SIEMENS



Control Thermostats

RAK-TR.1..H

Electromechanical TR

- 2-position control thermostat with single-pole changeover microswitch
- Switching capacity contact connection 1-2: 16 (2.5) A, AC 250 V (DIN3440) contact connection 1-3: 6 (2.5) A, AC 250 V
- Time constant conforming to DIN EN 14597
 3 mounting choices: pipe, pocket or wall mounting
- External setting knob for setpoint adjustment
- Push-in terminals for fast installation

Use

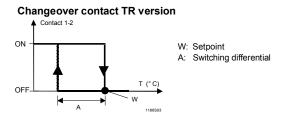
Typical applications:

- Heat generation plant
- For general use in heating, ventilation and air conditioning plant

Function

Changeover switch (S.P.D.T.)

When the setpoint is reached on rising temperature, contact connection 1-2 changes over to contact connection 1-3. When the themperature of the medium falls by the value of the switching differential, the control termostat reverts to contact connection 1-2.



If the probe has cooled down to a temperature below approx. -20°C, the control current circuit opens, however, automatically closes again, when the temperature rises.

CE1N1205en 2017-10-25

Building Technologies

Product No.	Stock number	Degree of protection	Temperature setting range	Capillary tube length	Scope of delivery	Pocket length ¹⁾	
RAK-TR.1000B-H	S55700-P111	IP43	1595 °C		Pocket (for RAKB) / Clamping band for max.	100 mm	
RAK-TR.1000S-H	S55700-P112	IP43	1595 °C	700 mm	pipe dia. 100 mm /Cable		
RAK-TR.1210B-H	S55700-P113	IP43	1582 °C		gland M16x1.5 mm / Mounting instructions	100 mm	
Accessories	,		100, brass, PN1 ets N1193 and N				
Ordering	When set).	When ordering, please give type reference according to "Type summary" (standard set).					
	dered	If the accessories required are not those included in the standard set, they can be or- dered separately according to the type references given in Data Sheets N1193 and N1194.					
Mechanical design							
 Housing The base of the thermostat is made of PC (reinforced) and is designed for pipe, pocket or wall mounting; the electromechanical thermal reset limit thermostat uses a capillary type sensing element. The cover is made of PC. The cable gland is M16x1.5 mm. The PC plastic is especially designed to be flame resistant, UV protected and flexible against high temperatures and tough against chemical and biological impacts. 							
Notes							
Mounting aid	Installa	tion Instruc	tions are enclose	ed in the packa	age.		
Mounting location		It must be ensured that there is sufficient clearance above the thermostat for adjusting the setpoint and for removing and replacing the thermostat, if required.					
Pipe mounting		The clamping band should be properly tightened to ensure the entire length of the sensing element is in close contact with the pipe's surface.			of the		
Protection pocket mounting		Mount the pocket and adjust the hexagon as required. Immerse the capillary sensing element in the pocket and secure the base to the pocket by means of the screw.			-		
Wall mounting with sensing element in t pocket	he capilla	To prepare for wall mounting, knock out the fixing holes in the housing and pu capillary tube until the required length is reached. After immersing the capillar element in the pocket, secure it with a clamp (mounting accessories).					
A Wiring	The ca Wire th	The appliance must be wired by the installer only. The cables used must meet the insulation requirements for mains voltage. Wire the thermostat according to the connection diagram and in compliance with local regulations.					
⚠ Max. AC 250 V	Cautio	Caution: prior to opening the housing, disconnect the thermostat from the mains supply.					
<u>∧</u> ∔	Earth	Earth connections must be made in compliance with the regulations.					
Disposal							
X		ve 2012/19/	EU and may not	be disposed o	for disposal in terms of Euro of as domestic waste. provided for this purpose.	opean	

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

2/4

Switching mechanism	Switching capacity Nominal voltage	AC 24250 V	
	Nominal current $I(I_M)$	A0 24200 V	
	contact connection 1-2	0.1 16 (2.5) A 0.1 6 (2.5) A	
	contact connection 1-3		
	External fuse	16 A	
	Life expectancy at nominal rating: Contact 1-2	min. 250'000 switching cycles	
	Safety class	I to EN 60 730	
	Degree of protection:	IP 43 to EN 60 529	
	Externally adjustable		
	temperature range RAK-TR.1000B-H	1595 °C	
	temperature range RAK-TR.1000S-H	1595 °C	
	temperature range RAK-TR.1210B-H	1582 °C	
	Thermal switching differential	6 K	
Directives and Stan- lards	Product standard	EN 60730-x	
		DIN EN 14597 (TR1198) ¹⁾	
	EU Conformity (CE)	CE1T1206xx ¹⁾	
	Radio interference protection	click rate N ≤5 to EN 55 014	
Invironmental	Operation	class 3K5 to IEC 60 721-3-3	
onditions	Max. temperature on bulb	switch-off temperature + 25 K	
	Ambient temperature at the housing	max. 80 °C (T80)	
	Humidity	< 95 % r.h.	
	Mechanism	class 3M2 to IEC 60 721-3-3	
	Storage and transport	class 2K3 to IEC 60 721-3-2	
	Ambient temperature	-25+70 °C	
	Humidity	< 95 % r.h.	
	Max. temperature socket	125 °C	
	Degree of pollution	normal to EN 60 730	
	Controlled medium	Water, oil	
Calibration	Calibration temperature	80 °C	
	Manufacturing deviation	±3 °C	
	Calibrated for ambient temperature at the		
	switching mechanism and capillary tube	22 °C to DIN EN 14597	
	Time constant in: water	<45 s to DIN EN 14597	
	oil	<60 s to DIN EN 14597	
	air	<120 s to DIN EN 14597	
Connections	Electrical connections	Push In ²⁾ terminals for wires	
		6 x 0.752.5 mm ²	
	Earth connection	Push In ²⁾ terminals for wires	
		2 x 0.752.5 mm ²	
	Cable gland	2 x 0.752.5 mm² M16 x 1.5 mm	
	Cable gland	M16 x 1.5 mm	
	Cable gland External wiring flexible cord		

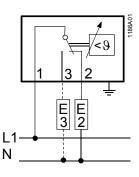
3/4

Housing colors		base RAL 7001 (dark-grey)		
		cover RAL 7035 (light-grey)		
Dimensions of sensing e	lement	6.5 mm dia. x 65 mm		
Capillary length		700 mm		
Min. bending radius of	of capillary	R min. = 5 mm		
Construction				
Carrier of switching n	nechanism	plastic		
Capillary tube and se	nsing element	copper		
Diaphragm		stainless steel		
Weight of standard set:	RAKB	0.33 kg		
	RAKS	0.27 kg		

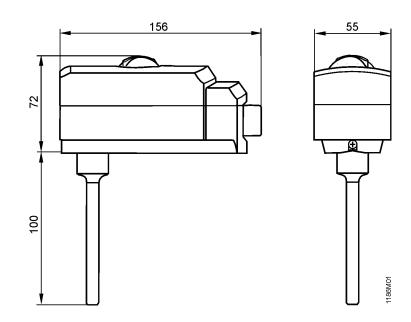
1) The documents can be downloaded from http://siemens.com/bt/download.

2) Push In is a patented connection technology designed by Weidmüller, Germany's leading manufacturer of electrical connection technologies.

Connection diagram



Dimensions



Published by: Siemens Switzerland Ltd. Building Technologies Division International Headquarters Gubelstrasse 22 6301 Zug Switzerland Tel. +41 58-724 24 24 www.siemens.com/buildingtechnologies

© Siemens Switzerland Ltd 2009-2014 Delivery and technical specifications subject to change