

# **Phase Failure Warning System**



## PHASE FAILURE WARNING SYSTEM

This equipment gives a warning of a change in loading on resistance mats as used for de-icing purposes on aircraft.

It is designed for use on a 208V, 400 c.p.s. 3-phase supply.

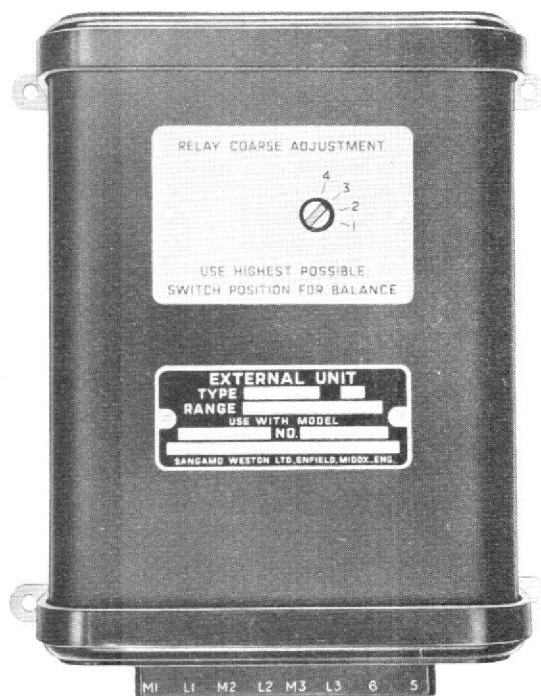
Although originally designed for a specific military aircraft the equipment can be modified to meet the requirements of other aircraft.

The following comprise one set of equipment.

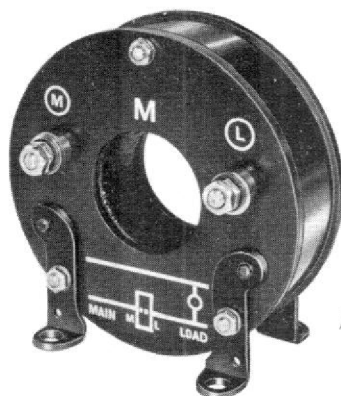
3 Current transformers	(S117)	FD. 667
1 Moving coil relay	(S170)	FD. 884
1 Integrator unit	(ACC.1)	FD.1059



Model S 170



Integrator Unit ACC.1



Model S 117





The integrating circuit components are housed in a metal container (ACC.1) and the circuit is energised from the secondaries of the current transformers (S117) where primaries are connected in the 3-phase supply.

The integrator circuit is arranged to summate the current from each phase and is then used to actuate the Model S170 moving coil relay.

The relay contacts are set to close for a predetermined value of the 3-phase loading and the closing of the contacts operates a slave relay or alarm circuit. The unit is capable of adjustment to cover a variation in the 3-phase loading, for example, 170-250 amps. This adjustment is obtained by switch selection of a tapped shunt connected via the integrator circuit relay input terminals.

A final adjustment is made by a resistance potentiometer which is connected across part of the relay circuit.

A shunt is incorporated in the system and is in use when the aircraft is in flight. For ground testing this shunt is disconnected from the circuit enabling tests to be made at 25% of the normal 3-phase load on flight.

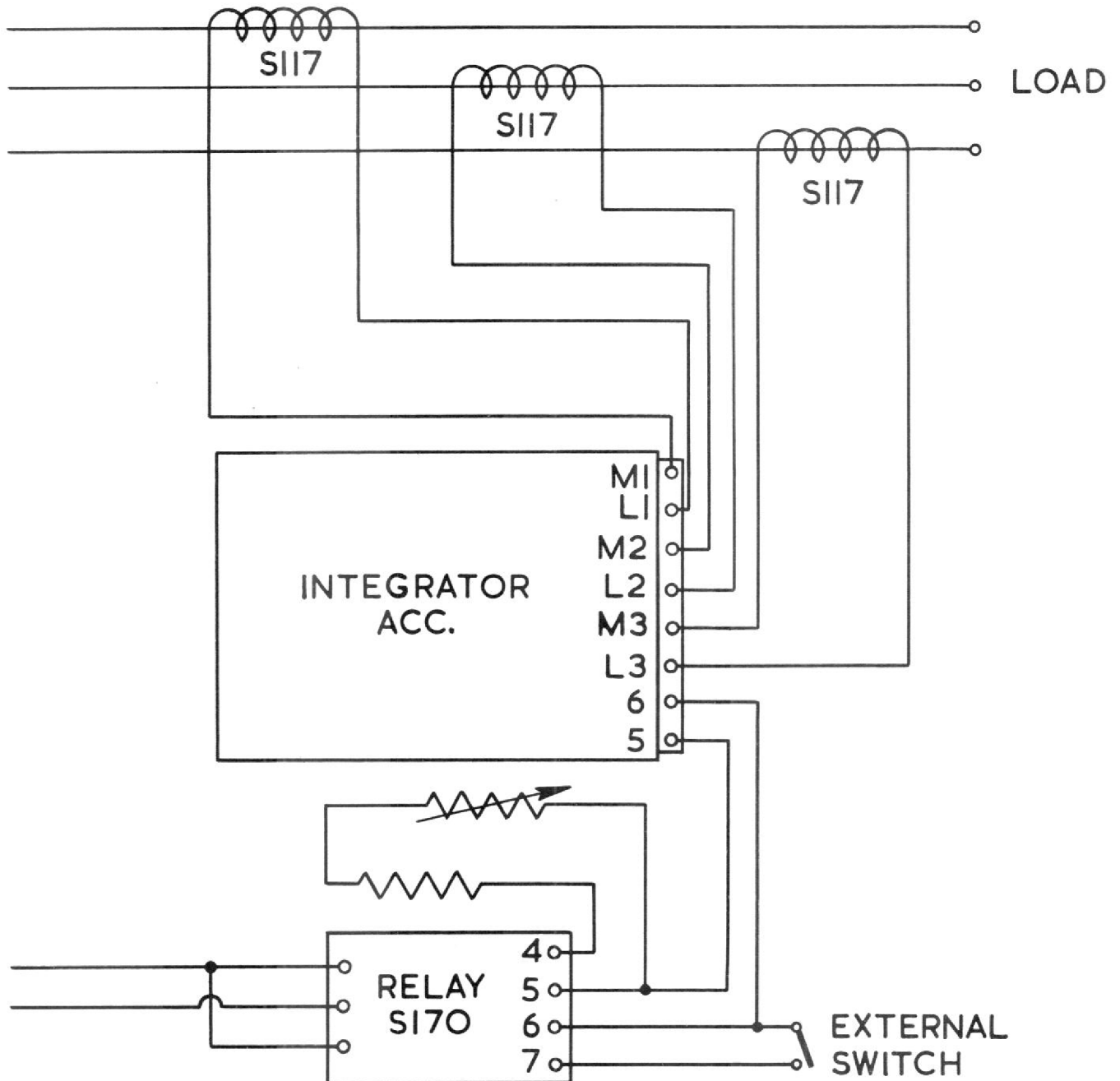
The system is capable of detecting a  $\pm 5\%$  change from a predetermined value of 3-phase load.

These limits are for a particular application and can be varied to suit other requirements.

---



WIRING DIAGRAM FOR PHASE FAILURE  
WARNING SYSTEM





This file was downloaded  
from the RTFM Library.

Link: [www.scottbouch.com/rtfm](http://www.scottbouch.com/rtfm)

Please see site for usage terms,  
and more aircraft documents.

