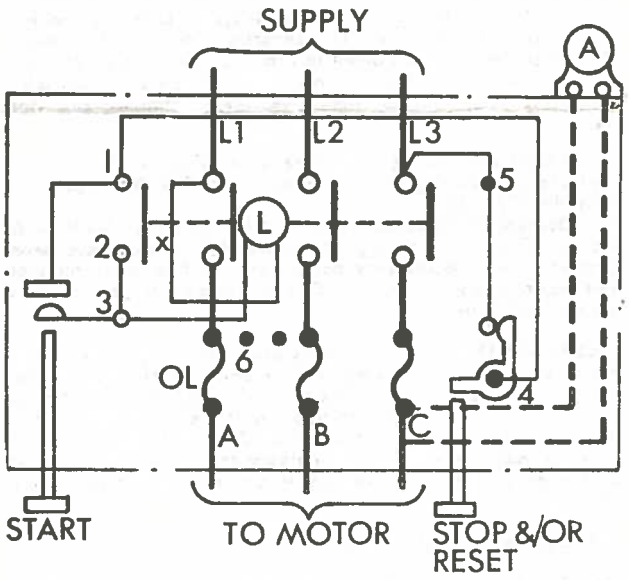
ALLENWEST

DIRECT-SWITCHING STARTERS OR CIRCUIT-BREAKERS TYPES "SCIS" & "SCI"

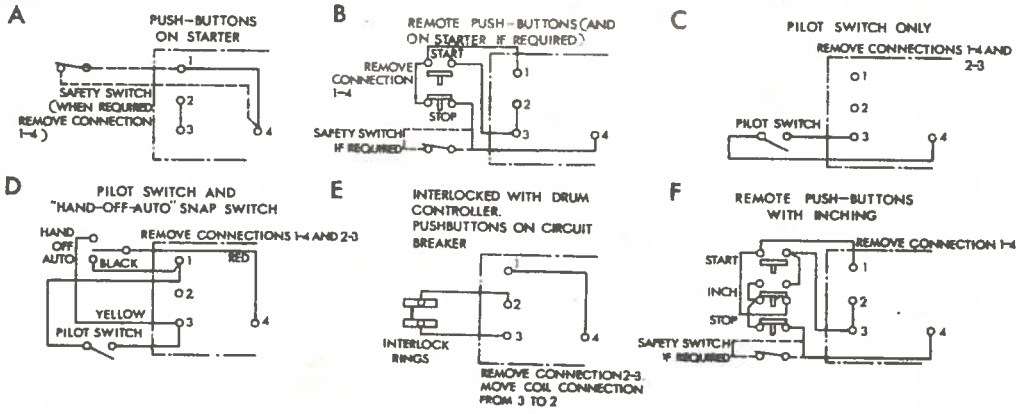


SINGLE PHASE SUPPLY –
CONNECT SUPPLY TO TERMINALS L1 & L3 AND CONNECT MOTOR TO TERMINALS A & C

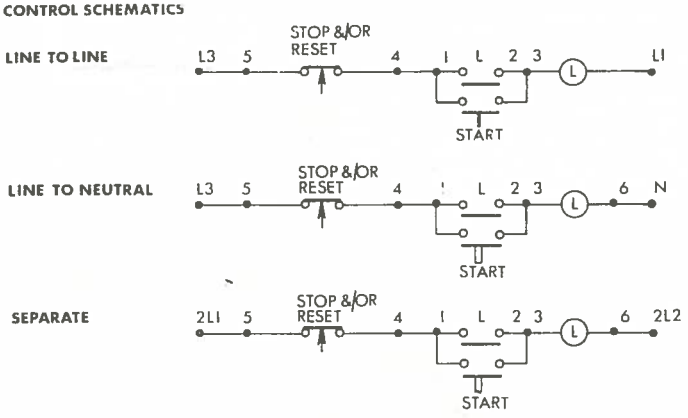
3 PHASE 4 WIRE SYSTEM–
REMOVE CONNECTION X FROM L1 AND CONNECT TO 6 CONNECT NEUTRAL TO 6

SEPARATE CONTROL SUPPLY–
REMOVE CONNECTION X FROM L1 AND CONNECT TO 6 REMOVE L3–5 CONNECT SEPARATE SUPPLY TO 6 & 5

CONNECTIONS FOR VARIOUS SCHEMES OF CONTROL



CONTROL SCHEMATICS



"Stop/Reset" or "Reset" push-button is always embodied in starter cover.
"Start" push-button is embodied only when indicated in scheme of control.
The complete diagram of connections is obtained by combining the appropriate main diagram with the desired scheme of control.

STARTERS OR CIRCUIT BREAKERS TYPES "SCIS" AND "SCI"

INSTALLATION AND MAINTENANCE INSTRUCTIONS

INSTALLATION

Mount the starter firmly and vertically.

Connect as diagram overleaf. Securely tighten all terminals, and take care not to interchange cable clamps bearing terminal markings.

See that overload relay dashpots are quite clean. Fill to within $\frac{1}{8}$ in. of top with special dashpot oil provided. Where this is in capsules, each contains sufficient for one dashpot.

Setting and adjustment of overload relays are dealt with under separate headings.

NOTE—Dashpots and pistons are carefully matched to ensure accurate operation, and must on no account be interchanged.

AUXILIARY CONTACTS—These are available (max. 2) in package form and can readily be screwed to magnet guides. Each block contains one contact and can be arranged to give normally-open or normally-closed operation as required.

MAINTENANCE

CONTACTS—To obtain access, partially withdraw contactor after slackening fixing screws. Fixed and moving contacts may then be readily removed.

Contacts should then be kept clean and un-pitted by the careful use of a file card. They should not be filed harshly ; if badly blistered, they may be dressed with a smooth file to restore contact shape.

As soon as silver facings become badly worn, replace contacts by a new set.

MAGNETS—Inspect magnet faces periodically, and wipe off rust or dirt with a clean dry cloth. Do not apply oil or grease except for preservation during an idle period, after which it must be completely removed.

Excessive vibration during normal operation may be caused by :

1. Foreign matter (e.g. cable trimmings) lodging on the pole faces and preventing the magnet from sealing.
2. Incorrect assembly. Silencing rings on yoke and armature must be diagonally disposed, i.e., with rings on opposite sides of the operating coil.
3. Broken silencing ring. In this event magnet should be replaced.

OPERATING COIL—To remove, disconnect tails, slacken fixing screws holding brass magnet brackets, and remove magnet yoke complete with operating coil, coil washer and armature push-off spring.

NOTE—Correct re-assembly of coil is with washer on top (immediately below push-off spring) ; tails emerge uppermost and towards front of contactor.

Ensure that yoke is replaced in accordance with 2 above.

OVERLOAD RELAYS

CURRENT SETTING—After filling with oil supplied (Allen West Specification No. 12/DP1), set dashpots with their top edges in line with the calibration mark nearest to the normal full load current of motor. Values on calibration plate show full load currents and relays will trip at 15% above this setting.

TIME-LAG SETTING—This is controlled by the rate at which oil is allowed to flow from top to underside of the piston and is adjusted by washer " D " which has five holes of graded size.

Starters are despatched with time-lags set at centre position (i.e., with centre hole in " D " covering hole " C " in piston). If the load necessitates a different time-lag, remove washer " D " from plunger and replace so that required hole coincides with fixed hole " C." Smaller hole gives longer time-lag and vice versa.

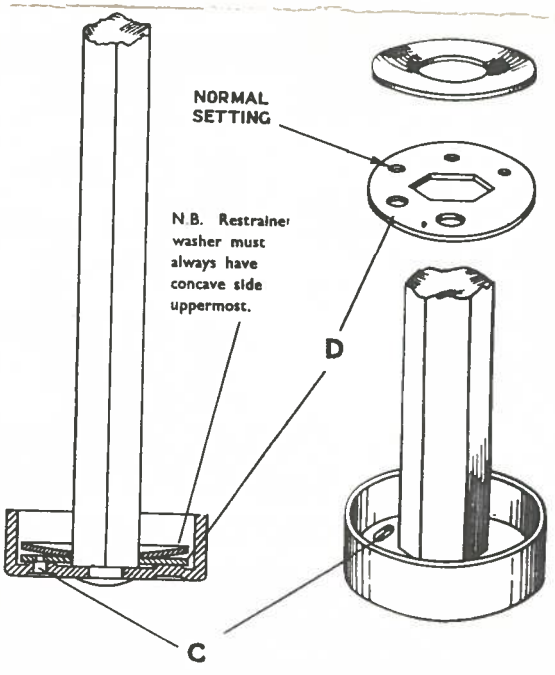
If sufficient time-lag is not obtainable by this method, it may be increased by using thicker dashpot oil (Allen West Specification No. 12/DP2).

Dashpot oils specified are obtainable only from *Allen West & Co. Ltd.* Their use is strongly recommended, as they have been proved to give satisfactory performance and as other mineral oils may not be so satisfactory. Oils of vegetable origin should on no account be used.

RESTRAINING DEVICE—This automatically increases time-lag setting during the heavy current peaks which occur under normal starting conditions. It comprises a dished washer which must be fitted concave side uppermost (see illustration). On heavy current peaks the initial rush of oil through hole " C " tilts the washer, which seals the hole and thus materially increases the time-lag. The washer assumes its original position as current decreases to normal value.

SPARE PARTS—See leaflet 122/E/-.

NOTE—In the event of any difficulty, consult *Allen West & Co. Ltd.*, quoting serial number stamped on rating plate.



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