

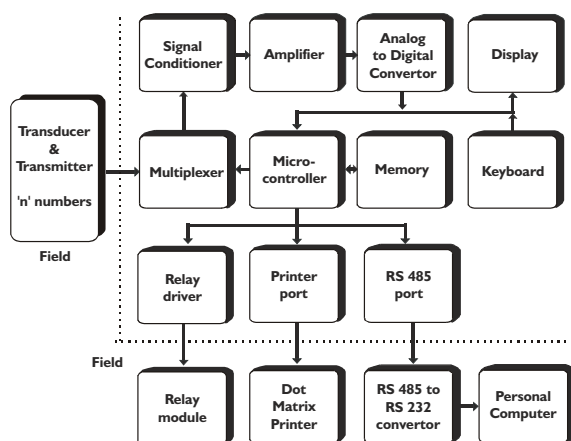


INTRODUCTION

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.

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 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.



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.

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

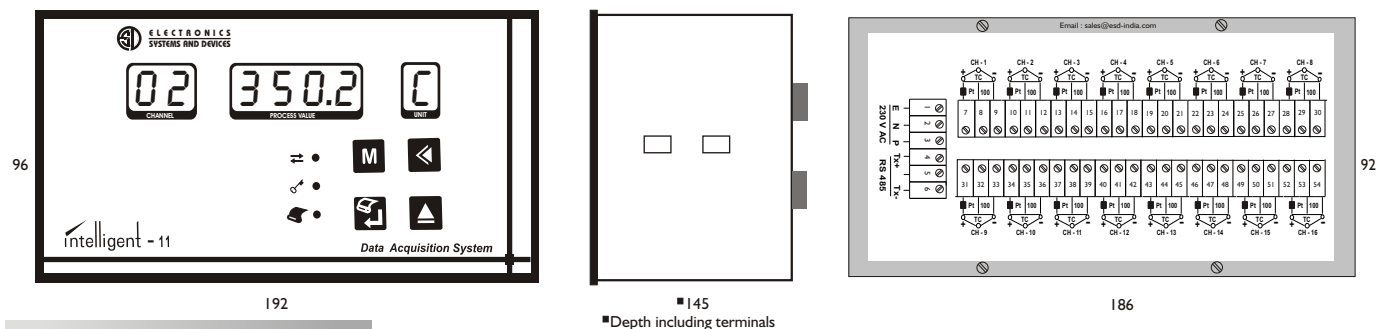
- ✓ Proven trouble free field performance
- ✓ Highly compact and better accuracy
- ✓ User friendly PC end software with Graphs and Reports for better analysis
- ✓ User friendly programming
- ✓ RS 485/RS 232C communication
- ✓ Dust and vermin proof enclosure with epoxy powder coating
- ✓ LED display gives 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	Memory records	: 1600 / 850 records
Number of inputs	: 8 / 16	Real time clock	: Built in with 24 hours format
Ranges	: Refer chart below (other on demand)	Battery backup	: Built in for program / data memory
Input	: Pt - 100 / Thermocouple / 4 - 20 mA	Interface	: RS 485 (2 wire) for PC communication
Indication	: 9 9 9 . 9 12.5 mm RED LED display	PC software	: Customized software suitable to run on Windows 7 and above
Number of digits	: 7 (2 for channel number, 4 for process value and 1 for unit)	Software features	: 1. Auto port detection / communication with DAS 2. Reports & graphs generation 3. Facility for email of data 4. Data access through LAN
Indication accuracy	: +/- 0.1 % of full scale +/- 1 digit	Front facia	: ABS plastic suitable for IP 55 having size 192 x 96 mm
Least count	: Refer chart below (other on demand)	Panel cutout	: 186 x 92 mm
Power supply	: 230 V AC, +/- 10 %, 50 Hz with earth	Mounting	: Flush panel
Relative humidity	: Less than 90% non condensing	Enclosure	: Mild steel CRCA sheet with powder coating
Ambient temperature	: 0 to 55°C	Termination	: Screwed type suitable for 2.5 mm ² wire
Amb. Temp. compensation	: Built in up to 55°C	Weight	: 1 kg approximately
Accuracy deviation due to		Chart	
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 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		
Scan time	: Individually adjustable from 0 - 99 seconds		
Display response time	: 0.5 seconds /channel		

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	
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	Ordering eg. Intelligent 11 - 21112 Data Acquisition System No of inputs - Sixteen (2) Input - Pt - 100 (1) Range - 0°C to 400°C (1) Power Supply - 230 V AC (1) Type - PC (2)

ALSO SELECT ESD ...	BACK END	SAME RANGE	FRONT END
	<ul style="list-style-type: none"> ✓ Pt - 100 ✓ Thermocouples ✓ Thermowells ✓ Compensating Cables 	<ul style="list-style-type: none"> ✓ Scanners ✓ Scanners With Alarm ✓ Scanners With Controllers 	<ul style="list-style-type: none"> ✓ Automation Panels ✓ PLC