Claims

1. Rotary switch comprising

- a switch body which identifies an inner space which rotatably houses a shaft rotating around a rotation axis (X-X), operatively connected to an actuator device external to the switch, such as a valve or an actuator, characterised by

- a distribution valve positioned outside said inner space of the switch body and pneumatically connectable to said external actuator device,

- a pneumatic connector and at least one control means, such as a solenoid, operatively connected to the pneumatic connector,

- the pneumatic connector being at least partially positioned in the wall of the switch body,

- the control means being positioned in the inner space of the switch body,

- the control means being adapted to be operatively connected to an external control device, the distribution valve being pneumatically connectable to the external actuator and operatively connected to the control means by means of the pneumatic connector, so as to permit its selective operation by the control means, wherein

- the pneumatic connector defines at least one connection channel placing the distribution valve in fluidic connection with the control means, wherein the connection channel crosses the pneumatic connector which in turn crosses a side wall of the switch body,

- wherein inside the connection channel at least one anti-explosion means is inserted, positioned coaxially to the connection channel so as to reduce the through cross-section thereof by a predefined length of the connection channel,

- wherein, at the anti-explosion means, the through cross-section is confined on an outer circular crown of the connection channel, delimited between an inner side wall of the connection channel and an external lateral wall of the anti-explosion means.

2. Switch according to claim 1, wherein said anti-explosion or dust-prevention means comprises a metric nut or a metric screw, screwed onto a corresponding nut thread made on the inner side wall of the connection channel, so as to delimit a through cross-section having having a helical pattern.

3. Switch according to claim 1 or 2, wherein said anti-explosion or dust-prevention means comprises a calibrated cylinder, positioned coaxially to said connection channel, so as to define a through cross-section in the shape of a circular crown.

4. Switch according to claim 1, 2 or 3, wherein the switch comprises first mechanical connection means between the distribution valve and the pneumatic connector, said first mechanical connection means passing through a side wall of the switch body.

5. Switch according to any of the previous claims, wherein the switch comprises second mechanical connection means between the distribution valve and the switch body, the second mechanical connection means have the function of connecting the distribution valve to the switch body and, in particular, to the side wall of the switch body, so as to have a rigid connection between the two components.

6. Switch according to claim 4 or 5, wherein said first and/or second mechanical connection means of the distribution valve are threaded connection means which sealingly engage in the side wall of the switch body, so as to prevent the exit of gas and/or flames from the inner space towards the outside of the switch body.

7. Switch according to claim 4, 5 or 6, wherein said first and/or second mechanical connection means of the distribution valve are threaded connection means which sealingly engage in the side wall of the switch body, so as to prevent the entrance of dust in the inner space from outside the switch body.

8. Switch according to claim 5, 6 or 7, wherein said second mechanical connection means of the distribution valve are threaded connection means which sealingly engage in the pneumatic connector, so as to prevent the exit of gas and/or flames from the inner space towards the outside of the switch body, and to prevent the entrance of dust in the inner space from outside the switch body.

9. Switch according to any of the previous claims, wherein air filtering means are inserted between the distribution valve and the anti-explosion means.

10. Switch according to any of the previous claims, wherein, sealing means are inserted between the distribution valve and the anti-explosion means.

11. Switch according to claim 9 or 10, wherein said air filtering or sealing means are inserted inside the connection channel, in the pneumatic connector.

12. Switch according to any of the claims from 9 to 11, wherein said air filtering means comprise porous filters and the sealing means comprise 0-ring type gaskets.

13. Switch according to any of the previous claims, wherein sealing components are placed between the pneumatic connector and a side wall of the switch body.

14. Switch according to claim 13, wherein said sealing elements comprise 0-ring type gaskets.

15. Switch according to any of the previous claims, wherein the pneumatic connector is of such a size as to ensure that the connection joint between the connector and the body wall does not permit the exit of the flame in the case of an explosion inside the inner space.

16. Switch according to any of the previous claims, comprising a cover, joined so as to close said switch body, fitted with an indicator joined in rotation to said shaft, so as to permit a visual signalling of the angular position and/or operating condition of the rotating shaft, from outside the switch.