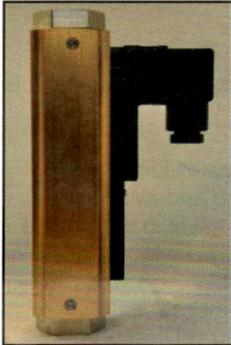
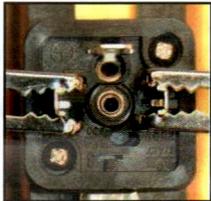


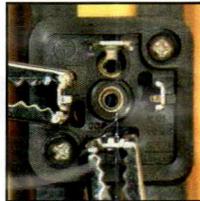
**Setting the switch-off point „BO“:** After the mechanical and electrical connections have been made, we recommend that the switchcase should be shifted to the upper side of the appliance (see picture 1). Check electrically at the plug connection, the phases 1+2 by the model „closer“ (see picture 2) or 1+3 by model „changer“ (see picture 3). Both models are opened in this case (additionally is by „Changer“ in the phases 1+2 closed - see also previous diagram. Now let the medium flow in till the upper level of the floatingbody 4 mm over the selected switch-off-point on the scala (see picture 4). Afterwards the switchcase on the reverse side of the floemonitor should be slowly shifted downwards in the direction of the switch-off-point until the electrical switchpoint is reached. The position for both models is now in the phases 1+2 opened and can be fixed with a screwdriver on this point (see picture 5)



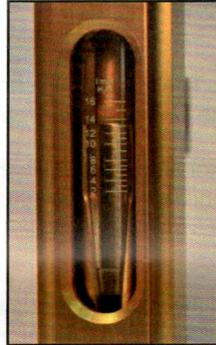
Picture 1



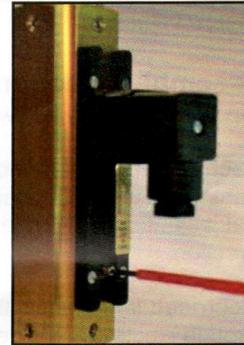
Picture 2



Picture 3



Picture 4



Picture 5

We recommend this variation because it is with the technically conditioned hysteresis (Difference between turn on and off point) it keeps contacts in the switchcase in the position area. The decided turn-off-point (smallest flow amount of medium) can be so exactly switched and supervised. Please keep to our stipulations to avoid switch and function failures.

**Important Information:** Only the failur free and compatible working variable components (floating-body and switchcase) can guarantee the supervisory function. Please bear in mind the following points to avoid an electrical or mechanical impairment.

**Mechanical:** Pay careful attention to the condition of the floating-body. Only regular cleaning and maintenance keeps the cooling medium from getting soiled. Take care to avoid rust or dirt getting in the flow monitor. Also magnetic particles, foreign bodies and dust should be regularly removed. A suitable filter system is recommended to help the safety of your plant for example a dirt-/magnet-filter.

Failure to keep the system in proper condition and regular maintenance will influence the mechanical function in a negative way and can lead to the complete breakdown. For this reason the condition of the floating-body is very important for the „floating-body flow through principle“

**Electrical:** The eventuality that the electrical switchcase, for unseen reasons, during the running is turned off should be considered. This can happen when there is an overload on the electrical system and no safety system which leads to the electrical breakdown. In this case because of the short circuit, the reed contact would melt in the switchcase and although a normal flow through will be electrically suggested the minimum flow amount can already be smaller. For this reason the electrical function of the switchcase should be regularly controlled. This is also important for the function of the „floating-body flow through principle“ Recommended is an additional control mechanism which can call attention to breakdowns in the electrical system with a warning signal. In this way it is possible to secure safety and maintain the value of the system.

Only with a conscientious working and operation secures a „dependable partner“ on your side. If you have any further questions, technical wishes or suggestions for improvement please let us know.

We will be pleased to hear from you and give our help. Our contact address is at the bottom of the page. Thank you for buying our product and having your trust in us.

We reserve us the right to do technical changes. Printing errors are possible.

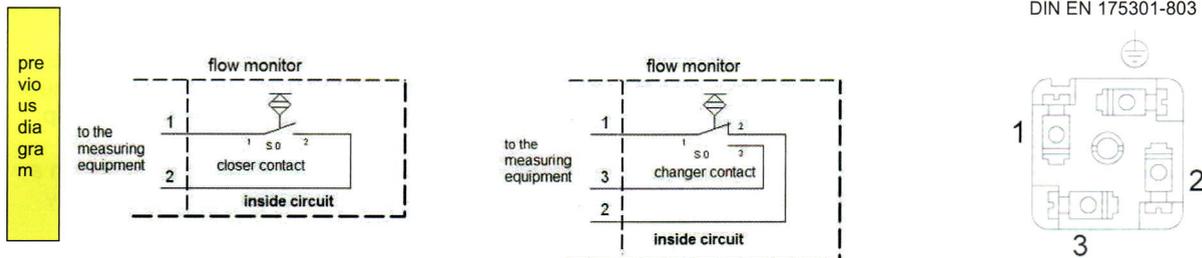
**Operating instructions:** The flowmonitor „BO“ is a current monitoring regulator designed for industrial use. It is exclusively made to control the minimum amount of cooling substance in the circulation of an industrial plant. It's function on an electro-mechanical base is on the principal of a floating body – flow through. The switchcase is fixed on the outside, is moveable, and can feel the magnetic field from the rising and sinking floating body which is filled with magnets as well as the cooling substance. This way the ideal turnoffpoint can be fixed. Because of the conditions of the principal of working it is important to keep the flowmonitor out of the way of other foreign magnetic fields. The influence of other induction fields can lead to a failur in the function because of the conflicting negativ influence.

**Assembly directions:** The installation should only be carried out from suitable technically skilled people. It is important that they follow the correct instructions.

**Mechanism:** The flowmonitor should stand in the flow through direction and so built into the circulation of the plant. It must be in a position outside of foreign magnetic induction fields and free from voltage and twisting so that it can function properly. Because of the way of fuction it is only allowed that the flow through is in an upward direction.

**Electrical:** Important is that the assembly is only in voltage free conditions because of the risk to life and health through electrocution. Here we refer to the measures for protection according to DIN EN 61140 (VDE 0140-1). In the assembly instructions is the electric switchcase insulated for protection from IP 65 protection class II according to DIN EN 60529 and DIN EN 61140. Thus it is better to use our recommended plug connection for earthing electricly in the form of A (DIN EN 175301-803)

**Information:** Care must be taken by the electrical installation that the central screw on the electricity outlet is properly tighrened. Also important is the thickness of the cable which should be between 6 and 8 mm. So that the outlet is properly sealed. Failure to do this means that IP 65 cannot exist while dampness can wander into the not properly sealed connection. Should this happen then there is a large risk of an electrical shortcircuit which would mean the safety and monitoring function cannot work further. When the flowmonitor is functionally working and installed in an induction free zone then it can be switched an using the following diagrams.



**Maximum voltage in the switchcase**

	switchvoltage	switchamperage	switchoutput
Closer Contact	250 V*	3 A	100 VA
Changer Contact	250 V	1 A	60 VA

\*) max. switchvoltage with an insulatet cable with 400 V possible (as extra obtainable)

Example for switch (1) with amperage max. 32 V or (2) with 230 V max. 0,4 amperage. Withe special electrical equipment please follow the accomanying information.

**Important:** Never exceed the maximum switch output. Only short periods can the current and voltage maximums be exceeded. The reedcontact reacts sensitively to ohmic, inductive and capacity overload. This is possible to restrict with pre switched resistance. Otherwise is the risk of a short circuit and the reedcontact can be complexly destroyed and the function of the safely and observation also iliminated.

**Setting the switch-off point „BM“:** Collimate the lower edge of the plug for the requested marking of the scaling (on a technical scale only alternatively).