SIEMENS

Changeover Thermostat RYT182

for summer / winter changeover

- **The calibrated thermostat is used to detect**
  - **heating media temperatures >30 °C (±4 K)**
  - **cooling media temperatures <19 °C (±4 K)**
- **Potential-free changeover contact with a switching capacity of AC 250 V, 3 A**

Use

The changeover thermostat is used for monitoring the temperature of liquid media in piping systems to provide summer / winter changeover in HVAC plant.

Ordering

When ordering, please give name and type reference:
Changeover thermostat **RYT182**

Mode of operation

The thermostat acquires the medium temperature with its bimetal sensing element. When the temperature rises, the thermostat switches to heating mode at 30 °C ±4 K (contact C – B closed). On a temperature drop, it switches to cooling mode at 19 °C ±4 K (contact C – A closed).
The voltage signal delivered by the thermostat's changeover contact can be used to drive a motorized 3-port valve.

Mechanical design

The changeover thermostat consists of a black plastic casing with a fixing bracket. The electrical connection is made via a 3-core cable of 0.5 meter length which is attached to the casing. The mounting spring supplied with the thermostat is required to fit the device to a pipe having a diameter between 9.5 and 16 mm.

Mounting notes

To ensure correct acquisition of the medium temperature inside the pipe, the change-over thermostat must be fitted with thermal conductive paste applied to the contact surface.

Before mounting, any paint left on the pipe where the thermostat will be fitted must be removed. The device must be securely attached to the pipe.

⚠ Caution!

For AC 230 V mains applications:
The RYT182 is designed for exclusive use with devices of safety class I.

Disposal

The devices are considered electronics devices for disposal in terms of European Directive 2012/19/EU and may not be disposed of as domestic waste.

- Dispose of the device via the channels provided for this purpose.
- Comply with all local and currently applicable laws and regulations.

Technical data

Functional data	Calibration	
	Contact C – B (white – black) closed	>30 °C ±4 K
	Contact C – A (white – blue) closed	<19 °C ±4 K
	Contact output	potential-free changeover contact
	Switching capacity	max. AC 230 V, 3 A
	Ext. protection	max. 6 A
	Medium	water, refrigerants
	Sensing element	bimetal
Connections	Mechanically	
	With tension spring	for pipes having a dia. of 9.5…6 mm
	Electrically	
	Cable connection	$3 \times 2.5 \text{ mm}^2$, approx. 0.5 m long
Degree of protection	Protection degree of housing	IP 54 according to EN 60 529
	Protection class	designed for use with devices of safety class I to EN 60 730
Environmental conditions	Operation to	IEC 60 721-3-3
	Climatic conditions	class 3K5
	Temperature	−30...+100 °C
	Humidity (non-condensing)	5...95 % r.h.
	Transport to	IEC 60 721-3-2
	Climatic conditions	class 2K3
	Temperature	−20...+70 °C
	Humidity	<95 % r. h.
	Mechanical conditions	class 2M2
Directives and Standards	EU Conformity (CE)	CE1T1295xx [*)]
Materials and colors	Casing envelope	PC, black
	Casing cover	PC, black
	Base	copper, nickel plated
	Mounting bracket	stainless steel
	Thermostat (entirely)	silicon-free
Weight	Excl. packaging	0.068 kg

*) The documents can be downloaded from http://siemens.com/bt/download.

Internal diagram
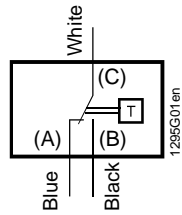
Contact C – B (white – black) closed   = >30 °C ±4 K = heating
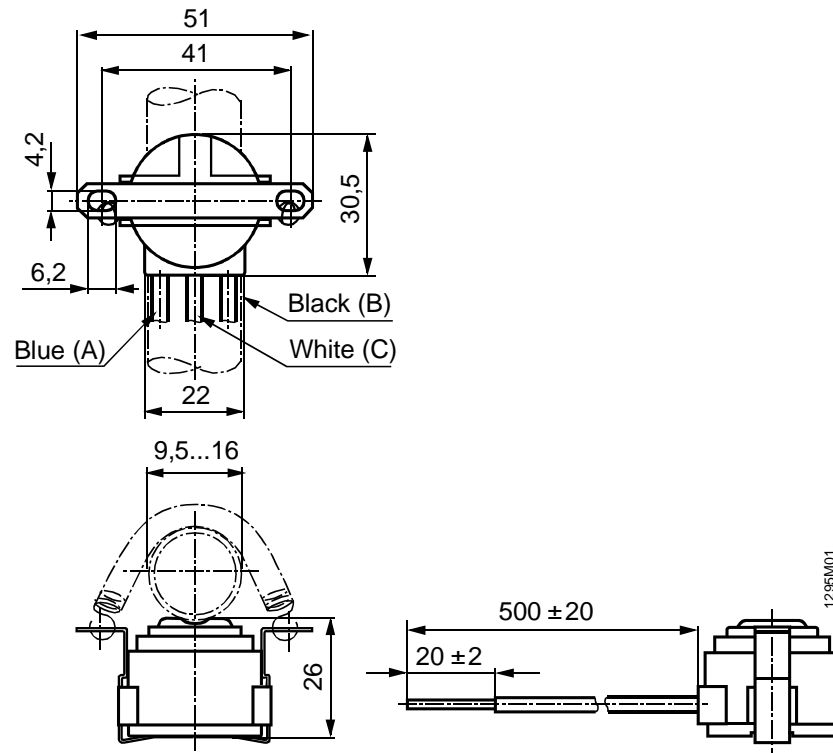Contact C – A (white – blue) closed   = <19 °C ±4 K = cooling

Connection diagrams (examples)
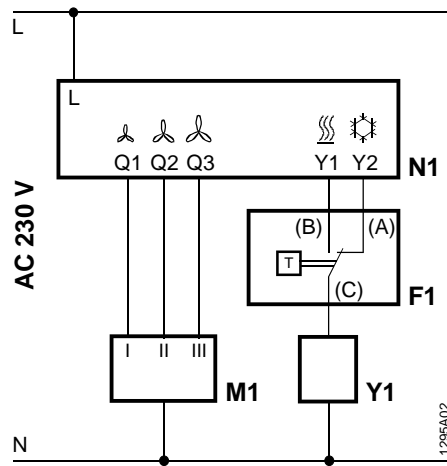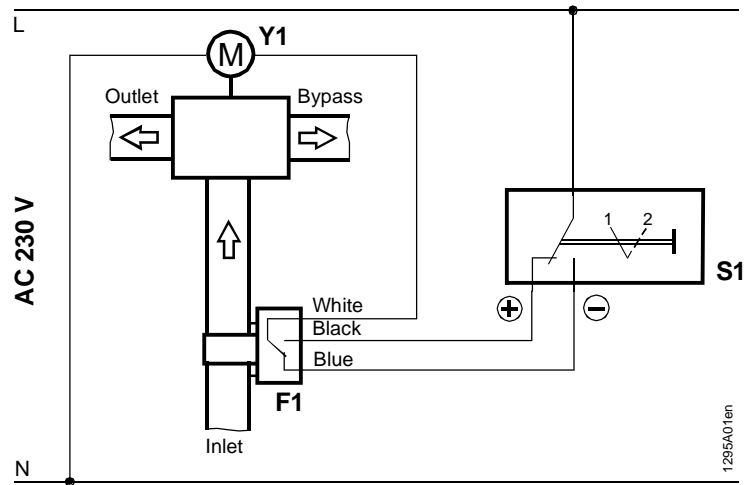
Legend

F1   Changeover thermostat RYT182
M1 3-stage fan
N1 Room thermostat RAB20...
S1 Heating / cooling changeover switch
Y1 Motorized valve (e.g. actuator SFA21/18 with 3-port valve VXI46)
⊕   Heating
⊖   Cooling

Dimensions

51

41

4,2

30,5

6,2

Black (B)

Blue (A)

White (C)

22

9,5...16

26

1295M01

500 ± 20

20 ± 2

Dimensions in mm

Subject to change

Changeover thermostat RYT182