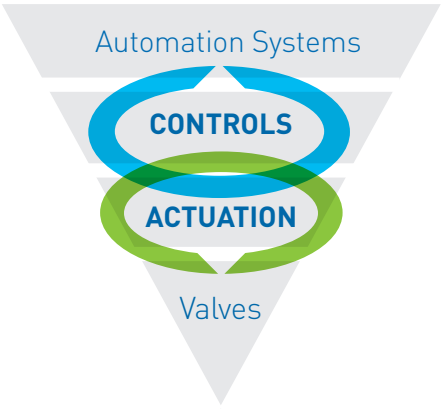
WESTLOCK CONTROLS

# VALVE NETWORKING MONITORING AND CONTROL

**MONITORING AND CONTROL** | PRODUCTS & CAPABILITIES




# 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
For example Westlock's development team is making major advances in areas such as wireless monitoring in order to raise 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.

### WIRELESS SYSTEMS
If you want to monitor larger areas of plant or valves in remote locations, then Westlock's wireless valve monitoring provides an advanced and cost effective solution.

### 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.

### WIRELESS MONITORING

Our wireless monitoring system is cost effective and easy to install; it can be used with either manual or automated on/off valves and integrates directly with your plant control system.

### 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.

### LIMIT SWITCHES AND SENSORS

AccuTrak position monitors can be fitted with a variety of switches and sensors to ensure you have the optimum combination for your application. Some of our most regularly fitted options are shown in the table below. For other combinations please contact your local sales office.

**SPDT** Mechanical switch (V3)

**DPDT** Mechanical switch (Licon)

**Magnum** XT-90 hermetically sealed SPDT proximity switch with tungsten contacts

**Magnum** XT-90 hermetically sealed SPDT proximity switch with rhodium contacts

**Inductive** proximity sensor V3; barrel; slotted

**Pneumatic** 3/2 micro valve switch

## 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.

## 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

# 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.

# 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®, DeviceNetTM, FOUNDATION FieldbusTM, PROFIBUS-DP and ModBus®.

### FEATURES

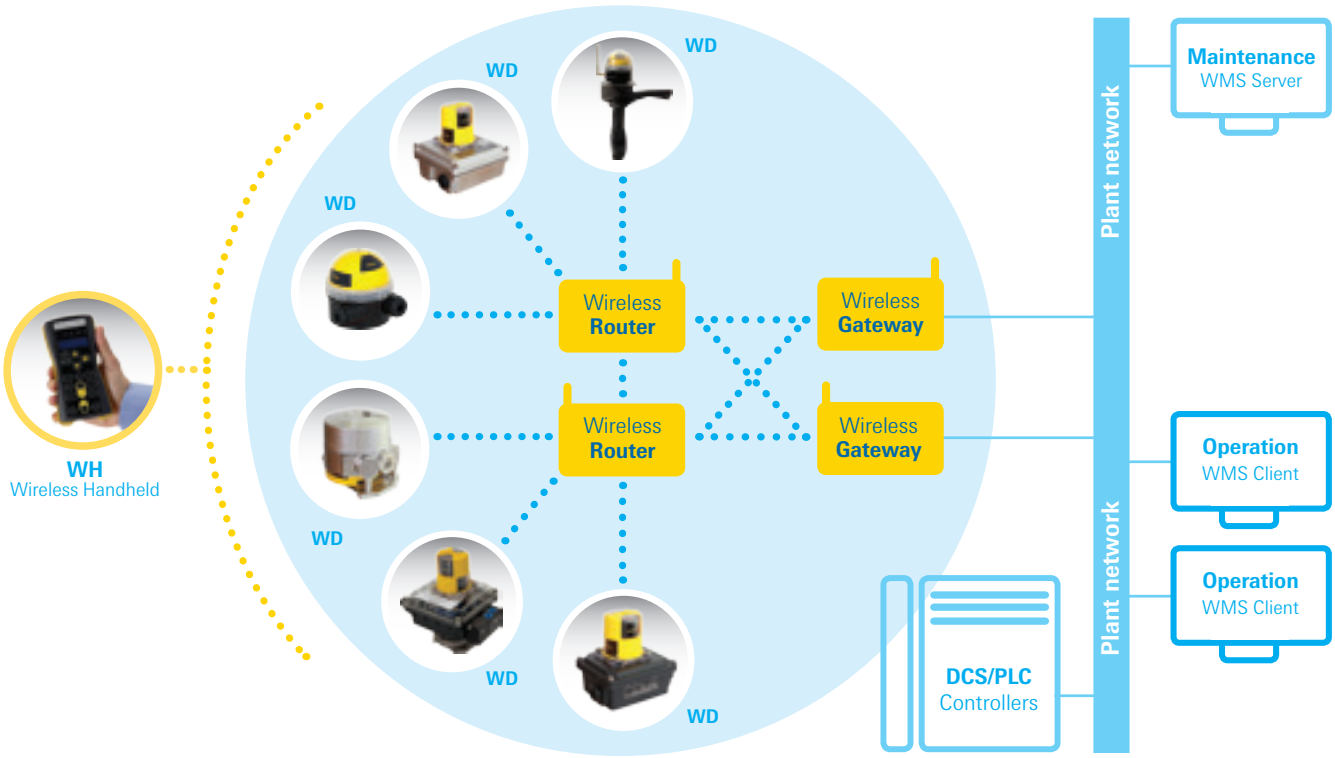
- Dedicated network modules (PACs) for all major protocols
- Approved for all hazardous area applications
- Control and monitoring for rotary and linear valves
- Non-contact position monitoring
- Integrated pneumatic actuation control
- On-line predictive and maintenance related diagnostics

# 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




# WIRELESS
## VALVE MONITORING SYSTEMS

Our wireless valve position monitoring system presents you with a safer and more efficient way to manage larger areas of your plant. Designed to work with both manual and automated on/off valves, it integrates directly with your wider plant control system.

As a result you can access real-time information about any valve's status directly from your control system with reductions in failure and risk being matched by an increase in safety and yield.

The compact valve monitoring wireless device fits directly inside a standard switchbox and is available with all the components necessary to install, operate and integrate with your existing plant operating system.

### KEY NUMBERS

#### LIMITS

- Wireless Devices (WD) per Wireless Management Server (WMS)
- 10,000 using WMS Server
- 120 using WMS Stand Alone
- Wireless Devices (WD) per Wireless Gateway (WG)
- 100 using Wireless Routers (WR)
- 32 without Wireless Routers (WR)

#### BATTERY LIFE

- Wireless Device, nominal configuration (up to 8 events per hour): 10 years

#### TYPICAL DISTANCES

- Wireless Device (WD) to Router (WR): 25m (70m/open space)
- Router (WR) to Router (WR)/Gateway (WG): 100m (200m/open space

#### TYPICAL LATENCIES

- Hop to hop: 10ms
- Wireless Device (WD) to WMS: 1 second

#### BENEFITS

- Reduced costs eliminating wires, conduits, cable trays, cabinets, I/Os
- Easier engineering and installation
- Faster commissioning and startup
- Solution for space constraints, smaller footprint
- Monitoring for manual, automated, rotary or linear valves
- Reduced unwarranted field trips and labor costs
- Improved operation efficiency and safety

# 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 vale 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.

# 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 AMS™ 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®, Profibus PA™ and FOUNDATION Fieldbus™ protocols

WESTLOCK
CONTROLS

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