

## Float and displacer switches Installation and maintenance instructions ATEX approved ITS04ATEX11902

Most Avery-Hardoll switches are manufactured to customer's individual requirements so a number of variations in design are possible.

It is therefore impracticable to give precise details covering installation of all types. However, the following provides general guidance.

### Installation

The installation of Avery-Hardoll switches to tanks must be carried out by technically competent personnel.

This procedure is a straightforward operation, as the appropriate flange connection will have been supplied as specified in the customer's order. However, it is necessary to ensure an even seating of the flange to its mating surface, together with a suitable gasket. Care must be taken to ensure that the switch stem is not damaged or bent during installation.

For non-flanged types with a screwed end fitting, attachment can be made either directly to the tank or to the customer's own fitting. In the former, another means of access within the tank must be provided for float clearance.

### Warning

It is essential that the electrical supply to the switch does not exceed the electrical rating of the reed switch and that loads in excess of the maximum reed switch operation are not applied.

Ensure the switch is not operated outside its designated temperature range (see label).

### Maintenance

Switches are designed to give long periods of satisfactory trouble-free life, and under normal conditions, they require little maintenance. Only technically competent personnel should repair or maintain the product and only spares supplied from Avery-Hardoll are to be used. Products covered by warranty may not be modified in any way without written permission from the company.

Where switches are used in liquids having a tendency to form deposits or in the case of some oils, there is a tendency for a 'varnishing' effect to be produced on the immersed section of the stem tube and float. If this occurs, it is advisable to remove the unit and remove any deposits likely to hinder the rise and fall of the float or displacer.

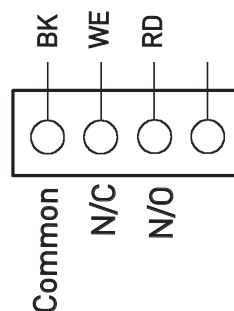
**Note: Float stops must not be slacked or removed from the stem under any circumstances.**

**It is recommended that all switches are checked and tested every six months.**

### Wiring connections

Single pole / double throw switches are connected by three wires per switch as follows:

Normally closed (N/C) contact	White wire (WE)
Normally open (N/O) contact	Red wire (RD)
Common	Black wire (BK)



Wired as  
change-over unit

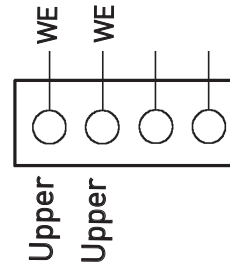
## Wiring connections

Single pole / single throw switches are connected by two wires per switch of the same colour as follows:

Upper level switch	White wires (WE)
Middle level switch	Red wires (RD)
Lower level switch	Black wires (BK)

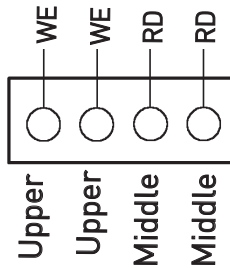
The switch wires are connected to a four way terminal block (opposite and below).

Terminal blocks are not fitted to miniature versions.



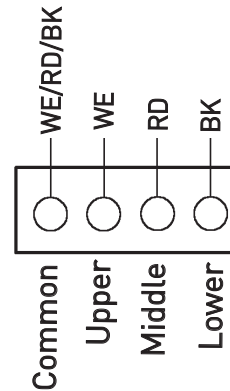
Single level

Wired as separate circuits



2 level

Wired as separate circuits



3 level

Wired as common circuits

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