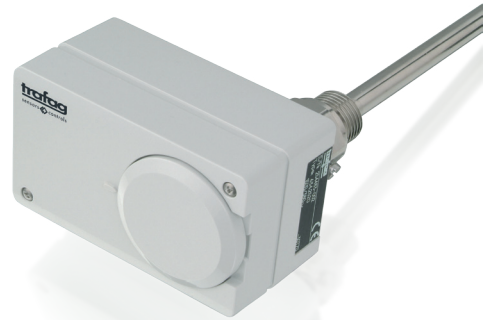


# MINISTAT

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



## Applications

- Machine tools
- HVAC
- Process technology
- Water treatment

## Features

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

## Technical Data

Designation of application	Direct mounting thermostat	Switching differential	Adjustable / not adjustable
Measuring range	-30°C ... +40°C to +70°C ... +350°C	Repeatability	± 0.5 % FS typ.
Output signal	Floating change-over contact	Approval / conformity	EN60730-1/ EN60730-2-9: Typ 2.B.H

10/2018

Data sheet H72174n

Subject to change

## Ordering information/type code

		XXX	XX	XXXXXXXXXX	XXXX	XXXX	XX
<b>Custom build code</b>	External adjustment	624					
	Internal adjustment	634					
<b>Microswitch</b>	Small switching differential, not adjustable		10				
	Average switching differential, not adjustable		11				
	With gold plated contacts, switching differential not adjustable		21				
	Adjustable large switching differential		24				
	Adjustable standard switching differential		25				
<b>Range</b>	<b>Sensor material</b>	<b>Sensor diameter [mm]</b>	<b>Range [°C]</b>	<b>Sensor max. [°C]</b>			
	Cu	7	-30...+40	45	01.422.12		
	Cu <sup>2)</sup>	7	-10...+25	50	07.422.12		
	Cu	7	0...+35	50	09.422.12		
	Cu	7	+10...+45	85	11.422.12		
	Cu <sup>2)</sup>	7	+10...+80	100	13.422.12		
	Cu	7	+15...+30	60	17.422.12		
	Cu	7	-10...+35	50	94.322.12		
	Cu <sup>2)</sup>	7	-10...+80	85	95.322.12		
	Cu	7	+5...+95	105	20.322.12		
	Cu <sup>2)</sup>	7	+20...+110	115	23.322.12		
	Cu	7	+20...+150	165	31.122.12		
	Cu	7	+20...+230	250	24.022.35		
	Cu <sup>2)</sup>	7	+30...+300	330	53.022.35		
	Cu	7	+70...+350	380	54.022.35		
<b>Protection tube</b>	For fixing option 12, brass nickel plated, G1/2" <sup>1)</sup>				1216		
	For fixing option 12, stainless steel, G1/2" <sup>1)</sup>				1211		
	For fixing option 35, brass nickel plated, G1/2" <sup>1)</sup>				8316		
	For fixing option 35, stainless steel, G1/2" <sup>1)</sup>				8411		
<b>Protection tube length</b>	<b>Suitable for sensor</b>			<b>Protection tube length [mm]</b>			
	XX.122.XX <sup>1)</sup>			110		0110	
	XX.122.XX; XX.322.XX <sup>1)</sup>			150		0150	
	XX.122.XX; XX.322.XX; XX.422.XX <sup>1)</sup>			200		0200	
	XX.122.XX; XX.322.XX; XX.422.XX <sup>1)</sup>			400		0400	
<b>Accessories</b>	Switchpoint locking <sup>2)</sup>						15
	Switchpoint fixed and sealed upon customer's request <sup>2)</sup>						88
	Switchpoint preset upon customer's request, no guarantee on switching accuracy <sup>2)</sup>						83
	Switchpoint adjustment please indicate when ordering: - Switchpoint [°C] - Increasing or decreasing						
	Condensator over Pin 1-2						12
	Condensator over Pin 1-3						13
	Condensators over Pin 1-2 / 1-3						23
	Railway version IEC 61373, category 2						28
	Outdoor application (vented)						44
	Cover with window						77

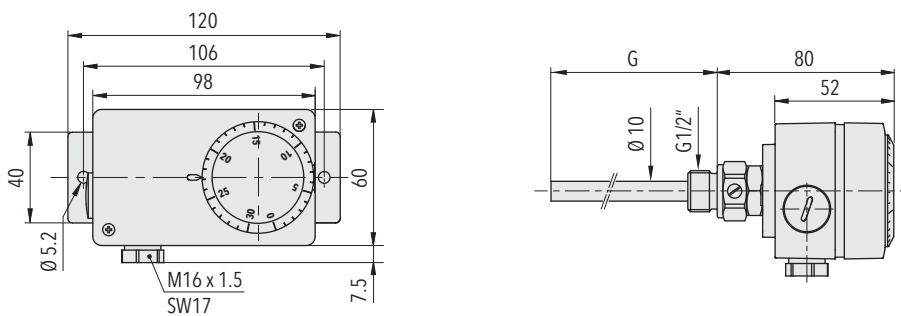
<sup>1)</sup> See data sheet H72114/H72163

<sup>2)</sup> Only with type 634 internal adjustment

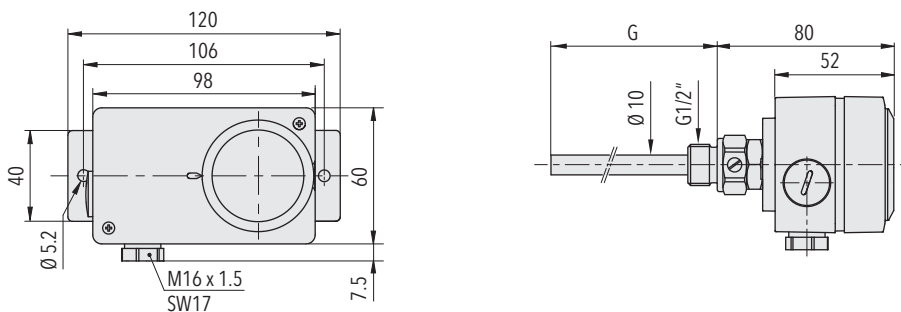
## Standard products (extra short lead time)

Product No.	Type Code	Temperature range [°C]	Protection tube length [mm]	Switching differential [°C]	Sensor max. [°C]
MST8015	634 2595 322 12 1216 0150	-10 ... +80	150	2 ... 12 (adjustable)	85
MST8040	634 2595 322 12 1216 0400	-10 ... +80	400	2 ... 12 (adjustable)	85
MST9511	634 2520 332 12 1217 0110	+5 ... +95	110	2 ... 12 (adjustable)	105
MST9515	634 2520 322 12 1216 0150	+5 ... +95	150	2 ... 12 (adjustable)	105
MST9540	634 2520 322 12 1216 0400	+5 ... +95	400	2 ... 12 (adjustable)	105
MST15015	634 2531 122 12 1216 0150	+20 ... +150	150	2.5 ... 16 (adjustable)	165
MST15040	634 2531 122 12 1216 0400	+20 ... +150	400	2.5 ... 16 (adjustable)	165

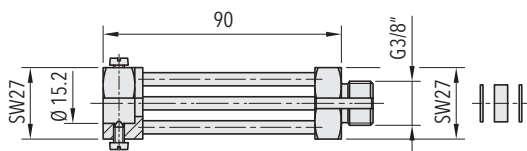
## Dimensions



624.XXXX.X22.12...



634.XXXX.X22.12...



Fixation 35

Specifications		
<b>Accuracy</b>	Repeatability	$\pm 0.5 \% \text{ FS typ.}$
	Scale accuracy typ.	$\pm 2 \% \text{ FS typ.}$
	Switching differential	See table
	Switching point	Temperature compensated with bimetal switch lever
<b>Environmental conditions</b>	Ambient temperature	Range $\leq +45^{\circ}\text{C}$ : $-30^{\circ}\text{C} \dots +50^{\circ}\text{C}$ Range $+45^{\circ}\text{C} \dots +250^{\circ}\text{C}$ : $-30^{\circ}\text{C} \dots +70^{\circ}\text{C}$ Range $> +250^{\circ}\text{C}$ : $-10^{\circ}\text{C} \dots +70^{\circ}\text{C}$ (Important: Temperature at sensor may not exceed maximum sensortemperature)
	Storage temperature	Range $\leq +45^{\circ}\text{C}$ : $-30^{\circ}\text{C} \dots +50^{\circ}\text{C}$ Range $> +45^{\circ}\text{C}$ : $-30^{\circ}\text{C} \dots +85^{\circ}\text{C}$
	Protection	IP54
	Humidity	Max. 95 % relative
<b>Mechanical Data</b>	Sensor housing	See ordering information
	Filling	Liquid
	Protection tube	See ordering information
	Housing	PC/ABS-Blend V0
	Screwed cable gland	Polyamide (PA)
	Installation	any position
	Weight	$\sim 430 \text{ g}$
<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 10/11/25: 20 Mio. cycles Microswitch 21: 0.5 Mio. cycles Microswitch 24: 0.3 Mio. cycles
<b>Electrical connection</b>	Cable gland	M16x1.5 Cable- $\varnothing$ 4...9 mm
	Terminal screw	3 x 1 ... 2.5 mm <sup>2</sup>

## Additional information

<b>Documents</b>	Data sheet	<a href="http://www.trafag.com/H72174">www.trafag.com/H72174</a>
	Instructions	<a href="http://www.trafag.com/H73624">www.trafag.com/H73624</a>
	Flyer	<a href="http://www.trafag.com/H70955">www.trafag.com/H70955</a>

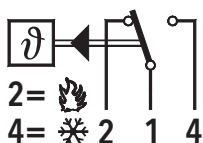
## Switching differential typ.

<b>Measuring range</b>	[°C]	-30 ... +40 -10 ... +25 0 ... +35 +15 ... +30 +10 ... +45 +10 ... +80	-10 ... +35 -10 ... +80 +5 ... +95 +20 ... +110	+20 ... +150	+20 ... +230	+40 ... +300 +70 ... +350
<b>Microswitch 10:</b> Switching differential not adjustable	[°C]	0.3	0.8	1	1.2	2
<b>Microswitch 11/21:</b> Switching differential not adjustable	[°C]	0.7	2	2.5	3	4
<b>Microswitch 24:</b> Switching differential adjustable	[°C]	4 ... 21	5.5 ... 26	7 ... 34	15 ... 65	18 ... 84
<b>Microswitch 25:</b> Switching differential adjustable	[°C]	0.7 ... 10	2 ... 12	2.5 ... 16	3 ... 32	4 ... 40

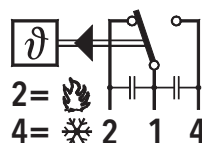
## Electrical data switch

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
<b>25</b>	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
<b>24</b>	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



624/634



with accessory 23