**JUMO GmbH & Co. KG**
Delivery address: Mackenrodtstraße 14
36039 Fulda, Germany
Postal address: 36035 Fulda, Germany
Phone: +49 661 6003-0
Fax: +49 661 6003-607
Email: mail@jumo.net
Internet: www.jumo.net

**JUMO Instrument Co. Ltd.**
JUMO House
Temple Bank, Riverway
Harlow, Essex, CM20 2DY, UK
Phone: +44 1279 63 55 33
Fax: +44 1279 62 50 29
Email: sales@jumo.co.uk
Internet: www.jumo.co.uk

**JUMO Process Control, Inc.**
6724 Joy Road
East Syracuse, NY 13057, USA
Phone: +1 315 437 5866
Fax: +1 315 437 5860
Email: info.us@jumo.net
Internet: www.jumousa.com



# Surface-mounted thermostat ATH

## Special features

- Version according to DIN EN 14597
- Pressure Equipment Directive 2014/68/EU
- Sturdy housing (protection type IP54)
- Microswitch
- Self-monitoring (STB/STW [STB]) in the event of a pressure drop
- Safety cut-out (STB/STW [STB])
- Control range -50[1] to +500 °C




**ATH-1 (Type 603021/01-1-...)**

## Brief description

Thermostats control and monitor thermal processes. Instruments of the ATH series are available as temperature controllers TR, temperature monitors TW, safety temperature monitors STW (STB), and safety temperature limiters STB. When malfunctions occur, the STB places the system being monitored in a safe operating status.

Surface-mounted thermostats operate according to the fluid expansion principle. A microswitch is used as an electrical switching element.

## Switching functions

**Temperature controller TR and Temperature monitor TW**
If the temperature on the temperature probe exceeds the setpoint value, the electrical circuit is opened or closed by a microswitch. If the temperature falls below the selected setpoint value (by the switching differential), the microswitch is reset to its initial position.

**Restart lock at safety temperature limiter STB**
If the temperature at the temperature sensor exceeds the set limit value, the electrical circuit is opened and the microswitch is mechanically locked. After falling below the limit value by approx. 10 % of the temperature range (approx. 15 % of the limit value setting > +350 °C), the switch can be unlocked manually.

**Use of the safety temperature monitor STW as safety temperature limiter STB**
In this case, the circuit following the thermostat must comply with DIN EN 14597 and VDE 0116.

**Self-monitoring for safety temperature limiter STB and safety temperature monitor STW (STB)**
If the measuring system is destroyed (i.e. if the expansion fluid escapes) the pressure in the membrane of the STB and STW (STB) drops and permanently opens the electrical circuit. Unlocking is then no longer possible. When the STW (STB) and STB sensors cools down to the negative temperature range, the circuit opens, but must be unlocked manually by the reclosing button when the temperature rises. The STW (STB) restarts automatically.



**ATH-70 (Type 603021/70-2-...)**

[1] Available upon request.

## Approvals and approval marks (see technical data)

**JUMO GmbH & Co. KG**
Delivery address: Mackenrodtstraße 14
36039 Fulda, Germany
Postal address: 36035 Fulda, Germany
Phone: +49 661 6003-0
Fax: +49 661 6003-607
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JUMO House
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Internet: www.jumousa.com



# Technical data

## Control ranges and temperature probes

| Type | Control/limit value ranges °C | Max. admissible probe temperature °C | Max. capillary length mm | Length of the temperature probe Probe Ø "d" = 6 mm[a] mm | |
|---|---|---|---|---|---|
| | | | | Ø 6 | Ø 8 |
| | **Liquid-filled** | | | | |
| ATH-1, ATH-2 | -20 to +50 | 60 | 5000 | 141 | 92 |
| | -10 to +40 | 50 | | 185 | 115 |
| | 0 to 50 | 60 | | 185 | 115 |
| | 0 to 100 | 125 | | 107 | 75 |
| | 20 to 90 | 115 | | 138 | 91 |
| | 20 to 120 | 140 | | 106 | 75 |
| | 20 to 150 | 175 | | 88 | 65 |
| | 30 to 110 | 135 | | 125 | 84 |
| | 50 to 200 | 230 | | 101 | 72 |
| | 50 to 250 | 290 | | 73 | 54 |
| | 50 to 300 | 345 | | 63 | 49 |
| | 50 to 350 | 405 | | 53 | - |
| | 60 to 130 | 150 | | 135 | 90 |
| ATH-20, ATH-70 | 20 to 150 | 175 | 5000 | 77 | 60 |
| | 30 to 110 | 135 | | 108 | 75 |
| | 50 to 250 | 290 | | 64 | 49 |
| | 50 to 300 | 345 | | 55 | - |
| | 60 to 130 | 150 | | 116 | 79 |
| | **Gas-filled** | | | | |
| ATH-1, ATH-2 | 20 to 400 | 460 | 1000 | 278 | 158 |
| | 20 to 500 | 575 | 2000 | 148 | 92 |
| | 20 to 500 | 575 | 4000 | 202 | 119 |
| ATH-20, ATH-70 | 20 to 400 | 460 | 1000 | 176 | 106 |
| | 20 to 500 | 575 | 2000 | 127 | 81 |
| | 20 to 500 | 575 | 4000 | 202 | 119 |

[a] Standard

## Capillary and temperature probe

| Type | Scale limit value | Capillary | Temperature probe |
|---|---|---|---|
| ATH-.. | up to 200 °C | Copper (Cu), Ø 1.5 mm, material no. Cu-DHP | Copper (Cu), material no. Cu-DHP, hard soldered |
| | up to 350 °C | Copper (Cu), Ø 1.5 mm, material no. Cu-DHP | Stainless steel (CrNi), material no. 1.4571, hard soldered |
| | up to 500 °C | Stainless steel (CrNi), Ø 1.5 mm | Stainless steel (CrNi), material no. 1.4571, welded |
| | up to 350 °C | Stainless steel (CrNi), Ø 1.5 mm | Stainless steel (CrNi), material no. 1.4571, welded |
| Capillary length | 1000 mm as standard, max. 5000 mm | | |
| Min. bending radius of the capillary | 5 mm | | |

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## Electrical data

| | | | |
|---|---|---|---|
| Switching function | TR, TW, STW (STB)<br>Microswitch with change-over contact | STB (-70)<br>Microswitch with change-over contact and restart lock | STB (-70/574)<br>Microswitch with change-over contact, restart lock and additional signal contact |
| Max. switching capacity | AC 230 V +10 %, 10 (2)[a] A, cos φ = 1 (0.6)[a]<br>DC 230 V +10 %, 0.25 A | | |
| With switching differentials 1.5 % and 2 % | AC 230 V +10 %,<br>6 (1.2)[a] A, cos φ = 1 (0.6)[a] | - | - |
| | Microswitch, gold-plated, extra code 702 (only for switching differentials 3 %, 5 % and 7 %), AC/DC 24 V, 0.1 A, contact resistance 2.5 to 10 mΩ | | |

[a] Inductive loads

| | |
|---|---|
| Contact reliability | To ensure a high switching reliability, we recommend a minimum load of: |
| With silver contacts | AC/DC 24 V, 100 mA |
| With gold-plated contacts (extra code 702) | AC/DC 10 V, 5 mA |

## Environmental influences

| Switching differential in % from the control/limit value range | Nominal value | Possible actual value | Nominal value | Possible actual value | |
|---|---|---|---|---|---|
| | Liquid-filled | | Gas-filled | | |
| Switching function TR, TW | 3 | 3 max. 4 | 5 | 4 max. 8 | Standard |
| | 6 | 6 max. 8 | 9 | 8 max. 12 | Upon request |
| | 1.5 | 1 max. 2 | 2 | 1.5 max. 2,5 | Extra cost |
| | Liquid-filled | | Gas-filled | | |
| Switching function STW (STB) | 5 | 4 max. 6 | 7 | 5 max. 12 | Standard |
| | 9 | 8 max. 11 | 9 | 8 max. 16 | Upon request |
| | 2 | 1 max. 3 | 2 | 1.5 max. 3 | Extra cost |

| | |
|---|---|
| Switching point accuracy in % of the limit value range | |
| Switching function TR, TW | In the upper third of the scale ±1.5 %, at scale beginning ±6 % |
| Switching function STW (STB), STB | In the upper third of the scale +0/-5 %, at scale beginning +0/-10 % |

| | | | | | | |
|---|---|---|---|---|---|---|
| Ambient temperature influence | Referring to the control/limit value range<br>If the ambient temperature at the switching head and/or the capillary deviates from the calibration ambient temperature 22 °C, a switching point shift occurs.<br>Higher ambient temperatures = lower switching point<br>Lower ambient temperatures = higher switching point | | | | | |
| Surface-mounted thermostats with scale limit value | < 200 °C | | ≥ 200 °C ≤ 350 °C | | > 350 °C ≤ 500 °C | |
| Switching function | TR, TW | STW (STB), STB | TR, TW | STW (STB), STB | TR, TW | STW (STB), STB |
| Influence on the switching head | 0.08 %/K | 0.17 %/K | 0.06 %/K | 0.13 %/K | 0.14 %/K | 0.12 %/K |
| Influence on the capillary per meter | 0.047 %/K | 0.054 %/K | 0.09 %/K | 0.011 %/K | 0.04 %/K | 0.03 %/K |
| Admissible storage temperature | -50 to +80 °C or up to max. admissible ambient temperature, see nameplate | | | | | |
| Admissible ambient temperature when in use | See Nameplate | | | | | |
| Rated position (NL) | According to DIN 16257, NL 0 to NL 90 (other NL upon request) | | | | | |

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### Housing

| | |
|---|---|
| Material | |
| Housing lid | Standard: Polycarbonate, shock resistant; color: pepple gray RAL 7032 |
| | Extra code 701: Aluminum die casting, painted; color: pepple gray RAL 7032 |
| Housing bottom part | Standard: Aluminum die casting, painted; color: anthracite gray RAL 7015 |
| Setpoint value adjustment | |
| Switching function TR | Switching point can be adjusted externally with the rotary knob |
| Switching function TW, STW (STB), STB | Switching point can be adjusted with a screwdriver after removing housing lid |
| Protection type | IP54, according to DIN EN 60529 |
| Cable inlet | Standard: self-sealing grommet M20 × 1.5, sealing range 8 to 10 mm |
| Weight | Approx. 500 g |
| Switching head mounting<br>Type ATH with capillary | |
| Standard | Screw connection with counter nut M18 × 1 on the housing spigot, capillary exit on the housing spigot |
| Extra code 248 | Wall mount |
| Extra code 711 | With 2 screws through the housing bottom part, lateral capillary exit on the case, lid and bottom part made of plastic |
| Extra code 764 | Mounting flange made of steel, capillary exit on the housing spigot |

### Process connection

| | |
|---|---|
| Type ATH with rigid thermowell | |
| Scale limit value up to 150 °C | Process connection 20: Screw-in sleeve with screw-in spigot G 1/2″, form A, according to DIN 3852/2 |
| Scale limit value exceeding 150 °C | Process connection 30: Screw-in sleeve with screw-in spigot G 1/2″, form A, according to DIN 3852/2, and intermediate piece, to ensure that the max. admissible ambient temperature is not exceed on the housing |
| Type ATH with capillary | Process connection 10: Plain cylindrical probe (standard) |
| | Process connection 20: Screw-in sleeve (upon request) |
| | Screw-in sleeve with screw-in spigot G 1/2″, form A, according to DIN 3852/2, and clamping piece with fixing screw to lock the probe in place |
| Material | |
| Process connection 20 | |
| Up to 150 °C | CuZn, nickel-plated, standard |
| Above 150 °C | CrNi |
| Process connection 30 | |
| Up to 150 °C | CrNi |
| Insertion length | Standard: 100, 120, 150, 200, or 300 mm (other lengths upon request) |
| Immersion tube Ø | D = 8 mm, D = 10 mm |

⇨ For different process connections and thermowells refer to data sheet 606710

**JUMO GmbH & Co. KG**
Delivery address: Mackenrodtstraße 14
36039 Fulda, Germany
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Temple Bank, Riverway
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6724 Joy Road
East Syracuse, NY 13057, USA
Phone: +1 315 437 5866
Fax: +1 315 437 5860
Email: info.us@jumo.net
Internet: www.jumousa.com



## Approvals and approval marks

| | |
|---|---|
| DIN | |
| Testing agency | DIN CERTCO/TÜV Süd |
| Certificates/certification numbers | TW892 |
| Inspection basis | DIN EN 14597 |
| Valid for | ATH-2 (Type 603021/02 [TW]) |
| DIN | |
| Testing agency | DIN CERTCO/TÜV Süd |
| Certificates/certification numbers | TR891 |
| Inspection basis | DIN EN 14597 |
| Valid for | ATH-1 (Type 603021/01 [TR]) |
| DIN | |
| Testing agency | DIN CERTCO/TÜV Süd |
| Certificates/certification numbers | STW(STB)894S |
| Inspection basis | DIN EN 14597 |
| Valid for | ATH-20 (Type 603021/20 [STW (STB)]) |
| DIN | |
| Testing agency | DIN CERTCO/TÜV Süd |
| Certificates/certification numbers | STB895 |
| Inspection basis | DIN EN 14597 |
| Valid for | ATH-70 (Type 603021/70 [STB]) |
| DGRL | |
| Testing agency | TÜV Süd |
| Certificates/certification numbers | Z-IS-TAF-MUC-17-11-2652099-021 |
| Inspection basis | 2014/68/EU, DIN EN 14597 |
| Valid for | ATH-20 (Type 603021/20 [STW (STB)]),<br>ATH-70 (Type 603021/70 [STB]) |
| EAC[a] | |
| Testing agency | GOST Norm AG |
| Certificates/certification numbers | 0198420 |
| Inspection basis | TR ZU 004/2011 (LVD) |
| Valid for | ATH (Type 603021) |

[a] Russian documentation available upon request.

**JUMO GmbH & Co. KG**
Delivery address: Mackenrodtstraße 14
36039 Fulda, Germany
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Phone: +49 661 6003-0
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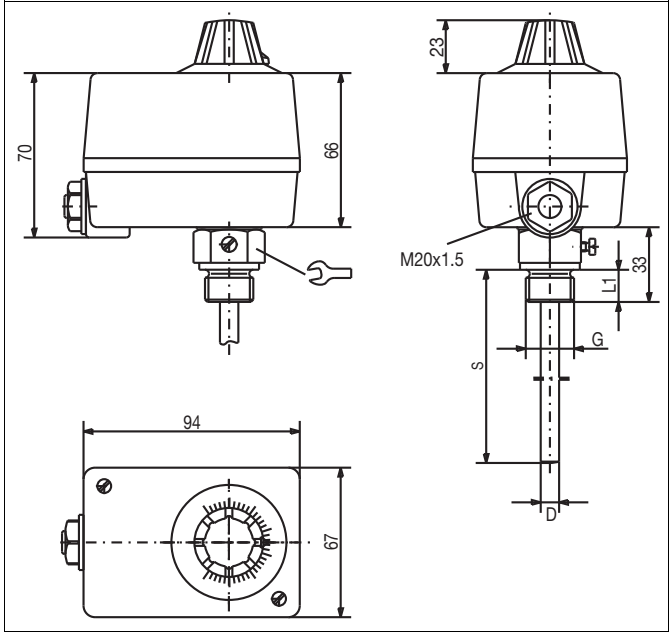


# Dimensions

## Versions with rigid thermowell

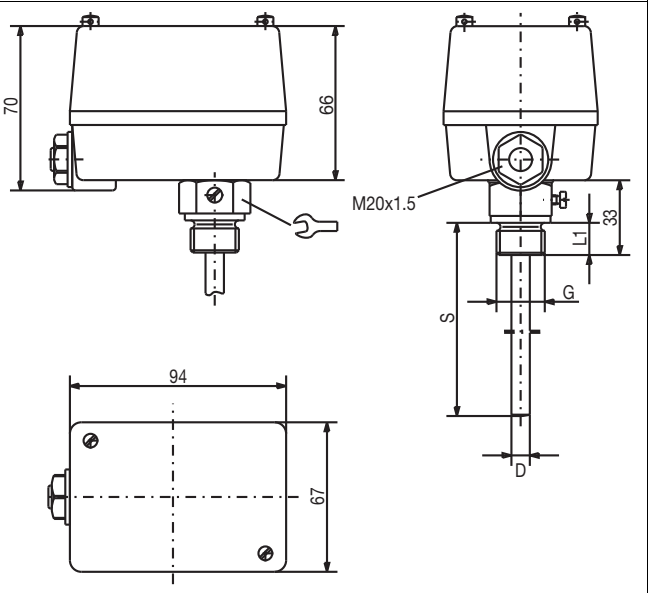
ATH-1 (Type 603021/01-1-...)

With screw-in sleeve (process connection 20)



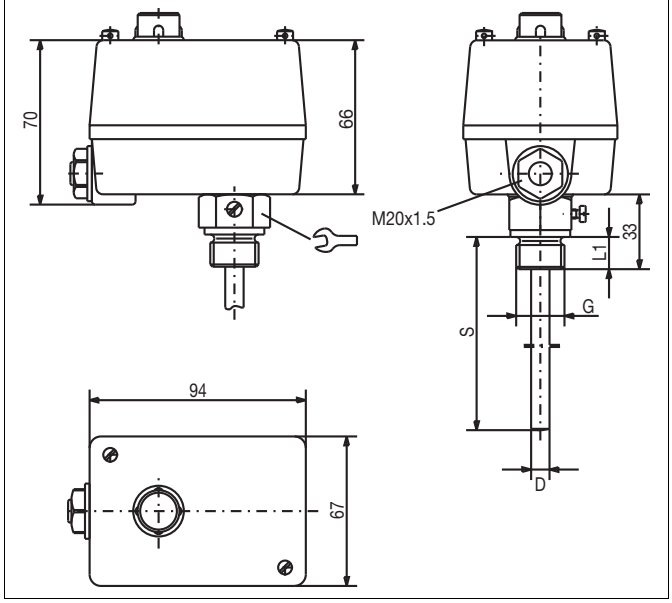

ATH-2 (Type 603021/02-1-...),
ATH-20 (Type 603021/20-1-...)

With screw-in sleeve (process connection 20)




ATH-70 (Type 603021/70-1-...),
ATH-70/574 (Type 603021/70-1-.../574)

With screw-in sleeve (process connection 20)



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Delivery address: Mackenrodtstraße 14
36039 Fulda, Germany
Postal address: 36035 Fulda, Germany
Phone: +49 661 6003-0
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Email: mail@jumo.net
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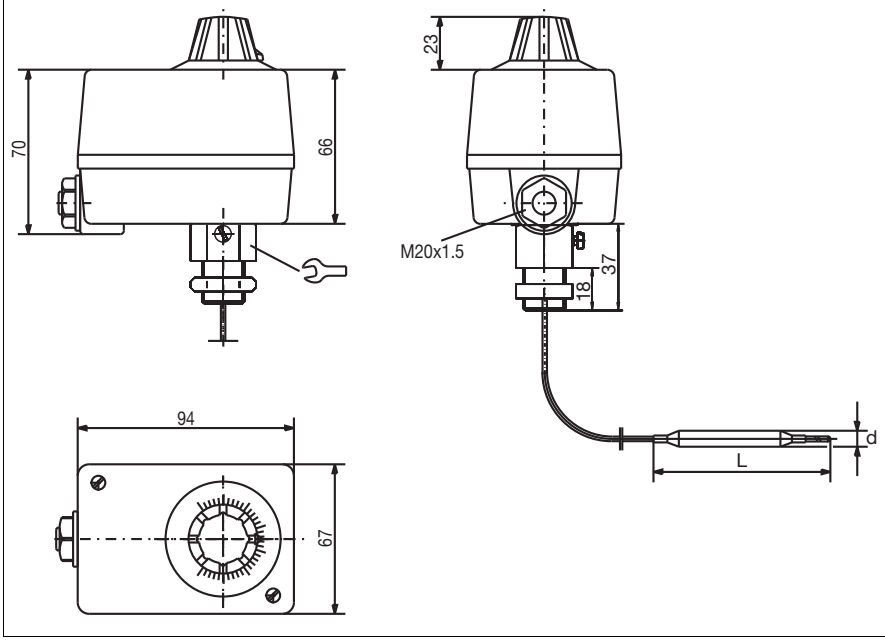
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6724 Joy Road
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## Versions with capillary

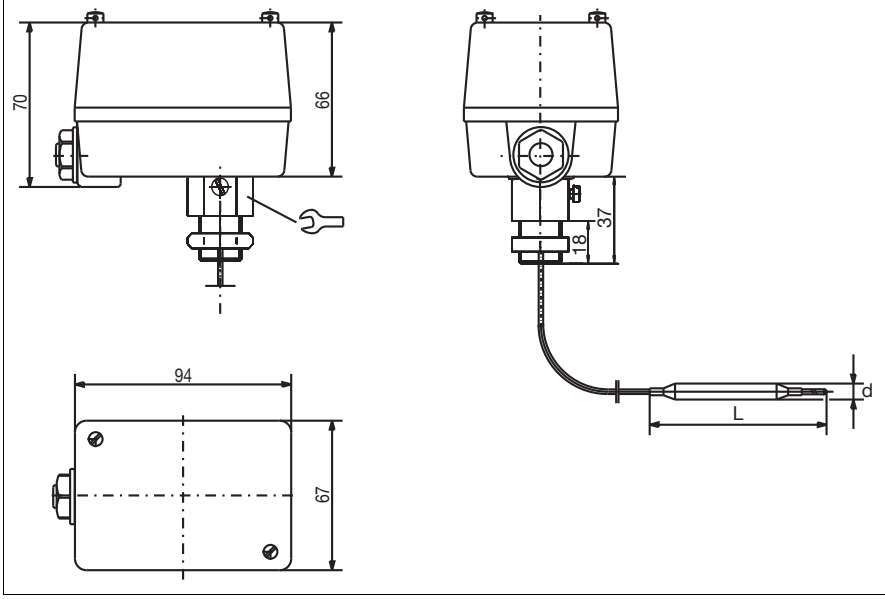
ATH-1 (Type 603021/01-2-...)

With plain cylindrical probe (process connection 10)




ATH-2 (Type 603021/02-2-...),
ATH-20 (Type 603021/20-2-...)

With plain cylindrical probe (process connection 10)



**JUMO GmbH & Co. KG**
Delivery address: Mackenrodtstraße 14
36039 Fulda, Germany
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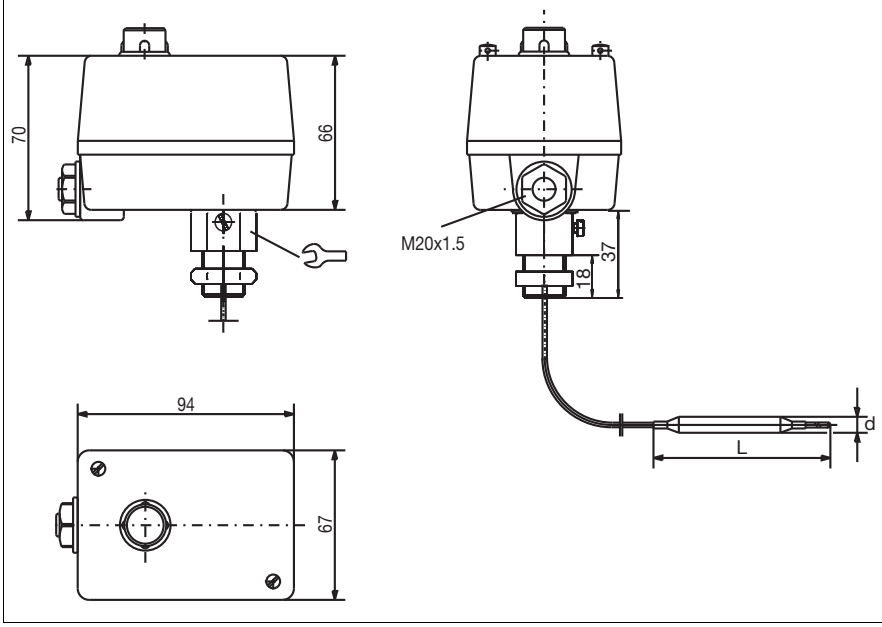
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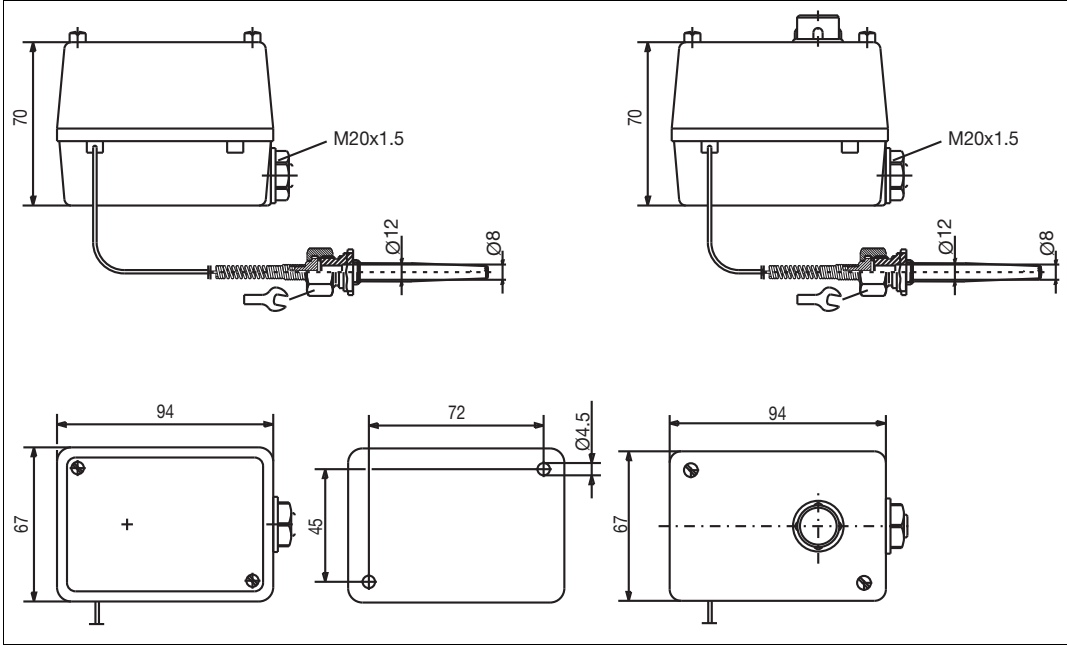
ATH-70 (Type 603021/70-2-...),
ATH-70/574 (Type 603021/70-2-.../574)

With plain cylindrical probe (process connection 10)




ATH-20/r[a] (Type 603021/20-2-.../711),
ATH-70/r[a] (Type 603021/70-2-.../711)

With Weld-in sleeve for union nut, conical (process connection 42)




[a] r = Switching head mounting (extra code 711)

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36039 Fulda, Germany
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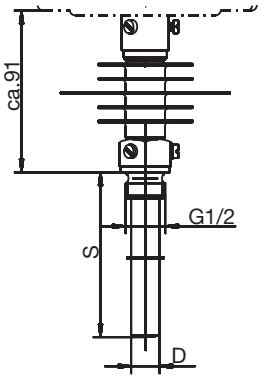
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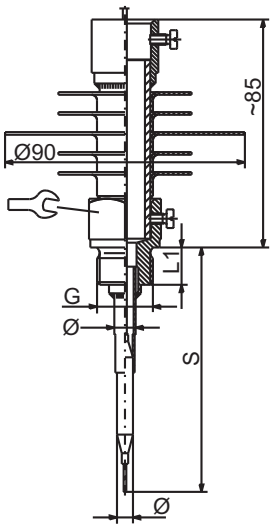
## Process connection

### for versions with rigid thermowell

Screw-in sleeve with intermediate piece
for scale end value above 150 °C (process connection 30)




Screw-in sleeve with intermediate piece, open (process connection 31)

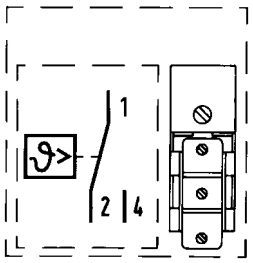



# Connection diagram

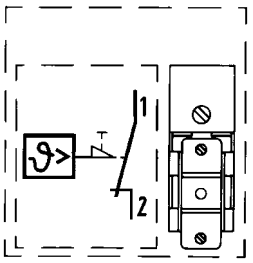
The connection diagram in the data sheet provides information on product selection.

**For the electrical connection, only use the installation instructions or the operating manual.**

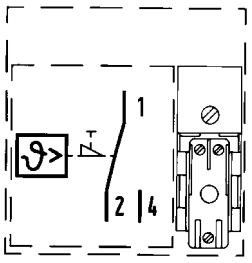
### Wiring diagrams




TR (Type 603021/01-...),
TW (Type 603021/02-...),
STW (STB) (Type 603021/20-...)




STB (Type 603021/70-...)




STB (Type 603021/70-.../574)

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Fax: +1 315 437 5860
Email: info.us@jumo.net
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# Order details

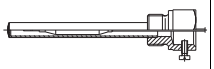
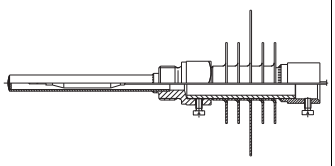
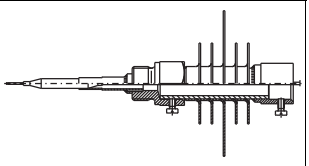
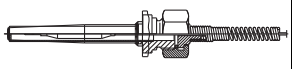
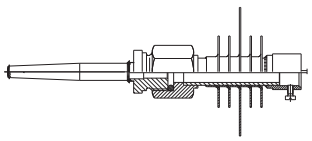
| | | |
|---|---|---|
| | **(1)** | **Basic type** |
| 603021 | | Surface-mounted thermostat ATH |
| | **(2)** | **Basic type extensions** |
| 01 | | ATH-1 Temperature controller (TR) |
| 02 | | ATH-2 Temperature monitor (TW) |
| 20 | | ATH-20 Safety temperature monitor (STW [STB]) |
| 70 | | ATH-70 Safety temperature limiter (STB) |
| | **(3)** | **Design** |
| 1 | | Rigid thermowell |
| 2 | | Capillary |
| | **(4)** | **Control range** |
| 014 | | -20 to +50 °C |
| 016 | | -10 to +40 °C |
| 021 | | 0 to 50 °C |
| 025 | | 0 to 100 °C |
| 041 | | 20 to 90 °C |
| 042 | | 20 to 120 °C |
| 043 | | 20 to 150 °C |
| 045 | | 20 to 400 °C |
| 046 | | 20 to 500 °C |
| 052 | | 30 to 110 °C |
| 062 | | 50 to 200 °C |
| 063 | | 50 to 250 °C |
| 064 | | 50 to 300 °C |
| 066 | | 60 to 130 °C |
| | **(5)** | **Switching differential** |
| 00 | | None |
| 15 | | 1.5 % |
| 20 | | 2 % |
| 30 | | 3 % |
| 50 | | 5 % |
| 60 | | 6 % |
| 70 | | 7 % |
| 90 | | 9 % |
| | **(6)** | **Capillary length** |
| 0 | | None |
| 1000 | | 1,000 mm |
| 2000 | | 2,000 mm |
| 3000 | | 3,000 mm |
| 4000 | | 4,000 mm |
| 5000 | | 5,000 mm |
| | **(7)** | **Capillary material** |
| 00 | | None |
| 20 | | CrNi (stainless steel) |
| 40 | | Cu (copper) |

**JUMO GmbH & Co. KG**
Delivery address: Mackenrodtstraße 14
36039 Fulda, Germany
Postal address: 36035 Fulda, Germany
Phone: +49 661 6003-0
Fax: +49 661 6003-607
Email: mail@jumo.net
Internet: www.jumo.net

**JUMO Instrument Co. Ltd.**
JUMO House
Temple Bank, Riverway
Harlow, Essex, CM20 2DY, UK
Phone: +44 1279 63 55 33
Fax: +44 1279 62 50 29
Email: sales@jumo.co.uk
Internet: www.jumo.co.uk

**JUMO Process Control, Inc.**
6724 Joy Road
East Syracuse, NY 13057, USA
Phone: +1 315 437 5866
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| | | |
|---|---|---|
| | **(8)** | **Process connection** |
| 10 | | Plain cylindrical probe  |
| 20 | | Screw-in sleeve  |
| 30 | | Screw-in sleeve with intermediate piece  |
| 31 | | Screw-in sleeve with intermediate piece, open  |
| 42 | | Weld-in sleeve for union nut, conical  |
| 46 | | Weld-in sleeve for union nut with intermediate piece, conical  |
| | **(9)** | **Process connection thread** |
| 00 | | None |
| 13 | | G 1/2" |
| 14 | | G 3/4" |
| | **(10)** | **Process connection material** |
| 00 | | None |
| 20 | | CrNi (stainless steel) |
| 46 | | CuZn (copper) |
| | **(11)** | **Insertion length** |
| 000 | | Without thermowell |
| 100 | | 100 mm |
| 120 | | 120 mm |
| 150 | | 150 mm |
| 200 | | 200 mm |
| 300 | | 300 mm |
| 400 | | 400 mm |
| | **(12)** | **Immersion tube diameter** |
| 00 | | Without thermowell |
| 8 | | 8 mm |
| 10 | | 10 mm |
| | **(13)** | **Probe diameter** |
| 6 | | 6 mm |
| 8 | | 8 mm |

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JUMO House
Temple Bank, Riverway
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| (14) | Extra code |
|---|---|
| 000 | None |
| 248 | Wall mount |
| 574 | Microswitch with changeover contact, restart lock (only for STB) |
| 701 | Housing lid made of aluminum die casting |
| 702 | Snap-action switch contact, gold-plated (only with switching differential 3 %, 5 %, and 7 %, and STB) |
| 711 | Switching head mounting with 2 screws through the housing bottom part |
| 764 | Mounting flange made of steel |

⇨ For different process connections and thermowells refer to data sheet 606710

| | (1) | | (2) | | (3) | | (4) | | (5) | | (6) | | (7) | | (8) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Order code** | | / | | - | | - | | - | | - | | - | | - | | - |
| **Order example** | 603021 | / | 70 | - | 1 | - | 043 | - | 00 | - | 0 | - | 00 | - | 20 | - |

| | (9) | | (10) | | (11) | | (12) | | (13) | | (14) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Order code** | | - | | - | | - | | - | | / | | , ...[a] |
| **Order example** | 13 | - | 20 | - | 100 | - | 8 | - | 6 | / | 574 | |

[a] List extra codes in sequence, separated by commas.

# Stock versions

## Versions with capillary

### Temperature controller (TR), Type 603021/01-2-...

| Type | Control range/ limit value range °C | Switching differential % | Capillary mm | Process connection | Probe Ø × length mm | Part no. |
|---|---|---|---|---|---|---|
| ATHf-1 | -10 to +40 | 3 - 4 | 1000 | „10“ plain cylindrical probe | 6 × 185 | 60001134 |
| ATHf-1 | 0 to 100 | 3 - 4 | 1000 | | 6 × 107 | 60001004 |
| ATHf-1 | 20 to 150 | 3 - 4 | 1000 | | 6 × 88 | 60000955 |
| ATHf-1 | 50 to 300 | 3 - 4 | 1000 | | 6 × 63 | 60001133 |
| ATHf-1 | 20 to 500 | 5 | 1000 | | 6 × 148 | 60002113 |

### Temperature monitor (TW), Type 603021/02-2-...

| Type | Control range/ limit value range °C | Switching differential % | Capillary mm | Process connection | Probe Ø × length mm | Part no. |
|---|---|---|---|---|---|---|
| ATHf-2 | 0 to 50 | 3 - 4 | 1000 | „10“ plain cylindrical probe | 6 × 185 | 60000482 |
| ATHf-2 | 0 to 100 | 3 - 4 | 1000 | | 6 × 107 | 60000962 |
| ATHf-2 | 0 to 100 | 3 - 4 | 2000 | | 6 × 107 | 60001212 |
| ATHf-2 | 20 to 150 | 3 - 4 | 1000 | | 6 × 88 | 60000963 |
| ATHf-2 | 20 to 200 | 3 - 4 | 2000 | | 6 × 88 | 60001210 |
| ATHf-2 | 50 to 200 | 3 - 4 | 1000 | | 6 × 101 | 60000187 |
| ATHf-2 | 50 to 300 | 3 - 4 | 1000 | | 6 × 63 | 60001038 |
| ATHf-2 | 50 to 300 | 3 - 4 | 2000 | | 6 × 63 | 60001208 |
| ATHf-2 | 20 to 500 | 5 | 1000 | | 6 × 148 | 60002122 |

**JUMO GmbH & Co. KG**
Delivery address: Mackenrodtstraße 14
36039 Fulda, Germany
Postal address: 36035 Fulda, Germany
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Temple Bank, Riverway
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**JUMO Process Control, Inc.**
6724 Joy Road
East Syracuse, NY 13057, USA
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Email: info.us@jumo.net
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### Safety temperature limiter (STB), Type 603021/70-2-...

| Type | Control range/ limit value range °C | Switching differential % | Capillary mm | Process connection | Probe Ø × length mm | Part no. |
|---|---|---|---|---|---|---|
| ATHf-70 | 30 to 110 | - | 1000 | „10“ plain cylindrical probe | 6 × 108 | 60001136 |
| ATHf-70 | 30 to 110 | - | 2000 | | 6 × 108 | 60001206 |
| ATHf-70 | 20 to 150 | - | 2000 | | 6 × 77 | 60001205 |
| ATHf-70/U | 20 to 150 | - | 1000 | | 6 × 77 | 60001525 |
| ATHf-70 | 50 to 200 | - | 2000 | | 6 × 85 | 60001204 |
| ATHf-70/U | 50 to 200 | - | 1000 | | 6 × 85 | 60001290 |
| ATHf-70 | 50 to 300 | - | 2000 | | 6 × 55 | 60001191 |
| ATHf-70/U | 50 to 300 | - | 1000 | | 6 × 55 | 60001528 |
| ATHf-70/U | 20 to 500 | - | 1000 | | 6 × 127 | 60002088 |
| ATHf-70/U | 20 to 500 | - | 2000 | | 6 × 127 | 60002099 |
| ATHf-70/U/r | 20 to 500 | - | 4000 | „42“ G 3/4" | 200 | 60002262 |

## Versions with rigid thermowell

### Temperature controller (TR), Type 603021/01-1-...

| Type | Control range/ limit value range °C | Switching differential % | Process connection screw-in tube | Immersion tube Ø × length mm | Part no. |
|---|---|---|---|---|---|
| ATHs-1 | -10 to +40 | 3 - 4 | „20“ G 1/2" | 8 × 200 | 60001517 |
| ATHs-1 | 0 to 50 | 1.5 | „20“ G 1/2" | 15 × 100 CrNi | 60000634 |
| ATHs-1 | 0 to 100 | 3 - 4 | „20“ G 1/2" | 8 × 120 CrNi | 60001548 |
| ATHs-1 | 0 to 100 | 3 - 4 | „20“ G 1/2" | 8 × 150 | 60001125 |
| ATHs-1 | 0 to 100 | 1.5 | „20“ G 1/2" | 8 × 200 | 60000174 |
| ATHs-1 | 0 to 100 | 3 - 4 | „20“ G 1/2" | 8 × 200 | 60001126 |
| ATHs-1 | 20 to 150 | 3 - 4 | „20“ G 1/2" | 8 × 100 | 60000481 |
| ATHs-1 | 20 to 150 | 3 - 4 | „20“ G 1/2" | 8 × 200 | 60001035 |
| ATHs-1 | 20 to 150 | 3 - 4 | „20“ G 1/2" | 8 × 300 | 60001127 |
| ATHs-1 | 50 to 200 | 3 - 4 | „30“ G 1/2" | 8 × 200 CrNi | 60003316 |
| ATHs-1 | 50 to 300 | 3 - 4 | „30“ G 1/2" | 8 × 150 CrNi | 60003317 |
| ATHs-1 | 20 to 500 | 5 | „30“ G 1/2" | 8 × 200 CrNi | 60003318 |

### Temperature monitor (TW), Type 603021/02-1-...

| Type | Control range/ limit value range °C | Switching differential % | Process connection screw-in tube | Immersion tube Ø × length mm | Part no. |
|---|---|---|---|---|---|
| ATHs-2 | -10 to +40 | 3 - 4 | „20“ G 1/2" | 8 × 200 | 60001135 |
| ATHs-2 | 0 to 50 | 1.5 | „20“ G 1/2" | 15 × 100 CrNi | 60001549 |
| ATHs-2 | 20 to 90 | 1.5 | „20“ G 1/2" | 15 × 100 | 60000177 |
| ATHs-2 | 20 to 90 | 6 - 8 | „20“ G 1/2" | 15 × 100 | 60000959 |
| ATHs-2 | 20 to 90 | 3 - 4 | „20“ G 1/2" | 8 × 150 | 60001129 |
| ATHs-2 | 0 to 100 | 3 - 4 | „20“ G 1/2" | 8 × 120 CrNi | 60001552 |
| ATHs-2 | 0 to 100 | 3 - 4 | „20“ G 1/2" | 8 × 150 | 60000179 |
| ATHs-2 | 0 to 100 | 3 - 4 | „20“ G 1/2" | 8 × 200 | 60001039 |
| ATHs-2 | 0 to 100 | 3 - 4 | „20“ G 1/2" | 8 × 300 | 60001130 |
| ATHs-2 | 20 to 150 | 3 - 4 | „20“ G 1/2" | 8 × 100 CrNi | 60001551 |
| ATHs-2 | 20 to 150 | 3 - 4 | „20“ G 1/2" | 8 × 200 CrNi | 60001554 |
| ATHs-2 | 20 to 150 | 3 - 4 | „20“ G 1/2" | 8 × 300 | 60000182 |
| ATHs-2 | 50 to 200 | 3 - 4 | „30“ G 1/2" | 8 × 120 CrNi | 60003319 |

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Delivery address: Mackenrodtstraße 14
36039 Fulda, Germany
Postal address: 36035 Fulda, Germany
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| Type | Control range/ limit value range °C | Switching differential % | Process connection screw-in tube | Immersion tube Ø × length mm | Part no. |
|---|---|---|---|---|---|
| ATHs-2 | 50 to 300 | 3 - 4 | „30“ G 1/2" | 8 × 150 CrNi | 60001556 |
| ATHs-2 | 50 to 500 | 5 | „30“ G 1/2" | 8 × 200 CrNi | 60003322 |

## Safety temperature monitor (STW [STB]), Type 603021/20-1-...

| Type | Control range/ limit value range °C | Switching differential % | Process connection screw-in tube/ weld-in tube | Immersion tube Ø × length mm | Part no. |
|---|---|---|---|---|---|
| ATHs-20 | 20 to 150 | 4 - 6 | „20“ G 1/2" | 8 × 150 | 60001478 |
| ATHs-20 | 50 to 300 | 5 | „30“ G 1/2" | 8 × 200 CrNi | 60003323 |
| ATHs-20 | 50 to 300 | 5 | „31“ G 1/2" | 8 × 300 CrNi | 60002585 |
| ATHs-20 | 50 to 350 | 4 - 6 | „46“ G 3/4"[a] | 170 steel, conical | 60002217 |
| ATHs-20 | 20 to 500 | 7 | „21“ G 1/2" | 8 × 200 | 60003324 |

[a] Weld-in tube

## Safety temperature limiter (STB), Type 603021/70-1-...

| Type | Control range/ limit value range °C | Switching differential % | Process connection screw-in tube | Immersion tube Ø × length mm | Part no. |
|---|---|---|---|---|---|
| ATHs-70 | 30 to 110 | - | „20“ G 1/2" | 8 × 200 | 60001043 |
| ATHs-70 | 30 to 110 | - | „20“ G 1/2" | 8 × 300 | 60000189 |
| ATHs-70 | 60 to 130 | - | „20“ G 1/2" | 8 × 150 | 60001044 |
| ATHs-70 | 60 to 130 | - | „20“ G 1/2" | 8 × 200 | 60000190 |
| ATHs-70 | 130 to 200 | - | „30“ G 1/2" | 8 × 200 CrNi | 60003325 |
| ATHs-70 | 50 to 300 | - | „30“ G 1/2" | 8 × 200 CrNi | 60003327 |
| ATHs-70/U | 30 to 110 | - | „20“ G 1/2" | 8 × 150 | 60001524 |
| ATHs-70/U | 20 to 150 | - | „20“ G 1/2" | 8 × 200 | 60001522 |
| ATHs-70/U | 20 to 150 | - | „20“ G 1/2" | 8 × 200 CrNi | 00479064 |
| ATHs-70/U | 50 to 300 | - | „30“ G 1/2" | 8 × 200 CrNi | 60003328 |
| ATHs-70/U | 50 to 350 | - | „46“ G 3/4"[a] | 170 steel, conical | 60002218 |
| ATHs-70/U | 20 to 500 | - | „31“ G 1/2" | 8 × 200 CrNi | 60003329 |
| ATHs-70/U | 20 to 500 | - | „30“ G 1/2" | 8 × 200 CrNi | 60001476 |

[a] Weld-in tube