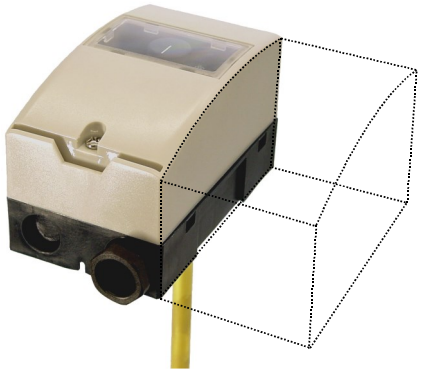
RAKE™ RAME™ RAZE™



Montagevorschrift
Fitting instructions
Instruction de montage

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.

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

* 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

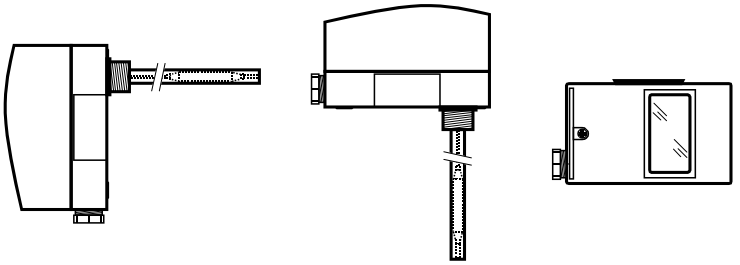
câble de raccordement:
H05VV2-F 3G1+2G1 ($T_{max.}$ ≥ 100°C)

Cond. d'environnem. pour pollution:
Normal

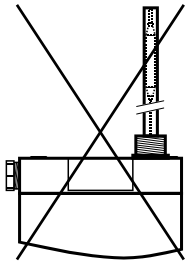
Longévité en charge nominale:
min. 100'000 commutations

1

Empfehlenswert:
Recommended:
A recommander:



Unzulässig:
Forbidden:
Interdit:



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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.

ϑ = 130°C

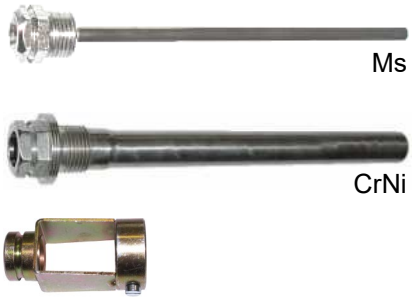
ϑ > 130°C...250°C

ϑ = 130°C...190°C

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

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

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



Registrierungsnummern:
14503 (ISO 9001:2015, ISO 14001:2015)
41005 (Druckgeräterichtlinie 2014/68/EU Module B)
47347 (Druckgeräterichtlinie 2014/68/EU Module D)

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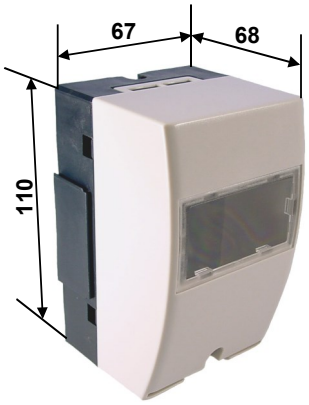
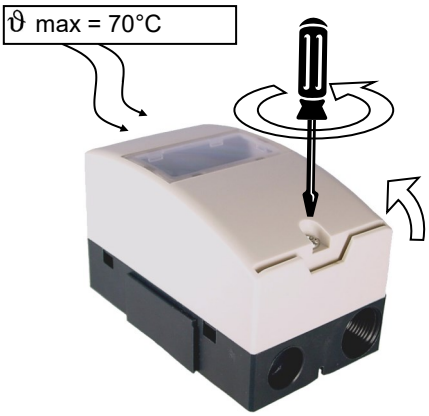
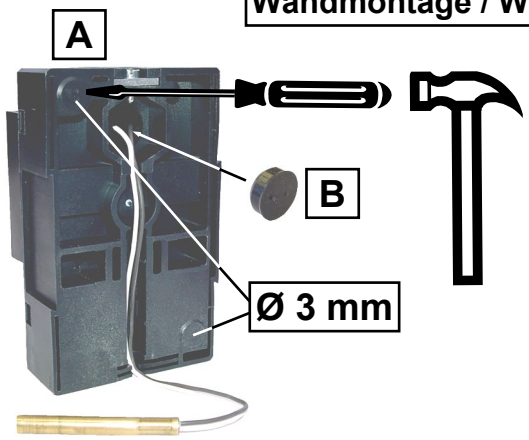


IP54
EN60529



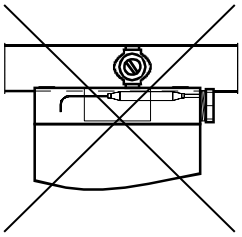
4 Wandmontage / Wall mounting / Montage mural





5 Rohrmontage / Pipe mounting / Montage sur le conduit

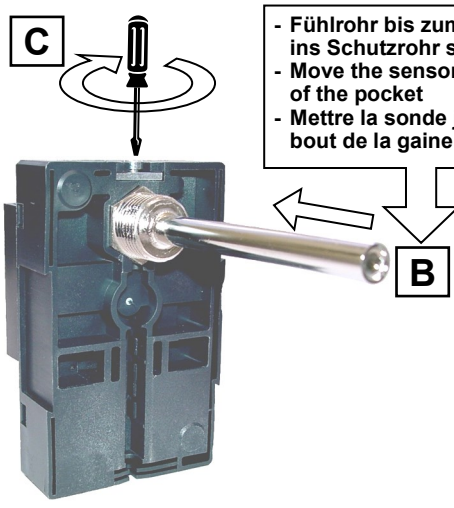






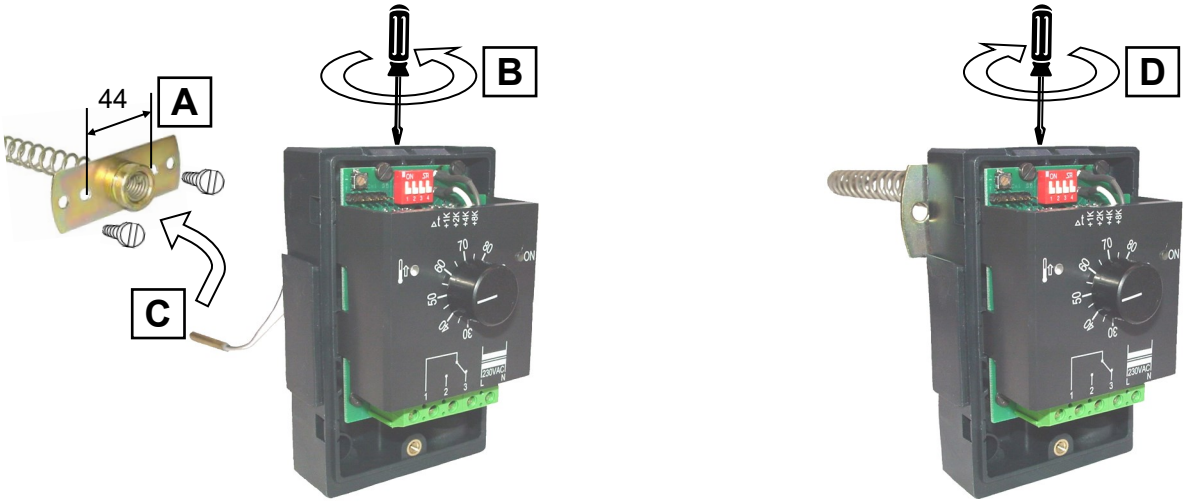
6 Montage auf Tauchhülse / Pocket mounting / Montage gaine protection





- 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

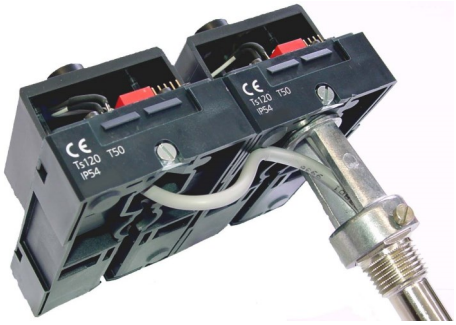


8 Doppelthermostat / Dual control thermostats / Thermostat double



Aufbau
Structure
Construction

Verdrahtung Bauseitig
Wiring by installing
Câblage par l'installation



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Thermische Schaltdifferenz ∆t:		**0,5 ... 15,5K**
Grundwert:		0,5K
Zuschaltbar:	DIP1	+1K
	DIP2	+2K
	DIP3	+4K
	DIP4	+8K
Thermal differential ∆t:		**0,5 ... 15,5K**
Basic value:		0,5K
Insert able:	DIP1	+1K
	DIP2	+2K
	DIP3	+4K
	DIP4	+8K
Différentiel thermique ∆t:		**0,5 ... 15,5K**
Valeur fondamentale:		0,5K
Insérable:	DIP1	+1K
	DIP2	+2K
	DIP3	+4K
	DIP4	+8K



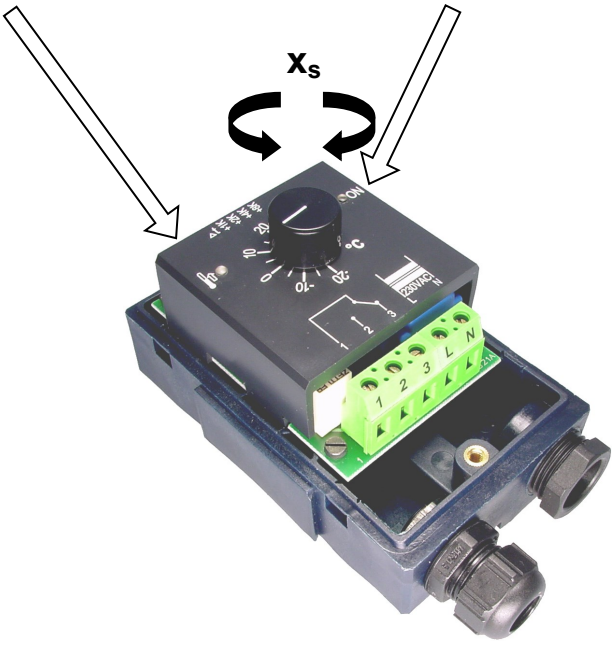
10

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 … 120°C
	DIP1 OFF	x_s: 0 … 60°C
Proportionalband:	DIP2 ON	x_p: ± 10K
	DIP2 OFF	x_p: ± 20K
Neutralzone:	DIP3 ON	Nz: ± 1,5K
	DIP3 OFF	Nz: ± 3,0K
Mischerlaufzeit:	DIP4 ON	$T\Delta y_{100\%} \geq 60s$
	DIP4 OFF	$T\Delta y_{100\%} \geq 30s$

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

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



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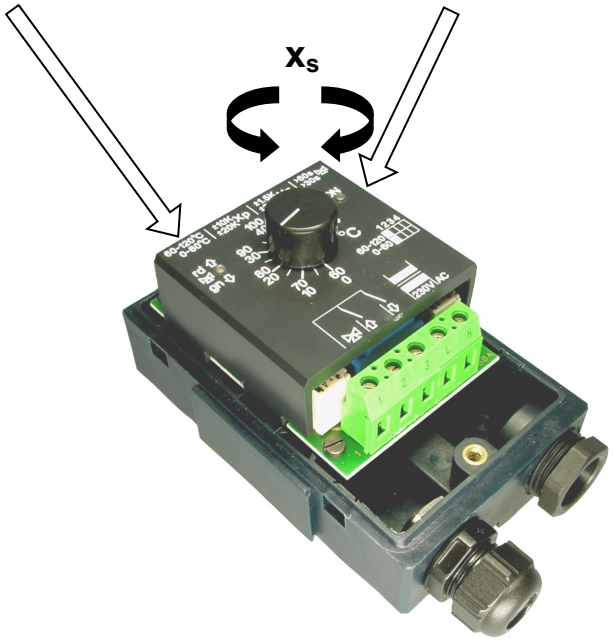
Rot: Mischer öffnet
Grün: Mischer schliesst

Red: valve command open
Green: valve command close

Rouge: mélangeur ouvre
Outre: mélangeur ferme

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



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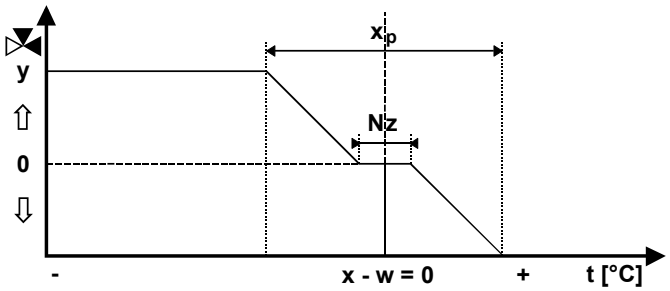

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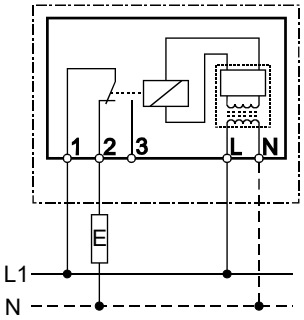
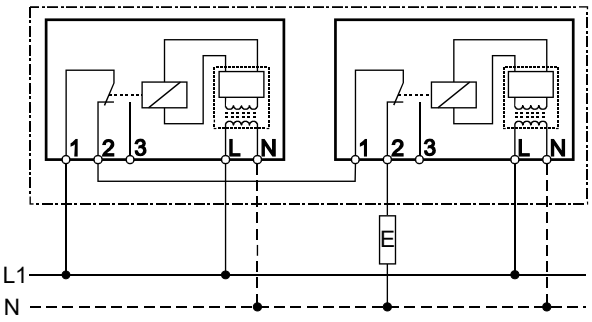
TW

I (I_M) = 8(4)A / 250VAC



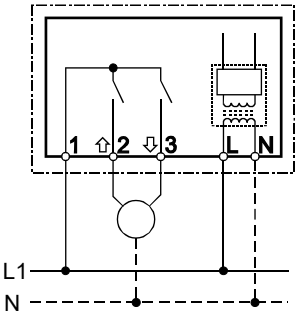
TW / TW

I (I_M) = 8(4)A / 250VAC



3-P

I (I_M) = 4(4)A / 250VAC



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