

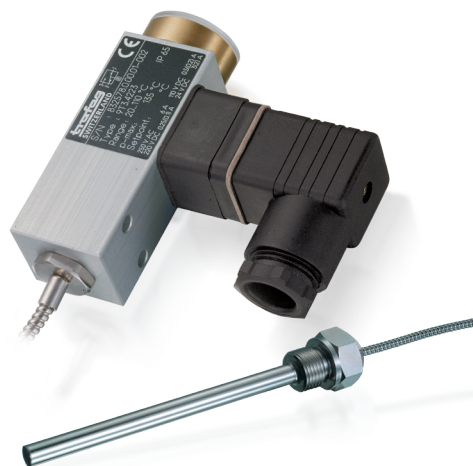
# PICOTHERM

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



## Applications

- Shipbuilding
- Engine manufacturing
- Railways
- Hydraulics
- HVAC



## Features

- Compact design
- Rugged housing
- High repeatability
- Protection IP65
- Any mounting position possible

## Technical Data

Designation of application	Compact thermostat for shipbuilding	Switching differential	Not adjustable
Measuring range	+5°C ... +95°C to +20°C ... +150°C	Repeatability	± 1 % FS typ.
Output signal	Floating change-over contact	Approval / conformity	ABS, BV, CCS, DNV-GL, KRS, LRS, NKK, RINA, RMRS EN60730-1/ EN60730-2-9: Typ 2.B.H

11/2018

Data sheet H72113n

Subject to change

## Ordering information/type code

		474 .	XX	XX	XXX	XX	XXXX	XXXX	XX	XX
<b>Micro-switch</b>	Standard, switching differential not adjustable	03								
<b>Range</b>	<b>Range</b> [°C]	<b>Sensor max.</b> [°C]								
	+5 ... +95	100	20							
	+20 ... +110	115	23							
	+20 ... +150	165	31							
<b>Sensor</b>	<b>Sensor diameter</b> [mm]	<b>Range</b>								
	Ø7	20, 23	322							
	Ø9	20, 23	332							
	Ø12	20, 23	342							
	Ø7	31	122							
	Ø9	31	132							
	Ø12	31	142							
<b>Fixing</b>	Flange connection (for remote sensing version)						00			
	Cap nut (for direct mounting version)						14			
<b>Protection tube</b>	<b>Mounting</b>	<b>Suitable for sensor</b>	<b>Protection tube diameter</b> [mm]							
	For direct mounting on protection tube	122, 322	10	1416						
	For direct mounting on protection tube	142, 342	15	1419						
	For remote sensing version	122, 322	10	8316						
	For remote sensing version	142, 342	15	8319						
<b>Protection tube length</b>	Length G, see data sheet H72163							XXXX		
<b>Accessories</b>	Female electrical connector EN 175301-803-A (DIN43650-A)								58	
	Capillary tube protection: Flexible metal tube, brass nickel plated								90	
	Fixing set								V3	
	Cover with window								77	
<b>Capillary tube length</b>	Capillary tube length up to 5000 mm (no specification required for direct mounting on protection tube) L = XXXX Standard length: L = 3000 mm with flexible metal tube									

## Standard products (extra short lead time)

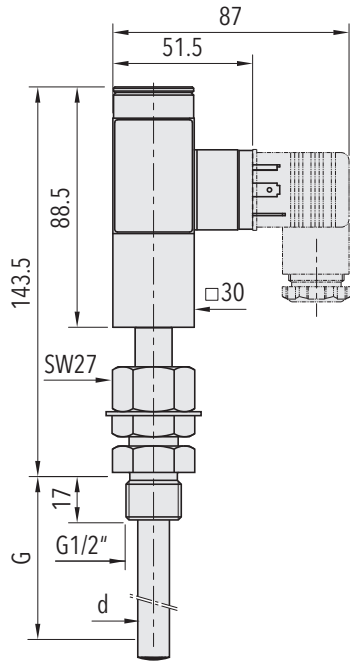
Product No.	Type Code	Temperature range [°C]	Protection tube diameter [mm]	Protection tube length [mm]	Switching differential [°C]	Sensor max. [°C]
ISPT9515	474 0320 322 14 1416 0150 58 V3	+5 ... +95	10	150	4 (fixed)	100
ISPT9565	474 0320 342 14 1419 0065 58 V3	+5 ... +95	15	65	4 (fixed)	100
ISPT11015	474 0323 322 14 1416 0150 58 V3	+20 ... +110	10	150	4 (fixed)	115
ISPT11065	474 0323 342 14 1419 0065 58 V3	+20 ... +110	15	65	4 (fixed)	115
ISPT15015	474 0331 122 14 1416 0150 58 V3	+20 ... +150	10	150	5 (fixed)	165
ISPT15065	474 0331 142 14 1419 0065 58 V3	+20 ... +150	15	65	5 (fixed)	165
ISP9515	474 0320 322 00 8316 0150 58 90 V3	+5 ... +95	10	150	4 (fixed)	100
ISP9565	474 0320 342 00 8319 0065 58 90 V3	+5 ... +95	15	65	4 (fixed)	100
ISP11015	474 0323 322 00 8316 0150 58 90 V3	+20 ... +110	10	150	4 (fixed)	115
ISP11065	474 0323 342 00 8319 0065 58 90 V3	+20 ... +110	15	65	4 (fixed)	115
ISP15015	474 0331 122 00 8316 0150 58 90 V3	+20 ... +150	10	150	6 (fixed)	165
ISP15065	474 0331 142 00 8319 0065 58 90 V3	+20 ... +150	15	65	6 (fixed)	165

Specifications		
<b>Accuracy</b>	Repeatability	± 1 % FS typ.
	Stability typ.	± 1 % FS typ.
	Scale accuracy typ.	± 4 % FS typ.
	Switching differential	See table
	Switching point	Temperature compensated with bimetal switch lever
<b>Environmental conditions</b>	Ambient temperature	-30°C ... +70°C
	Storage temperature	-40°C ... +85°C
	Protection	IP65
	Humidity	Max. 95 % relative
	Vibration	5...25 Hz: ±1.6 mm 25...100 Hz: 4g
	Shock	50 g / 11 ms
<b>Mechanical Data</b>	Sensor housing	Copper (Cu)
	Filling	Liquid
	Protection tube	Brass nickel plated
	Housing	AlMgSi1 anodized
	Male electrical plug	Polyamide (PA)
	Installation	any position
	Weight	~ 260 g
<b>Microswitch</b>	Rating	See table
	Resistance of insulation	> 10 MΩ
	Dielectric strength	2 kV terminal ground
	Life time (mechanical)	10 Mio. cycles
<b>Electrical connection</b>	Cable gland	Cable-Ø: 6...13 mm
	Terminal screw	4 x 0.5...1.5 mm <sup>2</sup>

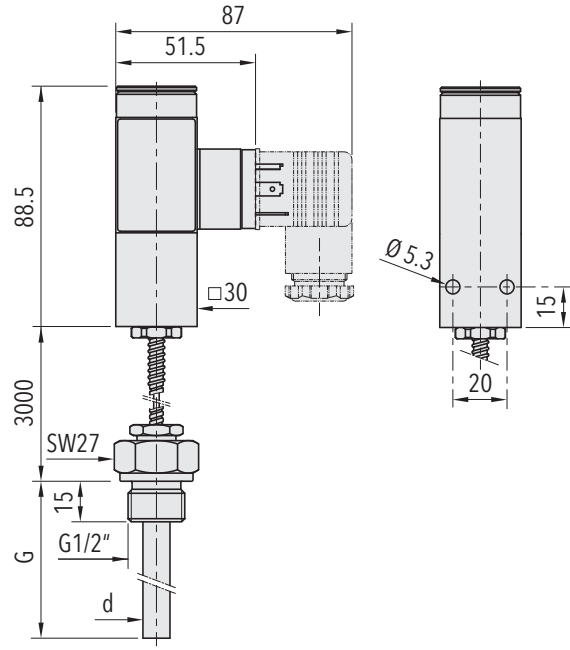
#### Additional information

<b>Documents</b>	Data sheet	<a href="http://www.trafag.com/H72113">www.trafag.com/H72113</a>
	Instructions	<a href="http://www.trafag.com/H73113">www.trafag.com/H73113</a>
	Flyer	<a href="http://www.trafag.com/H70953">www.trafag.com/H70953</a>

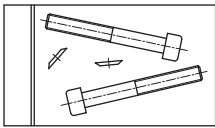
## Dimensions



474.XXXX.XXX.14.14XX...



474.XXXX.XXX.00.83XX...



M5x40 ISO4762

474...V3

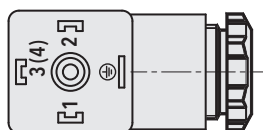
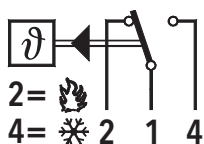
## Switching differential typ.

Measuring range	[°C]	+5 ... +95	+20 ... +110	+20 ... +150
Sensor max.	[°C]	100	115	165
Microswitch 03: Switching differential not adjustable	[°C]	4.0	4.0	6.0

## Electrical data switch

Type	Features	Rating	
		Resistive Load (Inductive Load)	
		AC	DC
03	Silver contacts	250 V, 3 (1) A	250 V, 0.1 (0.05) A 220 V, 0.25 (0.2) A 110 V, 0.5 (0.3) A 24 V, 2.0 (1.0) A

## Electrical Connection



DIN 43650-A