TDS limiter type FLB1

Application and function

The TDS limiter FLB1 for continuous control of the boiler water electrical conductivity.
The measurement of electrical conductivity is done by a measuring cell consisting of the TDS probe and the chamber wall of protection tube.

The product according to PED directive 97/23/EEC annex VII (Module B+D, category II) has the CE-mark no. 0035 of the notified body.
Applied rules as per TRD, AD2000 and “Wasserstand 100”.

Function FLB1

The controller continuously measures, at the electrode rod in the measuring cell, the electrical conductivity of the boiler water which is closely related to the level of TDS.
This measured value is compared with the set point of controller. If it is higher or equal than the set point, the controller relay is de-energised and will go to alarm to shut down the burner. The indicator lamp **"STÖRUNG"** (alarm) lights. If the measured value drops below 78 % of set point, the controller relay is energised. The indicator lamp **"STÖRUNG"** does not longer light.
A performance check can be done by pressing and holding of the button **"TEST K"** (limit value).
In case of failure of the system, e.g. break of mains supply or short circuit, the controller goes in position of higher or equal value than the set point.

The indicator lamp **"UB"** shows that the power supply is on.

- Baumuster geprüft
- Fertigung überwacht

Technical basic equipment

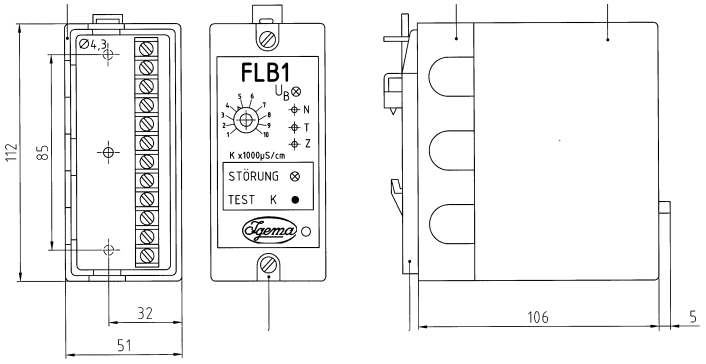
- FLB1 is delivered in a plastic plug-in housing for installation in control panels
- Fixation on standard rail 35 mm according to DIN EN 50022 or directly screwed to chassis plate

Technical data

Component mark	TÜV ID: 0000006175
CE-mark	0035
Power supply	230V ± 15% / 50-60 Hz
Input	ca. 4,5 VA
Fuse	80 mA/T
Protection as per DIN EN 60529	IP40 [1)]
Allowable temperature	0 – 60° C

[1)] according to the German regulations VdTÜV-Wasserstand 100, 4.90
a protection of IP54 has to be maintained in the boiler area

Max. operating data of contacts		
Burner cut-off	Voltage	max. 250 Vac
	Current	max. 5 A ohmsch
Transmitter oputput	4-20mA	
Electrical conductivity of the liquid	0 µs/cm ≤ æ ≤ 10.000 µS/cm	
	0 µs/cm ≤ æ ≤ 1.000 µS/cm	
Adjustable limit value „K“ at 25° C	1.000 µs/cm ≤ æ ≤ 10.000 µS/cm	
	100 µs/cm ≤ æ ≤ 1.000 µS/cm	



Trimmer **N** for zero adjustment

Trimmer **T** for compensation of temperature

Trimmer **Z** for line constant

1 = conductivity range of liquid

2 = Jack ø 3,6 mm, for connection of measuring instrument for adjustment

Installation example