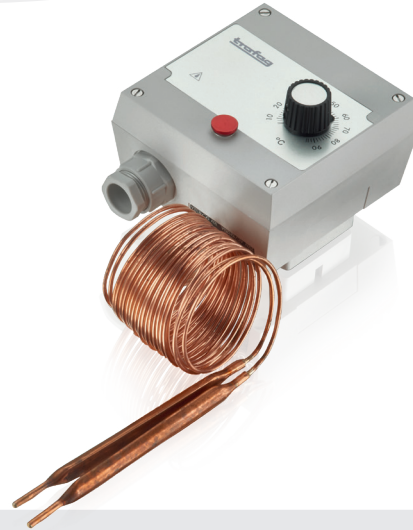


DUO LIMISTAT

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



Applications

- HVAC
- Refrigeration

Features

- Two individual measuring systems
- Short response time
- Protection IP54
- Electrical connection on terminal screw

Data sheet H72142n 05/2020

Technical Data

Designation of application	Double thermostat with remote sensor and limiter	Switching differential	Adjustable / 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	EN60730-1/ EN60730-2-9: Typ 2.B.H

Subject to change

Ordering information/type code

		302 .	XX	XX	XXX	XX	XXXXXXXXXX	XX	XX
Microswitch	Small switching differential, not adjustable (Microswitch 10, Limiter Switch 12)		38						
	Standard switching differential, not adjustable (Microswitch 11, Limiter Switch 12)		37						
	Adjustable standard switching differential (microswitch 25, limiter switch 12)		58						
Range	Temperature controller and limiter [°C]	Sensor max. [°C]	Temperature controller [°C]	Limiter [°C]					
	-30 ... +40	+50							
	-10 ... +25	+60							
	0 ... +35	+70							
	+10 ... +45	+85							
	+10 ... +80	+100							
	+15 ... +30	+60							
	-10 ... +35	+70							
	-10 ... +80	+85							
	+5 ... +95	+105							
	+20 ... +110	+115							
	+20 ... +150	+165							
	+20 ... +230	+250							
	+40 ... +300	+330							
	+70 ... +350	+380							
			+5 ... +95	+20 ... +110					
			+20 ... +150	+35 ... +175					
			+40 ... +300	+70 ... +350					
Sensor ¹⁾	See table "Ordering-no. for sensors"				XXX				
Fixing ²⁾	Mounting bracket (for remote sensing version)					19			
	For direct mounting on protection tube					21			
Protection tube	See data sheet www.trafag.com/H72114 and www.trafag.com/H72163						XXXX.XXXX		
Accessories	Condensator over Pin 1-2							12	
	Condensator over Pin 1-3							13	
	Condensators over Pin 1-2 / 1-3							23	
	Railway version IEC 61373, category 2							28	
	Outdoor application (vented)							44	
	Capillary tube protection: Flexible metal tube, brass nickel plated							90	
	Capillary tube protection: Flexible metal tube 1.4541/V2A							91	
	Capillary tube protection: PVC tube							92	
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 www.trafag.com/H72114 and www.trafag.com/H72163

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

³⁾ Overlengths upon request

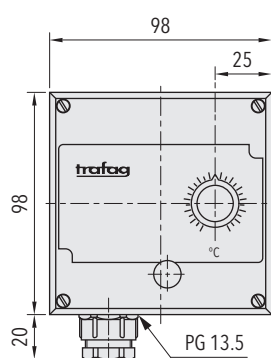
Ordering no. for sensors

Range	Sensor-Ø	Sensor material		
		Stainless steel	Copper	Copper nickel plated
01, 07, 09, 11, 13, 17	4.7 mm		412	413
	7.0 mm	421	422	423
	5.5 / 11 mm		462	463
94, 95, 20, 23, 36	4.7 mm	311	312	313
	7.0 mm	321	322	323
	5.5 / 11 mm		362	363
31, 42	4.7 mm	111	112	113
	7.0 mm	121	122	123
	5.5 / 11 mm		162	163
24, 53, 54, 39	4.7 mm	011	012	013
	7.0 mm	021	022	023
	5.5 / 11 mm		062	063

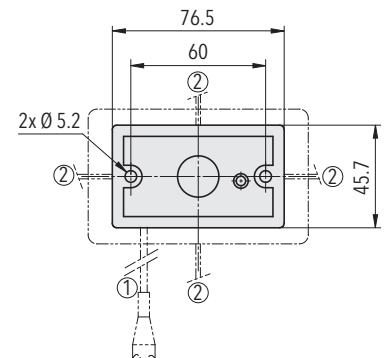
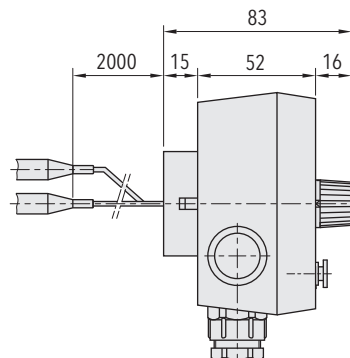
Standard products (extra short lead time)

Product No.	Type Code	Temperature range [°C]	Switching differential [°C]	Measuring range limiter [°C]	Sensor max. [°C]
D95R	302 5836 362 19	+5 ... +95	2 ... 12 (adjustable)	+20 ... +110	105
D150R	302 5842 162 19	+20 ... +150	2.5 ... 16 (adjustable)	+35 ... +175	165
D300R	302 5839 062 19	+40 ... +300	4 ... 40 (adjustable)	+70 ... +350	380

Dimensions



302.XXXX.XXXX.XX...



Fixation 19

Specifications		
Accuracy	Repeatability	$\pm 0.5 \% \text{ FS typ.}$
	Scale accuracy typ.	$\pm 2 \% \text{ FS typ.}$
	Switching differential	See table
	Switching point	Temperature 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 $+45^{\circ}\text{C} \dots +250^{\circ}\text{C}$: $-30^{\circ}\text{C} \dots +70^{\circ}\text{C}$ Range $> +250^{\circ}\text{C}$: $-10^{\circ}\text{C} \dots +70^{\circ}\text{C}$ (Important: Temperature at sensor may not exceed maximum sensortemperature)
	Storage temperature	Range $\leq +45^{\circ}\text{C}$: $-30^{\circ}\text{C} \dots +50^{\circ}\text{C}$ Range $> +45^{\circ}\text{C}$: $-30^{\circ}\text{C} \dots +85^{\circ}\text{C}$
	Protection	IP54
	Humidity	Max. 95 % relative
Mechanical Data	Sensor housing	See ordering information
	Filling	Liquid
	Housing	Noryl
	Screwed cable gland	Polyamide (PA)
	Installation	any position
	Weight	$\sim 620 \text{ g}$
Microswitch	Rating	See table
	Resistance of insulation	$> 2 \text{ M}\Omega$
	Dielectric strength	$U \leq 250\text{V}$: 1.45 kV $U \leq 500\text{V}$: 2 kV terminal ground
	Life time (mechanical)	Microswitch 10/11/25: 20 Mio. cycles Microswitch 12: 0.3 Mio. cycles
Electrical connection	Cable gland	PG13.5 Cable- $\varnothing$ 5...12.5 mm
	Terminal screw	6 x 1 ... 2.5 mm ²

Additional information		
Documents	Data sheet	www.trafag.com/H72142
	Instructions	www.trafag.com/H73170
	Flyer	www.trafag.com/H70963

Switching differential typ.

Measuring 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 not adjustable	[°C]	0.3	0.8	1	1.2	2
Microswitch 11: Switching differential not adjustable	[°C]	0.7	2	2.5	3	4
Microswitch 12: Switching differential not adjustable	[°C]	2	6	7.5	9	12
Microswitch 25: Switching differential adjustable	[°C]	0.7 ... 10	2 ... 12	2.5 ... 16	3 ... 32	4 ... 40

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
12	Large switching differential, not adjustable	125 V, 15 (1.5) A 250 V, 15 (1.25) A 500 V, 10 (0.75) A	250 V, 0.3 (0.2) A 125 V, 0.75 (0.4) A 30 V, 15 (1.5) A 14 V, 15 (1.5) 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

Electrical Connection

