



INTRODUCTION

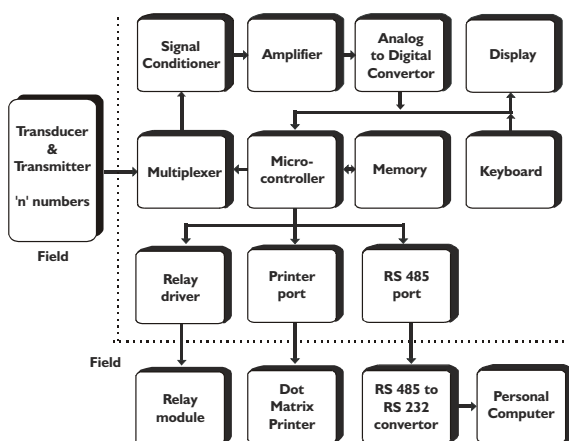
Temperature Indicators / Controllers play an important part in any process industry. Quick and accurate measurement / control of a process temperature will improve the final product quality, reliability and reduce rejection. Temperature indication and control is therefore one of the prime considerations in any process industry.

When the process is complex and critical, the measurement locations are many and they have inter-relationship between one another which needs to be recorded, analysed and stored. In such a situation Data Acquisition System becomes a necessity. The Intelligent series serves this purpose very effectively.



ESD's DAS offer communication to PC. The data from the instrument is logged on to the PC in a file. The data in these files can be opened in a spread sheet package like MS-Excel so as to obtain various graphs and carry out trend analysis.

PRINCIPLE OF OPERATION



Data Acquisition System (DAS) series is based on microcontroller and is designed for fast and accurate measurement and control of temperature. The instrument is designed using highly reliable electronic components. This series accepts all types of Thermocouples, Pt - 100, 0 - 10 V DC as well as 4 - 20 mA as input. Wide ranges of measurements are available depending on the sensors used. The instrument is immune to mechanical vibrations. Even the mounting position will not affect the measurement s accuracy. The large bright red LED seven segment display allows long distance readability. Use of highly reliable electronic components with low temperature coefficient ensure long and trouble free service. The instrument is tested for its performance under various climatic conditions.

APPLICATION

The ESD Intelligent series data acquisition system can be used in almost any industry, laboratory etc. where accurate temperature monitoring and process verification is needed to be carried out.

FEATURES

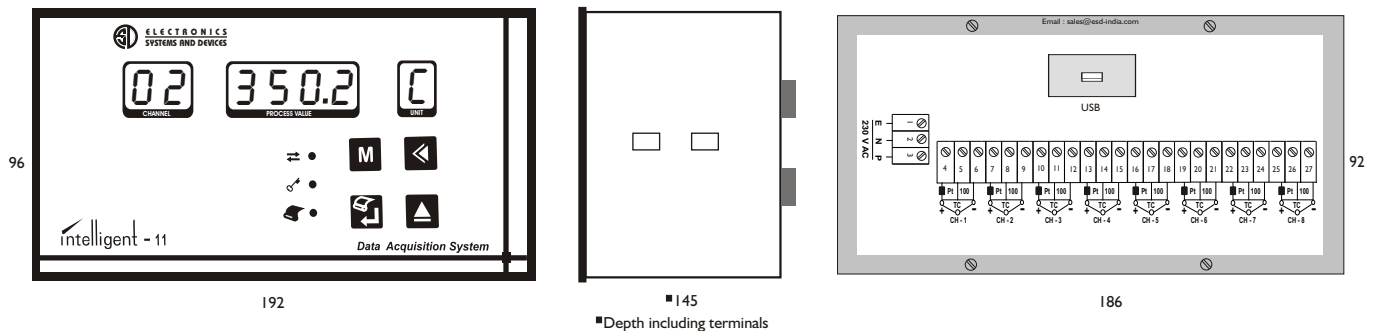
- ✓ Proven trouble free field performance
- ✓ Highly compact and better accuracy
- ✓ User friendly PC end software with Graphs and Reports for better analysis
- ✓ User friendly programming
- ✓ USB interface for unlimited data storage
- ✓ Dust and vermin proof enclosure with epoxy powder coating
- ✓ LED display gives better readability at long range
- ✓ Fast response time
- ✓ Available in different DIN std. cutouts
- ✓ Designed for Pt-100, Thermocouples and 4 - 20 mA input
- ✓ Fail safe relay logic
- ✓ Maximum MTBF and minimum MTTR
- ✓ Feather touch push button

SPECIFICATIONS

| | | | |
|---------------------------|--|-----------------------|--|
| Model | : Intelligent 11 | Scan time | : Individually adjustable from 0 - 99 seconds |
| Number of inputs | : 8 / 16 | Display response time | : 0.5 seconds /channel |
| Ranges | : Refer chart below (other on demand) | Real time clock | : Built in (24 hours format) |
| Input | : Pt - 100 / Thermocouple / 4 - 20 mA | Battery backup | : Built in for program / data memory |
| Indication | : 9 9 9 . 9 12.5 mm RED LED display | Interface | : USB 2.0 suitable for 8 Gb pendrive |
| Number of digits | : 7 (2 for channel number, 4 for process value and 1 for unit) | Records capacity | : Unlimited |
| Indication accuracy | : +/- 0.25 % of full scale +/- 1 digit | Output | : CSV file editable in MS Excel |
| Least count | : Refer chart below (other on demand) | Front fascia | : ABS plastic suitable for IP 55 having size 192 x 96 mm |
| Power supply | : 230 V AC, +/- 10 % , 50 Hz with earth | Panel cutout | : 186 x 92 mm |
| Relative humidity | : Less than 90% non condensing | Mounting | : Flush panel |
| Ambient temperature | : 0 to 55°C | Enclosure | : Mild steel CRCA sheet with powder coating |
| Amb. Temp. compensation | : Built in up to 55°C | Termination | : Screwed type suitable for 2.5 mm ² wire |
| Accuracy deviation due to | | Weight | : 1 kg approximately |
| a) Temperature change | : +/- 0.002 % /°C, ref at 25°C | Chart | |
| b) Supply variation | : +/- 0.001 % / V | | |
| Sensor break indication | : O P E N | | |
| Input impedance | : < 10 Mohms, (only for T/C input) | | |
| Recalibration (if reqd) | : By software using keypad. To be done on channel 1 only. | | |
| Programming | : Using 4 keys membrane keypad. Default password is 134 | | |
| Power consumption | : 6 VA | | |
| Channel skip | : By setting scan time as zero seconds | | |

| 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 | Settable |
| mA / mV | Programmable from -999 to 9999 | |

INSTALLATION



ORDERING INFORMATION

| | | | | | | |
|----------------|--|---|--|--|----------------------------------|--|
| Intelligent 11 | X1 | X2 | X3 | X4 | X5 | Ordering eg. Intelligent 11 - 11112 Data Acquisition System No of inputs - Eight (1) Input - Pt - 100 (1) Range - 0°C to 400°C (1) Power Supply - 230 V AC (1) Type - USB (2) |
| | No. of Inputs 1 - Eight 2 - Sixteen | 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 - -100 to 200°C 1 - 0 to 400°C 2 - 0 to 600°C 3 - 0 to 1200°C 4 - 0 to 1600°C 5 - Other | Power Supply 1 - 230 V AC 2 - 110 V AC 3 - 24 V AC 4 - 24 V DC 5 - Other | Type 1 - PC 2 - USB | |

ALSO SELECT
ESD ...

BACK END

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

SAME RANGE

- ✓ Scanners
- ✓ Scanners With Alarm
- ✓ Scanners With Controllers

FRONT END

- ✓ Automation Panels
- ✓ PLC



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