

MINISTAT

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



Applications

- Machine tools
- HVAC
- Process technology
- Water treatment

Features

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

05/2015

Data sheet H72174h

Technical Data

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

Subject to change

Ordering information/type code

		XXX	XX	XXXXXXXXXX	XXXX	XXXX	XX
Custom build code	External adjustment	624					
	Internal adjustment	634					
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	Sensor material	Sensor diameter [mm]	Range [°C]	Sensor max. [°C]			
	Cu	7	-30...+40	45	01.422.12		
	Cu ²⁾	7	-10...+25	50	07.422.12		
	Cu	7	0...+35	50	09.422.12		
	Cu	7	+10...+45	85	11.422.12		
	Cu	7	+10...+80	100	13.422.12		
	Cu	7	+15...+30	60	17.422.12		
	Cu	7	-10...+35	50	94.322.12		
	Cu ²⁾	7	-10...+80	85	95.322.12		
	Cu	7	+5...+95	105	20.322.12		
	Cu ²⁾	7	+20...+110	115	23.322.12		
	Cu	7	+20...+150	165	31.322.12		
	Cu	7	+20...+230	250	24.122.35		
	Cu ²⁾	7	+30...+300	330	53.122.35		
	Cu	7	+70...+350	380	54.122.35		
Protection tube	For fixing option 12, brass nickel plated, G1/2" ¹⁾				1216		
	For fixing option 12, stainless steel, G1/2" ¹⁾				1211		
	For fixing option 35, brass nickel plated, G1/2" ¹⁾				8316		
	For fixing option 35, stainless steel, G1/2" ¹⁾				8411		
Protection tube length	Suitable for sensor			Protection tube length [mm]			
	XX.122.XX ¹⁾			110		0110	
	XX.122.XX, XX.322.XX ¹⁾			150		0150	
	XX.122.XX, XX.322.XX, XX.422.XX ¹⁾			200		0200	
	XX.122.XX, XX.322.XX, XX.422.XX ¹⁾			400		0400	
Accessories	Set blocking (only type 634)						15
	Condensator over Pin 1-2						12
	Condensator over Pin 1-3						13
	Condensators over Pin 1-2 / 1-3						23
	Railway version (UIC 616)						28
	Outdoor usage (aerated)						44
	Cover with window						77

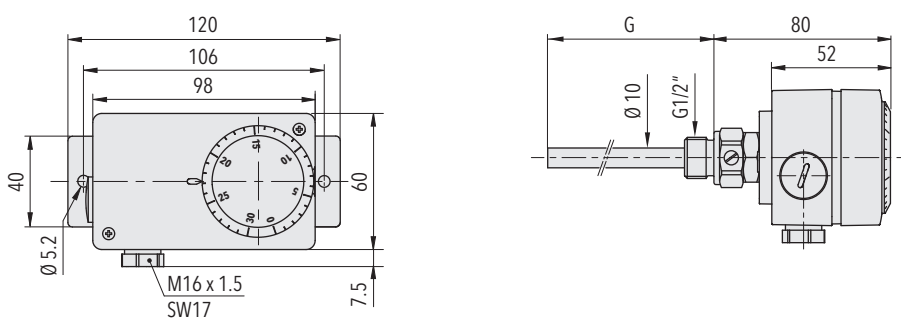
¹⁾ See data sheet H72114/H72163

²⁾ Only with type 634 internal adjustment

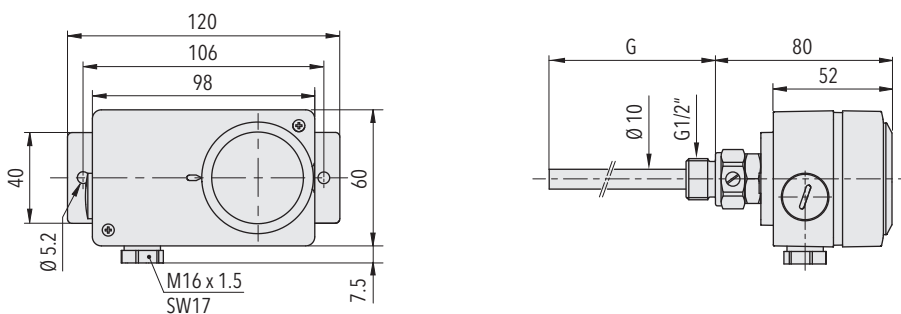
Standard products (extra short lead time)

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	105
MST8040	634 2595 322 12 1216 0400	-10...+80	400	2...12	85
MST9511	634 2520 332 12 1217 0110	+5...95	110	2...12	85
MST9515	634 2520 322 12 1216 0150	+5...95	150	2...12	105
MST9540	634 2520 322 12 1216 0400	+5...95	400	2...12	105
MST15015	634 2531 322 12 1216 0150	+20...+150	150	2.5...16	165
MST15040	634 2531 322 12 1216 0400	+20...+150	400	2.5...16	165

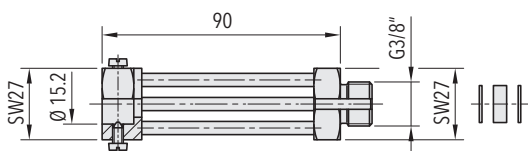
Dimensions



624.XXXX.X22.12...



634.XXXX.X22.12...



Fixation 35

Specifications		
Accuracy	Repeatability	± 0.5 % FS typ.
	Scale accuracy typ.	± 2 % FS typ.
	Switching differential	see table
	Switching point	Temperature compensated with bimetal switch lever
Environmental conditions	Ambient temperature	Range ≤ +45°C: -30...+50°C Range +45...+250°C: -30...+70°C Range > + 250°C: -10...+70°C (Important: Temperature at sensor may not exceed maximum sensor temperature)
	Storage temperature	Range ≤ +45°C: -30...+50°C Range > +45°C: -30...+85°C
	Protection	IP54
	Humidity	Max. 95 % relative
Mechanical Data	Sensor housing	See ordering information
	Filling	Liquid
	Protection tube	See ordering information
	Housing	PC/ABS-Blend V0
	Screwed cable gland	PA, Polyamid
	Installation	Any position
	Weight	~ 430 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)	Microrupteur 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/H72174
	Instructions	www.trafag.com/H73624
	Flyer	www.trafag.com/H70955

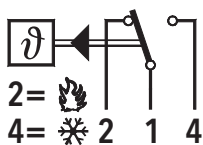
Switching differential typ.

Range	[°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
Microswitch 10 Switching differential (fixed value, not adjustable)	[°C]	0.3	0.8	1	1.2	2
Microswitch 11/21 Switching differential (fixed value, not adjustable)	[°C]	0.7	2	2.5	3	4
Microswitch 24 Switching differential (adjustable value)	[°C]	4 ... 21	5.5 ... 26	7 ... 34	15 ... 65	18 ... 84
Microswitch 25 Switching differential (adjustable value)	[°C]	0.7 ... 10	2 ... 12	2.5 ... 16	3 ... 32	4 ... 40

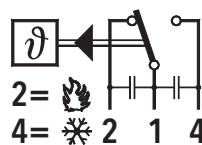
Electrical data switch

Type	Features	Rating Resistive Load (Inductive Load)	
		AC	DC
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



624/634



with accessory 23

Modifications

Index	Date	Description
a	11/2005	redesigned data sheet
b	12/2009	Page 2,3,4: Big switching differential O6 removed
c	06/2010	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
d	06/2010	Page 3: Operating temperature changed to ambient temperature, Ranges separated to: $\leq +45^{\circ}\text{C} = -30\dots+50^{\circ}\text{C}$ $+45\dots+250^{\circ}\text{C} = -30\dots+70^{\circ}\text{C}$ $>+250^{\circ}\text{C} = -10\dots+70^{\circ}\text{C}$
e	10/2011	Page 3: Dielectric strength changed to $U \leq 250\text{ V}: 1.45\text{kV}/U \leq 500\text{ V}: 2\text{kV}$
f	10/2012	Page 2: Added: different protection tube length are suitable for different sensors 110 [mm] 122 150 [mm] 122 322 200 [mm] 122 322 422 400 [mm] 122 322 422
g	01/2015	New layout Page 5: Switch 11 DC rating corrected: old 14V 15(2.5) A, new 14V 15(1.5) A
h	05/2015	Page 2: Ranges 07.422.12; 95.322.12; 23.322.12; 53.122.35 new declared, footnote 2: "only with type 634 internal adjustment"