

tecnosoft
WE DELIVER DATA



MONITORING SOLUTIONS
FOR THE COLD CHAIN



SOLUTIONS FOR STERILIZATION,
PASTEURIZATION, COOKING AND
CHILLING MONITORING



VALIDATION AND
PROCESS MONITORING





Tecnosoft is your best partner for processes and products monitoring. We are the data consultants and we provide it to you by adapting to your needs and processes.

Tecnosoft does not limit itself to developing the simple device but provides a complete solution that includes software dedicated to different applications and different areas, which respond to the regulatory needs in force and the need for simplicity and user friendliness.

We can turn users needs into new systems and services with the possibility to customize them, thanks to Tecnosoft flexibility and continuous updates.

tecnosoft.eu



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PROCESS MONITORING

Temperature, humidity,
pressure solutions.

2

COLD CHAIN

Cold chain monitoring
solutions

3

DEEPWAVE

Real time monitoring
solutions

4

TS MANAGER

Validation software

5

BLUEWAVE

Bluetooth data logger
for process monitoring

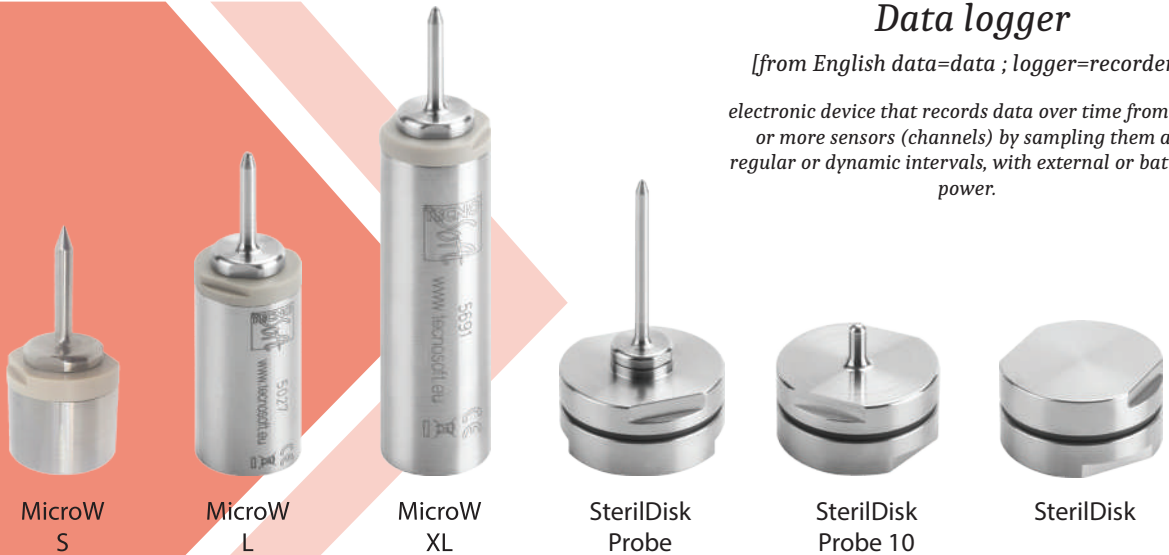
6

TC LOG

Thermocouples
Temperature data logger

PROCESS MONITORING

TEMPERATURE, HUMIDITY, PRESSURE SOLUTIONS



Data logger

[from English data=data ; logger=recorder]:

electronic device that records data over time from one or more sensors (channels) by sampling them at regular or dynamic intervals, with external or battery power.

Temperature: MicroW and SterilDisk Series for validation of thermal processes validation (cooking, pasteurization, sterilization) or daily routine in the life science and food fields.

	MicroW S	MicroW L	MicroW XL	SterilDisk
Lenght	14 mm	39 mm	64 mm	17.4 mm
Ø	20 mm	20 mm	20 mm	36 mm
Probe	Rigid Flexible Bendable	Rigid Flexible Bendable	Rigid Flexible Bendable	Flat Rigid Flexible
Battery life				
Datasheet				



Maximum data logger range:
-80°C ÷ +140°C

Maximum probe range:
-80°C ÷ +500°C

Accuracy:
±0,1°C

1. Probe Bendable
Bendable metal probe, customizable length.
2. Rigid Probe
Customizable length.
3. Flexible Probe
Flexible teflon cable and rigid tip.





Pressure: PressureDisk series for high pressures, up to 5 bar, and saturated steam processes. Pirani series for extreme vacuum for freeze-drying and plasma sterilization processes (H2O2).

PressureDisk Range:

-40°C ÷ +140°C
0 bar ÷ 5 bar absolutes

Maximum Pirani Range:

-80 °C ÷ +85 °C
0,001 mbar ÷ 1200 mbar absolutes



PressureDisk



PressureDisk 05



Pirani Vacuum
Logger



Pirani Vacuum
Logger

	PressureDisk	Pirani Vacuum Logger	RHTemp L	RHTemp XL
Lenght	43,22 mm	64 mm	46 mm	71 mm
Ø	35 mm	20 mm	18 mm	18 mm
Battery life				
Datasheet				

INCLUDED



RHTemp L/XL 80 Range:

-40°C ÷ + 80°C
0% ÷ +100% RH (non condensing)

RHTemp L/XL 125 Range:

-40°C ÷ +125°C
0% ÷ +100% RH (non condensing)

Umidity: RHTemp series for instruments validation and environmental processes monitoring such as drying and incubation.



RHTemp L



RHTemp XL

COLD CHAIN

COLD CHAIN MONITORING SOLUTIONS

Temperature-controlled and continuous transport monitoring solutions for environments, warehouses, fridges, cold rooms etc.
Windows and Mobile apps for data management and report printing.
Can also be used for thermal mapping according to GDP or in the food sector for HACCP compliance.

ON REQUEST



Stick Logger: TempStick with internal or external cable sensor of various types and HumiStick for temperature and humidity.

It is requested the USB connection base for the communication with PC.

Maximum data logger range:
-30°C ÷ +60°C

Accuracy with calibration certificate:
±0,25°C

Accuracy without calibration certificate:
±1°C



Maximum data logger range:
-30°C ÷ +60°C / 5% ÷ 95% RH

Temperature accuracy:
±0,4°C da +5°C a +40°C /
±1°C da -30°C a +60°C

Humidity accuracy:
±3% RH da 20% a 80% /
±4% RH da 5% a 95%

PROBE -40°C ÷ +80°C

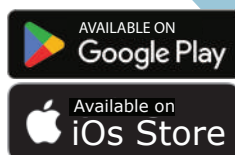


PROBE -80°C ÷ +20°C
PROBE 0°C ÷ +200°C





BlueLOG: Real-time Bluetooth communication with Android and iOS Mobile. Internal or external cable temperature sensor, also for ultra freezers, humidity, inclination and shock/shock sensors. Manual start via button, real-time alarms with acoustic signal and LED. App with report printing, Excel export, tracking of stops on Maps. Real-time Cloud NOD also available (internet connection required).



	TempStick	Humistick	BlueLOG	BlueLOG RH	TempNFC
Dimensions	50 x 24 x 10 mm	50 x 24 x 10 mm	67 x 20 x 97 mm	67 x 20 x 97 mm	67 x 20 x 97 mm
Temperatur Range	-30°C ÷ +60°C	-30°C ÷ +60°C 5% ÷ 95% RH	-30°C ÷ +60°C	-30°C ÷ +60°C 0% ÷ 100% RH	-40°C ÷ +60°C
External sensor	-80°C ÷ +200°C	-	-80°C ÷ +200°C	-	-80°C ÷ +70°C
Accuracy	±0,25°C	±3% RH da 20% a 80% ±4% RH da 5% a 95%	±0,1°C / ±3%	±0,2°C / ±3%	±0,2 °C
Battery	Replaceable	Replaceable	Replaceable	Replaceable	Replaceable

Temp NFC: Contactless for Android Mobile with internal or external temperature cable sensor, ultra freezers are included.



Disposable Temp NFC is available.



DEEPWAVE

REAL TIME MONITORING SOLUTION



DeepWave is the complete solution for real-time monitoring in closed environments, warehouses, refrigerators, cold rooms, ultra freezers. It consists of a series of radio data loggers with long-distance transmission based on the LoRa protocol, available in several versions and a receiver connected to the TSLog 21 software, that can be validated in the pharmaceutical,

cosmetic, healthcare and medical fields. The measurements are carried out by Smart Sensors, digital sensors that are always calibrated and connected to radio data loggers. The system is widely versatile and scalable and allows you to extend the network at any time, being able to add sensors and radio modules where and when you want.



Helios is the heart of the DeepWave system: it receives data from data loggers and saves them in the TSLog 21 database, the management software that can be validated with HACCP, 21 CFR Part11, Annex 11, GAMP 5 regulations. The LoRa data loggers send the data detected by the Smart Sensors via radio to Helios which saves them in its memory and manages the alarms. Helios, connected to your network via Ethernet, allows the connection of multiple clients to the TSLog 21 database.





The Smart Sensor is a digital sensor with built-in data conversion and calibration parameters: in this way the recalibration process is easy and quick, just by replacing sensors. It does not request the technician intervention on-site for the

calibration and it is not necessary to remove the sensors in order to send them to the calibration laboratory. All Smart Sensors are supplied with an Accredia traceable calibration certificate included.



**TEMPERATURE
SMART SENSOR**



**PRESSURE
DIFFERENTIAL
SMART SENSOR**



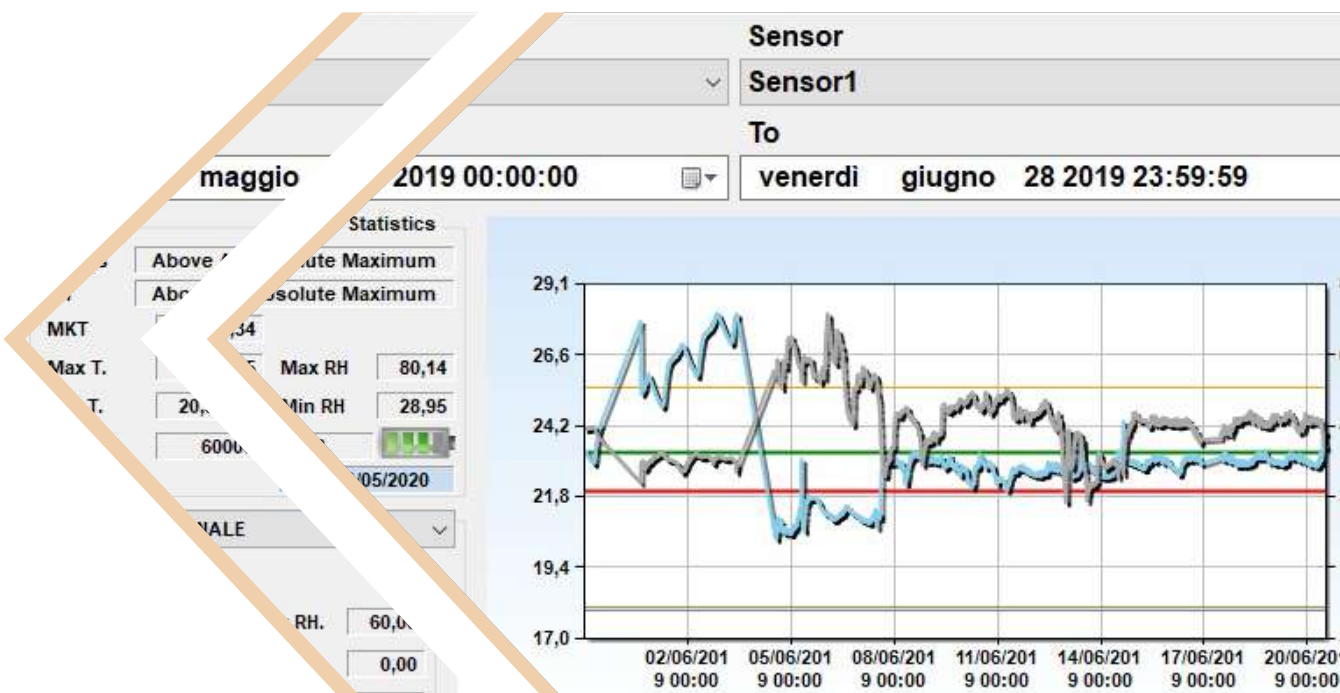
**HUMIDITY
SMART SENSOR**



EXTENSION

TSLog 21 allows you to manage multiple users with different levels, each user accesses via Login and Password. The data can be viewed in graphic format with zoom and table, and can be printed in customizable reports by exporting them to Excel. Alarms are sent via email and/or

SMS and can be customized according to availability shifts. It is possible to create a map of the environments to monitor the sensors as a whole, with reporting of the values read and those outside the threshold.



TS MANAGER

VALIDATION SOFTWARE



Validation, certification and qualification, mapping and everyday use software that supports all Tecnosoft data loggers. From thermal process validation to warehouse mapping, TS Manager is the most powerful tool that can accompany you in your work. It meets all the requirements of FDA 21 CFR Part 11, GAMP5, Annex 11 regulations and offers a wide choice of functions and options for the analysis and reporting of your data.



MAIN FEATURES

- > New UI for a modern User Experience
- > Multi-level access (guest, standard, advanced, administrator) via login and password
- > Audit Trail
- > Client/server installation with shared database
- > Data in the software cannot be changed and encrypted
- > Division of probe groups into Sections with partial analyzes on each Section
- > Multilingual
- > Graph, with zoom and synchronized data table
- > Multigraph analysis for groups of probes
- > Lethality chart in missions and mission groups
- > Print custom reports
- > Wide choice of analysis and statistics: lethality, F0, A0, PU, Vacuum Leak Test, Stability, Maximum and Minimum Thresholds, Averages, Theoretical Temperature of Pressure in Saturated Vapor
- > Table with synchronized data and statistics

2.6.0.2 Pro DEFAULT Amministratore ADMIN

Archivio	20.09.2023	10:05.03	Temporanea	Nome Vite	3501252022	MicroWH L	21/09/2023	10:05.03	MicroWH L	3501252022	Datalogger 1	X	Avvio rapido	Stazione	GMAN	Grete	Manfredini
Archivio	21/09/2023	10:05.03	Temporanea	Nome Vite	3501252022	MicroWH L	21/09/2023	10:05.03	MicroWH L	3501252022	Datalogger 1	X	Avvio rapido	Stazione	GMAN	Grete	Manfredini
Archivio	21/09/2023	10:05.03	Temporanea	Nome Vite	3501252022	MicroWH L	21/09/2023	10:05.03	MicroWH L	3501252022	Datalogger 1	X	Avvio rapido	Stazione	GMAN	Grete	Manfredini
Archivio	21/09/2023	10:05.03	Temporanea	Nome Vite	3501252022	MicroWH L	21/09/2023	10:05.03	MicroWH L	3501252022	Datalogger 1	X	Avvio rapido	Stazione	GMAN	Grete	Manfredini

Missioni

2.6.0.2 Pro DEFAULT Amministratore ADMIN

Reporto	Stazione	Strumento
Data di ora avvio	Stazione	
21/09/2023 10:05.03	Default	
Stazione	Default	
Utente	Utente	
Admin	Admin	
Modello Datalogger	Numero letture missione	
MicroWH L	850	
Numero di vite	Durata	

Impostazioni

2.6.0.2 Pro DEFAULT Amministratore ADMIN

Proprietà | Avanzate | Stampa | Personalizzazioni | Gruppi | Versione

Database

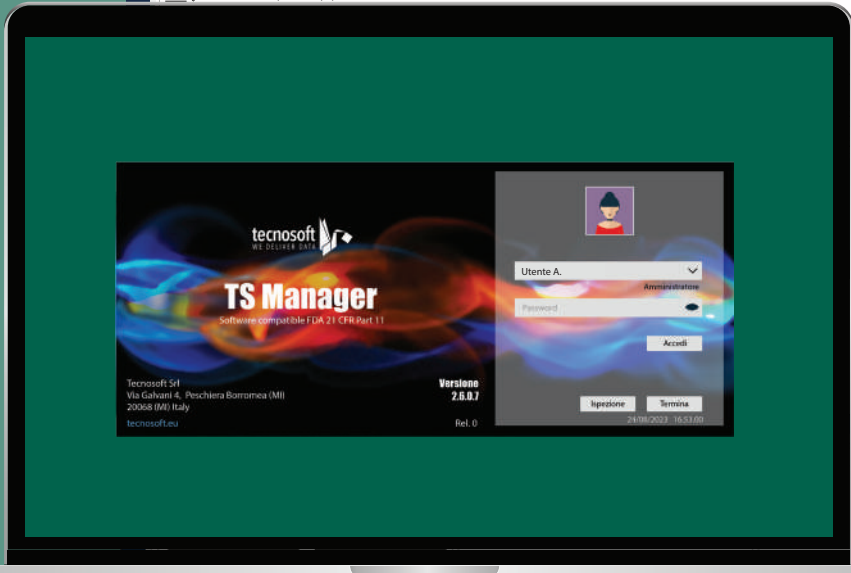
Connessione
Data Source=SQLEXPRESS;Integrated Security=True;user Instance=true

Stazione
DEFAULT

Forza il controllo del database al prossimo avvio

Sicurezza

- Richiedi l'autorizzazione per avviare la missione
- Richiedi l'autorizzazione per fermare la missione
- Solo gli amministratori possono creare nuovi utenti
- Controllo integrità all'apertura delle missioni
- Richiesta di inserire la password dopo periodo di inattività



Numero di vite: 3501252022 | Durata: 00:14:39

Nome: Admin

Scadenza calibrazione: 30/10/2023

Programmato	Fermato	Prima acquisizione	Dispositivo	Numero di vite	Nome	Stato	Nome profilo	Stazpato	Clienta	Strumento	Stazione	Nome utente	Cognome utente
21/09/2023	21/09/2023	10:05.03	MicroWH L	3501252022	Datalogger 1	X	Avvio rapido				GMAN	Grete	Manfredini
21/09/2023	21/09/2023	10:05.03	MicroWH L	3501252022	Datalogger 1	X	Avvio rapido				GMAN	Grete	Manfredini
21/09/2023	21/09/2023	10:05.03	MicroWH L	3501252022	Datalogger 1	X	Avvio rapido				GMAN	Grete	Manfredini
21/09/2023	21/09/2023	10:05.03	MicroWH L	3501252022	Datalogger 1	X	Avvio rapido				GMAN	Grete	Manfredini
21/09/2023	21/09/2023	10:05.03	E-MicroW L	3501252022	Datalogger 1	X	Avvio rapido				GMAN	Grete	Manfredini

Dashboard | Missioni | Gruppi | Profili | Clienti

Collegamento | Controllo integrità | Restrizioni zona | Opzioni di stampa | Stampa

Personalizza | Approva | Reporta | Salva e chiudi | Chiudi

Griglia Pressione

Indica l'intervallo in Bar asse Y

Griglia asse X in secondi

Indica l'intervallo di tempo dell'asse X

Testo asse X in secondi

Adatta il testo dell'asse X

Scala Y Pressione

Manuale

Minimo: C | C

Massimo: C | C

Dashboard | Missioni | Gruppi | Profili | Clienti

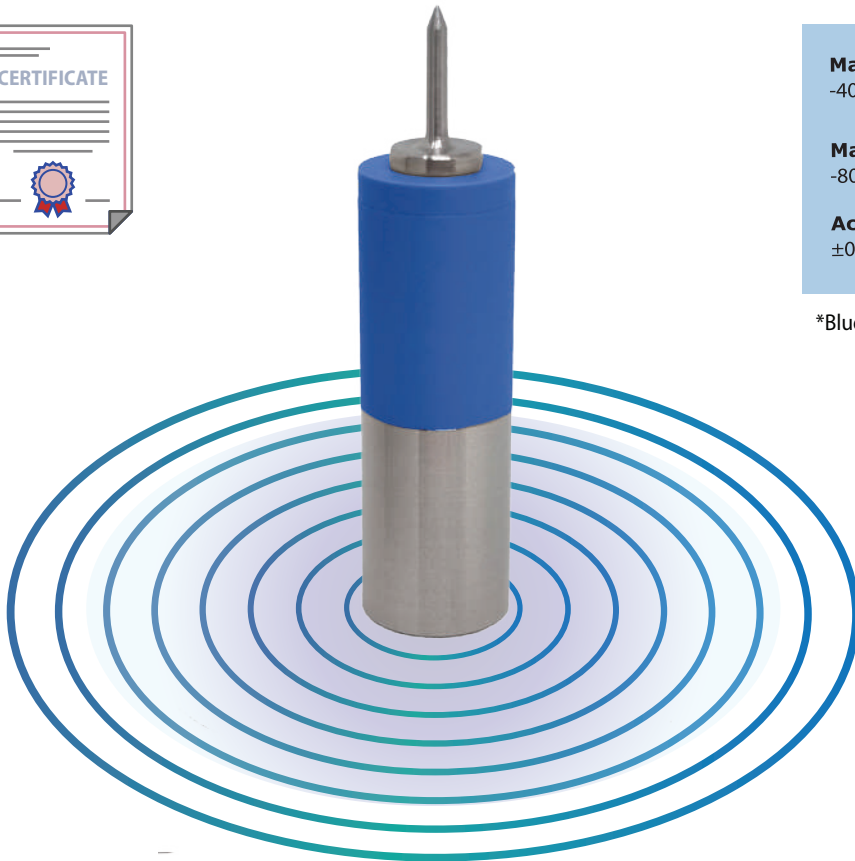
Collegamento | Controllo integrità | Restrizioni zona | Opzioni di stampa | Stampa

Personalizza | Approva | Reporta | Salva e chiudi | Chiudi

BLUEWAVE

BLUETOOTH DATA LOGGER FOR PROCESS MONITORING

Forget connection bases, receivers, accessories and additional devices: today you can receive data in real time directly on your PC or on your Smartphone*. No connection bases, receivers, accessories are needed. With the BlueWave series for temperature and pressure processes monitoring the user can control processes in real time and without additional space. Receive data and share it instantly.



Maximum data logger range:
-40°C ÷ + 140°C

Maximum probe range:
-80°C ÷ + 500°C

Accuracy:
±0,1°C

*Bluetooth 5.0 or higher device required

	Bluewave Temperature	Bluewave Pressure
Height	70 mm	89 mm
Ø	23 mm	23 mm
Probe	Rigid Rigid + Bendable Flexible Bendable	Pressure Rigid + Pressure Bendable + Pressure
Battery life		
Data sheet		

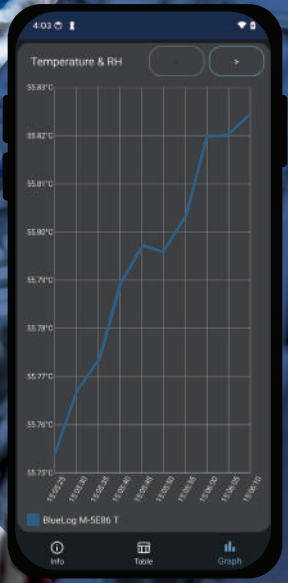
Maximum data logger range:
-40°C ÷ + 140°C
0 bar ÷ 5 bar absolutes

Maximum probe range:
-80°C ÷ + 500°C

Battery:
Replaceable

*Bluetooth 5.0 or higher device required



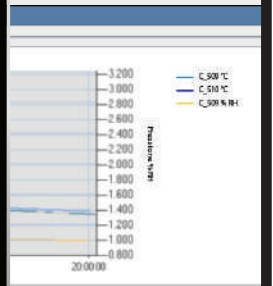


Dashboard
ZAG2 Pro DEFAULT Administrative ADMIN

Bluensee 0603647D8A1 S.3 <small>Nome: Setai Number BT Version</small>	Bluensee 0A73647D8A1 S.3 <small>Nome: Serial Number BT Version</small>	Bluensee 0A73647D8A1 S.3 <small>Nome: Serial Number BT Version</small>	Bluensee 0A00647D8A1 S.3 <small>Nome: Serial Number BT Version</small>
Bluensee 0A73647D8A1 S.3 <small>Nome: Serial Number BT Version</small>	Bluensee 0A73647D8A1 S.3 <small>Nome: Serial Number BT Version</small>	Bluensee 0A73647D8A1 S.3 <small>Nome: Serial Number BT Version</small>	Bluensee 0A73647D8A1 S.3 <small>Nome: Serial Number BT Version</small>

Profil
ZAG2 Pro DEFAULT Administrative ADMIN

Quando	°C	NPH	Descrizione
21/08/2023 15:40:53	20,08	62	Appuntamento mattina
21/08/2023 15:40:54	40,08	63	Medic. dalla dispensazione
21/08/2023 15:40:57	30,08	63	20:00
21/08/2023 15:41:54	31,23	63	
21/08/2023 15:41:57	25,24	62	Appuntamento mattina
21/08/2023 15:41:58	15,24	62	10:00
21/08/2023 15:42:01	30,08	63	10:00
21/08/2023 15:42:04	31,23	63	
21/08/2023 15:42:07	25,24	62	



	C_500H °C	C_510 °C	C_500 & RH
15:25:00	25,63 °C	15 %	25,63 °C
15:25:01	25,63 °C	15 %	25,63 °C
15:25:02	25,63 °C	15 %	25,63 °C
15:25:03	25,63 °C	15 %	25,63 °C
15:25:04	25,63 °C	15 %	25,63 °C
15:25:05	25,63 °C	15 %	25,63 °C
15:25:06	25,63 °C	15 %	25,63 °C
15:25:07	25,63 °C	15 %	25,63 °C
15:25:08	25,63 °C	15 %	25,63 °C
15:25:09	25,63 °C	15 %	25,63 °C
15:25:10	25,63 °C	15 %	25,63 °C
15:25:11	25,63 °C	15 %	25,63 °C
15:25:12	25,63 °C	15 %	25,63 °C
15:25:13	25,63 °C	15 %	25,63 °C
15:25:14	25,63 °C	15 %	25,63 °C
15:25:15	25,63 °C	15 %	25,63 °C
15:25:16	25,63 °C	15 %	25,63 °C
15:25:17	25,63 °C	15 %	25,63 °C
15:25:18	25,63 °C	15 %	25,63 °C
15:25:19	25,63 °C	15 %	25,63 °C
15:25:20	25,63 °C	15 %	25,63 °C



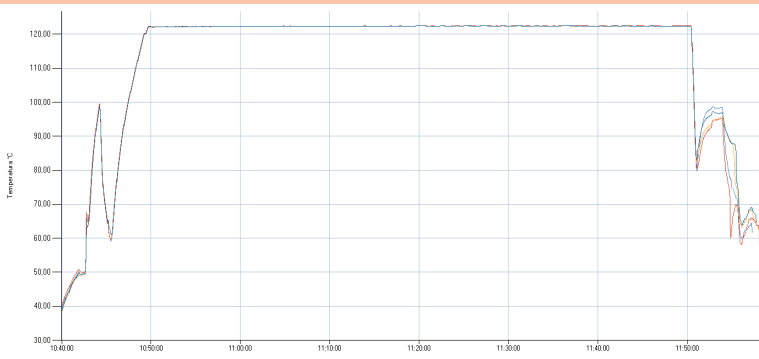
TC LOG

THERMOCOUPLES TEMPERATURE DATA LOGGER



Up to 8 channels profile, resistant up to 130°C, available for T, K or Universal thermocouples, both with and without connectors.
Various thermal protections are available and can be used in extreme heated environments.

ON REQUEST



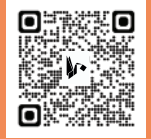
Dimensions:
132 x 80 x 25 mm

Temperature range of sensor:
-60°C ÷ + 130°C

Battery:
Replaceable

ACCESSORIES

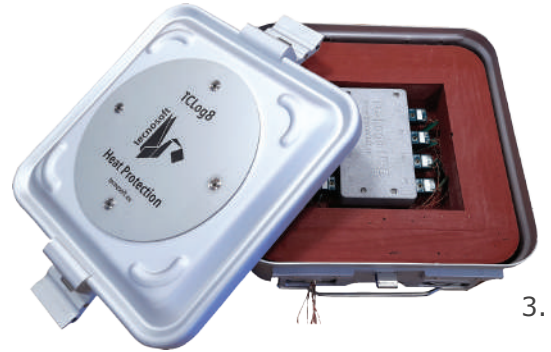
FIXING AND PROTECTION SYSTEMS



1.



2.



3.



4.



5.



6.



7.

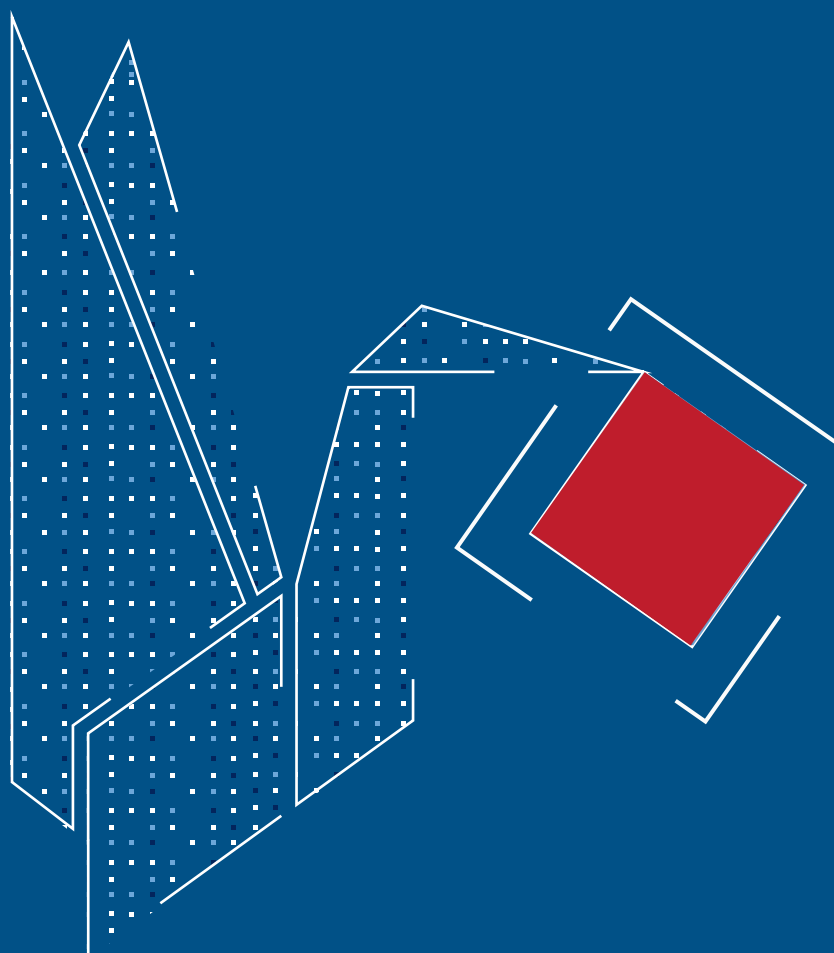


8.



9.

1. Universal tool for opening logger 2. Thermal protector for MicroW S 3. Thermal protector for TC-Log 8 S USB 4. Pressure Disk 5 filter 5. Example of data logger fixed with high temperature adhesive rubber 6. Locking nut used to fix and adjust the depth of the tip inside the packages. 7. Example of deep fixing 8. Fixing example equipped with spacer and used to monitor the core of the product. 9. Special antenna for autoclaves.



Tecnosoft s.r.l.

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