



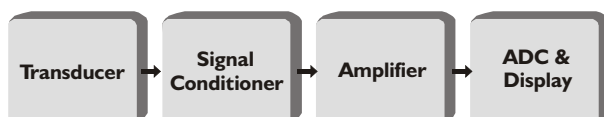
INTRODUCTION

Temperature Indicators in temperature measurement play an important part in any process industry. Quick and accurate measurement of process temperature will improve the final product quality, reliability and reduce rejection. Temperature indication is therefore one of the prime considerations in any process industry. The ESD 901 series Digital temperature indicators are designed for fast and accurate temperature measurement. The instrument is designed using highly reliable electronic components. The process temperature is displayed directly in digits, which gives better resolution compared to analog indicator. The ESD 901 series accepts all types of Thermocouples, Pt - 100, 0 - 20 mA as well as 4 - 20 mA as input. Wide ranges of measurements are available depending on the sensor used. The instrument is immune to mechanical vibrations. Even the mounting position will not affect the



measurement accuracy. Three different display sizes of seven segment red LED allows long distance readability. 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 ESD 901 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 LED display, indicating the temperature directly.

APPLICATION

The ESD 901 series temperature indicator can be used in almost any industry where long distance visibility is required so as to enable viewing by everybody on the shop floor.

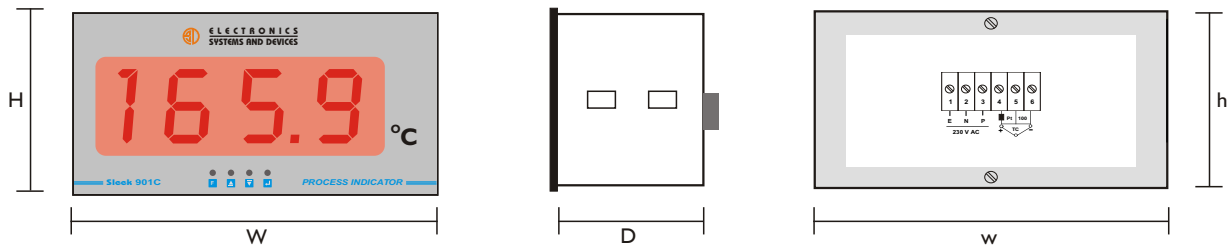
FEATURES

- ✓ Proven troublefree field performance
- ✓ Dust and vermin proof enclosure with epoxy powder coating
- ✓ Large LED display gives better readability at long range
- ✓ Fast response time
- ✓ Available in three different display heights
- ✓ Designed for Pt-100, Thermocouples and 4 - 20 mA input
- ✓ Maximum MTBF and minimum MTTR
- ✓ Wide supply variation and environmental band

SPECIFICATIONS

Model	<input type="checkbox"/> Sleek 901A <input type="checkbox"/> Sleek 901B <input type="checkbox"/> Sleek 901C <input type="checkbox"/> Sleek 901D <input type="checkbox"/> Sleek 901E	Amb. Temp. compensation : Built in upto 55 °C
Ranges	: Std. as per chart below (other on demand)	a) Temperature change : +/- 0.002 % / °C , ref at 25 °C
Input	<input type="checkbox"/> Pt - 100 <input type="checkbox"/> Thermocouple <input type="checkbox"/> 4 - 20 mA	b) Supply Variation : +/- 0.005 % / V
Indication	: 3 9 9 . 9 7 segment Red LED display	Sensor break indication : Up scale[_ _ _] (Down on demand)
Indication accuracy	: +/- 0.25 % of fullscale +/- 1 digit	Input impedance : < 10 Mohms, (only for T/C input)
Least count	: 0.1 °C upto 400 °C, 1°C above 400 °C	Recalibration (if reqd) : By Zero and Span pots inside
Display height(mm)	<input type="checkbox"/> 25 <input type="checkbox"/> 50 <input type="checkbox"/> 100 <input type="checkbox"/> 150 <input type="checkbox"/> 200	Power consumption : 5 VA
Power supply	: 230 V AC, +/- 10 % , 50 Hz with Earth	Mounting <input type="checkbox"/> Flush panel mounting <input type="checkbox"/> Ceiling hanging type
Relative Humidity	: 90 % Non Condensing	Enclosure : IP 55 mild steel with power coating
Ambient Temperature	: 0 to 55 °C	Termination : PBT 2.5 mm ²

INSTALLATION



Model	Display height (mm)	Facia (W x H)	Cutout (w x h)	Depth (D)
Sleek 901A	25	196 x 96	186 x 92	80
Sleek 901B	50	288 x 144	282 x 138	140
Sleek 901C	100	480 x 240	468 x 232	140
Sleek 901D	150	576 x 288	562 x 279	140
Sleek 901E	200	672 x 336	656 x 326	140

■ Add 25 for terminals

ORDERING INFORMATION

Sleek 90	X1	X2	X3	X4	X5	X6																													
	Input 1 - One		Mounting 1 - Flush panel 2 - Ceiling hanging single side indication 3 - Ceiling hanging both side indication	Input 1 - Pt - 100 2 - J type T/C 3 - K type T/C 4 - R type T/C 5 - S type T/C 6 - 0 to 20 mA 7 - 4 to 20 mA 8 - 0 to 2V DC 9 - Other	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 600 °C 6 - 0 to 800 °C 7 - 0 to 1000 °C 8 - 0 to 1200 °C 9 - Other	Power Supply 1 - 230 V AC 2 - 110 V AC 3 - 48 V AC 4 - 24 V AC 5 - 24 V DC 6 - Other	<table border="1"> <thead> <tr> <th>Input</th> <th colspan="3">Standard Ranges in °C</th> </tr> </thead> <tbody> <tr> <td>Pt-100</td> <td>-50 - 50</td> <td>0 - 100</td> <td>0 - 200</td> </tr> <tr> <td>J</td> <td>0 - 200</td> <td>0 - 400</td> <td>0 - 600</td> </tr> <tr> <td>K</td> <td>0 - 200</td> <td>0 - 400</td> <td>0 - 600</td> </tr> <tr> <td></td> <td>0 - 800</td> <td>0 - 1000</td> <td>0 - 1200</td> </tr> <tr> <td>R, S</td> <td colspan="3">800 - 1600</td> </tr> <tr> <td>mA / mV</td> <td colspan="3">0 to 100 % or process value</td> </tr> </tbody> </table>	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	800 - 1600			mA / mV	0 to 100 % or process value		
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	Display height (mm) A - 25 B - 50 C - 100 D - 150 E - 200						Ordering eg. ESD 901A - 1101 Digital Temp. Indicator ESD 90 No of inputs - One (I) Panel cutout - 186 x 92 mm (A) Mounting - Flush panel (I) Input - Pt - 100 (I) Range - -50 °C to 50 °C (0) Power Supply - 230 V AC (I)																												

ADDITIONAL CHOICE

- Single Input Indicators
- Portable Indicators
- Field mounting Indicators
- Multi Input Indicators
- Multi Channel Indicators
- Flameproof Indicators



**ELECTRONICS
SYSTEMS AND DEVICES**
Process Control Instrumentation

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