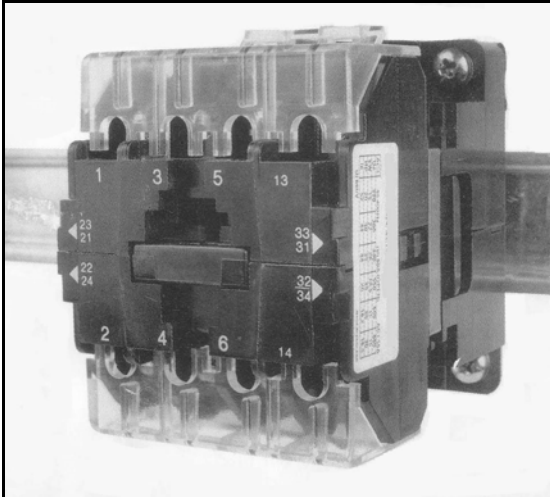


# UA22 Contactor & Accessories

## Installation & Servicing Instructions



**UA22 Contactor**

### IDENTIFICATION

The contactor rating is shown on a label affixed to the side of the device.

The contactor has either three main poles and one normally open Auxiliary contact or four main poles.

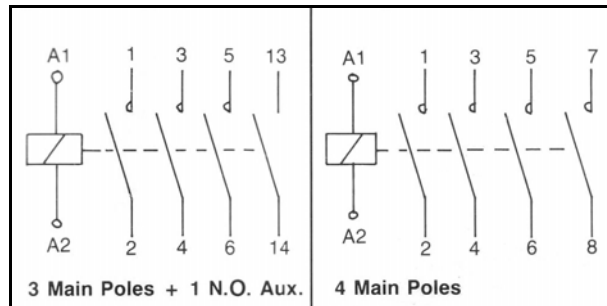


Fig. 1 Contact Arrangement

### INSTALLATION

If any accessories are to be attached to the contactor, refer to relevant fitting instructions below.

Check that the control supply voltage and frequency is compatible with that marked on the operating coil and label.

Mount the device on a flat surface using captive fixing screws (see drilling plans), or on 35mm DIN Rail. The unit will operate satisfactorily in any plane except when suspended upside down.

Maximum terminal capacity :

Mains: 1 x 16mm<sup>2</sup> stranded

Auxiliaries: 2 x 2.5mm<sup>2</sup>

### DIN RAIL MOUNTING

A mounting adaptor plate is available (order code U-4191245) for use with 35mm DIN Rail. Secure adaptor plate to base of contactor using the fixing screws provided, and with the locking cam at the bottom right hand side. Rotate cam screw anti-clockwise to loosen cam. Clip device on to DIN rail and secure into required position by tightening cam screw with cam located behind flange on DIN Rail.

### ACCESSORIES

#### Auxiliary Contacts - Side mounting

One side adder (ordering code, U-4191159) can be fitted at each side of contactor, each block containing one normally open and one normally closed contact.

The following limitations apply to the use of side adders :

1. When two contactors are horizontally mechanically interlocked, side adders may only be fitted to outer positions of units, i.e., one on each device.
2. When two contactors are vertically mechanically interlocked, side adders may only be fitted to the opposite side to the mechanical interlocking mechanisms. i.e. one on each device.
3. When contactor is d.c. operated , a single side adder only may be fitted on the opposite side of unit to the economy resistors and late break adder.

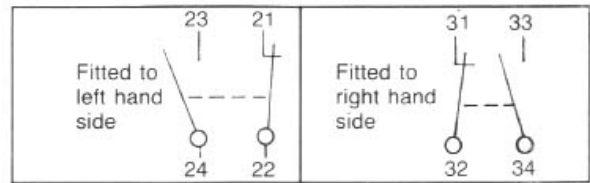


Fig. 2 Two Pole Auxiliary Side Adder Contacts – 1N/O + 1N/C

To fit side adder to contactor/relay, locate short projecting hooks of block moulding over terminal barrier on front side edge of contactor, see figure 3. Depress main contact carrier on contactor and simultaneously press contact block into side of contactor to lock into position.

To remove side adder from contactor, depress the two locating hooks near the bottom of the contact block and withdraw module.

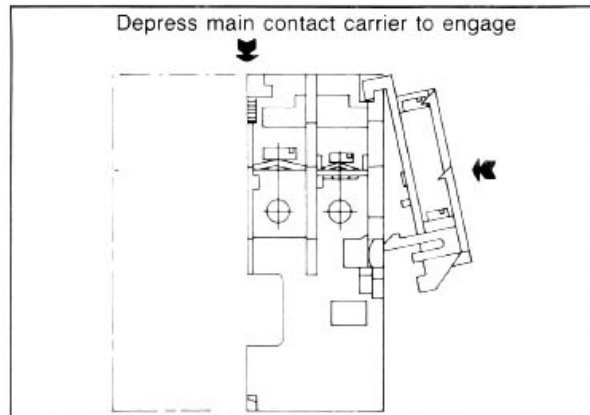


Fig. 3 Fitting of Side Mounted Auxiliary Contact Block

#### Auxiliary Contacts - Top mounting

Top adder (ordering code U-4195105) comprises two normally open and two normally closed contacts arranged as shown in figure 4.

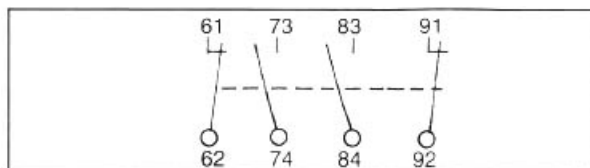


Fig. 4 Auxiliary Top Adder Contacts (2 N/O + 2 N/C)

# UA22 Contactor & Accessories Installation & Servicing Instructions

To fit top adder, see figure 5, ensure that the red coloured catch is withdrawn to its full extent. Offer top adder to front face of contactor with terminal numbers upright. Slide block downwards to fully engage contact carrier coupling hook and block interlocking feet. Finally, lock into position by fully depressing red catch.

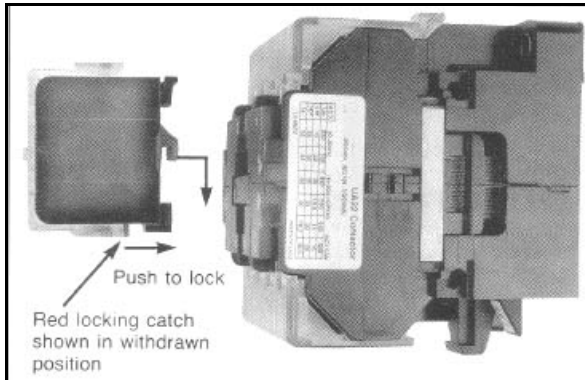


Fig. 5 Coupling of 4 Pole Auxiliary Top Adder

## Mechanical Interlock Assembly

Two contactors can be mechanically interlocked side by side or alternatively one above the other, using the separately packaged kits, (horizontal mechanical interlock kit ordering code U-4191173, vertical mechanical interlock kit ordering code U-4191171).

### Horizontal Mounting See Figure 6

To fit mechanical interlock kit to contactors mounted side by side drill panel to enable contactors to be mounted on centres shown in Figure 6.

Fit left hand contactor to mounting panel with appropriate fixing screws. With moulded segment of one lever assembly towards the base of the contactor locate pin of assembly in bottom hole of contactor moulding and locate projection of lever into the slot in the moving carrier. Locate pin of second lever assembly in top hole of contactor moulding with projection of lever outermost. Offer right hand contactor onto lever assembly pins and locate lever projection in slot of moving carrier. Secure right hand contactor to panel with appropriate fixing screws. See Figure 6.

Check operation of contactors manually on no-load before connecting supply.

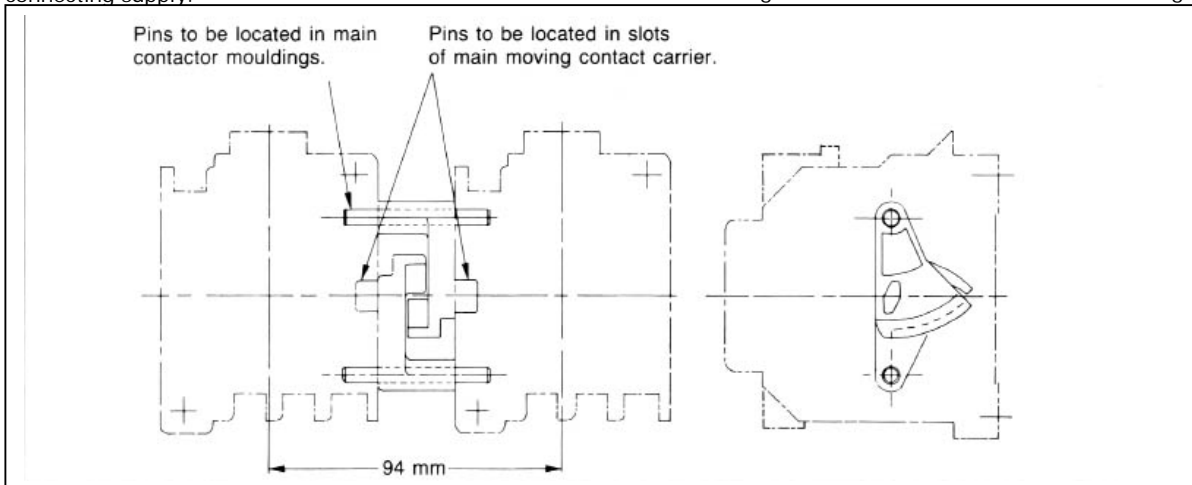


Fig. 6 Horizontal Mechanical Interlock Arrangement

### Vertical Mounting See Figure 7

To fit mechanical interlock assembly to contactors mounted one above the other initially decide on whether mechanical interlock is required on the left or right hand side of the contactors.

Mount baseplate on to panel with the long pillars on the baseplate to either the left hand side or the right hand side as required.

Mount interlock lever assembly on top of the two pillars and secure with the M4 screws and spring washers provided. Mount both contactors on to baseplate with projecting pins on levers located into the slots in the contactor moving carriers. Secure contactors in position with M5 screws and shakeproof washers provided.

Check operation of contactors manually on no-load before connecting supply.

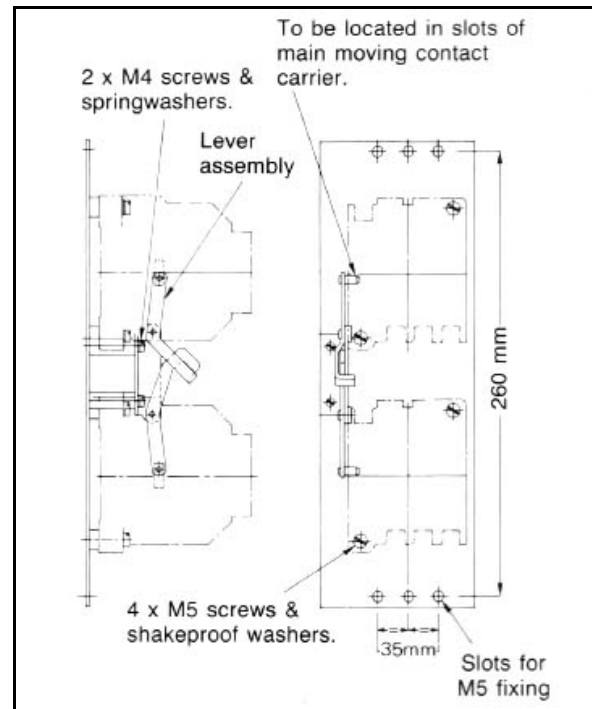


Fig. 7 Vertical Mechanical Interlock Arrangement

# UA22 Contactor & Accessories Installation & Servicing Instructions

## Start Switch

A start switch (order code U-4191250) is available for connecting across the normally open auxiliary contact on the main body of the contactor. To fit start switch: first remove terminal shrouds by inserting a small screwdriver between side of shroud and main moulding and lever off. Remove terminal screws to fit start switch and replace terminal shrouds, ensuring that the longest shroud is fitted to the top of the contactor. See Figure 8.

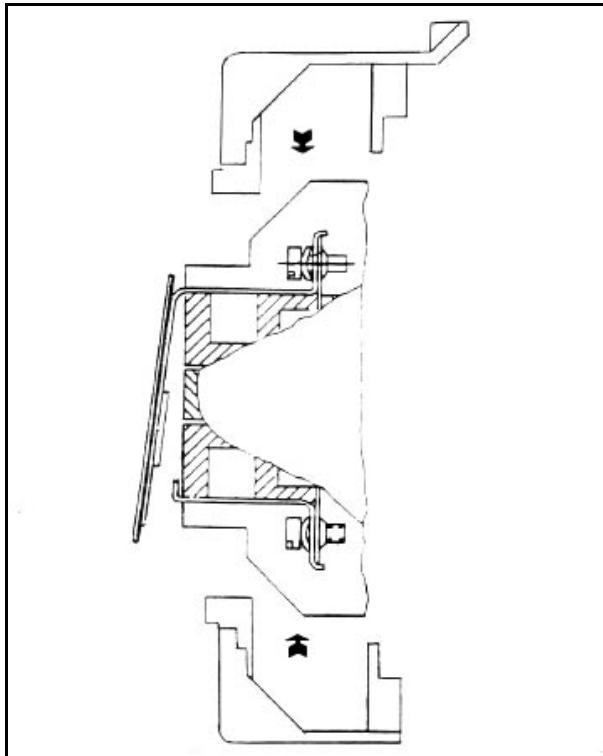


Fig. 7 Start Switch Fitted Across N/O Inbuilt Auxiliary

### ULO Latch Attachment

Proceed as for auxiliary contacts - top mounting (see page 2 ), noting that reference to contact carrier coupling hook is not applicable for the ULO.

### MAINTENANCE

No routine maintenance is necessary on the above devices. Contactor main and auxiliary contacts are designed to match the normal operating life expectancy of the unit, provided that the device is correctly selected for its operational duty.

### Operating Coil Replacement A.C. Operated

Disconnect all cabling connections and remove any attachments fitted to the contactor. Detach both side spring clips and also the spring clip at the base of the contactor, separate the main half body mouldings to expose the operating coil - see figure 9.

Withdraw contactor interior complete from main moulding and separate the magnet yoke to extract coil, taking care not to lose the two push off springs and rubber pad behind the yoke.

Select correct replacement coil and assemble in reverse order to above ensuring that both push off springs are located in the carrier recesses and on the pips projecting from the top flange of the coil bobbin. Install interior into main body moulding ensuring rubber pad is correctly situated.

**Important:** Moving contact carrier must be replaced with its aperture at the top facing the same direction as the coil terminals otherwise half body mouldings will not fully close therefore showing incorrect assembly.

### Operating Coil Replacement D.C. Operated

Before proceeding as for a.c. operated contactors it is necessary to remove the side adder containing the late break contact and economy resistors. Before removal it is necessary to disconnect wire link at terminal 21.

It is essential that magnet armature and yoke of d.c. operated contactors are not in any way interchanged with a.c. operated magnet systems.

**Note:** D.C. operated magnets are identified by a black line.

For coil connections for d.c. operated contactor, see figure 10.

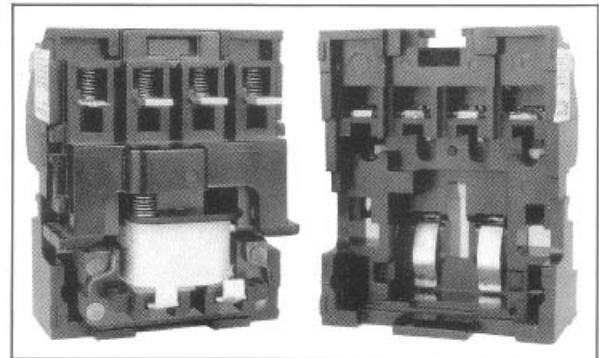


Fig. 9 Contactor open showing coil

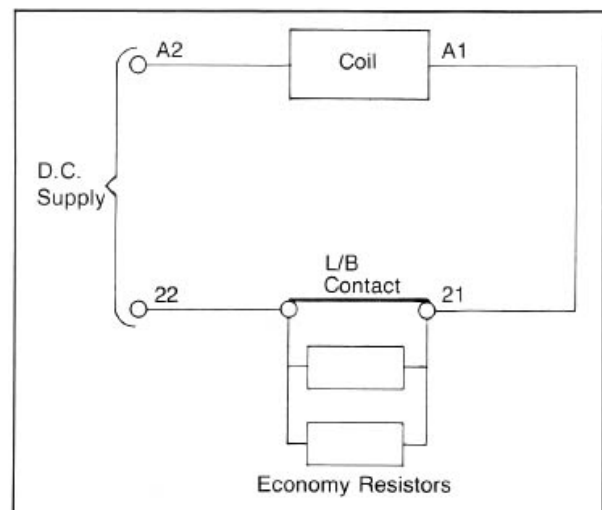
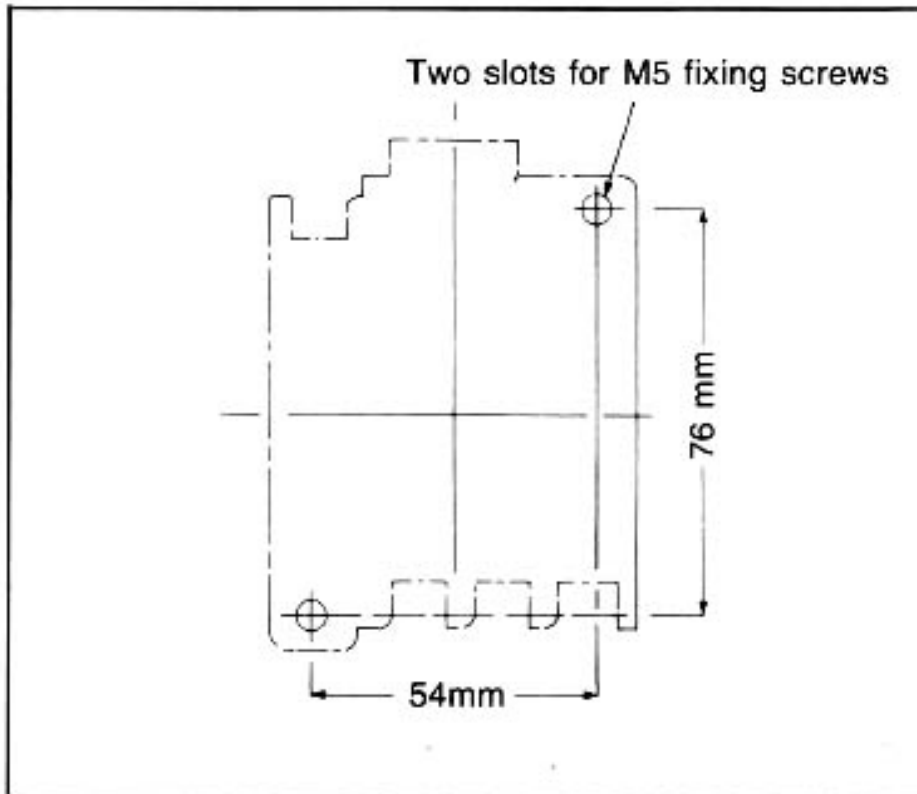


Fig. 10 Coil Connections for D.C. operating devices

**Note:** All wiring must be kept clear of economy resistors as these warm up in operation.

# UA22 Contactor & Accessories Installation & Servicing Instructions

## DRILLING PLANS



Drilling Plan 1

## OBSOLECENCE

Please note that the UA22 contactor can be used as a direct replacement for the now discontinued UA15 & UA18 Contactors. The UA22 is the same physical size, with the same mounting and connection arrangements.

## HEALTH AND SAFETY AT WORK ETC, ACT 1974 STATEMENT TO PURCHASERS AND PROSPECTIVE PURCHASERS

Section 6 of this Act provides that manufacturers, designers, importers or suppliers of articles for use at work have a duty to ensure, so far as is reasonably practicable, that the articles will be safe and without risk to health when properly used. An article is not regarded as being 'properly used' if it is used without regard to any relevant information or advice relating to its use made available by the manufacturer, designer, importer or supplier.

Information on the design, construction and installation of our products to ensure that so far as is reasonably practicable they are safe and without risk to health when properly used may be found in:

- Relevant British Standards Specifications and Codes of Practice.
- Regulations for Electrical Installations (published by the Institution of Electrical Engineers),
- Catalogues and product leaflets of the Company.
- Or may be obtained by specific requests to the Company.

It is important that the products concerned should be installed, commissioned and maintained by, or under the supervision of, competent persons in accordance with good engineering practice and:

- IEE Regulations for Electrical Installations.
- Codes of Practice.
- Statutory requirements.
- Any instructions specifically advised by the Company and, where appropriate, with particular reference to information marked on the product.

In accordance with the provisions of the Act, you are therefore requested to take such steps as are necessary to ensure that any appropriate information relevant to our products is made available by you to anyone concerned.

**These notes assume throughout that the product is disconnected from the supply. It is essential that this is done before any work is carried out.**

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