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

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 ± 0,15% F.S. ± 1 digit
- 90 up to 750°C type E ± 0,15% F.S. ± 1 digit
- 90 up to 1000°C type J ± 0,15 % F.S. ± 1 digit
- 90 up to 350°C type T ± 0,50 % F.S. ± 1 digit
100 up to 1650°C type S ± 0,15 % F.S. ± 1 digit
400 up to 1700°C type B ± 0,25 % F.S. ± 1 digit
100 up to 1650°C type R ± 0,15 % F.S. ± 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

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Back TS 31000

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