



- Slimline construction, only 22.5 mm width
- Adjustable sensitivity
- Adjustable open circuit or closed circuit principle
- Potential-free output as SPDT
- 24 V DC optional



Electrode Relay ER-104/B

For control and detection of levels.

Application

The electrode relay ER-104/B is used for conductive level capture.

The operational possibilities cover all areas in which conductive, liquid media are to be captured, monitored or controlled. Hereby limit level capture (overflow, dry operation) as well as min./max. control can be implemented.

The devices can be used as contact protection relays if e.g. the pickup allows only low contact loads, but on the other hand higher loads have to be switched.

Construction

For efficient utilisation of limited space the ER-104/B is available in slimline construction of 22.5mm width. It basically consists of three functional units: the power supply, the switching amplifier with integrated hold function for easy realisation of min./max. controls and the switching

relay with a potential free output contact as SPDT.

It is possible to use the ER-104/B electrode relay as a contact protection relay by combining it with our "signal pickups" (e.g. immersion probes, pressure bell switches, water level indicators, float switches).

Function

By immersing the electrodes connected to the inputs into a conductive liquid a low AC voltage is generated. This current is evaluated by the switching amplifier. The relay will switch on exceeding an adjustable trigger point.

The working direction of the ER-104/B can be adjusted on the device. In closed circuit operation the internal relay is driven when the electrodes are not wetted, in open circuit operation when the electrodes are wetted.

Specifications

ER-104/B	
Power Supply	
Nominal operating voltage	230 V AC or 24 V DC ±10% other voltages on request
Rated frequency	48...62Hz
Power consumption	1 W/VA
Output	
Contacts	1 potential free SPDT
Option	2 potential free SPDT (simultaneously operated)
Switching voltage	max. 250 V AC, 150 V DC
Switching current	max. 3 A AC, 5 A DC
Switching capacity	max. 150 W DC, 600 VA AC
Input	
Open circuit voltage	<10 V AC
Short circuit current	≤5 mA
Sensitivity range	(2..30/2..300) kOhm
Option:	0, 2...3 or 10...1000 kOhm
Switching time:	approx. 0.5 ... 10 s energised/ de-energised
Dimensions	22.5 x 99 mm* (w x h) *112 mm with connector
Weight	approx. 150 g
Storage temperature	-30...80 °C
Operating temperature	-20...60 °C

Standard		
EN 60 529	protection (terminals)	IP 20
	protection (enclosure)	IP 40
EN 61 010-1	protection class (device)	II
EN 61 000-6-4	error emission	
EN 61 000-6-2	error resistance	
EN 61 000-4-2	level of emission	III
EN V 50 140	level of emission	III
EN V 50 141	level of emission	III
EN V 50 142	level of emission	III / IV
EN 61 000-4-4	level of emission	III

You can find more information in the instruction manual or on www.nivus.com

