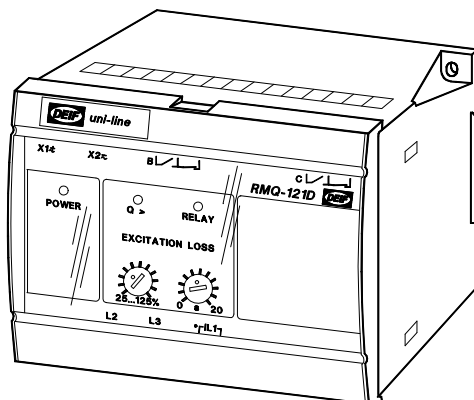


Overexcitation relay type RMQ-121D

Uni-line

4189340145B (UK)



- *Protection of generators against overexcitation*
- *Single 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 overexcitation relay type RMQ-121D forms part of a complete DEIF series (the *Uni-line*) of relays for protection and control of generators.

The RMQ-121D protects the generator against overexcitation by transmitting an opening signal to the generator circuit breaker, if the generator generates too high currents in case of heavy inductive loads.

The generator is thus protected against damage caused by excessive heating of its windings.

2. Label

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

Measuring voltage	Type designation		DEIF's order ack. No. To be stated when contacting DEIF
Calibrated secondary power of the relay	TYPE	121120	Mounted voltage module
Supply voltage	MEAS VOLTAGE	400V	Mounted standard current module
Coupling (set by DEIF)	MEAS CURRENT	MODULE 400V	
Relay coupling Shown is relay B as a normally de-energised relay with latch circuit	MEAS POWER	1500W	Scaling ¹ (for adaption of the unit to the measuring power)
Contact remains locked in alarm position even though the input returns to normal.	SUPPLY	24VDC	Special calibration (if non-standard calibration is applied)
Latch circuit is reset by disconnecting the supply voltage.	COUPLING	1var3	
	"Further information"		
	☒ NORM. DEENERGIZED ☐ NORM. ENERGIZED ☒ LATCH	☐ NORM. DEENERGIZED ☐ NORM. ENERGIZED ☐ LATCH	
	  		Distributor's ID No. Filled in by distributor when customizing the unit.
	Highest voltage in relation to earth	Installation category	

Note 1: Calculation of measuring power:

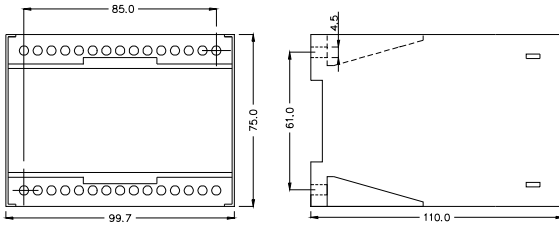
$$1.732 \times \text{voltage module} \times \text{current module} \times \text{scale} = \text{measuring power}$$

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 setpoint exceeding for 200 ms after disconnection of the auxiliary voltage.

3. Mounting instructions



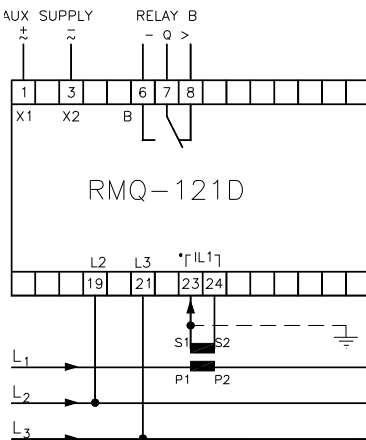
The RMQ-121D is designed for panel mounting, being mounted on a 35 mm DIN rail, or by means of 2 off 4 mm screws.

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 2 A 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.

If the external current transformer is placed in another phase than indicated in the above diagram, the voltage inputs are connected as shown in the below table:

External current transformer is connected to L2	Connect L3 to term. no. 19	Connect L1 to term. no. 21
External current transformer is connected to L3	Connect L1 to term. no. 19	Connect L2 to term. no. 21

5. Start up instructions

5.1 Setting and indication

Setting of	LED/relay	
Reactive power setpoint: (25...125%) of Q_n	"Q>"	Yellow LED is lit when the reactive power exceeds the setpoint value, but the output contact has not yet been activated.
Time delay: 0...20 s	The contact is activated and the red LED is lit after the timer has expired.	

The setpoint value must be selected to correspond to the amount of reactive power, which may be generated by the generator without causing damage to it.

The time delay must be set to a value ensuring that any system regulations will not cause unnecessary disconnections. A setting of min. 10 s is recommended.

6. Technical specifications

Overload, currents: 4 x I_n , continuously
 20 x I_n for 10 s (max. 75 A)
 80 x I_n for 1 s (max. 300 A)

Load: Max. 0.5 VA.

Overload, voltages: 1.2 x U_n , continuously, 2 x U_n for 10 s

Load: 2 k Ω /V

Frequency range: 40...45...65...70 Hz

Relay contact: 1 changeover switch

Contact ratings: 250 V-8 A-2000 A (AC), 24 V-8 A-200 W (DC)

Contact voltage: Max. 250 V (AC). Max 150 V (DC)

Response time: <400 ms

Galv. separation: Between inputs, outputs and aux. supply: 3250 V-50 Hz-1 min.

Consumption: (Aux. supply) 3.5 VA/2 W