



Two Channel Temperature Controller Series 8146/5041

Temperature Controller and Limiter Series 8146/5241

- Explosion protection
 - CENELEC
 - IEC
- Can be used
 - in Zone 1 and Zone 2
 - in Zone 21 and Zone 22
- Switching capacity
 - Controller: 5 A
 - Limiter: 16 A
- Two point step - controller
- Liquid filled measuring system
- Continuous interruption when setpoint overflow (manual reset)
- Continuous interruption when measuring system is leaking
- Expanded security in accordance with DIN 3440
- Enclosure made of glass fibre reinforced polyester resin

STAHL

The liquid filled measuring system changes its volume as a function of temperature changes. A changeover contact therefore is actuated by mechanical transmission.

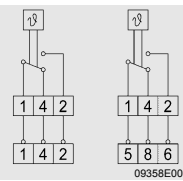
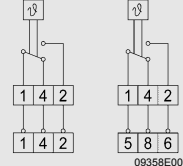
In case that the setpoint is overflow the controller switches off. After the temperature drops below the setpoint the temperature controller can be reset manually.

When the system leaks the temperature controller remains in the off-position. When the sensor temperature drops below the minimum the circuit opens but closes again when the temperature rises.

Zones 1 & 2, 21 & 22

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Selection table				
Version	Schematic	Description	Ordering code	Weight kg
8146/5041-R5A Two Channel Temperature Controller		make-brake capacity 5 A specify measuring ranges	8146/5041 - .	1,100
8146/5241 Temperature Controller and Limiter		make-brake capacity Controller: 5 A Limiter: 16 A specify measuring ranges	8146/5241 - .	1,440

Add. to ordering code

		possible measuring ranges
Controller:	8146/5041-R5A/	- 20 °C ... + 50 °C 0 °C ... + 120 °C + 50 °C ... + 300 °C
Limiter:	8146/5241-B16A/	0 °C ... + 200 °C + 50 °C ... + 300 °C
Examples:	Two Channel Temperature Controller:	8146/5041- R5A/-20°C...+50°C R5A/+50°C...+300°C
	Temperature Controller and Limiter:	8146/5241- R5A/-20°C...+50°C B16A/0°C..+200°C

Accessories and spare parts

Designation	Description	Ordering code	Weight kg
Cable gland	8161/5-M 25 x 1,5 1 piece	8161077010	0,011
Sealing for capillary tube	for size M 20 x 1,5 1 piece	8434901950	0,001



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Technical Data

Explosion protection	
Gas explosion protection	⊕ II 2 G EEx ed IIC T6 or T5
Dust explosion protection	⊕ II 2 D IP66 T80 °C, T95 °C
Certificates	
Gas explosion protection	PTB 01 ATEX 1024
Dust explosion protection	LCIE 02 ATEX 6241
Material	
Enclosure	glass fibre reinforced polyester resin
Gaskets	Polyurethane, foamed
Sensor	VA 1.4571
Degree of protection	IP 65
Capillar tube	
Length	1 m
Diameter	1,5 mm
Min. bending radius	5 mm
Cable entry	2 x cable gland M 20 x 1,5 (bottom)

Technical Data CONTROLLER

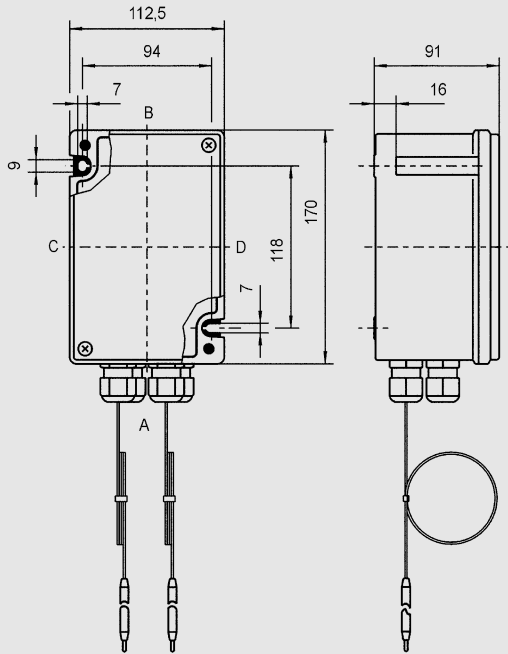
Measuring range	- 20 °C ... + 50 °C	0 °C ... + 120 °C	+ 50 °C ... + 300 °C
Rated Voltage	max. 250 V, AC	max. 250 V, AC	max. 250 V, AC
Rated current	5 A	5 A	5 A
Sensor			
Diameter	6 mm	6 mm	6 mm
Length	129 mm	81 mm	51 mm
Contact	1 changeover	1 changeover	1 changeover
Setpoint accuracy	0 K ... + 3,5 K	0 K ... + 6 K	0 K ... + 12,5 K
Allowable temperature limits at the sensor			
Minimum	- 30 °C	- 10 °C	- 15 °C
Maximum	+ 60 °C	+ 140 °C	+ 345 °C
Ambient temperature	- 20 °C ... + 50 °C	- 20 °C ... + 50 °C	- 15 °C ... + 50 °C
Terminal	4 x cage clamp terminal 2,5 mm ²	4 x cage clamp terminal 2,5 mm ²	4 x cage clamp terminal 2,5 mm ²

Technical Data LIMITER

Measuring range	0 °C ... + 200 °C	+ 50 °C ... + 300 °C
Rated Voltage	max. 250 V, AC	max. 250 V, AC
Rated current		
Contact NC	16 A	16 A
Contact NO	10 A	10 A
Sensor		
Diameter	6 mm	6 mm
Length	71 mm	57 mm
Contact	1 changeover	1 changeover
Setpoint accuracy		
in the lower third of scale	0 K ... - 6 K	
in the upper third of scale		0 K ... - 10 K
Allowable temperature limits at the sensor		
Minimum	- 10 °C	- 10 °C
Maximum	+ 230 °C	+ 345 °C
Ambient temperature	- 20 °C ... + 50 °C (T5) - 20 °C ... + 40 °C (T6)	- 20 °C ... + 50 °C (T5) - 20 °C ... + 40 °C (T6)
Terminal	4 x screw-type terminal 2,5 mm ²	4 x screw-type terminal 2,5 mm ²

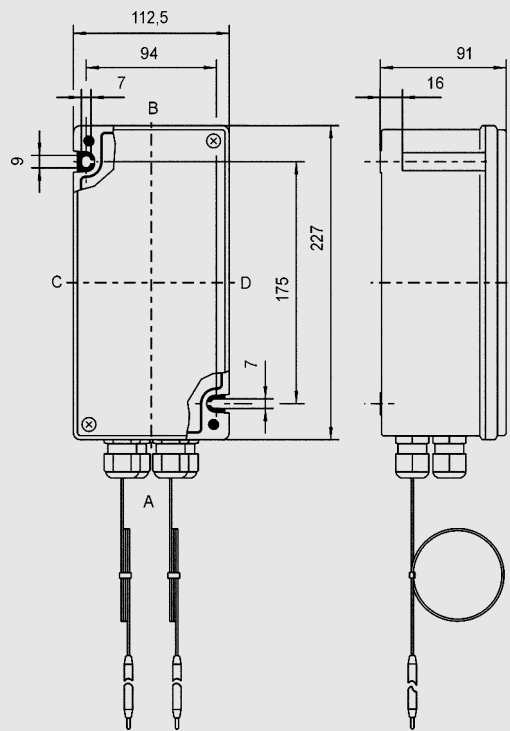
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Dimension drawings (all dimensions in mm) - subject to alterations



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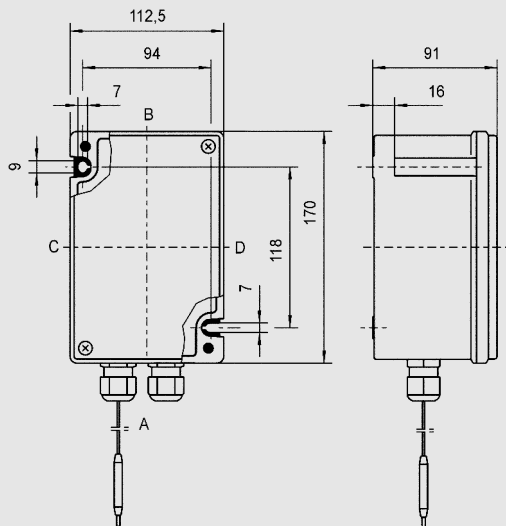
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Series 8146/5041**



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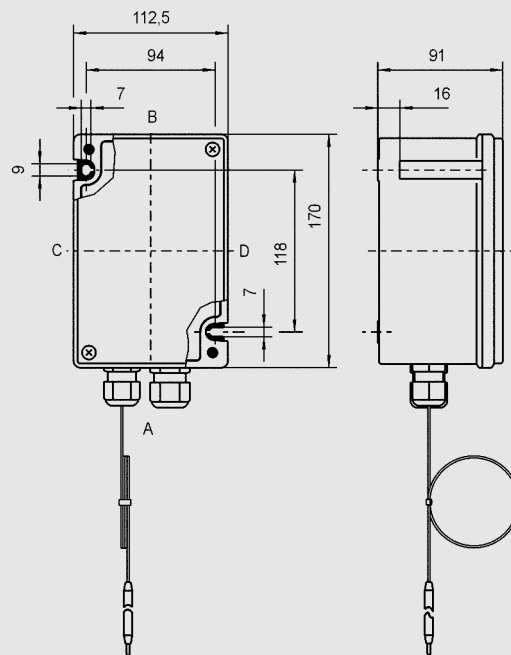
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Dimension drawings (alle dimensions in mm) - subject to alterations



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**8146/5041-R16A
Temperature Controller (Switching Capacity 16 A)**



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**8146/5041-B16A
Temperature Limiter (Switching Capacity 16 A)**

We reserve the right to make alterations to the technical data, weights, dimensions, designs and products available without notice. The illustrations cannot be considered binding.

