



## Thermostatic Head with Immersion Sensor

**RT96.27**

for favourably priced water temperature control

---

**Operates autonomously without auxiliary energy.**  
**Quality liquid expansion sensor with a high level of control accuracy.**  
**Setpoint setting range of 20 to 70 °C can be limited with tappets.**

### Use

---

The RT96.27 is designed to provide affordably priced water temperature control. Since the device operates autonomously, neither an external controller nor cabling is required. It is used primarily in the following applications:

- Control of the water temperature in d.h.w. heating plant
- Constant flow and return temperature control of heat consumers in connection with radiator and underfloor heating systems
- Control of the flow or return temperature on the primary or secondary side of heat exchangers

### Functions

---

The liquid expansion sensor responds to deviations from the adjusted setpoint. When the water temperature rises, the liquid in the sensing system expands, exerting a pressure on the metal bellows. The pressure is transferred to the valve stem which closes the valve continuously. When the water temperature falls, the liquid in the sensing system contracts so that the valve opens. This means that the valve operates continuously, thus ensuring a precise regulation of the flow of water. The water temperature is thus maintained at a constant level in accordance with the setpoint.

## Type summary

Descripton	Type reference	Weight
Thermostatic head with immersion sensor	RT96.27	230 g
Protective cover, colour RAL9016	AL148	30 g

## Equipment combinations

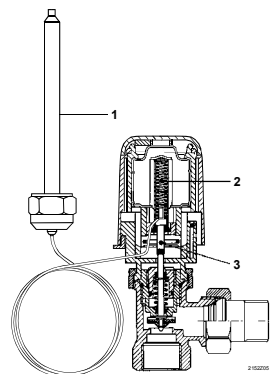
The RT96.27 is designed for use with Landis & Staefa radiator valves VD... / VE... / VU... and the MiniCombiValves (MCV) VPD... / VPE...

Product	Type reference	Data Sheet
Straight valves to DIN	VD110, VD115, VD120, VD125-0	CE1N2145
Angle valves to DIN	VE110, VE115, VE120, VE125-0	CE1N2145
Straight valves to NF	VD210, VD215, VD220	CE1N2146
Angle valves to NF	VE210, VE215, VE220	CE1N2146
Special angle valve	VU215	CE1N2146
Special angle valve	VUC515	CE1N2147
MCV straight valves to DIN	VPD1...	CE1N2185
MCV angle valves to DIN	VPE1...	CE1N2185
MCV straight valves to NF	VPD2...	CE1N2185
MCV angle valves to NF	VPE2...	CE1N2185

*Note: when using the appropriate adapters, the RT96.27 can also be fitted to valves of other manufacture.*

## Technical design

- Liquid expansion sensor with a control accuracy of  $\pm 1.5$  °C
- Large specific stroke and very small hysteresis
- Tappets for minimum or maximum temperature limitation or locking at the required setpoint
- Sensing element filled with expansion liquid



1. Sensing element
2. Transfer element
3. Valve stem

## Accessories

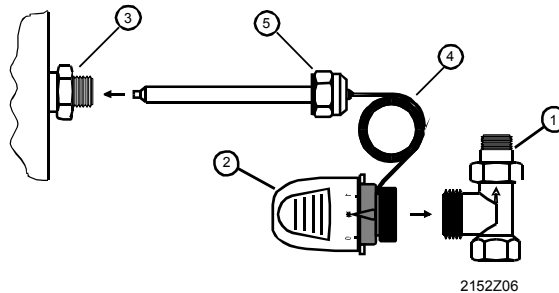
Protective cover AL148 prevents tampering and is suited for use in public buildings. It protects the thermostatic head, prevents inadvertent readjustments, damage and removal. The protective cover can also be used to lock the setpoint.



## Mounting notes

### Mounting:

1. Mount the valve ① and remove the protective cover.
2. Fit the thermostatic head ② .
3. Mount the protection pocket ③ (not included in supply).
4. Unwind the capillary ④ carefully.
5. Immerse the sensor and tighten with the nut ⑤ .



### Notes:

The mounting position of the thermostatic head is optional, provided it is easily accessible and the setting can be read.

The capillary must be unwound carefully and may not be pulled or folded.

The entire length of the protection pocket must be immersed in water.

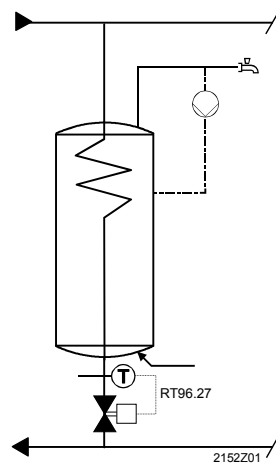
A robust cap nut made of metal facilitates mounting with no need for using tools.

## Technical data

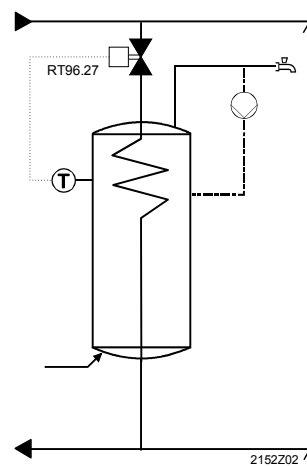
Medium	water with max. 40 % ethylene-glycol
Operating pressure PN	10 bar
Max. operating temperature	100 °C
Setpoint adjustment	20...70 °C
Setting scale	20...28...36...45...54...62...70 °C
Sensor temperature	
Min. storage	-30 °C
Max. working	80 °C
Hysteresis	≤ 1 K
Valve nominal stroke	2.5 mm
Valve max. differential pressure	1.5 bar ( $\frac{3}{8}$ " - $\frac{1}{2}$ " )
Valve max. differential pressure	1.0 bar ( $\frac{3}{4}$ " )
Time constant	8 sec
Influence of medium temperature	≤ 0.75 K
Influence of differential pressure	≤ 0.75 K
Head springs	steel
Head stem	brass
Setting knob	ABS
Sensor	copper

## Application examples

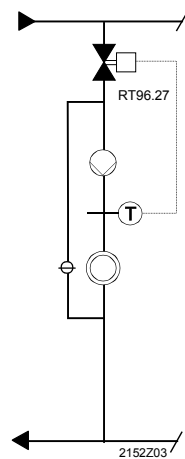
D.h.w. heating



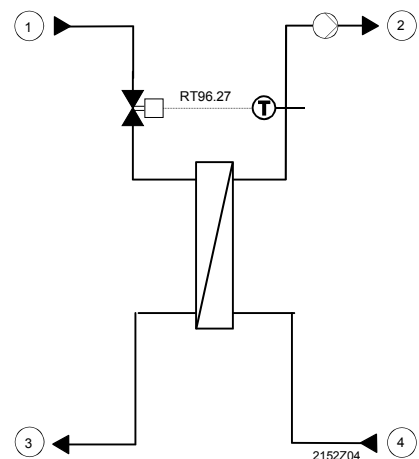
D.h.w. heating



Constant flow temperature control

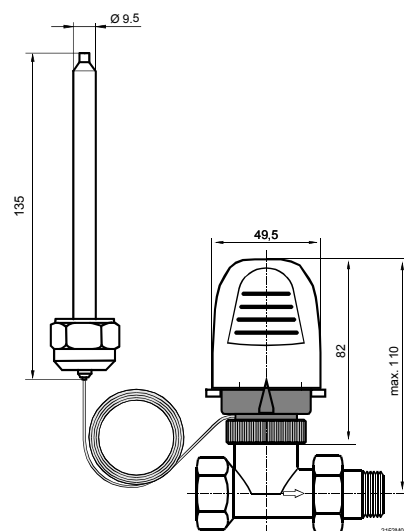


Control of the flow temperature on the secondary side of heat exchangers



1. Primary flow
2. Secondary flow
3. Primary return
4. Secondary return

## Dimensions



©2003 Siemens Building Technologies Ltd.  
Subject to alteration