

Heraeus



**Digilance
Wireless System -**
Radio Transmission
of Measurement Data
in Foundries



Electro-Nite

Digilance Wireless System - Measurement data transmission without complex

Radio transmission of measurement data

The availability of wireless communication technology provides the ideal solution, particularly where data has to be transmitted from hostile and exposed measurement locations

and where compensation cables are susceptible to extreme wear.

- » **Eliminates complex or inaccessible wiring installations**
- » **Saving in service costs**

Digilance Wireless System

The Digilance instrument comes equipped with a radio transmitter. At the end of each measurement cycle, the instrument transmits the measured data to a receiver station. The received signal is then further transmitted by a short cable connection to a PC, where the data is stored and can be further analysed for process control.

- » **Portable and wireless temperature measurement instrument with radio range up to 100 m**

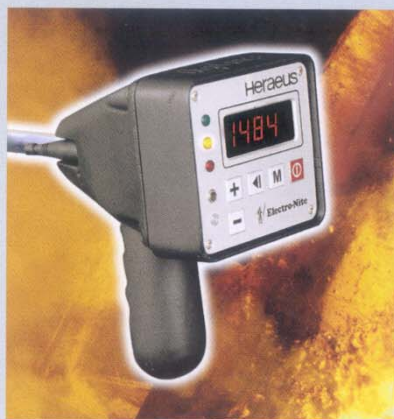
- » **2,4 GHz frequency band – world-wide certified**

MeltControl 2000-win software provides the ideal solution for online receiving of data and visual display of the measured data. The integrated data base permits data processing via selective access to the measured data and the further possibility of presenting the data in a report form. Over ODBC, further data processing is possible, e.g. in Microsoft® Excel, Microsoft® Access.

- » **MeltControl 2000-win: Evaluation software for bath temperature measurement and thermal analysis**
- » **Easy access to stored data to enable data processing in other software applications**

If advanced data processing is not necessary, Digilance Wireless comes equipped with PC software to enable wireless receiving capability.





Digilance Wireless

Digilance Wireless instrument technique

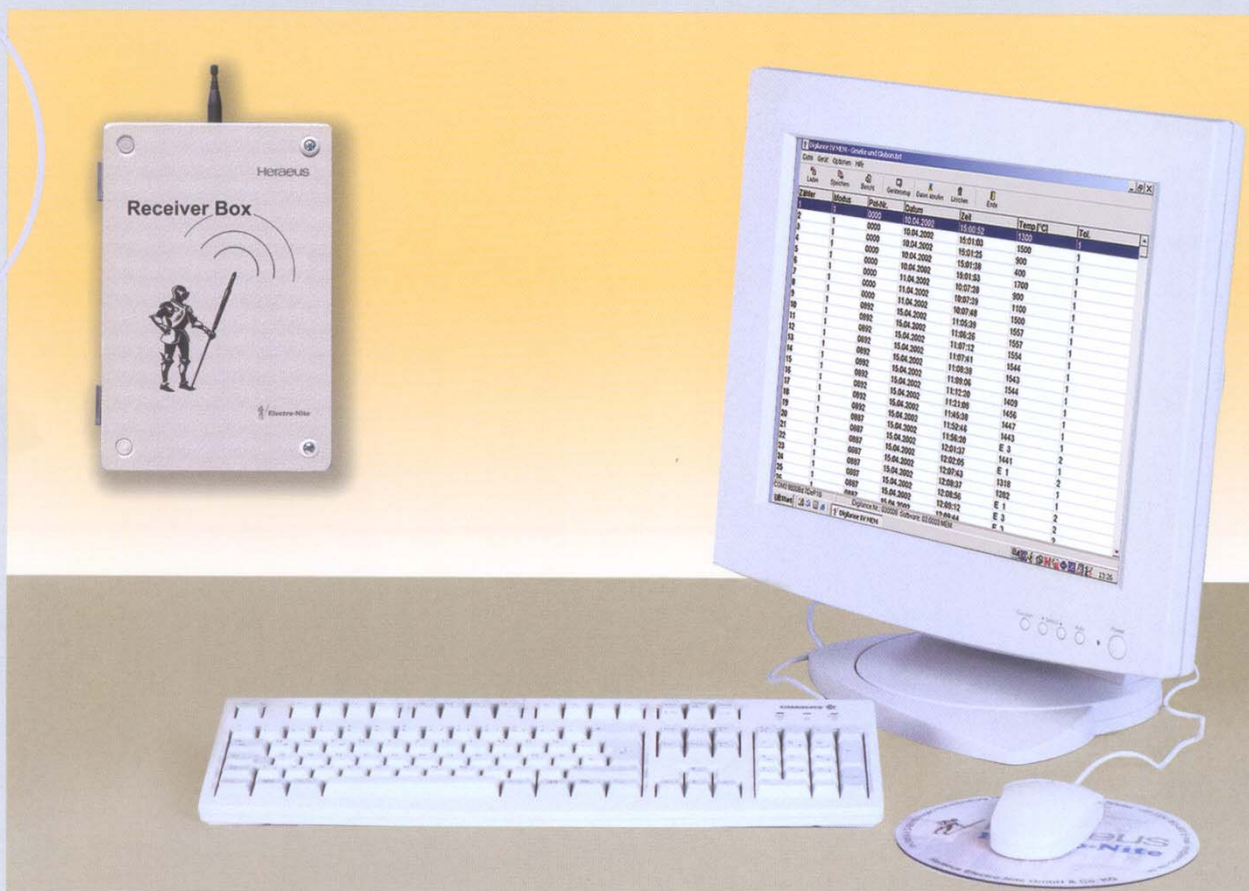
Digilance Wireless features a bright, LED display, which is easily viewed, even in poor lighting conditions.

Three coloured LEDs indicate the measurement cycle status. An electronic buzzer signals the end of the measurement cycle.

▶▶ Measuring instrument with data memory for up to 400 measurements

The instrument features a robust, ergonomic keypad, which enables the operator to enter heat and furnace numbers. Digilance Wireless uses tolerance comparison and averaging techniques to accurately determine temperature.

Direct measuring data transmission to the PC



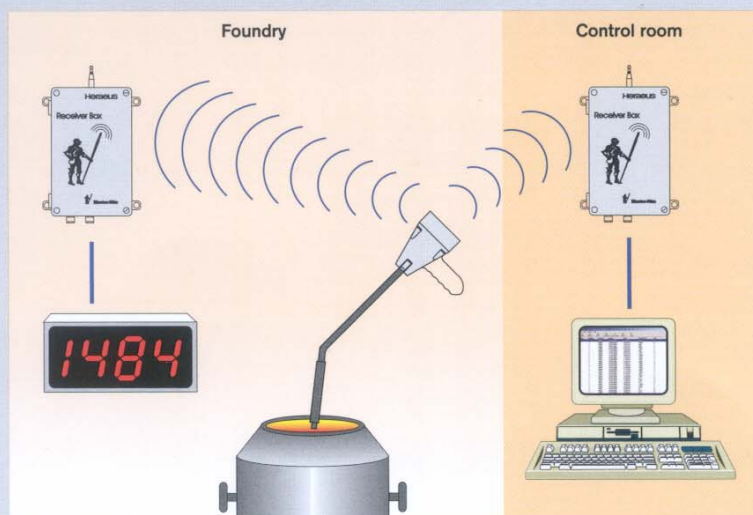
After completion of the measurement, the temperature is clearly displayed and stored in the instrument memory.

- ▶ High long-term stability by digital signal conditioning
- ▶ Cyclic self alignment for the improvement of the temperature measurement accuracy
- ▶ Compatibility with thermocouple type S, R, B and K
- ▶ Visual and acoustic signalling of measurement cycle status
- ▶ Four digit input of heat and furnace number

Instrument programming and parameter settings can be changed using the supplied PC software via an infrared interface (IR) or by radio transmission.

- ▶ Instrument programming over PC with infrared interface (IR), or via radio

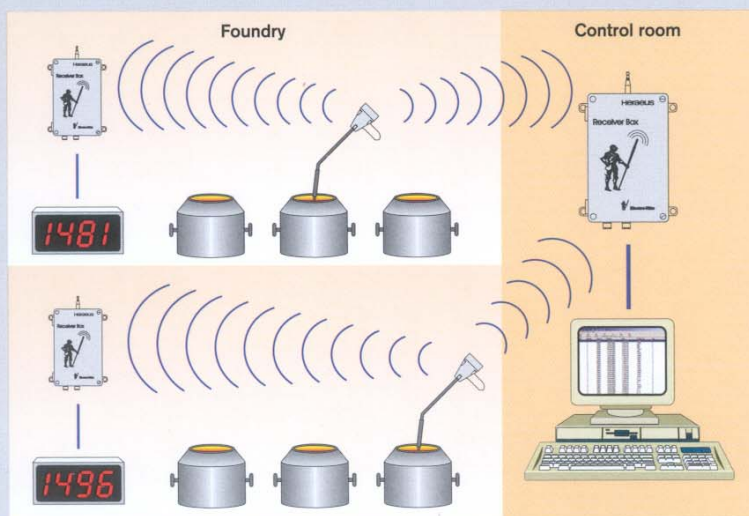
In addition to the data transmission capability to a slave station and host PC, the measured data can also be transmitted to supplementary receivers; for example large LED displays to enable data to be seen over large distances. The portability and versatility of Digilance Wireless enables the operator to use the instrument at several measuring locations.



Digilance Wireless working in single measuring station

- ▶ Central measurement data recording: temperature, date, time, heat and furnace number

Digilance Wireless in operation with multiple measurement stations



Technical Data

Digilance Wireless			
Measurement ranges	four adjustable measuring ranges, linearized acc. to IEC 584/ IPTS 68/ ITS 90 and/ or acc. to ITPS 48 dip measurement type S, R, B continuous measurement type K	type S (Pt 10% Rh/Pt) type R (Pt 13% Rh/Pt) type B (Pt 30% Rh/Pt 6% Rh) type K (NiCr/Ni) type K continuous measurement	400 – 1760 °C (752 – 3200 °F) 400 – 1760 °C (752 – 3200 °F) 400 – 1820 °C (752 – 3308 °F) 100 – 1370 °C (212 – 2498 °F) 100 – 1370 °C (212 – 2498 °F)
Temperature evaluation procedure	plateau computation with tolerance comparison and averaging	continuous measurement type K with/ without hold function (maximum value measurement)	
Reference temperature	0 °C	internal cold junction	
Accuracy	+/- 1 °C	with ambient temperature 0 °C up to + 50 °C	
Temperature display	LED with four digits, height of the numbers 14.2 mm	°C/ °F switchable	
Resolution	indicator resolution 1 °C (1 °F)	internal resolution 0.1 °C	
Measuring sequence display	"ready", "measurement", "complete" displayed by colored LEDs	signalling of "complete" by electronic buzzer	
Operation	5-key metal keypad		
Measuring data memory	memory for 400 measurements		
Heat number/ furnace number input	numerically, with four digits		
Date/ time	battery-buffered real-time clock		
Data output	over radio in the Spread Spectrum procedure	frequency range 2402 - 2478 GHz transmitting power 100 mW	
Instrument parameter setting	over radio	alternatively over infrared interface	
Power supply	4 NiMH rechargeable batteries (type AA, 1100 mA), rated voltage 1.2 V	intelligent charging circuit with overloading protection	
Battery load control	visually	over LED	
Operational data	charging voltage power consumption ambient temperature	12 V, 400 mA 0.5 VA 0 °C up to + 50 °C	
Housing	light alloy housing with handle and antenna, protection IP 54	dim. approx. 215 x 120 x 165 mm weight (without immersing lance) approx. 2.0 kg	
Additional hardware/ software (contained in the scope of supply)	plug power supply unit and mains adapter, infrared adapter for connection at RS 232 interface of a PC	PC parameter setting software for Windows operating system, starting from Win 95	

Digilance Wireless Receiver Unit			
Frequency range	2402 – 2478 GHz		
Transmitting power	100 mW		
Housing	steel sheet housing for wall installation, antenna installed firmly, protection IP 55	dim.: h = 300 mm, w = 200 mm, d = 120 mm weight: approx. 4.6 kg	
Operational data	power supply power consumption ambient temperature	85 – 265 V AC, 47 – 63 Hz 15 VA 0 °C up to + 50 °C	
Instrument variations	Ethernet, V 24 or TTY 20 mA interface	server/ client function	

Accessories			
MeltControl 2000-win software for bath temperature measurement and thermal analysis	for online data transfer and visualisation	with evaluation program for thermal analysis	

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Further technical details on request. We reserve the right to modify illustrations and technical data without notice.

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Certified Quality System
DIN EN ISO 9001:2000
DIN EN ISO 14001