LEVEL LIMITING & ALARM

Reliable water level monitoring is one of the most critical safety requirements in steam boiler operation. For this reason, two different types of systems are used in compliance with EN 12952 and EN 12953:

Level Alarm Systems
Level alarm systems continuously monitor the water level inside the boiler and generate an alarm signal when the defined high or low level limits are reached. These systems are primarily used to warn operators of abnormal operating conditions and allow timely intervention. Vira's SK 1000 and SK-T 1200 series provide dependable alarm functions for both high and low water levels.

Level Limiter Systems
Unlike alarm systems, level limiters are designed as safety devices that automatically shut down the burner or stop fuel supply when a critical water level is reached. Vira's SMH 1000, D-SMH 1000 (high level) and SML 1000, D-SML 1000 (low level) self-monitoring limiters incorporate advanced diagnostic functions such as:

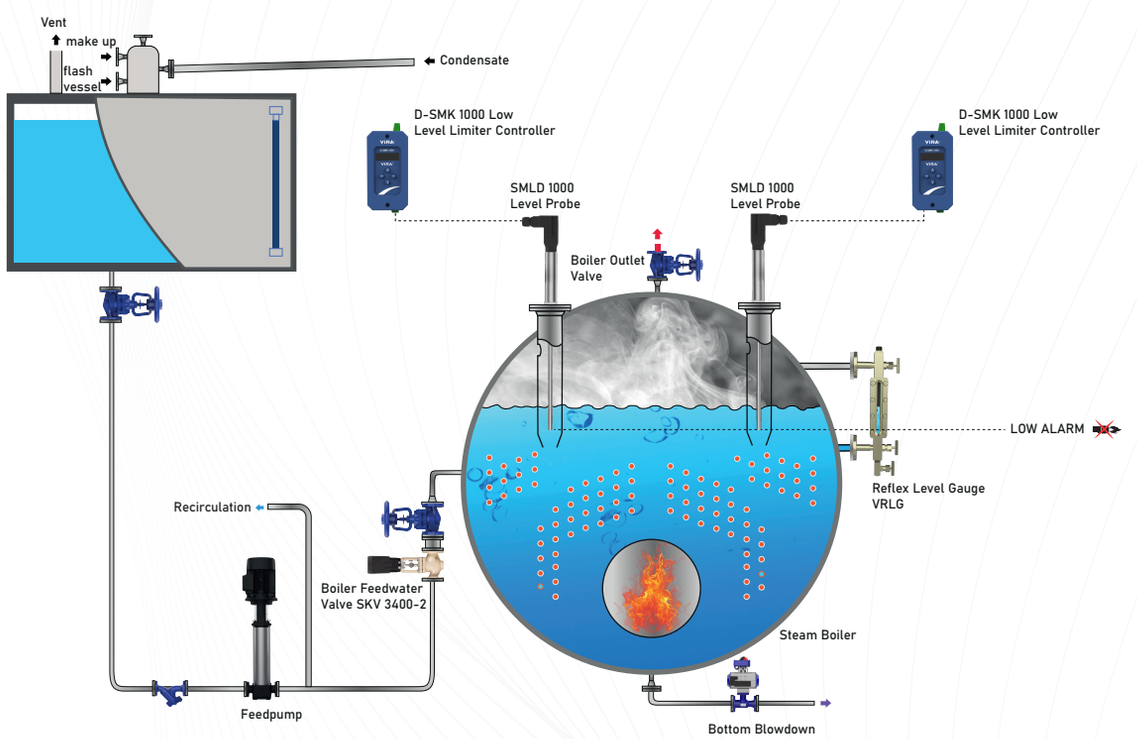
- Detection of open circuit (cable break) or short circuit in the connection lines
- Verification of probe contact with the boiler body
- Monitoring for probe leakage and contamination
- Periodic internal circuit self-checks
- Automatic fault alarm in case of any irregularity

Difference Between Alarm and Limiter Systems

A Level Alarm system provides warnings to the operator when the water level in the boiler reaches a predefined high or low point. The alarm signal is transmitted via relays, but the device itself is not self-monitoring and not redundant.

A Level Limiter, on the other hand, is a certified safety device designed to automatically shut down and lockout the boiler in case of dangerous low or high water level conditions. Unlike alarms, limiters fulfill mandatory safety requirements in accordance with EN 12952 and EN 12953 standards.

Note: SMH 1000, D-SMH 1000 and SML 1000, D-SML 1000 self-monitoring level limiter systems are certified for use in unattended boiler operation in line with EN 12952 and EN 12953 requirements.

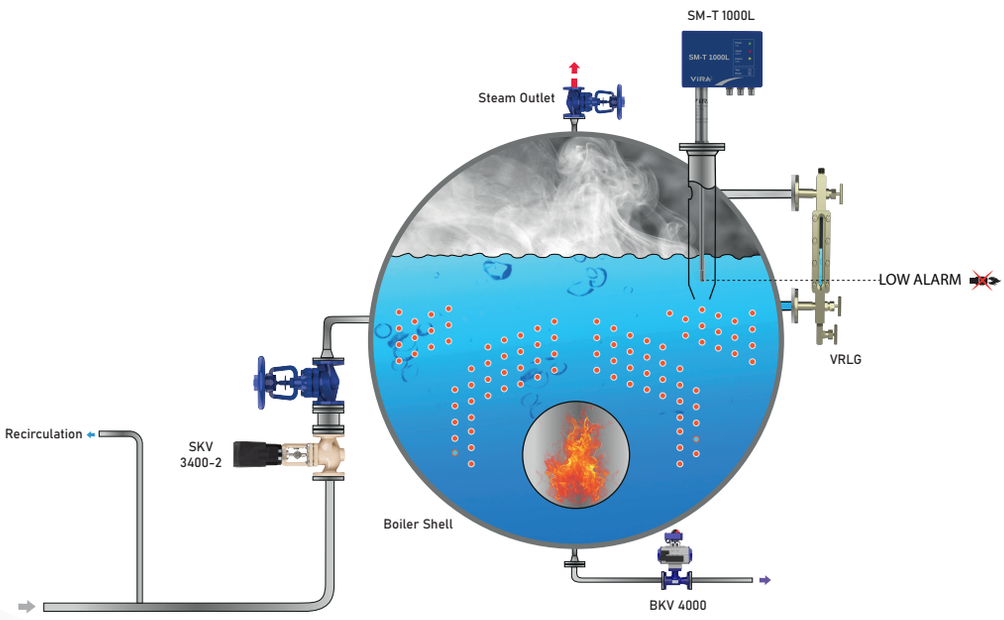


SM-T 1000L Compact Self Monitoring Low Level Limiter System

NEW

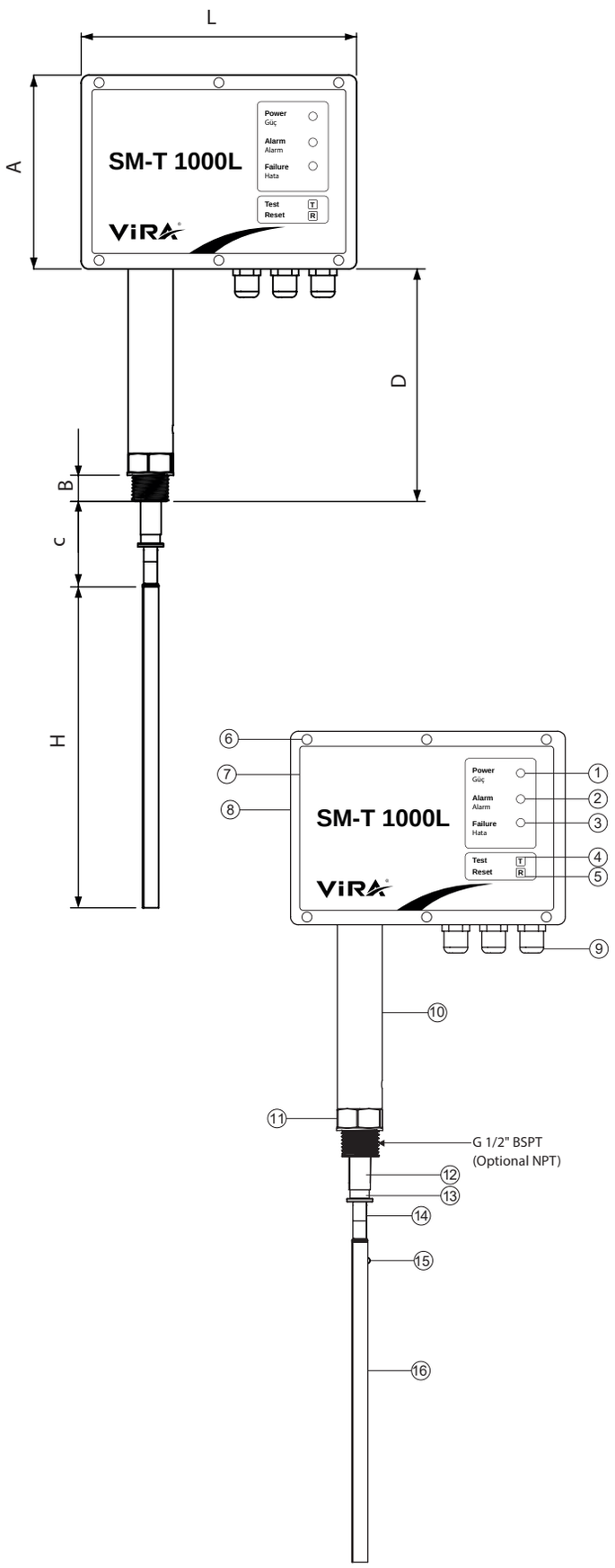
Compact Self Monitoring Low Level Limiter	
Type	: SM-T 1000L
Supply Voltage	: 230 VAC (+5% / -10%), 50/60Hz
Functions	: Self Monitoring Low Level Alarm, Test, Reset, Cable Break Check, Short Circuit Check, Probe Scale Check, Periodic Self Check
Outputs	: 2 Safety Relays
Nominal Pressure	: PN 40
Operat. Temp.	: 239 °C
Operat. Press.	: 32 Bar g
Connection	: G 1/2" BSPT (Optional NPT)
Length	: 500, 1000, 1500 mm (can be cut to desired level)
Ambient Temp.	: 75 °C
Compliance	: CE (EMC 2014/30/EU, LVD 2014/35/EU), PED 2014/68/EU, SIL (IEC 61508), EN 12952 & 12953

SM-T 1000L Typical Installation



TECHNICAL SPECIFICATION

SM-T 1000L Compact Self Monitoring Low Level Limiter



Technical Data

Type	SM-T 1000L
Supply Voltage	230 VAC (+5% / -10%), 50/60Hz
Functions	Self Monitoring Low Level Limiting, Test, Reset, Cable Break Check, Short Circuit Check, Probe Scale Check, Periodic Self Check
Input	Level Probe Input, Ground
Outputs	2 Safety Relays
Display	Led
Max. Ambient Temp.	75℃
Enclosure	Aluminum
Installation Type	Boiler top mounted
Protection Class	IP 65

No	Part	Material
1	Led " High Alarm"	Lexan Label
2	Led " Low Alarm"	Lexan Label
3	Led "Power"	Lexan Label
4	Test Button	Lexan Label
5	Reset Button	Lexan Label
6	Housing screws M4	Austenitic Stainless Steel 304
7	Housing Cover	Aluminum
8	Housing	Aluminum
9	Cable Gland PG9	Brass (Nickel Coated)
10	Label	Laser Marking
11	Probe Body	Austenitic Stainless Steel 304
12	Primary Insulator	Polytetrafluoroethylene (PTFE)
13	Comparator Tip	Austenitic Stainless Steel 316L
14	Secondary Insulator	Polytetrafluoroethylene (PTFE)
15	Retaining Pin	Austenitic Stainless Steel 304
16	Probe Tip	Austenitic Stainless Steel 316L

Dimensions

H (mm)	L (mm)	A (mm)	B (mm)	C (mm)	D (mm)
500 1000 1500	170	121	16,5	53,2	145

Note: The probe tips are supplied in uniform lengths according to the ordered size. The lengths must be cut and adjusted on site to suit the specific application. If 500 mm is ordered, all probe tips will be delivered with a dimension 'H' of 500 mm.