



# WESTLOCK CONTROLS PRODUCT OVERVIEW

# WESTLOCK CONTROLS

## HERITAGE OF INNOVATION SINCE 1984

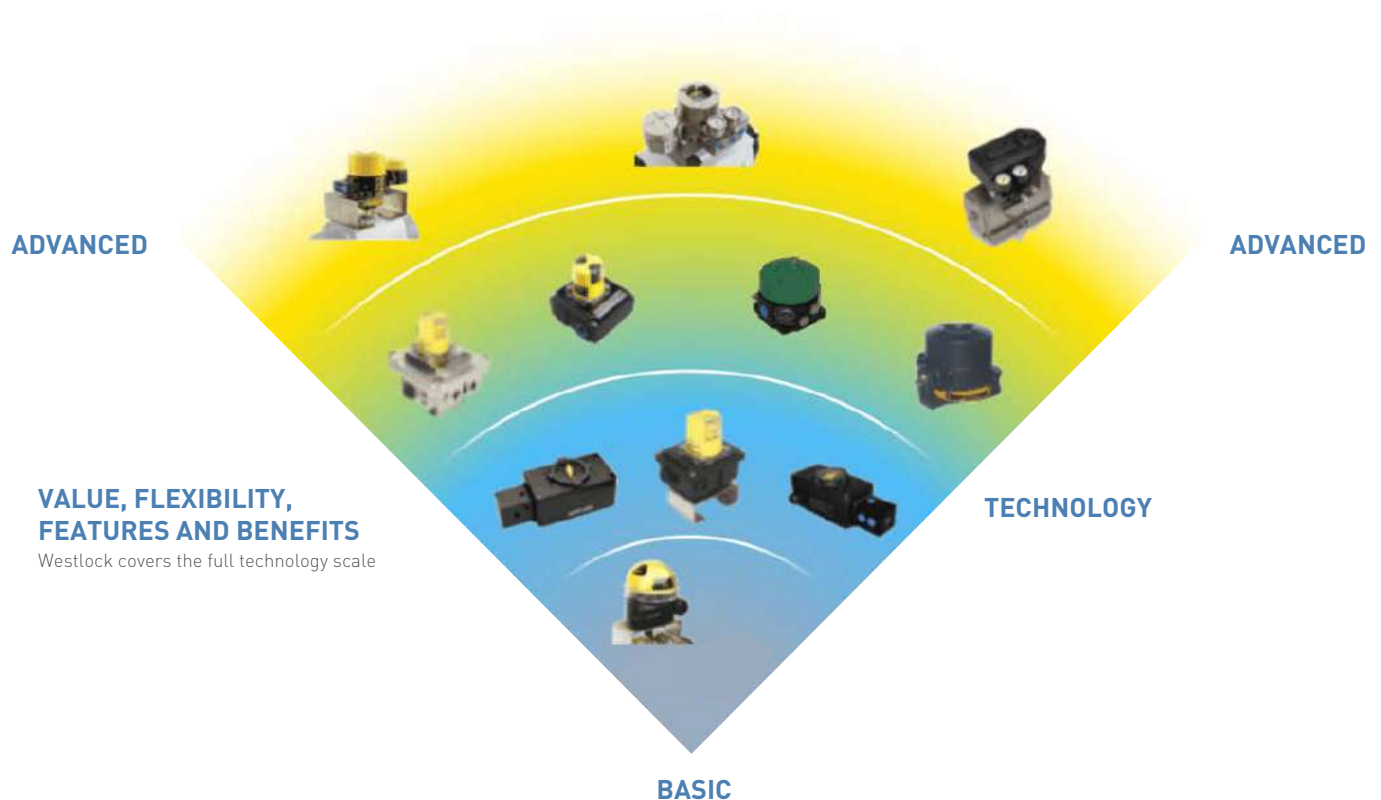
Westlock is a global leader in innovative and emerging technologies in the **Valve Position Monitor, Digital Control Monitor, Network Control Monitor, Position Transmitter** and **Smart Positioner segments** of the Flow Control Industry.

**Westlock Controls** has built a **global reputation** providing innovative **solutions** for **networking**, monitoring, and controlling process valves.

- Westlock provides products that allow our Customer to automate their valve package (More than 8 million devices in service around the world)
- Solving the Customers 'hightech' requirements, resulted in Westlock products being widely adopted on all pneumatic valve applications
- Operating in some the most diverse applications and industries including: Oil & Gas, Power, Mining, Process, Chemical, Food, Water, among others.

## GLOBAL CONTROLS

### RANGE SEGMENTATION



# WELCOME TO WESTLOCK

## CREATING EFFICIENCY FROM COMPLEXITY

Westlock Controls is one of the world's leading suppliers of products for networking, monitoring and controlling process valves. At a time when flow control systems are growing in complexity and industry requirements are getting stricter, we are delivering innovative solutions to process companies across the globe. That is because as the demand for future-proof valve monitoring increases, Westlock is meeting the challenge with a range of advanced products designed to support today's plant operators.

### INCREASED SAFETY

Westlock Controls product meets the latest global approvals for hazardous certification and functional safety. Products range from explosion-proof/flameproof to intrinsically safe while being up to SIL3 capable raising the bar in plant safety even further.

### REDUCED MAINTENANCE COSTS

We are also constantly improving the way operators monitor and control their valves allowing them to reduce their maintenance times and costs.

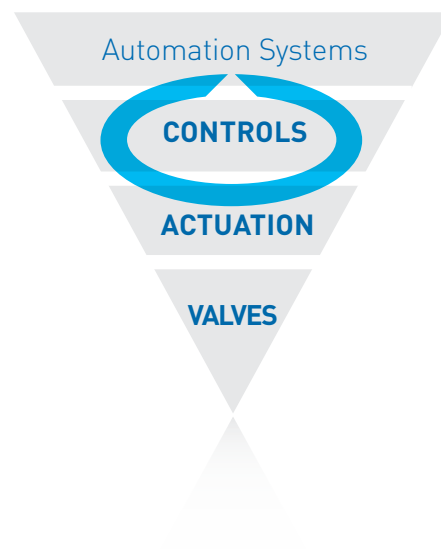
### IMPROVING PLANT EFFICIENCY

In short, we are dedicated to delivering the solutions that will drive plant efficiency forward in the future - no matter how complex flow control systems become.

### SERVICE AND SUPPORT

Our specialist actuation and controls teams have unique cross-functional expertise in valve automation, safety applications, process control and digital communication. We use our knowledge of the latest technologies in control systems and digital communication to help customers increase their plant efficiency and security independent of their current technology or supplier.

On-site services are provided by our local teams and valve services partners, who are available for help with installation, commissioning and start-up.



#### VALVE MONITORS AND SWITCHES

Valve monitoring is the key to acquiring real time information about a valve's status, allowing you to reduce failure and risk while increasing safety and yield.

#### NETWORK CONTROL MONITORS

Our Intellis network control devices enable you to seamlessly integrate valve monitoring and controls with your plant's control system.

#### POSITION TRANSMITTERS

Our position transmitters enable the smart and discrete control of valves and are particularly suitable for critical service and sophisticated process patterns.

#### VALVE CONTROL MONITORS

Quantum control monitors help you increase the efficiency of your plant providing a range of options for operating and controlling valves more effectively.

#### POSITIONERS

Positioners provide modulating valve control using both analogue and digital networking capabilities.





## ACCUTRAK POSITION MONITORS

If you are looking to optimize the performance of your plant and improve its efficiency, then consistent precise valve monitoring is not just important, it is critical. Our AccuTrak position monitors offer the optimum solution - providing an integrated and extremely cost effective method of monitoring your rotary and linear valves.

### FEATURES

- Switch stabilization plate ensures reliable operation
- Wide range of switches and sensors
- Choice of conduit entries and threads
- Range of enclosures allow multiple switches and sensors to be fitted
- Enclosures have unique serial numbers
- Wide range of certification options

### ROTARY VALVES

AccuTrak monitors are ideal for both manual and automated rotary valves. The switches/sensors, wiring terminals, enclosures and local visual indication are all combined in one compact unit, which can be mounted directly or via a valve actuator.

### LINEAR VALVES

AccuTrak monitors are suitable for linear valves through the use of an explosionproof junction housing and hermetically sealed proximity switches.

### ENCLOSURES

AccuTrak position monitors feature a full range of high quality enclosures, including stainless steel, aluminium and durable engineered resin.

### AREA CLASSIFICATIONS

Suitable for a range of area classifications, from general purpose to explosionproof applications, AccuTrak position monitors are designed to comply with most hazardous area requirements. Please ask about the certification that is available for your specific specification and configuration.

#### TOUCH SET CAMS

AccuTrak monitors also have a unique self-locking spring-loaded TouchSet cam mechanism at their heart. This is attached to a stainless steel shaft and allows you to adjust the cam and sensors by hand; no tools are required.

#### PRE-WIRED TERMINAL STRIPS

By providing easy access terminal strips which are angled at 45° towards the operator, we even take the hard work out of installing our monitors.





## QUANTUM VALVE CONTROL MONITORS

Our Quantum control monitors combine low power valve monitoring and the control of automation process valves with integrated position sensors and low power energy solenoid valves - all in one single unit.

### FEATURES

- Integral solenoid valves
- Wide range of switches and sensors
- Choice of conduit entries and threads
- Range of enclosures allows multiple switches and sensors to be fitted
- Enclosures have unique serial numbers
- Wide range of certification option

### ROTARY VALVES

Suitable for all types of rotary valve, both manual and automated, Quantum control monitors can be mounted directly to the valve or via a valve actuator.

### LINEAR VALVES

An explosionproof junction housing and hermetically sealed proximity switches also make the monitors perfect for linear valves.

### INTEGRAL SOLENOID VALVES

Pre-wired low power solenoid valves are an integral part of all Quantum control monitors with a range of options including materials, coil voltages and number of coils.

### ENCLOSURES

Available in stainless steel, aluminium and engineered resin, as well as a variety of sizes to accommodate individual switch and sensor arrangements.

### AREA CLASSIFICATIONS

Also suitable for a host of area classifications from general purpose to explosion proof applications. Please ask about certification for your specific specification and configuration.

### SWITCHES AND SENSORS

A full range of switches and sensors ensure you have the optimum combination for each application.

### PRE-WIRED TERMINAL STRIPS

We even take the hard work out of installing our monitors by providing easy access terminal strips which are angled at 45° towards the operator.

### TOUCH SET CAMS

Quantum control monitors have a unique self-locking spring-loaded TouchSet cam mechanism at their heart. This is attached to a stainless steel shaft which allows you to adjust the cam and sensors by hand; no tools are required.

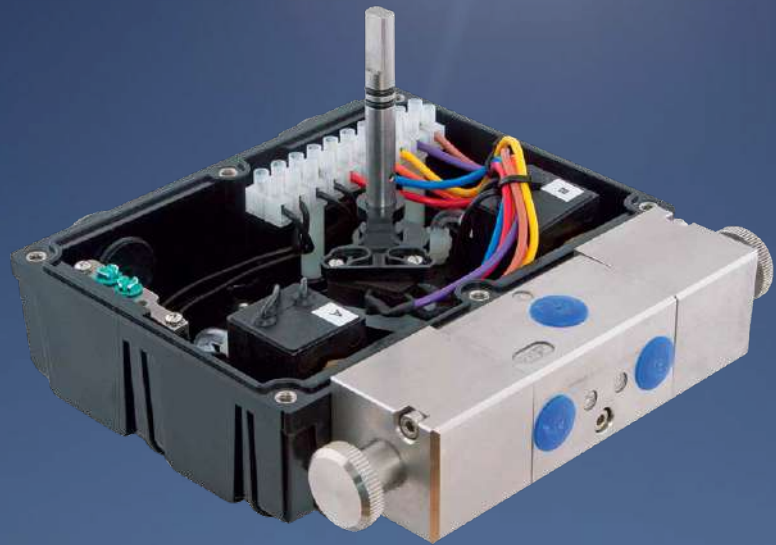


## FALCON SOLENOID VALVES

Falcon solenoid valves are an integral part of Westlock Quantum control monitors and are engineered specifically to address low power valve actuation requirements. They are suitable for both single acting and dual acting actuators, as well as high cycle applications.

### FEATURES

- Aluminum, stainless steel and nickel plated brass bodies
- Choice of NPT and BSP threads
- Option of latching / non-latching momentary and locking overrides
- Range of standard coil voltages, AC and DC
- Single and dual coil options
- Visual indication of SOV position



# WESTLOCK

## SWITCHES & SENSORS

Westlock control and monitoring equipment can be fitted with a variety of switches and sensors to provide the optimum combination and ideal solution for each application

### Magnum XT-90 Hermetically Sealed Proximity Switch



Hermetically-sealed proximity switches with either pure tungsten or rhodium contacts for use with low power I/O's to provide longer contact life.

### MagPAC Modular Switches



Modular switches with bifurcated reed switches designed specifically for use in low power and high DI card capacitance discrete position feedback applications.

### Inductive Proximity Sensor

Intrinsically safe



A solid state inductive proximity sensor which is available in NAMUR output. It is ideal for use in devices within potentially explosive atmospheres.

### SPDT Mechanical Switch V3



A V3 SPDT (single pole double throw) mechanical switch (Form C).

### DPDT Mechanical Switch



A Form CC DPDT (double pole double throw) mechanical switch with silver-plated contacts.



# INTELLIS

## NETWORK CONTROL MONITORS

Improving the way you integrate your valves with your plant control system can have a major bearing on the productivity of your business. We offer a range of valve communication and control products which, coupled with our networking components, enable you to take advantage of digital communication technologies that minimize your total life cycle cost.

Intellis is a family of field network valve and control monitors which use embedded control systems to automate valves and link field I/O to the host PLC or DCS. They incorporate all the features of standard Westlock control monitors with the addition of a network I/O module.

Each network monitor houses two discrete Hall effect sensors for valve position monitoring, an optional low power solenoid valve for actuation control and a network interface module for communication via the chosen network protocol. Monitors are available for linear and rotary applications in all area classifications.

### NETWORK PROTOCOLS

Protocols supported include ASi®, DeviceNet™, FOUNDATION Fieldbus™, PROFIBUS-DP and ModBus®.

### FEATURES

- Dedicated network modules (PACs) for all major protocols
- Approved for all hazardous area applications
- Control and monitoring for rotary and linear valves
- Non-contact position monitoring
- Integrated pneumatic actuation control
- On-line predictive and maintenance related diagnostics



# PHARMA II

## NETWORK CONTROL MONITORS

Designed specifically for sanitary applications the Pharma II provides position and control monitoring for rotary and linear sanitary diaphragm valves. It is compatible with all major valve manufacturers products and available with network connectivity via DeviceNet or AS-I protocols.

### FEATURES & BENEFITS

- Non-contact, solid state Hall effect sensors provide premium reliability, even in high cycle applications
- Easy integration of puck style solenoid valve base
- QuickSwap conventional and network electronic modules





## DIGITAL EPIC POSITION TRANSMITTERS

Digital EPIC position transmitters are ideal for applications with sophisticated process patterns and those that require partial stroke testing (PST) or remote emergency shut down (ESD) initiation. By combining the continuous monitoring of valve travel with other valve control functions, they keep you constantly informed.

### DISCRETE CONTROL

The stand-alone digital position and control transmitters provide discrete control and precise non-contact feedback with digital communication via HART and FOUNDATION Fieldbus protocols.

### THE INTEGRATED SOLUTION

Digital EPIC transmitters are engineered as a simple integrated package and are perfect for mounting to both rotary and linear valves. They are also approved for use in hazardous areas.

### PUTTING SAFETY FIRST

As non-intrusive magnetic calibration input sensors allow calibration without removing the cover, safety is maintained in potentially explosive environments.

### FEATURES AND BENEFITS:

- Digital communication via HART® protocol
- Remote and local partial stroke test (PST) and emergency shut down (ESD) initiated remotely or locally for safety system applications
- Valve position measurement via a non-contact magnetic pick-up increasing reliability in high cycle applications or where vibration is present
- Available with low power Falcon solenoid valve for valve control applications
- Choice of engineered resin, aluminum or stainless steel enclosures
- Highly visible position indicator

### CS TRANSMITTER

The CS analog position transmitter delivers precision and reliability using a 4-20 mA signal which can be integrated with any of the range of Westlock position and control monitors. It is small enough to be used in a variety of enclosures and requires one of the lowest operating voltages in the industry.

# INTELLIGENT EFFECTIVE SAFETY VALVE CONTROL

THE ABILITY OF SAFETY VALVES TO PERFORM IN EMERGENCY SITUATIONS IS CRITICAL TO PROTECT PERSONNEL, EQUIPMENT AND THE ENVIRONMENT AGAINST RISK AND TO MAINTAIN THE MANDATORY SAFETY INTEGRITY LEVEL (SIL) FOR YOUR PLANT.

To guarantee performance, you must be certain that the valves and the equipment controlling these valves will perform when called upon.

## EFFICIENT AND RELIABLE

Digital EPIC-2 is an intelligent valve position transmitter designed especially for safety valves.

Its advanced diagnostics functions enable Emergency Shutdown (ESD), Partial Stroke Testing (PST), Solenoid Operated Valve Testing (SOVT) and Full Stroke Testing (FST) to be carried out efficiently and reliably, to ensure effective maintenance of your SIL up to level 3.

Combining a powerful state-of-the-art ARM® 32-bit microcontroller-based intelligent position transmitter with proven solenoid valve technology in a single, compact unit, its unique and smart diagnostics increase the safety, reliability and efficiency of plant operation simply and effectively.

Its sophisticated diagnostic functions lower the total cost of ownership by suggesting predictive maintenance of the valve under operation before it fails and interrupts the process, with intelligent alarms that pinpoint the root cause of problems, enabling you to ensure effective maintenance and operational integrity of your safety valves.

- ARM® 32-bit microcontroller based smart position transmitter with 4-20mA position feedback
- Valve position measurement via non-contact local or remote mount magnetic sensor with no moving parts, providing high accuracy and reliability
- Choice of factory configured solenoid coil & valve in a single integrated solution or the ability to select a custom solenoid valve with a choice of Cv rating and coil voltage
- Password protected 3 button local user interface with high contrast graphic LCD and optional backlight
- Remote user interface using HART® 7 DD/FDT® DTM 1.2 for seamless integration into any control system or Safety Instrumented System (SIS)
- Easy configuration using guided setup wizard and auto calibration
- Emergency Shutdown (ESD) status and alarm
- Partial Stroke Testing (PST) and pressure profiling
- Solenoid Operated Valve Testing (SOVT)
- Full Stroke Testing (FST) and pressure profiling
- Intelligent alarm system



**D530 Intrinsically Safe Digital EPIC 2**



**D510 Flameproof Digital EPIC 2**



# POSITIONERS

## FOR MODULATING CONTROL

Westlock's valve positioners provide reliable modulating position control for both rotary and linear action valves, with a variety of pneumatic, analogue and digital units.

### 793 PNEUMATIC ROTARY POSITIONER

Our 793 pneumatic positioner uses a force balance principle that allows the proportional operation of quarter turn rotary valves. In turn its' compact design mounts enable it to be attached directly to all NAMUR actuators by means of a standard kit.

#### FEATURES AND BENEFITS:

- Stable positioning characteristics for all actuators
- Action (direct or reverse) is easily reversed in the field
- Suitable for double-acting or single-acting service
- Unaffected by normal supply pressure fluctuations
- Integral electric limit switches option

### K10 ELECTRO-PNEUMATIC POSITIONERS

With completion in just a few minutes, the K10 is the first electro-pneumatic (analog) positioner to allow calibration at the push of a button.

#### FEATURES & BENEFITS:

- Advanced auto-calibration takes care of positioner gain settings, zero, span and internal adjustments
- End-of-travel limit switches or 4-20 mA feedback transmitter option

- Negligible-bleed lapped spool and matched sleeve design deliver significant energy savings
- Corrosion resistant engineered resin IP66 rated enclosure
- Optional high flow transducer

### ICOT SMART POSITIONER

By providing modulating valve position control, the ICoT range of smart digital positioners deliver reliable and effective control for both rotary and linear action valves. They are suitable for hazardous and explosionproof area classifications, with a choice of engineered resin, aluminium and stainless steel enclosure options.

#### FEATURES & BENEFITS:

- Full diagnostics on the valve and actuator
- Fully compatible with AMST<sup>™</sup> software and DTM
- 3 button interface and graphical LCD display for easy calibration and information display
- Valve speed adjustable via user control
- High-flow spool valve option for larger actuator/valves
- Accurate measurement of all operating parameters
- Compatible with HART<sup>®</sup>, Profibus PA<sup>™</sup> and FOUNDATION Fieldbus<sup>™</sup> protocols



### WESTLOCK CONTROLS

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