



Please read these Operating Instructions before commissioning the instrument. Keep the manual in a place that is accessible to all users at all times. Please assist us to improve these operating instructions, where necessary. Your suggestions will be appreciated.

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All necessary settings and, where appropriate, alterations inside the instrument are described in these operating instructions. If any difficulties should still arise during commissioning, you are asked not to carry out any unauthorized manipulations on the unit. You could endanger your rights under the instrument warranty! Please contact the nearest subsidiary or the head office in such a case.

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1 Introduction

1.1 Typographical conventions

1.1.1 Warning signs



Danger

This symbol is used when there may be **danger to personnel** if the instructions are ignored or not followed correctly!



Caution

This symbol is used when there may be **damage to equipment** if the instructions are ignored or not followed correctly!

1.1.2 Note signs



Note

This symbol is used when your **special attention** is drawn to a remark.



Reference

This symbol refers to **further information** in other chapters or sections.

abc¹

Footnote

Footnotes are remarks that **refer to specific points** in the text. Footnotes consist of two parts:

A marker in the text, and the footnote text.

The markers in the text are arranged as continuous superscript numbers.

The footnote text (in smaller typeface) is placed at the bottom of the page and starts with a superscript number.

*

Action

This symbol indicates that an **action to be performed** is described.

The individual steps are marked by this asterisk, e.g.

* Select setpoint

1.2 Application

Depending on the version, the explosion-protected surface-mounting thermostat type ATH-EXx can be used as a

- TW temperature monitor
- TB temperature limiter
- STW fail-safe temperature monitor
- STB break-proof protection temperature limiter

in areas with an explosion hazard caused by gases, vapors or mists, Zone 1 or in areas with combustible dust or dust/air mixtures, Zone 21.



If this surface-mounting thermostat is used inside the hazardous area, the relevant regulations for mounting and operating equipment in such an area must be observed.

Cutting through or kinking the capillary of the surface-mounting thermostat, type ATH-EXx, will result in permanent failure of the instrument!

1.3 Ex marking

II 2G EEx ed IIC T6 or T5 for potentially explosive gas atmospheres

II 2D IP65 T80°C for potentially explosive dust atmospheres

Test certificate: PTB 03 ATEX 1187

CE marking and No. of notified body: CE 0044.

1.4 Safety notes



Filling liquid may escape in the event of a measuring system fracture. At present there is no restrictive statement from the health authorities concerning any danger to health over short periods and at low concentration, e.g. after a fracture of the measuring system.

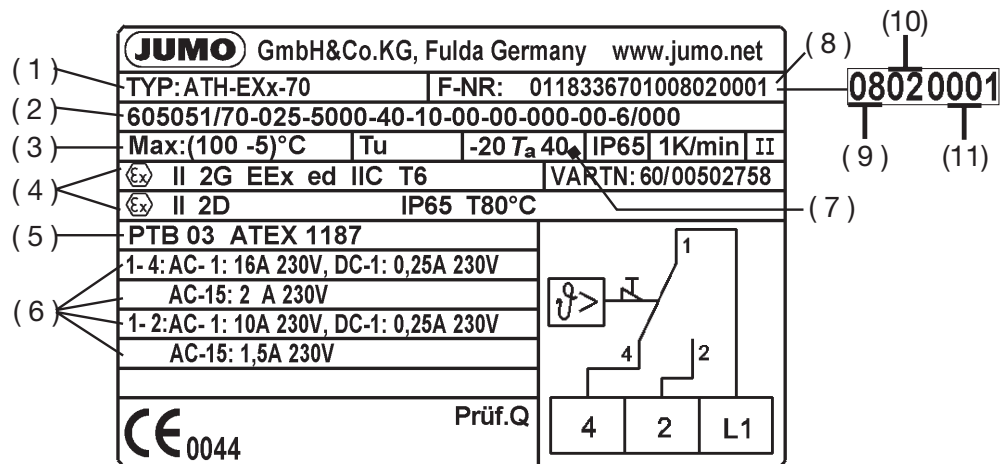
Physical and toxicological properties of the substances that may escape in the event of a system fracture.

End of scale °C	Dangerous reaction	Fire and explosion hazard		Water conta- mination	Toxicological data		
		Ignition temp. °C	Explosion limit % v/v		irritant	danger to health	toxic
< +200	–	+355	0.6 – 8 V	X	X	X	–
≥ +200 ≤ +350	–	+490	0.8 – 14.5 V	X	X	X	–
> +350 ≤ 500	–	–	–	–	–	–	–

– = no; X = yes

2 Instrument identification

2.1 Nameplate



- (1) Type ⇒ Chapter 2.2 “Type designation”, page 7
- (2) Type code
- (3) Control range or limit value range / ambient temperature at which this thermostat was calibrated (option)
- (4) Ex-protection marking
- (5) Testing laboratory / certification
- (6) Switching capacity
- (7) Permissible ambient temperature
- (8) Serial number
- (9) Year of production
- (10) Week of production
- (11) Running serial device number

2 Instrument identification

2.2 Type designation

ATH-EXx-. . .

ATH Surface-mounting thermostat (with capillary)

EXx Marking for explosion-protected version

. . Code number for the function:

2 = Temperature monitor **(TW)**

with changeover contact.

Limit adjustable within the housing.

7 = Temperature limiter **(TB)**

with changeover contact and restart lock-out.

Limit adjustable within the housing.

7-F = Temperature limiter **(TB)**

with changeover contact and restart lock-out.

Limit is factory-set.

20 = Fail-safe temperature monitor **(STW)**

with changeover contact.

Limit adjustable within the housing.

70 = Break-proof protection temperature limiter **(STB)**

with change-over contact and restart inhibit.

The limit value can be set by the installing engineer – before commissioning the plant – within the housing.

70-F = Break-proof protection temperature limiter **(STB)**

with change-over contact and restart inhibit.

Limit value set to a fixed value at the factory.

F = Designation for factory-set limit setting.

3.2 Opening the surface-mounting thermostat

- * Unscrew the 4 cover screws (2)
 - * Remove cover (3) with seal (not visible)
-



Make sure that the seal is seated correctly when reassembling!

3.3 Fixing the surface-mounting thermostat

Mounting position

- To DIN 16257, NL 0 – NL 90 (other NL on request)
- * Drill fixing holes according to the drilling diagram.
 - * Use the 4 screws to secure the housing base.
-

3.4 Capillary / temperature probe / pocket

3.4.1 General



Cutting through or kinking the capillary of the surface-mounting thermostat will lead to permanent instrument failure!

Minimum permissible bending radius of the capillary is 5 mm.

The temperature probe must be mounted in a JUMO pocket, otherwise the approval of the surface-mounting thermostat becomes invalid.



The temperature probe must completely immersed in the medium to be measured.

To ensure their overall accuracy, the thermostats must only be used together with the pockets supplied by the factory (diameter $D = 8, 10$ or 15 mm).

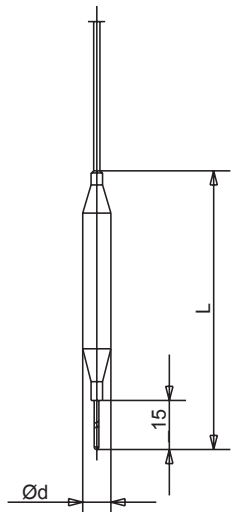
Pockets with a diameter $D = 10$ mm must only be fitted with probes with diameter $d = 8$ mm.

Fitting several probes into a common pocket is only permitted with 2 or 3 probes (mounting type "A", diameter $d = 6$ mm) and 15×0.75 mm pockets. When fitting 2 probes in a common pocket, the factory-supplied spring clip must be fitted in the pocket.

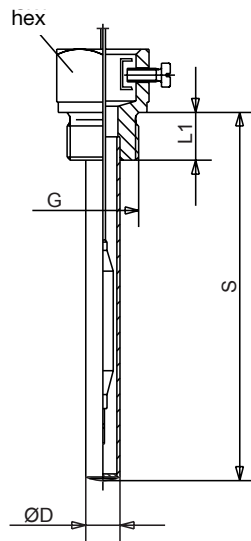
For operation in air, probe mounting type "A" (without pocket) must be chosen.

3 Mounting

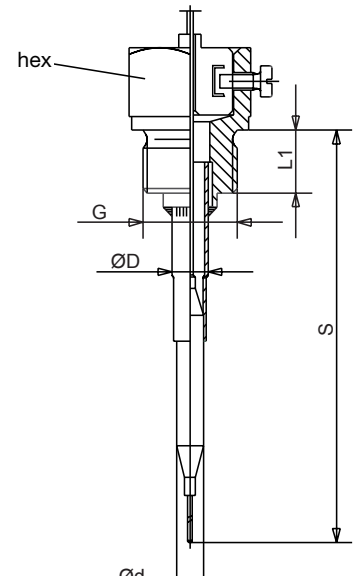
3.4.2 Approved probes and protection tubes (pockets)



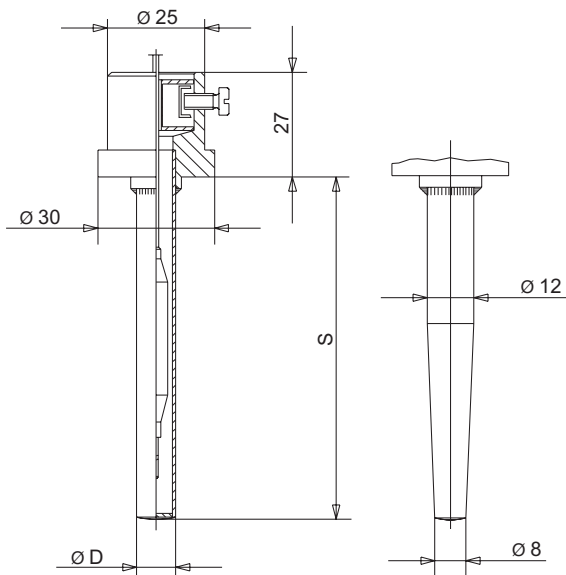
A
Plain cylindrical probe



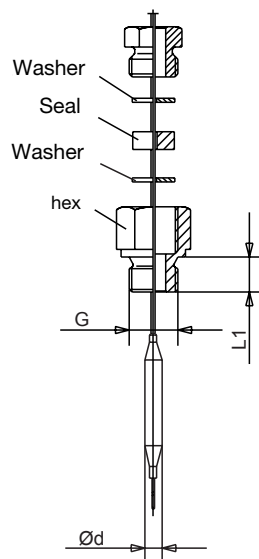
U
Screw-in pocket with screw-in spigot. Form A to DIN 3852/2. With fixing screw.



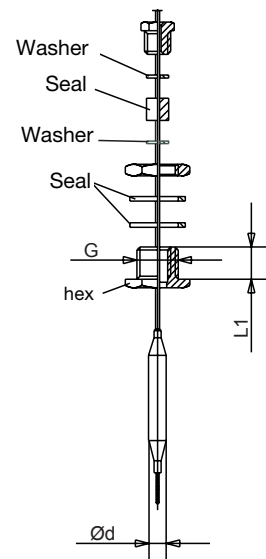
UO
Screw-in pocket without closed end, screw-in spigot Form A to DIN 3852/2. With fixing screw and clip.



US
Weld-in pocket with fixing screw and clip.



Q
Threaded at both ends, for retrofitting. Oil-resistant seal. For temperatures up to +200°C.



V
Sealing gland, for retrofitting. Oil-resistant seal. For temperatures up to +200°C.

3.5 Permissible operating conditions at the pocket

3.5.1 Probe mountings U and US

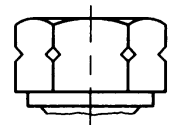


The values given below refer to the maximum loading on the probe mounting concerned. The maximum pressure which can be sealed depends on the mounting conditions and may possibly be lower.

3.5.1.1 Steel pockets

Materials

Tube: St 35.8 I
 Screw-in nipple up to 300°C: 9 SMnPb.28 K
 Screw-in nipple up to 450°C: 16 Mo 3 (turned groove)
 Weld-in nipple: 16 Mo 3 (no turned groove)



Loading

Temperature	Tube diameter		
	8 x 0.75 mm or conical	10 x 0.75 mm	15 x 0.75 mm
	max. permissible pressure	max. permissible pressure	max. permissible pressure
100°C	89 bar	72 bar	48 bar
150°C	83 bar	67 bar	45 bar
200°C	78 bar	63 bar	42 bar
300°C	59 bar	47 bar	32 bar
400°C	46 bar	37 bar	25 bar
450°C	24 bar	19 bar	13 bar



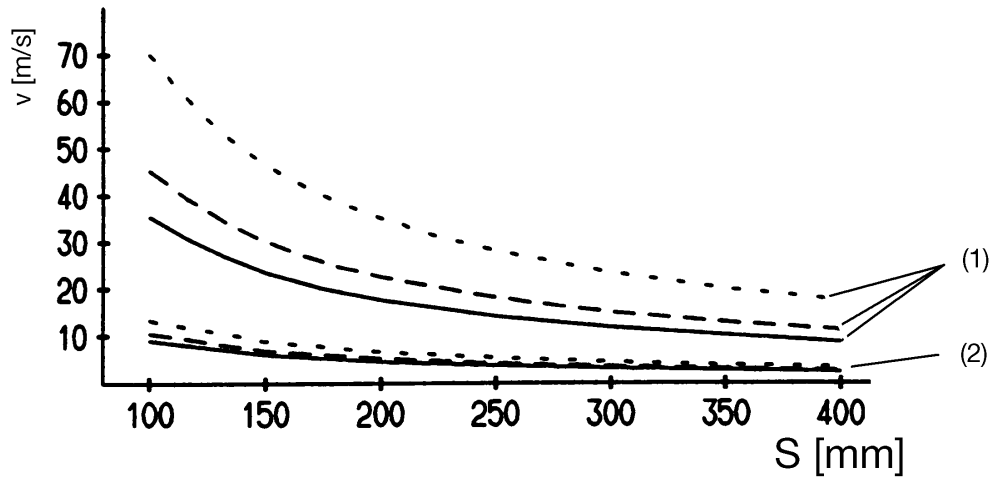
With operating temperatures above 420°C, the permissible operating time is limited to 200,000 hours. TRD 508 must be observed in this respect.

3 Mounting

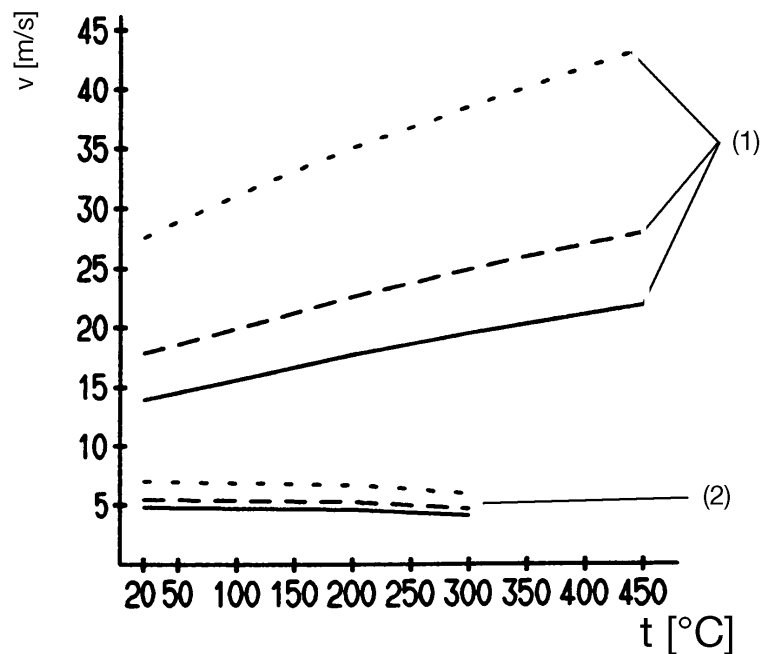
Permissible incident flow velocity

Temperature:	+200°C
Thermal medium:	air (1) water, oil (2)
Tube diameter D:	_____ 8 mm - - - - - 10 mm 15 mm

Permissible incident flow velocity "v" at the maximum permissible pressure loading and different immersion tube lengths "S"



Permissible incident flow velocity "v" at the maximum permissible pressure loading and different immersion tube temperatures "t"



3 Mounting

3.5.1.2 Stainless steel pocket

Materials	Tube:	X 6 CrNiMoTi 17122
	Screw-in/weld-in nipple:	X 6 CrNiMoTi 17122

Loading

Temperature	Tube diameter		
	8 x 0.75 mm or conical	10 x 0.75 mm	15 x 0.75 mm
	max. permissible pressure	max. permissible pressure	max. permissible pressure
100°C	92 bar	74 bar	50 bar
150°C	88 bar	71 bar	48 bar
200°C	83 bar	67 bar	45 bar
300°C	72 bar	58 bar	39 bar
400°C	67 bar	54 bar	36 bar

Permissible incident flow velocity on request

3.5.1.3 Brass pocket

Material CuZn

Loading

Temperature	Tube diameter		
	8 x 0.75 mm	10 x 0.75 mm	15 x 0.75 mm
	max. permissible pressure	max. permissible pressure	max. permissible pressure
100°C	50 bar	40 bar	27 bar
150°C	48 bar	39 bar	26 bar

Permissible incident flow velocity on request

3 Mounting

3.5.2 Probe mountings A, H, Q, UO, V

Materials Choice of steel, stainless steel or brass

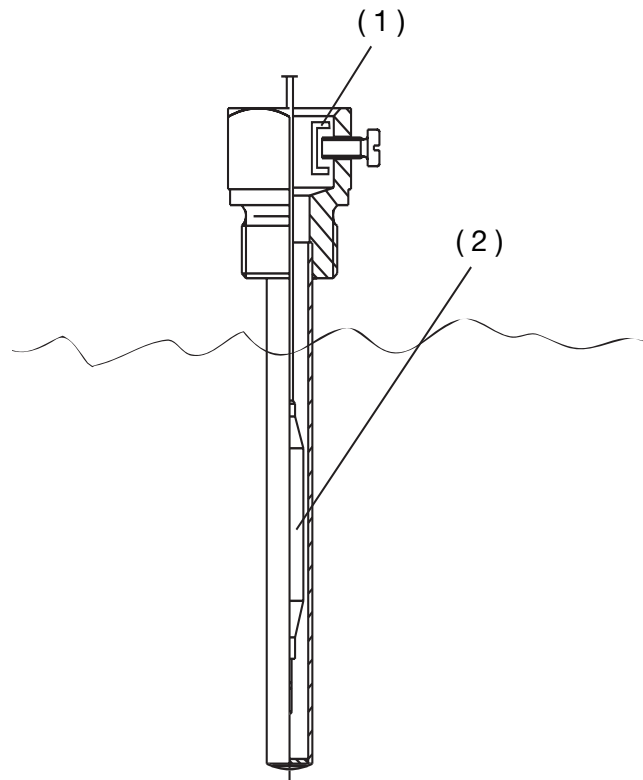
Loading Only for use in unpressurized media.

Probe mounting	H	Q, V	A, UO
Maximum temperature	+55°C	+200°C	+500°C

3.6 Mounting the probe



The temperature probe (2) must be immersed in the medium for its entire length, otherwise there will be appreciable deviations from the switching point. In the case of probe mountings U, UO and US, the temperature probe is secured in the pocket by a clamping clip (1).



4.1 Regulations and notes



In case of electrical connections in a potentially explosive area, it is necessary to comply with the relevant specifications.

- The electrical connection must only be carried out by qualified personnel.
 - The choice of cable, the installation and the electrical connection must conform to the requirements of VDE 0100 “Regulations on the Installation of Power Circuits with Nominal Voltages below 1000 V” or the appropriate local regulations.
 - If contact with live parts is possible while working on the instrument, it must be completely disconnected from the electrical supply.
 - Earth the instrument at the PE terminal to the protective earth conductor. This cable must have at least the same cross-section as used for the supply cables. Earthing cables must be wired in a star configuration to a common earth point that is connected to the protective earth conductor of the electrical supply. Do not loop earthing cables, i.e. do not run them from one instrument to another.
 - Apart from faulty installation, incorrect settings on the thermostat can also affect the proper functioning of the subsequent process or lead to damage. Setting up must therefore be restricted to qualified personnel. Please observe the relevant safety regulations for such matters.
-

4 Installation

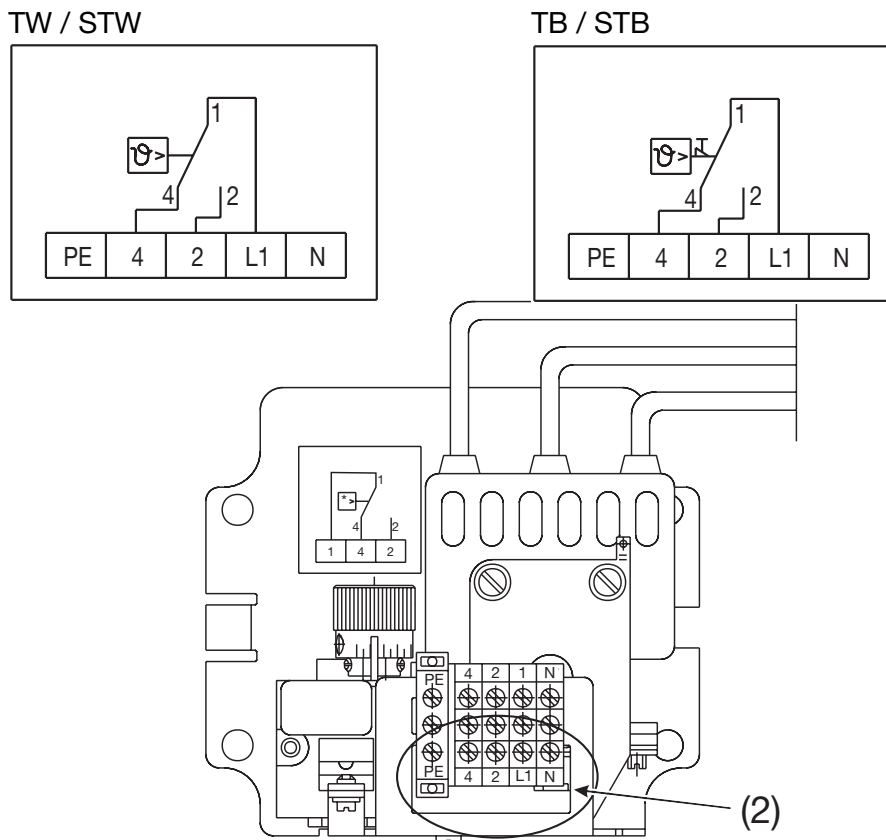
4.2 Electrical connection

- * Open the housing.
⇒ “Opening the surface-mounting thermostat”, page 9
- * Pass the connection cable (cable diameter 6 to 12 mm) through the Ex cable compression gland (1).
⇒ “Dimensions”, page 8
- * Make the connection to the terminals (2) in accordance with the connection diagram.
- * Fitting type X (no special tools).
- * The connecting cable must have a fixed installation.



- * Connect the protective earth conductor to the PE terminal.
-
- * Position the connecting cable in the housing and tighten the Ex cable compression gland (1), using the tightening torque given below:
⇒ “Dimensions”, page 8
- Screw-in thread (1.1) into housing = 3.75 Nm
Compression screw (1.2). = 3.50 Nm for 6 mm cable diameter
Compression screw (1.2). = 2.50 Nm for 12 mm cable diameter

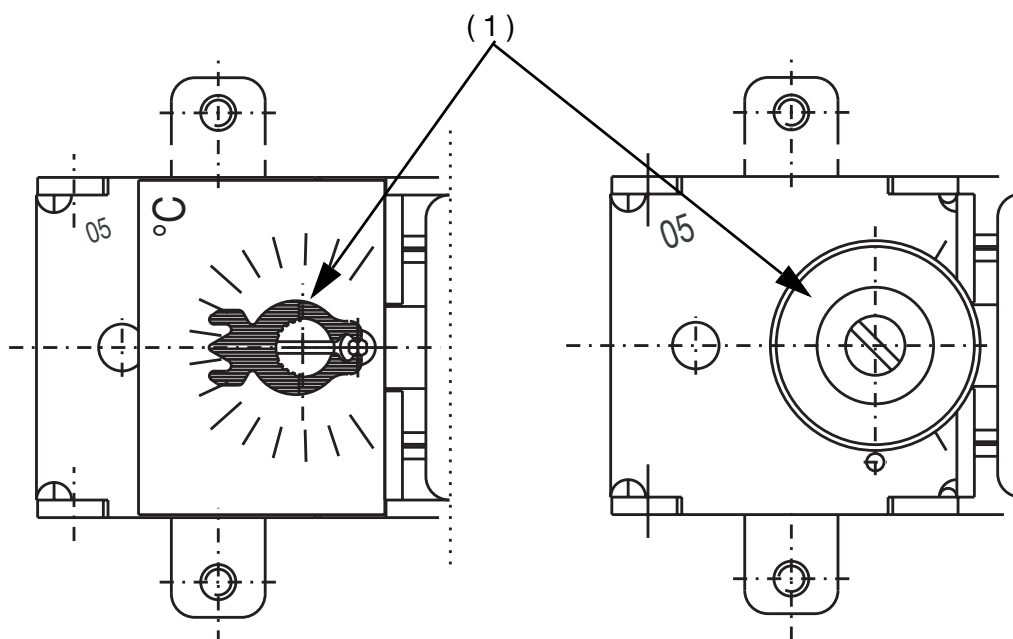
4.3 Connection diagrams



5.1 Limit setting

5.1.1 TW, STW, TB (code 7)

- * Open the housing.
⇒ “Opening the surface-mounting thermostat”, page 9
- * Set the limit on the setpoint spindle (1).



5.1.2 STB (code 70)



Important note for setup and operation!

When the thermostat is used as a safety device for explosion protection in accordance with EU Directive 94/9/EC Annex II Sec. 1.5, a **functional test** is required that conforms to the applicable regulations.

The switching point must be fixed **by the installation engineer** after thermally testing individual items, and **secured against alteration**. Several aspects must be observed:

- the probe geometry and thermal coupling
- the maximum ambient temperature
- the maximum product temperature

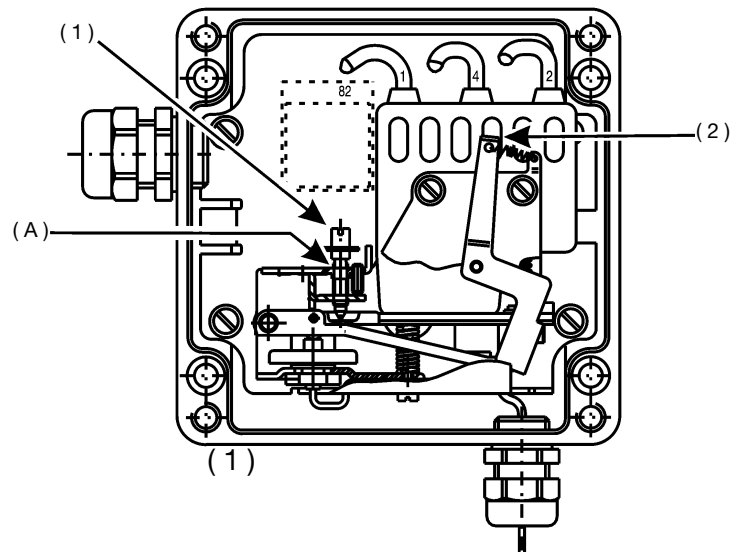
Setting the limit according to the scale

- * Open the housing.
⇒ “Opening the surface-mounting thermostat”, page 9
- * Set the limit on the setpoint spindle (1) against the internal scale.
- * Secure this setting by sealing the setpoint spindle (1), for instance with “red” thread sealing wax, temperature resistant to at least +80°C)

5 Settings

Setting the limits according to specific system characteristics

- * Open the housing. → “Opening the surface-mounting thermostat”, page 9
- * Warm up the temperature probe – in the system – to the intended limit temperature (allow at least 5 minutes for the temperature to equalize), while using a calibrated reference measuring device to measure and observe the precise temperature at the temperature probe.
- * Determine the required switching position (circuit 1-4 opens and circuit 1-2 closes) by rotating the setpoint spindle (1) from the end of the scale in the direction of the start of the scale.
- * Secure this setting by sealing the setpoint spindle (1), for instance with “red” thread sealing wax, temperature resistant to at least +80°C.



A = secure the limit setting by sealing the setpoint spindle with “red” thread sealing wax.

(2) reset arm

5.1.3 TB, STB (code 7-F or 70-F)



Important note for setup and operation!

When the thermostat is used as a safety device for explosion protection in accordance with EU Directive 94/9/EC Annex II Sec. 1.5, a **functional test** is required that conforms to the applicable regulations.

In addition, suitable measures (such as calculation, thermal testing of individual items) must be used to document that the switching point set by the manufacturer prevents the temperature exceeding the given limit. The specific local and operating conditions must be taken into account, such as:

- the probe geometry and thermal coupling
- the maximum ambient temperature
- the maximum product temperature



- The limit setting is fixed at the factory.
- Alteration is not permitted.

5.2 Resetting the TB or STB limiter

If the temperature at the probe goes above the limit that has been set, the electrical circuit 1-4 is opened and remains mechanically locked out. When the critical temperature has fallen to about 9-15% below the set limit, the TB or STB can be reset manually.

- * Open the housing.
 - ⇒ “Opening the surface-mounting thermostat”, page 9
- * Press the reset arm (2) in the direction of the arrow.
 - ⇒ “(2) reset arm”, page 18

5.3 Self-monitoring (fail-safe)

5.3.1 Response to a fracture of the measuring system



On the STW or STB, in the event of a fracture of the measuring system (leakage) the circuit 1-4 will remain **permanently** open.

On the STB, the microswitch is also mechanically and **permanently** locked out.

5.3.2 Response to low temperature



On the STW or STB, the circuit is opened if the probe temperature falls below the minimum value, as given below:



- 10°C (for limit ranges between 0 and +200°C)
- 20°C (for limit ranges between +80 and +250°C)
- 30°C (for limit ranges between -20 and +50°C)
- 30°C (for an upper limit > 250°C ≤+500°C)



When the temperature rises above the minimum probe temperature, the STW resets itself automatically. The STB requires a manual reset.

⇒ “Resetting the TB or STB limiter”, page 19

6 Instrument description

6.1 Technical data

Ex marking  **II 2G EEx ed IIC T6 or T5** for potentially explosive gas atmospheres
 **II 2D IP65 T80°C** for potentially explosive dust atmospheres

Explosion protection  **II 2G** Equipment group II, Category 2, equipment for potentially explosive gas atmospheres
 **II 2D** Equipment group II, Category 2, equipment for potentially explosive dust atmospheres

Explosion protection type **EEx ed IIC T6**
EEx **General requirements**
European Standard EN 50014 / VDE 0170 / 0171 Part 1
e **Increased safety**
European Standard EN 50019 / VDE 0170 / 0171 Part 6
d **Flameproof enclosure**
European Standard EN 50018 / VDE 0170 / 0171 Part 5
IIC **Gas group**
T6 **Temperature class**

IP65 T80°C

Application in combustible dusts

European Standard EN 50281-1-1 / VDE 0170 / 0171 Part 15-1-1

IP65 **Protection to EN 60529-IP65**
T80°C **max. permissible surface temperature**
(application in combustible dusts)

Test certificate PTB 03 ATEX 1187

6 Instrument description

Permissible ambient temperature in operation

	Capillary °C	Thermostat head °C		for end of scale °C
		T6	T5	
max.	+40	+40		all
	+55		+55	
min.	-40	-20		< 200
	-20	-20		≥ 200 ≤350
	-40	-20		≥ 350 ≤500

Permissible probe temperature

max. limit +15% (+550°C with limit > 450°C)

Permissible storage temperature

max. +50°C, min. -50°C

Housing

polyester housing, glass-fiber reinforced, black

Connecting cable

diameter 6 to 12 mm, conductor cross-section up to 2.5 mm²

Switching differential in % of control/limit range

Thermostats with end of scale ≤350°C			Thermostats with end of scale > 350°C		
Switching action	Nominal value	Possible actual value	Switching action	Nominal value	Possible actual value
TW	3	3-5	TW	5	5-9
STW	5	5-7	STW	6	6-11
TB / STB	--	--	TB / STB	--	--

Contact rating

TW, STW	
Terminals 1-4 (break)	Terminals 1-2 (make)
AC1: 10 A, 230 V +10%	AC1: 5 A, 230 V +10%
AC15: 2 A, 230 V +10%	AC15: 0.8 A, 230 V +10%
DC1: 0.25 A, 230 V +10%	
TB, STB	
Terminals 1-4 (break)	Terminals 1-2 (make)
AC1: 16 A, 230 V +10%	AC1: 10 A, 230 V +10%
AC15: 2 A, 230 V +10%	AC15: 1.5 A, 230 V +10%
DC1: 0.25 A, 230 V +10%	

Fusing required

see contact rating

6 Instrument description

Enclosure protection

EN 60 529 - IP65

Operating medium

Water, oil, air, superheated steam

Time constant $t_{0.632}$

in water	in oil	in air / superheated steam
≤ 45 sec	≤ 60 sec	≤ 120 sec

Mode of operation

according to EN 60 730-1

TW,TB: Type 2BL = automatic action with micro-disconnection in operation, no auxiliary supply required.

STW: Type 2BKL = automatic action with micro-disconnection in operation, fail-safe.

STB: Type 2BFKL = automatic action with micro-disconnection in operation, fail-safe, reset only permissible by means of a tool.

Operating position (NL)

To DIN 16257, NL 0 — NL 90 (other NL on request)

Weight

approx. 1.2 kg

Capillary and probe material

End of scale	Capillary	Probe
up to +200°C	copper, Mat. Ref. 2.0090 electro-tinned 1.5 mm diameter	copper, Mat. Ref. 2.0090 electro-tinned brazed
up to +300°C	copper, Mat. Ref. 2.0090 electro-tinned 1.5 mm diameter	stainless steel, Mat. Ref. 1.4571 brazed
up to +500°C	stainless steel, Mat. Ref. 1.4571 1.5 mm diameter	stainless steel, Mat. Ref. 1.4571 welded
at extra cost		
up to +300°C	stainless steel, Mat. Ref. 1.4571 1.5 mm diameter	stainless steel, Mat. Ref. 1.4571 welded

Min. bending radius of the capillary

5 mm

6 Instrument description

Switching point accuracy

in % of scale span, referred to the limit value at $T_a + 22^\circ\text{C}$.

TW, TB	in upper third of scale	+0 -4 %
	at start of scale	+0 -6 %
STW, STB	in upper third of scale	+0 -5 %
	at start of scale	+0 -7 %

Mean ambient temperature effect

in % of scale span, referred to the limit value.

A deviation of the ambient temperature at the thermostat head and/or the capillary from the $+22^\circ\text{C}$ calibration ambient temperature produces a shift in the switching point:

higher ambient temperature = lower switching point

lower ambient temperature = higher switching point

Surface-mounting thermostats with end of scale					
< $+200^\circ\text{C}$		$\geq +200^\circ\text{C} \leq +350^\circ\text{C}$		> 350°C	
TW TB	STW STB	TW TB	STW STB	TW TB	STW STB
effect due to the thermostat head, % per $^\circ\text{C}$					
0.08	0.17	0.06	0.13	0.14	0.12
effect due to capillary, % per $^\circ\text{C}$ per meter					
0.047	0.054	0.09	0.11	0.04	0.03

Physikalisch-Technische Bundesanstalt

Braunschweig und Berlin

PTB



EG-Baumusterprüfbescheinigung

- (1)
- (2) Geräte und Schutzsysteme zur bestimmungsgemäßen Verwendung in explosionsgefährdeten Bereichen - **Richtlinie 94/9/EG**
- (3) EG-Baumusterprüfbescheinigungsnummer



PTB 03 ATEX 1187

- (4) Gerät: Aufbau-Thermostat Typ ATH-EXx-..
- (5) Hersteller: JUMO GmbH & Co. KG
- (6) Anschrift: Moltkestrasse 13-31, 36039 Fulda, Deutschland
- (7) Die Bauart dieses Gerätes sowie die verschiedenen zulässigen Ausführungen sind in der Anlage und den darin aufgeführten Unterlagen zu dieser Baumusterprüfbescheinigung festgelegt.
- (8) Die Physikalisch-Technische Bundesanstalt bescheinigt als benannte Stelle Nr. 0102 nach Artikel 9 der Richtlinie des Rates der Europäischen Gemeinschaften vom 23. März 1994 (94/9/EG) die Erfüllung der grundlegenden Sicherheits- und Gesundheitsanforderungen für die Konzeption und den Bau von Geräten und Schutzsystemen zur bestimmungsgemäßen Verwendung in explosionsgefährdeten Bereichen gemäß Anhang II der Richtlinie.
Die Ergebnisse der Prüfung sind in dem vertraulichen Prüfbericht PTB Ex 04-13196 festgehalten.
- (9) Die grundlegenden Sicherheits- und Gesundheitsanforderungen werden erfüllt durch Übereinstimmung mit
EN 50014:1997 + A1 + A2 EN 50018: 2000 EN 50019: 2000
EN 50281-1-1:1999
- (10) Falls das Zeichen „X“ hinter der Bescheinigungsnummer steht, wird auf besondere Bedingungen für die sichere Anwendung des Gerätes in der Anlage zu dieser Bescheinigung hingewiesen.
- (11) Diese EG-Baumusterprüfbescheinigung bezieht sich nur auf Konzeption und Prüfung des festgelegten Gerätes gemäß Richtlinie 94/9/EG. Weitere Anforderungen dieser Richtlinie gelten für die Herstellung und das Inverkehrbringen dieses Gerätes. Diese Anforderungen werden nicht durch diese Bescheinigung abgedeckt.
- (12) Die Kennzeichnung des Gerätes muß die folgenden Angaben enthalten:

Ex II 2 G/D

EEx ed IIC T5 bzw. T6

IP65 T95°C bzw. T80°C

Braunschweig, 06. Februar 2004

Zertifizierungsstelle Explosionsschutz
Im Auftrag

Dr.-Ing. J. Klausmeyer
Regierungsdirektor



Seite 1/3

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Physikalisch-Technische Bundesanstalt

Braunschweig und Berlin



Anlage

(13)

(14) **EG-Baumusterprüfbescheinigung PTB 03 ATEX 1187**

(15) Beschreibung des Gerätes

Der Aufbau-Thermostat Typ ATH-EXx-.. dient zur thermischen Steuerung bzw. Überwachung.

Technische Daten

Bemessungsspannung max.	250 V
Bemessungsstrom max.	2 A (bezogen auf AC15) *
zul. Umgebungstemperatur	+40°C für T6 +55°C für T5

* Andere als die genannten Bemessungswerte sind bei Einhaltung des Ein- und Ausschaltvermögens entsprechend den einschlägigen Bestimmungen zulässig und - abhängig von der Betriebsart, der Gebrauchskategorie usw. - vom Hersteller festgelegt.

(16) Prüfbericht PTB Ex 04-13196

(17) Besondere Bedingungen

keine;

zusätzliche Hinweise für Errichtung und Betrieb

1. Aufbau-Thermostat Typ ATH-EXx-..-F (mit fest eingestelltem Schaltpunkt):

Bei Verwendung als Sicherheitseinrichtung für den Explosionsschutz gemäß EU-Richtlinie 94/9/EG Anhang II Abs 1.5 ist eine Funktionsprüfung entsprechend den einschlägigen Bestimmungen erforderlich.

Zusätzlich ist durch geeignete Maßnahmen (z.B. Berechnung, thermische Stückprüfung) zu dokumentieren, dass der vom Hersteller eingestellte Schaltpunkt das Überschreiten der Grenztemperatur verhindert. Dabei sind die örtlichen und betrieblichen Bedingungen zu beachten, u.a.:

- die Fühlergeometrie sowie die thermische Ankopplung
- die max. Umgebungstemperatur
- die max. Produkttemperatur.

Seite 2/3

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Physikalisch-Technische Bundesanstalt



Braunschweig und Berlin

Anlage zur EG-Baumusterprüfbescheinigung PTB 03 ATEX 1187

2. Aufbau-Thermostat Typ ATH-EXx.. (ohne fest eingestellten Schaltpunkt):

Bei Verwendung als Sicherheitseinrichtung für den Explosionsschutz gemäß EU-Richtlinie 94/9/EG Anhang II Abs 1.5 ist eine Funktionsprüfung entsprechend den einschlägigen Bestimmungen erforderlich.

Der Schaltpunkt ist vom Errichter durch thermische Stückprüfung festzulegen und gegen Verstellen zu sichern. Dabei sind u.a. zu beachten:

- die Fühlergeometrie sowie die thermische Ankopplung
- die max. Umgebungstemperatur
- die max. Produkttemperatur.

3. Die Anschlussleitung ist fest zu verlegen.

4. Diese Hinweise sind per Betriebsanleitung dem Errichter/Hersteller mitzuteilen.

(18) Grundlegende Sicherheits- und Gesundheitsanforderungen

Erfüllt durch Übereinstimmung mit den vorgenannten Normen.

Zertifizierungsstelle Explosionsschutz
Im Auftrag

Braunschweig, 06. Februar 2004


Dr.-Ing. U. Klaus
Regierungsdirektor



Seite 3/3

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EU Konformitätserklärung

EU Declaration of Conformity / Déclaration CE de conformité

Dokument-Nr. CE 224 H
Document No. / Document n°

Hersteller JUMO GmbH & Co. KG
Manufacturer / Etabli par

Anschrift Moritz-Juchheim-Straße 1
Address / Adresse 36039 Fulda

Produkt Beschreibung Aufbau- Thermostat
Product / Produit Typ/ Serie ATH-EXx
Typenblatt-Nr. 60.5051

Wir erklären in alleiniger Verantwortung, dass das bezeichnete Produkt die Schutzanforderungen der Europäischen Richtlinien erfüllt.

*We hereby declare in sole responsibility that the designated product fulfills the safety requirements of the European directives.
Nous déclarons sous notre seule responsabilité que le produit remplit les directives européennes.*

Richtlinie

Directive / Directive

Datum der Erstanbringung des
CE-Zeichens auf dem Produkt

*Date of first application of the CE mark to the product
Date de 1ère application du sigle CE sur le produit*

2004/108/EG	[EMV-Richtlinie]	05.1996
2006/95/EG	[Niederspannungs-Richtlinie]	01.1996
94/9/EG	[Explosionsschutz-Richtlinie-ATEX]	02.2004

Angewendete Normen

Standards applied / Normes appliquées

DIN EN 61 326-1	Ausgabe: 10.2006
DIN EN 60 730-1	Ausgabe: 12.2005
DIN EN 14597	Ausgabe: 12.2005
DIN EN 50 014 + A1 + A2	Ausgabe: 1997
EN 50 018	Ausgabe: 2000
EN 50 019	Ausgabe: 2000
EN 50 281-1-1	Ausgabe: 1999

Anerkannte Qualitätssicherungssysteme der Produktion

Recognized quality assurance systems used in production / Organisme notifié agréé

nach EU-Richtlinie 94/9/EG / EU Directive 94/9/EC / Directive européenne 94/9/CE
to / suivant TÜV Hannover, Am TÜV 1, D 30519 Hannover, Germany
Kennnummer 0032, Mitteilungsnummer TÜV 99 ATEX 1454 Q.
Identification No. 0032, Notification No. TÜV 99 ATEX 1454 Q / N° d'identification 0032, N° de signification TÜV 99 ATEX 1454 Q

nach EU-Richtlinie 97/23/EG Modul D / EU Directive 97/23/EC Module D / Directive européenne 97/23/CE module D
to / suivant TÜV Industrie Service GmbH, D 68167 Mannheim, Germany
Kennnummer 0036, Zertifikat-Nr. DGR-0036-QS-179-02
Identification No. 0036, Certificate No. DGR-0036-QS-179-02 / N° d'identification 0036, N° de certificat DGR-0036-QS-179-02

Aussteller:

Issued by: / Etabli par:

Firma / Company / Société
JUMO GmbH & Co. KG, Fulda

Ort, Datum:

Place, date: / Lieu, date:

Fulda, 2008-03-28

Rechtsverbindliche Unterschrift

*Legally binding signature
Signature juridiquement valable*

Geschäftsbereichsleitung Verkauf und Produktion
*Head of Division Sales and Production
Direction du département Ventes et Production*

ppa. Wolfgang Vogl



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