1MRK 514 005-BEN
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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.

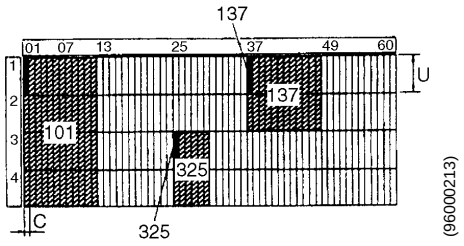

Fig. 1 The U and C modules form a coordinate system. Note that the item designations of each unit is the combination of U and C modules covered by that unit’s upper left corner, e.g. 101 and 325.

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 325 has added 2U and 24C to its module position.

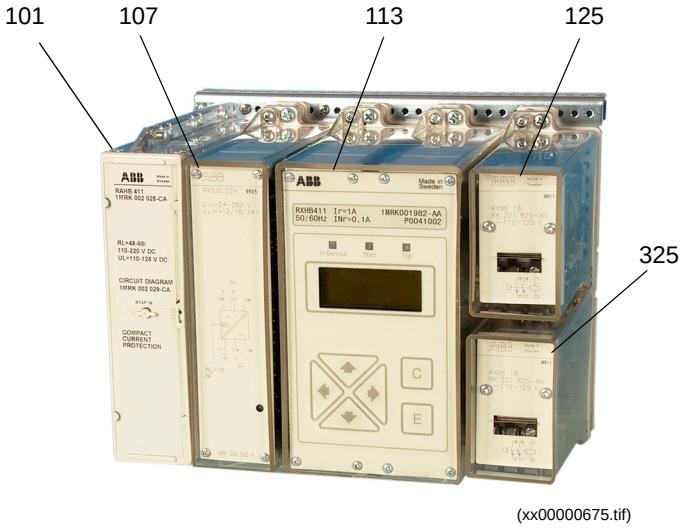

Fig. 2 Item designations for relay units

A complete terminal designation for the protective relay shown in Fig. 2, Fig. 3 and Fig. 4 consists of e.g. the item designation 101 and the terminal designation 11 A.

This terminal, 101:11 A, is encircled in the terminal diagram, Fig. 3 and in the connection guide, Fig. 4.

An example of the rear of a protection assembly with COMBITEST test switch is shown i Fig. 4. Terminal positions are used for internal and external connections.

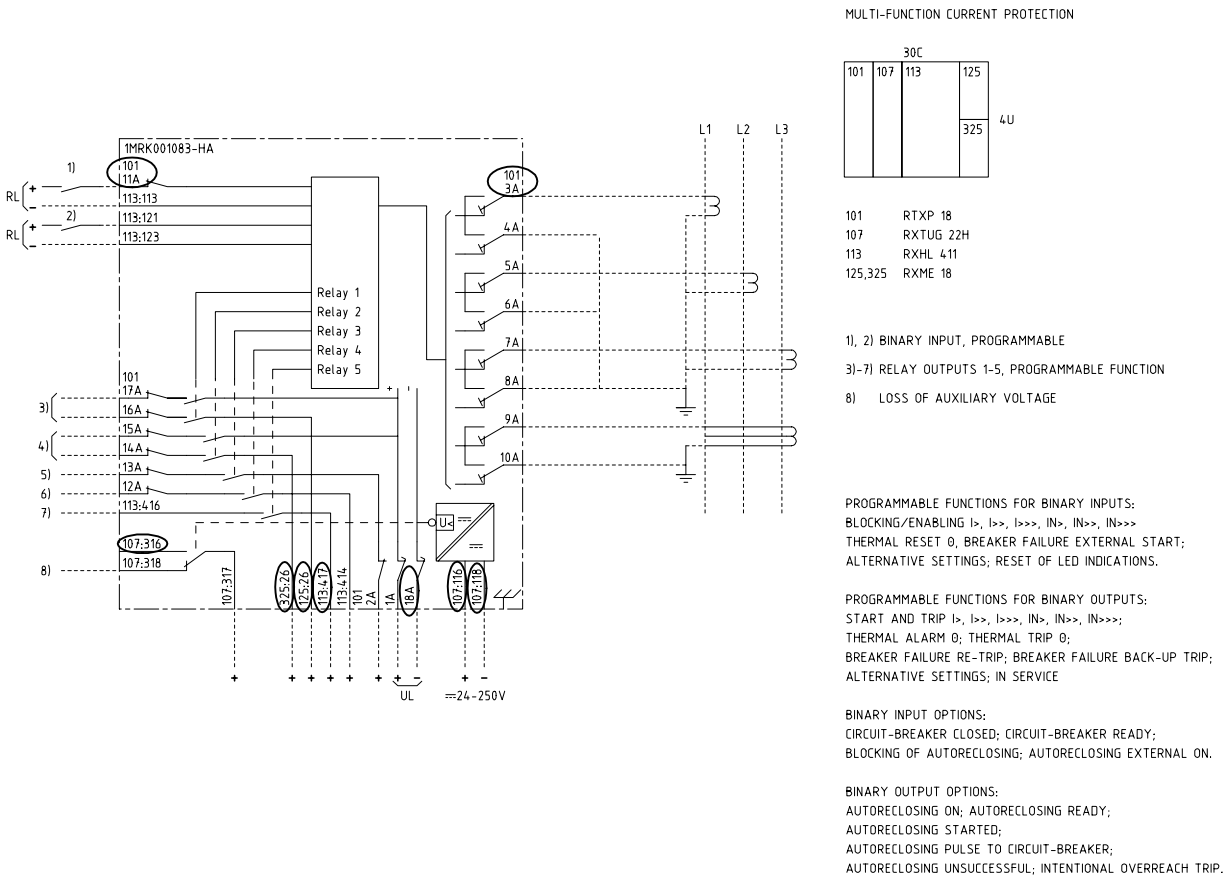

Fig. 3 Terminal diagram 1MRK 001 083-HAA

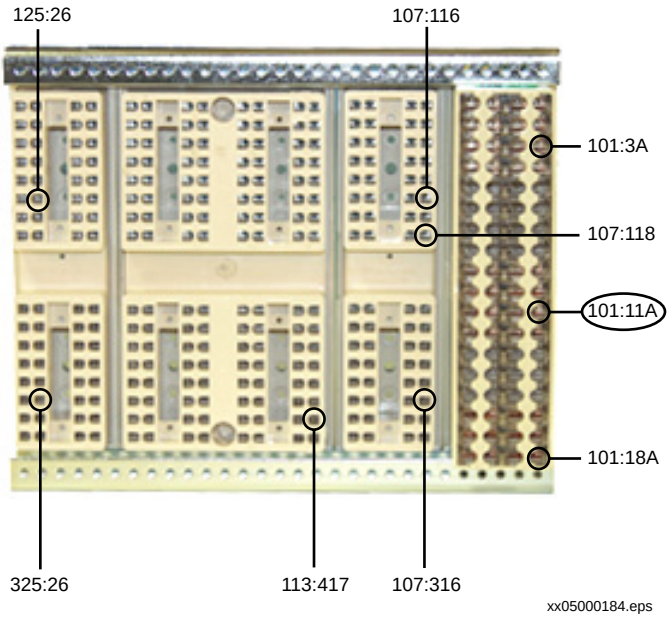

Fig. 4 Terminal locations at the rear of a protection assembly

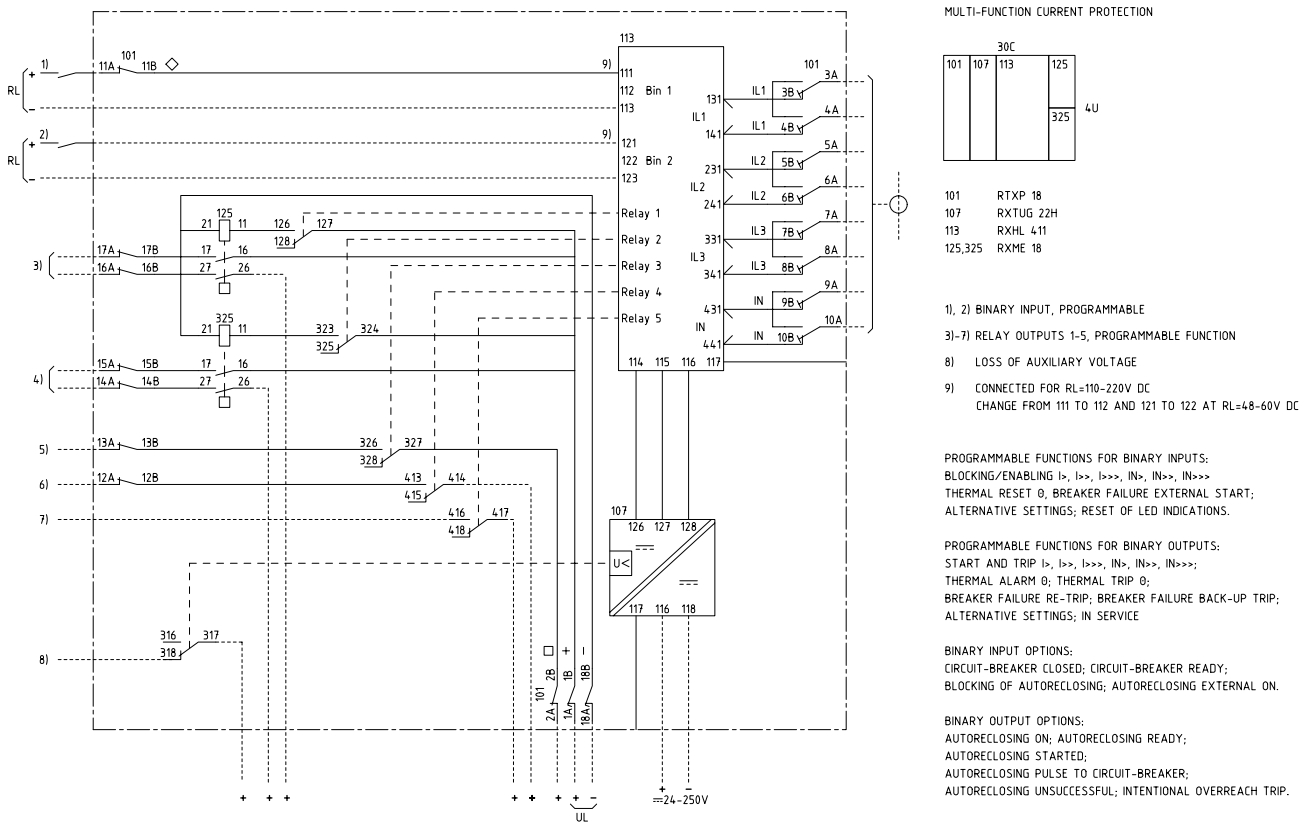

Fig. 5 Circuit diagram 1MRK 001 083-HA

Terminal bases are marked with figures and letters according to Fig. 6. 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. 7), in an RX 4 terminal base can get four different terminal designations depending on the size of the mounted relay unit.

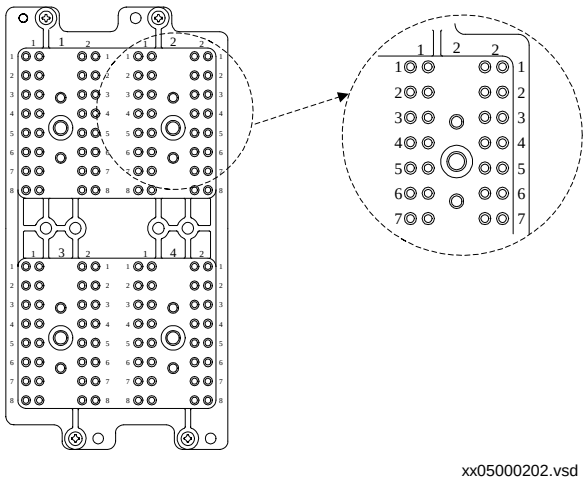

Fig. 6 Terminal base seen from the front

From rear side

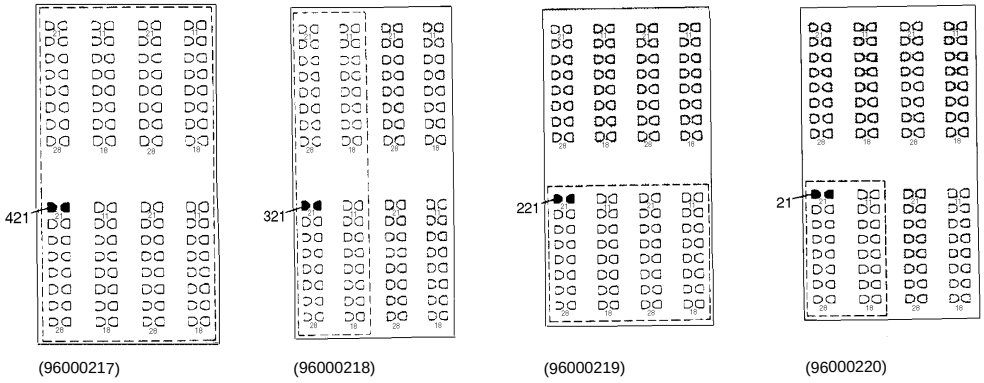

Fig. 7 Terminal designation for different relay units dotted mounted on the same terminal base

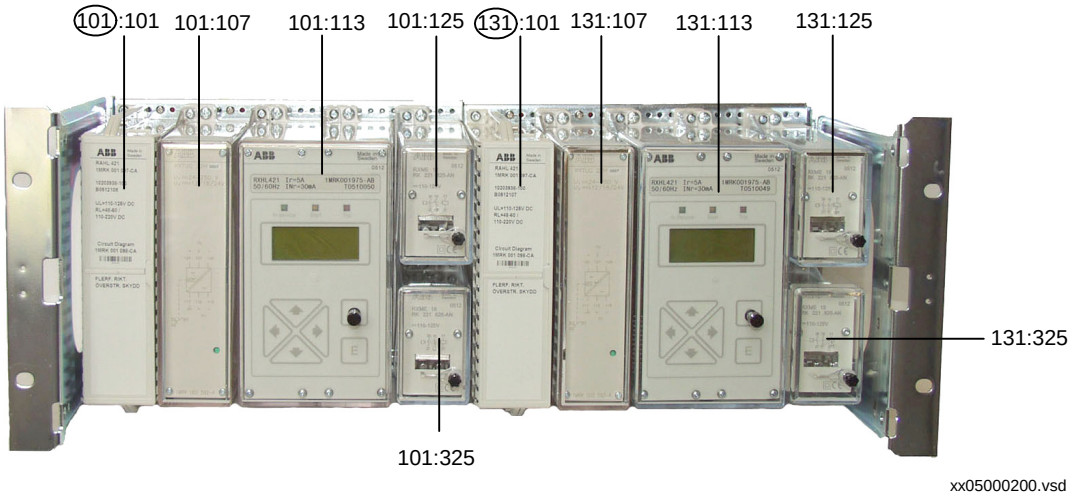

Fig. 8 Two of the same protective relays, the encircled 101 and 131,mounted in an equipment frame.

The terminal designation for one terminal in the left unit of the left protective relay will be 101:101. The same terminal in the right protective relay has the terminal designation 131:101 as this relay has added 30C-modules to its position 131.

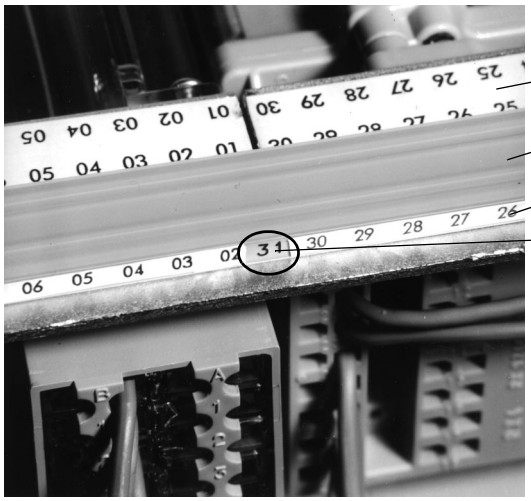

Fig. 9 C-module markings

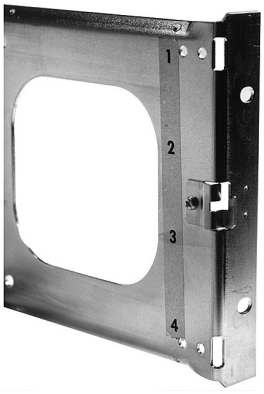

Fig. 10 Vertical U-module marking tape

Manufacturer

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