>> **HEAT SHIELD** Wireless WBGT meter

General Catalog

Components

HEAT SHIELD
Wireless WBGT meter

data loggers

LSI LASTEM

Milano
ITALY

LSI LASTEM s.r.L

40 years of experience in environmental technology

Since 1972, LSI LASTEM Srl of Milano (Italy) develops, manufactures and delivers worldwide the most complete range of high quality environmental monitoring systems. LSI LASTEM instruments suits virtually any type of application, guaranteeing accurate and reliable measurement of environmental parameters both for portable and long term monitoring, outdoors and indoors. Our comprehensive range of products includes sensors, data acquisition systems, software and installation Accessorieses.

Products

Instrumentation for indoor and outdoor environmental monitoring applications

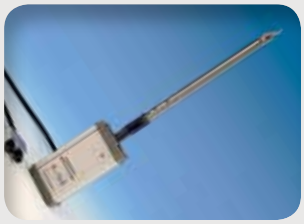
LSI Lastem catalogue features one of the most complete ranges of instruments available on the market. We supply our products as complete, turn-key solutions or as components for third-party integration.

METEOROLOGICAL SENSORS

Our broad range of sensors covers virtually any meteorological parameter, including wind, temperature, relative humidity, solar radiation, rain, atmospheric pressure, evaporation, visibility and more.

INDOORS SENSORS

A full set of sensors for high-end indoors monitoring applications including solutions for temperature, relative humidity, air speed, light, radiative quantities, pressure, gas concentration and more.



DATA LOGGERS and SOFTWARE

A complete range of data loggers for environmental applications, featuring low power consumption, protection against severe environmental conditions and extensive set of signal supported and communication protocols.

Systems

LSI Lastem knowledge and expertise, the result of 40 years of business in the environmental market, has helped customers put together an incredible number of application-specific monitoring solutions.

INDOORS APPLICATIONS

Indoor Environmental Quality

Since his inception, indoor environmental assessment has been LSI Lastem's core business. Over the years, we implemented the most complete range of systems to measure the critical quantities defining health and comfort of building occupants.

Heat stress and thermal comfort

State-of-the-art systems for the measurement of thermal comfort and heat/cold stress in health and safety applications according to relevant ISO standards. Over the years this application has become a true LSI Lastem's specialty.

HVAC

Complete solutions for thermal comfort and indoor air quality monitoring in order to regulate HVAC (Heating, Ventilation Air Conditioning) systems performances and attain a better thermal sensation with optimal energy expenditures.

Buildings assessment/Wall insulation

Complete systems for testing building environmental performances as function of energy saving capacity and related environmental comfort (Green Building Rating Tools) - including wall thermal transmittance, thermal comfort, indoor air quality and ventilation, light controls.

Controlled Atmosphere Processing Environments

Monitoring of ambient temperature, relative humidity, air speed, pressure, IAQ and other parameters relevant for optimal storing and processing purposes in clean rooms, white chambers, laboratories, warehouses, caves and green houses.

Museums and heritage

Practicing on Italy's immense cultural and artistic heritage and in cooperation with the most renowned restoration institutes, LSI Lastem has implemented monitoring solutions for the critical environmental and chemical parameters affecting conservation of artworks in museums, archeological sites and natural caves.

ENVIRONMENT AND POLLUTION

Air Quality Monitoring
Meteorological measurements for the analysis of the atmosphere dynamics and data correlation for air quality networks, stack emissions and gas analyzers systems.

Landfills and waste plants monitoring
Monitoring of meteorological parameters in environmental-hazardous plants such as landfills and waste treatment plants. Solutions for odours dynamics, rain quantity and deepwater level&quality.

Compost and biofilters
Systems to monitor the compost maturation process and bio-filtration activity. We provide solutions for temperature, oxygen and water content monitoring, for on-line (wireless or cabled) and portable applications.

METEOROLOGICAL APPLICATIONS

AWS and Synoptic Meteorological systems
Complete surface weather observation systems according to WMO standards for general or specific meteorological observations, operating individually or in networks.

Road and transportation monitoring systems
Meteorological measurements systems for roads, railroads, seaports and airports-including specific parameters such as wind, visibility, precipitation intensity and type, road-surface conditions and present weather.

Hydrology systems
Meteorological systems to control water both as a resource and as a hazard in hydrological networks and water-basin management – including measures of rain intensity, level and quality of water and snow.

Agrometeorology
Climate is the single most important factor for crops growth and health. We offer a complete range of application-specific monitoring for leaf wetness, evapotranspiration, soil water content and photosynthetic-active radiation.

Wind energy
From site assessment to wind turbine control, our complete meteorological catalogue with its full range of anemometers and data logger, gives wind energy professionals one of the most complete arrays of solutions available on the market.

Solar energy
As Italy evolved into a premium solar energy market, we became the preferred choice for plant owners, EPC contractors and monitoring systems producers as we developed a unique knowledge of the application to go along with our meteorological and radiometric know-how.

1972 - Laboratori di Strumentazione Industriale (LSI) Spa is organized in Milano by former members of a previously existing electronic research company (LRE) and begins the production of electrical thermometers. Soon afterwards, the company adds systems to measure relative humidity through the psychrometric method and hot-wire anemometers to his portfolio.

1975 - The company introduces graphic recorders for the online printing of the measured values and a line of converters for the connection of sensors to industrial systems. In just a short time, the range of products and measured quantities is remarkably increased with the introduction of sensors for the measurement of different types of temperature radiant, contact and of liquids, along with luxmetric sensors and hygrometers.

1979 - Introducing the LASTEM logo, the company begins the production and distribution of his line of sensors and data acquisition systems specific for meteorological applications. LASTEM Srl is now operative.

1980 - LSI is the first company in Italy to produce instruments for the measurement and storage of the thermal environments parameters requested in the health and safety regulations in working environments.

1985 - LSI and LASTEM transfer their head offices from Viale Liguria (Milan) to the current Settala (MI) headquarters, consisting in three twin buildings.

1990 - After the consolidation of computer technology and storage possibilities, LSI develops a series of PC-compatible acquisition systems and software.

1995 - A new concept of measurement is then started: multi-measurement system - one single system able to measure not just a few parameters, but a whole range of quantities which, altogether, can solve a specific application need.
The multi-measurement concept has been a company mainstay since, widening the range of sensors for the measurement of environmental quantities such as gas concentration, thermic flows, lux and radiation.

2000 - LSI further develops its range, with a new sensor line equipped with data transmission via radio to data acquisition systems.

2004 - Aiming at offering a more complete range of services and better quality standards to his clients, LSI creates the new “After-Sale Services” division, designed to offer support and service after the purchase of the instruments: Telephonic Assistance, Data Collection, Repair Service and External Assistance.

2006 – LSI and LASTEM are united under the same brand and logo, with the new LSI LASTEM name.

2010 – A new concept of multi-position measurement is started: thanks to radio technology applied to data loggers and sensors, the multi-measurement concept is extended to a multi-position concept. Now LSI Lastem can develop complex systems producing simultaneous measurement of a number of parameters in different positions of the targeted environment.

LSI LASTEM Headquarters
Settala (MI) ITALY

www.lsi-lastem.com


| photo | 3 twin-building structure

LSI LASTEM headquarters in Settala, near Milano, Italy is a 1325 m^2, 3 twin-building structure that's been home to our company since 1985. Here, a team of 30 professionals is employed in engineering, production, aftersales, marketing and administration departments.

R&D
Each and every LSI Lastem product is designed, developed and tested here. Our skill set includes physics, mechanics, electronics, firmware and software engineering.


Mechanical Shop
The backbone of LSI Lastem products takes shape in our in-house shop. Our expert craftsmen produce here sensor bodies, supports and mechanical components.


Sensors assembly division
Given our extensive range of sensors, this is always one of the busiest areas of the company. After completion, sensors are moved in the nearby calibration laboratories for testing.


Data Loggers Assembly division
Data Loggers are the absolute core of our systems. Here they are assembled, configured and tested – the latter activity lasts for a 7-day period.


adquarters

Settala (MI) ITALY

Calibration Laboratories

To ensure consistent and dependable performance, we calibrate each sensor against traceable standards in a specific calibration facility. Our laboratory is accredited by ACCREDIA Italian Accreditation System, the National Body for accreditation activities, equivalent to ISO/IEC 17025.

Aftersales

We have a skilled, dedicated team for aftersales services. Their duties include repairs, calibrations, on-site installations and maintenance. In addition, we perform data management services to our customer - data download, validation and web publication.

Training

We have always believed in the benefit of offering training for our customers to make the use of our system more productive and easier. That's why we have a dedicated room for our year-round training seminars.

Heat Shield
Portable wireless WBGT meter

www.lsi-lastem.com

Highlights

- Quick, reliable and accurate assessment of indoor and outdoor WBGT index
- Built-in radio technology for simultaneous, wireless monitoring in different locations/heights
- Rated IP54 to withstand harsh environmental conditions
- 8MB memory for extended data logging
- Battery Life: 400h (with radio on 20h)
- Automatic start/stop of measurements
- Probe design and performances according to ISO7726
- GIDAS TEA The most advanced software available on the market for Thermal Environment Analysis,.
- Support for ISO7730 thermal comfort analysis with PMV and PPD indexes, heat and cold stress Predicted Heat Strain (PHS), Insulation Required (IREQ).

Heat Shield includes globe temperature, wet bulb temperature the, dry bulb temperature and relative humidity and displays on-line WBGT indoor& outdoor index, Heat Index and Humidex. Thanks to its built-in radio technology, Heat Shield can support up to two satellite units to calculate WBGT at different levels (As per the recommendations outlined in ISO 7243: 1989) or in different locations. When equipped with the anemometer, the unit can be also used for accurate thermal environments analysis thanks to the most advanced software available on the market for this purpose, GIDAS TEA.

Main Features

Measurements

All sensors are designed in compliance with ISO7726. Heat Shield supports both 15 cm (6”) and 5 cm (2”) black globes thermometers as well as external anemometers for air speed (va) measurement.

Tg sensor, 5 cm (2”) diameter

Tg sensor, 15 cm (6”) diameter

Ta&RH% sensor

Tnw sensor

ESV125 Va sensor (hot wire)

DNA205 Va sensor (cups)

continued

Hot wire technology offers optimal performances indoors and in low air speed conditions, while a cup anemometer is ideal for outdoor use.

Calculations

Heat Shield calculates on-line and displays the following indexes:

- WBGT indoor&outdoor index (ISO7243). For up to 3 locations simultaneously it requires Satellite units.
- Head-Torso-Ankle Weighted Average WBGT (ISO7243) (requires Satellite units)
- Heat index According to 1990 National Weather Service (NWS) Technical Attachment (SR 90-23)
- Humidex According to J.M. Masterton and F.A. Richardson of Canada's Atmospheric Environment Service equation (1979)

Heat Shield has 8 Mb memory to store measurements and calculations performed during every survey. Once data are downloaded to a PC, LSI Lastem suggests two software applications: Using GIDAS TEA will be possible perform easy and quick creation of reports based on any available ISO index:

- PMV-PPD index, TO Operative Temperature index (ISO7730) (requires BSZ313 PC module)
- PHS Predicted Heat Strain (ISO7933) (requires BSZ317 PC module)
- IREQ Insulation Required, Duration Limit of the exposition (ISO11079) (requires BSZ313 PC module)

Using HS Manager will be possible to perform analysis of the results of Heat Shield and to evaluate working limits. HS Manager always comes together with Heat Shield units. GIDAS TEA is an optional program.
Read more about LSI Lastem programs in the last pages of this document.

Three levels WBGT on the same vertical

Easy to operate

Heat Shield is very stable when placed on any horizontal surface but it can be also hand able or mounted on standard photographic tripod. With its on-and-play philosophy, measurements can be displayed in just a few instants from power on. No configuration is required by PC. Rechargeable batteries assure up to 400 hrs of measurement (20 hrs when using wireless Satellites).

WBGT in three positions of the same environment

Three WBGT with wireless satellite modules

Heat Shield can be supplied as a single base unit or with two additional wireless satellite modules. The satellite units are used to measure environmental conditions at three levels and calculate Head-Torso-Ankle Weighted Average WBGT as required by the ISO 7243. Alternatively, the satellite modules can be used in different locations, performing three simultaneous measurements saving the user precious working time. Heat Shield radio can cover up to 300 m (line-of-sight; actual range in indoors conditions may vary).

Rugged and reliable

Heat Shield is extremely compact and robust. It has been designed to withstand the harsh working environments where heat stress condition normally arise both in indoor and outdoor conditions. Due to its metal case, it is very well protected against mechanical shocks, dust and dew. IP54 protection guarantees performance in outdoors or in dusty and humid conditions.

Sales Kit

Heat Shield - Portable wireless WBGT meter

KIT 1: Base WBGT kit

Includes:
- Heat Shield base module
- 90÷230 Vac power charger
- PC serial cable
- USB adapter
- HS Manager software
- carrying case.

KIT 2: WBGT+Thermal comfort kit

Includes:
- Heat Shield base module
- 90÷230 Vac power charger
- PC serial cable
- USB adapter
- HS Manager software
- supports and carrying case.

Hot wire anemometer.

KIT 3: Full three levels WBGT kit

Includes:
- Heat Shield base module plus n.2 satellite modules for 3-level measurements
- 90÷230 Vac power charger
- PC serial cable
- USB adapter
- HS Manager software
- carrying cases.

Code	Description	KIT 1	KIT 2	KIT 3
	Heat Shield modules			
ELR610M	Heat Shield base module. Includes 110-220 Vac power charger, PC serial cable, USB adapter and HS Manager software. Small black globe sphere (5 cm diameter)	●	●	
ELR615M	Heat Shield base module. Includes 110-220 Vac power charger, PC serial cable, USB adapter and HS Manager software. Large black globe sphere (15 cm diameter)	Note 1	Note 1	Note 1
ELR610S	Heat Shield satellite module. Small black globe sphere (5 cm diameter)			● qt.2
ELR615S	Heat Shield satellite module. Large black globe sphere (15 cm diameter)	Note 1	Note 1	Note 1
	Tripod			
BVA304	Tripod	Opt.	Opt.	●
BWA048	Soft bag for tripod and supports	Opt.	Opt.	●
BVA325	Support for Heat Shield and ESV125 anemometer on tripods or surfaces	Opt.	●	●
BVA326	Tripod extension for 3-level measurements and/or BVA308 mounting		Note 4	●
BVA308	H.80 cm pole for DNA205 anemometer on tripod		Opt.	Opt.
	Anemometers			
ESV125	Hot wire anemometer	Opt.	●	Opt.
DNA205	Cup anemometer	Opt.	Note 4	Opt.
	GIDAS TEA modules	Note 5	Note 5	Note 5
BSZ317	TEA module for hot environments. PHS index calculation. Calculator		Opt.	
BSZ313	TEA module for comfort environments. PMV-PPD index calculation. Calculator		Opt.	
BSZ315	TEA module for cold environments. ITR index calculation. Calculator		Opt.	●
	Carrying cases			
BWA317	Carrying case for n.1 ELR610M and n.2 ELR610S modules plus accessories	●	●	●
BWA318	Carrying case for n.1 ELR615M and n.2 ELR615S modules plus accessories	Note 6	Note 6	Note 6

Note 1 Check your country policy and legislation to select the appropriate globe diameter.
Note 2 Normally tripod can use useful for three levels WBGT measurement
Note 3 Anemometer is required for calculation of PMV-PPD, PHS and IREQ. Hot wire technology (ESV125) offers optimal performances indoors and in low air speed conditions, while a cup anemometer (DNA205) is ideal for outdoor use.
Note 4 Wind measurement using DNA205 cup anemometer is required to evaluate the heat stress in outdoor conditions. In that case, DNA205 is mountable on a BVA304 tripod using BVA308 pole
Note 5 GIDAS TEA modules performs in-depth index calculation, data analysis and reporting. Each module includes also a unique "Calculator" feature, to perform sensitivity analysis simulating thermal environments conditions using real measurements or virtual data. See technical specification in the last pages of this document.
Note 6 Select a bigger carrying case when large black globe sphere (15 cm diameter) Heat Shield modules are selected.

Heat Shield base module

Heat Shield includes globe temperature, wet bulb temperature the, dry bulb temperature and relative humidity and displays on-line WBGT indoor& outdoor index, Heat Index and Humidex. Two models are available, one (ELR610M) with 2" (5 cm) sphere globe temperature sensor the other (ELR615M) with 6" (15 cm) sphere.

ELR610M (1) – ELR615M (2)	*Type*	*Element*	*Range*	*Accuracy (0÷60°C)*
	Natural Wet Bulb Thermometer (Cotton wick immersed into a built-in reservoir with detachable cover)	1/3 DIN-A Pt100	-20÷60°C	± 0.3°C
	Globe Thermometer **ELR610M**: 2" sphere **ELR615M**: 6" sphere	1/3 DIN-A Pt100	-20÷60°C	± 0.3°C
	Dry Bulb Thermometer (Equipped with radiant screen)	1/2 Pt100	-20÷60°C	± 0.8°C ±0.4 °C (10-40°C)
	Relative Humidity Sensor	Capacitive sensing element	0÷100%	1.8 %RH (10-90%)
	ESV125 Air Flow (optional)*	Hot wire (Tungsten wire diam. 9,45 µm)	0.01÷20 m/s	±10 cm/s (0,5÷1,5 m/s) 4% (>1,5 m/s)
	DNA205 Anemometer (optional)* *not supported on satellite units	Cup anemometer for outdoor use	0÷75 m/s	2,5%\

Common features

Calculated parameters	*WBGT (indoor) index* *WBGT (outdoor) index*	According to ISO7243 For up to 3 locations simultaneously (Requires Satellite units)
	Head-Torso-Ankle Weighted Average WBGT	According to ISO7243 (Requires Satellite units)
	Heat index	According to 1990 National Weather Service (NWS) Technical Attachment (SR 90-23)
	Humidex	According to J.M. Masterton and F.A. Richardson of Canada's Atmospheric Environment Service equation (1979)
	*PMV-PPD***	According to ISO7730
	*Predicted Heat Strain (PHS)***	According to ISO7933
	*Insulation Required (IREQ), Duration Limit of the exposition (Dlim)***	According to ISO11079
	***Requires Air Flow measurement*	** via post-processing Software
Data management	*Data logging*	10" sec÷12hrs; va=1"
	Memory	8MB of flash data memory
	Survey identification	Time and date stamping with clock and calendar
	Software compatibility	HS Manager (included), Gidas TEA (optional)
	Languages	English, Spanish, Portuguese, Italian

continued

Power supply	*Power supply*	Stand-by: 0.2 mA (n.9 months)
	Power consumption (Radio ON)	TX ON: 180 mA, RX ON: 30 mA8 ÷ 14 Vdc
	Power consumption (Stand-by)	According to 1990 National Weather Service (NWS) Technical Attachment (SR 90-23)
Battery	*Type*	2 A (4.2 V) Lithium rechargeable
	Recharging time	~ 8 hrs
	Battery life	Standby: 9 months Radio OFF (without satellites): 400 hrs Radio ON (without satellites): 20 hrs
Other features	*Internal clock*	Accuracy: 30 sec/month (T=25°C)
	Display	LCD 4 x 20 car
	Keyboard	N.8 keys
	Processor	1 RISC 8 bit, clock 16 MHz
	ADC resolution	16 bit
	Sampling time	80 ms (rejection 50 Hz)
	Environmental limits	-20 ÷ 60 °C
	Protection	IP 54
	Standards / Approvals	CE Mark
	Weight	1,4 Kg
	Dimensions	185x220x55 mm
	Mounting	Threaded bushing allows mounting to standard photographic tripods

Interfaces	*On instrument*	*External*
RS232 PC Interface (Base unit only)	Waterproof jack	Supplied with USB converter for PC connection
12VDC power jack	Waterproof jack	AC adapter wall power cube (90÷230VAC – 50÷60Hz)
Anemometer	Waterproof jack	Compatible with ESV125 Hot wire and DNA205 Cup anemometer

Heat Shield satellite module

Additional satellite module for ELR610M or ELR615M base modules. Each base module can manage up to two satellites. Two satellite models are available, one (ELR610S) with 2" (5 cm) sphere globe temperature sensor the other (ELR615S) with 6" (15 cm) sphere.

ELR610S (1) – ELR615S (2)	*Type*	*Element*	*Range*	*Accuracy (0÷60°C)*
	Natural Wet Bulb Thermometer (Cotton wick immersed into a built-in reservoir with detachable cover)	1/3 DIN-A Pt100	-20÷60°C	± 0.3°C
	Globe Thermometer **ELR610S**: 2" sphere **ELR615S**: 6" sphere	1/3 DIN-A Pt100	-20÷60°C	± 0.3°C
	Dry Bulb Thermometer (Equipped with radiant screen)	1/2 Pt100	-20÷60°C	± 0.8°C ±0.4 °C (10-40°C)
	Relative Humidity Sensor	Capacitive sensing element	0÷100%	1.8 %RH (10-90%)

Common features

Power supply	*Power supply*	8÷14 Vdc
	Power consumption (Radio ON)	TX ON: 180 mA, RX ON: 30 mA
	Power consumption (Stand-by)	Stand-by: 0.2 mA (n.9 months)
Battery	*Type*	2 A (4.2 V) Lithium rechargeable
	Recharging time	~ 8 hrs
	Battery life	20 hrs
Radio	*Type*	ZigBee
	Frequency	ISM 2.4 GHz direct sequence channels
	Power	10 mW (+10 dBm)
Other features	*Internal clock*	Accuracy: 30 sec/month (T=25°C)
	Keyboard	n.4 keys
	Processor	1 RISC 8 bit, clock 16 MHz
	ADC resolution	16 bit
	Sampling time	80 ms (rejection 50 Hz)
	Environmental limits	-20 ÷ 60 °C
	Protection	IP 54
	Standards / Approvals	CE Mark
	Weight	1,05 Kg
	Dimensions	185x150x55 mm
	Mounting	Threaded bushing allows mounting to standard photographic tripods

Interfaces		*On instrument*	*External*
	12VDC power jack	Waterproof jack	AC adapter wall power cube (90÷230 VAC – 50÷60Hz)

LSI LASTEM GIDAS TEA (Thermal Environment Application) is a state-of-the-art software suite designed for the most comprehensive thermal analysis available on the market. With the 3 specific modules of TEA (Moderate/Hot/Cold environment) you can easily carry out ISO index calculations, generate thermal-comfort projects and reports, perform simulations and organize records and results in the database.

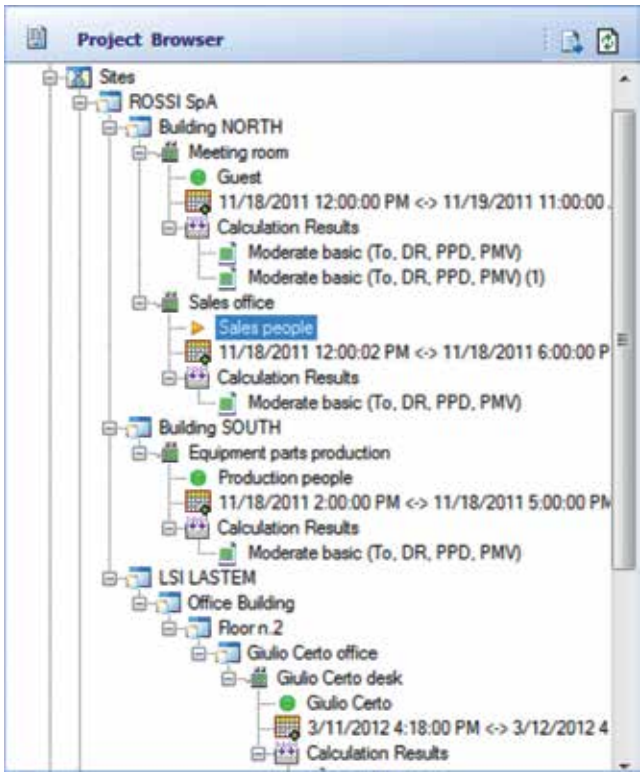
GIDAS - TEA (Thermal Environments Applications)

Three modules are available for thermal index calculation, in full compliance with relevant ISO

BSZ313: Thermal comfort indexes.
Determination and interpretation of thermal comfort using calculations and local thermal comfort criteria for optimal comfort conditions according to the following ISO indexes:
- PMV Predicted mean vote (ISO7730)
- PPD Predicted % of dissatisfied (ISO7730)
- DR Predicted % of dissatisfied by draught (ISO7730)
- TO Operative temperature (ISO7730)

BSZ315: Cold environments
Determination and interpretation of cold stress when using required clothing insulation and local cooling effects to limit the possible decrease of body temperature according to physical thermoregulation activity.
- ITR required thermal insulation (ISO 11079)

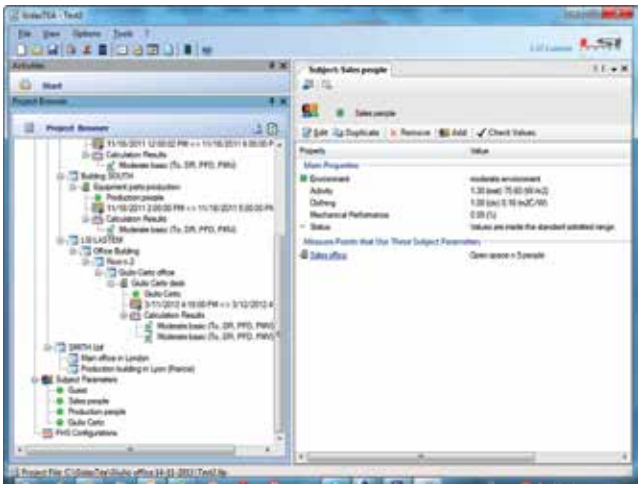
BSZ317: Heat stress
Analytical determination and interpretation of heat stress using calculation of the predicted heat strain to avoid dangerous conditions for the health of hot environment workers.
- WBGT Wet bulb globe temperature. Inside/outside (ISO 7243)
- PHS Predicted heat strain (ISO7933:2004)



Environments setup

■ Organize each measurement location with record information. (Name, place, description, etc.). One or more subjects can be assigned to every measurement location.
■ Index calculation for every measurement location and every subject.

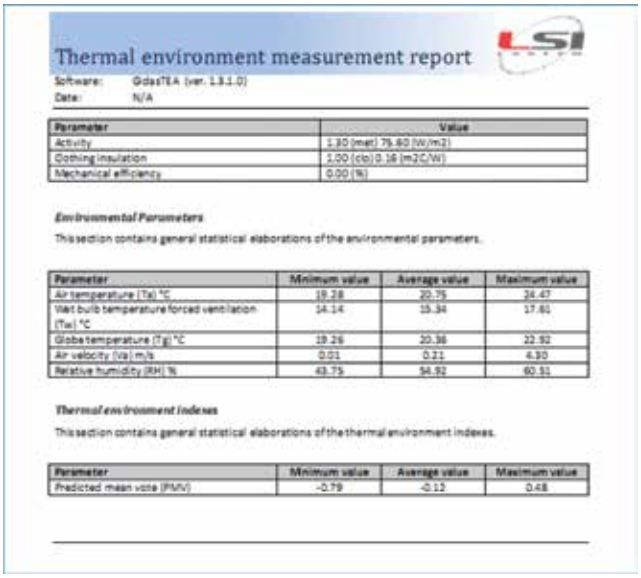
interface - **project browser**



General

- Data download from M/R-Log
- Measurement locations setup
- Subject parameters (clothing and activity) setup
- Measurement reports, tables and charts.
- Index calculation and in-depth analysis using different subject parameters (sensing analysis)
- Quick index calculator

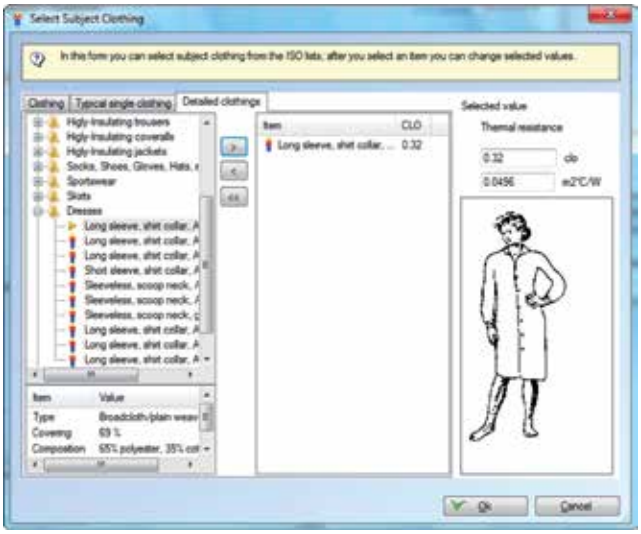
interface - **Gidas TEA**



Final report

- Tables an charts for measured quantities and thermal enviroment indexes.
- Final report, with complete information (measurements positions, subjects, environmental quantities and thermal environment indexes, in charts and summarized tables, with editable records).
- DocX, open office, xml (ECMA-376) document format.

interface - **measurement report**



Subject setup

Values setup using tables and pictures from ISO standards, including:

- Subject activity (MET)
- Clothing (Clo)
- Rendiment (ETA)

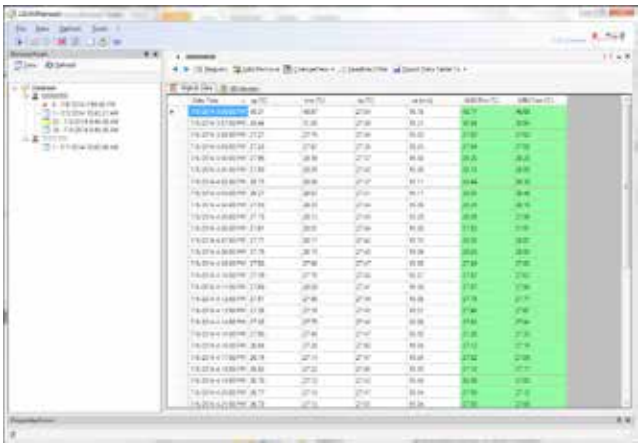
interface - **select subject clothing**

Calculator feature

- Manual entering of Subject parameters (Clo, MET, ETA) and environmental quantities (temperature, RH%, air speed, etc.).
- Sensing analysis of thermal indexes when editing the entered quantities.
- Reports in DocX, Open Office xml (ECMA-376) formats.

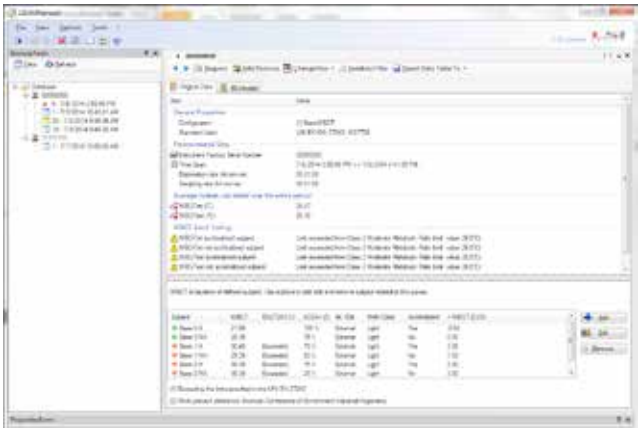
HS Manager

HS Manager is a PC module to download and manage data (index and measurements) coming from the Heat Shield Base module. HS Manager is included with the ELR610M-S and ELR615M-S modules.



Main

- Data downloading
- Data storing for each survey number
- Row data (index and measurements) reports in table and charts
- Requery of the row data into Max/Min/ Ave/Standard Deviation values over a programmable time base
- Data export to Excel
- Charts and tables copy&paste feature



WBGT management

- WBGT average calculation over the entire survey
- Highlight of the worst hour
- WBGT limits evaluations for UNI 27243 and for ACGIH
- WBGT limits of exposure for MET classes, YES/NOT acclimatized persons and Clothing levels

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