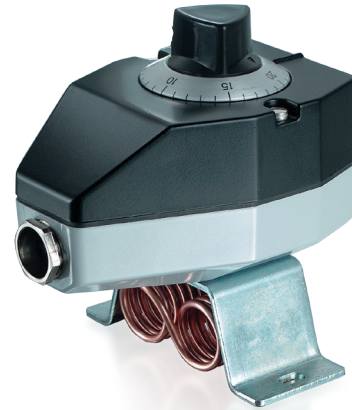


INDU AMBISTAT

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



Applications

- HVAC

Features

- Compact design
- Rugged housing
- Protection IP65
- Any mounting position possible

Technical Data

| | | | |
|----------------------------|------------------------------|------------------------|-----------------------------------|
| Designation of application | Industrial room thermostat | Switching differential | Adjustable / not adjustable |
| Measuring range | -30 ... +30 to 0 ... +60°C | Repeatability | ± 0.5 % FS typ. |
| Output signal | Floating change-over contact | Approval | EN60730-1/ EN60730-2-9: Typ 2.B.H |

02/2015

Data sheet H72116g

Subject to change

Ordering information/type code

| | | XXX | XX | XX | XXXXXXXXXX | XX |
|--|--|--------------------------------------|----|----|------------------|----|
| Custom build code | External adjustment | 409 | | | | |
| | Internal adjustment | 419 | | | | |
| Microswitch | Small switching differential, not adjustable | | 10 | | | |
| | Average switching differential, not adjustable | | 11 | | | |
| | With gold plated contacts, not adjustable | | 21 | | | |
| | Adjustable standard switching differential | | 25 | | | |
| Range | Range [°C] | Operating temperature [°C] | | | | |
| | -30 ... +30 | -30 ... +40 | | 02 | | |
| | -20 ... +40 | -30 ... +50 | | 06 | | |
| | +5 ... +35 | -30 ... +70 | | 10 | | |
| | 0 ... +60 | -30 ... +70 | | 12 | | |
| Sensor ¹⁾ / Fixing ²⁾ | Sensor: Copper; Fixation: Bracket (open sensor coil) | | | | 522.27 | |
| | Sensor: Copper nickel plated; Fixation: Bracket (open sensor coil) | | | | 523.27 | |
| | Sensor: Copper; Fixation: Bracket, with protection tube L=215mm, steel nickel plated | | | | 422.27.2743.0215 | |
| | Sensor: Copper nickel plated; Fixation: Bracket, with protection tube L=215mm, steel nickel plated | | | | 423.27.2743.0215 | |
| Accessories | Signal lamp | | | | | 14 |
| | Set blocking | | | | | 15 |
| | Railway version (UIC 616) | | | | | 28 |
| | Outdoor usage (aerated) | | | | | 44 |

¹⁾ See data sheet H72114/H72163

²⁾ See data sheet H72106

Standard products (extra short lead time)

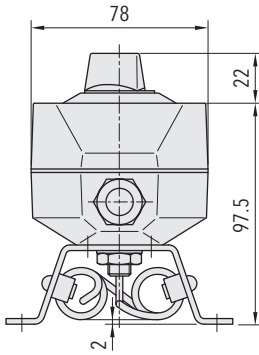
| Product No. | Type Code | Temperature range [°C] | Switching differential [°C] | Operating temperature [°C] |
|-------------|-----------------|---------------------------|--------------------------------|-------------------------------|
| IA33 | 409 2502 522 27 | -30 ... +30 | 0.7 ... 6 | -30 ... +40 |
| IA35 | 409 2510 522 27 | +5 ... +35 | 0.7 ... 6 | -30 ... +50 |
| IA60 | 409 2512 522 27 | 0 ... +60 | 0.7 ... 6 | -30 ... +70 |
| IAS33 | 419 2502 522 27 | -30 ... +30 | 0.7 ... 6 | -30 ... +40 |
| IAS35 | 419 2510 522 27 | +5 ... +35 | 0.7 ... 6 | -30 ... +50 |
| IAS60 | 419 2512 522 27 | 0 ... +60 | 0.7 ... 6 | -30 ... +70 |

| Specifications | | |
|---------------------------------|--------------------------|---|
| Accuracy | Repeatability | $\pm 0.5 \% \text{ FS typ.}$ |
| | Scale accuracy typ. | $\pm 2 \% \text{ FS typ.}$ |
| | Switching differential | See table |
| Environmental conditions | Ambient temperature | see ordering information |
| | Storage temperature | Range $\leq +40^{\circ}\text{C}$: $-30\dots+50^{\circ}\text{C}$ Range $> +40^{\circ}\text{C}$: $-30\dots+85^{\circ}\text{C}$ |
| | Protection | IP65 |
| | Humidity | Max. 95% relative |
| Mechanical Data | Sensor housing | See ordering information |
| | Filling | Liquid |
| | Housing | AlSi9Cu3, coated |
| | Screwed cable gland | Brass nickel plated |
| | Installation | Any position |
| | Weight | $\sim 950 \text{ g}$ |
| Microswitch | Rating | See table |
| | Resistance of insulation | $> 2 \text{ M}\Omega$ |
| | Dielectric strength | $U \leq 250\text{V}$: $1.45 \text{ kV} / U \leq 500\text{V}$: 2 kV terminal ground |
| | Life time (mechanical) | Microswitch 10/11/25: 20 Mio. cycles Microswitch 21: 0.5 Mio. cycles |
| Electrical connection | Cable gland | M20x1.5 Cable- \varnothing 4...10 mm |
| | Terminal screw | $3 \times 1\dots2.5 \text{ mm}^2$ |

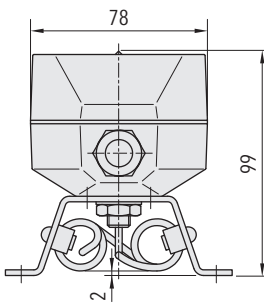
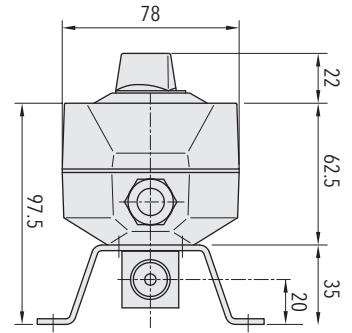
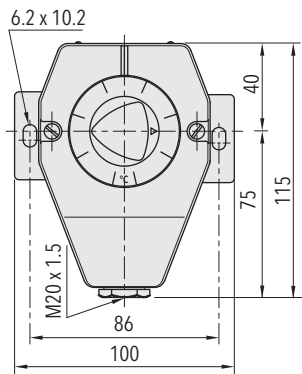
Additional information

| | | |
|------------------|--------------|--|
| Documents | Data sheet | www.trafag.com/H72116 |
| | Instructions | www.trafag.com/H73111 |
| | Flyer | www.trafag.com/H70964 |

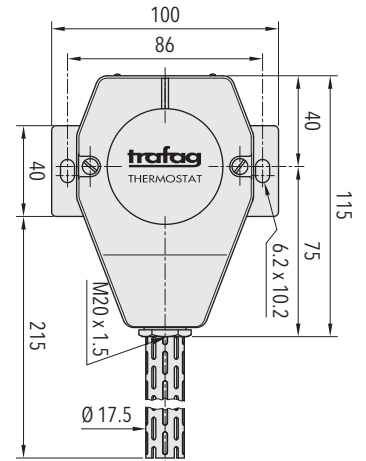
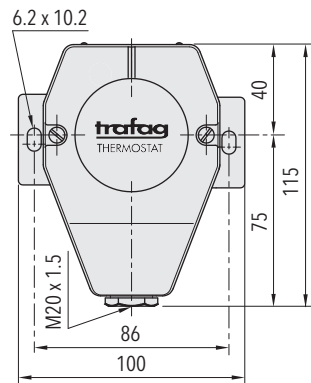
Dimensions



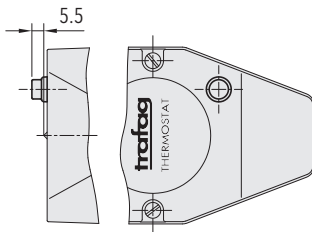
409.XXXX.52X.27...



419.XXXX.52X.27...



4X9.XXXX.42X.27.2743.0215

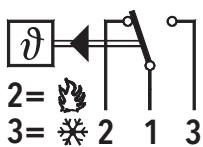


Accessory 14

| Switching differential typ. | | |
|---|------|---|
| Range | [°C] | -30 ... +30 -20 ... +40 +5 ... +35 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 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 |

Electrical Connection



409 / 419

Modifications

| Index | Date | Description |
|-------|------------------------|---|
| b | 11/2003 | redesigned data sheet |
| c | 02/2004 | Microswitch without condensator (Page 4) |
| d | 11/2004 | Page 4: rating microswitch 11/25 |
| e | 12/2009 06/2010 | Page 2: Sensor „Copper chrome plated“ all types removed Page 2,3,4: Big switching differential O6 removed Page 4: contact rating of microswitch 21 increased from 0.01A to 0.1A (24 AC & 24 DC) Page 4: Switch 21: advise „suitable for intrinsically safe control circuit“ removed because „simple apparatus“ devices are available |
| f | 09/2011 | Page 3: Dielectric strength changed to $U \leq 250V: 1.45kV/U \leq 500V: 2kV$ |
| g | 02/2015 | New layout Page 5: Switch 11 DC rating corrected: old 14V 15(2.5) A, new 14V 15(1.5) A |
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