

# ALTERO 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

- With 1 adjustable step between 2 stages
- Short response time
- Protection IP54
- Electrical connection on terminal screw

## Technical Data

Designation of application	Multistage room thermostat	Switching differential	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 H721371

Subject to change

## Ordering information/type code

		XXX	XX	XX	XXX	XX	XX
<b>Custom build code</b>	Internal adjustment	198					
	External adjustment	199					
<b>Microswitch</b>	Small switching differential, not adjustable		10				
	Average switching differential, not adjustable		11				
	With gold plated contacts, not adjustable		21				
<b>Range</b>	<b>Range [°C]</b>	<b>Operating temperature [°C]</b>					
	-45 ... +15	-45 ... +30		05			
	-30 ... +30	-30 ... +40		02			
	-20 ... +40	-30 ... +50		06			
	0 ... +30	-30 ... +50		03			
	+10 ... +40	-30 ... +70		04			
	0 ... +60	-30 ... +70		12			
<b>Sensor</b>	Stainless steel (1.4435 / AISI316L)				401		
	Copper				402		
	Copper nickel plated				403		
<b>Fixing <sup>2)</sup></b>	Console					19	
<b>Accessories</b>	Signal lamp						14
	Switchpoint locking <sup>1)</sup>						15
	Switchpoint fixed and sealed upon customer's request <sup>1)</sup>						88
	Switchpoint preset upon customer's request, no guarantee on switching accuracy <sup>1)</sup>						83
	Switchpoint adjustment please indicate when ordering: - Switchpoint [°C] - Increasing or decreasing						
	Railway version (UIC 616)						28
	Outdoor application (vented)						44
	Desired stage difference to be indicated when ordering (without indication = switches synchronous) Switch 1 on scale, difference switch 2 to scale -6°C ... +15°C						
	Minimum distance between switches: Switch 10: ±1°C Switch 11/21: ±2°C						

<sup>1)</sup> Only with type 198, internal adjustment

<sup>2)</sup> See data sheet H72106

## Standard products (extra short lead time)

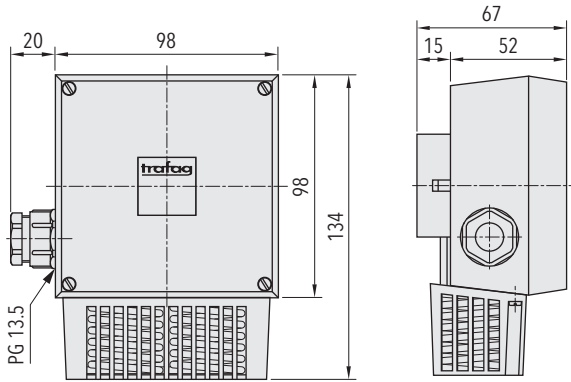
Product No.	Type Code	Temperature range [°C]	Switching differential [°C]	Smallest stage difference [°C]	Largest stage difference [°C]	Operating temperature [°C]
A230	199 1103 402 19	0 ... +30	0.7 (fixed)	-6	15	-30 ... +50
A233	199 1102 402 19	-30 ... +30	0.7 (fixed)	-6	15	-30 ... +40
A260	199 1112 402 19	0 ... +60	0.7 (fixed)	-6	15	-30 ... +70
A2S30	198 1103 402 19	0 ... +30	0.7 (fixed)	-6	15	-30 ... +50
A2S33	198 1102 402 19	-30 ... +30	0.7 (fixed)	-6	15	-30 ... +40
A2S60	198 1112 402 19	0 ... +60	0.7 (fixed)	-6	15	-30 ... +70

Specifications		
<b>Accuracy</b>	Repeatability	$\pm 0.5\%$ FS typ.
	Scale accuracy typ.	$\pm 2\%$ FS typ.
	Switching differential	see table
<b>Environmental conditions</b>	Ambient temperature	see ordering information
	Storage temperature	Range $< +40^{\circ}\text{C}$ : $-30\dots+50^{\circ}\text{C}$ Range $> +40^{\circ}\text{C}$ : $-30\dots+85^{\circ}\text{C}$
	Protection	IP54
	Humidity	Max. 95 % relative
<b>Mechanical Data</b>	Sensor housing	see ordering information
	Filling	Liquid
	Housing	Noryl
	Screwed cable gland	PA, Polyamid
	Installation	any position
	Weight	$\sim 480\text{ g}$
<b>Microswitch</b>	Rating	see table
	Resistance of insulation	$> 2\text{ M}\Omega$
	Dielectric strength	$U \leq 250\text{V}$ : 1.45 kV $U \leq 500\text{V}$ : 2 kV terminal ground
	Life time (mechanical)	Microswitch 10/11: 20 Mio. cycles Microswitch 21: 0.5 Mio. cycles
<b>Electrical connection</b>	Cable gland	PG13.5 Cable- $\varnothing$ 5...12.5 mm
	Terminal screw	$6 \times 1\dots 2.5\text{ mm}^2$

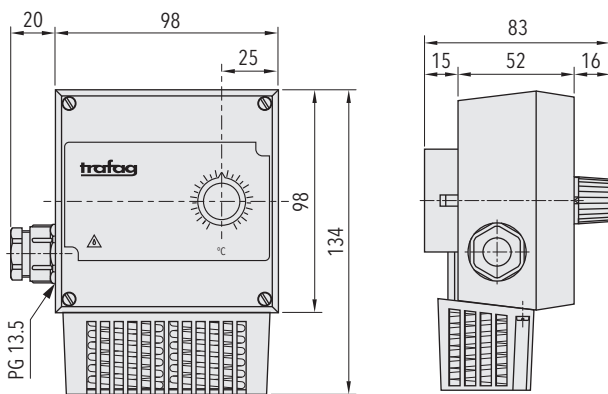
### Additional information

<b>Documents</b>	Data sheet	<a href="http://www.trafag.com/H72137">www.trafag.com/H72137</a>
	Instructions	<a href="http://www.trafag.com/H70311">www.trafag.com/H70311</a>
	Flyer	<a href="http://www.trafag.com/H70962">www.trafag.com/H70962</a>

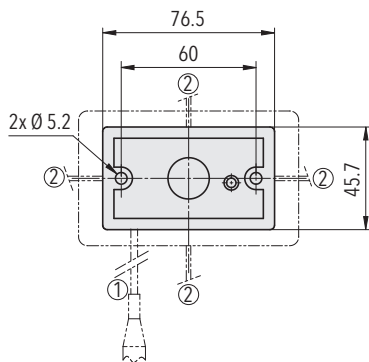
## Dimensions



198.XXXX.XXX.XX.XX



199.XXXX.XXX.XX.XX



19X.XXXX.XXX.19.XX

## Switching differential typ.

<b>Range</b>	[°C]	-45 ... +15 -30 ... +30 -20 ... +40 0 ... +30 +10 ... +40 0 ... +60
<b>Microswitch 10</b> Switching differential (fixed value, not adjustable)	[°C]	0.3
<b>Microswitch 11</b> Switching differential (fixed value, not adjustable)	[°C]	0.7
<b>Microswitch 21</b> Switching differential (fixed value, not adjustable)	[°C]	0.7

## Electrical data switch

Type	Features	Rating	
		Resistive Load (Inductive Load)	
		AC	DC
<b>10</b>	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
<b>11</b>	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
<b>21</b>	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

## Electrical Connection

