**IP54**

**1 195M**

# Electronic temperature control with 3-point output

# RAKE713… RAME743…

**in protective housing, for mounting with a pocket, or on pipes**

CE

**Registered under DM/066 622**

**Electronic temperature control with 3-point output with adjustable proportional range, neutral zone and mixing valve operating time**

## Application

Electronic temperature control for applications in boilers and on heating-, ventilation-and air conditioning equipment. Fitting through a pocket or on pipes.

## Features

- Status indication by LED for power supply and control status
- The set temperature value is not sensitive to temperature changes on the housing (max. ±1K).
- Two, on the contact side reciprocally locked, relays
- Time factor for the pocket according DIN 3440

## Type summary

| *Type* | *Order- Nr.* | *Range , adjustable[°C]* | *Pocket length* |
|---|---|---|---|
| RAKE713.0110M | 011-6501 | 0 ... 60°C / 60 ... 120°C | 100 mm |
| RAKE713.0111M | 011-6502 | 0 ... 60°C / 60 ... 120°C | 150 mm |
| RAKE713.0112M | 011-6503 | 0 ... 60°C / 60 ... 120°C | 200 mm |
| RAKE713.0113M | 011-6504 | 0 ... 60°C / 60 ... 120°C | 280 mm |
| RAKE713.0114M | 011-6505 | 0 ... 60°C / 60 ... 120°C | 450 mm |
| RAKE713.0115M | 011-6506 | 0 ... 60°C / 60 ... 120°C | 600 mm |
| RAME743.011M | 011-6510 | 0 ... 60°C / 60 ... 120°C | with clamping band |

## Technical data

| | | | |
|---|---|---|---|
| Power supply | Voltage | | 230VAC -15...+10%, 50Hz |
| | Power consumption | | approx. 3VA |
| | Low voltage part | | Protection isolated |
| Switching power | Nominal voltage range | | AC 24...250 V / DC 20...300 V |
| | Nominal current range I ($I_M$) | | 0.05…4(4) A cos φ ≥ 0,6 |
| | Service life at nominal load | | min. 100'000 operations |
| Settings | Setting range | set temperature | Double scale 0 … 60°C / 60 … 120°C |
| | DIP - switch: | set temperature | DIP1 Off: 0…60°C / DIP1 On: 60...120°C |
| | | proportional range Xp | DIP2 Off: ± 20K / DIP2 On: ± 10K |
| | | neutral zone Nz | DIP3 Off: ± 3K / DIP3 On: ± 1,5K |
| | | mixing valve operating time | DIP4 Off: ≥ 30s / DIP4 On: ≥ 60s |
| Sensor | Measuring element | | Pt1000 class B (DIN EN 60 751) |
| | Measuring range | | -20 ... +140°C |

| | | |
|---|---|---|
| Calibration | Calibration tolerance | ± 1 K |
| | Time factor in water / in oil | < 45 s / < 60 s |
| Ambient conditions | Housing temperature range | 0 … 50°C (T50) |
| | Max. sensor temperature | 200°C |
| | Ambient temperature for storage and transportation | -20 ... +60°C |
| Standards | CE - conformity | Guide line 89/336/EWG, 93/68/EWG |
| | EMC noise emission | EN50081-1/EN55022B |
| | EMC noise immunity | EN50082-2/EN60730 |
| | Product standard | EN60730-1/-2..-9 |
| | Operation mode | Type 1C (EN60730-1/-2..-9) |
| | Protection class | II according EN60730 |
| Execution | Protection mode | IP54 according EN 60 529 |
| | Socket | Polyamide reinforced (PA), temperature stability up to 120°C |
| | Cover | Polycarbonate (PC), temperature stability up to 120°C |
| | Pocket length R | 100, 150, 200, 280, 450 or 600 mm |
| | Electrical connection | Screw terminals |
| | Cable bushing | M20 and M16 |
| | Weight without packaging and pocket | approx. 255 gr. |

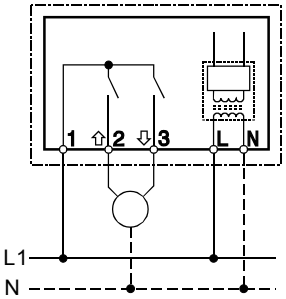
## Fitting notes

Check the mounting instructions inside the packaging.

The required pocket material depends on the installation (medium, tank material etc.) and must be specified by the user.

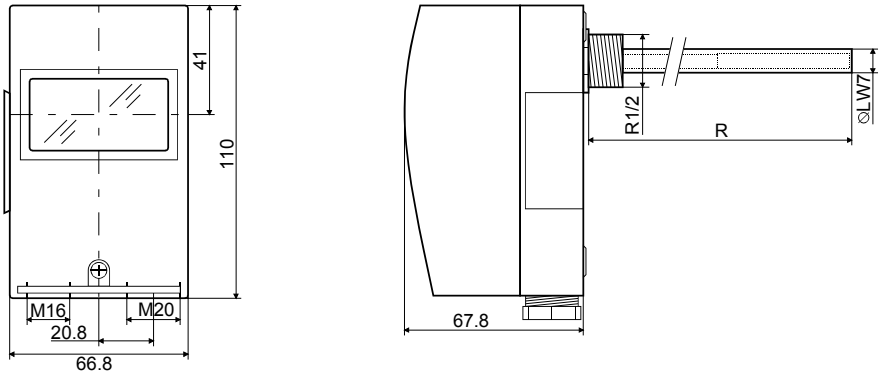
To comply with the time factor requirements according DIN 3440, pockets must be conform to drawing H 1 7111 3459 (see also data sheet "Pockets 1130").

## Wiring diagram/ status indicators

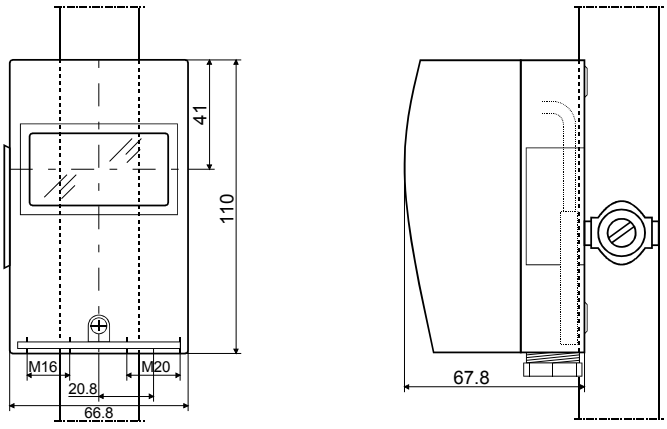



| | | |
|---|---|---|
| Supply status: | yellow LED | |
| Relays status double - LED: | heating | red LED |
| | cooling | green LED |

## Dimensions RAKE




## Dimensions RAME




| | |
|---|---|
| Socket | 005-1054 |
| Cover | 005-0551.3 |