EBI 300/310/330

USB DATA LOGGERS FOR COLD CHAIN MONITORING

-ebro-
a xylem brand

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 preconfigurated 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 optional via the software Winlog.basic, Winlog.light or Winlog.pro
- Set optional limits and start to record the measurement data

Connect | Readout

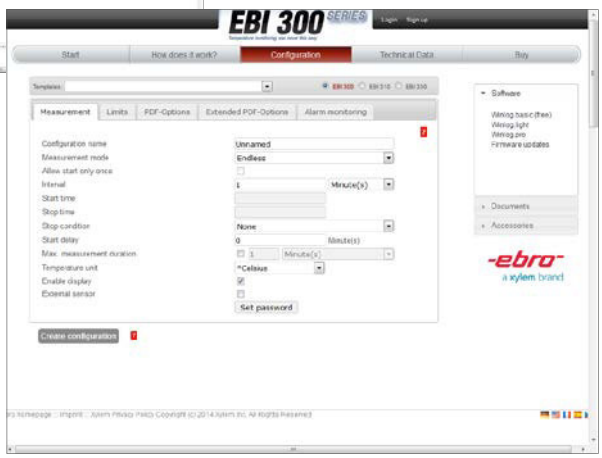
- Connection of the logger to any PC via the USB port
- Automatic generation of a PDF report with all important measurement data

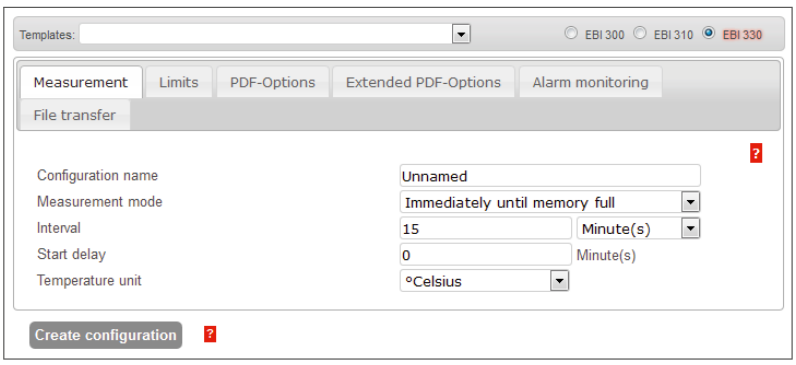
Evaluate | Archive

- 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 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

EBI 330 Single-Use USB Data Loggers

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	-40 °C ... +85 °C (-40 °F ... +185 °F)
Sample rate	1 min. to 24 hours
Measurement modes	• 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

EBI 300 Multi-Use USB Data Loggers

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	• 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

Technical Data

Measurement range/operating temperature	-30 °C … +70 °C (-22 °F ... +158 °F) By connecting an external probe, the temperature measurement range can be extended.
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

The device has been certified together with the EB 4401 food inspection case.

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

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

Fast, flexible core temperature measurements

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 4mm, L = 50mm, 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

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

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

Relative humidity monitoring in storages and during transports

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
Probe temperature	0% rH … 100% rH
Measurement range humidity	± 3% between 10% rH … 90% rH (at 25 °C / +77 °F) ± 5% for the remaining measurement range
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 14mm
Protection class	IP 20

- Internal temperature probe usable additionally

EBI 310 Multi-Use USB Data Loggers

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	• 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 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) By connecting an external probe, the temperature measurement range can be extended.
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

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

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

Measurement of high and low temperatures

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 5mm, L = 50mm, blunt
Cable	PTFE, L = 1m, 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

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

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

Precise temperature measurements in dry ice

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	Up to 2 years, depending on applications

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

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

Relative humidity monitoring in storages and during transports

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

- Internal temperature probe usable additionally

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

Temperature monitoring in storages and during transport, process monitoring

exchangeable sensors

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

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

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 waperproof

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

How to order:

Type	Description	Part No.
EBI 330-T30	Single-use USB data logger, **package unit: 10 pieces**	1340- 6332
EBI 300	Standard USB Data Logger	1340-6330
EBI 300 TE	USB Data logger with external temperature probe	1340-6335
TPC 300	Replacement probe for EBI 300 TE	1341-6331
EBI 300 TH	USB Data logger with external humidity probe	1340-6334
TPH 400	Replacement probe for EBI 300 TH	1341-6336
EBI 310	High Precision USB Data Logger	1340-6331
EBI 310 TE	USB Data logger with external precision temperature probe	1340-6337
TPX 220	Replacement probe for EBI 310 TE	1341-6332
EBI 310 DI	USB Data logger for dry ice measurements	1340-6338
TPX 250	Replacement probe for EBI 310 DI	1341-6333
EBI 310 TH	USB Data logger with external humidity probe	1340-6336
TPH 500	Replacement probe for EBI 310 TH	1341-6337
EBI 310 TX	USB Data logger with temperature-two-channel-adapter	1340-6339
TPX 310	Replacement adapter for EBI 310 TX	1341-6335
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
EBI 300-WM2	Wall Mount for EBI 300 / 310	1340- 6341
EBI 300 WM3	Transportation mount for EBI 300/310	1340-6344

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