

## Electronic level switch

### EWLS

#### Application and function

The electronic level switch (EWLS) is used to monitor the level of electrically conductive liquids. Typical applications for the EWLS are the monitoring of condensate in steam pipes or high and low water alarm and control.

This product complies with EU Directive 2014/68/EU. The applicable regulations are AD2000 and the ASME Boiler and Pressure Vessel Code.

The level switch consists of an add-on housing with 2 to 4 probes, a detection unit (MU3), which is attached to the add-on housing and fully wired, and a switch box with built-in control unit.

The probes in the add-on housing detect the fill level via a conductive measuring system. The recorded signals are processed by the CU-3, which controls the downstream functions. This is installed in a switch box. The control box contains signal lights to indicate certain statuses (two lights per electrode [water= green, steam= red], normal operation [green], water alarm [yellow] and system error [yellow]).



EWLS

#### Technical basic equipment

- Materials according to DIN or ASME
- Up to 4 probes with customised spacing
- Process connection according to DIN or ANSI, flange or weld-on end

#### Optional versions

- The registration unit is equipped with electrodes to IP65
- Process connections on the front of the add-on housing
- External display unit DU-3

## Technical data

### Acquisition unit MU-3

The registration unit can be equipped with up to 4 electrodes.

Any subdivision of the display range is possible thanks to the freely selectable spacing of the probes.

All processors in the two independent electronic circuits of the unit carry out a regular self-test for internal errors in the electronic circuits.



*Probes EL65, EL165, EL265*

Probetype	Data sheet	Article-No.
EL65		15-01877
EL165		15-17847
EL265		15-18729

Housing version	
Material	Pressure vessel steel
Switch box version on the housing	
Material	Stainless steel
Protection type	IP65
Interface	CAN-Bus
Working temperature	0°C up to +85°C (-10°C without condensation)

## Evaluator unit CU-3

The unit processes the detected signals and controls the downstream functions.

Each processor controls a separate relay per contact, whereby the output contacts are only switched if both processors signal the normal operating status in unison. For each immersed probe, the output is increased by the corresponding proportion (16 mA / number of probes). In the event of a fault, the output goes to 2 mA. The display is via an LCD with 2 lines of 16 characters each. Input/programming via 4 buttons.



Power supply	24 V DC / 24 W via separate switching power supply; redundant design possible when using 2 power supply units		
Interfaces			
intern	CAN bus for supply and internal communication		
Outlets	4 mA - 20m output (load < 500 Ω; not galvanically decoupled) e.g. for connection to a boiler control system		
	7 SPDT / 3 DPDT output contacts freely programmable (probe - switching contact)		
	1 SPDT output contact permanently assigned to device faults		
	1 SPDT output contact permanently assigned to the level alarm (NW and/or HW); the corresponding probes for NW and/or HW are freely selectable		
Limit data of the potential-free contacts			
Limit or auxiliary relay	Switching voltage (max.)	250 VAC	24 V DC
	Switching current (max.) <sup>1)</sup>	4 A ohmsch	4 A
Housing version			
Material	PC-GF V-0		
Protection type	Housing:	IP40	
	Clamps:	IP20	
Connection	2 terminal strips with 21 terminals each up to 2,5 mm <sup>2</sup>		
Operating temperature	0°C up to +55°C (-10°C without condensation)		

<sup>1)</sup> A contactor must always be used for inductive/large loads

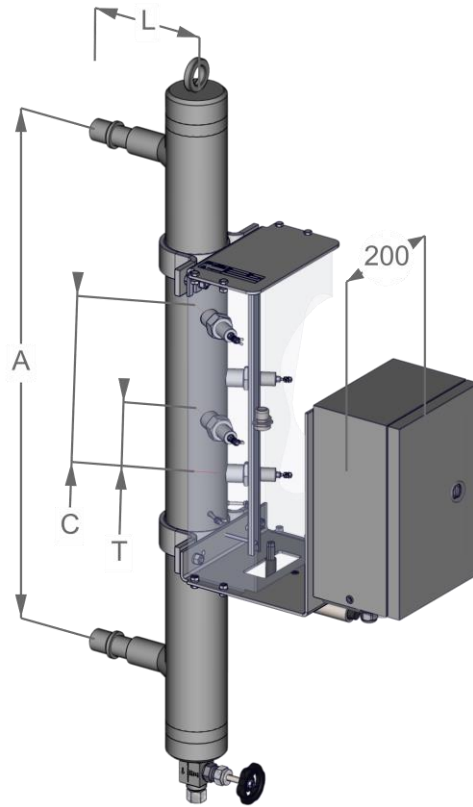
## Switch box for CU-3



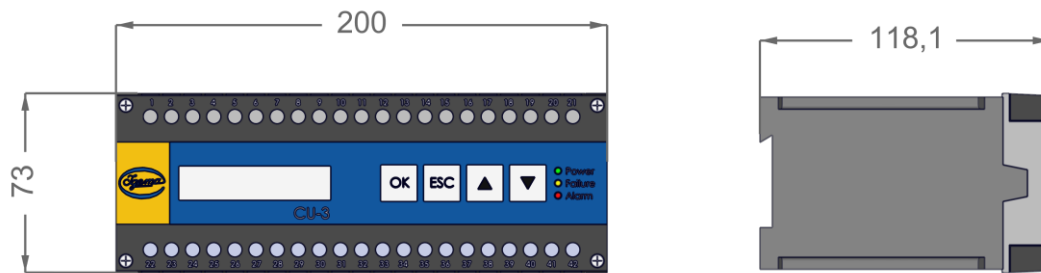
Contents	<ul style="list-style-type: none"> <li>• 1x CU-3</li> <li>• 1x Power supply unit</li> <li>• 1x double-pole fuse 6A</li> <li>• LED indicator lights built into the housing</li> <li>• Connection terminals for the mains voltage</li> <li>• Output terminals for the CAN connection to the MU-3</li> <li>• 5x M20 Cable glands MS/NI or Adapter M20 to 3/4" NPT MS/NI</li> </ul>	
Standards	IEC/EN 60529	
Housing material	Sheet steel housing painted, RAL 7035	Stainless steel housing 1.4404 / 316 Electrically polished
Protection type	IP66, NEMA 4	IP66, NEMA 4x
Dimensions	300 x 400 x 150mm	
Power supply	110-240 V AC, 47-63 HZ	
Power consumption	0,55 A @ 115 V AC bzw. 0,35 A @ 230 V AC	

## Dimensions and sizes

### EWLS





### Control unit CU-3


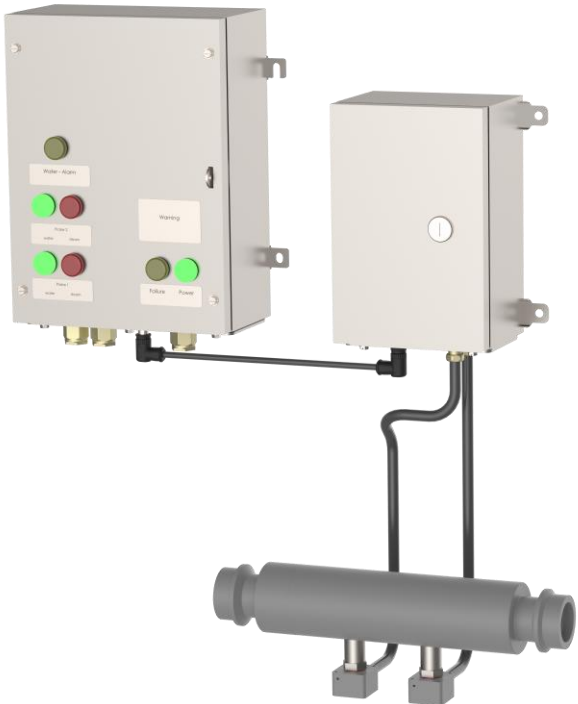


## Basic equipment

The electronic remote indicator shown is equipped with up to 4 probes in the MU-3 registration unit and is fitted with a control unit in the switch cabinet.

Acquisition unit MU-3	Control unit in the switch box
 <p data-bbox="272 987 687 1016"><i>Ex.: Without built-in measuring probes</i></p>	 <p data-bbox="874 987 1305 1016"><i>Ex.: Switch box in stainless steel design</i></p>

## Optional versions

Examples of the optional design	
Electrode with IP66 protection	Process connections on the front of the registration unit
 <p data-bbox="316 2022 501 2051"><i>Ex.: EL265 IP66</i></p>	 <p data-bbox="799 2022 1230 2051"><i>Ex.: horizontal version with 2 electrodes</i></p>



*Direct download*



*Product page on the Internet*

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