

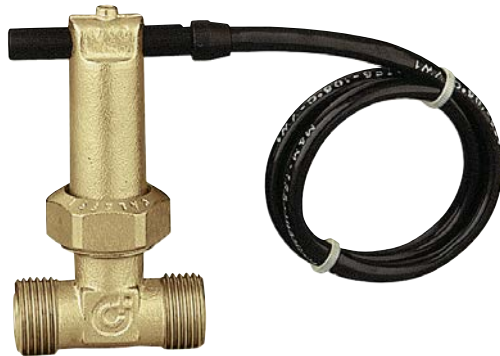
Flow switch with magnetically operated contacts

315 series



01184/18 GB

replaces 01184/11 GB



Function

The water flow switch detects whether there is any flow in the piping and opens or closes an electric contact.

It is mainly used for switching on domestic water system boilers, enabling pumps and managing the priority on diverter valves used in combined domestic hot water production systems.



Product range

315 series Flow switch with magnetically operated contacts

sizes 1/2" and 3/4"

Technical specifications

Materials

Body: brass EN 12165 CW617N

Performance

Medium: drinking water and glycol solutions
 Max. percentage of glycol: 30%
 Protection class: IP 65

Max. working pressure: 6 bar
 Working temperature range: -15–100°C
 Voltage: 230 V (ac)
 Maximum current intensity: 0,02 A

Contacts normally open (NO)

Insulation class: □

Device: type 1 action in accordance with EN 60730-1 par 2.6

Contacts close with increasing flow at: 156 l/h (1/2")

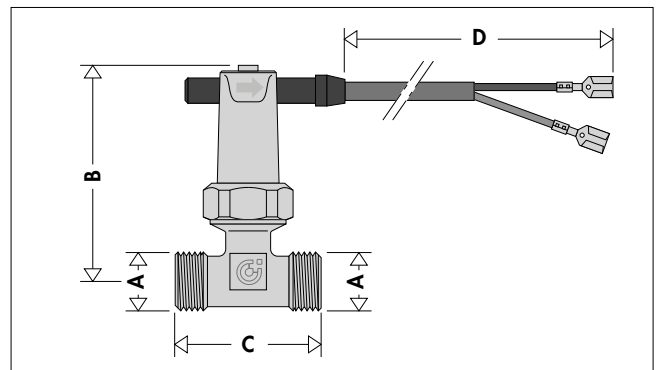
456 l/h (3/4")

Contacts open with decreasing flow at: 108 l/h (1/2")

348 l/h (3/4")

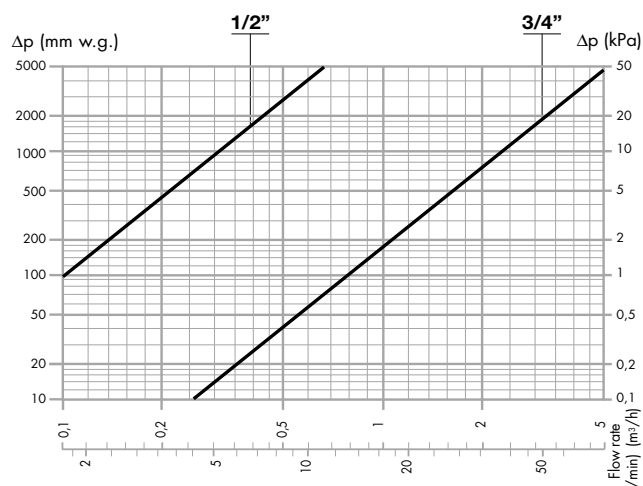
Threaded connections: 1/2" and 3/4" M

Dimensions

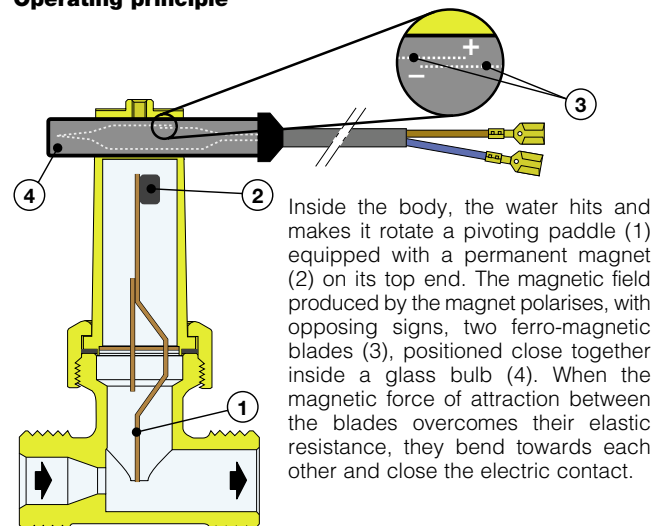


Code	A	B	C	D	Mass (kg)
315400	1/2"	82,5	50	350	0,22
315500	3/4"	82,5	60	350	0,25

Hydraulic characteristics



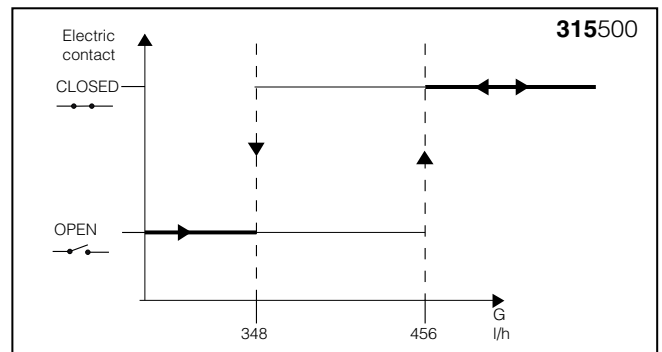
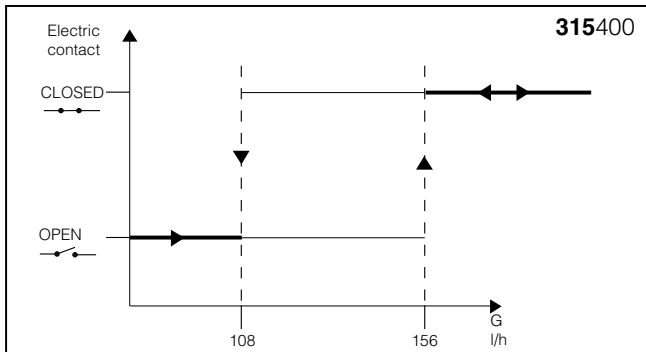
Operating principle



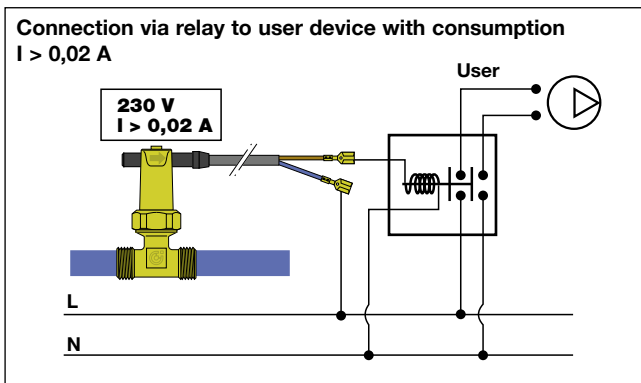
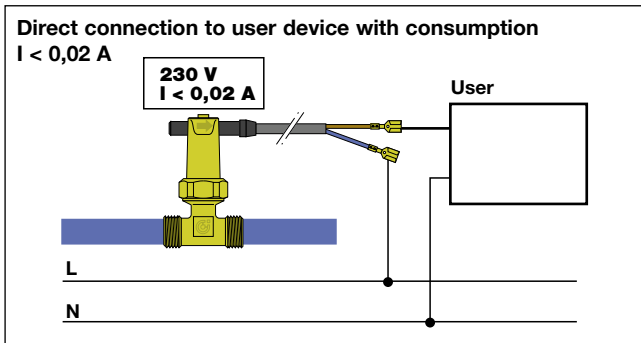
Inside the body, the water hits and makes it rotate a pivoting paddle (1) equipped with a permanent magnet (2) on its top end. The magnetic field produced by the magnet polarises, with opposing signs, two ferro-magnetic blades (3), positioned close together inside a glass bulb (4). When the magnetic force of attraction between the blades overcomes their elastic resistance, they bend towards each other and close the electric contact.

Electric contact switching differential in relation to water flow rate

The flow switch shows an opening/closing differential of the electric contact which is related to the flow increase/decrease. Starting from a null flow rate, with increasing flow rate the flow switch closes the contact when the flow rate reaches the value shown on the graph (156 l/h for code 315400, 456 l/h for code 315500), thus supplying electrical power to the user device or relay it is connected to. The contact stays closed for higher flow rate values. With decreasing flow rate, the switching of the electric contact from closed to open takes place not at the same level as the closing, but at the lower value shown on the graph (108 l/h for code 315400, 348 l/h for code 315500).

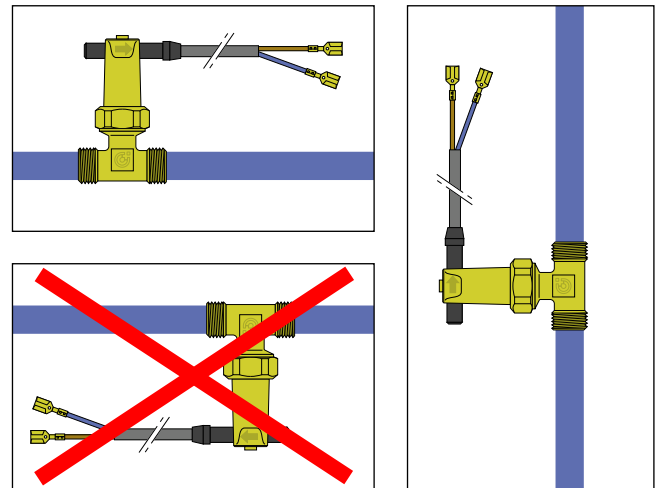


Electrical connections

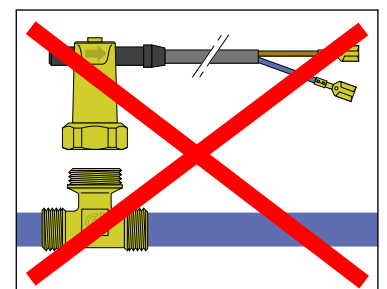


N.B.: It is recommended to pay attention to the current consumption value of the user device the flow switch is connected to. If this value is greater than **0,02 A**, a relay must be installed between the flow switch and the user device itself to prevent damage to the flow switch contacts.

Installation



The 315 series flow switch can be installed on either vertical or horizontal piping, but not upside down. The top part of the flow switch, containing the magnetic mechanism, is rigidly fixed to the body and therefore cannot be removed.



SPECIFICATION SUMMARY

315 series

Flow switch with magnetically operated contacts. Brass body. Voltage 230 V (ac). Maximum current intensity 0,02 A. Contacts normally open. Contacts close with increasing flow at 156 l/h (1/2") and 456 l/h (3/4"). Contacts open with decreasing flow at 108 l/h (1/2") and 348 l/h (3/4"). Threaded connections 1/2" (and 3/4") M. Medium drinking water and glycol solutions. Maximum percentage of glycol 30%. Maximum working pressure 6 bar. Working temperature range -15–100°C. Protection class IP 65.

We reserve the right to make changes and improvements to the products and related data in this publication, at any time and without prior notice.