

**Temperature Controller
and Limiter
Series 8434, 8146**

- Explosion protection to:
 - CENELEC
 - IEC
- Can be used in Zone 1 and Zone 2
- Temperature control and monitoring of solid, liquid and gaseous media
- The thermostate elements themselves are explosion-protected
- Temperature ranges

Controller:	– 10° C ... + 40° C
	0° C ... + 100° C
	+ 70° C ... + 350° C
Limiter:	+ 10° C ... + 80° C
	+ 20° C ... + 110° C
	+ 30° C ... + 300° C

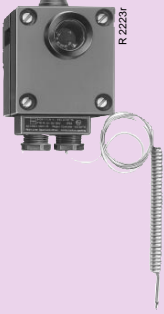
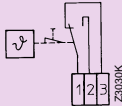
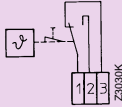
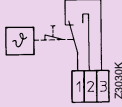
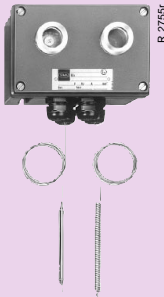
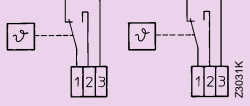
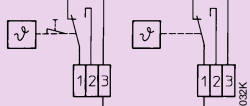
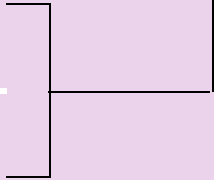
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Capillary tube thermostats 8434 with internally adjustable temperature ranges are designed for controlling and limiting temperatures. Dual temperature controllers and combined temperature controllers with limiters are built into series 8146 enclosures.

The temperature controller once released, can be reset by pushing the reset button, after the sensor temperature has gone down.

Zone 1 and Zone 2

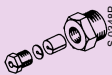



Selection table

Version	Capillary tube thermostat	Schematic	Measuring range	Ordering code	Weight [kg]
8434 Temp. controller 	Room temperature controller with spiral probe		- 10° C ... + 40° C	8434/11-311-0	0,5
	Temperature controller		0° C ... + 100° C + 30° C ... + 300° C	8434/11-321-0 8434/11-331-0	0,5 0,5
	Temperature limiter		+ 10° C ... + 80° C + 20° C ... + 110° C + 70° C ... + 350° C	8434/12-441-0 8434/12-451-0 8434/12-461-0	0,6 0,6 0,6
8146 Temp. controller and limiter 	Double temperature controller		see below	8146/541-7A -R <input type="checkbox"/> -R <input type="checkbox"/>	1,3
	Combined temperature controller and limiter		see below	8146/541-7A -R <input type="checkbox"/> -B <input type="checkbox"/>	1,3
Add. to ordering code:		Controller (R)	Measuring range:		
			- 10° C ... + 40° C		
			0° C ... + 100° C		
			+ 70° C ... + 350° C		
		Limiter (B)	+ 10° C ... + 80° C		
			+ 20° C ... + 110° C		
			+ 30° C ... + 300° C		
Sensor material: Temperature controllers and limiters: stainless steel Room temperature controller with spiral probe: copper alloy, nickel-plated					

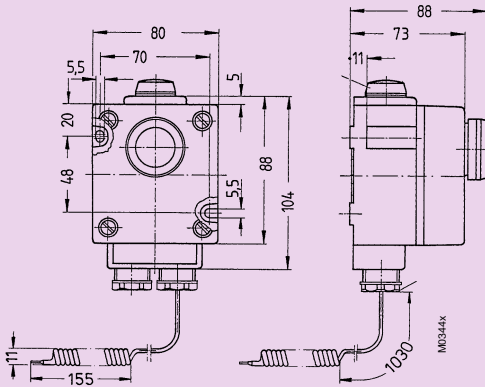


Technical data			
Explosion protection	EEx ed IIC T6		
Test certificate	8434: PTB Nr. Ex-85/1002 8146: PTB Nr. Ex-84/1019		
Enclosure material	Polyester (glass-fibre reinforced)		
Degree of protection	IP 65		
Terminals	max. 4 mm ² terminal block		
Cable entries	8434: 1 x Pg 16 8146: 2 x Pg 16		
Ambient temperature	- 20° C ... + 55° C		
Note	Setting scale visible through window		
Controller			
Capillary tube			
Material	Room temperature controller: copper alloy, nickel plated Temperature controller: stainless steel		
Length	1000 mm		
Temperature ranges (setting internal)	- 10° C ... + 40° C	0° C ... + 100° C	+ 30° C ... + 300° C
Hysteresis	2 K	2 K	8 K
Accuracy	± 3 K	± 3 K	± 9 K
max. probe temperature	73° C	145° C	320° C
Limiter			
Capillary tube			
Material	stainless steel		
Length	1000 mm		
Temperature ranges (setting internal)	+ 10° C ... + 80° C	+ 20° C ... + 110° C	+ 70° C ... + 350° C
Hysteresis	± 2,5 K	± 3,5 K	± 10 K
max. probe temperature	100° C	115° C	380° C
Switch contact for controller and limiter			
Contact	1 CO		
Rated voltage	250 V, AC		
Rated current	AC	DC	
	AC 1 7 A, 250 V ~ AC 11 0,5 A, 250 V ~	DC 1 7 A, 30 V ~ 0,5 A, 125 V ~ 0,25 A, 250 V ~	

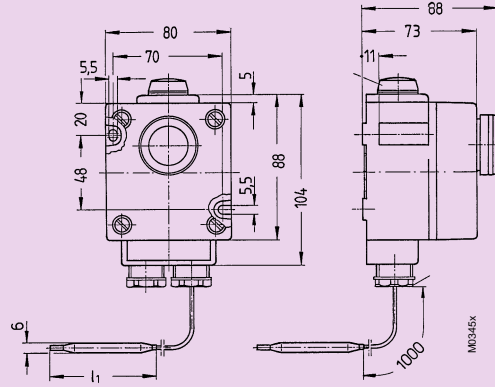
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Accessories				
Designation	Illustration	Description	Ordering code	Weight [kg]
Threaded union		Size R ³ / ₈	84 340 01 37 0 84 340 02 37 0	0,270 0,270
		for temperature controller for temperature limiter		
Integral sealing gland		Size: Pg 16	350 715 0	0,004
Compression gland		Size: Pg 16	81 610 05 01 0	0,014
Stopping plug		Size: Pg 16	82 900 28 59 0	0,007

Dimensions, all dimensions in mm – subject to alteration

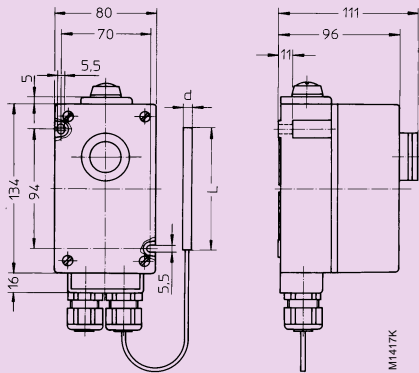


8434/11-311-0
Capillary tube thermostat as room temperature controller with spiral probe

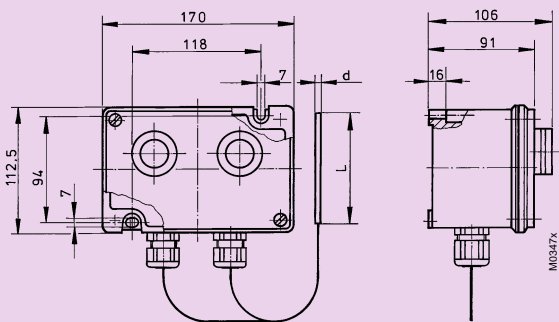


8434/11-3.1-0
Capillary tube thermostat as room temperature controller with spiral probe

Type	l_1
8434/11-32-0	140
8434/11-33-0	90



8434/12-...-0
Capillary tube thermostat as temperature limiter



8146/541-7A-...
Double temperature controller as temperature controller with limiter

	Measuring range	Dimension in [mm]	
		L	d
Controller	- 10° C ... + 40° C	155	11
	0° C ... + 100° C	140	6
	+ 30° C ... + 300° C	90	6
Limiter (mech.)	+ 10° C ... + 70° C	187	7
	+ 20° C ... + 110° C	137	7
	+ 70° C ... + 350° C	107	7