

## Application

To be able to locate a relay unit in a protective relay, the unit is identified with a unique item designation. Furthermore, the electrical connection point has a unique terminal designation. These designations are used on circuit diagrams, terminal diagrams and elsewhere to identify locations of terminals and modules.

A circuit diagram for a protective relay shows the units of which the protective relay is built up, the internal wiring between the units and the external connection of the relay. The terminal diagram shows in a simplified way the functioning of the protective relay and the external connection of the relay.

The item designations are based on a coordinate system of U and C modules and the terminal designations are based on the size of the unit. U is the height module and C is the width module. The U-module (44,45 mm,

1,75 in), derived from the 19" standard, is the vertical distance between the groups of holes in the fixing bars of cubicles. The C-module (7 mm, 0,28 in) is the horizontal distance between the mounting holes in apparatus bars.

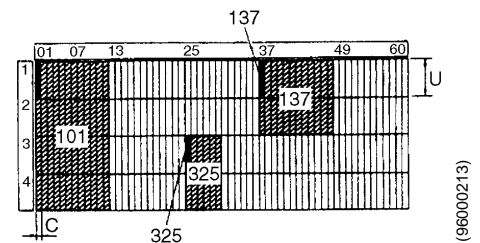


Fig. 1 The U and C modules form a coordinate system. Note that the item designations of each unit is the combination of U and C modules covered by that unit's upper left corner, e.g. 101 and 325.

## Illustration of item and terminal designations

### COMBIFLEX

The left unit of the protective relay in Fig. 2 has the item designation 101, where the first figure stands for the U-module position and the next two for the C-module position.

The next unit, 107, has the same U-module position but has added 6C to the C-module position. Unit 331 has added 2U and 24C to its module position.

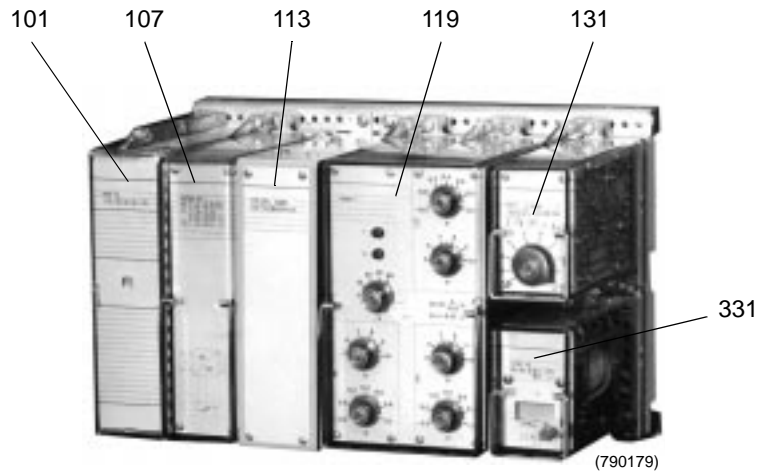


Fig. 2 Item designations for relay units

A complete terminal designation for the protective relay shown in Fig. 2 consists of e.g. the item designation 101 and the terminal designation 14 A.

This terminal, 101:14A, is encircled in the terminal diagram, Fig. 3 and in the connection guide, Fig. 4.

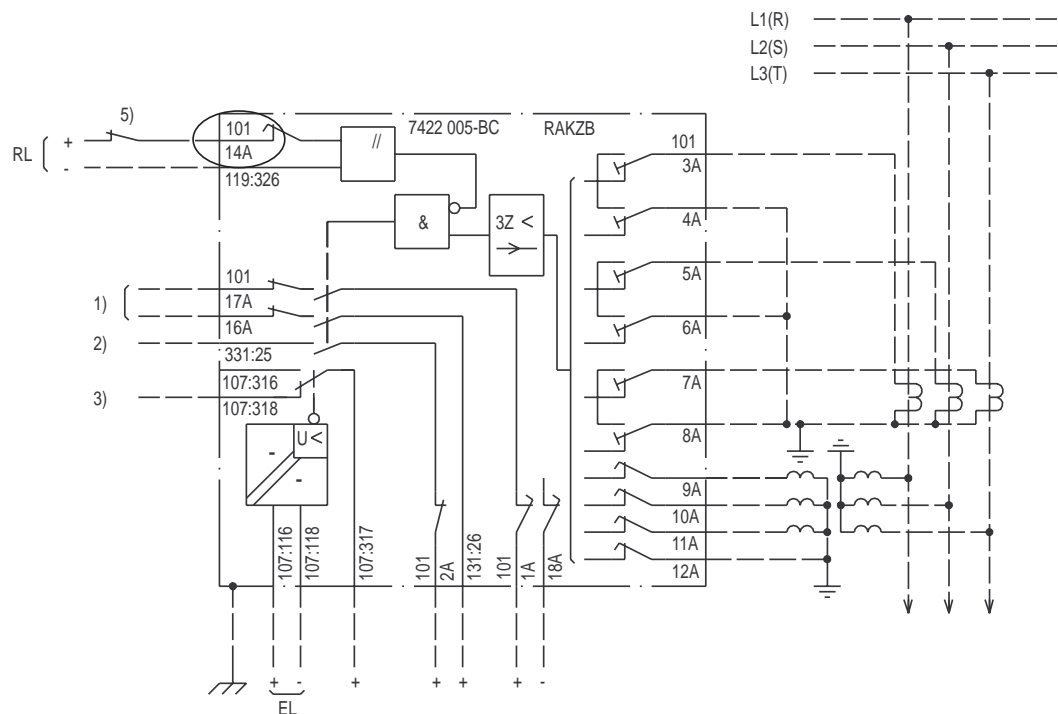


Fig. 3 Terminal diagram 7422 005-BBA

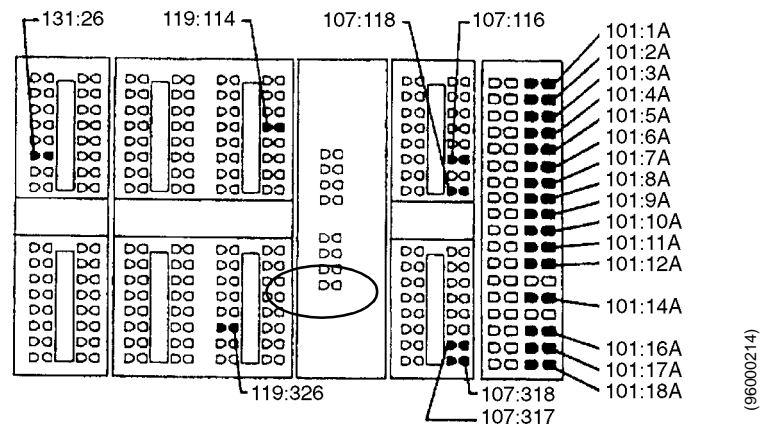


Fig. 4 Connection guide for external connections according to the terminal diagram (rear view)

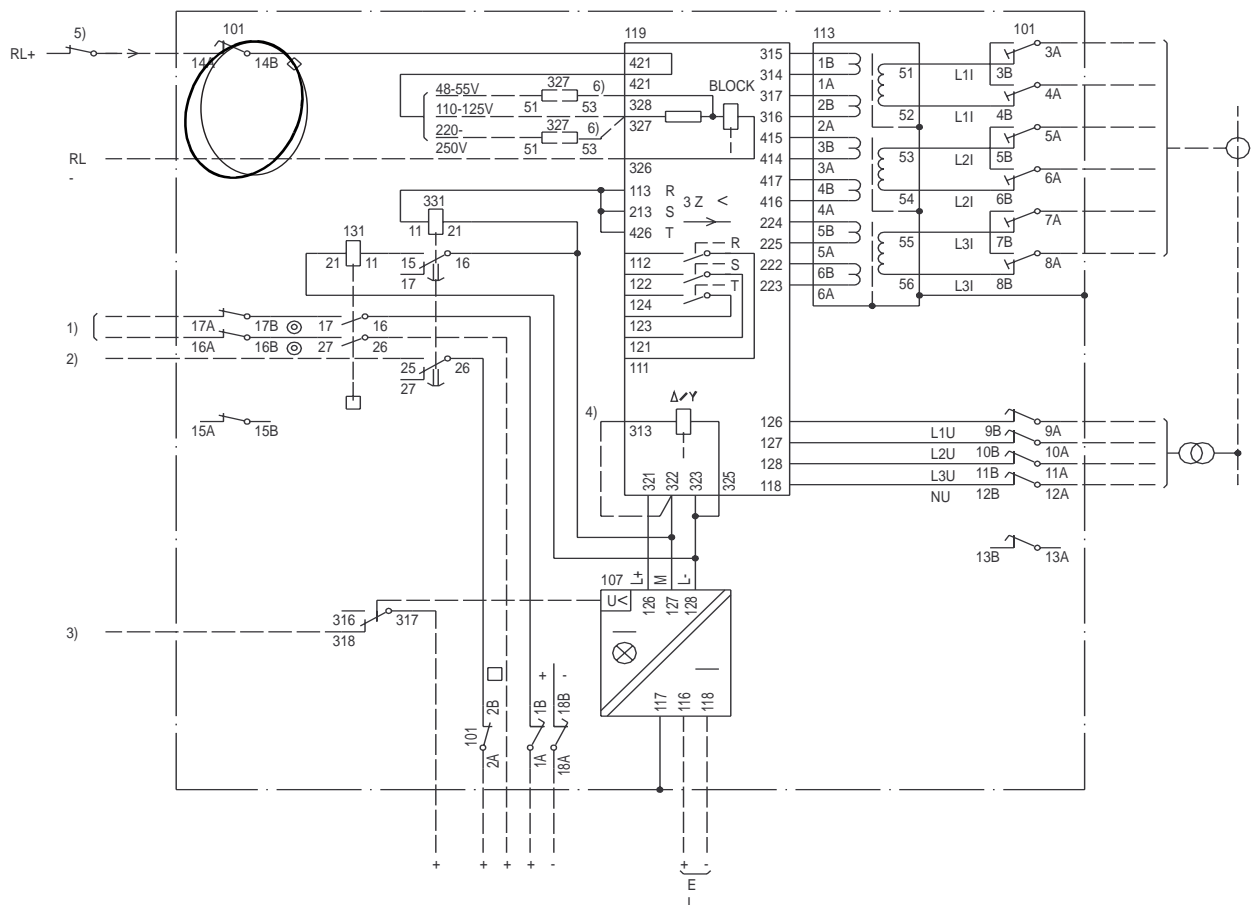


Fig. 5 Circuit diagram 7422 005-BC

## Illustration of item and terminal designations (cont'd)

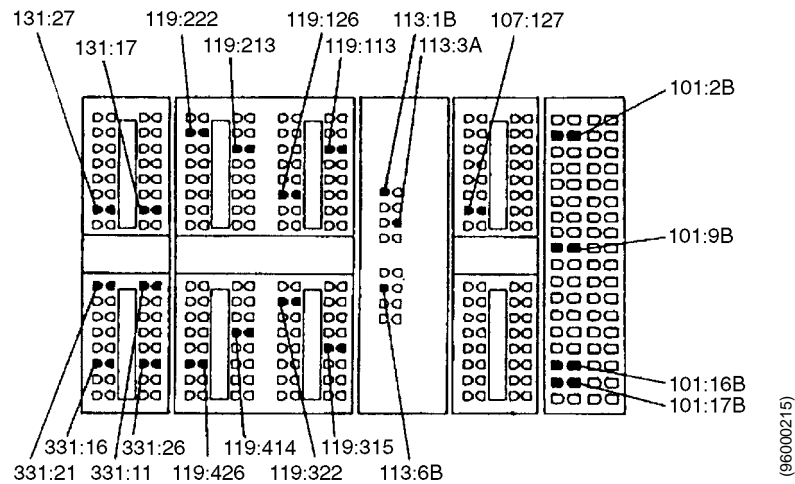


Fig. 6 Some of the terminals used in the internal connections in Fig. 5 (rear view)

Terminal bases are marked with figures and letters according to Fig. 7. The terminal designation for a relay unit depends on the size of the mounted unit, not on the terminal base. One and the same terminal, 21 (see Fig. 8), in an RX 4 terminal base can get four different terminal designations depending on the size of the mounted relay unit.

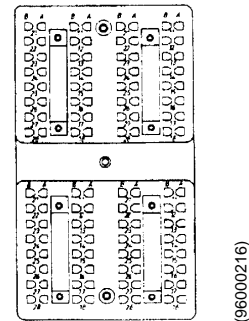


Fig. 7 Terminal base seen from the rear

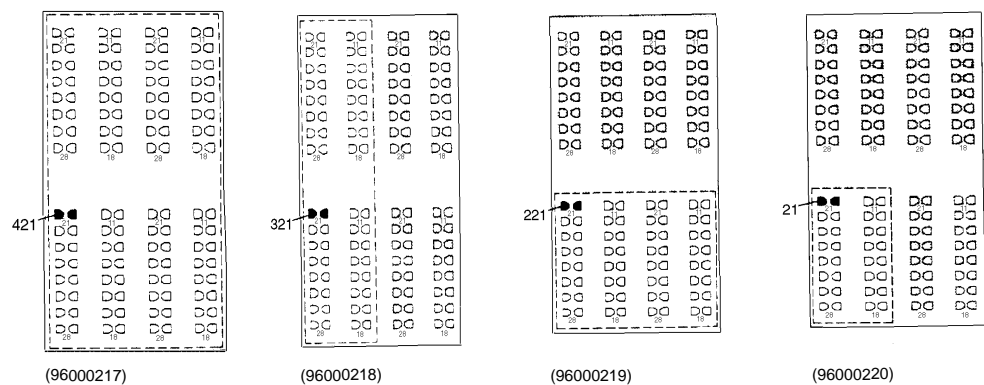


Fig. 8 Terminal designation for different relay units dotted mounted on the same terminal base

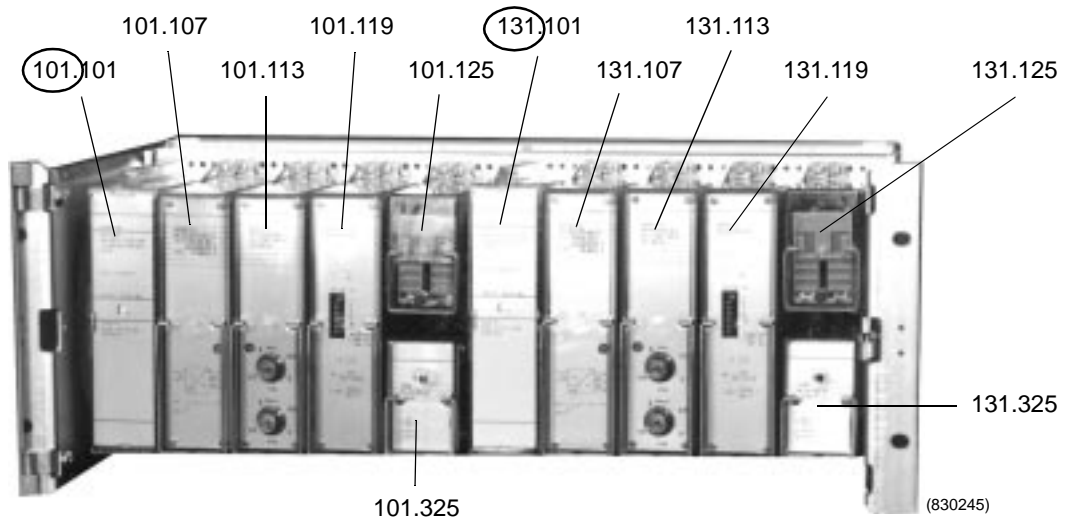


Fig. 9 Two of the same protective relays, the encircled 101 and 131, mounted in an equipment frame.

The terminal designation for one terminal in the left unit of the left protective relay will be 101.101:14A. The same terminal in the right

protective relay has the terminal designation 131:101:14A as this relay has added 30C-modules to its position 131.

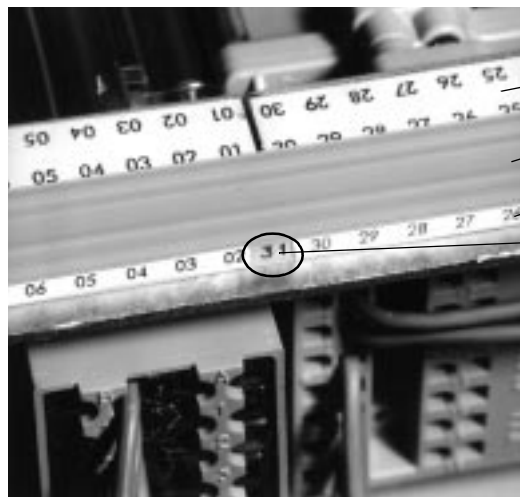


Fig. 10 C-module markings

- a) Horizontal marking tape
- b) Horizontal marking bar
- c) Marking strips on both sides of the marking bar
- d) The C-module designation for the right-hand relay in Fig. 9 together with the U-module designation 131 for the right-hand relay

Illustration of item and  
terminal designations  
(cont'd)



Fig. 11 Vertical U-module marking tape

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