

euroSwitch[®]
A Longvale Brand

FERROProx[®]

FS-Series Ferrous Proximity Switch

**Hazardous Area
Instrumentation
Proximity Switches**

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

www.euroswitch.com





Euroswitch products are ideal solutions for your Hazardous Area and Process Automation applications

An innovative approach over the last 30 years has seen us become a global leader in the world of sensing. We push the boundaries with new and exciting concepts where indication and signalling is critical.

Euroswitch design bespoke solutions for your applications



Unrivalled reliability... Whatever the industry

Industries served include Oil & Gas, Petrochemical, Power Generation, Subsea, Marine, Military, Nuclear, Aerospace and Transport amongst many more. Modern design, based on customer needs along with the latest manufacturing techniques and hi-tech materials are what make Euroswitch products a popular choice.



High Temperature Applications

Extreme Temperature switches allow for highly reliable continuous operation of up to 204°C/400°F.

Subsea Applications

Euroswitch are able to offer a wide range of proximity switches that are suitable for operation and continuous submersion at depths of up to 6900m/22600ft.

Low Temperature

Low Temperature switches allow for highly reliable continuous operation down to -60°/-76°F. In fact Euroswitch have the lowest temperature proximity switches for hazardous areas available on the market.

Bespoke

Euroswitch offer many bespoke products that reduce installation time, cost and parts inventory.

Euroswitch understand that standards are constantly changing

Let our team of experts take the work load away from you by advising a product that best meets your requirements. We also hold great knowledge across a variety of industries. If you have an issue then let us solve your problem—chances are we already have.

The Evolution of the Switch

Euroswitch Wireable Connection Heads are unique in the hazardous area market and offers the benefits of a micro junction box integrated directly within the sensor. This patented technology is available on the majority of our instrumentation in one of three designs, namely W, WL or WLR. All designs are certified to the latest global protection standards.

Junction Box

Alleviates the requirement for an additional junction box due to termination being carried out direct at the switch.

Customer Cable Types

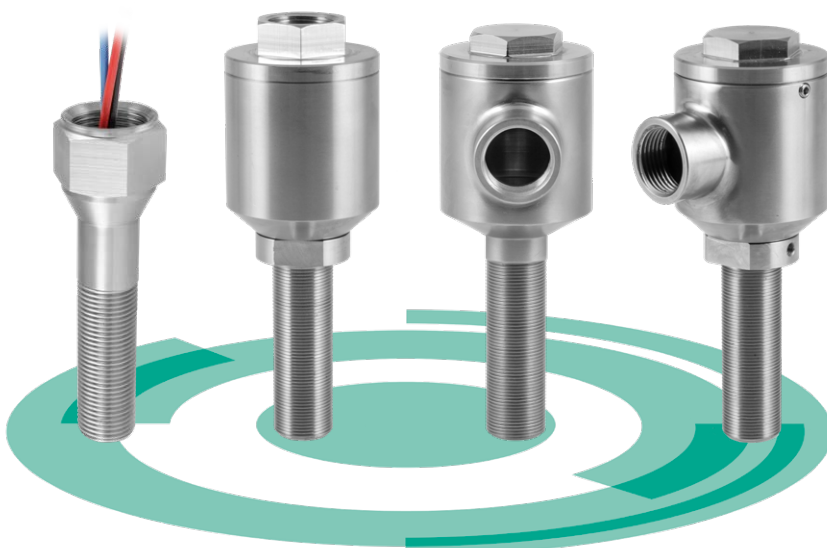
Allows for customer specific cable to be used up to 2.5mm² (12AWG).

Reduced Installation Time

Allowing for the installer to save time on connecting glands and terminating cable.

Multi Approved

Allowing for reduced inventory by combining global approvals in one product : UL/CSA, IECEx, ATEX, EAC/ TRCU, KCS, Imetro, Nepsi, PESO, ECAS Ex.



Euroswitch Global Approvals

Euroswitch FS Series Proximity Switches highly versatile range can be used for a multitude of applications where a reliable signal is required. Utilising proven magnetic technology enables them to sense ferrous material, such as carbon steel and 400 Series Stainless at up to 2.5mm, with volt free SPDT or DPDT contact forms.

The FS Series is available either hardwired or with one of three wireable options W, WL, WLR which utilises our pioneering (Patented) integrated connection head.

FS Series Features



- Ferrous Sensing (Sensing Range <2.5mm / 0.1")
- 316L Stainless Steel Housing
- SPDT or DPDT contacts
- Imperial or Metric Threads (Mixed threads available)
- Operating Temperature -60°C to + 204°C (-76°F to + 400°F)
- High and Low electrical loads
- Use Either A/C or D/C, N/O or N/C
- Volt Free Contacts
- Globally Certified, please see table below
- IP 66/67/68, NEMA 4, 4X, 6, 6P
- SIL 2 and SIL 3
- Repeatability of <0.05mm/0.002"
- Low Hysteresis <0.5mm/0.02"



Product Series	FS-A	FS-B	FS-C	FS-D	FS-E	FS-F	FS-H	FS-I
Contact Form	SPDT	SPDT		SPDT		SPDT	SPDT	
Mounting	M18	5/8"UNF	M18	5/8"UNF	M18	3/4"UNF	5/8"UNF	M18
Overall Length	3.15"/80.0mm	3.62"/92.0mm		4.31"/109.5mm		5.81"/147.6mm	3.75"/95.3mm	
Conduit Entry	N/A	1/2"NPT	M20	1/2"NPT	M20	1/2"NPT	1/2"NPT	M20
Standard Approvals (Explosion Proof)								
IECEX / 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 / ATEX Ex ia Zone 0	•	•		•		•	•	
UL/CSA Class I, II, III Div 1, Zone 0	•	•		•		•		
Regional Approvals								
TS Mark		• Wireable Only		• Wireable Only		• Wireable Only		
ECAS Ex		•		•		•	•	
Nepsi Ex	•	•		•		•	•	
PESO Ex	•	•		•		•	•	
KCs Ex		• Wireable Only		• Wireable Only		• Wireable Only	• Wireable Only	
Inmetro Ex	•	•		•		•	•	
EAC/TRCU Ex	•	•		•		•	•	
Mining M1 Exd		•		•		•	•	

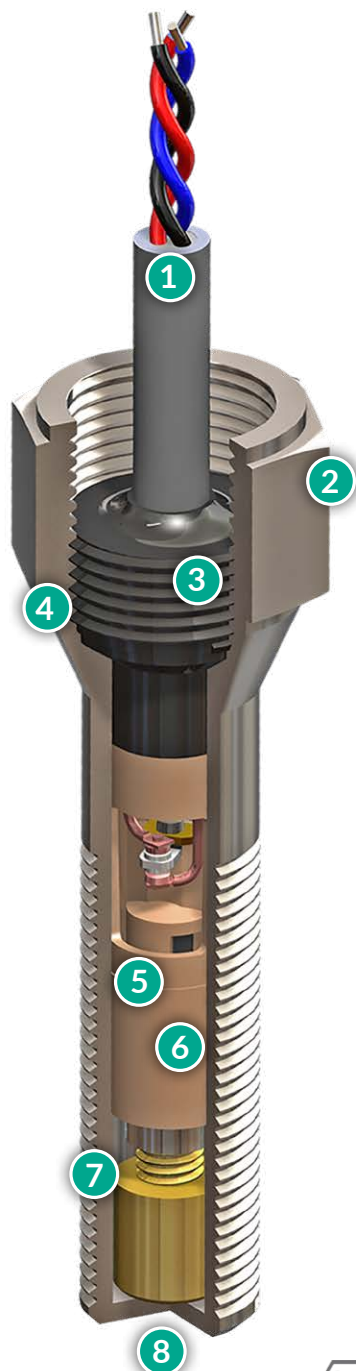
The diagram illustrates three different pressure transmitter models:

- W Series:** A basic cylindrical transmitter with a top-mounted sensor.
- WL Series:** A transmitter with a side port and a top-mounted sensor.
- WLR Series:** A transmitter with a side port and a top-mounted sensor. A cutaway view shows the internal green PCB and wiring.

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FS Series Ferrous Operated Proximity Switch

The Euroswitch **FS Series** uses an internal array of magnets enabling it to sense ferrous material such as carbon steel. Globally certified, they are used in some of the most arduous and hazardous applications where a reliable signal is required making them a cost effective solution for your application.



1. Termination Options

Cable (Standard or Low/High Temp.)
Lead Wires
Wireable Connection Head
Industrial Connectors

2. Multi Approvals

Available with multiple approvals such as ATEX, IECEx, UL, CSA, EAC/TRCU, INMETRO and KCs under a single part number.

3. Environmental Protection

Special potting compound fills the cavity to form a barrier against moisture/gas & dust ingress enabling the switch to be rated to NEMA 4, 4X, 6, 6P and IP 66, 67, 68.

4. Materials

Complete 316L Stainless Steel* construction ensures excellent corrosion resistance and robustness.

* Standard option, other materials available.

5. The Ferroswitch Technology

Uses an array of magnets to provide a snap action response and ensures solid contact pressure is maintained.

6. Contact Options

Noble material contacts (palladium/silver) are self cleaning and suitable for switching high or low electrical loads.

Available in SPDT/SPCO Form C and DPDT/DPCO 2x Form C arrangements.

7. Mounting Options

Wide variety of metric/imperial thread types and lengths available.

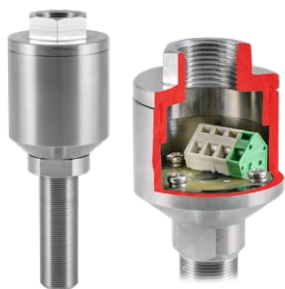
8. Sensing Range

End sensing for precision applications. Able to sense ferrous material at up to 2.5mm (0.1"). Increased sensing range available with magnetic targets.



Wireable Connection Heads

The Euroswitch **Wireable Connection Head** is an industry first and has been widely accepted throughout the hazardous area market. This patented technology is available on the majority of our instrumentation in one of three designs, namely W, WL or WLR. All designs are certified to the latest global protection standards.



W Series



Features

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

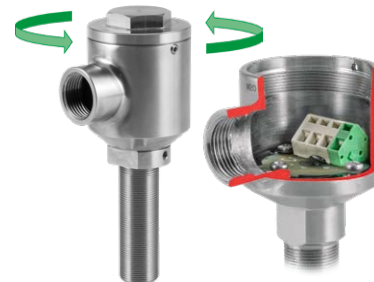


WL Series



Features

- Side Entry
- 1/2" NPT or M20 Conduit Entry
- 316L Stainless Steel



WLR Series



Features

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

Technology Overview

Integral Junction Box

Alleviates the requirement for an additional junction box, glands and bracketry, allowing termination to be carried out directly at the switch.

Terminals

Supplied with either cage clamp or screw terminals, both offering the ability to accept customer specific cable sizes between 0.08- 2.5mm² (28-12AWG).

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 the user to orientate the entry to their preferred location. Beneficial when installing in threaded holes that do not allow the entry to finish in the same orientation every time.

Material

High grade 316L Stainless Steel design for superior corrosion resistance.

Multi Approved

Available with multiple approvals such as ATEX, IECEx, UL, CSA, EAC/TRCU, INMETRO and KCs under a single part number.



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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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