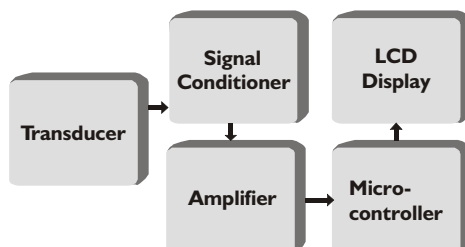## INTRODUCTION

Temperature Indicator play an important part in any process industry. Quick and accurate measurement of a process temperature will improve the final product quality, reliability and reduce rejection.

The Sleek 100 is a micro controller based hand held type Portable Digital Temperature Indicator which is designed for fast and accurate measurement of temperature. It is designed using highly reliable electronic components. Sleek 101 is available with peak hold facility. It holds the peak reading till reset. Sleek 100 is specially suited for field applications where AC power is not available quickly. The process temperature is displayed directly in digits, which gives better resolution compared to analog indicator.

The Sleek 100 accepts all types of Thermocouples and Pt - 100 as input. Wide ranges of measurement are available depending on the sensor used. The instrument is immune to mechanical vibrations. Even the holding position will not affect the measurement accuracy. The LCD display ensures low power consumption. Use of highly reliable electronic components with low temperature coefficients ensure long and trouble free service. The instrument is tested for its performance under various climatic conditions.

PRINCIPLE OF OPERATION

The Sleek 100 series is based on the principle of a high input impedance amplifier feeding an analog to digital convertor. The input signal generated by the transducer is fed to a sensor compensation circuit, where automatic ambient compensation in case of thermocouple & lead resistance compensation in case of Pt-100 is achieved. Duly compensated signal is fed to a signal conditioning amplifier, output of which is given to digital display. The linearisation of the input signal from the transducer is done by hardware in the input circuit. This gives a standardized signal to the analog to digital convertor which drives the seven segment LCD display, indicating the temperature directly.

APPLICATION

The Sleek 100 series temperature indicator can be used in almost any industry, laboratory etc. where accurate temperature measurement is to be carried out in the field. Sleek 101 is useful for foundry applications where instantaneous peak temperature is latched till

FEATURES

- ✓ Proven trouble free field performance
- ✓ Highly compact
- ✓ Sensor open indication
- ✓ Fast response time
- ✓ Designed for Pt-100, Thermocouples
- ✓ Low battery indication
- ✓ Maximum MTBF and minimum MTTR
- ✓ Low current consumption
- ✓ Peak hold facility
- ✓ °C / °F field selectable
- ✓ Inbuilt linearisation

SPECIFICATIONS

Model	: Sleek 100
Ranges	: Std. as per chart below (other on demand)
Input	: Pt - 100 / Thermocouple
Display indication	: 199.9 Alfa numeric LCD
Character size (mm)	: 4.5 (W) x 8 (H)
Indication accuracy	: +/- 0.25 % of full scale +/- 1digit
Least count	: 0.1°C up to 400°C, 1°C above 400°C
Power supply	: 9 V battery
Battery life	: 50 hours
Low battery indication	: Provided
Relative humidity	: Less than 90% non condensing
Ambient temperature	: 0 to 55°C

Amb. Temp. compensation	: Built in up to 55°C
Accuracy deviation due to	
a) Temperature change	: +/- 0.002 % /°C ref at 25°C
b) Supply variation	: +/- 0.001 % / V
Sensor break indication	: OPEN
Input impedance	:< 10 Mohms, (only for T/C input)
Recalibration (if reqd)	: By Software
Enclosure	: ABS Plastic
Dimensions (mm)	: 90 x 60 x 20
Termination	: 3 pin connector (OMEGA Connector on demand)
Weight	: 400 gram approximately

ORDERING INFORMATION

Sleek 10 **X1**   **X2**   **X3**

Type
0 -- Indicator
1 --- Peak hold

Input
1 -- Pt - 100
2 --- J type T/C
3 -- K type T/C

Range
0 -- -50 to 50°C
1 -- 0 to 100°C
2 -- 0 to 200°C
3 -- 0 to 100%
4 -- 0 to 400°C
5 -- 0 to 1200°C
6 -- Other

Input	Standard Ranges in °C		
Pt-100	-50 - 50	0 - 100	0 - 200
J	0 - 200	0 - 400	0 - 600
K	0 - 200	0 - 400	0 - 600
	0 - 800	0 -1000	0 - 1200
R, S	0 -1600		
mA / mV	0 to 100 % or process value		

Ordering eg. Sleek 100 **- 010**
Digital Temp. Indicator Sleek100
Type -- Indicator (0)
Input -- Pt - 100 (1)
Range -- -50°C to 50°C (0)

SENSORS FOR PORTABLE

Immersion type   **Leaf type**   **Pierce type**

ALSO SELECT ESD ...

BACK END
- ✓ Pt - 100
- ✓ Thermocouples
- ✓ Thermowells
- ✓ Compensating Cables

SAME RANGE
- ✓ Single Input Indicators
- ✓ Multi Input Indicators
- ✓ Supersize Display Indicators
- ✓ Multi Channel Indicator
- ✓ Flameproof Indicators
- ✓ Field Mounting Indicators

FRONT END
- ✓ Automation Panel

ELECTRONICS SYSTEMS AND DEVICES
Process Control Instrumentation

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CE

ESD/PI/441

Unspecified dimensions are in mm.   Photos not to the scale.   Due to continuous development above details are likely to change.