



# LEVEL SWITCHES



# / DETERMINE

Permanent level monitoring – the detection and checking of the liquid level – is essential for the optimum operating condition of a technical machine or system.

It is only through this that control, regulation & time-critical response become possible to guarantee function and process safety. Float switches are essential components, and their reliability and quality are of decisive importance.



Manufactured 100% in-house, the ASHCROFT product line of level switches are the most reliable and economical solution for level control in tanks and containers.

**MEASURE US BY IT!**

LEVEL SWITCHES

LEVEL SWITCHES

# / THIS IS ASHCROFT

## DEVELOPMENT FROM TRADITION

When Edward Ashcroft founded our company in 1852, his mission was to protect the steam-powered industry and its workers by using more sophisticated and reliable instruments. Times have changed, but not our attitude. With a history of more than 165 years, of which more than 40 years with our own production in Europe, we have experienced and learned a lot. Together with our customers, we have mastered three industrial revolutions, survived global and regional conflicts and crisis's. We look forward to accompanying our customers with our products in the fourth industrial revolution as well.

## GLOBAL - REGIONAL - LOCAL

Globally positioned - regionally represented and locally available for you. With local contacts who speak your language and are ready to solve your challenges.

## OUR GREATEST STRENGTH

All of Ashcroft's products and services are the result of our exceptional people. We are all passionate about our common goal, the best customer satisfaction. Ashcroft is inspired of a common commitment to our work and to each other. Combining the talents of our diverse workforce makes us more competitive, resilient and better able to respond to the ever-changing needs of our customers and markets.

## OUR MOTIVATION

As a customer and partner, you are the focus of our attention. We are passionate about designing and producing the most innovative, high quality pressure and temperature measuring instruments on our planet.

## OUR VALUES

Our five corporate values are not abstract, but are lived by us, and every Ashcroft employee bases his or her daily actions on them.

LEVEL SWITCHES



## THINK CUSTOMER FIRST

Every measure, every plan and every project is aimed first and foremost at you, our customer. We see the world through your eyes.

## NEVER SETTLE / CHALLENGE THE STATUS QUO

What was true yesterday is not necessarily true today. At Ashcroft, we challenge each other to never be indifferent, to keep improving ourselves and the company.

## RESPECT EACH OTHER

We celebrate our diversity, share our ideas and intensify our collective thinking. We act and discuss in mutual respect and thus find better solutions.

## THINK BEYOND BORDERS

Across geographical borders. Beyond the factory. Beyond your own area of responsibility. Beyond the personal comfort zone.

## WIN AS A TEAM

The common goal is more important to us than our own.

LEVEL SWITCHES

LEVEL

MEASUREMENT

## / ASHCROFT LEVEL SWITCHES

DETECTION

CONTROL

LEVEL SWITCHES

## / ASHCROFT LEVEL SWITCHES

FOR LEVEL MONITORING IN LIQUIDS WITH UP TO 6 FLOATS AND 6 SWITCH CONTACTS.

The Ashcroft level switch series (LS) is designed to measure liquid levels in both unpressurised and pressurised tanks.

For optimum operation of a technical machine or system, tank level measurement is vital. The Ashcroft LS series provides the user with tank level and continuous liquid level measurement.

Ashcroft level switches are used to trigger a defined system function (e.g. alarm switching) when the liquid level exceeds or falls below a certain level. As the liquid level rises or falls, the float (which is available in various materials) moves along the sliding tube. A magnet integrated in the float switches a reed contact permanently installed in the sliding tube and controls the desired system function as a normally closed or normally open contact. Float switches with more than two switching points enable the output of additional information on the "full" or "empty" message in the liquid tank.

They are usually mounted from above or below via a thread or flange in the tank.

For applications with critical requirements, unit versions with ATEX approval (intrinsically safe or flameproof enclosure) are available. Ashcroft level switches are the most economical and reliable solution for level control in tanks and vessels.

All switches are available in a variety of materials and designs that are suitable for a wide range of liquids to be controlled.

LEVEL SWITCHES



# / CONNECTION OPTIONS

THE ASHCROFT LEVEL SWITCH IS USED FOR MONITORING THE LEVEL OF LIQUIDS BY MEANS OF REED CONTACTS FIXED IN THE SLIDING TUBE.

The system uses a magnetic float that moves along the sliding tube and switches the reed contacts when crossed. The position of the reed contacts is freely definable and must be specified when ordering the level switch.

## TYPES

- LS100 = 1 switch point
- LS200 = 2 switch points
- LS300 = 3 switch points
- LS400 = 4 switch points
- LS500 = 5 switch points
- LS600 = 6 switch points

## SLIDE TUBE LENGTH

- up to 3.000 mm

## SLIDING TUBE MATERIALS

- 316 stainless steel
- PVDF
- PVC

## FLOAT MATERIALS

- 316 stainless steel
- NBR
- Polypropylene

## MATERIALS PROCESS CONNECTION

- 316 stainless steel
- PVDF
- PVC

## PROCESS CONNECTION

- Thread
- Flange

## WORKING PRESSURE

- 4 - 60 bar

## TEMPERATURE RANGES

- 55°C - +200°C

## SWITCHING FUNCTIONS

- REED SPST
- REED SPDT

## ELECTRICAL CONNECTION

- DIN connector
- Cable
- Cable with cable gland
- Weatherproof connection housing IP 65
- ATEX Ex-d connection housing
- ATEX Ex-ia intrinsically safe connection housing

## ACCURACY

- ±2 mm (switching point)



# / ASHCROFT LS100

FOR LEVEL MONITORING WITH ONE SWITCHING POINT

## LEADING PIPE

- / 316 stainless steel; maximum length 3.000 mm
- / PVDF; maximum length 700 mm
- / PVC; maximum length 700 mm

## PROCESS CONNECTION

- / G 1/8" / G 1/4" / G 3/8" / G 1/2" / G 3/4" / G 1"
- / G 1 1/4" / G 1 1/2" / G 2"

## FLANGE CONNECTION (DIMENSIONS ON REQUEST)

- / 316 stainless steel / PVDF / PVC

## ELECTRICAL CONNECTION

- / Housing ATEX EEx d IIC T6 IP65
- / Housing ATEX EEx d IIB T6 IP65
- / Housing ATEX EEx ia IIC T6 (intrinsically safe)
- / Housing ATEX EEx ia IIB T6 (intrinsically safe)
- / Cable (length 1 m)
- / Cable with cable gland (length 1 m)
- / Weatherproof connection housing
- / Housing IP65
- / DIN plug



## / TECHNICAL SPECIFICATIONS

CONSTRUCTION	OUTER-Ø	HEIGHT	OPERATING PRESSURE	MEDIUM TEMPERATURE	DENSITY	MATERIAL	SWITCH FUNCTION
/ Cylinder	/ 30 mm	/ 20 mm	/ ≤ 10 bar	/ 60°C	/ ≥ 500 kg/m³	/ NBR	/ SPST 220V 2A 40W / SPST 220V 3A 60W / SPDT 100V 0,25A 5W
/ Cylinder	/ 30 mm	/ 45 mm	/ ≤ 10 bar	/ 60°C	/ ≥ 500 kg/m³	/ NBR	/ SPST 220V 3A 60W / SPST 220V 3A 120W / SPDT 220V 1A 60W
/ Cylinder	/ 17,5 mm	/ 25 mm	/ ≤ 4 bar	/ 60°C	/ ≥ 800 kg/m³	/ NBR	/ SPST 220V 2A 40W / SPST 220V 3A 60W / SPDT 100V 0,25A 5W
/ Cylinder	/ 25 mm	/ 15 mm	/ ≤ 4 bar	/ 60°C	/ ≥ 250 kg/m³	/ NBR	/ SPST 220V 2A 40W
/ Cylinder	/ 25 mm	/ 15 mm	/ ≤ 4 bar	/ 60°C	/ ≥ 800 kg/m³	/ PP	/ SPST 220V 2A 40W / SPST 220V 3A 60W / SPDT 100V 0,25A 5W
/ Cylinder	/ 25 mm	/ 25 mm	/ ≤ 4 bar	/ 60°C	/ ≥ 700 kg/m³	/ PP	/ SPST 220V 2A 40W / SPST 220V 3A 60W / SPDT 100V 0,25A 5W
/ Cylinder	/ 45 mm	/ 45 mm	/ ≤ 4 bar	/ 60°C	/ ≥ 600 kg/m³	/ PP	/ SPST 220V 3A 120W / SPDT 220V 1A 60W
/ Ball	/ 28 mm	/ 28 mm	/ ≤ 10 bar	/ 110°C	/ ≥ 800 kg/m³	/ 316 stainless steel	/ SPST 220V 2A 40W / SPST 220V 3A 60W / SPDT 100V 0,25A 5W
/ Cylinder	/ 30 mm	/ 36 mm	/ ≤ 25 bar	/ 110°C	/ ≥ 700 kg/m³	/ 316 stainless steel	/ SPST 220V 3A 60W / SPDT 100V 0,25A 5W
/ Cylinder	/ 44 mm	/ 52 mm	/ ≤ 12 bar	/ 110°C	/ ≥ 650 kg/m³	/ 316 stainless steel	/ SPST 220V 3A 60W / SPST 220V 3A 120W / SPDT 220V 1A 60W
/ Ball	/ 52 mm	/ 52 mm	/ ≤ 30 bar	/ 110°C	/ ≥ 550 kg/m³	/ 316 stainless steel	/ SPST 220V 3A 60W / SPST 220V 3A 120W / SPDT 220V 1A 60W
/ Ball	/ 52 mm	/ 52 mm	/ ≤ 60 bar	/ 110°C	/ ≥ 700 kg/m³	/ 316 stainless steel	/ SPST 220V 3A 60W / SPST 220V 3A 120W / SPDT 220V 1A 60W
/ Cylinder	/ 30 mm	/ 29 mm	/ ≤ 30 bar	/ 110°C	/ ≥ 700 kg/m³	/ 316 stainless steel	/ SPST 220V 3A 60W / SPDT 100V 0,25A 5W

LEVEL SWITCHES

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## / TECHNICAL SPECIFICATIONS

CONSTRUCTION	OUTER-Ø	HEIGHT	OPERATING PRESSURE	MEDIUM TEMPERATURE	DENSITY	MATERIAL	SWITCH FUNCTION
/ Cylinder	/ 30 mm	/ 20 mm	/ ≤ 10 bar	/ 60°C	/ ≥ 500 kg/m³	/ NBR	/ SPST 220V 2A 40W / SPST 220V 3A 60W / SPDT 100V 0,25A 5W
/ Cylinder	/ 30 mm	/ 45 mm	/ ≤ 10 bar	/ 60°C	/ ≥ 500 kg/m³	/ NBR	/ SPST 220V 3A 60W / SPST 220V 3A 120W / SPDT 220V 1A 60W
/ Cylinder	/ 17,5 mm	/ 25 mm	/ ≤ 4 bar	/ 60°C	/ ≥ 800 kg/m³	/ NBR	/ SPST 220V 2A 40W / SPST 220V 3A 60W / SPDT 100V 0,25A 5W
/ Cylinder	/ 25 mm	/ 15 mm	/ ≤ 4 bar	/ 60°C	/ ≥ 250 kg/m³	/ NBR	/ SPST 220V 2A 40W
/ Cylinder	/ 25 mm	/ 15 mm	/ ≤ 4 bar	/ 60°C	/ ≥ 800 kg/m³	/ PP	/ SPST 220V 2A 40W / SPST 220V 3A 60W / SPDT 100V 0,25A 5W
/ Cylinder	/ 25 mm	/ 25 mm	/ ≤ 4 bar	/ 60°C	/ ≥ 700 kg/m³	/ PP	/ SPST 220V 2A 40W / SPST 220V 3A 60W / SPDT 100V 0,25A 5W
/ Cylinder	/ 45 mm	/ 45 mm	/ ≤ 4 bar	/ 60°C	/ ≥ 600 kg/m³	/ PP	/ SPST 220V 3A 120W / SPDT 220V 1A 60W
/ Ball	/ 28 mm	/ 28 mm	/ ≤ 10 bar	/ 110°C	/ ≥ 800 kg/m³	/ 316 stainless steel	/ SPST 220V 2A 40W / SPST 220V 3A 60W / SPDT 100V 0,25A 5W
/ Cylinder	/ 30 mm	/ 36 mm	/ ≤ 25 bar	/ 110°C	/ ≥ 700 kg/m³	/ 316 stainless steel	/ SPST 220V 3A 60W / SPDT 100V 0,25A 5W
/ Cylinder	/ 45 mm	/ 55 mm	/ ≤ 12 bar	/ 110°C	/ ≥ 650 kg/m³	/ 316 stainless steel	/ SPST 220V 3A 60W / SPST 220V 3A 120W / SPDT 220V 1A 60W
/ Ball	/ 52 mm	/ 52 mm	/ ≤ 30 bar	/ 110°C	/ ≥ 550 kg/m³	/ 316 stainless steel	/ SPST 220V 3A 60W / SPST 220V 3A 120W / SPDT 220V 1A 60W
/ Ball	/ 52 mm	/ 52 mm	/ ≤ 60 bar	/ 110°C	/ ≥ 700 kg/m³	/ 316 stainless steel	/ SPST 220V 3A 60W / SPST 220V 3A 120W / SPDT 220V 1A 60W
/ Cylinder	/ 30 mm	/ 29 mm	/ ≤ 30 bar	/ 110°C	/ ≥ 700 kg/m³	/ 316 stainless steel	/ SPST 220V 3A 60W / SPDT 100V 0,25A 5W

LEVEL SWITCHES

## / ASHCROFT LS200 / 300 / 400 / 500 / 600

FOR LEVEL MONITORING WITH TWO TO SIX SWITCHING POINTS

### CONNECTED PIPE

- / 316 stainless steel; maximum length 3.000 mm
- / PVDF; maximum length 700 mm
- / PVC; maximum length 700 mm

### PROCESS CONNECTION

- / G 1/8" / G 1/4" / G 3/8" / G 1/2" / G 3/4" / G 1"
- / G 1 1/4" / G 1 1/2" / G 2"

### FLANGE CONNECTION (DIMENSIONS ON REQUEST)

- / 316 stainless steel / PVDF / PVC

### ELECTRICAL CONNECTION

- / Housing ATEX EEx d IIC T6 IP65
- / Housing ATEX EEx d IIB T6 IP65
- / Housing ATEX EEx ia IIC T6 (intrinsically safe)
- / Housing ATEX EEx ia IIB T6 (intrinsically safe)
- / Cable (length 1 m)
- / Cable with cable gland (length 1 m)
- / Weatherproof connection housing
- / Housing IP65
- / DIN plug



LEVEL SWITCHES

# ASHCROFT CUSTOM / ASHCROFT CES ENGINEERED SOLUTION

LEVEL SWITCHES

## / ASHCROFT CES

CUSTOMER-SPECIFIC SOLUTIONS AS CORE  
COMPETENCE

Every installation is individual, every challenge specific.  
We know that.

That's why we also know that it is often not enough to meet special  
problems with off-the-peg products alone – and therefore  
does not live up to our own standards:

We regard perfect product implementation and the realisation of  
smooth process flows – for example in the form of stocking  
concepts – as elementary.

With our Custom Engineered Solutions (CES<sup>SM</sup>) we offer our  
customers tailor-made solution concepts.

In close coordination between you, our product experts and our  
development engineers, we work out customised product  
solutions for the most individual applications.

This flexibility distinguishes us and enables us to offer our  
customers the best possible concepts.

We identify with your results and are aware of our  
responsibility. This is our understanding of partnership.

**MEASURE US BY IT!**

LEVEL SWITCHES





 **ASHCROFT**<sup>®</sup>  
Trust the shield.<sup>®</sup>

 [www.ashcroft.eu](http://www.ashcroft.eu)

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