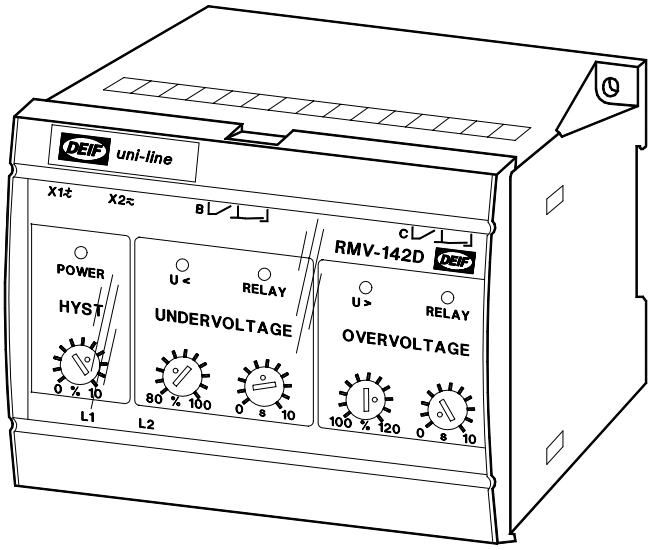
DEIF A/S

Installation and start up instructions

Undervoltage and overvoltage relay type RMV-142D

uni-line

4189340118F (UK)



- *Combined undervoltage and overvoltage: U< + U>*
- *Single phase measurement*
- *LED indication of fault condition*
- *Timer controlled tripping*
- *LED indication for activated relay*
- *35 mm DIN rail or base mounting*

CE

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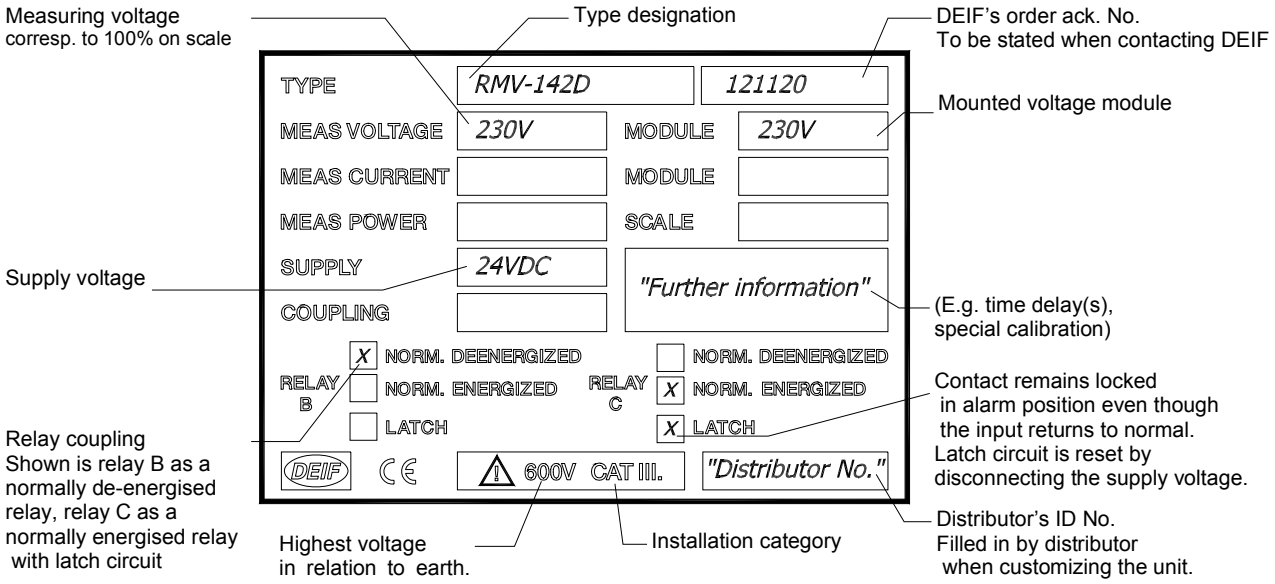
1. Description

This combined undervoltage and overvoltage relay type RMV-142D forms part of a complete DEIF series (the *uni-line*) of relays for protection and control of generators.

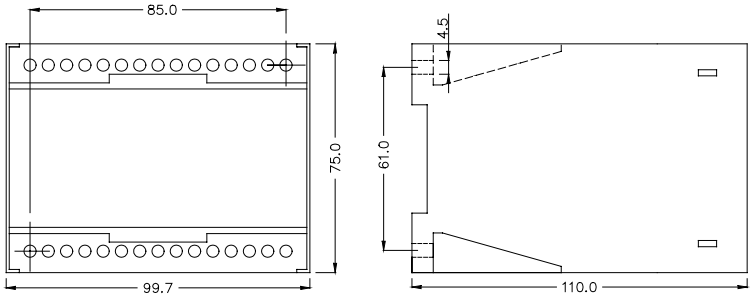
2. Label

The relay is provided with a label with the following data:



Note: The relay is provided with a 200 ms power-up relay, ensuring correct function of the relay on connection of the auxiliary voltage. Normally energised contacts ("NE") are not activated (contact does not open/close) until 200 ms after connection of the auxiliary voltage. Likewise, the relay is provided with a 200 ms power-down circuit, ensuring supervision and maintenance of any set point exceeding for 200 ms after disconnection of the auxiliary voltage.

3. Mounting instructions



The RMV-142D is designed for panel mounting, being mounted on a 35 mm DIN rail, or by means of two 4-mm screws.

Weight: Approx. 0.650 kg

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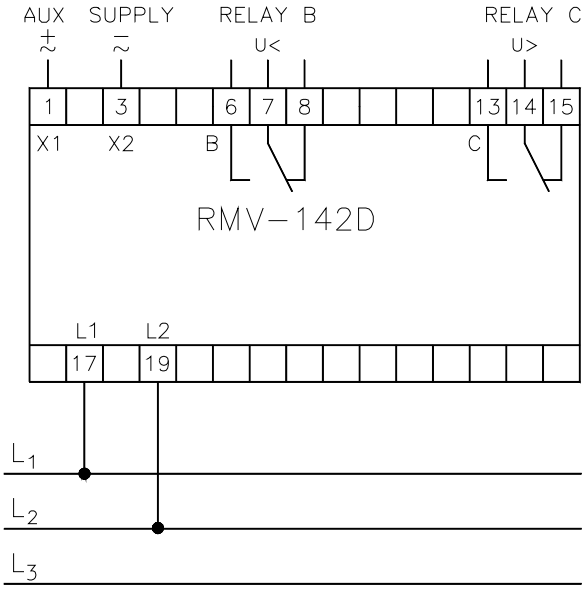
The design of the relay makes mounting of it close to other *uni-line* units possible, however make sure there are min. 50 mm between the top and bottom of this relay and other relays/units.

The DIN rail must always be placed horizontally when several relays are mounted on the same rail.

4. Connection diagram



A 2A fuse may protect all voltage inputs.

The relay is protected against ESD (electrostatic electricity), and further special protection against this during the mounting of the relay is not necessary.

The RMV-142D may be connected between 2 phases or between 1 phase and neutral. The RMV-142D is to be configured so that the input of the relay corresponds to the actual voltage measured.

5. Start up instructions

5.1 Setting and indication

Setting of	LED/relay	
Undervoltage set point: (80…100%) of U_n	”U<”	Yellow LED is lit when the input voltage drops below the set point, but the output contact has not yet been activated.
Overvoltage set point: (100…120%) of U_n	“U>”	Yellow LED is lit when the input voltage exceeds the set point, but the output contact has not yet been activated.
Time delay: 0…10 s	The contact is activated and the red LED is lit after the timer has expired.	
Hysteresis: (1…10%) of U_n	Relay contact is reset when fault voltage equals or is less than the preset hysteresis.	

The built-in relays of the RMV-142D are activated when the input voltage drops below/ exceeds the set points preset on the front of the unit.

A suitable hysteresis is selected in relation to the preset set points, e.g. to ensure, that the relay contacts are not reset, until the input voltage is within its nominal range.

Example: Nominal voltage range: 95…105V
Undervoltage set point: 90% of U_n (90V)
Overvoltage set point: 110% of U_n (110V)
Hysteresis: 5% of U_n (5V)

The relay will now be activated at an undervoltage of 90V and an overvoltage of 110V, and will be deactivated again when the input voltage is within the range 95…105V.

Note: Hysteresis setting is common to undervoltage and overvoltage contacts.

When setting the set points on the front of the RMV-142D an accuracy of ±10% of the scaling, corresponding to ±2% of U_n, may normally be obtained.

If a higher accuracy is required, the unit (the generator) connected to the relay must be regulated until the required set point value is reached. When the input voltage driops below/exceeds the set point, the relevant yellow LED of the RMV-142D is lit.

6. Technical specifications

Frequency range:	40…45…65…70Hz
Max. input voltage:	1.2 x U_n, continuously, 2 x U_n for 10 s
Load:	2kΩ/V
Relay contacts:	1 changeover switch per relay
Contact ratings:	250V-8A-2000A (AC), 24V-8A-200W (DC)
Response time:	<100 ms
Galvanic separation:	Between inputs and outputs: 3250V-50Hz-1 min.
Consumption:	(Aux. supply) 3.5VA/2W