

The datalogger **INSTRU 12151** accepts a wide range of analog industrial sensors and accurately records the measurements in non-volatile memory.

Setup and data retrieval is done in a PC via an infrared wand through the use a Windows compatible software which plots and prints graphs, lists loggings and exports data to spreadsheets. Special mathematical functions can be programmed



### CHARACTERISTICS

1 or 2 universal multi-sensor channels  
 Accepts Thermocouples J,K,T,E,N,R,S,B;  
 Pt100, 0-50mV and 4-20mA  
 Optional 0-5V and 0-10Vdc  
 12 bit resolution, 4096 levels  
 Accuracy: 0,15% of full scale  
 Capacity: 8111 to 65455 measur./channel  
 Recording rate: from 0.5s to 30 day  
 Internal real time clock compliant to 2080  
 Powered by internal 3.6V lithium battery  
 Battery life: 1250 days (logging every 30s),  
 560 days (logging every 5s)  
 IP65 ABS enclosure (Optional IP67)  
 Dimensions: 64x58x35mm  
 Operating temperature -40°C to 75°C

### SPECIFICATIONS

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| <b>Signal input</b>  | Universal input that allows direct sensor measuring: thermocouples J, K, T, N, E, R, S and B, Pt100 RTDs, besides adjustable indication range 0-50mV voltage and 4-20mA current.   |
| <b>Resolution</b>  | 12 bits (4096 levels)  |
| <b>Accuracy</b>  | Thermocouples J, K, T e N: 0,25% of full scale $\pm 1^{\circ}\text{C}$<br>Thermocouples E, R, S e B: 0,25% of full scale $\pm 3^{\circ}\text{C}$<br>Pt100: 0,15% of full scale<br>Linear current or voltage: 0,15% of full scale                                       |
| <b>Pt100 excitation current</b>  | 25 $\mu\text{A}$   |
| <b>Input impedance</b>   | 100 $\Omega$ for 4-20mA inputs<br>10M $\Omega$ for thermocouples and mV.   |
| <b>Storage capacity</b>  | Usual: 8.111 readings<br>Optional: 16.303 readings   |
| <b>Data offloading time</b>  | 8 seconds for 8.000 bytes  |
| <b>Computer interface</b>  | Infrared wand  |
| <b>Interval between readings</b>   | 0,5s to 30 days  |
| <b>Loggings start</b>  | Immediately<br>In a user programmed time (start can be delayed up to 30 days)  |
| <b>Recording mode</b>  | Instant value<br>Average of up to 250 readings for each recording<br>Minimum or maximum value of up to 250 readings for each recording   |
| <b>Loggings end</b>  | At full memory<br>After a preset record number<br>Never stops: overwrite oldest records  |
| <b>Software platform</b>   | Windows 95, Windows 98 and Windows NT<br>It configures, reads and displays data on screen in many ways (list, graph, text files to be exported to other softwares)   |
| <b>Power</b>   | 3,6V lithium battery (1/2 AA)<br>Optional external 4 to 5VCC source (when external source is connected, internal battery is automatically cut off)   |
| <b>Estimated autonomy (based on nominal charge values of a 950mAh battery)</b> | 1245 days (interval between readings: 30s)<br>1110 days (interval: 20s)<br>840 days (interval: 10s)<br>700 days (interval: 7s)<br>560 days (interval: 5s)<br>390 days (interval: 3s)<br>280 days (interval: 2s)<br>150 days (interval: 1s)<br>80 days (interval: 0,5s) |
| <b>Battery usage indication</b>  | Battery working life estimation info (0-100%)  |
| <b>Working temperature</b>   | From -40°C to 70°C (thermocouple cold junction compensation is made between 0°C and 70°C)  |
| <b>Dimensions</b>  | 58x64x35mm   |

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