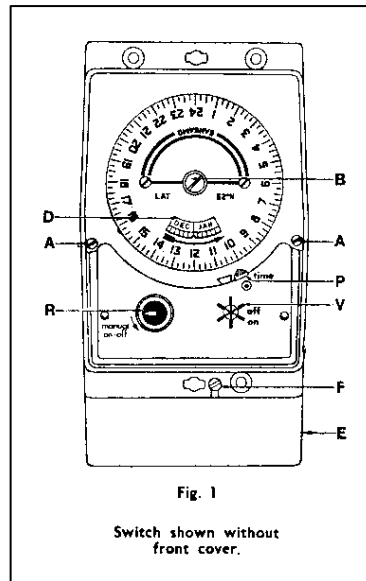


**SANGAMO SOLAR DIAL  
SYNCHRONOUS  
TIME SWITCHES  
MODEL S610 FORMS 13 & 14**



**SPECIFICATION**

All models comply with BS3955 Part 3

Current, voltage, frequency:	As shown on identification label of switch
Ambient temperature:	0 - 50C
Live parts:	Enclosed
Dirt protection:	Normal Situations
Moisture protection:	Ordinary
Shock protection:	Class 1

**TO INSTALL**

- 1 Remove front cover by releasing the two locking keys and lift clear.
- 2 Loosen captive screws A (Fig 1) and withdraw mechanism from base.
- 3 Remove extended terminal cover E by unscrewing captive screw F and lift clear.
- 4 Secure base with three No 6 countersunk wood screws or three No 4BA countersunk screws.
- 5 Connect switch to supply as indicated on terminal housing (See also wiring diagram). Ensure that switch is earthed.

NOTE: The maximum lengths for which the cables may be bared are  
0.85 in. (21.6mm) for line and load and 0.6 in. (15.2 mm) for neutral.

- 6 Fit mechanism to base and tighten screws A.
- 7 Replace and secure extended terminal cover E.

**NOTE: On completion of installation and/or setting of switch replace and secure front cover.**

## TO SET SOLAR DIAL

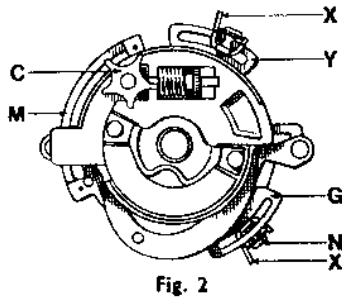


Fig. 2

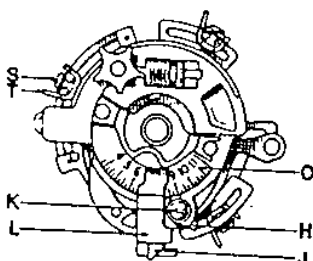
- 8 Loosen screw B (Fig 1) and remove dial assembly.
- 9 Turn small five-point wheel C (Fig 2) at rear of dial assembly until current calendar date is indicated through aperture D (Fig 1). NOTE: Each calendar month is divided into six equal divisions, each representing five days. The small pointer of date dial should be made to indicate as nearly as possible correct day of the month.
- 10 (a) Switches are factory set to operate automatically at sunset and sunrise in localities based on Greenwich Meridian. Leading edges of operating targets X (Fig 2) are approximately in centers of operating arms Y and G.  
 (b) To compensate for longitudinal errors, variations of switch operating times (for periods of approximately 75 minutes, either side of sunset or sunrise) can be achieved by suitable adjustment of operating targets within slots of operating arms. For convenience, slots are calibrated in quarter hour intervals.  
 (c) Longitudinal correction, if applied, should be four minutes approximately for each degree longitude east or west of the Greenwich Meridian. It is subtracted for longitudes east of the Meridian and added for longitudes west of the Meridian.  
 (d) It should be unnecessary to adjust operating targets for latitudinal variations as dials are supplied for different latitudes.
- 11 Before replacing dial assembly and carrying out instructions as sections 12 and 13, see sections 14 and 15 for model S610.13 or sections 18 to 20 for model S610.14.
- 12 Replace dial assembly ensuring that hub location engages with spindle and tighten screw B (Fig 1).
- 13 Turn dial in direction of arrow until pointer P (Fig 1) indicates time of day (Greenwich Mean Time) at moment of setting. Allow for backlash by lightly turning dial in opposite direction to arrow. Dial is calibrated in 15-minute divisions.

## FIXED 'OFF' OPERATION BETWEEN 8 p.m. and 1a.m

- 14 In model S610.13 this operation can be achieved by transferring operating target from solar operating arm G (Fig 2) to midnight bridge M at rear of dial.
- 15 To transfer operating target:
  - (a) With dial assembly removed, take out screw N (Fig 2) and associated washer; remove target and 'U' shaped fixing clip.
  - (b) Fit fixing clip to midnight bridge, present target to clip in attitude shown for T (Fig 3) and secure with screw and washer.
- 16 To set operating target (Fig 3): Slacken screw S securing target, move assembly along midnight bridge until target coincides with appropriate time on dial, and tighten screw.
- 17 In model S610.14 operating target is a standard fitment to midnight bridge.



## FIXED EARLY MORNING 'ON' OPERATION BETWEEN 02.45 and 09.45

Fig. 3



- 18 At rear of solar dial of model S610.14 is sector bridge O (Fig 3) to which is fitted an adjustable moulded arm H incorporating a spring-tensioned operating target J to give a fixed 'on' operation within the range of the sector bridge.
- 19 To set fixed early morning 'on' operation (Fig 3):
- (a) With dial assembly removed, slacken screw K, move moulded arm H along sector bridge until red pointer on this arm coincides with selected time on scale and tighten screw K.
  - (b) Fixed operation will be obtained at time required, except where normal solar operating target is earlier.
- 20 Spring-tensioned lever L (Fig 3) which needs no adjustment prevents spring-tensioned target J from operating when solar operating time coincides with, or is earlier than, fixed time operation. Lever L automatically releases target J from operating position.

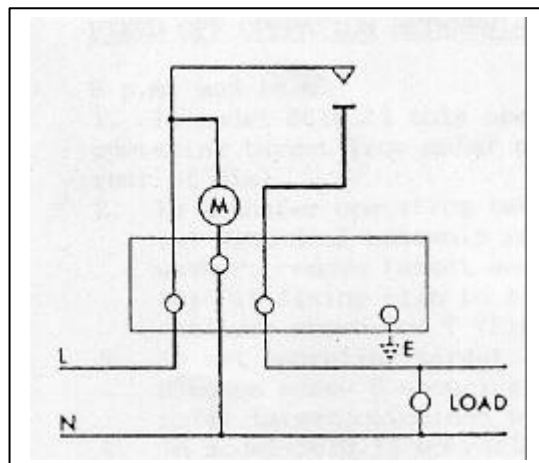
## ON/OFF INDICATOR V (Fig 1)

- 21  Contacts closed       Contacts open

## MANUAL OPERATION (Fig 1)

- 22 Rotating knob R in direction of arrow immediately opens or closes switch contacts, anticipating the next operation.

## WIRING DIAGRAM



**WARNING**  
This control must be earthed. Terminals are for fixed wiring only.  
Provision for disconnecting the supply to the control must be made in the fixed wiring.

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