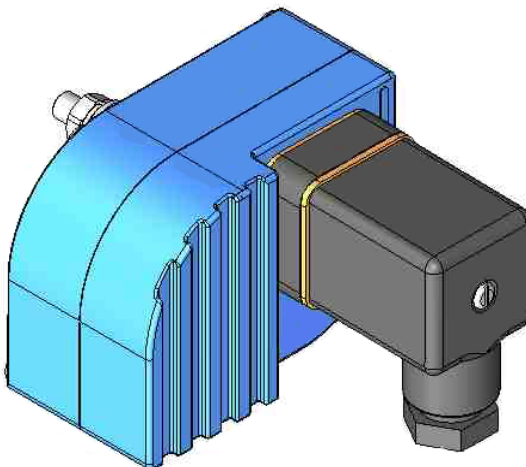




## Instructions Manual



### TECHNICAL DATA

- Material: Housing. Aluminium alloy
- Ambient temperature: -25 to 80 °C
- Ingress protection: IP65
- DIN 43650-A connector, PG9 cable gland
- Conforms with the Directives EMC 89/336/CEE and ATEX 94/9/CE



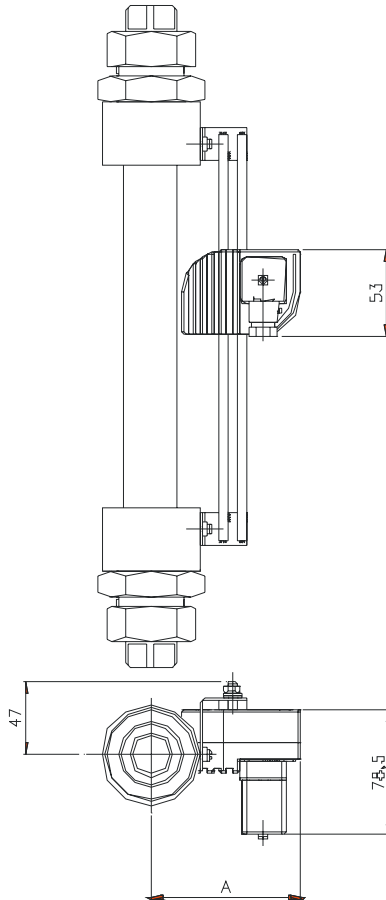
## OPERATION

Flow rate variations displace the float in the metering tube and as it passes by the point where the 60 AMD... limit switch is, by means of magnetic coupling acts on the detectors vane changing its position from one detection position to the other.

The vane position is maintained until the float passes in the opposite direction at the limit switch position, changing the inductive detector to its original state.

## DIMENSIONS

| DN    | A      |
|-------|--------|
| 15-20 | 90 mm  |
| 20-25 | 96 mm  |
| 40    | 111 mm |
| 50    | 117 mm |
| 65-80 | 130 mm |



## ELECTRICAL CONNECTION

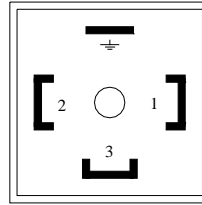
For the electrical installation it is recommended to use multiple conductor cables with individual cable sections in the order of 0.25 or 0.5 mm<sup>2</sup> in order to make it easier to connect. Individual cables should not be used as they will impair the IP-65 rating of the cable gland.

Before starting the installation, check that the cable to be used are the right size for the cable gland on the connector, this will guarantee the instrument will stay water tight.

Peel the outside insulation to free the inner cables. It is recommended to tin the cables at the ends of the wires to avoid loose ends which can produce short circuits. Pass the cables through the cable gland and screw in the cables in their positions. Once the wiring is finished make sure that the cables are well gripped by the cable gland to maintain the ingress protection degree.

In the female connector (A):

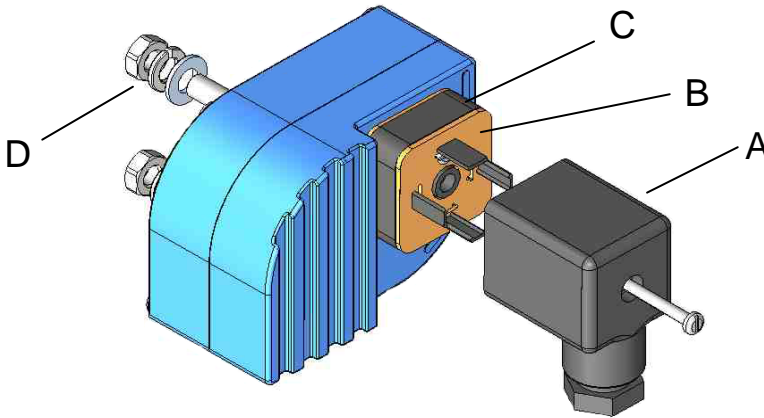
- Terminal 1: Negative (Blue sensor cable)
- Terminal 2: Positive (Brown sensor cable)
- Terminal 3: NC
- Earth terminal: Earth



### MOUNTING

Once the electrical connection has been made and the cable gland has been tightened, mount the female connector (A) on the male base (C), placing the seal (B) between the two pieces.

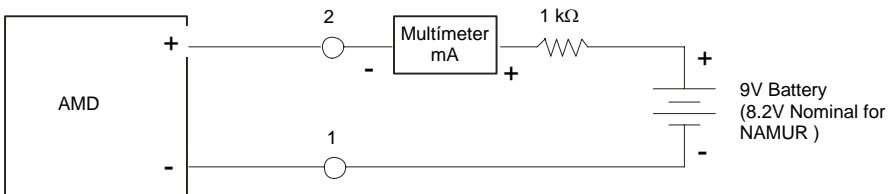
To fix the level switch in its position on the flow meter, remove the nuts and washers (D), mount the limit switch in the guide as shown on the previous page, assemble the washers and nuts, situate the limit switch at the required height and tighten the nuts.



### MAINTENANCE. Electrical verification of the limit switch

- a) Check that the voltage at the terminals 1 and 2 is over 7.5 V when the vane is in the slot. Connect a multimeter with the scale in DC mA, in series with the terminal 2.
- b) Verify that the current is less than 1 mA when the vane is in the slot, and more than 3 mA when the vane is out of the slot.

If you don't have the NAMUR amplifier, the current can be checked using the following circuit diagram:



If you don't have the detector, the operation of the amplifier can be checked using the following circuit diagram:



With the potentiometer we modify the current of the NAMUR amplifier. The switching point must be between 1.2 mA and 2.1 mA. That is, with the current below 1.2 mA the output relay must have a state and above 2.1 mA the output relay must have the other state.

### TECHNICAL CHARACTERISTICS

The AMD is a NAMUR (DIN 19234) sensor with the following nominal characteristics:

|                                       |              |
|---------------------------------------|--------------|
| Nominal voltage                       | 8.2 V        |
| Power supply internal resistance      | 1 k $\Omega$ |
| Current with the vane into the slot   | < 1 mA       |
| Current with the vane out of the slot | $\geq$ 3 mA  |

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|                     |                          |
|---------------------|--------------------------|
| Power supply limits | 5 ... 25 VDC             |
| Ambient Temperature | -25 ... +80 $^{\circ}$ C |
| Self inductance     | 160 $\mu$ H              |
| Self capacity       | 20 nF                    |

Conforms with the Directive EMC 89/336/EEC and ATEX 94/9/CE



### WARRANTY

Tecfluid S.A. GUARANTEES ALL ITS PRODUCTS FOR A PERIOD OF 24 MONTHS, after consignment, against all defects in materials and workmanship.

This warranty does not cover failures which can be imputed to misuse, use in an application different to that specified in the order, the result of service or modification by un-authorized persons, bad handling or accident.

This warranty is limited to cover the repair or replacement defective parts which have not been damaged by misuse.

This warranty is limited to the repair of the equipment and all further and eventually following damages are not covered by this warranty.

Any consignment of equipment to our factory or distributor must be previously authorised. The consignment should be done with the equipment well packed, clean of any liquids, grease or hazardous materials. Tecfluid S.A. will not accept any responsibility for damage done during transport.

Together with the equipment, a note should be enclosed indicating the failure observed, the name, address and telephone number of the sender.

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The technical data in this document is subject to modification without notification, if the technical innovations in the product or manufacturing processes so require.