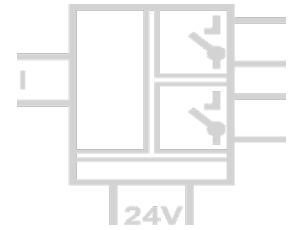


# Current Monitor DG 3302 / DG 3382

Monitoring of AC/DC currents up to 6 A,  
additional mV Input for external Shunt Resistor



The Current Monitors DG 3302 and DG 3382 are used to monitor limit values of AC and DC currents.

Currents up to 6 A can be monitored directly. For higher currents, external current transformers or shunt resistors (input 30/150 mV) are connected.

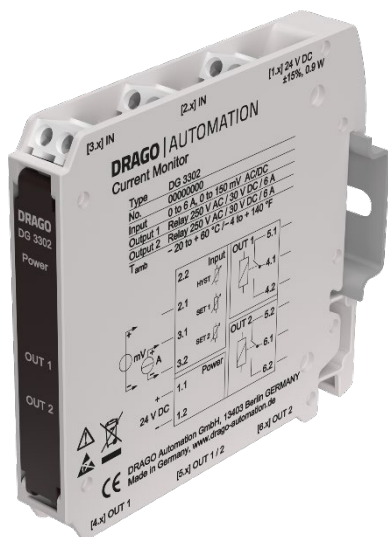
Two switching outputs can be configured simultaneously or independently of each other with the analog control electronics as MIN or MAX alarm in open-circuit or closed-circuit operation.

All setting elements are located behind the openable front cover and can also be operated when the unit is mounted. The switching points and the switching hysteresis can be adjusted with potentiometers. The monitoring states are indicated by yellow LEDs.

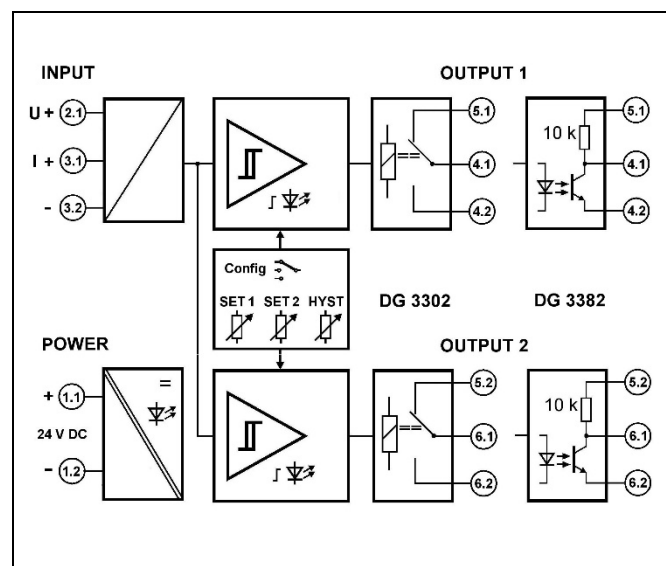
Two relay changeover contacts are available on the DG 3302. The DG 3382 is equipped with two isolated transistor switching contacts (open-collector), which can optionally work with pull-up resistors. Input, power supply and the outputs are safely galvanically isolated from each other.

The Protective Separation and the 24 V DC power supply make the DG 3302 and DG 3382 universally applicable for all measurement and industrial applications, as well as for building automation.

- **Easy configuration on front panel**  
Measuring range and operating mode switchable, switch point and hysteresis adjustable with potentiometer
- **Status indication by LED**  
Easy monitoring and switching point adjustment
- **Relay changeover contacts with high power handling**  
or fully isolated transistor switching outputs
- **True 4-port separation**  
Protection against erroneous measurements due to parasitic voltages or ground loops
- **Protective Separation acc. to EN 61010**  
Protects service personnel and downstream devices against impermissibly high voltage
- **High reliability and noise immunity**  
No microprocessor, no integrated software
- **Extremely slim design**  
12.5 mm slim housing for a simple and space saving DIN rail mounting
- **5 Years Warranty**  
Defects occurring within 5 years from delivery date shall be remedied free of charge at our plant



## Block diagram



## Technical Data

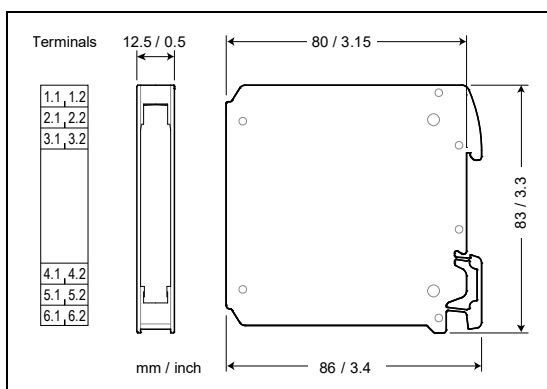
| Input   |                              | Current Input  |               | mV/Shunt Input                       |        |
|---|------------------------------|--|---------------|--------------------------------------|--------|
| Input ranges                                      |                              | 1.2 A  | 6 A           | 30 mV                                | 150 mV |
| Input resistance                                  |                              | 0.01 $\Omega$  |               | > 10 k $\Omega$                      |        |
| Overload max.                                     |                              | 10 A continuous, surge current 30 A for 1 s  |               | 30 V                                 |        |
| Frequency   |                              | DC o 10 to 500 Hz sinusoidal, switchable   |               |                                      |        |
| Switch point setting                              |                              | 0 to 110 % with 12-turn potentiometer, independently adjustable for each switching output  |               |                                      |        |
| Hysteresis setting                                |                              | 0 to 6 % or 0 to 60 % of measuring range switchable, adjustable with potentiometer   |               |                                      |        |
| Output  |                              |  |               |                                      |        |
| DG 3402   | Contact type                 | 2 changeover relays (SPDT)   |               |                                      |        |
| Relay   | Switching capability AC max. | 250 V / 6 A  | 1500 VA       |                                      |        |
|   | Switching capability DC max. | 250 V / 0.2 A  | 115 V / 0.3 A | 30 V / 6 A                           |        |
|   |                              | Recommended minimum load 300 mW / 5 V / 5 mA   |               |                                      |        |
| DG 3382   | Contact type                 | 2 transistor switches, fully isolated, optional 10 k Pull-up resistor  |               |                                      |        |
| Transistor  | Switching capability         | 30 V DC, max. 50 mA, residual voltage < 1.5 V, not current limited   |               |                                      |        |
| Status indication                                 |                              | one yellow LED per switching output  |               |                                      |        |
| Response time                                     |                              | DC Input: approx. 20 ms  |               | AC Input: approx. 500 ms             |        |
| General Data                                      |                              |  |               |                                      |        |
| Switch error                                      |                              | < 0.2 % full scale   |               |                                      |        |
| Temperature coefficient <sup>1)</sup>             |                              | < 150 ppm/K  |               |                                      |        |
| Test voltage                                      |                              | 4 kV AC, 50 Hz, 1 min. input against power supply against both switching outputs<br>3 kV AC, 50 Hz, 1 min. switching output 1 against switching output 2   |               |                                      |        |
| Working voltage (Basic Insulation) <sup>2)</sup>  |                              | 1000 V AC/DC for overvoltage category II and 600 V AC/DC for overvoltage category III according to DIN EN 61010 with pollution degree 2 between input, power supply and both switching outputs. Furthermore 300 V AC/DC between output 1 and output 2.   |               |                                      |        |
| Protection against electrical shock <sup>2)</sup> |                              | Protective separation according to DIN EN 61140 by reinforced insulation according to DIN EN 61010 up to 600 V AC/DC at overvoltage category II and 300 V AC/DC at overvoltage category III at pollution degree 2 between input, power supply and both switching outputs. Furthermore 300 V AC/DC between output 1 and output 2. |               |                                      |        |
| Power supply                                      |                              | 24 V DC, $\pm$ 15 %, approx. 0.7 W   |               |                                      |        |
| Ambient temperature                               |                              | Operation  |               | - 20 °C to + 60 °C (-4 to + 140 °F)  |        |
|   |                              | Transport and storage  |               | - 35 °C to + 85 °C (-31 to + 185 °F) |        |
| EMC <sup>3)</sup>                                 |                              | EN 61326-1   |               |                                      |        |
| MTBF (acc. to EN 61709 / SN 29500)                |                              | 575.4 years (T <sub>amb.</sub> 40 °C, FIT 198)   |               |                                      |        |

1) Average TC related to full scale value in specified operating temperature range, reference temperature 23 °C

2) For applications with high working voltages, ensure there is sufficient spacing or isolation from neighboring devices and protection against electric shocks.

3) Minor deviations possible during interference

## Dimensions



### Construction

12.5 mm (0.5") housing, protection class IP 20  
mounting on 35 mm DIN rail acc. to EN 60715  
Weight 70 g

### Connection

Captive plus-minus clamp screws  
Wire cross-section max. 2.5 mm<sup>2</sup> / AWG 14  
Stripped length 6 ... 8 mm / 0.28 in  
Screw terminal torque 0.8 Nm / 7 lbf in

Subject to change!

## Product line

| Device                                   | Order No. |
|--|-----------|
| Current Monitor with relay contacts      | DG 3302   |
| Current Monitor with transistor switches | DG 3382   |