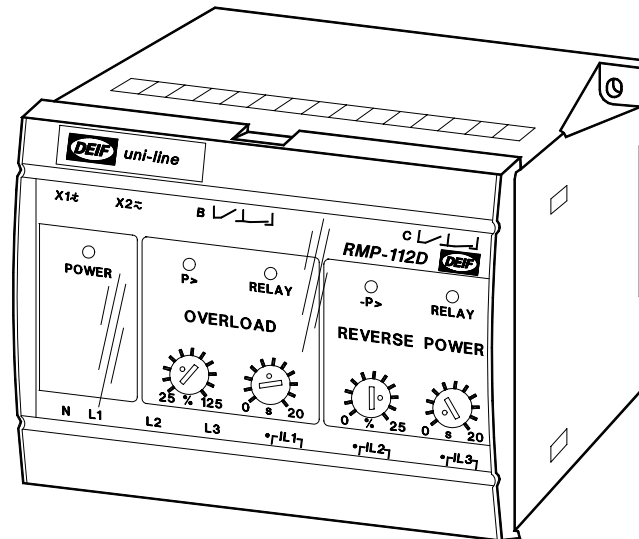


Overload/reverse power relay type RMP-112D
uni-line
4189340124C (UK)



- Combined overload and reverse power
- 3 phase measurement
- LED indication of fault condition
- Timer controlled tripping
- LED indication for activated relay
- 35 mm DIN rail or base mounting



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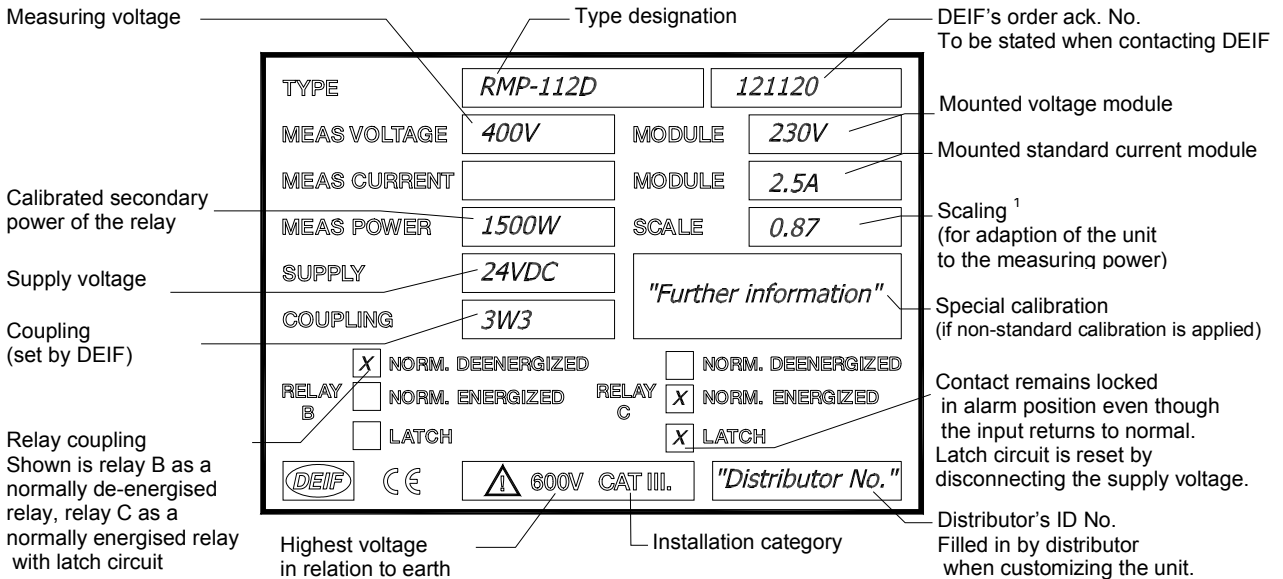


1. Description

This protective overload and reverse power relay type RMP-112D 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 1: Calculation of measuring power:

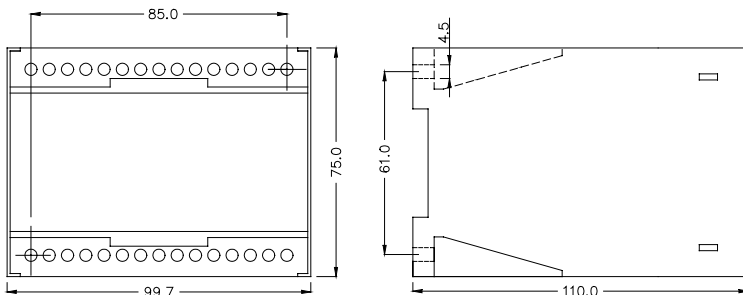
"X" x voltage module x current module x scale = measuring power

"X" is replaced by 2 for coupling 2W3

3 for couplings 3W3 and 3W4

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



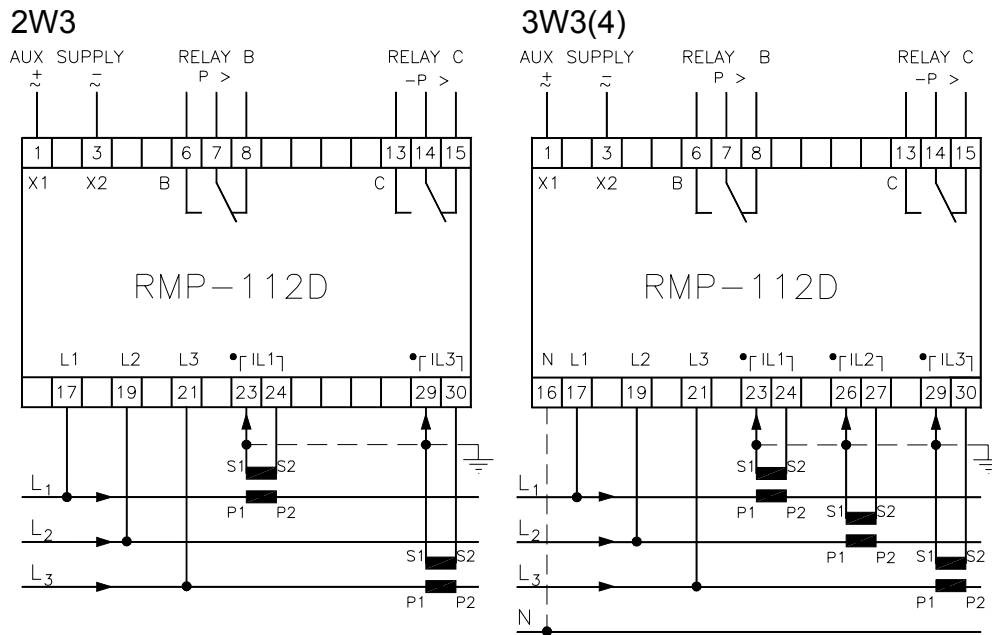
The RMP-112D is designed for panel mounting, being mounted on a 35 mm DIN rail, or by means of two 4-mm screws.

Weight: Approx. 0.650 kg

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.

Coupling	Applied for measurement on
3W3	3 phase networks without neutral
3W4	3 phase networks with neutral If neutral is not accessible, the connection to terminal No. 16 (neutral) may be omitted without this affecting the accuracy of the relay, provided that the 3 phase voltages are identical.

For relays with coupling 2W3 the voltage inputs are connected as follows, if the current transformers are placed in other phases than indicated in the above diagram:

External current transformer	Connect		
- connected to L1 (23 + 24) and L2 (29 + 30)	L1 to term. No. 17	L3 to term. No. 19	L2 to term. No. 21
- connected to L2 (23 + 24) and L3 (29 + 30)	L2 to term. No. 17	L1 to term. No. 19	L3 to term. No. 21

5. Start up instructions

5.1 Setting and indication

Setting of	LED/relay	
Overload set point: (25...125%) of P_n	"P>"	Yellow LED is lit when the set point has been exceeded, but the output contact has not yet been activated.
Reverse power set point: (0...25%) of P_n	"-P>"	Yellow LED is lit when the set point has been exceeded, but the output contact has not yet been activated.
Time delay: (for both) 0...20 s	The contact is activated and the red LED is lit after the timer has expired.	

If the RMP-112D is calibrated to the rated power of the generator, setting the overload set point according to the rated power generated by the applied prime mover is recommended. In most installations the prime mover determines the maximum power to be supplied by the generating set, implying that the set point is usually set to a value lower than P_n (100%). The reverse power set point value must be selected based on the power required to run the prime mover when no fuel is fed to this. A time delay of min. 5 s is recommended to avoid disconnection during synchronisation.

When setting the set points on the front of the RMP-112D an accuracy of $\pm 5\%$ of the scaling may normally be obtained, corresponding to $\pm 5\%$ of P_n for the overload relay and $\pm 1.5\%$ of P_n for the reverse power relay.

If a higher accuracy is required, the unit (the generator) connected to the relay must be loaded by means of a load bank. When the power exceeds the set point, the relevant yellow LED of the RMP-112D is lit.

6. Technical specifications

Overload, currents:	4 x I_n , continuously 20 x I_n for 10 s (max. 75A) 80 x I_n for 1 s (max. 300A)
Load:	Max. 0.5VA per phase
Overload, voltages:	1.2 x U_n , continuously, 2 x U_n for 10 s
Load:	2k Ω /V
Frequency range:	40... <u>45...65</u> ...70Hz
Relay contact:	1 changeover switch per relay
Contact ratings:	250V-8A-2000A (AC), 24V-8A-200W (DC)
Contact voltage:	Max. 250V (AC). Max 150V (DC)
Response time:	<400 ms
Galv. separation:	Between inputs, outputs and aux. supply: 3250V-50Hz-1 min.
Consumption:	(Aux. supply) 3.5VA/2W