

AMBISTAT

Swiss based Trafag is a leading international supplier of high quality sensors and monitoring instruments for the measurement of pressure and temperature.



Applications

- HVAC
- Refrigeration

Features

- Short response time
- Protection IP54
- Electrical connection on terminal screw

Technical Data

| | | | |
|----------------------------|----------------------------------|------------------------|-----------------------------------|
| Designation of application | Room thermostat | Switching differential | Adjustable / not adjustable |
| Measuring range | -45°C ... +15°C to 0°C ... +60°C | Repeatability | ± 0.5 % FS typ. |
| Output signal | Floating change-over contact | Approval / conformity | EN60730-1/ EN60730-2-9: Typ 2.B.H |

01/2017

Data sheet H72170i

Subject to change

Ordering information/type code

| | | XXX | XX | XX | XXX | XX | XX |
|-----------------------------|---|-----------------------------------|----|----|-----|----|----|
| Custom build code | External adjustment | 645 | | | | | |
| | Internal adjustment | 650 | | | | | |
| Microswitch | Small switching differential, not adjustable | | 10 | | | | |
| | Average switching differential, not adjustable | | 11 | | | | |
| | With gold plated contacts, not adjustable | | 21 | | | | |
| | Adjustable large switching differential | | 24 | | | | |
| | Adjustable standard switching differential | | 25 | | | | |
| Range | Range [°C] | Operating temperature [°C] | | | | | |
| | -45 ... +15 ¹⁾ | -45 ... +30 | | 05 | | | |
| | -30 ... +30 | -30 ... +40 | | 02 | | | |
| | -20 ... +40 ¹⁾ | -30 ... +50 | | 06 | | | |
| | 0 ... +30 | -30 ... +50 | | 03 | | | |
| | +10 ... +40 | -30 ... +70 | | 04 | | | |
| | 0 ... +60 | -30 ... +70 | | 12 | | | |
| Sensor | Stainless steel (1.4435 / AISI316L) | | | | 401 | | |
| | Copper | | | | 402 | | |
| | Copper nickel plated | | | | 403 | | |
| Fixing ²⁾ | Console | | | | | 19 | |
| Accessories | Switchpoint locking ¹⁾ | | | | | | 15 |
| | Switchpoint fixed and sealed upon customer's request ¹⁾ | | | | | | 88 |
| | Switchpoint preset upon customer's request, no guarantee on switching accuracy ¹⁾ | | | | | | 83 |
| | Switchpoint adjustment please indicate when ordering: - Switchpoint [°C] - Increasing or decreasing | | | | | | |
| | Railway version (UIC 616) | | | | | | 28 |
| | Outdoor application (vented) | | | | | | 44 |
| | Cover with window | | | | | | 77 |

¹⁾ Only with type 650 internal adjustment

²⁾ See data sheet H72106

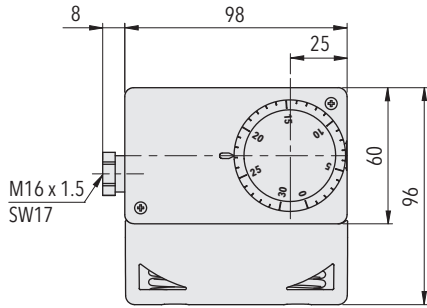
Standard products (extra short lead time)

| Product No. | Type Code | Temperature range [°C] | Switching differential [°C] | Operating temperature [°C] |
|-------------|---------------------------------------|------------------------|-----------------------------|----------------------------|
| A30 | 645 2503 402 19 | 0 ... +30 | 0.7 ... 6 (adjustable) | -30 ... +50 |
| A33 | 645 2502 402 19 | -30 ... +30 | 0.7 ... 6 (adjustable) | -30 ... +40 |
| A40 | 645 2504 402 19 | +10 ... +40 | 0.7 ... 6 (adjustable) | -30 ... +70 |
| A60 | 645 2512 402 19 | 0 ... +60 | 0.7 ... 6 (adjustable) | -30 ... +70 |
| AS30 | 650 2503 402 19 | 0 ... +30 | 0.7 ... 6 (adjustable) | -30 ... +50 |
| AS33 | 650 2502 402 19 | -30 ... +30 | 0.7 ... 6 (adjustable) | -30 ... +40 |
| AS40 | 650 2504 402 19 | +10 ... +40 | 0.7 ... 6 (adjustable) | -30 ... +70 |
| AS60 | 650 2512 402 19 | 0 ... +60 | 0.7 ... 6 (adjustable) | -30 ... +70 |
| ASE40 | 650 2404 402 19 0000 0000 00 00 00 01 | +10 ... +40 | 5 (fixed) | -30 ... +70 |

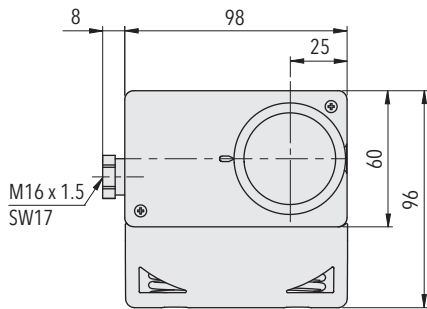
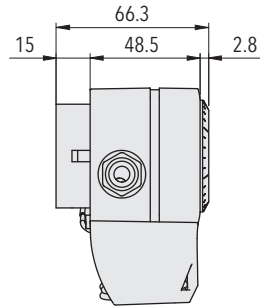
| Specifications | | |
|---------------------------------|--------------------------|--|
| Accuracy | Repeatability | ± 0.5 % FS typ. |
| | Scale accuracy typ. | ± 2 % FS typ. |
| | Switching differential | see table |
| Environmental conditions | Ambient temperature | see ordering information |
| | Storage temperature | Range < +40°C: -30...+50°C Range > +40°C: -30...+85°C |
| | Protection | IP54 |
| | Humidity | Max. 95 % relative |
| Mechanical Data | Sensor housing | see ordering information |
| | Filling | Liquid |
| | Housing | PC/ABS-Blend V0 |
| | Screwed cable gland | PA, Polyamid |
| | Installation | any position |
| | Weight | ~ 300 g |
| Microswitch | Rating | see table |
| | Resistance of insulation | > 2 MΩ |
| | Dielectric strength | U ≤ 250V: 1.45 kV U ≤ 500V: 2 kV terminal ground |
| | Life time (mechanical) | Microswitch 10/11/25: 20 Mio. cycles Microswitch 21: 0.5 Mio. cycles Microswitch 24: 0.3 Mio. cycles |
| Electrical connection | Cable gland | M16x1.5 Cable-Ø 4...9 mm |
| | Terminal screw | 3 x 1...2.5 mm ² |

| Additional information | | |
|------------------------|--------------|--|
| Documents | Data sheet | www.trafag.com/H72170 |
| | Instructions | www.trafag.com/H73624 |
| | Flyer | www.trafag.com/H70961 |

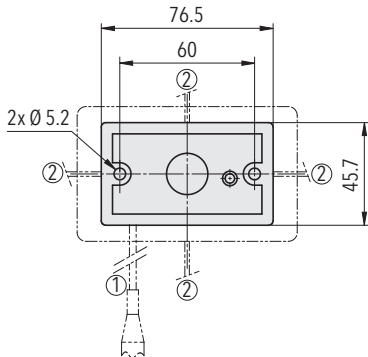
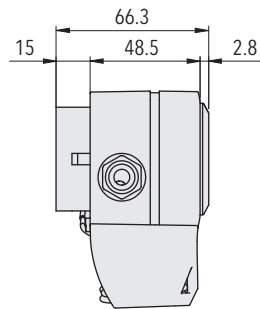
Dimensions



645.XXXX.XXX.XX.XX



650.XXXX.XXX.XX.XX

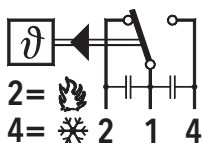


6XX.XXXX.XXX.19.XX

| Switching differential typ. | | |
|--|------|--|
| Range | [°C] | -45 ... +15 -30 ... +30 -20 ... +40 0 ... +30 +10 ... +40 0 ... +60 |
| Microswitch 10 Switching differential (fixed value, not adjustable) | [°C] | 0.3 |
| Microswitch 11 Switching differential (fixed value, not adjustable) | [°C] | 0.7 |
| Microswitch 21 Switching differential (fixed value, not adjustable) | [°C] | 0.7 |
| Microswitch 24 Switching differential (adjustable value) | [°C] | 3 ... 10 |
| Microswitch 25 Switching differential (adjustable value) | [°C] | 0.7 ... 6 |

| Electrical data switch | | | |
|------------------------|--|---|---|
| Type | Features | Rating | |
| | | Resistive Load (Inductive Load) | |
| | | AC | DC |
| 10 | Small switching differential, not adjustable | 125 V, 10 (1.5) A 250 V, 10 (1.25) A | 250 V, 0.2 (0.02) A 125 V, 0.4 (0.03) A 30 V, 2 (1) A 14 V, 15 (2.5) A |
| 11 | Average switching differential, not adjustable | 125 V, 15 (1.5) A 250 V, 15 (1.25) A 500 V, 10 (0.75) A | 250 V, 0.25(0.03) A 125 V, 0.5(0.05) A 30 V, 6 (1.5) A 14 V, 15 (1.5) A |
| 21 | Gold plated contacts, not adjustable | 24 V, 0.1(0.1)A 12 V, 1 (1) A 5 V, 2 (2) A | 24 V, 0.1(0.1)A 12 V, 1 (1) A 5 V, 2 (2) A |
| 25 | Adjustable standard switching differential | 125 V, 15 (1.5) A 250 V, 15 (1.25) A 500 V, 10 (0.75) A | 250 V, 0.25(0.03) A 125 V, 0.5(0.05) A 30 V, 6 (1.5) A 14 V, 15 (2.5) A |
| 24 | Adjustable large switching differential | 125 V, 15 (1.5) A 250 V, 15 (1.25) A 500 V, 10 (0.75) A | 250 V, 0.3 (0.2) A 125 V, 0.75 (0.4) A 30 V, 15 (1.5) A 14 V, 15 (1.5) A |

Electrical Connection



645/650