

# PIPE MOUNTING THERMOSTAT

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



## Applications

- Process technology
- Water treatment

## Features

- For pipe or barrel mounting
- Short response time
- Protection IP54
- Electrical connection on terminal screw

## Technical Data

Designation of application	Pipe mounting thermostat	Switching differential	Adjustable / not adjustable
Measuring range	-10°C ... +35°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

01/2017

Data sheet H72175g

Subject to change

## Ordering information/type code

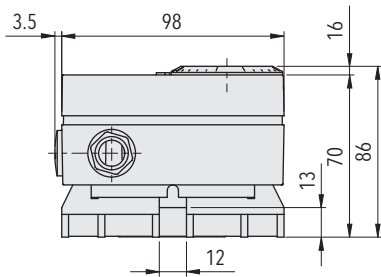
		XXX	XX	XX	XXX	XX	XX
<b>Custom build code</b>	External adjustment	663					
	Internal adjustment	664					
<b>Microswitch</b>	Small switching differential, not adjustable		10				
	Average switching differential, not adjustable		11				
	Adjustable standard switching differential		25				
<b>Range</b>	<b>Range</b> [°C]	<b>Sensor max.</b> [°C]					
	-10 ... 35	50		94			
	-10 ... 80 <sup>1)</sup>	85		95			
	0 ... 45 <sup>1)</sup>	85		93			
	10 ... 55 <sup>1)</sup>	85		22			
	5 ... 95	105		20			
	20 ... 110 <sup>1)</sup>	115		23			
<b>Sensor</b>	Copper				502		
	Copper nickel plated				503		
<b>Fixing</b>	Standard with strap					00	
<b>Accessories</b>	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						
	Condensator over Pin 1-2						12
	Condensator over Pin 1-3						13
	Condensators over Pin 1-2 / 1-3						23
	Outdoor application (vented)						44
	Cover with window						77

<sup>1)</sup> Only with type 664 internal adjustment

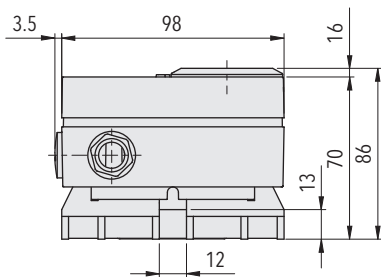
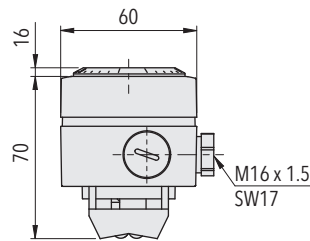
## Standard products (extra short lead time)

Product No.	Type Code	Temperature range [°C]	Switching differential [°C]	Sensor max. [°C]
MSP35	664 2594 502 00	-10 ... +35	3.7 ... 14 (adjustable)	50
MSP80	664 2595 502 00	-10 ... +80	3.7 ... 14 (adjustable)	85
MSP95	664 2520 502 00	+5 ... +95	3.7 ... 14 (adjustable)	105
MSP110	664 2523 502 00	+20 ... +110	3.7 ... 14 (adjustable)	115

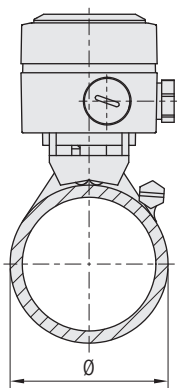
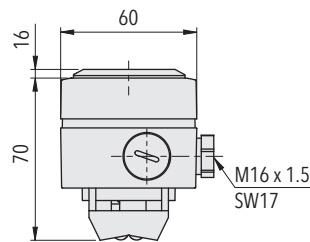
## Dimensions



663.XXXX.XXX.XX.XX



664.XXXX.XXX.XX.XX



The supplied strap (500mm) is sufficient for double winding upto pipe diameter of 65mm (2"), single winding upto pipe diameter 160mm.

Determination of strap length:

Strap length [mm]

$$= 180 \text{ [mm]} + 5 \times \varnothing_{\text{Pipe}} \text{ [mm]} \text{ (twice wound)}$$

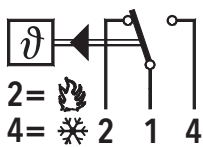
Specifications		
<b>Accuracy</b>	Repeatability	± 0.5 % FS typ.
	Scale accuracy typ.	± 2 % FS typ.
	Switching differential	Microswitch 10 (not adjustable): 2.5oC 11 (not adjustable): 3.7oC 25 (adjustable): 3.7...14oC
	Switching point	Temperature compensated with bimetal switch lever
<b>Environmental conditions</b>	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
<b>Mechanical Data</b>	Sensor housing	See ordering information
	Filling	Liquid
	Housing	PC/ABS-Blend V0
	Screwed cable gland	PA, Polyamid
	Installation	Any position
	Weight	~ 220 g
<b>Microswitch</b>	Rating	See table
	Resistance of insulation	> 2 MΩ
	Dielectric strength	U ≤ 250V: 1.45 kV U ≤ 500V: 2 kV terminal ground
	Life time (mechanical)	20 Mio. cycles
<b>Electrical connection</b>	Cable gland	M16x1.5 Cable-Ø 4...9 mm
	Terminal screw	3 x 1...2.5 mm²

Additional information		
<b>Documents</b>	Data sheet	<a href="http://www.trafag.com/H72175">www.trafag.com/H72175</a>
	Instructions	<a href="http://www.trafag.com/H73663">www.trafag.com/H73663</a>
	Flyer	<a href="http://www.trafag.com/H70958">www.trafag.com/H70958</a>

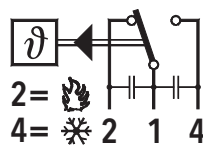
## Electrical data switch

Type	Features	Rating	
		Resistive Load (Inductive Load)	
		AC	DC
10	Small switching differential, not adjustable	125 V, 10 (1.5) A	250 V, 0.2 (0.02) A
		250 V, 10 (1.25) 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, 0.25(0.03) A
		250 V, 15 (1.25) A	125 V, 0.5(0.05) A
		500 V, 10 (0.75) A	30 V, 6 (1.5) A 14 V, 15 (1.5) A
25	Adjustable standard switching differential	125 V, 15 (1.5) A	250 V, 0.25(0.03) A
		250 V, 15 (1.25) A	125 V, 0.5(0.05) A
		500 V, 10 (0.75) A	30 V, 6 (1.5) A 14 V, 15 (2.5) A

## Electrical Connection



663/664



with accessory 23