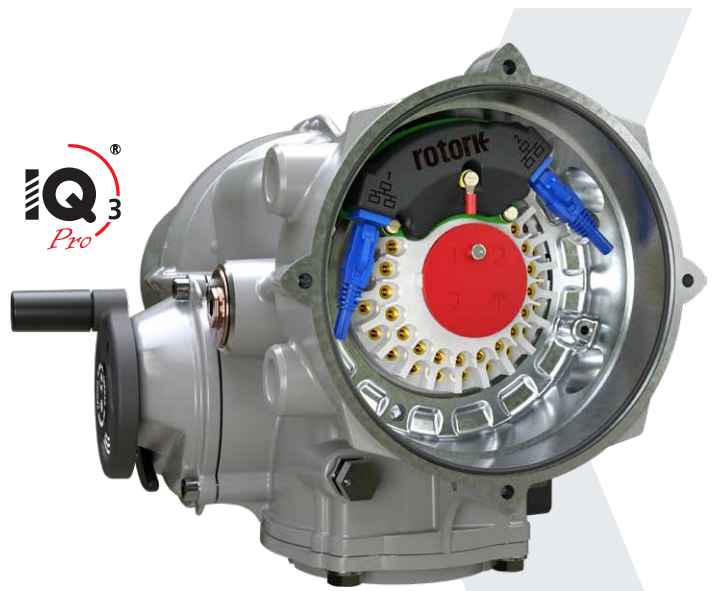




Keeping the World Flowing
for Future Generations

Integrated Ethernet Actuator

Modbus[®] TCP, EtherNet/IP[™] and PROFINET for IQ3 Pro range actuators



EtherNet/IP[™]



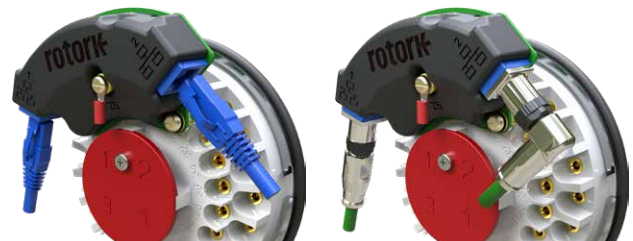
Industrial Ethernet is a popular choice for devices that require higher data speeds and volumes, such as sensors and actuators.

Rotork's Ethernet option supports Modbus TCP, EtherNet/IP and PROFINET industrial communication protocols in IQ3 Pro range actuators, providing a high-bandwidth connection that enables advanced asset management.

The option card is situated in the double-sealed body of the actuator, and only the wiring connection is located in the terminal compartment. This makes it possible to have explosionproof actuators with Ethernet connectivity.

Connection is established through two RJ45 or M12 connectors located in the terminal block and network control parameters can be configured via the actuator's display, Insight 2, or integrated webserver.

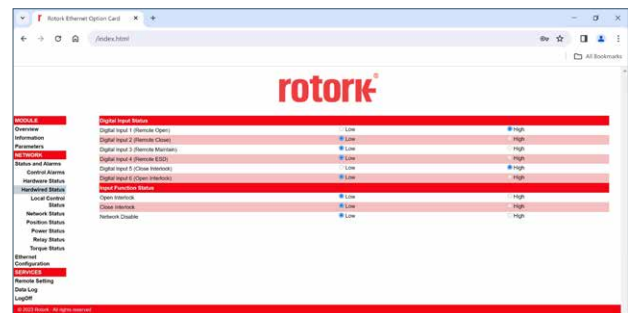
The IQ3 Pro internal data log can be accessed remotely via the webserver, allowing for remote data collection and uploading to Rotork's intelligent Asset Management (iAM) cloud-based system.



RJ45 (left) and M12 (right) termination options

Features and Benefits

- Dual RJ45 or M12 connections to suit site standards
- Line, Ring and Star topologies supported for extensive network design compatibility
- Option card is fully enclosed within the actuator, maintaining watertight and explosionproof enclosure and certifications
- 10/100 Mbps speeds supported
- PI certified with GSDML files (PROFINET)
- ODVA certified with supporting EDS files (EtherNet/IP)
- Internal webserver provides fast access to configuration and internal data log file
- Setup via standard actuator configuration tools, Insight 2 software or integrated webserver
- The Ethernet option card is compatible with existing IQ3 and IQ3 Pro range actuators, an upgrade kit and/or firmware upgrade may be required



Integrated webserver page showing digital input signal status

Integrated Ethernet option compared to existing Modbus RTU and Ethernet gateways

The Rotork Ethernet option card delivers fast, high bandwidth performance direct to the actuator. There is no intermediate Modbus RTU interface that would reduce speed and functionality, or increase complexity and failure points.

The integrated solution offers improved reliability through a simpler design, eliminating the need for gateways or converters thus reducing the number of potential failure points. Setup and commissioning are also simplified and integrated into the actuator.

Additionally, when compared to traditional Ethernet protocol gateways, e.g. PROFINET to EtherNet/IP, there is no intermediate interface that would increase complexity and failure points.



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Ethernet option card specifications

| Type | Specification |
|----------------------|--------------------------------|
| Ethernet connections | RJ45 or M12 interface |
| Temperature range | -40 to +70 °C (-40 to +158 °F) |
| Ethernet compliance | PI and ODVA certified |

IQ3 Pro range enclosure certifications

| Type | Certification |
|---------------|---|
| Non-hazardous | International - IP66/68 (7 m, 72 hours) USA - Type 4 & 6; Canada - Type 4, 4X & 6 |
| Hazardous | International - IECEx; EU & UK - ATEX, UKEX; USA - CSAus; Canada - CSA; Brazil - INMETRO; China - CCC Ex, India - IS/IEC; Japan - JNIO SH |

Intelligent Asset Management (iAM)

The Ethernet option card allows remote collection of the actuators' detailed data logs for upload into Rotork's intelligent Asset Management (iAM) system.

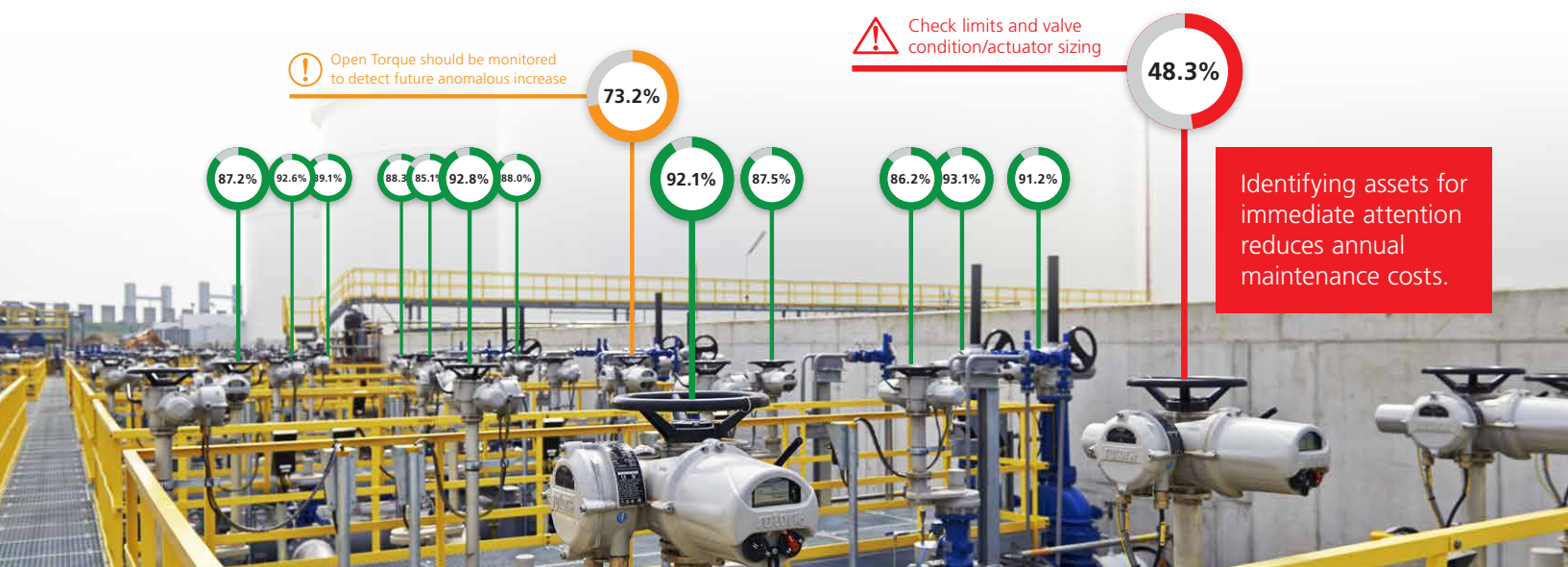
iAM is a robust, safe, secure, and scalable online platform that provides insight into actuator and valve condition based on detailed data logs collected from Rotork intelligent actuators. Summary views and colour-coded maps simplify complex analytics into easy-to-understand visuals. The customer can see a complete picture of the status of their assets at a glance. A simple-to-use web interface does not require the installation of specialised software.

Customers use iAM to understand the condition of their motor operated valves (MOVs), enabling a risk-based and proactive approach to maintenance. The ability of iAM to identify assets in poor condition, at risk of failure, or inappropriate for the process conditions allows targeted maintenance and actions at the appropriate time. This reduces costs, improves maintenance forecasting ability and reduces unplanned downtime (and the reduced output, poor performance, yields and reputational damage that can accompany downtime).

Rotork's experience in operating flow control equipment across the world in a variety of conditions, combined with years of real-world data, an OEM level of product understanding and adapting to the specific configuration setting of each asset, allows iAM to automate data log analysis to provide actionable insights for end users quickly.

The results of iAM analytics are available via various methods to suit each user. Users can do this online via the iAM cloud system, printable PDF reports, or digitally supplied to users' systems via industry-standard JSON/REST interface.

iAM reports are easy to understand and remove the need to manually review data, saving time and the need for detailed MOV knowledge. Remote collection of data logs via Ethernet enables regular monitoring to catch issues as early as possible. iAM also integrates with Rotork's Reliability Services to keep sites operating efficiently and reliably.



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