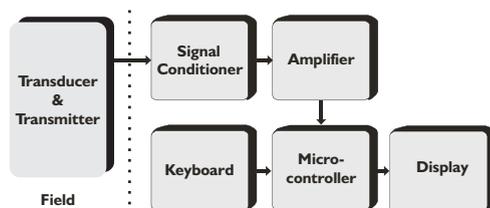




INTRODUCTION

Process indicators play an important part in any process industry. Quick and accurate measurement of a process parameter will improve the final product quality, reliability and reduce rejection. Process indication is therefore one of the prime considerations in any process industry. The Sleek 90 series is microcontroller based programmable process indicator designed for fast and accurate measurement. The instrument is designed using highly reliable electronic components. The process parameter is displayed in digits, which gives better resolution compared to analog indicator. The ESD Sleek 90 series accepts all types of Pt - 100, Thermocouples, 0 - 20 mA as well as 4 - 20 mA as input. The instrument is immune to mechanical vibrations. Even the mounting position will not affect the measurement accuracy. The large bright RED LED seven segment display allows long distance readability. Use of highly reliable electronic components with lowest temperature coefficient ensure long and trouble free service.

PRINCIPLE OF OPERATION



The Sleek 90 series is based on the principle of high input impedance amplifier feeding an ADC. The signal from 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 microprocessor then converts the signal into the range selected by the user and displays the value of the process parameter accordingly.



The instrument is tested for its performance under various climatic conditions. Wide ranges of measurements are available depending on the sensor used.

APPLICATION

The Sleek 90 series process indicators can be used in almost any industry, laboratory etc. where accurate process value measurement is needed to be carried out.

FEATURES

- ✓ Proven trouble free field performance
- ✓ Highly compact
- ✓ ABS plastic IP 65 certified enclosure
- ✓ LED display gives better readability at long range
- ✓ Fast response time
- ✓ Highly accurate
- ✓ Programmable range
- ✓ Decimal selection facility
- ✓ Maximum MTBF and minimum MTTR
- ✓ Feather touch push button
- ✓ Wide supply variation and environmental band
- ✓ User friendly programming

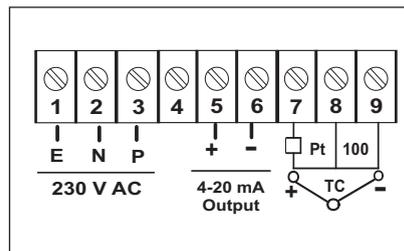
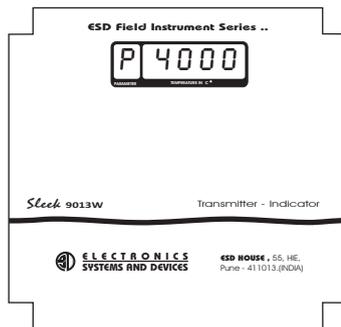
SPECIFICATIONS

| | | | |
|---------------------------|---|----------------------|---|
| Model | : Sleek 9013W | Enclosure | : ABS plastic suitable for IP 65 |
| Ranges | : Refer chart below (other on demand) | Termination | : Screwed type suitable for 2.5mm ² wire |
| Input | : PT 100 / Thermocouple / 4 - 20 mA | Weight | : 700 grams approximately |
| Indication | : 4 digit 12.5 mm RED LED display for process value and 1 digit 12.5 mm GREEN LED display for parameter | Mounting | : Wall / DIN rail |
| Indication accuracy | : +/- 0.1 % of full scale +/- 1 digit | Dimensions | : 120 x 123 x 75 (D) mm |
| Least count | : Refer chart below (other on demand) | Mounting CTC | : 110 x 113 mm |
| Power supply | : 230 V AC, +/- 10 % , 50 Hz with earth | Cable entry | : 3 nos.of PG 9 |
| Relative humidity | : Less than 90 % non condensing | Optional | |
| Ambient temperature | : 0 to 55°C | A)Retransmission o/p | : Isolated 4 to 20mA proportional to process value |
| Accuracy deviation due to | | Resolution | : 10 bit (0.016 mA step change) |
| a) Temperature change | : +/- 0.002 % /°C, ref at 25°C | Load resistance | : Maximum 500 ohms |
| B) Supply variation | : +/- 0.001 % / V | B)Serial interface | : Isolated RS 485(2 wire)/ RS 232 |
| Sensor break indication | : OPEN | Protocol | : Modbus RTU |
| Input impedance | : < 10 Mohms, (only for T/C input) | Chart | |
| Recalibration (if reqd) | : By software using internal keypad | | |
| Programming | : Using 4 keys internal membrane keypad. Default password is 134 | | |
| Power consumption | : 6 VA | | |
| Transmitter supply | : 24 V DC @ 30mA (only for 4-20mA) | | |

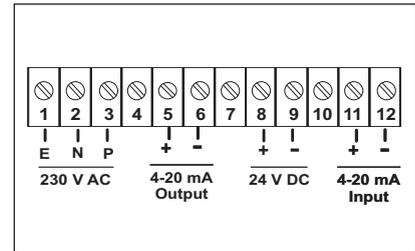
| Input | Std. Ranges in °C | Least count |
|---------|--------------------------------|-------------|
| Pt-100 | -100 to 200 0 to 400 | 0.1°C |
| J | 0 to 600 | 1°C |
| K | 0 to 1200 | |
| R, S | 0 to 1600 | |
| mA / mV | Programmable from -999 to 9999 | Settable |

INSTALLATION

Model Sleek 9013W



Pt 100 / TC



4-20 mA

ORDERING INFORMATION

Sleek 9013W

X1

| 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 - Pt - 1000 |
| 9 - Other |

X2

| Power Supply |
|--------------|
| 1 - 230 V AC |
| 2 - 110 V AC |
| 3 - 24 V AC |
| 4 - 24 V DC |
| 5 - Other |

X3

| Optional O/p |
|---------------------------|
| 1 - NIL |
| 2 - RS 232 |
| 3 - RS 485 |
| 4 - 4-20mA Retransmission |
| 5 - Other |

Ordering eg. Sleek 9013W - 114

| | |
|----------------------------|-----|
| Sleek 9013W | |
| Input - Pt - 100 | (1) |
| Power Supply - 230 V AC | (1) |
| Optional O/p - 4-20 mA O/p | (4) |

ALSO SELECT
ESD ...

BACK END

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

SAME RANGE

- ✓ Dual Channel Indicators
- ✓ Supersize Indicators
- ✓ Loop Powered Indicators
- ✓ Portable Indicators
- ✓ Field Mounting Indicators
- ✓ Flameproof Indicators
- ✓ Auto Manual Station

FRONT END

- ✓ ON OFF Controllers
- ✓ PI Controllers
- ✓ Process Scanners
- ✓ Automation Panels



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