

MAXIMAT® SHR CS

Measurement transducer



INSTRUCTION MANUAL

BAMO MESURES

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Measurement transducer
MAXIMAT® SHR CS

29-09-2014

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MES

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SAFETY PRECAUTIONS

- Assembly, commissioning and servicing may only be performed by specialist personnel! Applicable European and national regulations for erection of electric systems must be complied with.
- Connect the device only to the power supply voltage indicated in the technical data and on the nameplate.
- Do not open up the casing!
- In case of assembly or maintenance work, the device must be disconnected from all currents!
- Operate the device only under the conditions defined in the operating instructions!

TECHNICAL DATA

Power supply:	230 V AC $\pm 10\%$; 50/60 Hz or 24 V DC $\pm 10\%$ Note: Device may only be connected to the power supply via an electric cut-off device
Power Consumption:	approx. 3 VA / 3 W
Ambient temperature:	-20 ... +60°C
Casing:	22.5 x 75 x 110 mm, IP40
Mounting:	Quick mounting for standard rails DIN EN 50 022 (top hat rail 35 x 7.5 mm)
Terminals:	IP20, screw connectors, line cross section max 2.5 mm ²
Relay outlets:	2 ea. change over contacts, potential free Switching voltage max 250 V 50/60 Hz max 115 V DC max 3 A AC, 0.5 A DC Minimum load 10 mA at 5 V DC

Note

Contacts are not protected against overload, provide for external protective devices!

Signalling:	LED (green) Operating LED (green) Relay engaged LED (red) Filler alarm LED (red) Meas. circuit break LED (red) Meas. circuit short
Delay:	0.3 to 3 sec OFF-delay with adjustable pots Right stop = max delay Left stop = min delay (With SHR CS the pot is located behind the removable front panel)
Measurement circuit:	Max voltage 12 V DC Max power (short circuit) 110 mA Max conduction inductivity < 5 mH Max conduction capacity < 0.5 μ F

Note

The device may only be connected to overflow and leakage sensors MAXIMAT® or MAXITOP

Measuring circuit cable length:	Max 300 m Min cross-section 0.5 mm ²
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CE labels

In accordance with Low Voltage Guidelines (72/23/EEC), EMV Guidelines (89/336/EEC) and:
- EN 50 082-2:1995
- EN 55 011 (Class A):1998
- EN 61010-1:1993

Over voltage category II, if higher transient over voltage than category II expected, then special measures must be taken.
Pollution degree 1 (clean environment)

DIBT certification

Certification N°: Z-65.11-122, Z-65.13-265, Z-65.13-294, Z-65.40-201, Z-65.40-316 and Z-65.40-272 for overflow and leakage sensors under Art 19 of the Water Management Act (WHG§19)

Note:

Observe the General Construction Regulatory Certification of the connected overflow or leakage sensor!

FUNCTIONAL DESCRIPTION

The measurement transducer MAXIMAT SHR CS serves in connection with the overflow and leakage sensors of or lines MAXIMAT or MAXITOP, as a standard stop switch for overflow and leakage alarm devices for permanently attached tanks for storage of liquids hazardous to water. With the relay contacts installed, the alarm control and adjustment device can be operated.

ELECTRIC CONNECTION

Terminal number
(for top hat rail)

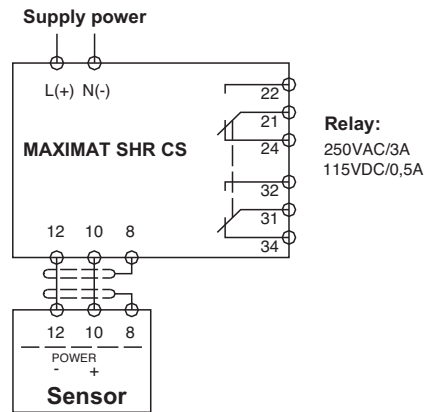
Mains (+V DC)	L(+)
Mains (-V DC)	N(-)
Alarm contact 1 (Common)	21
Alarm contact 1 (NC)	22
Alarm contact 1 (NO)	24
Alarm contact 2 (Common)	31
Alarm contact 2 (NC)	32
Alarm contact 2 (NO)	34

Sensor connection:

Please refer the manual of the connected MAXIMAT overflow or leakage sensor.

Sensor (shielding)	(8)**
Sensor +	10
Sensor -	12

** not used for several sensors



AUTO-MONITORING

The device works on the closed-circuit principle. With defects on the sensor, in the wiring and on the transducer the output relays drop out and thereby trigger an alarm signal.

CONTACT POSITION OF RELAY OUTPUTS

Operating state	Relay	Switcher contact
No alarm	Engaged	SHR CS: 21-24 and 31-34 closed
Alarm, fault, power outage	dropped out	SHR CS: 21-22 and 31-32 closed

SHUNT CIRCUIT

Operating state (no alarm)	$I_M = 18 \dots 40$ mA
Alarm	$I_M = 10 \dots 18$ mA
Wiring break	$I_M = < 7$ mA
Short circuit	$I_M = > 40$ mA

SERVICING

When used properly, the device needs no servicing.



LED short-circuit



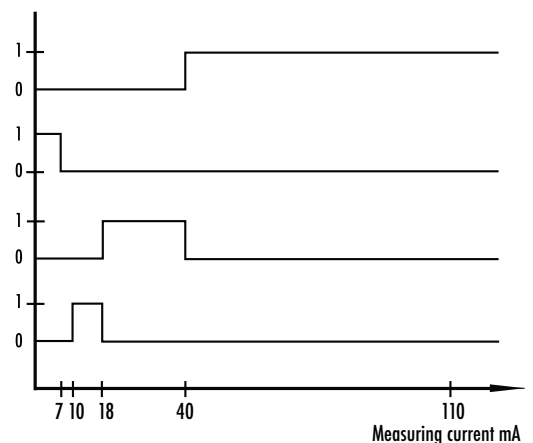
LED wiring break



LED operating state



LED overflow/leakage alarm



TROUBLE SHOOTING

Green LED does not light up	<ul style="list-style-type: none"> Power supply voltage out Device defective
Red LED lights up	<ul style="list-style-type: none"> Shunt circuit wiring break Sensor defective Wrong way connection (+/-)
Red LED lights up	<ul style="list-style-type: none"> Short circuit in the shunt circuit Sensor defective
Device reacts tardily	Time delay adjusted too slow