

DUCT THERMOSTAT

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

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

02/2021

Data sheet H72177k

Technical Data

Designation of application	Duct thermostat	Switching differential	Adjustable / not adjustable
Measuring range	-30°C ... +40°C to +20°C ... +110°C	Repeatability	± 0.5 % FS typ.
Output signal	Floating change-over contact	Approval / conformity	EN60730-1/ EN60730-2-9: Typ 2.B.H

Subject to change

Ordering information/type code

				XXX	XX	XX	XXX	XX	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, switching differential not adjustable				21				
	Adjustable large switching differential				24				
	Adjustable standard switching differential				25				
Range	Range	Sensor max.							
	[°C]	[°C]							
	-30 ... 40	45			01				
	-10 ... 25 ³⁾	50			07				
	0 ... 35	50			09				
	10 ... 45 ³⁾	85			11				
	10 ... 80 ³⁾	100			13				
	5 ... 95	105			20				
	20 ... 110 ³⁾	115			23				
Sensor ¹⁾	Range	Sensor diameter	Sensor material		Range	Sensor diameter	Sensor material		
		[mm]				[mm]			
	20,23	Ø7	Copper	322	01, 07, 09, 11, 13, 17	Ø7	Copper	422	
	20,23	Ø9	Copper	332	01, 07, 09, 11, 13, 17	Ø9	Copper	432	
Fixing ²⁾	With spring tube and flange, for direct mounting, Ø 16.5 x 200mm								30
Accessories	Switchpoint locking ³⁾								15
	Switchpoint fixed and sealed upon customer's request ³⁾								88
	Switchpoint preset upon customer's request, no guarantee on switching accuracy ³⁾								83
	Switchpoint adjustment please indicate when ordering:								
	- Switchpoint [°C]								
	- Increasing or decreasing								
	Capacitor over Pin 1-2								12
	Capacitor over Pin 1-3								13
	Capacitors over Pin 1-2 / 1-3								23
	Railway version IEC 61373, category 2								28
	Outdoor application (vented)								44
	Cover with window								77

¹⁾ See data sheet www.trafag.com/H72114 and www.trafag.com/H72163

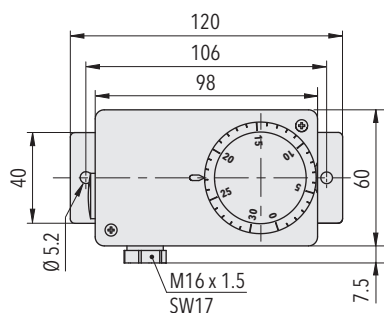
²⁾ See data sheet www.trafag.com/H72106

³⁾ Only with type 634 internal adjustment

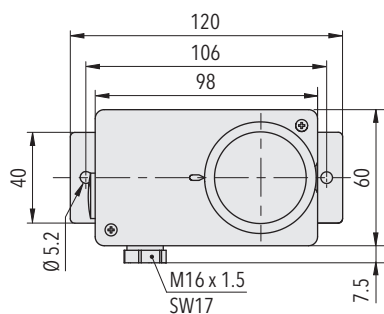
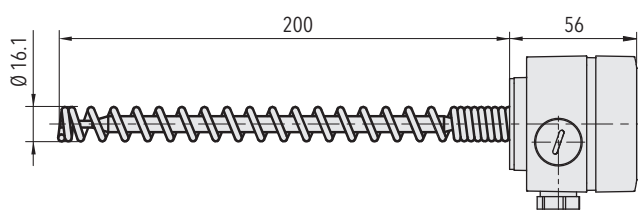
Standard products (extra short lead time)

Product No.	Type Code	Sensor material	Temperature range [°C]	Switching differential [°C]	Sensor max. [°C]
MSK35	634 2509 432 30	Copper	0 ... +35	0.7 ... 10 (adjustable)	50
MSK40	634 2501 432 30	Copper	-30 ... +40	0.7 ... 10 (adjustable)	45
MSK80	634 2513 432 30	Copper	+10 ... +80	0.7 ... 10 (adjustable)	100

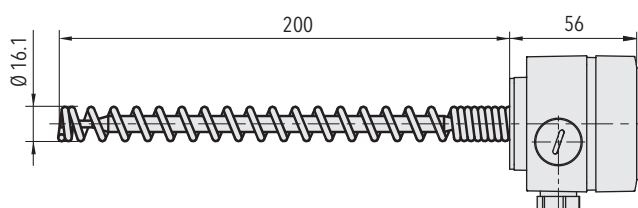
Dimensions



624.XXXX.XXX.XX.XX



634.XXXX.XXX.XX.XX



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	-30 ... +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
	Housing	PC/ABS-Blend V0
	Screwed cable gland	PA, Polyamid
	Installation	Any position
	Weight	~ 220 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 mm²

Additional information		
Documents	Data sheet	www.trafag.com/H72177
	Instructions	www.trafag.com/H73624
	Flyer	www.trafag.com/H70957

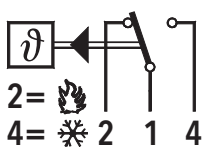
Switching differential typ.

Range	[°C]	-30 ... +40 -10 ... +25 0 ... +35 +15 ... +30 +10 ... +45 +10 ... +80	+5 ... +95 +20 ... +110
Microswitch 10 Switching differential (fixed value, not adjustable)	[°C]	0.3	0.8
Microswitch 11/21 Switching differential (fixed value, not adjustable)	[°C]	0.7	2
Microswitch 24 Switching differential (adjustable value)	[°C]	4 ... 21	5.5 ... 26
Microswitch 25 Switching differential (adjustable value)	[°C]	0.7 ... 10	2 ... 12

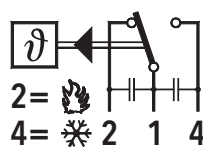
Electrical data switch

		Rating Resistive Load (Inductive Load)	
Type	Features	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