# WHITMAN TROLS









### PRODUCT BROCHURE

Whitman Controls is an established leader in the manufacture of pressure, vacuum, liquid level, and temperature sensor solutions.

Whitman Controls is a leader in the pressure, vacuum, temperature, and level sensor industry, a position we have held for over 40 years. The Whitman Value is built on our differentiated offering of high quality switches and sensors, and the ability to deliver custom products to exact customer specifications in highly competitive lead times. Off the shelf products limit an application's functionality and versatility - why choose a competitor solution at a higher price point that results in inferior performance? Our team of engineers deeply studies your application and media environment to provide a switch or sensor solution that will meet your performance needs while exceeding your expectations. High quality sensors, designed to exact customer specifications, and an unrelenting focus on superior service - Together they add up to the Whitman Value.













#### **Service-Disabled Veteran-Owned Small Business**

As a Service-Disabled Veteran-Owned Small Business, we believe in applying the same principles of military service to our every day practices: tireless dedication, rigorous standards of quality, and faithfulness to our values and mission. This translates into providing a high quality product to exact specifications that always exceeds performance expectations.

## ISO 9001 Certified – We Hold Ourselves, and Our Products, to the Highest Standards.

Whitman Controls is ISO 9001:2015 Certified, which gives our customers the confidence that we hold our internal processes, and products, to the highest standards of quality and rigorous testing requirements. You can be confident that the product you receive has met all necessary regulatory requirements and will outperform your desired expectations.

#### **Experience and Knowledge, That's Invaluable.**

Whitman Controls directs its years of design and manufacturing experience toward providing value-added services to our customers. These services can help you lower costs and increase efficiency. Our engineering team will work intimately with you and your team to design a switch that will maximize application performance no matter what the environment. In addition, our exceptional mechanical abilities allow us to perform additional assemblies and deliver more complete tested systems and subassemblies.

## Diversified Product Offering – More Choices and More Savings.

We offer the most extensive pressure, vacuum, temperature and liquid level switch selection in the industry. What does this mean for you? The ability to identify a switch that is suited perfectly for your application at a price that doesn't break your budget. At Whitman, we are constantly evaluating our input prices to identify savings we can pass along directly to the buyer. And we do all of this without sacrificing performance and quality.

Ongoing investment in research and development ensure we stay on the leading edge of sensor technology while consistently offering new models to meet the demands of any application. Plus we do it all at a price that will save you money.

#### PRODUCT OFFERINGS





#### **PRESSURE & VACUUM SWITCHES**

We manufacture a wide range of pressure, vacuum, and compound switches to meet the needs of any industrial application and operating environment. Each of our switches is highly customizable with numerous pressure ranges, fittings, electrical connections, and wetted materials available for selection. The Whitman name was built on our switch products over 40 years ago, and we pride ourselves on the quality and diversity of our offering.

#### PRESSURE TRANSMITTERS / TRANSDUCERS

Our full line of pressure transmitters and transducers provide an alternative for OEMs looking for continuous pressure measurement across a range of environments. These switches can be used in compact, low pressure environments, and in more hazardous, higher pressure applications. Like all of our products, these units are highly customizable to meet specific end-user needs.







#### **POINT LEVEL SWITCHES & SENSORS**

We provide a highly diversified offering of level switches and sensors, ranging from simple single and multi-level liquid level switches to more advanced sensor technologies used in the measurement of liquids and solids across more rugged media applications. These devices come in numerous sizes and materials, with our more advanced vibrating forks and rods providing numerous electrical settings, fittings, and various enclosures for more hazardous environments.

#### LEVEL TRANSMITTERS

Our full line of level transmitters provide continuous level and distance measurement up to 50 feet, and for pressure ranges up to 200 meters of water. These devices are ideal for continuous liquid level measurement, or for proximity measurement in process monitoring applications. Numerous options are available for desired output signals, custom lengths, and more rugged environments.









#### **TEMPERATURE SWITCHES & SENSORS**

Our temperature switches and thermostats are ideal for applications where the end user is looking for highly accurate control across a wide range of operating temperatures. These sensors are adjustable and highly responsive, affording use across a number of OEM processes.

## PRESSURE & VACUUM SWITCHES

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W	P88G Economical P/V/C Switch	P90 Off-Road NEMA 6 Pressure Switch	P95 Off Road NEMA 6 Pressure Switch	P100 Low Pressure P/V/C Switch	P117 Stainless Steel P/V Switch
Key Attributes	Economical switches for electrical ratings from 1 - 25 Amps	Ideal in harsh environments, weatherproof and briefly submersible	Ideal in harsh environments, resiliency against high pressure spikes up to 4,000 PSIG	Light pressure applications where precision of set point must be high	Stainless steel switches with high durability and diversity of set points
Available Switch Types	Pressure Vacuum Compound	Pressure	Pressure	Pressure Vacuum Compound	Pressure Vacuum
Proof Pressure	29.9 InHg VAC 600 PSIG	600 PSIG	4,000 PSIG	11.0 InHg VAC 15 PSIG	29.9 InHg VAC 750 PSIG
Set Point Ranges	28.2 InHg - 500 PSIG	0.75 to 400 PSIG	0.75 to 400 PSIG	11.0 InHg - 15 PSIG	28.2 InHg - 500 PSIG
Electrical Rating	Up to 25 Amps SPDT or SPST Availability	1 to 11 Amps SPDT or SPST Availability	1 to 11 Amps SPDT or SPST Availability	1 to 5 Amps SPDT or SPST Availability	1 to 5 Amps SPDT or SPST Availability
Temperature Range	-31°F to + 185°F (-35°C to +85°C)	-40°F to + 257°F (-40°C to +125°C)	-40°F to +257°F (-40°C to +125°C)	-65°F to +190°F (-54°C to +88°C)	-65°F to +225°F (-54°C to +107°C)
Sensor Element	Diaphragm	Diaphragm	Diaphragm	Diaphragm	Capsule
Standard Fittings (Custom fittings available)	1/4" NPTM 1/8" NPTM 1/8" BSPT Male	1/8" NPTM 12-20 SAE	1/8" NPTM 12-20 SAE	1/8" NPTM	1/8" NPTM 1/4" NPT Male 7/16-20 UNF Male
Wetted Parts	Diaphragm: Buna N & Brass Body: Zinc Alloy, Chromate Finish	Diaphragm: Viton Lower Body: Zinc Alloy, Chromate Finish	Diaphragm: Viton Lower Body: 303 SS	Diaphragm: Buna N with 316 SS Body: Anodized Aluminum	Capsule: 17-7 PH Body & Fitting: 303 SS
Corrosive Environment	Yes - P88LG	Yes	Yes	No	Yes - P117LG

### **PRESSURE & VACUUM SWITCHES**

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M	W117 Ultra Pure P/V Switch	P119 Miniature P/V Switch	J205G High Pressure P/V Switch	P605 High Pressure OEM Switch	J705 High Pressure / Set Point Switch
Key Attributes	High purity switches with all stainless steel welded interiors that are helium leak checked to pass 4 x 10-9 Std CC/Sec	Compact switches with Zinc die-cast bodies, ideal for tight spaces	High pressure ranges with low set points make this among most versatile offerings	Severe application controls suitable for numerous OEM systems specifically those with high pressure spikes	Durable high set point switches for more severe environments where switch integrity is critical
Available Switch Types	Pressure Vacuum	Pressure Vacuum	Pressure Vacuum	Pressure	Pressure
Proof Pressure	29.9 InHg VAC 750 PSIG	29.9 InHg VAC 750 PSIG	29.9 InHg VAC 5,000 PSIG	9,000 PSIG	9,000 PSIG
Set Point Ranges	28.2 InHg - 500 PSIG	28.2 InHg - 500 PSIG	28.2 InHg - 800 PSIG	200 to 6,000 PSIG	500 to 6,000 PSIG
Electrical Rating	1 to 5 Amps SPDT or SPST Availability	1 to 5 Amps SPDT or SPST Availability	1 to 5 Amps SPDT or SPST Availability	1 to 5 Amps SPDT or SPST Availability	1 to 5 Amps SPDT or SPST Availability
Temperature Range	-65°F to +225°F (-54°C to +107°C)	-65°F to +225°F (-54°C to +107°C)	-65°F to +225°F (-54°C to +107°C)	-65°F to +225°F (-54°C to +107°C)	-65°F to +225°F (-54°C to +107°C)
Sensor Element	Capsule	Capsule	Diaphragm	Piston	Piston
Standard Fittings (Custom fittings available)	1/8" NPTM 1/4" NPTM 1/4" VCR Male	1/8" NPTM 1/4" NPTM	1/8" NPTM 1/4" NPTM 7/16-20 SAE Male 1/4" VCR Male	1/8" NPTM 1/4" NPT Male 7/16-20 UNF Male	1/8" NPTM 1/4" NPTM 1/4" VCR Male
Wetted Parts	Capsule: 17-7 PH, Electron beam welded Body & Fitting: 303 SS	Capsule: 17-7 PH Body & Fitting: Anodized aluminum, ZA8 chromate finish	Diaphragm: 316 SS Body & Fitting: 303 SS	Limp Diaphragm: Kapton Body & Fitting: 303 SS	Piston: 17-4 PH Body & Fitting: 303 SS
Corrosive Environment	Yes - W117LG	Yes - P119LG	Yes - J205LG	Yes - P605L	Yes - J705L

## PRESSURE TRANSMITTERS / TRANSDUCERS

VV		
	P802 Rugged OEM Pressure Transducer	P805 Industrial Use Pressure Transducer
Key Attributes	All-welded stainless steel pressure transducers that are highly configurable with pressure ranges up to 20,000 PSIG	Rugged pressure transmitters with silicon piezoresistive sensors capable of measurement up to 8,700 PSIG
Measurement Range	-14.7 to 20,000 PSIG	-14.7 to 8,700 PSIG
Burst Pressure	Varies by Pressure Range	1.5 x FSO
Pressure Types	Gauge Compound	Absolute Gauge Sealed Gauge
Operating Temp Range	-40°F to +257°F (-40°C to +125°C)	-4°F to +185°F (-20°C to +85°C)
Output Signal	4 - 20mA 0.5 - 4.5V (ratiometric) 0 - 5V 1 - 5V 0 - 10V 1 - 6V 1 - 10V	4 - 20mA 0 - 5Vdc 1 - 5Vdc 0 - 10Vdc 0.5 - 4.5Vdc (ratiometric)
Power Supply	9 - 36Vdc (4-20mA output) 9 - 36Vdc (Voltage outputs) 5Vdc (0.5-4.5V outputs)	12 - 36Vdc 15-36Vdc (0 - 10Vdc output) 5Vdc (0.5 - 4.5Vdc output)
Electrical Connectors	DIN 43650 M12 Pigtail Packard MetriPack Hirschmann G Series DT04-3P DTM04-3P Amp Superseal	DIN 43650A M12 x 1 2 wire (current) 3 wire (voltage)
Fittings Available	1/8" NPT Male 1/4" NPT Male 7/16-20 SAE #4 Male 9/16-18 SAE #6 Male 1/4-19 BSP Male 3/8-24 SAE #3 Male 3/8-24 UNJF3A 7/16-20 UNJF3A European Threads (Various)	1/4" NPT Male G1/4 Male G1/2 Male G1/4 Female M20 x 1.5 Male
Wetted Materials:	Diaphragm: 17-4PH Stainless Steel Connection: 304 Stainless Steel	Diaphragm: 316L SS Housing: 304 SS
Accuracy	+/-0.25% of span	+/- 0.25% of span
Protection	IP67	IP65 IP66 (only for cable outlet)
Shock	100gs, 6ms	100gs, 6ms
/ibration	20g	20g

## LIQUID LEVEL SWITCHES

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VV	L20/L25 Side Mounted Level Switch	L30 / L31 Multi-Level Switch	L40 Vertical Mount Level Switch
Cey Attributes	Side-mounted switches for use as high or low indicators available in several materials	Multi-Station stainless steel or Brass/ Buna Level switches with as many as six level points and up to 72" in length	Vertical Mount stainless steel and Brass/E switches available in various sizes design for high performance and versatility
Available Materials	316 Stainless Steel Polypropylene CPVC Plastic Kynar	316L SS Stem & Floats Brass stem / Buna Floats	316L SS Stem & Floats Brass stem / Buna Floats Polypropylene CPVC Kynar
Min Liquid Specific Gravity	0.70 - 1.00	0.70 - 0.85	0.70 - 1.00
Temperature Range	-40°F to +180°F (+257°F in SS)	-40°F to +300°F	-40°F to +180°F (+300°F in SS)
Electrical Switch Rating	50 VA	50VA	50VA
Fitting	1/2" NPT 1/2" BSPT	1/8" NPT 1/2" NPT 1" NPT 1 1/2" NPT 2" NPT 3" Flange	1/8" NPT
Crush Pressure	100 PSI (500 PSI in SS)	1,000 PSI (Stainless Steel) 160 PSI (Brass / Buna)	100 PSI (Plastic) 160 PSI (Brass / Buna) 1,000 PSI (Stainless Steel)
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VV	L54 / L55 Ben Stem Side Mount Level Switch	L60 Heavy Duty Vertical Mount Level Switch	L70 Miniature Vertical Mount Switch
Key Attributes	Bent stem stainless steel level switches allowing for insertion into the sides of tanks and for vertical actuation	Rugged version of the L40 for use in more severe operating environments	Miniature and economical vertical mount switches available in polypropylene
Available Materials	316L Stainless Steel	316L SS Stem & Floats Brass stem / Buna Floats	Polypropylene & Buna Float
Min Liquid Specific Gravity	0.9	0.75 - 0.80	0.77
Temperature Range	-40°F to +257°F	-40°F to +180°F (+257°F in SS)	-40°F to +176°F
Electrical Switch Rating	50VA	50 VA	50VA
Fitting	1/8" NPT 3/8-24 UNF 2A Thread	1/4" NPT	1/8" NPT 3/8 - 16 UNC
Crush Pressure	900 PSI	975 PSI (Stainless Steel) 160 PSI (Brass / Buna)	100 PSI

## **VIBRATING FORK & ROD LEVEL SENSORS**

VV	L90 Vibrating Fork Level Switch	L91 Vibrating Rod Point Level Switch	L92 Vibrating Fork Point Level Switch
Key Attributes	Heavy duty tuning fork for measuring liquids across a range of media and applications	Heavy duty stainless steel vibrating rod ideal for measuring the presence of solids and powders	Heavy duty vibrating fork ideal for measuring the presence of solids and powders
Max Viscosity Minimum Density	10,000 cStokes	>= 350 gram/litre	15 gram/litre (150mm Fork Length) 75 gram/litre (125mm Fork Length) 500 gram/litre (100mm Fork Length
Process Temp. Range	-22°F to +392°F	-22°F to +482°F	-22°F to +392°F
Process Pressure	218 PSI Max	218 PSI Max	218 PSI Max
Available Wetted Parts	316/316L SS PTFE PFA TEFZEL HALAR	316/316L SS PTFE PFA TEFZEL HALAR	316/316L SS PTFE PFA TEFZEL HALAR
Vibration Test	As per IEC 60068 part 2 - 6	As per IEC 60068 part 2 - 6	As per IEC 60068 part 2 - 6
Available Process Connections	1" NPT / BSP 1 1/4" NPT / BSP 1 1/8" NPT / BSP 2" NPT / BSP Flange	1" NPT / BSP 1 1/4" NPT / BSP 1 1/8" NPT / BSP 2" NPT / BSP Flange	1" NPT / BSP 1 1/4" NPT / BSP 1 1/8" NPT / BSP 2" NPT / BSP Flange
Available Electronics (Supply & Output)	15 to 80VDC, DPDT Output 12 to 60 VDC, PNP Output 15 to 80VDC, SPDT Output Two Wire 18 to 260 VAC, Series Relay Two Wire DC 8 - 16 mA & 4 - 20 mA PFM Source Powered	15 to 80VDC, DPDT Output 12 to 60 VDC, PNP Output 15 to 80VDC, SPDT Output Two Wire DC 8 - 16 mA & 4 - 20 mA	15 to 80VDC, DPDT Output 12 to 60 VDC, PNP Output 15 to 80VDC, SPDT Output Two Wire DC 8 - 16 mA & 4 - 20 mA
Available Enclosures	Aluminum IP66-68 Rated Aluminum Flameproof IIa, IIb, IIc Stainless Steel Polycarbonate Plastic Customer Specified	Aluminum IP66-68 Rated Aluminum Flameproof IIa, IIb, IIc Stainless Steel Polycarbonate Plastic Customer Specified	Aluminum IP66-68 Rated Aluminum Flameproof IIa, IIb, IIc Stainless Steel Polycarbonate Plastic Customer Specified
Insertion Length	50 - 3,000mm	250 - 3,000mm	125 - 3,000mm
Explosion Proof	Yes	Yes	Yes

## LEVEL TRANSMITTERS

VV	L96 Capacitance Level Transmitter	L95 Hydrostatic Pressure Level Transmitter	Toughsonic Ultrasonic Level Sensor	Toughsonic PVDF Housing Ultrasonic Level Sensor
Key Attributes	Highly customizable capacitance level probe with numerous output options ideal for measuring liquid level in various tanks and other enclosures.	Stainless steel IP68 Rated devices for measuring vertical depth of a liquid	Ruggedized piezoelectric ultrasonic transducers for measuring level and distance through the air at distances up to 30 feet	Ruggedized piezoelectric ultrasonic transducers stored in PVDF housings for use in diesel fuels and chemical applications in closed and open tanks. Measurement options up to 20 feet
Measurement Range	Customizable	0.5 - 200m H20	0 - 30 ft (0 - 9.1m)	0 - 20 ft (0 - 6m)
Operating Temp Range	-22°F to +392°F (-30°C to 200°C)	+32°F to +158°F (0°C to +70°C)	-40°F to +158°F (-40°C to +70°C)	-40°F to +158°F (-40°C to +70°C)
Output Signal	0-5V, 1-5V, 0-10V, 4-20mA, Latching Relay	4 - 20mA	Voltage, 4 - 20mA, or combination	Five selectable, plus serial data
Power Supply	Varies with Output	12-36Vdc	10-30Vdc @60 mA Max	10-30Vdc @60 mA Max
Wetted Materials	304 / 316 SS, PTFE, Ceramic	304 SS 316L SS PTFE, Ceramic	316 Stainless Steel	316 Stainless Steel
Protection	IP68	IP68	IP68 NEMA - 4X NEMA - 6P	IP68 NEMA - 4X NEMA - 6P

## **TEMPERATURE SWITCHES & SENSORS**

VV	L10 Temperature Level Switch	II T150D Temperature Switch	TP Series Temperature Probe Switch	T3 Capillary Thermostat
Key Attributes	Temperature and level measurement in fluids up to 225°F	Adjustable temperature switches with set points up to 510°F and media applications up to 800°F	Creep action thermostat / thermal protector switch designed for use up to 250°F in 25°F increments	Capillary bulb stainless steel thermostat with 39" capillary tubes, stainless steel construction, use up to +190°F
Max System Temperature	+225°F (+107°C)	+800°F (427°C)	+225°F (+107°C)	+190°F (+88°C)
Max System Pressure	160 PSIG	1,000 PSIG	1,000 PSIG	1,000 PSIG
Set Point Ranges	+100°F to +225°F in 25° Increments -40°C to +107°C	-45°F to +510°F in 25° Increments -43°C to +266°C (+230°F / +110° in oil)	+50°F to +250°F in 25° Increments -40°C to +121°C	+30°F to +190°F (-1°C to 88°C)
Ambient Temperature Range	-40°F to +225°F in 25° Increments (-40°C to +107°C)	-65°F to 225°F (-54°C to 107°C)	-40°F to +250°F in 25° Increments (-40°C to +121°C)	+30°F to +190°F (-1°C to 88°C)
Electrical Rating	50VA	12" Wire Leads	-40°F to +250°F in 25° Increments (-40°C to +121°C)	10 Amps
Sensor Element	Reed Switch	Limit filled, saturated vapor sensor	Creep action thermostat	Capillary Bulb
Fittings Available	1/8" NPT	1/2" NPT Fitting adapter available	1/2" NPT Male	None
Wetted Parts	Brass stem, Buna Float	316L Stainless Steel	316 Stainless Steel	316 Stainless Steel
Corrosive Environment	Yes	Yes	Yes	No

#### WHAT OUR CLIENTS SAY

"We have had an exceptional professional relationship with Whitman Controls since we first started working with the company back in the mid 1990's. We have most frequently purchased the J205 line of pressure switches, which have shown incredible versatility and durability across a number of our applications. The quality of the Whitman switches and their speed to executing on our specific requests is what separates the firm from competitors in the field.

Customer service, from the sales team on new orders to the engineering team on discussing new designs, has always exceeded expectations."

- Shaun Chapdelaine, National Field Technician, Airgas www.airgas.com

"Whitman Controls has been an excellent partner going back to 2003.. We have been frequent and consistent buyers of the W117, P119, J205, and J705 line of vacuum and pressure switches, as well as all manner of level switches, all of which have shown exceptional quality and exceeded our expectations. Whitman Controls outpaces peers in the quality of their switches, ability to meet customer needs quickly and efficiently, and by showing a strong commitment to superior service. There is an excellent working relationship between our two firms and we look forward to partnering with the Whitman family for many years in the future."

- Senior Buyer, Auriema LTD

www.auriema.com

"We have partnered with Whitman Controls for nearly 20 years, and a Whitman Vacuum switch was designed into our very first project. Since our initial interaction with the company, we have used a number of their switches in both our own OEM builds and several customer systems. The company prides itself on the quality of its products and a commitment to its customers, and we have always had a favorable experience."

 Supply Chain Director, Leading Systems Integrator
 Solutions Provider Design Firm



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