



Two Channel Temperature Controller Series 8146/5041

Temperature Controller and Limiter Series 8146/5241

- Explosion protection
 - CENELEC
 - IEC
- For use in
 - Zone 1 and Zone 2
 - 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
- Enclosure made of glass fibre reinforced polyester resin

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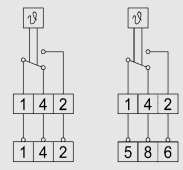
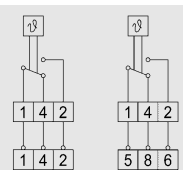
The liquid filled measuring system changes its volume as a function of temperature changes. A changeover contact therefore is actuated by mechanical transmission.

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	Circuit diagram	Description	Order number	Weight kg
8146/5041-R5A Two Channel Temperature Controller		Switching capacity: 5 A specify measuring ranges	8146/5041- .	1.100
8146/5241 Temperature Controller and Limiter		Switching capacity: Controller: 5 A Limiter: 16 A specify measuring ranges	8146/5241- .	1.440

Order Number Supplement				
				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		Order number	Weight kg
Cable gland	8161/5-M 20-13	1 piece	138518	0.012
Sealing for capillary tube	for size M 20 x 1,5	1 piece	145106	0.001

Technical Data	
Explosion protection	
Gas explosion protection	⊕ II 2 G Ex de IIC T6
Dust explosion protection	⊕ II 2 D Ex tD A21 IP66 T80 °C
Certificates	PTB 01 ATEX 1024
Material	
Enclosure	glass fibre reinforced polyester resin
Seal	Polyurethane, foamed
Sensor	Stainless steel VA 1.4571 (AISI 316L)
Type of protection	IP66
Capillar tube	
Length	1 m
Diameter	1.5 mm
Min. bending radius	5 mm
Cable glands	2 x M 20 x 1.5 cable glands
Cable dia. range	6 mm ... 13 mm

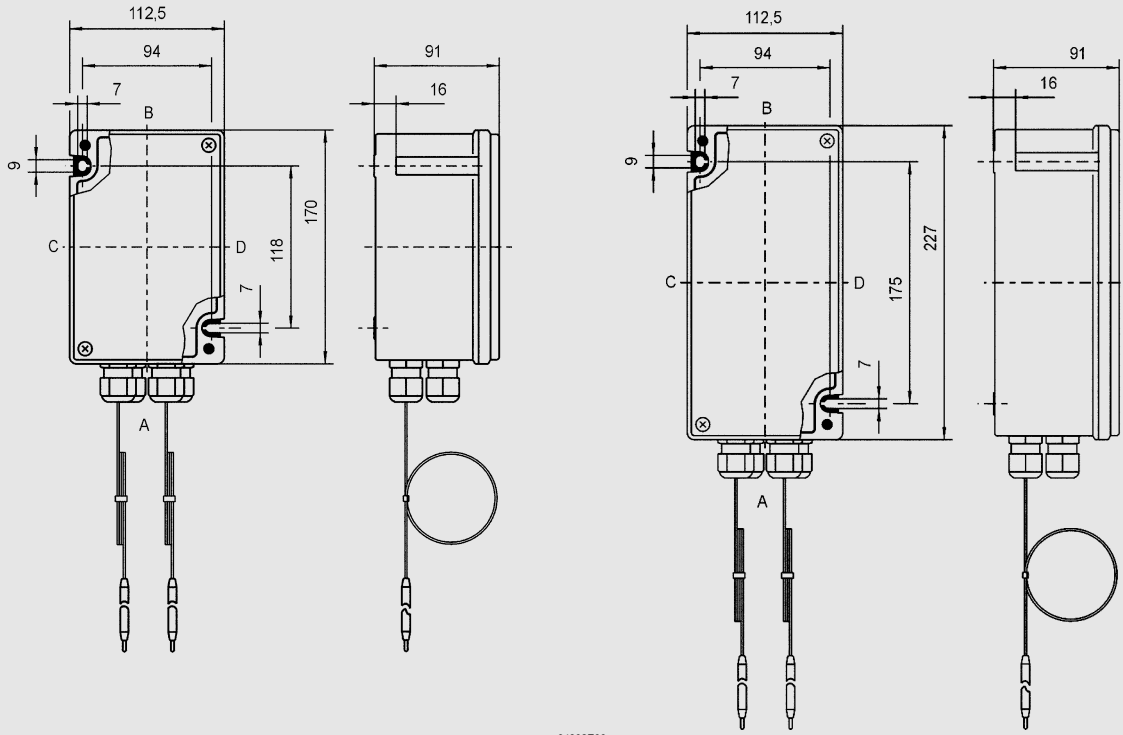


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Technical Data CONTROLLER			
Measuring range	- 20 °C ... + 50 °C	0 °C ... + 120 °C	+ 50 °C ... + 300 °C
Rated operational voltage	max. 250 V AC	max. 250 V AC	max. 250 V AC
Rated operational current	5 A	5 A	5 A
Sensor			
Diameter	6 mm	6 mm	6 mm
Length	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
Permissible sensor temperature			
Minimum	- 30 °C	- 10 °C	- 15 °C
Maximum	+ 60 °C	+ 140 °C	+ 345 °C
Ambient temperature	- 20 ... +50	- 20 ... +50	- 20 ... +50
Connection type	screw terminal	screw terminal	screw terminal
Connection cross-section	max. 2.5 mm ²	max. 2.5 mm ²	max. 2.5 mm ²
Technical Data LIMITER			
Measuring range	0 °C ... + 200 °C	+ 50 °C ... + 300 °C	
Rated operational voltage	max. 250 V AC	max. 250 V AC	
Rated operational current			
Contact NC	16	16	
Contact NO	10	10	
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	
Permissible sensor temperature			
Minimum	- 10 °C	- 10 °C	
Maximum	+ 230 °C	+ 345 °C	
Ambient temperature	- 20 °C ... + 50 °C	- 20 °C ... + 50 °C	
Connection type	4 x screw terminals	4 x screw terminals	
Connection cross-section	max. 2.5 mm ²	max. 2.5 mm ²	

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Dimensional Drawings (All Dimensions in mm) - Subject to Alterations



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04802E00

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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.

