



## VARIMETER PRO

**DOLD** 

### Multifunction measuring relay UG 9400 - with Modbus RTU

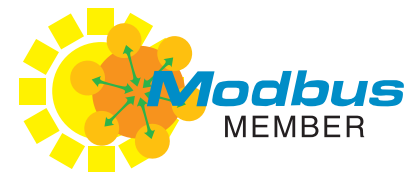
Trouble-free and economic operation of machinery and plant is greatly improved by the reliable and continuous monitoring of single and 3-phase mains. Especially for pumping stations, fan drives and signalling systems where preventive maintenance measures or early fault detection is indispensable. If different parameters have to be monitored simultaneously, the investment, maintenance, operating and installation costs will be increased.

The DOLD **VARIMETER PRO multifunction measuring relay UG 9400** combines up to 9 monitoring functions in one device with a width of only 22.5 mm and parameters setting and monitoring feedback via Modbus. Depending on the requirements, the UG 9400 can simultaneously monitors the 3-phase mains for over-voltage/undervoltage, voltage unbalance, overcurrent/undercurrent,  $\cos \phi$ , active, apparent and reactive power, frequency and phase sequence. It can also be used in single-phase mains applications. The compact UG 9400 measuring relay, also has two output relays which can be configured independently for different parameters.

Commissioning, parameter setting and monitoring is quick and easy via a Modbus RTU interface. This fieldbus connection saves wiring and offers extensive diagnostic options, which increase the reliability and availability of machinery and plant. In many applications, the simple integration of Modbus RTU enables cost effective central monitoring of measured electrical variables, especially in applications with complex and extensive plant.

#### Advantages and customer benefits

- ▶ Central parameter setting, monitoring and diagnostics via Modbus RTU
- ▶ Considerable space saving in the control cabinet due to a width of only 22.5 mm
- ▶ Large measuring ranges 3 phase AC 24 ... 690 V
- ▶ Galvanically separated Modbus RTU interface
- ▶ Simplified stocking due to 9-in-1 unit



**Our experience. Your safety.**

# Multifunction measuring relay UG 9400

## Technical features

- ▶ Multifunction measuring relay acc. to IEC/EN 60255-1
- ▶ With galvanically separated Modbus RTU interface
- ▶ Voltage monitoring (single and 3-phase)
- ▶ Current monitoring
- ▶ Frequency monitoring
- ▶ Power factor  $\cos \varphi$
- ▶ Phase sequence, phase failure
- ▶ Voltage / Phase asymmetry
- ▶ Active, reactive and apparent power
- ▶ Start up time delay, response delay
- ▶ Adjustable hysteresis 0.2 ... 50 % of the response value
- ▶ Error memory
- ▶ 2 x independent changeover contacts
- ▶ Settable Relay function energized or de-energized on trip
- ▶ Width 22.5 mm



Multifunction measuring relay  
UG 9400



## Order information

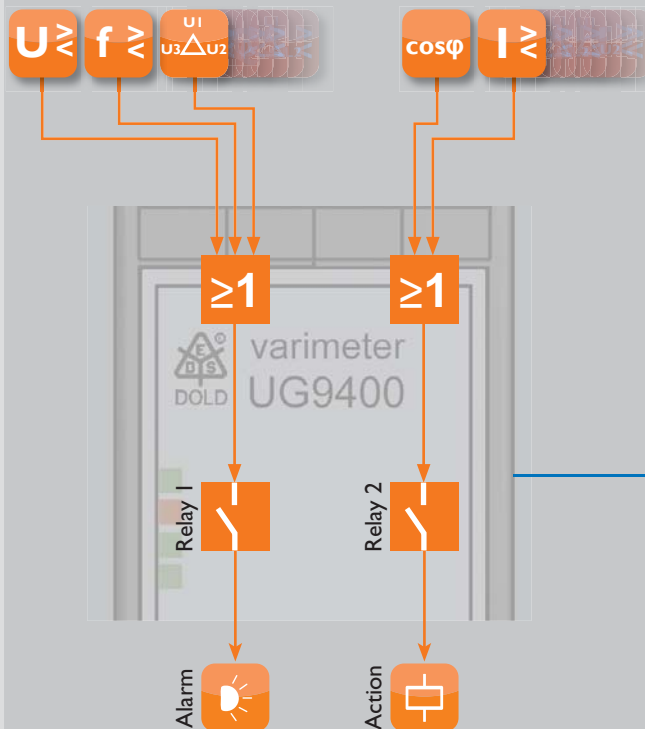
Standard type:  
UG 9400.12PM 3 AC 24 ... 690V AC 12A AC/DC 24-230V  
Item number: 0068514

## Fields of application

- ▶ Fan drives and pumping stations
- ▶ Signalling and photovoltaic systems
- ▶ Crushing plants and biogas plants

## Application example

The example shows the use of the multifunction measuring relay UG 9400 for monitoring an application with different measured variables. Each relay can be assigned up to 9 measured variables. In this example, if the measurement is outside the limit values of voltage or asymmetry, relay 1 switches. If the limit value of  $\cos \varphi$  is exceeded, relay 2 switches. Monitoring, parameter setting and diagnostics are performed centrally via the Modbus RTU interface.



## Further information

UG 9400

Start

[www.dold.com](http://www.dold.com)

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