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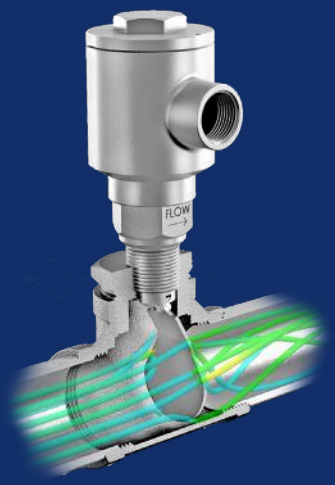
FLOWSwitch

FL-Series Ultra Compact Flow Switch



Specialists in design and manufacture of instrumentation for Hazardous Locations and Explosion Proof applications

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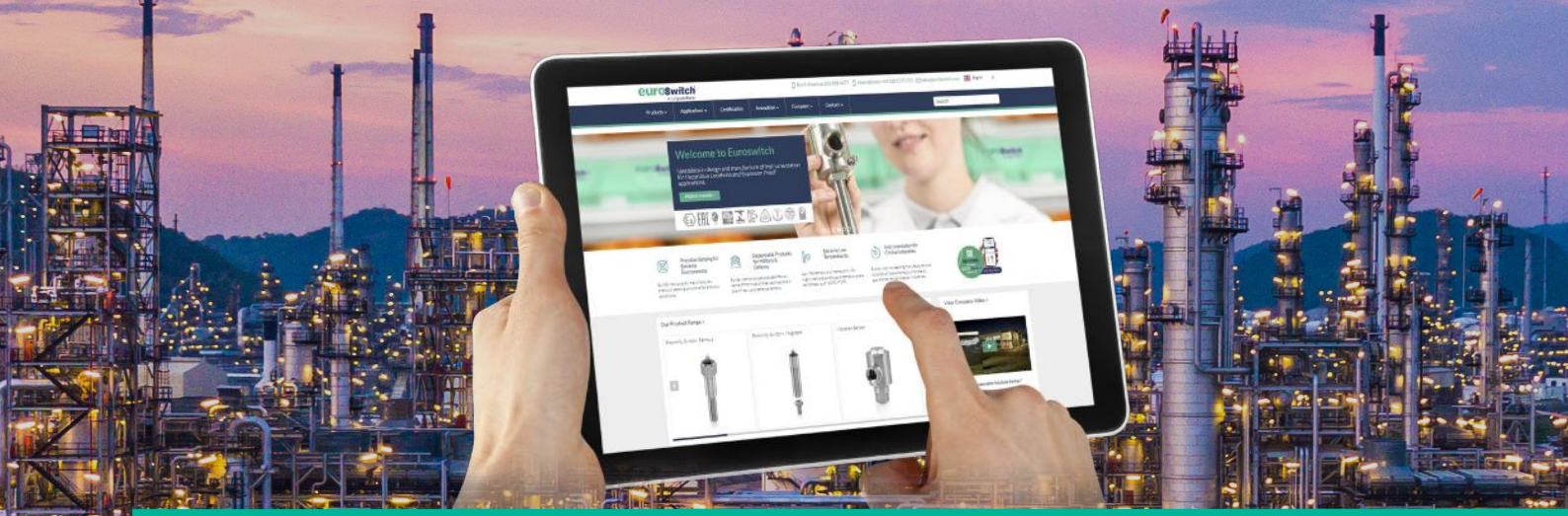

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'Your Process Automation Solutions Partner'

Euroswitch, a Longvale brand, is a pioneer in the design and manufacture of Process Automation Instrumentation solutions. Our products are certified to the latest global protection concepts and international standards, including: **ATEX, IECEx, UL, CSA, INMETRO and TRCU.**

Quality Assured, Manufacturing and Testing

Euroswitch has invested and committed to extensive independent testing for our products and manufacturing processes, to give you the confidence that our products do what we say they do.

Industries serviced include:

- Oil and Gas
- Nuclear
- Renewable
- Grain
- Military
- Mining
- Rail
- Chemical

'Unrivalled reliability, Whatever the industry'

Whether you are operating from a single manufacturing/processing facility, or are a worldwide provider in the Oil, Gas and Petrochemical sector, Euroswitch has a global distribution network that can provide a solution to meet your requirements.

FLOWSwitch

FL Series Ultra Compact Flow Switch

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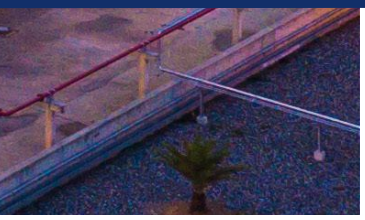
Worldwide Service & Support

Euroswitch offers exceptional support, with company locations in the UK, USA, and the Middle East; expertise is available 24-7 across the entire product range.

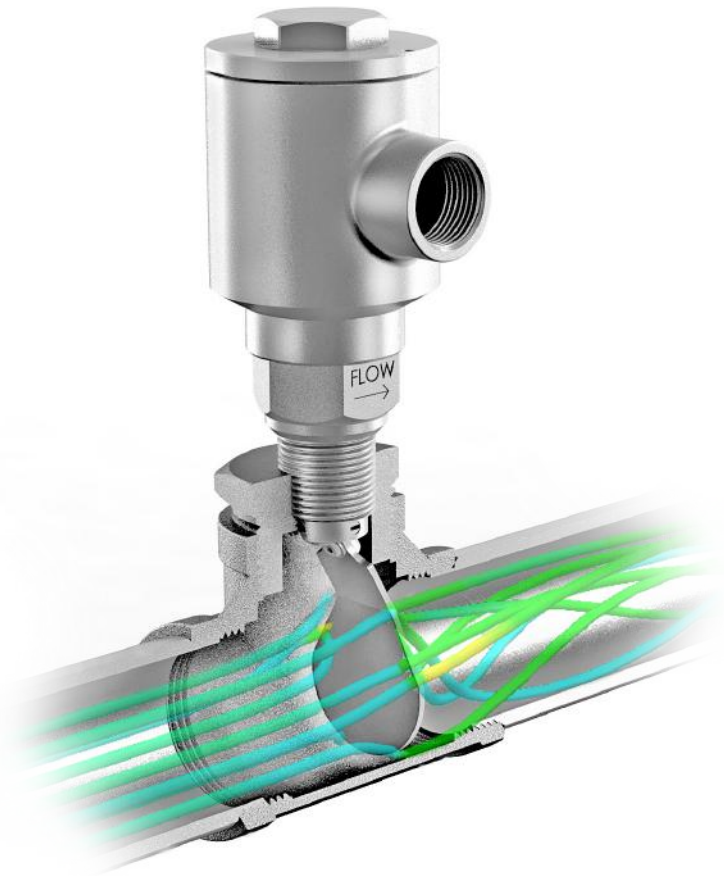


All designs are certified to the latest global protection standards.

FL Series - Special Features

The **Flow Switch** is a durable paddle-type device designed to detect flow or no-flow in a process media. The flow moves a permanent magnet into proximity of a dry contact switch. When flow decreases, the spring-loaded paddle mechanism retracts the magnet, resetting the switch.

The switch operates across a wide temperature range and is designed to handle inrush currents up to 24A, making it ideal for start-up surges from beacons, sounders, and other equipment. It offers switched outputs for PLC monitoring, system protection, and alarms in low or no-flow conditions.



Supply Voltage	Max Switching Current	Max Voltage
24 VDC	4A	240 VAC
110/120 VAC	4A	
230/240 VAC	3A	
Max in-rush 24A		

Flow Rates

- Factory-set to meet ANSI/ISEA Z358.1-2014 and EN15154 Parts 2 and 5 standards.
- Custom flow rates available upon request.
- See flow rate chart on page 5.

Robust Switching Contacts

- Handles high in-rush current up to 24A, 240 VAC/VDC, SPDT/DPDT.
- Continuous switching capability of 4A.

Termination Options

- Cable or individual lead wires.
- Wireable connection terminal head.

Multi approvals

- Certified under ATEX, IECEx, UKEx, Inmetro, UL, and CSA in a single part number.
- Additional regional certifications available

Environmental Protection

- Rated for moisture, gas, and dust protection: NEMA 4, 4X, 6, 6P and IP 66, 67, 68.

Materials

- All wetted parts made from 316L Stainless Steel as standard.

Pipe/Tee Options

- Sizes range from 1/2” to 2-1/2” in BSPT or NPT.
- Available in stainless steel, sealed and pressure tested.

Process Fluid Capability

- Compatible with various fluids: water, coolant, oil, and gas.

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FL Series - Options

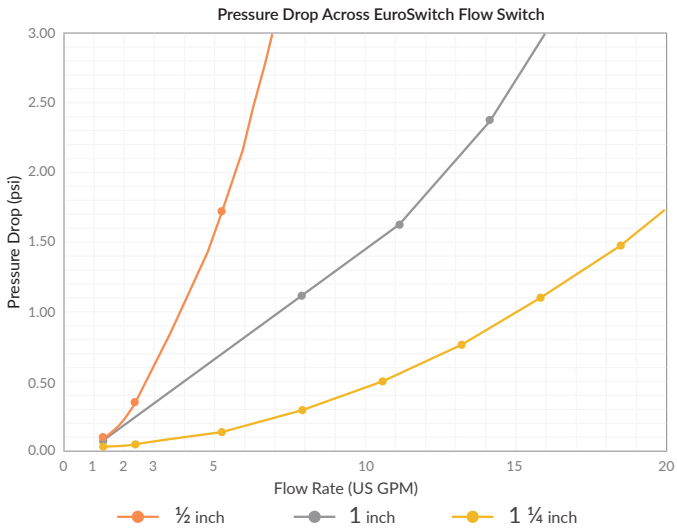
Scan the QR code to configure your FLOW Switch...

Product Series	FL-A	FL-A-W (A*)	FL-A-WL (A*)	FL-A-WLT (A*)	FL-A-WLR / WLRT
Housing Type	Hard Wired	Back/Top Entry	Side Entry	Side Entry	Side Entry 360° Rotatable
Contact Form	SPDT or DPDT	SPDT or DPDT	SPDT or DPDT	SPDT or DPDT	SPDT or DPDT
Conduit Connection	3/4" NPT - Male	1/2" NPT or M20	1/2" NPT or M20	1/2" NPT or M20 x 2	1/2" NPT or M20
Body Material	316L SS	316L SS	316L SS	316L SS	316L SS
Wireable Head Material	-	316L SS or Aluminium	316L SS or Aluminium	316L SS or Aluminium	316L SS
Tee Material	316L SS	316L SS	316L SS	316L SS	316L SS
Pipe/Tee Size					
1/2" BSPT or NPT	●	●	●	●	●
3/4" BSPT or NPT	●	●	●	●	●
1" BSPT or NPT	●	●	●	●	●
1-1/4" BSPT or NPT	●	●	●	●	●
1-1/2" BSPT or NPT	●	●	●	●	●
Standard Approvals (Explosion Proof)					
IECEx / UKEx ATEX Ex db & tb		●	●	●	●
UL/CSA Class I&II / Div 1	●	●	●	●	●
Standard Approvals (Non-Incendive)					
UL/CSA Class I&II / Div 2	●	●	●	●	●
Standard Approvals (Intrinsically Safe)					
IECEx / UKEx / ATEX Ex ia Zone 0		●	●	●	●
UL/CSA Class I, II, III Div 1, Zone 0		●	●	●	●
Regional Approvals					
Inmetro Ex db & tb		●	●	●	●

(A*) = Aluminium Head

Installation Considerations

- The Flow Switch is designed for installation on horizontal pipework, with the switch unit oriented vertically upward.
- Flow rates are pre-set at the factory and are 100% tested.
- Switches come sealed within a Tee fitting, which is permanently fixed and non-removable.



Standard Flow Rates

Pipe Size	1/2"	3/4"	1"	1-1/4"	1-1/2"
Actuation (Rising Flow)	7.6 (2.1)	9.1 (2.4)	9.1 (2.4)	9.1 (2.4)	9.1 (2.4)
Deactivation (Falling Flow)	4.0 (1.05)	5.0 (1.32)	5.0 (1.32)	5.0 (1.32)	5.0 (1.32)

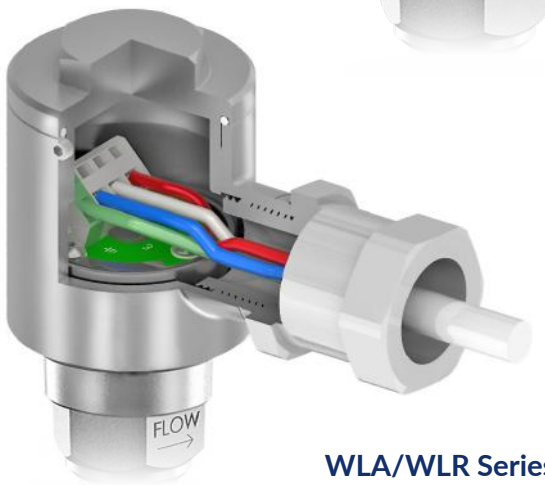
**All flow rates are in l/min (US GPM) measured with water at 20°C/68°F*

Wireable Connection Heads

The **Euroswitch Wireable Connection Head**, an industry-first innovation, has been widely adopted across the hazardous area market. This patented technology is available on our Flow Switches in four designs: W, WLA, WLR and WLT.

These wireable models feature anti-vibration cage clamp terminals, and the WLR version includes a rotatable connection head that can be adjusted to suit specific installations. Globally certified, these connection heads are used in the most demanding and hazardous environments worldwide, providing a reliable signal in critical applications.

W Series
Back/Top Entry

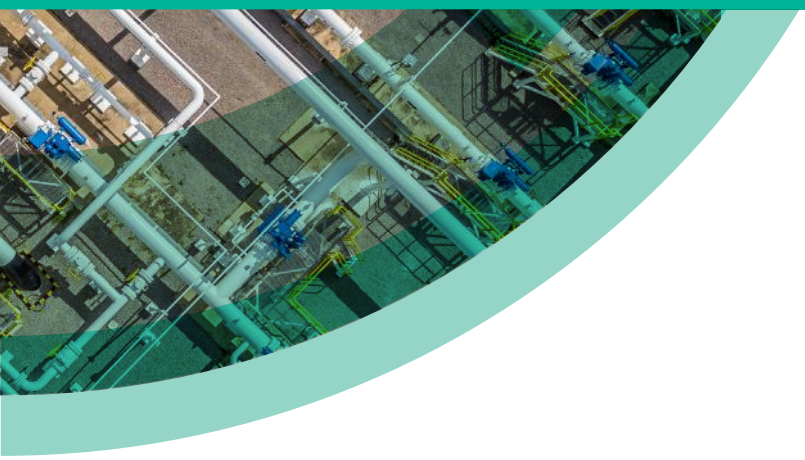


WLA/WLR Series
Side Entry

Download CAD files, product datasheets, and technical overviews for Euroswitch products. Visit our website for more information.
www.euroswitch.com

Key Advantages

- **Entry Options:** Available in back/top entry and side entry configurations, minimizing the need for additional components like 90° elbows.
- **Integral Gas and Dust Tight Terminal Chamber:** Ensures secure and safe operation in hazardous environments.
- **Compatible with Conduit or Armoured Cable Glands:** Options for 1/2” NPT or M20 fittings.
- **Field-Specific Cable Compatibility:** Accommodates 28-12 AWG conductors.
- **Anti-Vibration Terminals:** Designed to withstand vibrations up to 20g.
- **Compact Design:** Optimized for space-saving installations.
- **Single Source:** One component, one certification, and one supplier for simplified sourcing and compliance.



Scan the QR code to configure your FLOW Switch...

W / WA Series

Features

- Back/Top Entry
- 1/2" NPT or M20 Conduit Entry
- 316L Stainless Steel or Aliminium

WL / WLA / WLTA Series

Features

- Side Entry (Non-rotating)
- 1/2" NPT or M20 Conduit Entries
- 316L Stainless Steel or Aliminium

WLR / WLRT Series

Features

- 360° Rotatable Side Entry
- 1/2" NPT or M20 Conduit Entries
- 316L Stainless Steel

Technology Overview

Integral Junction Box

Eliminates the need for an additional junction box, glands, and bracketry, enabling direct termination at the switch.

Terminals

Available with anti-vibration cage clamp or screw terminals, both accommodating customer-specific cable sizes from 0.08 to 2.5mm² (28-12 AWG).

Entry Options

Back/top entry and side entry options available reducing the requirement for additional components such as elbows and nipples.

Entry Orientation

Our patented WLR (rotatable side entry) version allows users to orient the entry to their preferred location. This is particularly useful when installing in threaded holes where the entry may not finish in the same orientation every time.

Material

Constructed from high-grade 316L stainless steel for superior corrosion resistance, with an option for an aluminium connection head, (low copper alloy - polyester coated).

Multi Approved

Available with multiple approvals under a single part number, including ATEX, IECEx, UL, CSA, UKEx, and INMETRO.

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Online

Euroswitch.com has over a 1000 individual datasheets available online, making it the most comprehensive website of its kind.

3D CAD Models

Euroswitch offers a comprehensive range of 3D models for every product saving you time with integrating euroswitch products into your design.

Instrumentation

Euroswitch offers a vast range of Process Automation Instrumentation Solutions for Oil and Gas, Petro Chemical, Power Generation, Nuclear, Military, Subsea, Marine and Rail industries.

Our products are certified to the latest global protection concepts and international standards, including ATEX, IECEx, UL, CSA, INMETRO, KCs, PESO, ECAS, Nepsi and EAC/TRCU.

Please contact us for more information on our other product ranges. Or visit our website at **www.euroswitch.com**

Industrial Sensor Specialist
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Please ask to speak to one of our solutions team for advice on your specific application.

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