

Installation and commissioning instructions

Ex-Electrode relay XR-4x2

Important safety instructions please read and note !

The precondition for a perfect and safe operation of the electrode relays are proper transport, storage and mounting, professional installation and commissioning, operation as intended and maintenance.

These activities may only be carried out by persons with the necessary expertise and qualifications. The relevant safety regulations for the assembly and operation of electrical equipment and the assembly requirements for **equipment in Ex-areas** must be complied with.

Please contact the manufacturer if the information included in these instructions is not adequate in some way. In addition, the EC-Type Examination Certificate **TÜV 10 ATEX 555760** has to be considered.

Electrical connection

The operating voltage must lie within the voltage range of the XR-4x2. The electrical connection must be made while without power. Probes with WHG approval must be used. Unused inputs must be wired with an **100 kOhm resistor** (For wiring the unused inputs 100 kOhm resistors are attached at the relays).

Mounting

XR-4x2 electrode relay modules are intended for mounting on standard mounting rails 35mm according to DIN EN 50 022. The maximum ambient temperature of the electrode relay (see technical data) must not be exceeded at the place of installation.

Connection of the electrodes

Electrode for channel 1:
must be connected to the terminals **E0** (reference electrode), **E1** (Max).

Electrode for channel 2:
must be connected to the terminals **E5** (reference electrode), **E6** (Max).

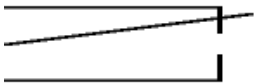
Note:

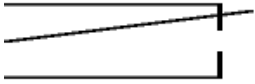
Care must be taken when installing the sensor line that it is installed with adequate distance to power cables. If this is not possible, the use of a shielded cable can reduce interference from coupling.

Connection of supply voltage

Make the electrical connection according to the imprint on the enclosure cover at the terminals identified with **A1(+)** and **A2(-)**; refer to the type plate for the voltage. According to EN 61010-1, all-pole disconnection is to be provided in the building installation which must be accessible as disconnecting device – marked as such – near the electrode relay. Over-current protection of the devices is provided by a fuse matching the supply voltage.

Connection of the potential-free output contacts

Device	Terminal	Assignment	Relay not actuated/released
XR-412 Channel 1	12	NC Normally closed contact	
	11	COM Common port	
XR-422 Channel 1	14	NO Normally open contact	

XR-412 Channel 1	22	NC Normally closed contact	
	21	COM Common port	
XR-422 Channel 2	24	NO Normally open contact	

As output, two potential-free change-over contacts are available at the XR-412, one potential-free change-over contact per channel is available at the XR-422.

Display elements / control elements:

LED GREEN "PWR"	LIGHTING	Ready for operation
	DARK	Power failure
LED RED "ERR"	LIGHTING	Line fault
	DARK	No line fault
LED YELLOW "OUT"	LIGHTING	Electrode immersed
	DARK	No electrode immersed

Function button

Not supported.

Commissioning / Setting

In the delivery state the potentiometer set to minimum sensitivity.

After the device setting, the connection of the electrodes and the supply voltage, the electrode relay must be set to the medium to be detected. For this purpose, first the sensitivity is set to the minimum value (Turn potentiometer with a screwdriver to the left stop - max. 25 revolutions).

With the immersed electrodes in the medium ("Max" and "Ground"), now the potentiometer must turned to the right, until the yellow LED lights up. If this setting is found, the potentiometer is still turned by approx 1 turn to the right, to be with fluctuating conductivity in the safe switching area. This setting is applied to both channels.

Function control

To check the function, immerse the to the relay connected electrodes in the medium. The switching function is to check for each channel on the status LEDs (yellow) at the relay and to the downstream devices or warning devices.

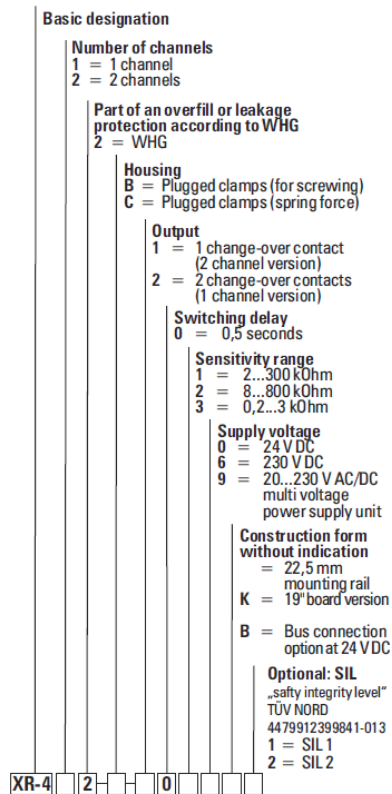
Maintenance / cleaning

The relay does not require any special maintenance beyond the general inspection / function check of the electrical system.

Technical data

Electrical Data:	See EC-Type Examination Certificate TÜV 10 ATEX 555760
Dimensions WxDxH:	<u>XR-4x2-B:</u> 22.5 x 114,5 x 99mm, <u>XR-4x2-C:</u> 22.5 x 114,5 x 112mm
Measuring range:	2 kOhm ... 300 kOhm
Line break resistance:	100 kOhm (WHG proves must be used)
Storage temperature:	- 30 ... + 80 °C
Operation temperature:	- 20 ... + 60 °C
Operating mode:	Closed-circuit current
System of protection:	Terminals IP 20; Housing IP 40

Type key



Connection examples XR-412

