

EN Usage

1) Application

The temperature controls are used to regulate heating and cooling equipment, filter fans and heat exchangers. In addition, they can also be used as switching contacts (min. 24V, 20mA) for signal devices used as low- or high-temperature alarms.

2) Types

- a) RTBSM-110.29X Normally closed contact (switching contact opens on temperature rise)
- b) RTBSM-111.29X Normally open contact (switching contact closes on temperature rise)
- c) RDBSM-214.29X Normally closed contact + Normally open contact - combination of **a)** and **b)**

Where X may be **0** or **6**

3) Safety Information

- Installation must only be performed by qualified electrical technicians in accordance with respective national electrical codes.
- Safety and protection against incidental contact, must be ensured through proper installation in accordance with VDE 0100.
- Technical specifications as stated on the rating plate must not be exceeded.
- No repairs, changes or modifications are permitted to the device.
- Personnel responsible for the installation and operation of this device, must be instructed in accordance with the installation instructions. These Instructions must be kept at a place where they can be freely accessed.

4) Installation Instructions

- Functionality Type: Independently Mounted, open type, Thermostat, for installation inside panels or other suitable electric enclosures.
- The device should be installed in a suitable fixed location, remote from direct sources of heat, and with free ventilation to the device.
- The device is to be mounted on a **DIN EN 60715** compliant rail (refer to mounting guidelines)
- For permanent electrical connection **FIXED WIRING**. Install away from the controlled device with the correct wire type and size for the terminal (refer to wiring guidelines).
- Use copper conductors only, strip insulation length 8 - 12mm
- The device is to be operated in an environment that ensures Pollution Degree 2 IEC 61010 – Normally, only non-conductive contamination may occur. However, a temporary conductivity caused by condensation may be expected. Deposits of moisture such as those that can occur from expected condensation (e.g. the interior of a refrigerated compartment) or defrost water are not anticipated.

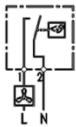
5) Ratings

Models	Voltage	Current/Power	Load Type	Setpoint range(°C)
RTBSM-110.29x; where x may be 0 or 6	240 Vac	16A	Res	0 to 60
	120 Vac	15A	Res	0 to 60
RTBSM-111.29x; where x may be 0 or 6	120 – 240 Vac	12A	LRA	0 to 60
		2A	FLA	
RDBSM-214.29x; where x may be 0 or 6	240 Vac	16A	Res	0 to 60
	120 Vac	15A	Res	0 to 60
	120 – 240 Vac	12A	LRA	0 to 60
2A		FLA		

6) Conformity

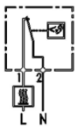
- Overvoltage category **III** – Distribution Level. Fixed wiring and associated equipment (not electrical loads) connected to the primary supply level, Category **IV**.
- Maximum Phase to Ground voltage of the supply source – 150Vac.
- For indoor use only IP00, no aggressive atmospheres.
- This device is not intended to provide safety or protective functionality. A control which starts or regulates the equipment during normal operation.
- Type 2.B Action – Calibration Verification Testing or Functionality Verification testing conducted. control has been investigated for "micro disconnection" applications.
- Endurance Cycle Tested (all types) -Automatic action (A) 100k. -Manual action (M) 10k.
- Deviation and Drift – Range of Set-point temperature: Any. Deviation Tolerance: ±5K. Drift Tolerance: ±5K
- Temperature – Operating Ambient Temperature: 0 °C to 60°C. Shipping and Storage Temperature -45°C to 80°C. Maximum terminal temperature 95°C.

7) Switching Diagrams



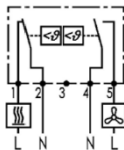
NO(Blue)

RTBSM-111-29x



NC(Red)

RTBSM-110-29x



RDBSM-214-29x

8) Approvals



9) Setting recommendations

Hysteresis (switching difference): $7K \pm 5K$ (Kelvin). When setting the temperature of the thermostat, the largest possible hysteresis must be allowed for.

Example

- Normally closed contact: Set value minus max. hysteresis (12K) = switch on point for heater
- Normally open contact: Set value minus max. hysteresis (12K) = switch off point for fan

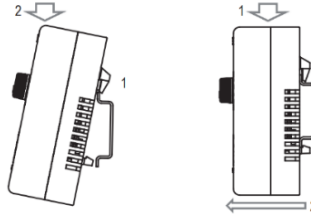
10) Mounting / Demounting Instructions

Mounting:

1. Hang up at the top
2. Press down to snap on

Demounting:

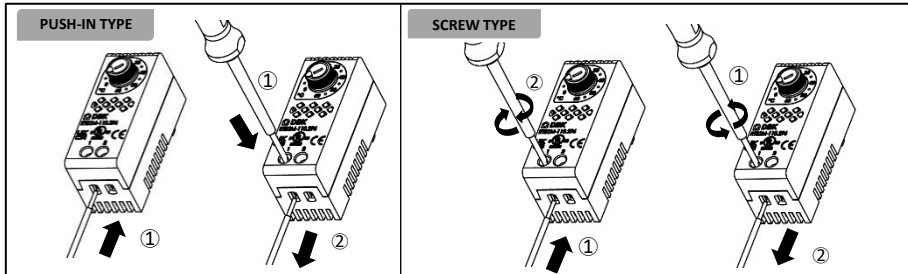
1. Pull downwards
2. Demount in a slanted manner



11) Wire Sizing Acceptability

Terminal Type	Wire Size	Current	Wire Type	Tightening Torque N·m (in·lbs)	Strip insulation length
Screw Type	18-14 AWG	Max. 16A	Copper, Solid or Stranded	0.5 (4.425)	8-12 mm
	20 AWG	Max. 13A			
Push-in Type	18-14 AWG	Max. 16A	Copper, Solid or Stranded	N/A	8-12 mm
	20 AWG	Max.13A			

12) Connection / Disconnection Instructions



CAUTION:

HIGH VOLTAGE – DISCONNECT POWER BEFORE SERVICING.

RISK OF ELECTRIC SHOCK; MORE THAN ONE DISCONNECT SWITCH MAY BE REQUIRED TO DE-ENERGIZE THE DEVICE BEFORE SERVICING.

MISE EN GARDE:

HAUTE TENSION – DÉBRANCHEZ AVANT L'ENTRETIEN.

RISQUE DE CHOC ÉLECTRIQUE; PLUS D'UN INTERRUPTEUR DE DÉCONNEXION PEUVENT ÊTRE DÉACTIVÉS AVANT L'ENTRETIEN.

DANGER:

TO REDUCE THE RISK OF ELECTRIC SHOCK –

DO NOT CONNECT TO A CIRCUIT OPERATING AT MORE THAN 150 VOLTS TO GROUND.

DANGER:

POUR RÉDUIRE LE RISQUE DE DÉCHARGE ÉLECTRIQUE –

NE PAS CONNECTER À UN CIRCUIT FONCTIONNANT À PLUS DE 150 VOLTS À LA TERRE.

13) Warranty

The technical data specified herein have been determined under laboratory conditions and in compliance with generally approved test regulations, in particular EN standards. Technical characteristics can only be warranted to this extent. The testing with regard to the qualification and suitability for the client's intended application or the use under service conditions shall be the client's own duty. We refuse to grant any warranty with regard thereto. (Subject to change without notice.)