

07-D059-11-880
May 1978

VSK1B VACUUM SWITCH

The VSK1B uses a pressure sensitive capsule to switch an electrical circuit when the pressure in a vacuum system passes through a pre-set level between 35 and 1000 mbar.

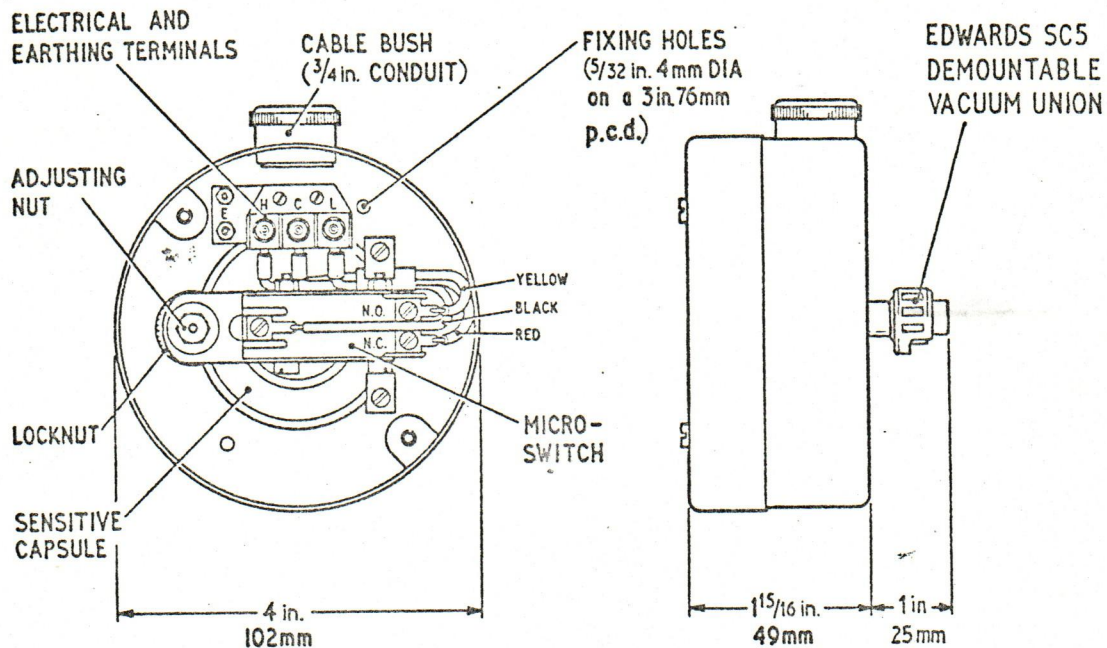
The capsule is connected to the vacuum system by the Edwards SC5 coupling. The outside of the capsule is at atmospheric pressure, so the pressure at which the switch operates will vary by approximately the same amount as the atmospheric pressure. The switch is factory set to operate at about 35 mbar on falling pressure. The switching differential is less than 35 mbar.

The microswitch connects the common terminal C either to H (when the pressure is high) or to L (when the pressure is low).

Data

Range	35 to 1000 mbar
Switching differential	within 35 mbar
Switch contact rating	5A at 250V a.c.
Volume	4.2cm ³
Maximum working pressure	1 bar (15 lbf in ⁻²)
Weight	480 g
Vacuum connexion	Edwards SC5
Coupling parts provided	O-ring, O-ring carrier, coupling body and nut.
Description	Code
VSK1B Vacuum Switch	07-D059-11-000

Installation



The switch can be mounted in a vibration-free position on a short tube which makes the vacuum connexion. Under other conditions, use a bracket attached to the two fixing holes in the back of the switch.

The vacuum connexion is made by the Edwards SC5 coupling. Braze the coupling body to a 6 mm o.d. tube attached to the system. Connect the instrument using the O-ring, the O-ring carrier and the plastic nut.

Three electrical connexions are required, two to put the switch in series with the power supply to the apparatus to be controlled, and an earth connexion. Thread the leads through the conduit entry and connect as follows:

Earth lead to E

First supply lead to C

Second supply lead to L if the external apparatus is to be on when the pressure is lower than the set point.

to H if the external apparatus is to be on when the pressure is higher than the set point.

ADJUSTMENT

The pressure at which the switch operates is controlled by the adjusting nut at the end of the microswitch cradle. Turning the nut clockwise lowers the pressure.

In quiet surroundings, the click of the switch changing over can be heard, but if not, use an electrical continuity tester connected between terminals C and H or C and L.

1. Disconnect the power supply from the electrical connexions.
2. Set and maintain the system pressure, measured by a capsule gauge, to the pressure at which the switch is to operate.
3. Remove the switch cover.
4. Slacken the locking nut.
5. Turn the adjusting nut until the switch just operates.
6. Tighten the locking nut.
7. Check the operation by altering the system pressure. Remember that the differential between cutting in and cutting out is up to 35 mbar.
8. Replace the cover and re-connect the power supply.

Maintenance

The instrument requires no maintenance.

The Edwards Exchange/Replacement service is available for the VSK1B.

Communication with Edwards

Any communication relating to the subject of this instruction should be addressed to Edwards High Vacuum or to the supplier from whom it was purchased.

Please specify:

- 1) the model, serial number and code.
- 2) the date of purchase.
- 3) your order number and the suppliers sales reference.

Equipment should not be returned to the supplier without prior arrangement.

IMPORTANT Health and Safety

Under Section 3 of the Health and Safety at Work Etc Act 1974 every employer has a duty to conduct his business so as not to expose persons not in his employment to risks to their health and safety. When goods are returned to the supplier, therefore, warning must be given if their usage is likely to render the equipment hazardous in any way.

Edwards High Vacuum and its distributors reserve the right to refuse acceptance of any equipment returned which they have reason to believe may be hazardous.

Damage in transit

If any damage has occurred in transit, it is important to inform both the carrier and the supplier within three days of delivery.