

# Compact leakage sensor MAXIMAT LW CX



## SAFETY INSTRUCTIONS

- Installation, initial start-up and maintenance may only be performed by trained personnel!
- The device may only be connected to supply power compliant to 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 the operating instructions!

## DESCRIPTION

The compact leakage sensors of the MAXIMAT LW CX type are leakage probes which are used to report leaks in containers with water-polluting media.

When the sensors come into contact with an electrically conductive medium, the integrated electronics react and the permanently output signal is interrupted. By interrupting the signal, an audible and visual alarm can be triggered.

## APPLICATION AREA

The leakage probes are only suitable for conductive media whose specific reactance is  $<5k\Omega$  or whose coupling capacitance to ground is  $>50pF$ .

The media must not form insulating or conductive deposits.

## TECHNICAL DATA

Operating principle	Capacitive high frequency, fail-safe
Operating/ambient temperature	-20...+60 °C
Operating pressure	Atmospheric, 0.8...1.1bar
Connection head	PBT glass fiber reinforced
Protection class	IP65 according to EN 60 529
Supply voltage	15...27V DC
Connection power	<1W
Cable length measuring circuit	Max. 300m, min. wire cross-section 0.5mm <sup>2</sup>
Materials	Mounting bracket / pipe cap = PVC Sensor part = PVC (LW CX 25) / PE (LW CX 40)
Connection cable (only for version without connection head)	PVC cable 5x 0.34mm <sup>2</sup> , shielded
Outputs	<b>Potential-free reed relay contact for low voltage (contact opens on alarm)</b> Max. 50V AC/DC, max. 0.5A, max. 10VA, e.g. for operation of coupling relay or PLC, signal device TC4 or supply isolator CST <b>Two-wire alarm evaluation</b> with MAXIMAT SHR C transducer

**Important: Simultaneous operation of both outputs is not intended!**

**BAMO** INTERNATIONAL

22, Rue de la Voie des Bans · Z.I. de la gare · 95100 ARGENTEUIL

Tel +33 (0)1 30 25 83 20 Web [www.bamo.eu](http://www.bamo.eu)

Fax +33 (0)1 34 10 16 05 E-mail [export@bamo.fr](mailto:export@bamo.fr)

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## TECHNICAL DATA (continuation)

Terminals	For version K, D: screw connection, cable cross-section max. 2.5mm <sup>2</sup> .
Additional function	<b>Connection of an external test button (potential-free contact)</b> with which the entire MAXIMAT LW CX electronics, wiring and signaling/control equipment can be checked.
Input	For external test button (connection to terminal T and terminal C) Test button contact closed: Test alarm is triggered.

**Note: The function check by the external test button is no substitute for the regular function checks required by the country!**

**CE mark: The device fulfills the legal requirements of applicable EU-guidelines.**

## COUNTRY-SPECIFIC CERTIFICATIONS

- GERMANY - General technical approval in accordance with the Water Resources Law (WHG)
- SWITZERLAND - Type examination certificate for water protection suitability according to the Conference of Heads of Environmental Protection Offices (KVVU)
- BELGIUM - Model certificate of approval in accordance with Flemish environmental authorisation regulations (VLAREM II)

Depending on the country requirements, the corresponding documentation is enclosed.

## SIGNALING

LED (green) on the connection board (only for version with connection head):

Operation:	LED on
Alarm / Fault:	LED off

## MAINTENANCE

When used as intended, the device is maintenance-free.

**Please note: In case of leakage, the probe should be removed from the medium as soon as possible.**

It must be effectively cleaned (rinsed) and may only be reintroduced into the dry collection device after a complete function test.

## MOUNTING

The sensor part of the leakage probe is installed suspended in the catch basin of the storage tank to be monitored.

It can rest against the outer wall of the collecting tray or stand on the bottom of the collecting tray.

The connected cable must be fixed in such a way that the sensor part is always in a vertical position.

In the case of free-hanging installation, it must be ensured that the connecting cable is only pulled through the adjusting screw connection to the extent that the lower edge of the sensor section has a maximum floor clearance of 40mm.

This ensures that a leakage alarm is reliably triggered at a maximum filling height of 50mm.

For the version without connection head MAXIMAT LW CX...0 must be proceeded in a corresponding manner by other, suitable mounting material.

The leakage probes must be secured against displacement, oscillation and floating.

The fastening must be resistant to the media.

## MATERIALS

The leak probe comes into contact with the storage medium, its vapors or condensate in the event of tank leaks.

Therefore, the materials of the leakage probe must be selected so that they are sufficiently resistant to the medium to be monitored.

Component	Material
Sensor and sensor tube	PVC, PE
Connection head / housing	PBT
Mounting parts	PVC (polyvinyl chloride) or PE (polyethylene)
Cable gland	PA (polyamide)
Cable gland seal	Perbunan / EPDM
Connecting/connection cable	PVC

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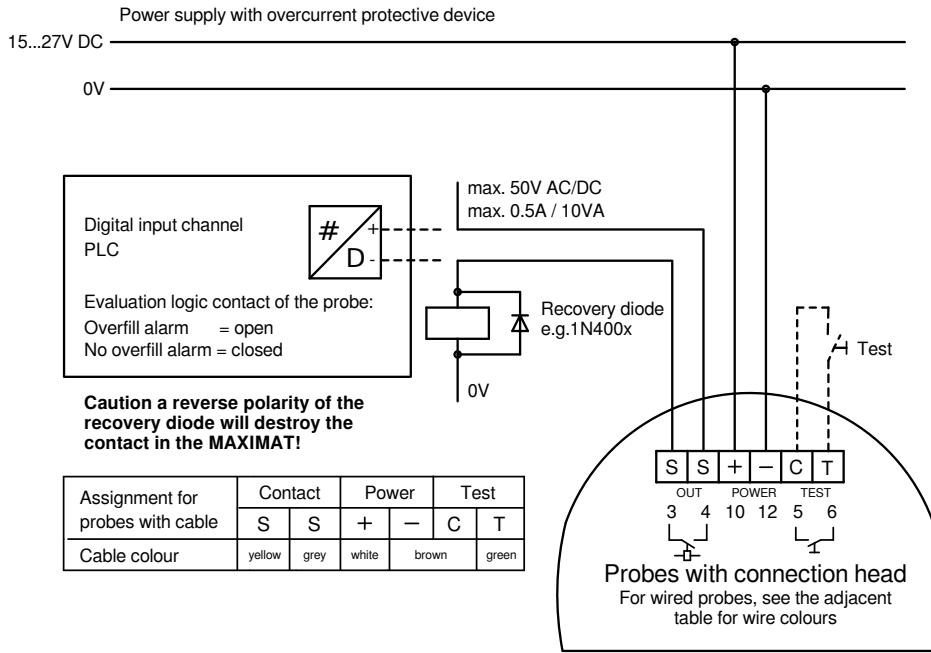
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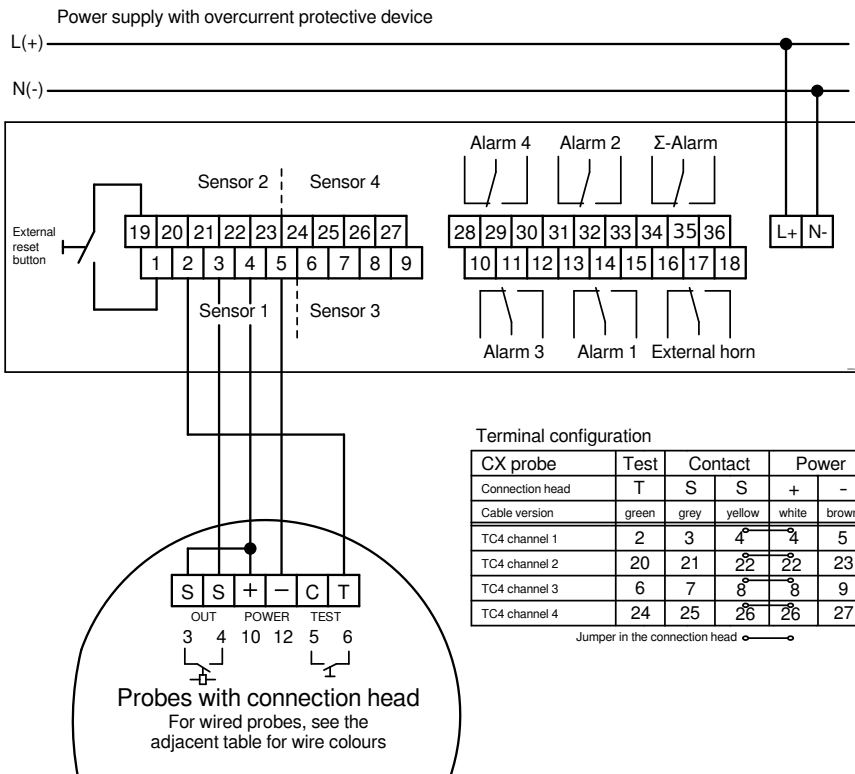
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# ELECTRICAL CONNECTION

## Coupling relay or PLC



## Signalling device MAXIMAT TC4



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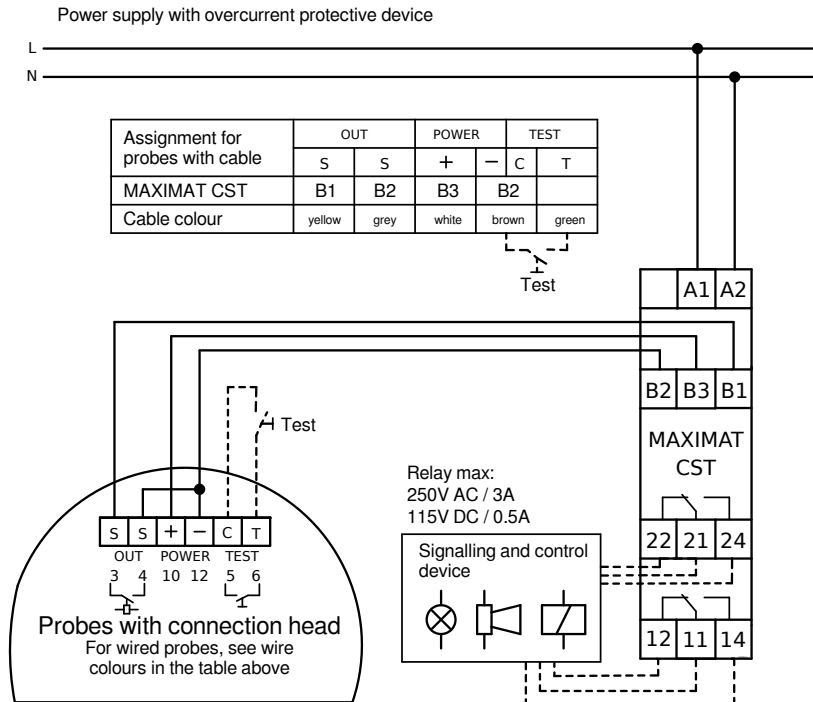
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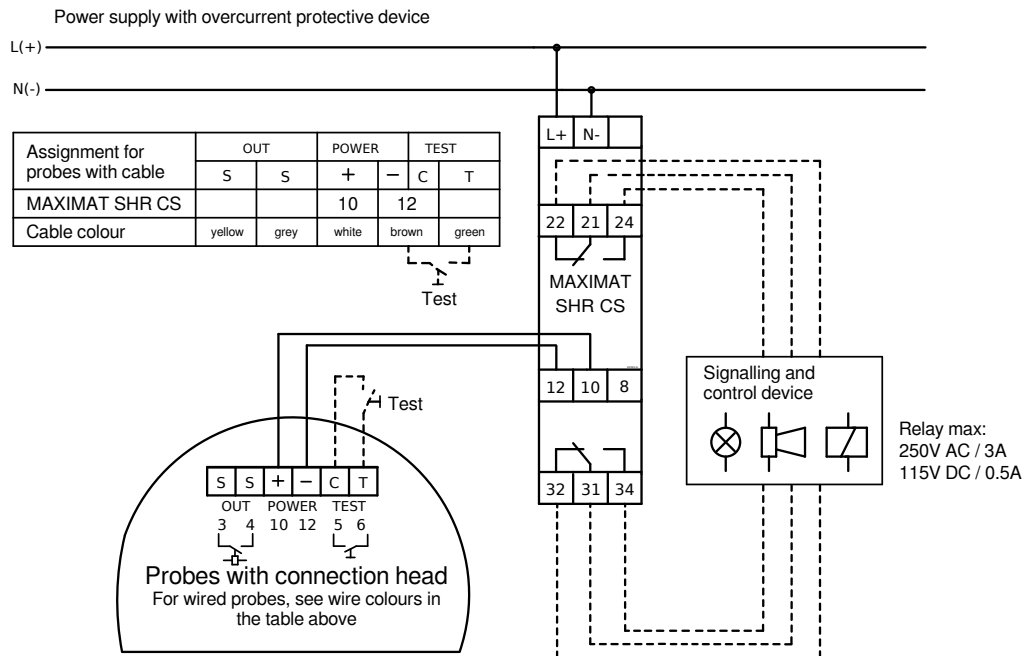
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# ELECTRICAL CONNECTION (continuation)

## Supply separator CST

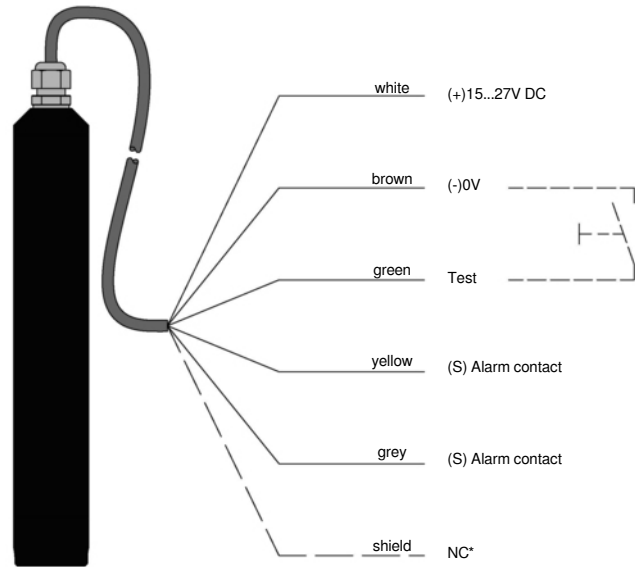


## External transducer MAXIMAT SHR CS



(\*) The cable shield must only be connected to a low-interference operating ground if increased EMC interference signals are to be expected.

## WIRE ASSIGNMENT OF THE CONNECTION CABLE (for versions without connection head):



(\* ) The cable shield must only be connected to a low-interference operating ground if increased EMC interference signals are to be expected.

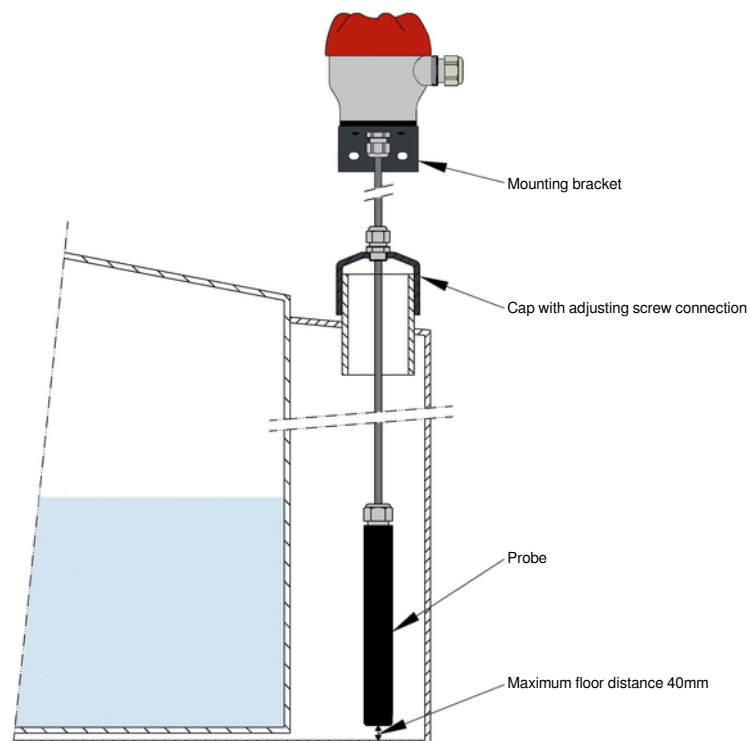
## EXAMPLE OF INSTALLATION

### Leakage probe for storage tanks

The leakage probes are installed in the collection trays.

If the probe stands on the ground, contact is made at approx. 6mm level.

In collecting trays for storage tanks, the probe must be installed in such a way that a leakage alarm is triggered at a filling level of 50mm at the latest.



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