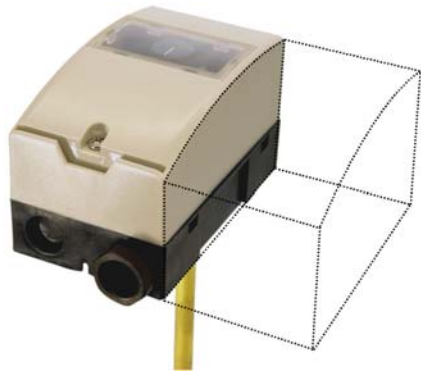


RAKE™ RAME™ RAZE™



Montagevorschrift
Fitting instructions
Instruction de montage



(TW) (Typ 1 B/C)*
Temperaturwächter
Temperature limiter
Thermostat de surveillance

Installation, Einstellung, Benützung und Abbau dürfen ausschliesslich durch Elektrofachkräfte erfolgen.

Installation, calibrating, usage and removal may only be carried out by qualified electricians.

L'installation, le réglage, l'utilisation et le démontage doivent exclusivement être exécutés par des électriciens professionnels.

* Safety
DIN EN 60730-1
DIN EN 60730-2-9

* EMC
DIN EN 60730-1

Software-Klasse A
Software-class A
Software-classe A

L - N: 230VAC
I: 3VA
U_{eff}: AC 12...250 V
DC 10...300V
I (I_M): 0,1...8(4)A

Elektrische Anschlüsse:
Schraubklemmen für 0,5...2,5mm² Draht

Anschlusskabel:
H05VV2-F 3G1+2G1 (T_{max.} ≥ 100°C)

Verschmutzungsgrad:
Normal

Lebensdauer bei Nennlast:
mind. 100'000 Schaltungen

L - N: 230VAC
I: 3VA
U_{eff}: AC 12...250 V
DC 10...300V
I (I_M): 0,1...8(4)A

Electrical connectors:
screw terminals for 0,5...2,5mm² wire

Connection cable:
H05VV2-F 3G1+2G1 (T_{max.} ≥ 100°C)

Degree of pollution:
Normal

Service life under nominal load:
min. 100'000 Operations

L - N: 230VAC
I: 3VA
U_{eff}: AC 12...250 V
DC 10...300V
I (I_M): 0,1...8(4)A

Contacts électriques:
bornes à vis pour câble 0,5...2,5mm²

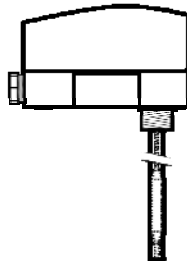
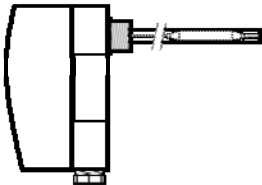
câble de raccordement:
H05VV2-F 3G1+2G1 (T_{max.} ≥ 100°C)

Cond. d'environnem. pour pollution:
Normal

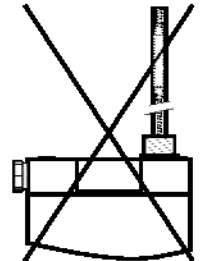
Longévité en charge nominale:
min. 100'000 commutations

1

Empfehlenswert:
Recommended:
A recommander:



Unzulässig:
Forbidden:
Interdit:



2 Die richtige Wahl des Schutzrohrmaterials **ist Sache des Anwenders** und ist abhängig von:
Medium, Behältermaterial, Druck, etc.
Die Schutzrohre dürfen nicht mit Öl gefüllt werden. Die Verwendung von Wärmeleitpaste o.ä. beim Einbau des Fühlrohrs in ein Schutzrohr ist unzulässig.

The choice of the correct pocket material depends on the installation (medium, tank material, pressure, etc.) and **must be specified by the user**. The pockets must not be filled with oil. It is not permissible to use thermally conductive paste (or similar) when installing the sensing element in pocket.

Le choix de la matière de la gaine de protection dépend de l'installation et **doit être fait par l'utilisateur**. Les gaines de protection ne doivent pas être remplies d'huile. L'emploi de pâte thermoconductrice ou autre lors de l'incorporation de la sonde dans une gaine est également interdit.

∅ = 130°C

Schutzrohre aus Messing oder CrNi - Stahl
Use brass or CrNi steel pocket
Utiliser gaines en laiton ou en CrNi acier



Ms

∅ > 130°C...250°C

Schutzrohre aus CrNi - Stahl
Use steel pocket CrNi
Utiliser gaines en acier CrNi



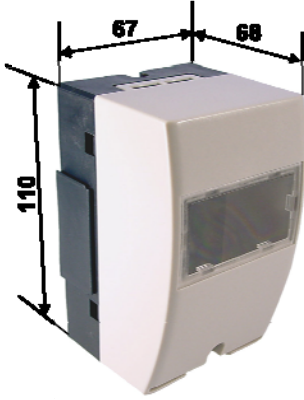
CrNi

∅ = 130°C...190°C

Montage mit 1 Distanzstück
Mounting with 1 spacer
Montage avec 1 entretoise

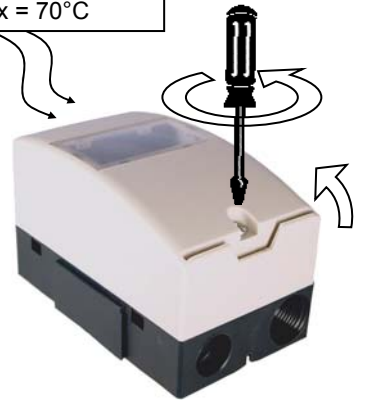


3



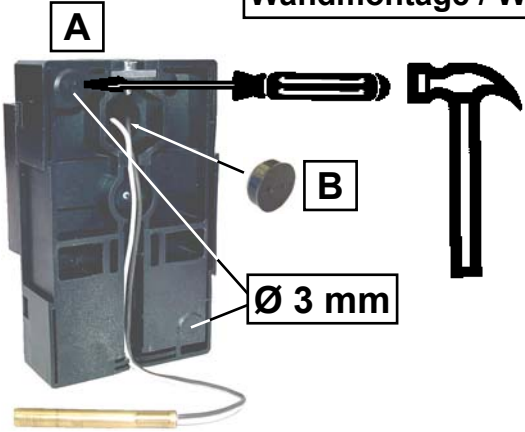
IP54
EN60529

Ø max = 70°C



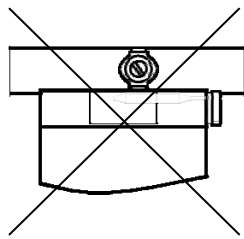
4

Wandmontage / Wall mounting / Montage mural



5

Rohrmontage / Pipe mounting / Montage sur le conduit



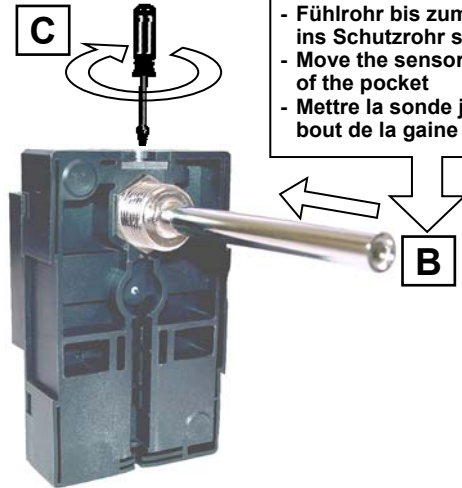
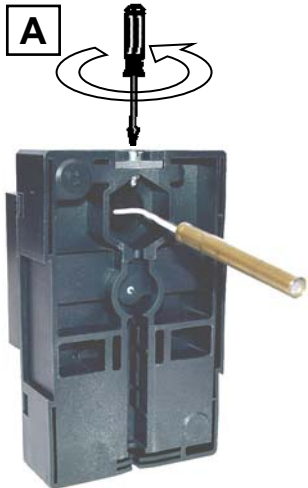
Ø 1/2" bis 3"



Ts = 120°C

6

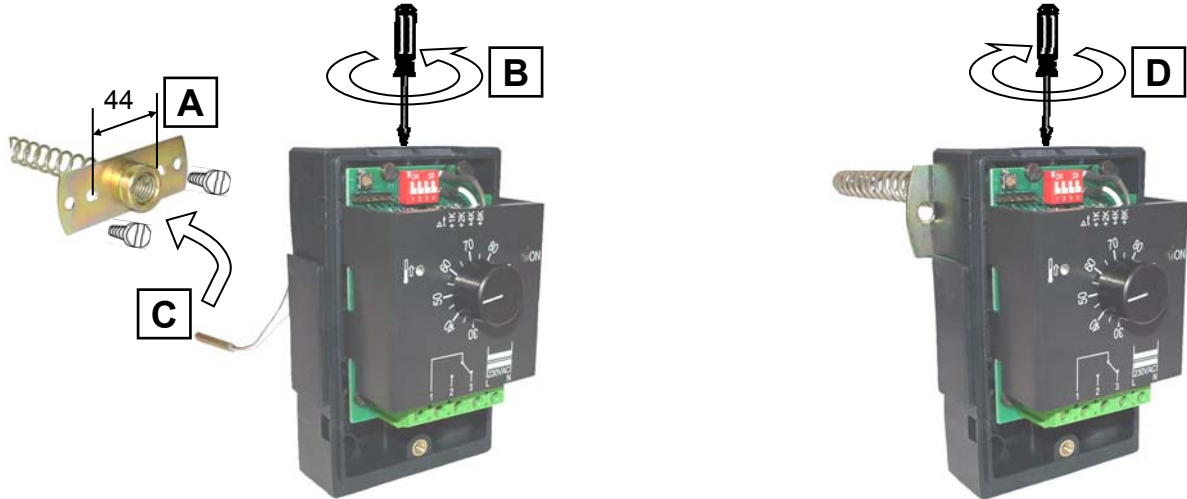
Montage auf Tauchhülse / Pocket mounting / Montage gaine protection



- Fühlrohr bis zum Anschlag ins Schutzrohr stecken
- Move the sensor to the end of the pocket
- Mettre la sonde jusque en bout de la gaine protection

7

Luftkanalmontage / Air-duct mounting / Montage canal d'air



8

Doppelthermostat / Dual control thermostats / Thermostat double



**Aufbau
Structure
Construction**

Verdrahtung Bauseitig
Wiring by installing
Câblage par l'installation



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Thermische Schaltdifferenz Δt : 0,5 ... 15,5K
 Grundwert: 0,5K
 Zuschaltbar: DIP1 +1K
 DIP2 +2K
 DIP3 +4K
 DIP4 +8K

Thermal differential Δt : 0,5 ... 15,5K
 Basic value: 0,5K
 Insert able: DIP1 +1K
 DIP2 +2K
 DIP3 +4K
 DIP4 +8K

Différentiel thermique Δt : 0,5 ... 15,5K
 Valeur fondamentale: 0,5K
 Insérable: DIP1 +1K
 DIP2 +2K
 DIP3 +4K
 DIP4 +8K



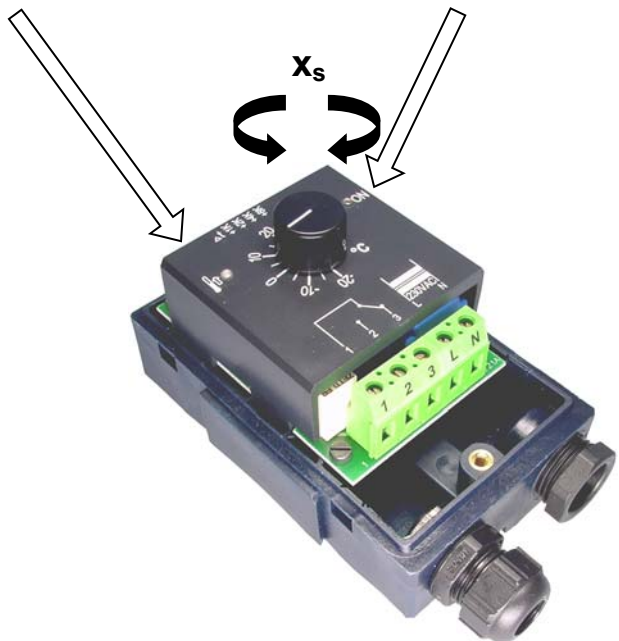
10

Rot: Heizen
Aus: Kühlen

Red: Heating
Off: Cooling

Rouge: Chauffer
Outre: Refroidir

Gelb: Speisespannung
Yellow: Input terminal voltage
Jaune: tension de farine



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Sollwert Einstellbereich: DIP1 ON $x_s: 60 \dots 120^\circ\text{C}$
 DIP1 OFF $x_s: 0 \dots 60^\circ\text{C}$
 Proportionalband: DIP2 ON $x_p: \pm 10\text{K}$
 DIP2 OFF $x_p: \pm 20\text{K}$
 Neutralzone: DIP3 ON $Nz: \pm 1,5\text{K}$
 DIP3 OFF $Nz: \pm 3,0\text{K}$
 Mischerlaufzeit: DIP4 ON $T\Delta y_{100\%} \geq 60\text{s}$
 DIP4 OFF $T\Delta y_{100\%} \geq 30\text{s}$

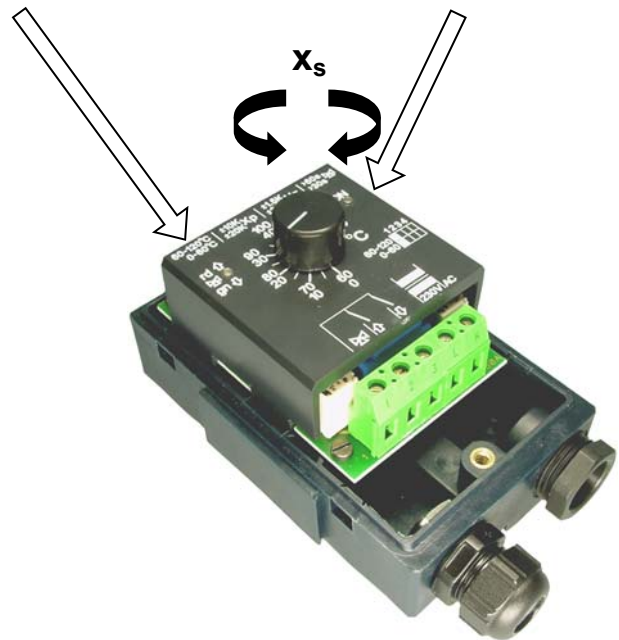
Set point range: DIP1 ON $x_s: 60 \dots 120^\circ\text{C}$
 DIP1 OFF $x_s: 0 \dots 60^\circ\text{C}$
 Proportional band: DIP2 ON $x_p: \pm 10\text{K}$
 DIP2 OFF $x_p: \pm 20\text{K}$
 Neutral zone: DIP3 ON $Nz: \pm 1,5\text{K}$
 DIP3 OFF $Nz: \pm 3,0\text{K}$
 Valve transition time: DIP4 ON $T\Delta y_{100\%} \geq 60\text{s}$
 DIP4 OFF $T\Delta y_{100\%} \geq 30\text{s}$

Plage valeur consigne: DIP1 ON $x_s: 60 \dots 120^\circ\text{C}$
 DIP1 OFF $x_s: 0 \dots 60^\circ\text{C}$
 Bande proportionnelle: DIP2 ON $x_p: \pm 10\text{K}$
 DIP2 OFF $x_p: \pm 20\text{K}$
 Zone de neutralité: DIP3 ON $Nz: \pm 1,5\text{K}$
 DIP3 OFF $Nz: \pm 3,0\text{K}$
 Temps de course: DIP4 ON $T\Delta y_{100\%} \geq 60\text{s}$
 DIP4 OFF $T\Delta y_{100\%} \geq 30\text{s}$

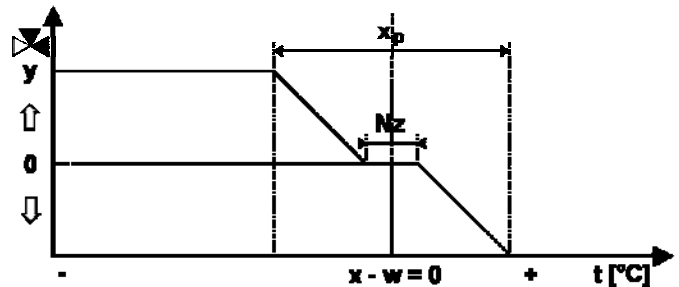


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Rot: Mischer öffnet
 Grün: Mischer schliesst
 Red: valve command open
 Green: valve command close
 Rouge: mélangeur ouvre
 Outre: mélangeur ferme
 Gelb: Speisespannung
 Yellow: Input terminal voltage
 Jaune: tension de farine



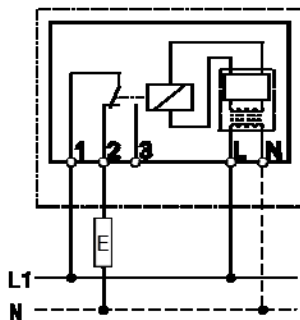
13



14

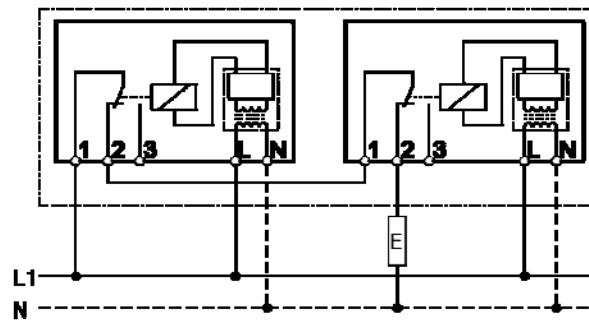
TW

$I (I_M) = 8(4)\text{A} / 250\text{VAC}$



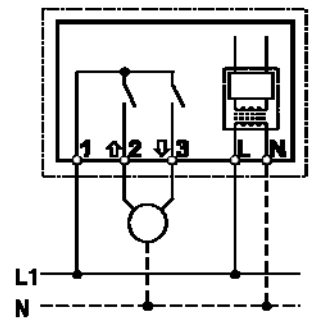
TW / TW

$I (I_M) = 8(4)\text{A} / 250\text{VAC}$



3-P

$I (I_M) = 4(4)\text{A} / 250\text{VAC}$



Technische Änderungen vorbehalten / Technical subject to change / Des modifications techniques réserver