

# SUN-VIC VACUUM SWITCH CONTACTORS

## SWITCHES, RESISTANCES AND CONDENSERS

The switches with the necessary resistances and condensers are also available for mounting on customers' panels, or for special purposes in which small space is a primary consideration.

Type.	PRICE EACH (2).		
	Switch.	Line Voltage resistance for standard voltages.	Condenser.
	£ s. d.	s. d.	s. d.
602	17 6	2 6	2 0
602A	1 0 0	2 @ 2 6	2 0
603	1 2 6	2 6	3 0
603A	1 5 0	2 @ 2 6	3 0
605A	1 10 0	2 @ 2 6	5 0

As indicated in this table, "A" Type Switches for use with the control and main circuits on separate supplies or different phases should be used with two series resistances each of half the normal value and connected on each side of the switch control circuit. This arrangement provides the necessary protection against internal short circuits.

All the above switches have normally open contacts, but a normally closed arrangement can be obtained in any given case by using the circuit shown in Fig. 2.

Alternatively Types 602 and 602A tubes only can be supplied with the main contacts normally closed. Details and prices will be sent on application.

## SUN-VIC THERMOSTATS

Details of standard types of Sun-Vic thermostats for use with the above will be found in our Heating Catalogue. Also leaflets of special types of precision thermostats will be sent on application.

# SUN-VIC VACUUM SWITCH CONTACTORS

## RATINGS

Three types of switch are standardised, with ratings as follows :—

Switch Tube. Type No.	RATINGS.			Dimensions.
	Volts.	Amps.	kW.	
602 and 602A	110	11	1.2	ins. Length, 4.5 Diam. 1.0
	230	9	2.0	
	440	7	3.0	
603 and 603A	110	18	2.0	Length 6 Diam. 1.125
	230	15	3.5	
	440	12	5.5	
605A	110	28	3.1	Length 8.5 Diam. 1.5
	230	26	6.0	
	440	22	9.5	

The control circuits of these switches take only 28, 38 and 50 milliamps respectively at 50—100 volts. To suit the switch for the required mains voltage the control circuit must therefore include a suitable limiting resistance. This is provided in the standard units listed below.

### Prices :

Prices of complete units, in bakelite cases, with resistance and condenser.

Normal types (main and control circuits commoned).

Type.	Single Switch Tube. Type No.	Approximate Dimensions of case.	PRICE EACH (2).
F102	602	ins. 6.75×3×3	£ s. d. 1 10 0
F103	603	8.75×3.75×3	2 0 0
F105	605A	13.5×6×3.5	3 0 0

Type.	Two Switch Tubes Type No.	Approximate Dimensions of case.	PRICE EACH (2).
F202	602	ins. 6.75×3×3	£ s. d. 2 10 0
F203	603	8.75×3.75×3	3 10 0
F205	605A	13.5×6×3.5	5 5 0

“ A ” Type Switches (main and control circuits entirely separate).

Type.	Single Switch Tube. Type No.	Approximate Dimensions of case.	PRICE EACH (2).
F102A	602A	ins. 6.75×3×3	£ s. d. 1 17 6
F103A	603A	8.75×3.75×3	2 7 6
F105A	605A	13.5×6×3.5	3 7 6

Type.	Two Switch Tubes. Type No.	Approximate Dimensions of case.	PRICE EACH (2).
F202A	602A	ins. 6.75×3×3	£ s. d. 2 15 0
F203A	603A	8.75×3.75×3	3 15 0
F205A	605A	13.5×6×3.5	5 5 0

For the control of 3-phase 4-wire circuits three F102A, F103A or F105A switches should be used with all three control circuits connected between one phase and neutral. For control of 3-phase (no neutral) circuits one F202A, F203A or F205A switch should be used.

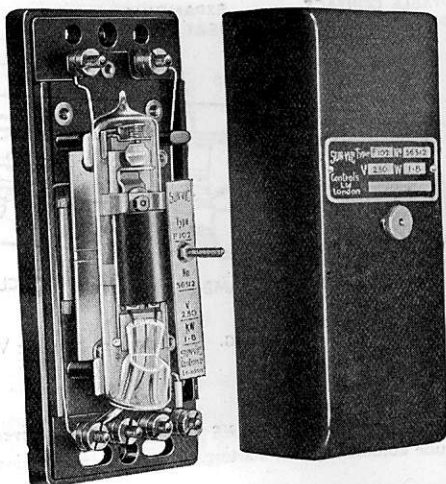
When ordering please state supply voltage. Standard voltage ranges are 100/110, 200/220, 220/240. 240/260, 400/440. Switches for non-standard voltages should be the subject of special enquiry.

# SUN-VIC VACUUM SWITCH CONTACTORS

THE SUN-VIC VACUUM SWITCH is used to replace normal contactors in very many switching problems. It can be supplied in various sizes to control up to 20 k.w. at 1,000 volts on non-inductive A.C. or D.C. circuits. It is particularly suitable for marine or traction purposes since it is unaffected by vibration and can be mounted in any position.

The general appearance of the switch is shown in diagrammatic form in Fig. 1 (page 326). As will be seen, the contacts are actuated by means of the expansion of a wire which is heated by the control current.

This system possesses many obvious merits when compared with an electro-magnetically actuated air breaker or mercury switch. The principal advantages are:—



Type F 102 Sun-Vic Vacuum Switch containing one Type 602 tube, condenser and line voltage resistance complete in case. For full details and prices see pages 327-8.

- (1) **High efficiency and long life** because the contacts cannot oxidise and are unaffected by external atmospheric conditions.
- (2) **Requires very little space.** The contact separation for any voltage is more than one thousand times smaller than the corresponding minimum separation in air.
- (3) **Requires no adjustment and no maintenance.**
- (4) **Operates without modification on A.C. or D.C.**
- (5) **Produces no noise on A.C. or D.C.**
- (6) **Produces no telephone or wireless disturbance** because in vacuum there is no arc on breaking.
- (7) **Increases life of control contacts.** The switch is operated by an expanding wire which provides a non-inductive control circuit consuming less than 2 watts.
- (8) **Can be mounted in any position** because of light control mechanism.
- (9) **Is unaffected by Vibration** and is therefore particularly suitable to traction and marine conditions.
- (10) **Inherent time lag of about 1½ seconds.**