

Measuring and Monitoring Relays

Level Monitor



ENW-E12

230 V AC / 24 V AC - 2 changeover contacts

- connection of up to three submersible electrodes
- selectable response sensibility
- LED indication

Part Numbers

110 308 05	230 V AC
110 308 10	24 V AC

Housing Dimensions



Description

The fluid level indicator is used for level or leakage monitoring of all conductive, inflammable media. The response level is selected by a proportional potentiometer.

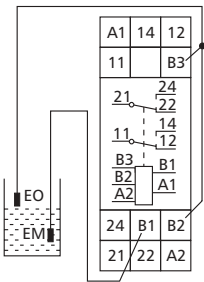
Functional Description

In the monitoring mode the instrument operates with an electrode (EO) and the earth terminal (EM), e. g. to signal minimum or maximum levels to protect submerged pumps from overflowing or running dry. If the surface of the fluid is subject to disturbance a second electrode is recommended (EU).

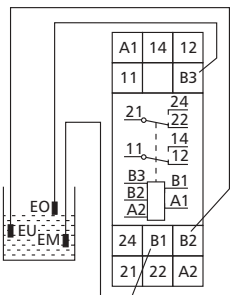
As a two-level controller the instrument controls pumps or valves with the electrodes EO, EU and the earth terminal EM to fill or empty containers automatically. A container wall, being conductive to the liquid media, may also be used as earth terminal.

As soon as the upper electrode EO is wetted by the rising level of the conductive medium excitation current is running from the EO electrode through the media to the earth terminal and the monitor is switched on. By means of an auxiliary switch the lower electrode EU is connected in parallel so that the monitor is only de-energized when the fluid level is releasing not only the upper but also the lower electrode. The operating status of the output relay is indicated by LED.

Wiring - two electrodes



Wiring - 3 electrodes



Accessory

Submersible Electrode

110 324

Technical data see next page.

Technical Data

Input

nominal voltage U_N	230 V AC, 24 V AC
power consumption	2 VA
operating voltage range	0.9 ... 1.1 U_N
release voltage	$\geq 0.15 U_N$
frequency range	50 ... 60 Hz
duty cycle	100 %
electrode voltage	12 V AC
response sensivity	5 k Ω ... 50 k Ω selectable
release time t_r	about 20 ms
recovery time t_w	≥ 250 ms
control contact	≥ 20 ms
minimum turn-on time	≥ 20 ms
repeat accuracy	$\leq \pm 0.01$ %
voltage sensivity	-
temperature sensivity	$\leq \pm 0.1$ %/K
operating temperature range	-20 °C ... +55 °C
storage temperature range	-20 °C ... +70 °C

Output

output contact	2 changeover contacts
contact material	AgNi
switching voltage max.	250 V
continuous current max.	6 A
current over both contacts	max. 8 A
making/breaking capacity	230 V~ 6 A AC1, 230 V~ 3 A AC3, 230 V- 0,12 A, 60 V- 0.6 A, 24 V- 3 A 12 V- 4 A DC1
contact fuse	6 A
mechanical endurance	3×10^7 switching cycles
electrical endurance	2×10^5 switching cycles
permissible switching frequency	600 switching cycles/h
isolation per VDE 0110	
rated voltage	250 V AC/DC
overvoltage category	III
pollution degree	2
test voltage (coil/contact)	2000 V, 50 Hz 1 min
EMC test	emission per EN 50 081 T1 interference immunity per EN 50 082 T2

Housing

type of protection (EN 60529)	housing IP50, terminal blocks IP20
relative humidity range	
per IEC 60721-3-3	
environmental class	3k3
wire cross section	2.5 mm ²
mounting position	any
colour	green
weight	300 g
housing dimensions WxHxL	22.5 x 75 x 100 mm
modular	without spacing