



Safety Precautions

- Installation, initial start-up and maintenance may only be performed by trained personnel!
- The device may only be connected to power which complies with the specifications included in the technical data and on the serial plate!
- The device must be disconnected from all sources of power during installation and maintenance work!
- The device may only be operated under the conditions specified in these operating instructions!

Functions Description

The MAXIMAT LW CX compact leakage sensor is used as a leakage monitoring device for permanently installed containers used for the storage of non-flammable, water endangering liquids.

Applications


The leakage sensor is only suitable for conductive liquids with a specific reactive impedance of less than 5k Ω , or a mutual capacitance to earth of greater than 50pF.
Stored liquids may not tend to precipitate insulating or conductive sediments.

Technical Data

Functional principal:	Capacitive high-frequency, fail-safe
Ambient temperature:	-20 to +60°C
Operating pressure:	Atmospheric, 0.8 to 1.1bar
Terminal housing:	PBT, fibre-glass reinforced, IP65 protection per EN 60 529
Process interface:	See order information
Supply power:	15 to 27V DC
Connected load:	<1W
Cable:	PVC, 5 x 0.34mm ²
Materials:	Angle bracket / tube cap: PVC Sensor unit: PVC / PE

Technical Data (continued)

Outputs:

- **Floating reed relay contact** (contact opens in case of alarm)
for extra-low voltage, max. 50V AC / DC, max. 0.5A, max. 10VA
e.g. for connection to coupling relays or PLC, TC4 signalling device or CST supply power isolator
- Observe protective measures for reed relay contacts (see instruction leaflet SU3101)** 
- **2-wire alarm evaluation** with MAXIMAT SHR C measuring transducer

Note: Simultaneous use of both outputs is not possible.

Input: For external test button (*connection to terminals T and C*)
Test button contact closed = test alarm is triggered

Note: The function test executed with the test button does not replace the operating test specified in ZG-ÜS, section 6.2, which must be conducted for all probes on a regular basis at least once a year.

Connector cable: (for variant without terminal housing only): shielded PVC cable, 5 x 0.34mm²

Indication:

LED (green) on the connector PCB (for variant with terminal housing only):

- Run: LED illuminated
- Alarm/error: LED off

Measuring circuit cable length:

Max. 300m, min. wire cross-section: 0.5mm²

Maintenance

When used as intended, the device is maintenance-free

Note!

In case of leakage, the probe should be removed from the medium as soon as possible. It must be effectively cleaned (rinsed off) and may only be returned to the dry catch basin after a complete functional test.

CE Mark

The device fulfills the legal requirements of applicable EU-guidelines

Approvals

DIBt (Germany)-Approval no. **Z-65.40.496** for leakage sensors in accordance with WHG §19
SVTI ASIT (Switzerland)-Approval no. **KVU-No. 321.012.14** for leakage sensors in accordance with GSchG

Installation:

The leakage sensor's probe is suspended such that it hangs into the catch basin of the storage tank to be monitored. The probe may make contact with the outside wall of the catch basin, or may stand on its floor. The cable must be secured such that the probe is always positioned vertically. When installed in a free-hanging fashion, it must be assured that the connector cable is only pulled far enough through the adjuster fitting to allow for a maximum clearance of 40mm between the probe and the catch basin floor, so that the leakage alarm is triggered at a maximum fill-level of 50mm.

If the MAXIMAT LW CX ... 0 variant without terminal housing is used, other suitable mounting components must be utilised in an appropriate fashion.

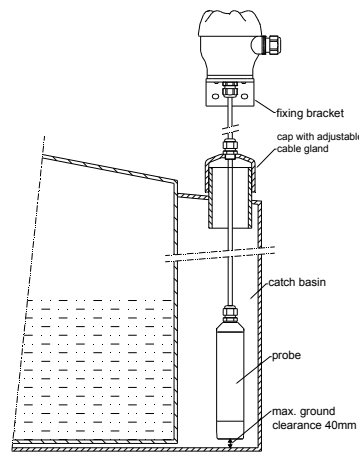
The leakage sensor must be secured against shifting, swaying and floating up. The mounting components must be resistant to the media.

Materials

In the event of a tank leak, the leakage sensor comes into contact with the stored liquid, or vapours and condensate resulting therefrom. For this reason, leakage sensor materials must be selected which are adequately resistant to the liquid to be monitored.

Component	Material
Sensor and sensor tube	PVC, PE
Terminal housing / housing	PBT
Mounting components	PVC (polyvinyl chloride) or PE (polyethylene)
Cable gland	PA (polyamide)
Cable gland seal	Perbunan / EPDM
Connector cable	PVC

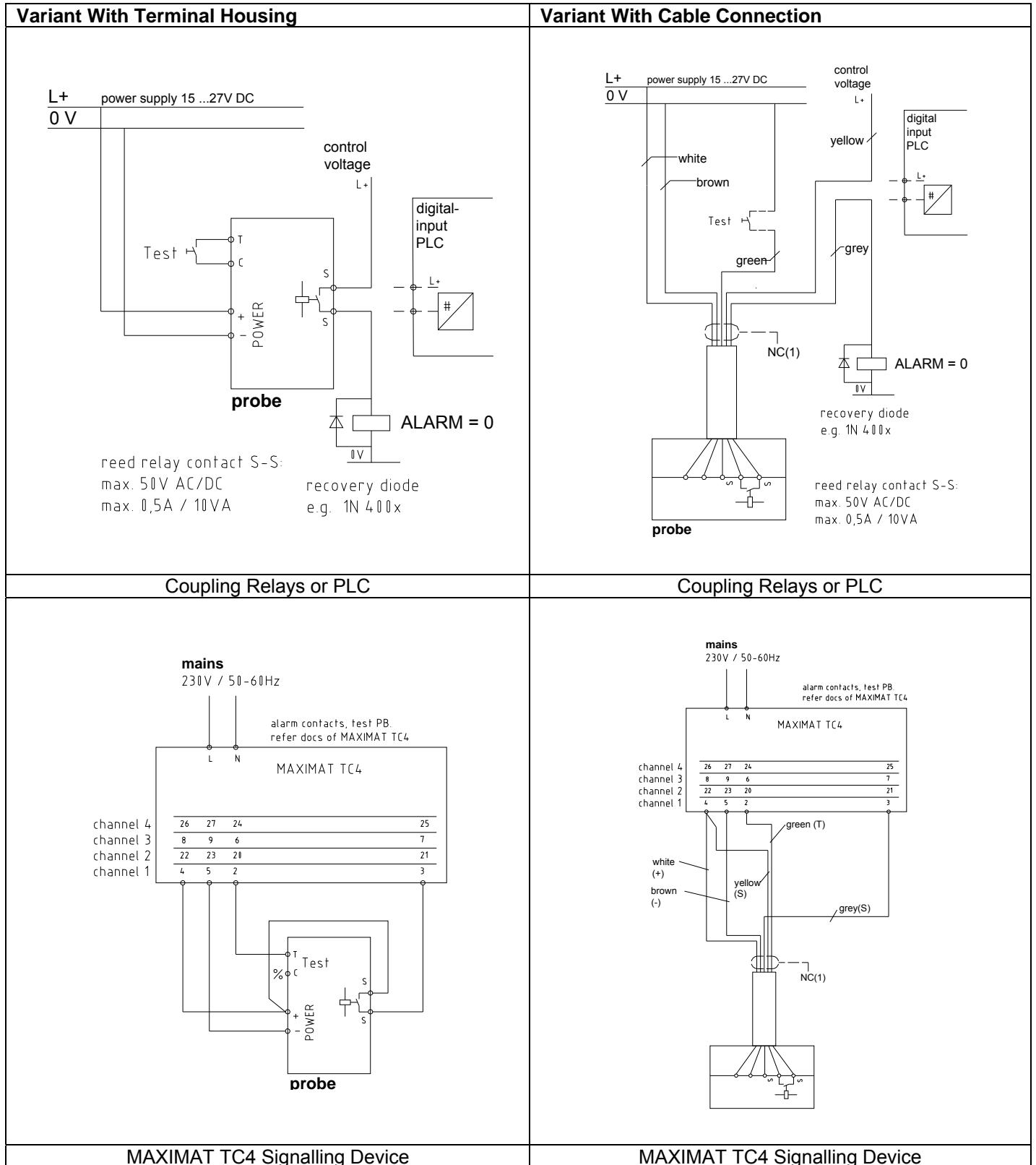
Settings



**Installation Example:
Storage Tank Leakage Sensor**

The leakage probes are installed inside catch basins. If the bottom of the probe contacts the floor of the catch basin, the alarm signal is triggered when the liquid reaches a fill-level of approximately 6mm. For applications involving storage tank catch basins, the probe must be installed such that the alarm signal is generated at a fill-level of 50mm or less.

Electrical Connection



(1) The cable shielding only needs to be connected to operational earth with minimal interference voltage if increased EMC interference can be expected.

Electrical Connected (continued)

<p>Variant With Terminal Housing</p>	<p>Variant With Cable Connection</p>
<p>CST Supply Power Isolator</p>	<p>CST Supply Power Isolator</p>
<p>MAXIMAT SHR CS External Measuring Transducer</p>	<p>MAXIMAT SHR CS External Measuring Transducer</p>

(1) The cable shielding only needs to be connected to operational earth with minimal interference voltage if increased EMC interference can be expected.

Cable wire assignment