

## Temperature measuring instrument with contactless operable selector switch

### Series TS 31000



- 16 or 32 inputs for thermocouples type K, E, J, T, S, B or R
- type of thermocouple selectable by the user at the spot
- high-contrast 4-digit LED display easy to read even from a greater distance
- 2-line alphanumeric LCD text display
- contactless operation: selection of the measuring point and programming via 2 light reflecting buttons
- pre-configurable at works for up to 16 different applications, e.g. engine types



#### One measuring instrument for a lot of applications

The instruments of the series TS 31000 are 16- or 32-channel temperature measuring instruments for thermocouples.

The TS 31000 is operated and programmed contactless via 2 light reflecting buttons.

The customer specific pre-configuration for 16 applications (e.g. engine types) offers a wide field of use.

The TS 31000 is equipped with a microcontroller for the complete control as well as for the linearization

of the different types of thermocouples and the cold junction sensors.

The measured temperature of the selected measuring point is shown on an easy reading 4-digit LED display. The customer specific text of the selected measuring point is indicated on a 2 line LCD matrix display.

The sensors are connected to the TS 31000 by the two 20-pole plug connectors or by 16-channel interchange modules with flat strip line.

## Technical Data

Inputs	16 or 32 for thermocouples type K, E, J, T, S, B or R with over- and undervoltage protection	
Display measured value	4-digit LED 15 mm high	
Text display	2-lines alphanumeric LCD 5,5 mm high per line	
Measuring ranges	- 90 up to 1300°C type K $\pm 0,15\%$ F.S. $\pm 1$ digit - 90 up to 750°C type E $\pm 0,15\%$ F.S. $\pm 1$ digit - 90 up to 1000°C type J $\pm 0,15\%$ F.S. $\pm 1$ digit - 90 up to 350°C type T $\pm 0,50\%$ F.S. $\pm 1$ digit 100 up to 1650°C type S $\pm 0,15\%$ F.S. $\pm 1$ digit 400 up to 1700°C type B $\pm 0,25\%$ F.S. $\pm 1$ digit 100 up to 1650°C type R $\pm 0,15\%$ F.S. $\pm 1$ digit	
Resolution	1°C	
Cold junction	2 measuring inputs Pt 100, 3-wire,	range: -10 up to +100°C
Measuring rate	2 measurements per second	
Programming and selection of the measuring channel	via two light reflecting buttons	
Connections	two 20-pole plug connectors acc. DIN 41651 for thermocouples and cold-junctions 3-pole screw clamp connection for the power supply	
Power supply	24 VDC (18...32 VDC) pole safe, galvanic separation	
Power consumption	2 W	
Casing	Panel mounting casing front 96 x 96 mm, depth of the electronic: 75 mm, panel cutout: 91 x 91 mm	
Storage temperature	-10 up to + 80°C	
Operating temperature	0 up to + 55°C	
Protection	IP54	
Vibrationproof	4g	
Options	external power supply unit 250 V, 230 V, 115 V interchange module 16 channels with flat strip line	



Back TS 31000



Interchange module for 16 channels with 32 screwclamps (sensor inputs)  
Output: 20 pole plug connector (picture similar)



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Subject to technical modification