

Cold Chain and Process



EBI 20
Standard Data Loggers

Description:

- Data logger versions for temperature and humidity measurements available
- With internal and external temperature probes
- Very easy to use
- Excellent price-performance ratio

Applications:

- Transport monitoring
- Storage monitoring
- Process monitoring



EBI 25
Wireless Data Logger System

Description:

- Radio data logger system for temperature and humidity measurements
- Other measurements can be integrated using Modbus over IP or other protocols

Applications:

- Continuous monitoring of cooling equipment, cool rooms and deep-freeze rooms
- Storage monitoring



Monitoring



EBI 40
Multi-Channel Temperature
Data Logger

Description:

- Temperature data logger for up to 6 or 12 thermocouple sensors with SMP connection
- Current measurement values and measurement curve shown on multi-color TFT display
- With USB connection for fast programming and readout of the measurement data

Applications:

- Process monitoring
- Process validation



EBI 3x0
USB Data Loggers

Description:

- Single-use and multi-use data loggers for temperature and humidity measurement
- USB connection
- Automatic PDF report generation with all measurement data
- Easy programming of the data loggers via the free online configurator at www.ebi300.com, no special software required

Applications:

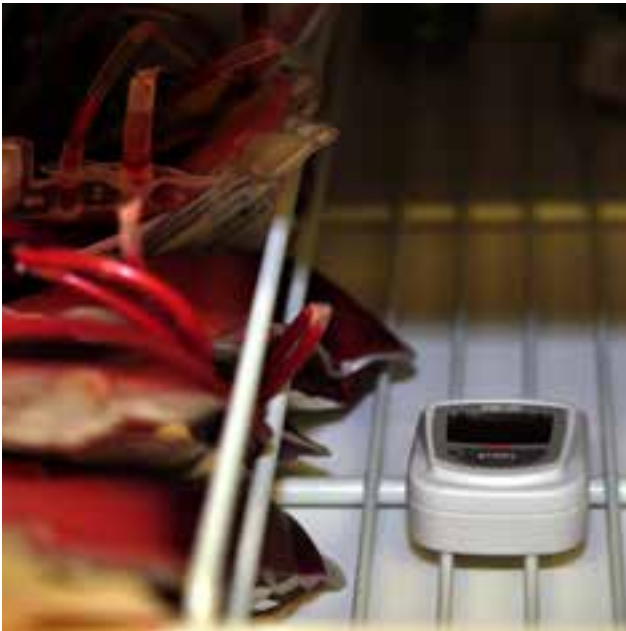
- Transport monitoring
- Storage monitoring

EBI 20 Standard Data Loggers

With a memory capacity of 40,000 measurements the easy to use EBI 20 data loggers are suitable for the continuous documentation and monitoring of temperature and humidity. All EBI 20 data loggers are delivered with a factory calibration certificate and a user replaceable battery. The data loggers are particularly attractive because of their excellent price-performance ratio.

Applications:

- Transport monitoring
- Storage monitoring
- Process monitoring





General technical specifications: valid for all types*

Resolution: Temperature	0.1 °C (0.2 °F)
Resolution: Humidity (only humidity data loggers)	0.1 % rH
Measurement mode	<ul style="list-style-type: none"> • Endless measurement • Start immediately until end of memory • Start / stop measurement • Start with key press
Operating temperature	-30 ... +60°C (-22 °F ... +140°F)
Storage temperature	-40 ... +70°C (-40 °F ... +158 °F)
Battery	3 V lithium (CR2450), user replaceable
Battery lifetime	Up to 24 months, at a sampling rate of 15 min. at +25 °C (77 °F)
Housing material	ABS
Dimensions (L x W x H)	69 x 48 x 22 mm**
Weight	Approximately 45 g**
Certificate	Factory calibration certificate

* Please find the exact technical data of each EBI 20 logger type on the next pages.

** Dimensions and weight just refer to the EBI 20 housing.

EBI 20-T1 Standard Temperature Data Logger with internal temperature sensor



Technical Data

Measurement range	-30 °C ... +70°C (-22 °F ... +158 °F) (please see the note on the next page)
Accuracy	±0.5 °C (-20 °C ... +40 °C) / ±0.9 °F (-4 °F ... 104 °F) ±0.8 °C (±1.4 °F) for the remaining measurement range
Data memory	1 channel, 40,000 measurements
Sensor	NTC
Sampling rate	1 min to 24 hours
Protection class	IP 67

Type	Description	Part No.
EBI 20 T1	Temperature logger	1601-0042

EBI 20-TE1 Standard Temperature Data Logger with external probe



Technical Data

Measurement range	-30 °C ... +70°C (-22 °F ... +158 °F) (please see the note on the next page)
Accuracy	±0.5 °C at -20 °C ... +40 °C (±0.9 °F at -4 °F ... 104 °F) ±0.8 °C (±1.4 °F) for the remaining measurement range
Data memory	1 channel, 40,000 measurements
Sensor	NTC, 55 mm, Ø 3 mm, pointed
Sampling rate	1 min to 24 h
Cable	Silicone, L = 0.8 m
Protection class	IP 67

Type	Description	Part No.
EBI 20-TE1	Temperature logger with external probe	1601-0043

EBI 20-TF Standard Temperature Data Logger with external probe up to +100 °C (+212 °F)



Technical Data

Measurement range	0 °C ... +100 °C (+32 °F ... +212 °F)
Accuracy	±0.5 °C (+50 °C ... +100 °C) ±1 °C for the remaining measurement range
Data memory	1 channel, 8000 measurements
Sensor	NTC, 55 mm, Ø 3 mm, pointed
Sampling rate	Adjustable from 1 sec to 24 hours
Cable	Silicone, L = 0.8 m
Protection class	IP 67

Type	Description	Part No.
EBI 20-TF	Temperature data logger with external probe	1601-0010

EBI 20-TH1 Standard Temperature / Humidity Data Logger with internal humidity sensor



Technical Data

Measurement range: humidity	0 % rH ... 100 % rH
Accuracy: humidity	±3% rH (10% rH ... 90% rH)
Measurement range: temperature	-30 °C ... +70°C (-22 °F ... +158 °F) (please see the note below)
Accuracy: temperature	±0.5 °C at -20 °C ... +40 °C (±0.9 °F at -4 °F ... 104 °F) ±0.8 °C (±1.4 °F) for the remaining measurement range
Data memory	40,000 measurements
Channels	channel 1: relative humidity, channel 2: temperature
Sensor	NTC, capacitive humidity sensor
Sampling rate	1min ... 24h
Protection class	IP 52

Type	Description	Part No.
EBI 20-TH1	Temperature/Humidity Data Logger	1601-0044

Sets and Accessories for EBI 20



EBI 20-T1-Set Temperature logger set (temperature logger, evaluation software, interface)



EBI 20-TE1-Set Temperature logger set (logger with external probe, evaluation software, interface)



EBI 20-TF-Set Temperature logger set (logger with external probe up to +100 °C (+212 °F), evaluation software, interface)



EBI 20-TH1-Set Temperature Humidity Logger Set (Logger, Evaluation software, Interface)



EBI 20-IF Interface



EBI 20-WM wall bracket



EBI 20-WM-1 truck wall bracket



The temperature measurement range of some EBI 20 models has been increased from +60 °C to +70 °C. This may require an update of the Winlog software.

Type	Description	Part No.
EBI 20-T1-Set	Temperature logger set (temperature logger, evaluation software, interface)	1601-0046
EBI 20-TE1-Set	Temperature logger set (logger with external probe, evaluation software, interface)	1601-0047
EBI 20-TF-Set	Temperature logger set (logger with external probe up to +100 °C (+212 °F), evaluation software, interface)	1601-0011
EBI 20-TH1-Set	Temperature Humidity Logger Set (logger, evaluation software, interface)	1601-0048
EBI 20-IF	Interface for EBI 20	1601-0020
EBI 20-WM	EBI 20 wall bracket with padlock	1601-0030
EBI 20-WM-1	EBI 20 truck wall bracket	1601-0033

EBI 25 Wireless Data Logger System

The EBI 25 system for wireless monitoring of temperature, humidity and other measurements assures that perishable goods are produced and stored at the right conditions at all times. Other measurements can be integrated using Modbus over IP.

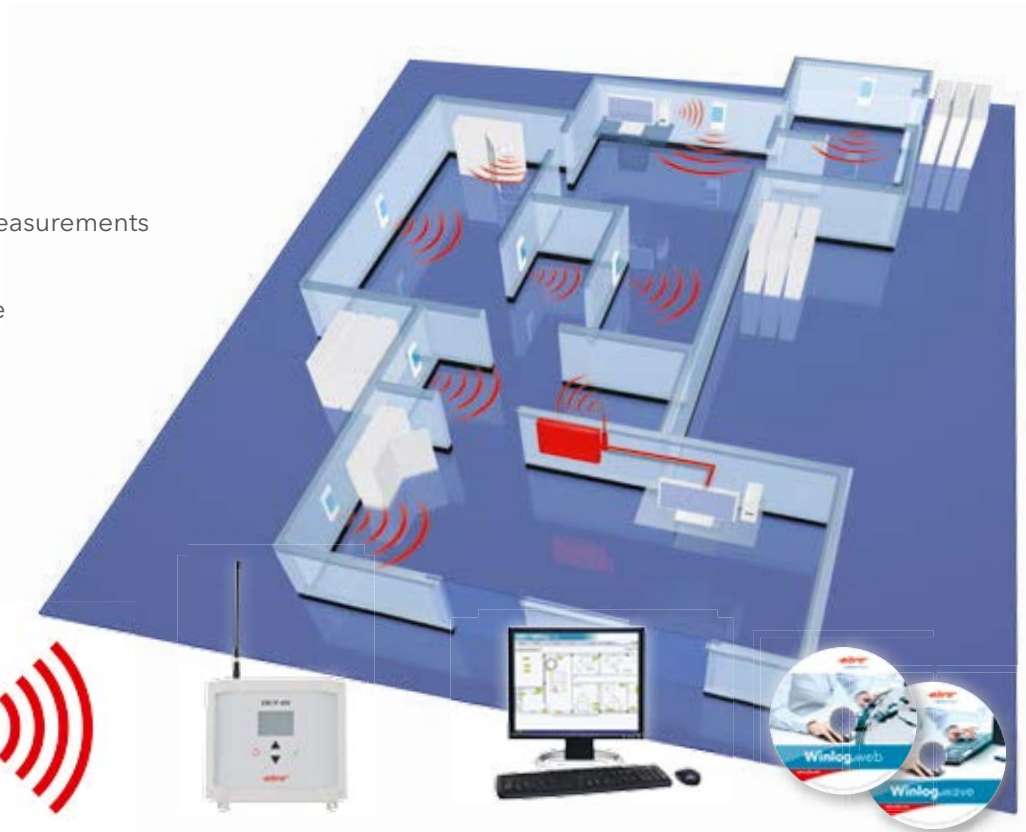
Benefits:

- Continuous monitoring
- Avoid loss of goods
- Quick intervention before it is too late
- Automatic documentation
- Worldwide access to the measurement data
- Easy handling, user replaceable battery



Embedding of other measurements possible:

- Differential pressure
- CO₂
- Particles
- Power demand
- Many others



EBI 25 data loggers

- Precise measurement of temperature and humidity (depends on logger type)
- Very large range of up to 500 m in a free field
- Long battery lifetime
- Easy installation

Base station: IF 400 interface

- Collects and stores the data of all connected EBI 25 data loggers
- Connection of up to 50 loggers per interface possible
- Stores up to 576 measurements per logger
- Direct connection of any number of interfaces to a PC or the network
- Audible alarm (with optional alarm box)

Evaluation software:

Winlog.web and Winlog.wave

Winlog.wave: Basic version for local PC usage.

Winlog.web: Professional version for internet and local network based use.



Please find more information from page 84.

General technical specifications: valid for all EBI 25 data logger types*

Resolution: Temperature	0.1 °C (0.2 °F)
Resolution: Humidity (humidity data loggers only)	0.1% rH
Memory	288 measurement values (per channel)
Sampling rate	1 min. to 24 hours, adjustable
Radio frequency	868 MHz in EU
Battery	3.6 V lithium (user replaceable)
Battery lifetime	Up to 2 years, depending on measurement and transmission rate
Storage temperature	-40 °C ... +85 °C (-40 °F ... +185 °F)
Operating temperature	-30 °C ... +60 °C (-22 °F ... +140 °F)
Measurement mode	Endless measurement
Housing material	ABS
Weight	Approximately 65 g

* Please find the exact technical data of each EBI 25 data logger type on the next pages.

EBI 25-T Wireless Temperature Data Logger with internal temperature sensor



Technical Data

Measurement range	-30 °C ... +60 °C (-22 °F ... +140 °F)
Accuracy	±0.5 °C at -20 °C ... +40 °C (±0.9 °F at -4 °F ... 104 °F) ±0.8 °C (±1.4 °F) for the remaining measurement range
Sensor	NTC
Protection class	IP67
Dimensions (L x W x H)	95 x 48 x 27 mm

Type	Description	Part No.
EBI 25-T	Wireless temperature logger (with internal sensor)	1340-6200

EBI 25-TE Wireless Temperature Data Logger with external probe



Technical Data

Measurement range	-40 °C ... +85 °C (-40 °F ... +185 °F)
Accuracy	±0.5 °C at -20 °C ... +40 °C (±0.9 °F at 4 °F ... 104 °F) ±0.8 °C at -30 °C ... -20 °C / +40 °C ... +60 °C (±1.4 °F at -22 °F ... -4 °F / +104 °F ... +140 °F) ±1.5 °C at -40 °C ... -30 °C / +60 °C ... +85 °C (±2.7 °F at -40 °F ... -22 °F / +140 °F ... +185 °F)
Sensor	NTC
Probe	Ø 3.8 mm, L = 65 mm, with 2 m PUR cable
Protection class	IP 67
Dimensions (L x W x H)	95 x 48 x 27 mm (without probe)

Type	Description	Part No.
EBI 25-TE	Wireless temperature logger (with external probe)	1340-6201

EBI 25-TX Wireless Temperature Data Logger for high and low temperatures



Technical Data

Measurement range	-200 °C ... +199.9 °C (-328 °F ... +391.8 °F)
Accuracy*	±2 °C (-200 °C ... -100 °C) ±0.5 °C (-100 °C ... -20 °C and +60 °C ... +199.99 °C) ±0.2 °C (-20 °C ... +60 °C)
Probe	Ø 5 mm, L = 50 mm, with 3m PTFE cable
Probe connection	Binder, series 620
Sensor	Pt 1000
Protection class	IP 67
Dimensions (L x W x H)	135 x 48 x 27 mm (without probe)

*Accuracy only applies when using an adjusted probe

Type	Description	Part No.
EBI 25-TX	Temperature data logger (with probe TPX 25-3)**	1340-6204
EBI 25-TX	Temperature data logger (without probe)	1340-0025
TPX 25-3	Pt 1000 probe for EBI 25-TX, 3 m	1341-0025
TPX 25-5	Pt 1000 probe for EBI 25-TX, 5 m	1341-0026
TPX 25-7,5	Pt 1000 probe for EBI 25-TX, 7,5 m	1341-0027
TPX 25-10	Pt 1000 probe for EBI 25-TX, 10 m	1341-0028

** Calibration certificate valid only for logger and probe.

EBI 25-TH Wireless Temperature / Humidity Data Logger with external humidity sensor



Filter caps for the protection of the humidity probe available;
see page 146.

Technical Data

Measurement range: Temperature	-30 °C ... +60 °C (-22 °F ... +140 °F)
Measurement range: Humidity	0% rH ... 100% rH
Accuracy: Temperature	±0.5 °C at -20 °C ... +40 °C (±0.9 °F at -4 °F ... 104 °F) ±0.8 °C (±1.4 °F) for the remaining measurement range
Accuracy: Humidity	±3 % rH (10 % ... 90 %)
Sensor	NTC for temperature / capacity humidity sensor
Protection class	IP 20
Dimensions (L x W x H)	124 x 48 x 27 mm (with probe)

Type	Description	Part No.
EBI 25-TH	Wireless temperature / humidity logger	1340-6202
AH 100	PTFE filter for EBI 25-TH	1340-5627
AH 200	Bronze sintered filter for EBI 25-TH	1340-5626
AH 300	Stainless steel sintered filter for EBI 25-TH	1340-5625

Sets and Accessories for EBI 25

Please find evaluation software for EBI 25 data loggers starting from page 84.



EBI 25-T-SET Wireless temperature logger set (3 EBI 25-T loggers, evaluation software Winlog.wave, interface, 3 wall mounts)



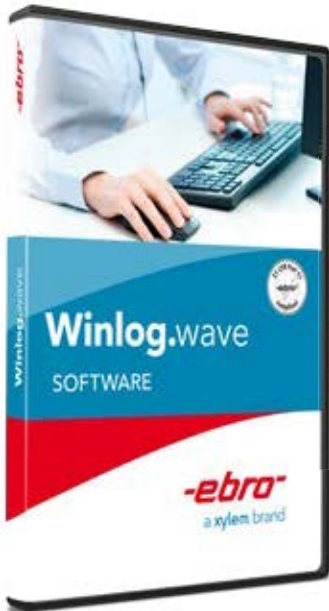
EBI 25-TE-SET Wireless temperature logger set (3 EBI 25-TE loggers, evaluation software Winlog.wave, interface, 3 wall mounts)



EBI IF 400 Interface including antenna



AG 152 Wall mount for EBI 25



Winlog.wave Evaluation software (single-user version)



Winlog.web Evaluation software (web-based server version)



Winlog.mobile:

Free-of-charge app shipped with the Winlog.web

- Always up-to-date - anywhere
- All measurements at a glance
- Alarming via ring tone or vibration
- Display of the alarms list
- Forwarding the alarm messages to persons in charge
- For mobile phones with iOS or Android operating systems



AL 116 external antenna for the interface EBI IF 400 interface for more power, optional

Type	Description	Part No.
EBI 25-T-SET	Wireless temperature logger set (3 EBI 25-T loggers, evaluation software Winlog.wave, interface, 3 wall mounts)	1340-6220
EBI 25-TE-SET	Wireless temperature logger set (3 EBI 25-TE loggers, evaluation software Winlog.wave, interface, 3 wall mounts)	1340-6221
EBI IF 400	Interface incl. antenna	1340-6210
AG 152	Wall mount for EBI 25	1340-6215
Winlog.wave	Software (single-user version)	1340-2391
Winlog.web	Software (web-based version)	1340-2390
AL 116	External antenna for EBI IF 400 for increasing the transmission power	1340-6211
EB SL-761-5	Ersatzbatterie für EBI 25	1100-0121

EBI 40 Multi-Channel Temperature Data Logger

The EBI 40 Multi-Channel Temperature Data Logger records temperatures during process monitoring and validation. Current measurement values and the measurement curve can be read on the multi-colored TFT display. The thermal insulation using the thermo isolation box allows the use of the data logger at very high temperatures. The EBI 40 is suitable for the connection of up to six or twelve thermocouple probes.

Applications:

Monitoring and validation of processes in:

- Incubators
- Refrigerators
- Climate cabinets
- Storage rooms,
- Transport studies
- Freeze-dryers etc.



EBI 40-TC Multi-Channel Data Logger for type K thermocouple sensors



Technical Data

Measurement range	-200 °C ... 1200 °C (-328 °F ... +2192 °F)
Accuracy	±0.5 °C (at 25 °C)
Resolution	0.1 °C (0.2 °F)
Channels	6 or 12 temperature channels
Sampling rate	Adjustable from 0.1 sec to 24 hours
Sensor	Thermocouple Type K / SMP connection
Operating temperature	0 °C ... +60 °C (0 °F ... +140 °F)
Storage temperature	0 °C ... +70 °C (32 °F ... 158 °F)
Memory	20,000 measurements per channel (max. 240,000 measurements)
Measurement mode	<ul style="list-style-type: none"> • Endless measurement immediately • Measure immediately until end of memory • Start / stop measurement
Display	TFT-display 3.5" (324 x 240 Pixel)
Dimensions (L x W x H)	140 x 118 x 35 mm
Housing material	ABS + PC
Protection class	IP 40
Certificate	Factory Calibration Certificate

Please find various thermocouple probes starting from page 126.

Type	Description	Part No.
EBI 40-TC-01	6-channel data logger (without probes)	1340-6400
EBI 40-TC-02	12-channel data logger (without probes)	1340-6401

Accessories for EBI 40



AN 141 Adapter cable, 1m silicone (SMP/Lemo size 0)



AN 142 Extension cable, 1m silicone, SMP
AN 144 Extension cable, 2.5 m, silicone, SMP



Wall mount **EBI 40-WH** Bracket for 35 mm cap rail

EBI TIB 400-01 Thermal Isolation Box for EBI 40
Sturdy thermal barrier (stainless steel and ceramic)

- Heat resistant insulation
- Replaceable sealing and cooling element
- Easy to transport
- Protects EBI 40 for 2 hours at +250°C (+482 °F)
- Dimensions (with folded handles): 247 x 210 x 131 mm

Type	Description	Part No.
AN 141	Adapter cable, 1m silicone SMP/Lemo size 0	1341-2629
AN 142	Extension cable, 1m silicone, SMP	1343-2626
AN 144	Extension cable, 2.5 m silicone, SMP	1343-2627
EBI TIB 400-01	Thermal Isolation Box for EBI 40	1340-6430
EBI 40-WH	EBI 40 wall mount	1340-6431

EBI 3x0 USB Data Loggers

Cold Chain Monitoring

The easy to use data loggers with USB connection monitor the temperature and/or humidity during transport and storage of sensitive goods like medicine, food, serums etc. Measurement reports are created automatically as PDF files when you connect the logger to a PC.

The EBI 300 and EBI 310 USB data loggers are suitable for multi-use, the EBI 330 data loggers are single-use versions which can be ordered preconfigured and are used especially when returning a more expensive multi-use logger to the sender after a shipment is difficult. Please contact us for more information.



Program | Measure

- Programming of the logger with the help of the free online configurator at **www.ebi300.com** or optionally via the ebro software Winlog.basic, Winlog.light or Winlog.pro, but also Winlog.med and Winlog.validation
- Set optional limits and start to record the measurement data

Connect | Readout

- Connection of the logger to any PC via the USB port
- Automatic generation of a PDF report with all important measurement data

Evaluate | Archive

- Store, save or email the PDF-report
- Further processing of the measurement data with the software Winlog.basic, Winlog.light or Winlog.pro

Benefits

- Direct USB connection
- Automatic PDF report generation
- Programmable at **www.ebi300.com**, no special software for programming and readout required but available
- Indication of alarm status via flashing LED
- Data integrity
- Conforms with FDA 21 CFR Part 11, DIN EN 12830 and ATP
- The data loggers help you to comply with GMP and VO (EG) 37/2005
- Free firmware updates at your place via software
- Excellent value-for-money



Digital interface

- Digital interface between loggers and external probes (at EBI 300 TE, EBI 300 TH, EBI 310 TE, EBI 310 TH, EBI 310 DI and EBI 310 TX).
- Data logger functions as data collector with optional internal sensor
- Easy exchange of the external probes e.g. for calibration: remove and send probe, connect replacement probe, measure!
- No calibration of the data collector required, if internal probe is not used!

Which data logger is right for you?

Every EBI 3x0 USB data logger have the afore mentioned properties. Depending on the application, claim and your purse, there are different requirements for which we have the right devices. The following overview shall help making the decision.

	EBI 330-T30	EBI 330-T85	EBI 300	EBI 300 TE	EBI 300 TH	EBI 310	EBI 310 TE	EBI 310 DI	EBI 310 TX	EBI 310 TH
Applications										
Monitoring of deep temperatures		✓					✓	✓	✓*	
Monitoring of high temperatures							✓		✓*	
Humidity monitoring					✓					✓
Storage monitoring			✓	✓	✓	✓	✓	✓	✓*	✓
Transport monitoring	✓	✓	✓	✓	✓	✓	✓	✓	✓*	✓
Process monitoring				✓	✓		✓		✓*	✓
Usage within dry ice		✓						✓		
Measurement channels										
Internal temperature channel	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
External temperature channel				1	1		1	1	2*	1
Sensor cable				✓			✓	✓	✓*	
High precision (Pt 1000)		✓				✓	✓	✓	✓	✓
Humidity channel					✓					✓
Usage										
Multi-use			✓	✓	✓	✓	✓	✓	✓	✓
Single-use	✓	✓								
Calibration certificate										
Including factory calibration certificate			✓	✓	✓	✓	✓	✓	✓*	✓
Batch calibration certificate available upon request	✓	✓								
Other features										
Display			✓	✓	✓	✓	✓	✓	✓	✓
Very flexible alarms (5 limits and MKT)						✓	✓	✓	✓	✓
High memory capacity (120.000 measurements)						✓	✓	✓	✓	✓

* with connected, exchangeable sensors

General technical specifications: valid for both EBI 330 data logger types*

Memory capacity	20,000 measurements
Alarm	2 limits
PDF creation	PDF/A 1b
LED	Yes (red and green)
Resolution	0.1 °C
Storage temperature	-30 °C ... +60 °C (-22 °F ... +140 °F)
Sample rate	1 min. to 24 hours
Measurement modes	<ul style="list-style-type: none"> Start with key press Start immediately until end of memory
Maximum start delay	24 h
Dimensions (L x W x H)	80 x 28 x 12 mm
Housing material	ABS
Protection class	IP 65
Certificate	Batch calibration certificate available on request

* Please find the exact technical data of each EBI 330 data logger type on this page.

EBI 330-T30 Single-Use USB Data Logger

Standard version

**Technical Data**

Measurement range/operating temperature	-30 °C ... +60 °C (-22 °F ... +140 °F)
Accuracy	±0.5 °C (-20 °C ... +40 °C / -4 °F ... +104 °F) ±0.8 °C for the remaining measurement range
Sensor	NTC
Battery	Lithium button cell (CR2032), 3V
Battery lifetime	100 days plus 9 months on stock before usage

Type	Description	Part No.
EBI 330-T30	Single-use USB data logger, package unit: 10 pieces	1340-6332

EBI 330-T85 Single-Use USB Data Logger

Low temperature version

**Technical Data**

Measurement range/operating temperature	-85 °C ... +50 °C (-121 °F ... +122 °F)
Accuracy	±2.0 °C (-85 °C ... -30 °C / -85 °F ... -22 °F) ±0.8 °C (-30 °C ... -20 °C / -22 °F ... -4 °F) ±0.5 °C (-20 °C ... +50 °C / -4 °F ... +122 °F)
Sensor	Pt 1000
Battery	Lithium button cell (TL-2450), 3.6 V
Battery lifetime	100 days at temperatures down to -30 °C (-22 °F); 100 hours at temperature below -30 °C (-22 °F) plus 6 months on stock before usage

Type	Description	Part No.
EBI 330-T85	Single-use USB data logger for deep temperatures, package unit: 10 pieces	1340-6333

General technical specifications: valid for EBI 300 data logger types*

Memory capacity	40,000 measurements
Alarm	2 limits
PDF creation	PDF
LED	Yes (red)
Storage temperature	-40 °C ... +85 °C (-40 °F ... +185 °F)
Sample rate	1 min ... 24 h
Measurement modes	<ul style="list-style-type: none"> • Endless measurement • Start / Stop • Measurement until end of memory • Start with key press
Display	Value, MIN / MAX, until end of memory, alarm on / off
Maximum start delay	72 h
Housing material	Polycarbonate
Certificate	Factory calibration certificate
Battery	Lithium button cell (CR 2450), 3 V
Battery lifetime	Up to 2 years, depending on applications
Norms	DIN EN 12830

* Please find the exact technical data of each EBI 300 data logger type on this double page.

EBI 300 Multi-Use USB Data Logger
Standard version



The device has been certified together with the EB 4401 food inspection case (please see page 167).

Technical Data

Measurement range/operating temperature	-30 °C ... +70 °C (-22 °F ... +158 °F) <i>By connecting an external probe, the temperature measurement range can be extended.</i>
Accuracy	± 0.5 °C (-20 °C ... +40 °C / -4 °F ... +104 °F) ± 0.8 °C for the remaining measurement range
Sensor	NTC
Resolution	0.1 °C
Dimensions (L x W x H)	80 x 33 x 14 mm
Protection class	IP 65

Type	Description	Part No.
EBI 300	Standard USB Data Logger	1340-6330

Accessories for EBI 300, EBI 300 TE and EBI 300 TH



EBI 300 TE + EBI 300 WM2



EBI 300-WM2 Wall Mount for EBI 300 / 310



EBI 300 WM3 transportation mount for EBI 300/310 made of stainless steel

Type	Description	Part No.
EBI 300-WM2	Wall Mount for EBI 300 / 310	1340-6341
EBI 300 WM3	Transportation mount for EBI 300/310	1340-6344

EBI 300 TE Multi-Use USB Data Logger with external temperature probe

Fast, flexible core temperature measurements



EBI 300 TE

- Simultaneous measurement of core temperature and ambient temperature
- Internal temperature probe usable additionally

Technical Data

Measurement range external temperature	-35 °C ... +70 °C (-31 °F ... +158 °F)
Measurement range internal temperature / operating temperature	-30 °C ... +70 °C (-22 °F ... +158 °F)
Accuracy (internal and external)	± 0.5 °C (-20 °C ... +40 °C / -4 °F ... +104 °F) ± 0.8 °C for the remaining measurement range
Probe	NTC, Stainless steel, Ø 4 mm, L = 50 mm, pointed
Cable	PVC, L = 1m, waterproof, oilproof and food safe
Resolution	0.1 °C
Dimensions (L x W x H)	91 x 33 x 14mm
Protection class	IP 65

Type	Description	Part No.
EBI 300 TE	USB Data logger with external temperature probe	1340-6335
TPC 300	Replacement probe for EBI 300 TE	1341-6331
TPC 300H	Replacement probe with handle for EBI 300 TE	1341-6370

EBI 300 TH Multi-Use USB Data Logger with external humidity and temperature probe

Relative humidity monitoring in storages and during transports



EBI 300 TH

Filter caps for the protection of the humidity probe available; see page 146.

- Internal temperature probe usable additionally

Technical Data

Measurement range temperature / operating temperature	-30 °C ... +70 °C (-22 °F ... +158 °F)
Accuracy (internal)	± 0.5 °C (-20 °C ... +40 °C / -4 °F ... +104 °F) ± 0.8 °C for the remaining measurement range
Accuracy (external)	± 0.5 °C (-20 °C ... +40 °C / -4 °F ... +104 °F) ± 1.0 °C for the remaining measurement range
measurement range humidity	0% rH ... 100% rH
Accuracy humidity	± 3% between 10% rH ... 90% rH (at 25 °C / +77 °F) ± 5% for the remaining measurement range
Probe humidity	Capacitive
Resolution temperature	0.1 °C
Resolution humidity	0.1% rH
Dimensions (L x W x H)	129 x 33 x 14 mm
Protection class	IP 20

Type	Description	Part No.
EBI 300 TH	USB Data logger with external humidity probe	1340-6334
TPH 400	Replacement probe for EBI 300 TH	1341-6336
AH 100	PTFE filter	1340-5627
AH 200	Bronze sintered filter	1340-5626
AH 300	Stainless steel sintered filter	1340-5625

General technical specifications: valid for all EBI 310 data logger types*

Memory capacity	120,000 measurements
Alarm	5 ranges
PDF creation	PDF/A 1b
LED	Yes (red and yellow)
Storage temperature	-40 °C ... +85 °C (-40 °F ... +185 °F)
Sample rate	1 s ... 24 h
Measurement modes	<ul style="list-style-type: none"> • Endless measurement • Start / Stop • Measurement until end of memory • Start with key press
Display	Value, MIN / MAX, until end of memory, alarm on / off
Maximum start delay	72 h
Housing material	Polycarbonate
Certificate	Factory calibration certificate
Norms	DIN EN 12830

* Please find the exact technical data of each EBI 310 data logger type on the next pages.

EBI 310 Multi-Use USB Data Logger

High precision version

**Technical Data**

Measurement range/operating temperature	-30 °C ... +75 °C (-22 °F ... +167 °F) <i>By connecting an external probe, the temperature measurement range can be extended.</i>
Accuracy	±0.2 °C (-30 °C ... +30 °C / -22 °F ... +86 °F) ±0.5 °C for the remaining measurement range
Sensor	PT 1000
Resolution	0.1 °C
Dimensions (L x W x H)	80 x 33 x 14 mm
Protection class	IP 65
Battery	Lithium button cell (CR 2450), 3 V
Battery lifetime	Up to 2 years, depending on applications

re-adjustable with Winlog.pro

Type	Description	Part No.
EBI 310	High Precision USB Data Logger	1340-6331

Accessories for the EBI 310, EBI 310 TE, EBI 310 DI, EBI 310 TX and EBI 310 TH



EBI 300-WM2 Wall Mount for EBI 300 / 310



EBI 300 WM3 transportation mount for EBI 300/310 made of stainless steel

Type	Description	Part No.
EBI 300-WM2	Wall Mount for EBI 300 / 310	1340-6341
EBI 300 WM3	Transportation mount for EBI 300/310	1340-6344

EBI 310 TE Multi-Use USB Data Logger with external precision temperature probe



Measurement of high and low temperatures



EBI 310 TE

- Simultaneous measurement of core temperature and ambient temperature
- Internal temperature probe usable additionally

Technical Data

Measurement range external temperature	-200°C ... +250°C (-328 °F ... +482 °F)
Measurement range internal temperature / operating temperature	-30 °C ... +75°C (-22 °F ... +167 °F)
Accuracy (internal)	± 0.2 °C (- 30 °C ... + 30 °C / -22 °F ... +86 °F) ± 0.5 °C for the remaining measurement range
Accuracy (external)	± 2.0 °C (- 200 °C ... -100 °C / -328 °F ... -148 °F) ± 1.0 °C (- 100 °C ... -20 °C / -148 °F ... -4 °F) ± 0.2 °C (- 20 °C ... + 60 °C / -4 °F ... +160 °F) ± 0.5 °C (+60 °C ... + 250 °C / +160 °F ... +482 °F)
Probe	Pt 1000, Stainless steel, Ø 5 mm, L = 50 mm, blunt
Cable	PTFE, L = 1 m, waterproof, oilproof and food safe
Resolution	0.1 °C
Dimensions (L x W x H)	91 x 33 x 14 mm
Protection class	IP 65
Battery	Lithium button cell (CR 2450), 3V
Battery life time	Up to 2 years, depending on applications

re-adjustable with Winlog.pro

Type	Description	Part No.
EBI 310 TE	USB Data logger with external precision temperature probe	1340-6337
TPX 220	Replacement probe for EBI 310 TE	1341-6332
TPX 220-3	Replacement probe with 3m cable for EBI 310 TE	1341-6332-0100

EBI 310 DI Multi-Use USB Data Logger for dry ice measurements



Precise temperature measurements in dry ice



EBI 310 DI

- Additional battery allows usage within dry ice
- Internal temperature probe usable additionally

Technical Data

Measurement range external temperature / operating temperature	-85°C ... +50°C (-121 °F ... +122 °F)
Measurement range internal temperature	-30 °C ... +75°C (-22 °F ... +167 °F)
Accuracy (internal)	± 0.2 °C (- 30 °C ... + 30 °C / -22 °F ... +86 °F) ± 0.5 °C for the remaining measurement range
Accuracy (external)	± 1.0 °C (- 85 °C ... -20 °C / -121 °F ... -4 °F) ± 0.2 °C (- 20 °C ... + 50 °C / -4 °F ... +122 °F)
Probe	Pt 1000, Stainless steel, Ø 5mm, L = 50mm, blunt
Cable	PTFE, L = 60cm, waterproof, oilproof and food safe
Resolution	0.1 °C
Dimensions (L x W x H)	100 x 33 x 14mm
Protection class	IP 65
Battery	Lithium button cell in the logger, lithium battery in the probe, both changeable by the user
Battery life time	10 transports of up to 100h each

re-adjustable with Winlog.pro

Type	Description	Part No.
EBI 310 DI	USB Data logger for dry ice measurements	1340-6338
TPX 250	Replacement probe for EBI 310 DI	1341-6333
AL 118	Battery change set for TPX 250	1100-0126

EBI 310 TH Multi-Use USB Data Logger with with external humidity and temperature probe

Relative humidity monitoring in storages and during transports



EBI 310 TH

Filter caps for the protection of the humidity probe available; see page 146.

- Internal temperature probe usable additionally

Technical Data

Measurement range temperature / operating temperature	-30 °C ... +75°C (-22 °F ... +167 °F)
Accuracy (internal)	± 0.2 °C (- 30 °C ... + 30 °C / -22 °F ... +86 °F) ± 0.5 °C for the remaining measurement range
Accuracy (external)	± 0.5 °C (0 °C ... + 60 °C / +32 °F ... +140 °F) ± 0.8 °C for the remaining measurement range
Probe temperature	Pt 1000
Measurement range humidity	0% rH ... 100% rH
Accuracy humidity	± 2% between 10% rH ... 90% rH (at 25 °C / +77 °F) ± 4% for the remaining measurement range
Probe humidity	capacitive
Resolution temperature	0.1 °C
Resolution humidity	0.1% rH
Dimensions (L x W x H)	129 x 33 x 14mm
Protection class	IP 20
Battery	Lithium button cell (CR 2450), 3V
Battery life time	Up to 2 years, depending on applications

re-adjustable with Winlog.pro

Type	Description	Part No.
EBI 310 TH	USB Data logger with external humidity probe	1340-6336
TPH 500	Replacement probe for EBI 310 TH	1341-6337
AH 100	PTFE filter	1340-5627
AH 200	Bronze sintered filter	1340-5626
AH 300	Stainless steel sintered filter	1340-5625

EBI 310 TX Multi-Use USB Data Logger with temperature-two-channel-adapter



Temperature monitoring in storages and during transport, process monitoring



EBI 310 TX



exchangeable sensors

- Up to two exchangeable probes can be connected; not included, see the following page
- Internal temperature probe usable additionally

Technical Data

Measurement range external temperature	-200°C ... + 400°C (- 328 °F ... +752 °F), dependent on probe type
Measurement range internal temperature / operating temperature	-30 °C ... +75°C (-22 °F ... +167 °F)
Accuracy (internal)	± 0.2 °C (- 30 °C ... + 30 °C / -22 °F ... +86 °F) ± 0.5 °C for the remaining measurement range
Probe	Pt 1000
Resolution	0.1 °C
Dimensions (L x W x H)	111 x 33 x 14mm
Protection class	IP 65
Battery	Lithium button cell (CR 2450), 3V
Battery life time	Up to 2 years, depending on applications

re-adjustable with Winlog.pro

Type	Description	Part No.
EBI 310 TX	USB Data logger with temperature-two-channel-adapter	1340-6339
TPX 310	Replacement adapter for EBI 310 TX	1341-6335

Exchangeable probes for EBI 310 TX

**TPX 310-P1**

- Measurement range: -200 °C ... +200 °C (-328 °F ... +392 °F)
- Needle: L = 45 mm, Ø = 5 mm, blunt
- Cable: PTFE, L = 3 m

Temperature		Accuracy
-200...-100 °C	-328...-148 °F	1.7 °C
-100...-20 °C	-148...-4 °F	1.2 °C
-20...+60 °C	-4...+140 °F	1.0 °C
+60...+200 °C	+140...+392 °F	1.7 °C

**TPX 310-P2**

- Measurement range: -50 °C ... +180 °C (-58 °F ... +356 °F)
- Needle: L = 130 mm, Ø = 3 mm, blunt
- Cable: PTFE, L = 3 m

Temperature		Accuracy
-50...+60 °C	-58...+140 °F	0.6 °C
+60...+180 °C	+140...+356 °F	0.9 °C

**TPX 310-P3**

- Measurement range: -50 °C ... +180 °C (-58 °F ... +356 °F)
- Needle: L = 130 mm, Ø = 3 mm, blunt
- Cable: PTFE, L = 1 m

Temperature		Accuracy
-50...+60 °C	-58...+140 °F	0.5 °C
+60...+180 °C	+140...+356 °F	0.8 °C

**TPX 310-P4**

- Measurement range: +100 °C ... +400 °C (+212 °F ... +752 °F)
- Needle: L = 50 mm, Ø = 1.5 mm, blunt
- Cable: metal wrapped, L = 3 m, not waterproof

Temperature		Accuracy
+100...+250 °C	+212...+482 °F	1.1 °C
+250...+400 °C	+482...+752 °F	1.4 °C

**TPX 310-P5**

- Measurement range: -50 °C ... +180 °C (-58 °F ... +356 °F)
- Probe: L = 130 mm, Ø = 3 mm, blunt
- Cable: PTFE, L = 5 m

Temperature		Accuracy
-50...-20 °C	-58...-4 °F	0.5 °C
-20...+60 °C	-4...+140 °F	0.6 °C
+60...+180 °C	+140...+356 °F	0.8 °C

**TPX 310-P6**

- Measurement range: -50 °C ... +180 °C (-58 °F ... +356 °F)
- Probe: L = 130 mm, Ø = 3 mm, blunt
- Cable: PTFE, L = 7.5 m

Temperature		Accuracy
-50...+60 °C	-58...+140 °F	0.7 °C
+60...+180 °C	+140...+356 °F	1.0 °C

**TPX 310-P7**

- Measurement range: -50 °C ... +180 °C (-58 °F ... +356 °F)
- Probe: L = 130 mm, Ø = 3 mm, blunt
- Cable: PTFE, L = 10 m

Temperature		Accuracy
-50...+60 °C	-58...+140 °F	0.9 °C
+60...+180 °C	+140...+356 °F	1.1 °C

Type	Description	Part No.
TPX 310-P1	External sensor for EBI 310 TX	1341-6338
TPX 310-P2	External sensor for EBI 310 TX	1341-6339
TPX 310-P3	External sensor for EBI 310 TX	1341-6340
TPX 310-P4	External sensor for EBI 310 TX	1341-6341
TPX 310-P5	External sensor for EBI 310 TX	1341-6342
TPX 310-P6	External sensor for EBI 310 TX	1341-6343
TPX 310-P7	External sensor for EBI 310 TX	1341-6344

Software

ebro offers exactly the software you need:

- Evaluation software for any applications: Winlog.basic, Winlog.light and Winlog.pro
- Evaluation software for EBI 25 data loggers: Winlog.web and Winlog.wave
- Evaluation software for pharmaceutical and medical applications: Winlog.med and Winlog.validation

Software/Features	Winlog.basic	Winlog.light	Winlog.pro	Winlog.med	Winlog.validation	Winlog.wave	Winlog.web
Event Triggered Recording			●	●	●		●
Script-Calculations			●				●
System-Scripts			●				
Picture Manager			●		●		
Measure in Charts			●				
Cursor		●	●	●	●		
Realtime Calculations			●	●	●		●
Ranges			●	●	●		
Range-based Calculations			●	●	●		
Statistics per Range			●	●	●		
Relative Time Axis			●				
Configurations		●	●	●(2)	●(2)		
Firmware-Update		●	●	●	●		●
Import		●(1)	●(1)				
Calibration			●	●	●		
Automatic File Name Generation			●				
21 CFR Part 11	●	●	●	●	●	●	●
User Administration	●	●	●	●	●	●	●
Audit-Trail	●	●	●	●	●	●	●
Advanced Chart Features		●	●				
Multi Document Support		●	●	●	●		
Export (Excel, PDF)	●	●	●	●	●	●	●
Customizable Company Logo	●	●	●	●	●	●	●
Wireless Support			●	●	●	●	●
2D Placement		●	●		●	●	●
3D Placement					●		
Routine Check			●(3)	●	●		
Validation			●(3)		●		
Unit Administration	●	●	●	●	●		●
Split Measurements			●	●	●		
Advanced Alarm-Management (Zones)	●(5)	●(5)	●(5)				
App Winlog.mobile							●

(1) Winlog.basic, Winlog.validation

(2) Template based

(3) Manual

(4) Since V2.5

(5) EBI 310 only

(6) Since V2.6

(7) Since V3.3

(8) Since V2.63

(9) Since V3.5



Supported Logger Types	Winlog.basic	Winlog.light	Winlog.pro	Winlog.med	Winlog.validation	Winlog.wave	Winlog.web
EBI 10		●	●	●	●		
EBI 11		●	●	●	●		
EBI 16				●(9)	●(9)		
EBI 20	●	●	●	●(7)	●(7)		
EBI 25						●	●
EBI 40		●	●	●(7)	●(7)		
EBI 100		●	●	●	●		
EBI 300	●(4)	●(4)	●(4)	●(7)	●(7)		
EBI 310	●(6)	●(6)	●(6)	●(7)	●(7)		
EBI 330	●(8)	●(8)	●(8)				
CT 830			●				
PHT 830			●				

System Requirements	Winlog.basic	Winlog.light	Winlog.pro	Winlog.med	Winlog.validation	Winlog.wave	Winlog.web
Windows Vista / 32 bit	●	●	●	●	●	●	●
Windows Vista / 64 bit	●	●	●	●	●	●	●
Windows 7 / 32 bit	●	●	●	●	●	●	●
Windows 7 / 64 bit	●	●	●	●	●	●	●
Windows 8 / 32 bit	●	●	●	●	●	●	●
Windows 8 / 64 bit	●	●	●	●	●	●	●
Windows 10 / 32 bit	●	●	●	●	●	●	●
Windows 10 / 64 bit	●	●	●	●	●	●	●
Memory	≥ 1GB	≥ 1GB	≥ 1GB	≥ 1GB	≥ 1GB	≥ 1GB	≥ 4 GB
Hard Disc Memory	≥ 300 MB	≥ 300 MB	≥ 300 MB	≥ 1 GB	≥ 1 GB	≥ 1 GB	≥ 20 GB
CD/DVD Drive	●	●	●	●	●	●	●
Screen Resolution	≥ 1024x768	≥ 1024x768	≥ 1024x768	≥ 1024x768	≥ 1024x768	≥ 1024x768	≥ 1024x768
Processor	Pentium 1GHz+	Pentium 1GHz+	Pentium 1GHz+	Pentium 1GHz+	Pentium 1GHz+	Dual Core 2 GHz+	Dual Core 2 GHz+

Market Overview	Winlog.basic	Winlog.light	Winlog.pro	Winlog.med	Winlog.validation	Winlog.wave	Winlog.web
Food	●	●	●			●	●
Industry	●	●	●		●	●	●
Pharmaceutical		●	●		●		●
Medical		●	●	●	●		

Available Languages	Winlog.basic	Winlog.light	Winlog.pro	Winlog.med	Winlog.validation	Winlog.wave	Winlog.web
English	●	●	●	●	●	●	●
French	●	●	●	●	●	●	●
Italian	●	●	●	●	●	●	●
Spanish	●	●	●	●	●	●	●
Chinese	●	●	●	●	●	●	●
Japanese	●	●	●	●	●		
Korean			●	●	●		
Portuguese				●	●		
Greek				●	●		
Czech	●	●	●	●	●		
Swedish	●	●	●	●	●		
Dutch			●	●	●		
German	●	●	●	●	●	●	●
Turkish				●	●		
Polish				●	●		

Evaluation Software for Any Applications

Winlog.basic, Winlog.light, Winlog.pro

For programming and readout of ebro data loggers and for evaluating the measurement values ebro offers three different software versions: the **free Winlog.basic**, the **standard software Winlog.light** and the **professional software Winlog.pro**.

Benefits

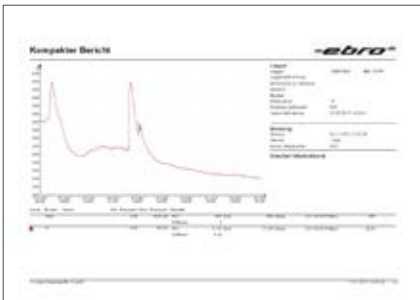
- Easy installation
- Easy programming of the data loggers, no prior knowledge required
- Extensive and custom report generation
- Suitable for all applications
- Security by compliance with FDA 21 CFR Part 11

Extensive Report Generation

The software makes it easy to generate standard and custom reports:

- Compact, one-sided report (1)
- Multi-page, detailed report (2)
- Tabular report with the measurement values (3)
- Insertion of your own company logo possible (4)
- Export data to Microsoft Excel® and PDF (5)
- Integration of pictures and graphics possible (Winlog.pro only) (6)

(1)



(3)

(5)

(2)

(4)

(6)



Winlog.basic

Easy to use, free software

- User friendly: intuitive and easy to use
- Graphical and numerical display of measurement data
- Protocol print (with printer and computers)
- Scan and enlarge of the measurement data
- Data export to Microsoft® Excel and PDF
- FDA 21 CFR Part 11 functionality as an option

Winlog.light

Standard software

- Contains all the features of Winlog.basic
- Data import from other ebro application programs
- Many standard reports
- Displays statistics on measurement data (e.g. MIN/MAX, mean, standard deviation etc.)
- Creation of configurations possible

Winlog.pro

Professional software

- Contains all the features of Winlog.basic and Winlog.light
- Enables real-time monitoring with wireless data loggers
- Formula editor for calculating the F0-value of the absolute humidity, the PE value etc.
- Display of the timeline either absolute or relative
- Customized definition of individual areas possible (with their own statistics and calculations)
- Including calibration tool for data loggers
- Integration of pictures and graphics into reports possible
- IQ/OQ documentation optional

System Requirements

So that the software can run on your computer with any problem, your computer must meet the following requirements:

Hardware Requirements:

- At least 1 GHz processor speed
- At least 1 GB working memory
- At least 1 GB free hard disc space
- USB (Universal Serial Bus)

Software requirements:

- Operating system Microsoft®
- Windows Vista (32 Bit and 64 Bit)
 - Windows 7 (32 Bit and 64 Bit)
 - Windows 8 (32 Bit and 64 Bit)
 - Windows 10 (32 Bit and 64 Bit)



Type	Description	Part No.
Winlog.basic	Free evaluation software	1340-2375
Winlog.light	Standard evaluation software	1340-2354
Winlog.pro	Professional evaluation software	1340-2355
IQ/OQ Winlog.pro	Installation and Operation Qualifications for Winlog.pro	1340-2286

Evaluation Software for EBI 25 Data Loggers

Winlog.wave and Winlog.web

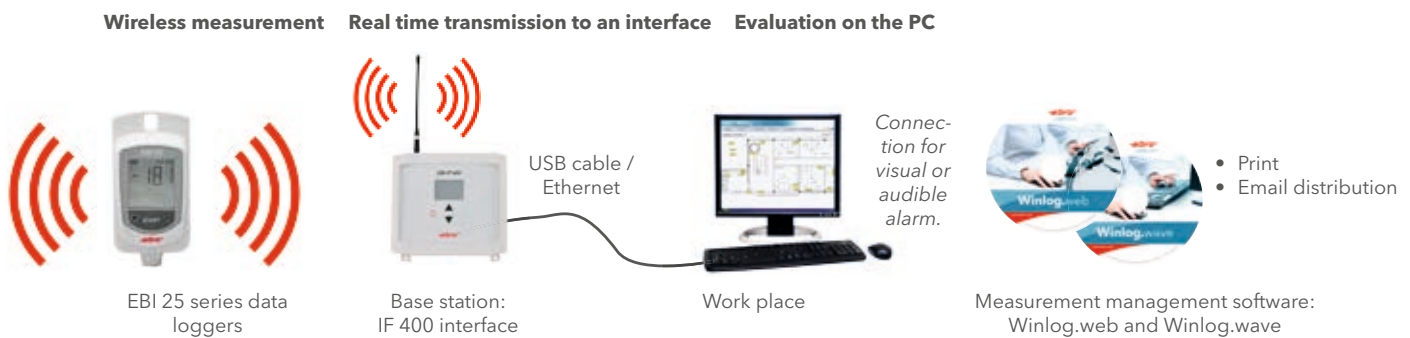
For programming and readout of EBI 25 data loggers as well as for evaluating the measurement values. The software automatically collects and evaluates data and alerts if necessary.

Functionality

The innovative EBI 25 system monitors wirelessly, transmits the data in real time to an interface (base station) and from there to the desired server or PC.

As soon as a temperature, humidity or any other measurement has exceeded a user defined limit, an alarm is immediately sent via email.

Please find the EBI 25 Data Logger Family starting on page 62.



Quick graphical overview of all measurement points including an image or floor plan view:





Winlog.wave

Basic version for local PC usage

- Single PC solution: The basic version for easy measurement data evaluation on a single PC- no network required.
- Flexible alarm management: graphic and email alarm notifications upon user defined conditions
- Connection to the IF 400 via USB
- FDA 21 CFR Part 11 data security functionality



Winlog.web

Professional version internet and local network based use

- Web based client/server solution: the measurement data can be evaluated on all PCs and smartphones via the internet or connected to the local network
- Very flexible and wide alarm management: alarm notifications upon user defined conditions, alarm notification via email; visual and audible alarm via the graphical user interface
- Connection of the interface IF 400 via USB and Ethernet
- FDA 21 CFR Part 11 data security functionality
- Management of larger data sets
- IQ / OQ documentation available

For users of the software Winlog.web ebro has designed an App called



- free of charge - to monitor the performance via smartphone.

System Requirements

To enable the software to operate smoothly, your computer must meet the following requirements:

Hardware requirements:

- Processor speed minimum 2 GHz
- Working memory 4 GB
- 20 GB free hard disc space
- USB (Universal Serial Bus)

Software requirements:

- Operating System Microsoft®
- Windows Vista (32 Bit and 64 Bit)
 - Windows 7 (32 Bit and 64 Bit)
 - Windows 8 (32 Bit and 64 Bit)
 - Windows 10 (32 Bit and 64 Bit)

Further requirements:

- Mozilla Firefox 3.0
- Microsoft Internet Explorer 10



Type	Description	Part No.
Winlog.wave	Evaluation software (single-user version)	1340-2391
Winlog.web	Evaluation software (web-based server version)	1340-2390
IQ/OQ Winlog.web	Installation Qualification and Operation Qualification for Winlog.web	1340-2290

Evaluation Software for Pharmaceutical and Medical Applications

Winlog.med and Winlog.validation

The Winlog.med and Winlog.validation software versions is suitable for programming and readout of ebro data loggers as well as for evaluating the measurement values. The software guides you step by step through the validation or routine control process and evaluates the measurement automatically.

Flexible Report Generation

Whether you need a short process report or a table report with all measurement data - ebro's Winlog software makes it easy.

Table report

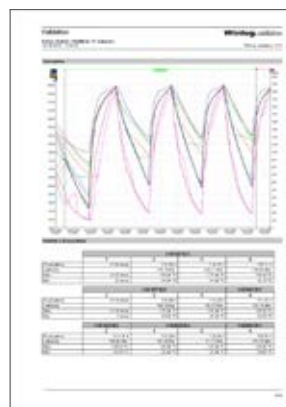
Detailed result overview

Process parameters, e.g. theoretical steam temperature calculation

Lethality report

Equipment used

Graphical data



Statistical data



Winlog.med For routine controls

- TÜV certified
- User-friendly
- High precision measurements
- Automatic report generation
- Automatic user-defined calculations
- Automatic identification of process cycles
- Creation of user-defined masters for specific devices and thermal processes
- Three-dimensional demonstration of sensor placement or placement of the sensors directly on an application image possible
- FDA 21 CFR Part 11



Winlog.validation For routine control and validation

Powerful report and evaluation software fitting the requirements of validation and qualification in Pharmaceuticals and Medicine.

- TÜV Industrial Services certified
- User-friendly
- High precision measurements
- Automatic report generation
- Automatic user-defined calculations
- Automatic identification of process cycles
- Creation of user-defined masters for specific devices and thermal processes
- Three-dimensional demonstration of sensor placement or placement of the sensors directly on an application image possible
- FDA 21 CFR Part 11
- IQ / OQ available



System Requirements

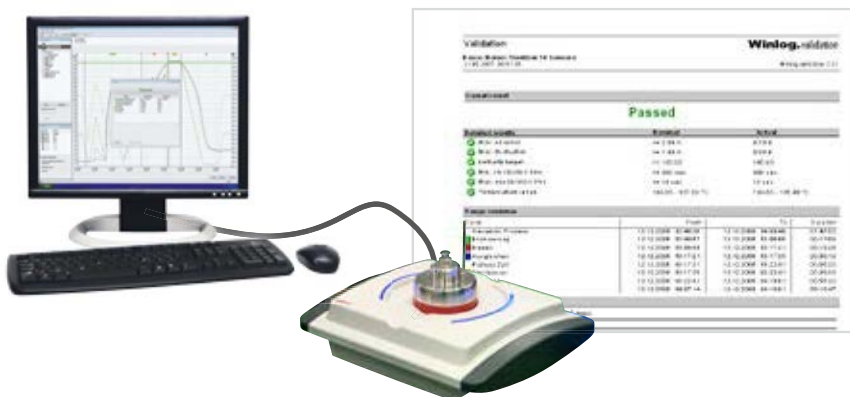
To enable the software to operate smoothly, your computer must meet the following requirements:

Hardware requirements:

- Processor speed minimum 1 GHz
- Working memory 1 GB
- 1 GB free hard disc space
- USB (Universal Serial Bus)

Software requirements:

- Operating System Microsoft®
- Windows Vista (32 Bit und 64 Bit)
 - Windows 7 (32 Bit und 64 Bit)
 - Windows 8 (32 Bit und 64 Bit)
 - Windows 10 (32 Bit und 64 Bit)



Type	Description	Part No.
Winlog.med	Standard evaluation software for routine controls	1340-2363
Winlog.validation	Professional evaluation software for routine controls and validations	1340-2394
IQ/OQ Winlog.validation	Installation Qualification and Operation Qualification for Winlog.validation	1340-2287