



ELK-4/ELK-4F

GALAXY CAPACITIVE LEVEL ELECTRODE

GENERAL FEATURES

Ayvaz Compact System Galaxy ELK-4/ELK-4F work according to conductivity measurement principle. ELK 4/ ELK 4F capable of displaying 4 levels in conductor liquids; 4 levels each with one contact point:

- High level alarm,
- Low level alarm,
- Pump start,
- Pump stop.

ELK 4/ELK 4F ensure the control of all functions inside the panel. No external control device required.

Conductivity of liquid is utilized for displaying the level of liquid. Minimum conductivity of liquid must be measured in order to ensure safe functioning of device. With this feature of fluids, two conditions can be detected.

- Electrode rod dipped / exposed,
- Switch point accessed / not accessed

Before the assembly, sizes of electrode rods must be adapted according to contact levels. (For example; maximum / minimum alarm or pump control)

Application Areas:

- Steam Boilers
- Supply Tanks
- Chemical Applications

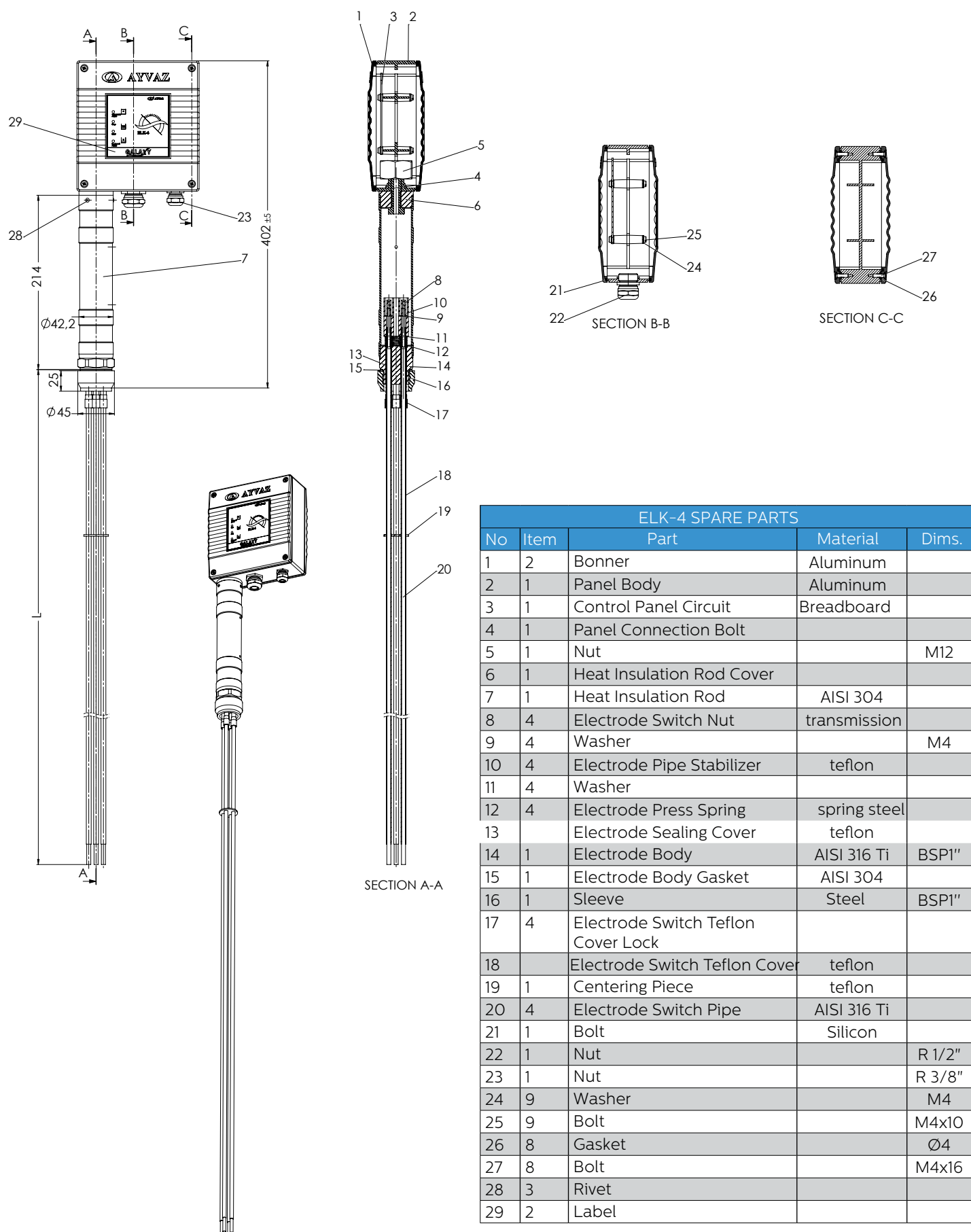
	LENGTH(mm)		
ELK-4	500	1000	1500
ELK-4F	436	936	1436

	Connections
ELK-4	Threaded 1" BSP (DIN ISO 228)
ELK-4F	Flanged (DN 50 and above PN 40 DIN 2635)

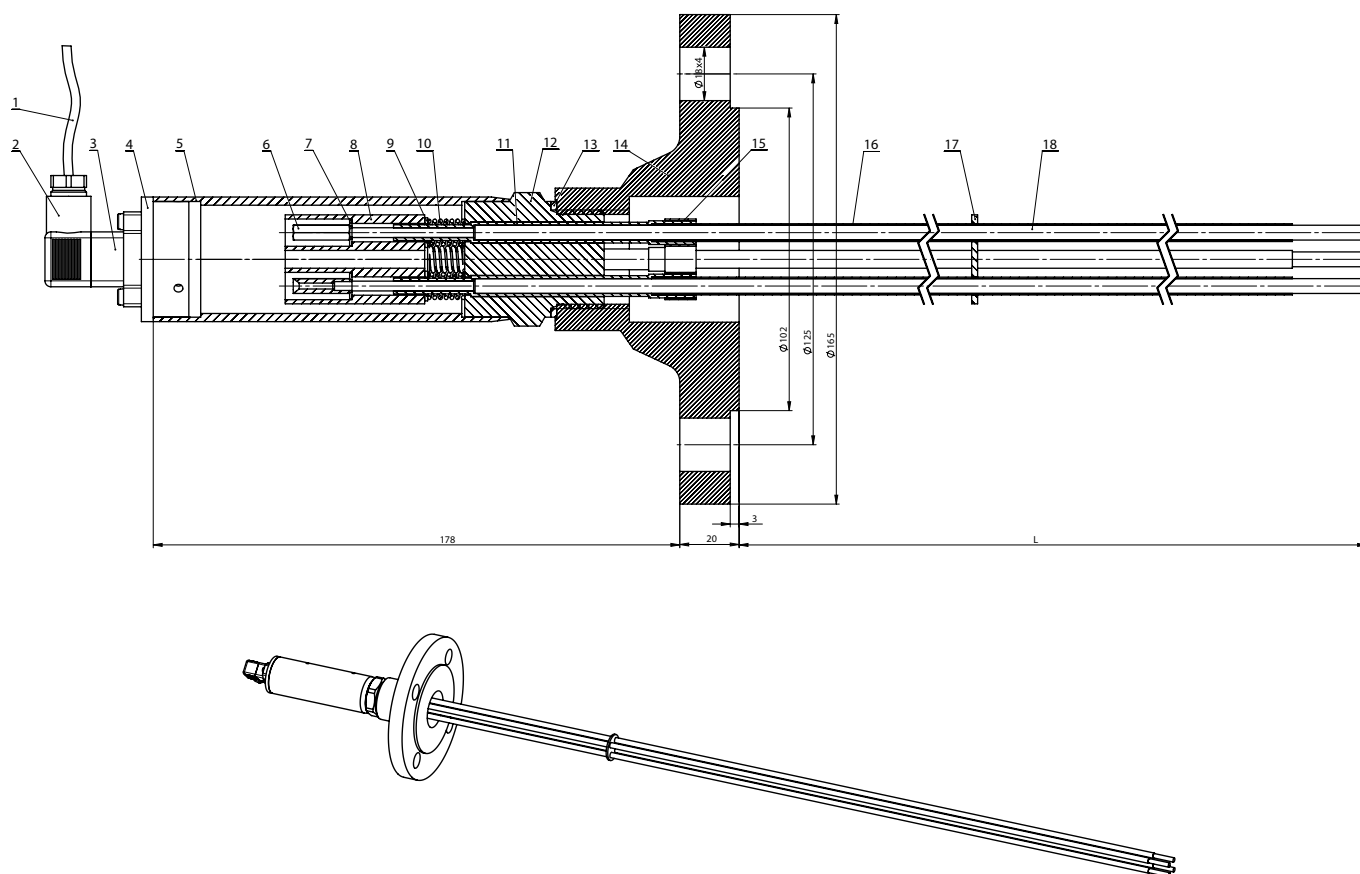
Technical Specifications	
Max. Working Temperature	238 °C
Max. Working Pressure	32 bar
Main Feeding	230 V + % 10, 50-60 Hz
Body	Stainless Steel
Flange	Forged Steel
Case	Aluminum Injection
Reading Electrode	Stainless Steel

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ELK-4F SPARE PARTS		
No	Part Name	Materials
1	Silicon Cable	
2	Cable Socket -1	
3	Cable Socket -2	
4	Thermal Insulation Pipe Cover	
5	Thermal Insulation Pipe	AISI 304
6	Gasket	Transmission
7	Washer	
8	Electrode Pipe Fixing Part	Teflon
9	Washer	
10	Electrode Pressure Spring	Spring Teflon
11	Electrode Sealing Cover	Teflon
12	Electrode Body	AISI 316 Ti
13	Electrode Body Gasket	AISI 304
14	Electrode Connection Flange	C22.8
15	Holder	
16	Insulation	Teflon
17	Centering Part	Teflon
18	Electrode	AISI 316 Ti

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The control of the level in the boiler or tanks is carried out with the help of sensors operating on different principles.

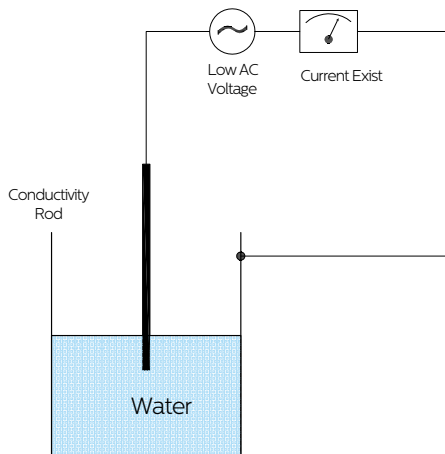
Conductivity Rod:

Principle of operation: The sensor determines the level of water according to the electrical conductivity of the environment in which it is contacted.

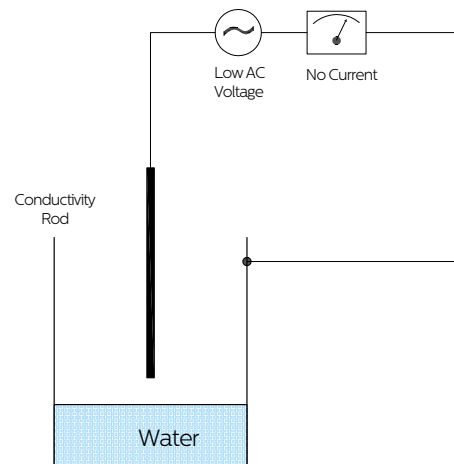
The water level in the boiler:

It is not possible to read level of water during the production of steam by the classical water level indicator.

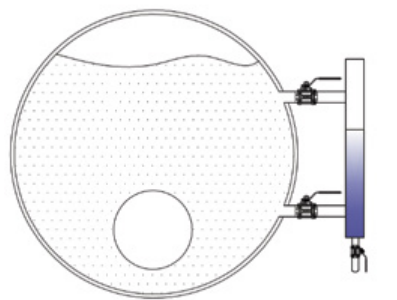
When the steam is produced, the water-level consists of steam-water mixture bubbles, and the precise water level can not be detected because the water level is in motion. The water level observed outside the boiler is read as lower than the actual water level in the boiler. The reason for this is that the water density at the water level indicator outside the boiler is higher.



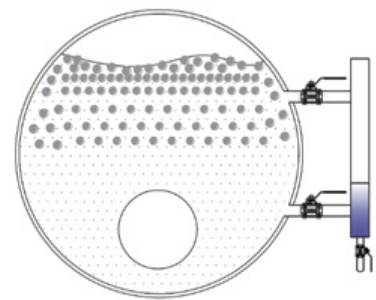
It transmits the current, which is the contact with water.



It doesn't transmit the current, which is not the contact with water.



Water level without steam production



Water level in steam production

Factors affecting the difference between the actual water level and the water level read from the outside:

- 1-Boiler Steam Capacity
- 2-Height of boiler outer level indicator compared to boiler
- 3-Chemical properties of boiler water
- 4-Size of boiler body

The advantages:

- 1-Self-testing level caps remove the necessity of daily testing of the system.
- 2-These systems are safe because products do not consist of moving elements and they do not need maintenance.



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