

EX INDUSTRISTAT

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



Applications

- Ex II 2 G / D

Features

- Compact design
- Rugged housing
- Any mounting position possible
- Ex d e IIC T6 Gb
- Ex tb IIIC T80°C Db

Technical Data

Designation of application	Ex Industrial thermostat with remote sensor	Switching differential	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	SEV 15 ATEX 0156 X

01/2017

Data sheet H72108n

Subject to change

Ordering information/type code

				XXX	XX	XX	XXX	XX	XXXXXXXXXX	XX	XX
Custom build code	External adjustment			404							
	Internal adjustment			414							
Microswitch	Standard, switching differential not adjustable			91							
Range	Range	Sensor max.		Range	Sensor max.						
	[°C]	[°C]		[°C]	[°C]						
	-30 ... +40	50	01	-10 ... +80	85	95					
	-10 ... +25	60	07	+5 ... +95	105	20					
	0 ... +35	70	09	+20 ... +110	115	23					
	+10 ... +45	85	11	+20 ... +150	165	31					
	+10 ... +80	100	13	+20 ... +230	250	24					
	+15 ... +30	60	17	+40 ... +300	330	53					
	-10 ... +35	70	94	+35 ... +175	200	56					
	+10 ... +70	85	59	+20 ... +270	330	55					
	+20 ... +85	100	58	+70 ... +350	380	54					
	+20 ... +115	130	57								
Sensor ¹⁾	Range	Sensor diameter	Sensor material								
		[mm]									
	01, 07, 09, 11, 13, 17, 58, 59	Ø7	Stainless steel	421							
	94, 95, 20, 23, 31, 56, 57	Ø4.7	Stainless steel	311							
	94, 95, 20, 23, 31, 56, 57	Ø7	Stainless steel	321							
	94, 95, 20, 23, 31, 56, 57	Ø9	Stainless steel	331							
	24, 53, 54, 55	Ø4.7	Stainless steel	111							
	24, 53, 54, 55	Ø7	Stainless steel	121							
	24, 53, 54, 55	Ø9	Stainless steel	131							
	01, 07, 09, 11, 13, 17, 58, 59	Ø4.7	Copper	412							
	01, 07, 09, 11, 13, 17, 58, 59	Ø7	Copper	422							
	01, 07, 09, 11, 13, 17, 58, 59	Ø9	Copper	432							
	94, 95, 20, 23, 31, 56, 57	Ø4.7	Copper	312							
	94, 95, 20, 23, 31, 56, 57	Ø7	Copper	322							
	94, 95, 20, 23, 31, 56, 57	Ø9	Copper	332							
	24, 53, 54, 55	Ø4.7	Copper	112							
	24, 53, 54, 55	Ø7	Copper	122							
	24, 53, 54, 55	Ø9	Copper	132							
	01, 07, 09, 11, 13, 17, 58, 59	Ø4.7	Copper nickel plated	413							
	01, 07, 09, 11, 13, 17, 58, 59	Ø7	Copper nickel plated	423							
	01, 07, 09, 11, 13, 17, 58, 59	Ø9	Copper nickel plated	433							
	94, 95, 20, 23, 31, 56, 57	Ø4.7	Copper nickel plated	313							
	94, 95, 20, 23, 31, 56, 57	Ø7	Copper nickel plated	323							
	94, 95, 20, 23, 31, 56, 57	Ø9	Copper nickel plated	333							
	24, 53, 54, 55	Ø4.7	Copper nickel plated	113							
	24, 53, 54, 55	Ø7	Copper nickel plated	123							
	24, 53, 54, 55	Ø9	Copper nickel plated	133							
Fixing ²⁾	Nut M10 (for remote sensing version)			10							
	Bracket (for remote sensing version)			27							
	Grubscrew locked, lateral (direct mounting version)			12							
	Cap nut (for direct mounting version)			14							
	Grubscrew locked with spacer (cooling element) (for direct mounting version)			18							

		XXX	XX	XX	XXX	XX	XXXXXXXXXX	XX	XX
Protection tube	See data sheet H72114/H72163							XXXX.XXXX	
Accessories									
	Switchpoint locking ⁴⁾								15
	Switchpoint fixed and sealed upon customer's request ⁴⁾								88
	Switchpoint preset upon customer's request, no guarantee on switching accuracy ⁴⁾								83
	Switchpoint adjustment please indicate when ordering:								
	- Switchpoint [°C]								
	- Increasing or decreasing								
	Capillary tube protection: Flexible metal tube, brass nickel plated								90
	Capillary tube protection: Flexible metal tube 1.4541/V2A								91
Capillary tube length	Capillary tube length up to 5000 mm (no specification required for direct mounting on protection tube) L=XXXX ³⁾								

¹⁾ See data sheet H72114/H72163

²⁾ See data sheet H72106

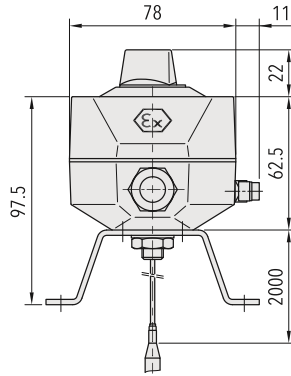
³⁾ Overlengths upon request

⁴⁾ Only with type 414, internal adjustment

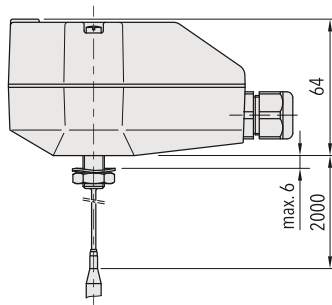
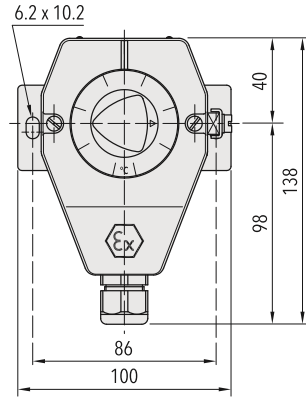
Standard products (extra short lead time)						
Product No.	Type Code	Sensor material	Temperature range [°C]	Switching differential [°C]	Sensor max. [°C]	
EXS35	414 9109 423 27 0000 0000 02	Copper nickel plated	0 ... +35	2.5 (fixed)	50	
EXS40	414 9101 423 27 0000 0000 02	Copper nickel plated	-30 ... +40	2.5 (fixed)	45	
EXS95	414 9120 323 27 0000 0000 02	Copper nickel plated	+5 ... +95	3.5 (fixed)	105	
EXS150	414 9131 323 27 0000 0000 02	Copper nickel plated	+20 ... +150	5.5 (fixed)	165	
EXS230S	414 9124 121 27 0000 0000 02	1.4435/316L	+20 ... +230	8 (fixed)	250	
EXS350S	414 9154 121 27 0000 0000 02	1.4435/316L	+70 ... +350	10 (fixed)	380	

Specifications		
Accuracy	Repeatability	$\pm 0.5 \% \text{ FS typ.}$
	Scale accuracy typ.	$\pm 2 \% \text{ FS typ.}$
	Switching differential	See table
	Switching point	Temperatur compensated with bimetal switch lever
Environmental conditions	Ambient temperature	Range $\leq +45^{\circ}\text{C}$: $-30^{\circ}\text{C} \dots +50^{\circ}\text{C}$ Range $+45^{\circ}\text{C} \dots +250^{\circ}\text{C}$: $-30^{\circ}\text{C} \dots +60^{\circ}\text{C}$ Range $> +250^{\circ}\text{C}$: $-10^{\circ}\text{C} \dots +60^{\circ}\text{C}$
	Storage temperature	Range $\leq +45^{\circ}\text{C}$: $-30^{\circ}\text{C} \dots +50^{\circ}\text{C}$ Range $> +45^{\circ}\text{C}$: $-30^{\circ}\text{C} \dots +60^{\circ}\text{C}$
	Protection	IP65
	Humidity	Max. 95 % relative
	Vibration	5...25 Hz: $\pm 1.6 \text{ mm}$ 25...100 Hz: 4 g
	Shock	50g/ 11ms
Mechanical Data	Sensor housing	See ordering information
	Filling	Liquid
	Housing	AlSi9Cu3, coated
	Screwed cable gland	Polyamide
	Installation	any position
	Weight	$\sim 950 \text{ g}$
Microswitch	Rating	See table
	Resistance of insulation	$> 2 \text{ M}\Omega$
	Dielectric strength	1.5 kV
	Life time (mechanical)	1 Mio. cycles
Electrical connection	Cable gland	M20x1.5/SW24 Cable- $\varnothing$ 5.5...13 mm Approval: PTB 99 ATEX 3128 X
	Terminal screw	3 x 1...2.5 mm ²

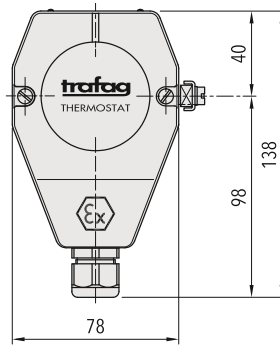
Dimensions



404.XXXX.XXX.27...



414.XXXX.XXX.10...



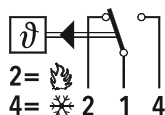
Switching differential typ.

Range	[°C]	-30 ... +40	-10 ... +35	+20 ... +150	+35 ... +175	+40 ... +300
		-10 ... +25	-10 ... +80		+20 ... +230	+70 ... +350
		0 ... +35	+5 ... +95			
		+15 ... +30	+20 ... +110			
		+10 ... +45	+20 ... +115			
		+10 ... +70				
		+10 ... +80				
		+20 ... +85				
Microswitch 91	[°C]	2.5	3.5	5.5	8	10
Switching differential (fixed value, not adjustable)						

Electrical data switch

		Rating	
		Resistive Load (Inductive Load)	
Type	Features	AC	DC
91	Standard BASO1ATEX2358U Ⓜ II 2 G Ex d IIC T6	250V 5(5) A 125V 5(5) A	250 V 0.25 (0.03) A 125 V 0.5 (0.06) A 75 V 0.75 (0.25) A 50 V 1 (1) A 30 V 5 (3) A 15 V 5 (3) A

Electrical connection



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Additional information

Documents	Data sheet	www.trafag.com/H72108
	Instructions	www.trafag.com/H73172
	Flyer	www.trafag.com/H70970