

# SAMSON Type 3730 & 3731 Series Positioners



SMART IN FLOW CONTROL

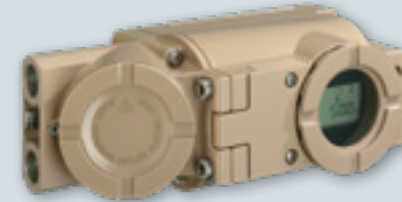
## 3730-X AND 3731-X SERIES OVERVIEW

## FEATURES AND BENEFITS



**3730-1**

**3730-1:** Basic Digital 4-20 mA Positioner for linear & rotary valves with LCD / multi-turn push button interface and auto-calibration.



**3731-3 & 3731-5**

**3731-3 & 3731-5:** Explosion proof versions of 3730-3 and 3730-5.



**Simple Attachment**

- Both linear and rotary control valves
- Single push-button set-up/initialization for most control valves
- Mounting Kit for various Actuators
- 180° Rotation LCD



**Universal Communication**

- Easy to use multi-turn button w/ LCD that is operational in any environment
- Configurable via multi-turn button, handheld communicator or various PC software programs
- Communication Drivers (i.e. EDD, DTM, FDI, etc.)  
FDI: On Request



**3730-2 / -3 / -4 / -5 / -6**

**3730-2:** Function Rich Digital 4-20 mA Positioner for linear & rotary valves with Diagnostics, auto-calibration, and LCD / multi-turn push button input. The positioner can be connected to a PC via SAMSON TROVIS-VIEW to view graphical diagnostics as well as perform configurations & calibrations.

**3730-3:** HART version of the 3730-2 that connects to other HART devices and systems using DDs (EDDs) or DTMs.

**3730-4:** PROFIBUS-PA version of the 3730-2 that connects to other PROFIBUS-PA devices and systems using GSDs or DTMs.

**3730-5:** FOUNDATION (FF) version of the 3730-2 that connects to other FF devices and systems using DDs (EDDs) or DTMs and is capable of control in the field.

**3730-6:** Upgraded version of the 3730-3 that includes two pressure sensors to monitor supply and output pressure allowing for a more friendly presentation of enhanced diagnostics.



**3730-6 TROVIS SAFE**



**3731-3 TROVIS SAFE**

**3730-6 TS & 3731-3 TS:** TROVIS Safe versions for on/off safety-instrumented systems (SIS).



**Optimal for All Applications**

- IP 66 / NEMA 4X / SIL 2 & 3 Rated
- Optional Stainless Steel Housing in 3730-X
- Full range of explosion protection methods and area classifications
- Low steady-state air consumption to reduce compressed air costs
- Air purge function for single acting actuators to protect actuator internals
- Substitution method of initialization for calibration without travel movement

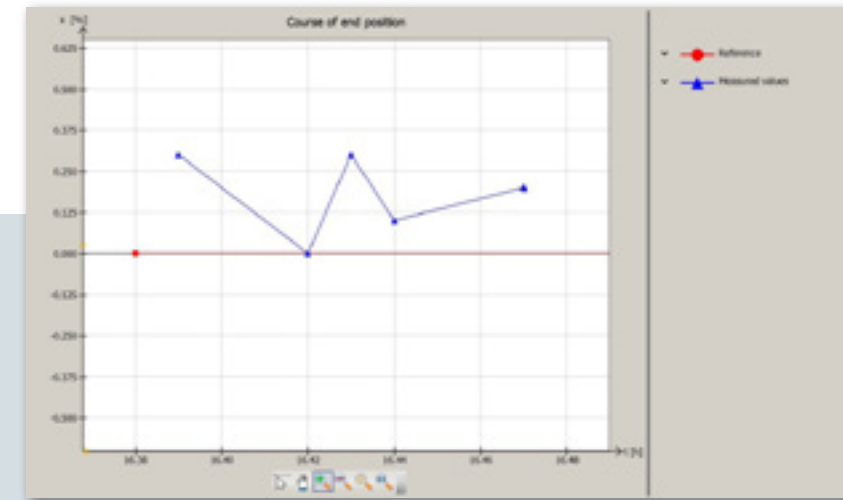


**Control Performance**

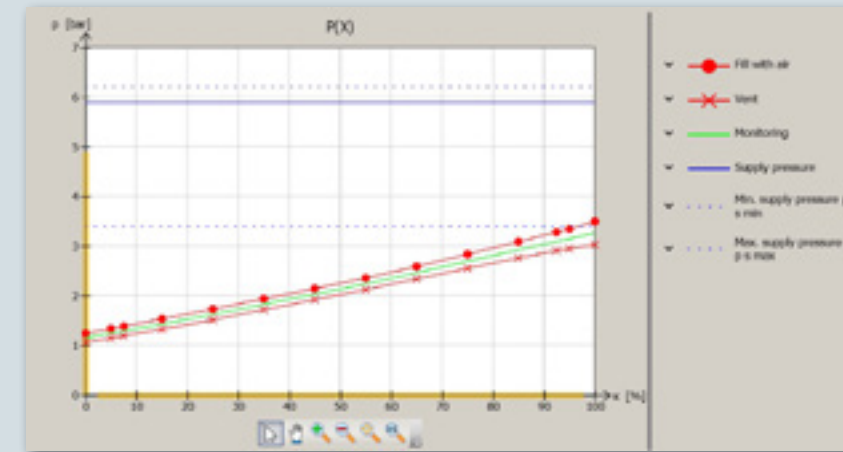
- Optimal Control Performance is standard
- Tight shutoff functions guarantee closure
- Non-gear feedback sensor without backlash and reduced hysteresis
- Continuous pneumatics offers better control & great resistance to particles
- Backup I/P Mode if displacement signal fails

# DIAGNOSTIC FUNCTIONALITY

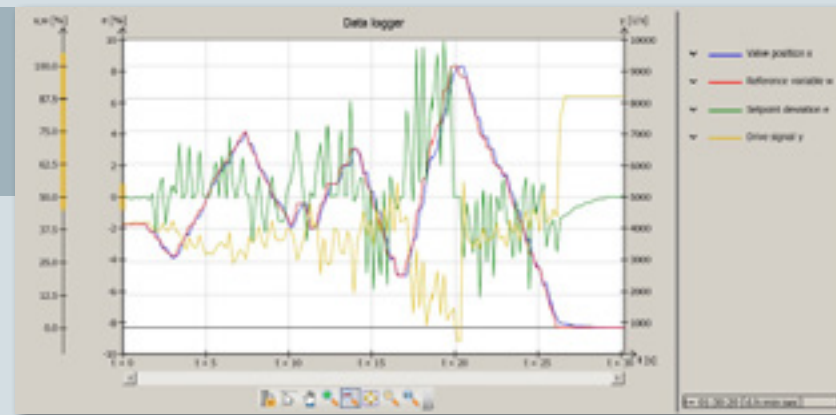
	Complete Valve History	Local Error Codes	Travel & Deviation Historians	Cycle Counter	Valve Signature & Hysteresis	End Position Trending	Deadband Test	Step Response Test
3730-1		X						
3730-2	X	X	X	X	X	X	X	X
3730-3	X	X	X	X	X	X	X	X
3730-4	X	X	X	X	X	X	X	X
3730-5	X	X	X	X	X	X	X	X
3730-6	X	X	X	X	X	X	X	X
3730-6TS	X	X	X	X	X	X	X	X
3731-3	X	X	X	X	X	X	X	X
3731-3TS	X	X	X	X	X	X	X	X



End Position Trend

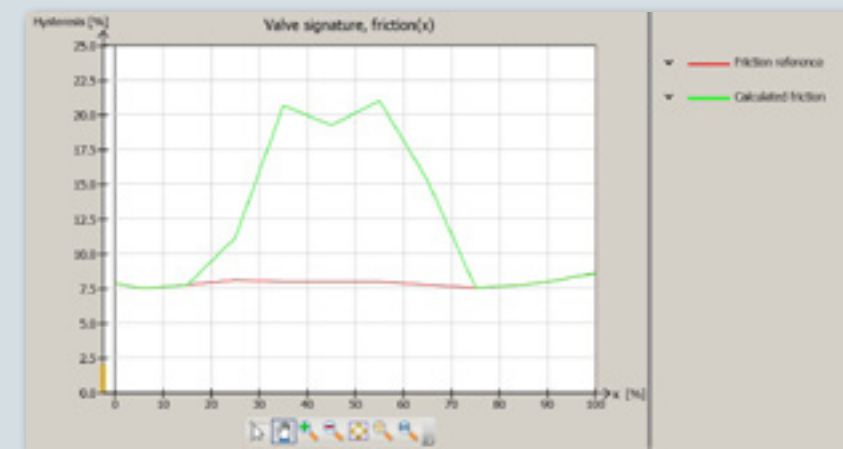


Valve Signature (Force)



Data Logger

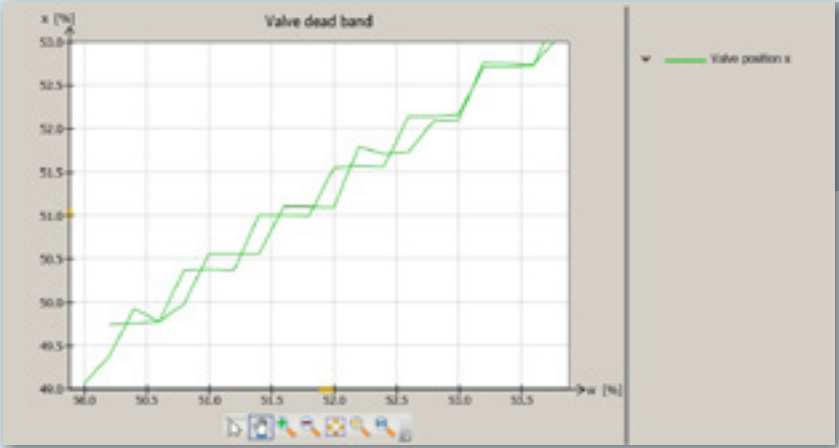
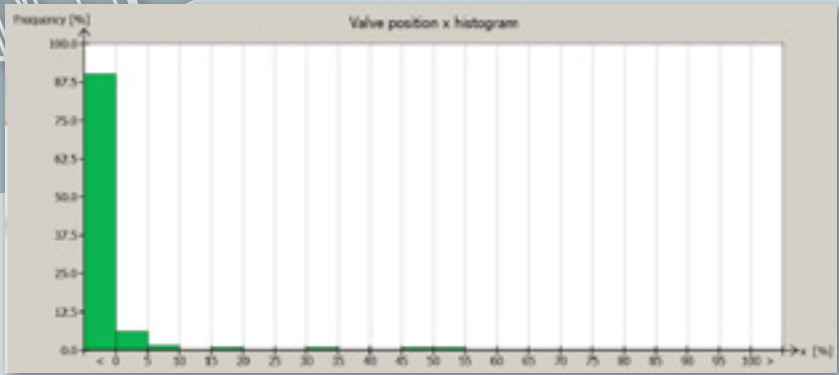
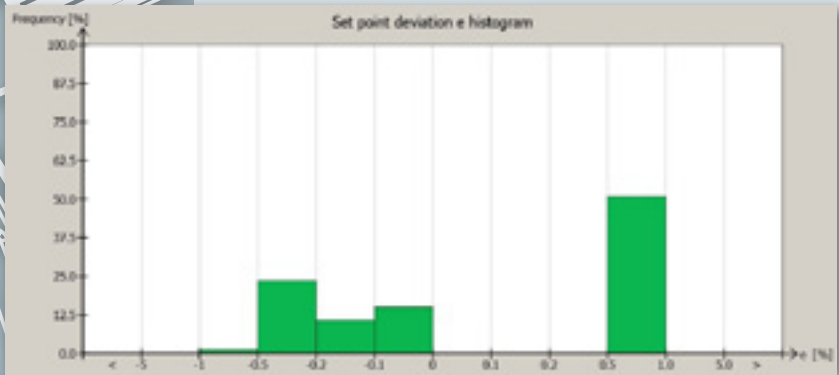
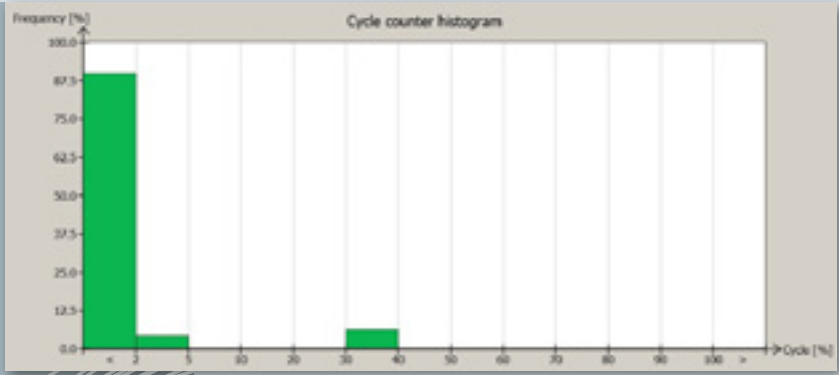
Reference	
Mean Hysteresis	4.6% (spring range)
Minimum Hysteresis	4.0% (spring range)
Maximum Hysteresis	5.4% (spring range)
Detected Lower Spring Range Value	0.2 bar
Detected Upper Spring Range Value	1.0 bar



Valve Signature (Hysteresis)

# DIAGNOSTIC FUNCTIONALITY

## Travel, Deviation & Cycle Counter



## Deadband Test

	Limit Switch	Position Feedback (4-20mA)	Binary Input Contact	Binary Output Contact	Solenoid Valve / Forced Vent Function	External Sensor	Leakage Sensor	Purging Function
3730-1	X							X
3730-2	X	X	X	X	X	X	X	X
3730-3	X	X	X	X	X	X**	X	X
3730-4	X		X		X	X		X
3730-5	X		X		X	X	X	X
3730-6	X	X	X	X	X	X	X	X
3730-6TS	X	X	X	X	X	X	X	X
3731-3		X	X	X*	X			X
3731-3TS		X	X	X*	X			X

\* In addition to the standard fault alarm binary output contact, this can be used as a general binary output as well.



# INTELLIGENT VALVE ENGINEERING

# SAMSON

PFEIFFER · RINGO · SED · STARLINE · VETEC  
AIR TORQUE · CERA SYSTEM · LEUSCH

**SAMSON's** technology has proven its value world-wide in a variety of industries. We are trusted in many of the world's most challenging applications to achieve precise control with a high level of safety and reliability.

We offer engineered solutions from a single source. With our extensive range of valves, actuators, and accessories we have the right products to suit your requirements.

Our linear and rotary control valves are equipped with SAMSON positioners that allow seamless integration into process control systems.

Continuous investment in research and development allows us to stay at the cutting edge of technology. With over 100 years of experience and expertise, you can count on SAMSON to provide a robust solution for your application.

**SAMSON**  
PFEIFFER · RINGO · SED · STARLINE · VETEC  
AIR TORQUE · CERA SYSTEM · LEUSCH

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