

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
- 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

Which data logger is right for you?

	Multi-use data loggers		Single-use data loggers	
	EBI 300	EBI 310	EBI 330-T30	EBI 330-T85
Monitoring of cryogenic temperatures		✓*		✓
Monitoring of high temperatures*		✓		
Humidity monitoring*	✓	✓		
Display	✓	✓		
High accuracy (± 0.2 °C)		✓		
High memory capacity (120,000 readings)		✓		
Very flexible alarms (5 limits and MKT)		✓		
Calibration certificate included	✓	✓		
Batch calibration certificate available on request			✓	✓
Low-cost			✓	✓

*With attached probe only.

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 139).

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
Memory capacity	40,000 measurements
Alarm	2 limits
PDF creation	PDF
LED	Yes (red)
Resolution	0.1 °C
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
Dimensions (L x W x H)	80 x 33 x 14 mm
Housing material	Polycarbonate
Protection class	IP 65
Certificate	Factory calibration certificate
Battery	Lithium button cell (CR 2450), 3 V
Battery lifetime	Up to 2 years, depending on applications

Various probes for temperature and humidity measurement available (see page 63).

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

Accessories for EBI 300



EBI 300-WM2 Wall Mount for EBI 300 / 310

EBI 300 + TPC 300 + EBI 300-WM2



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

External Probes for EBI 300

Fast, flexible core temperature measurements

TPC 300 External NTC temperature probe



Technical Data

Measurement range/operating temperature	-35 °C ... +70 °C (-31 °F ... +158 °F)
Accuracy	± 0.5 °C (-20 °C ... +40 °C / -4 °F ... +104 °F) ± 0.8 °C for the remaining measurement range
Probe needle	Stainless steel, Ø 4 mm, L = 50 mm, blunt
Cable	PVC, L = 1 m
Protection class	IP 65

Relative humidity monitoring in storages and during transport

TPH 400 External capacitive humidity probe



Technical Data

Measurement/operating range	Humidity: 0% rF ... 100% rH Temperature: -30 °C ... +70 °C (-22 °F ... +158 °F)
Humidity accuracy	± 3% between 10% rH ... 90% rH (at +25 °C / +77 °F) ± 5% for the remaining measurement range
Temperature accuracy	± 0.5 °C at +20 °C ... +40 °C (+68 °F ... +104 °F) ± 1 °C for the remaining measurement range
Probe	Capacitive humidity sensor
Protection class	IP 20

EBI 300 + TPC 300

EBI 300 + TPH 400



General technical data, valid for all EBI 300 probes:

Temperature resolution	0.1 °C
Humidity resolution (logger dependent)	0.1% rH
Storage temperature	-40 °C ... +85 °C (-40 °F ... +185 °F)
Norms	DIN EN 12830, ATP
Cable (logger dependent)	Water tight, oil resistant and food safe

Type	Description	Part No.
TPC 300	External Temperature Probe for EBI 300	1341-6331
TPH 400	External Humidity Probe for EBI 300	1341-6336
AH 100	PTFE filter for TPH 400	1340-5627
AH 200	Bronze sintered filter for TPH 400	1340-5626
AH 300	Stainless steel sintered filter for TPH 400	1340-5625

EBI 310 Multi-Use USB Data Logger

High precision version



Various probes for temperature
and humidity measurement
available
(see pages 65 and 66).

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
Memory capacity	120,000 measurements
Alarm	5 ranges
PDF creation	PDF/A 1b
LED	Yes (red and yellow)
Resolution	0.1 °C
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
Dimensions (L x W x H)	80 x 33 x 14 mm
Housing material	Polycarbonate
Protection class	IP 65
Certificate	Factory calibration certificate
Battery	Lithium button cell (CR 2450), 3 V
Battery lifetime	Up to 2 years, depending on applications

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

Accessories for EBI 310



EBI 300-WM2 Wall Mount for EBI 300 / 310

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

External Probes for EBI 310

Measurement of high and low temperatures

TPX 220 External Pt 1000 precision temperature probe



Technical Data

Measurement range (probe)	-200 °C ... +250 °C (-328 °F ... +482 °F)
Operating temperature (logger)	-30 °C ... +75 °C (-22 °F ... +167 °F)
Accuracy	± 2 °C (-200 °C ... -100 °C / -328 °F ... -148 °F) ± 1 °C (-100 °C ... -20 °C / -148 °F ... -4 °F) ± 0.2 °C (-20 °C ... +60 °C / -4 °F ... +140 °F) ± 0.5 °C (+60 °C ... +250 °C / +140 °F ... +482 °F)
Probe	Stainless steel, Ø 5 mm, L = 50 mm, blunt
Cable	PTFE, L = 1 m *
Protection class	IP 65

*Customized lengths up to 3 m available on request

Measurements in dry ice

TPX 250 External Pt 1000 precision temperature probe with additional deep temperature battery



Technical Data

Measurement range/operating temperature (probe and logger)	-85 °C ... +50 °C (-121 °F ... +122 °F)
Accuracy	± 1 °C (-85 °C ... -20 °C / -121 °F ... -4 °F) ± 0.2 °C (-20 °C ... +50 °C / -4 °F ... +122 °F)
Probe	Stainless steel, Ø 5 mm, L = 50 mm, blunt
Cable	PTFE, L = 60 cm *
Battery	1 lithium cell in EBI 310, 1 lithium battery in TPX 250, both user exchangeable
Battery lifetime	Up to 2 years, application dependent (EBI 310) 10 transports of max. 100 hours each (TPX 250)
Protection class	IP 65

*Customized lengths up to 3 m available on request

Relative humidity monitoring in storages and during transport

TPH 500 External capacitive humidity probe



Technical Data

Measurement and operating range	Humidity: 0% rH ... 100% rH Temperature: -30 °C ... +75 °C (-22 °F ... +167 °F)
Humidity accuracy	± 2% between 10% rH ... 90% rH (at +25 °C / +77 °F) ± 4% for the remainder
Temperature accuracy	± 0.5 °C at 0 °C ... +60 °C (+32 °F ... +140 °F) ± 0.8 °C for the remainder
Probe	Capacitive humidity sensor
Protection class	IP 20

General technical data, valid for all EBI 310 probes:

Temperature resolution	0.1 °C
Humidity resolution (logger dependent)	0.1% rH
Storage temperature	-40 °C ... +85 °C (-40 °F ... +185 °F)
Norms	DIN EN 12830, ATP
Certificate	Factory calibration certificate
Cable (logger dependent)	Water tight, oil resistant and food safe

EBI 310 +
TPX 220

EBI 310 +
TPX 250

EBI 310 +
TPH 500



Type	Description	Part No.
TPX 220	External Temperature Probe for EBI 310	1341-6332
TPX 250	External Temperature Probe for EBI 310 with additional battery	1341-6333
TPH 500	External Humidity Probe for EBI 310	1341-6337
AH 100	PTFE filter for TPH 500	1340-5627
AH 200	Bronze sintered filter for TPH 500	1340-5626
AH 300	Stainless steel sintered filter for TPH 500	1340-5625

External 2-channel Probes for EBI 310

Temperature monitoring in storages and during transport, process monitoring

TPX 310 External 2-channel Pt 1000 precision temperature probe



TPX 310



EBI 310 + TPX 310
+ exchangeable
sensors

Technical Data

Measurement range (probe)	-200 °C ... +400 °C (-328 °F ... +752 °F), depending on probe type
Operating temperature (logger)	-30 °C ... +75 °C (-22 °F ... +167 °F)
Accuracy	± 2.0 °C at -200 °C ... -100 °C (-328 °F ... -148 °F) ± 1.0 °C at -100 °C ... -20 °C (-148 °F ... -4 °F) ± 0.2 °C at -20 °C ... +60 °C (-4 °F ... +140 °F) ± 0.5 °C at +60 °C ... +250 °C (+140 °F ... +482 °F) ± 1.0 °C at +250 °C ... +400 °C (+482 °F ... +752 °F)
Protection class	IP 65

Exchangeable sensors for TPX 310:



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



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



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



TPX 310-P4

- Measurement range: +200 °C ... +400 °C (+392 °F ... +752 °F)
- Needle: L = 50 mm, Ø = 1.5 mm, blunt
- Cable: metal, L = 3 m

Type	Description	Part No.
TPX 310	External 2-channel temperature probe for EBI 310	1341-6335
TPX 310-P1	External sensor for TPX 310	1341-6338
TPX 310-P2	External sensor for TPX 310	1341-6339
TPX 310-P3	External sensor for TPX 310	1341-6340
TPX 310-P4	External sensor for TPX 310	1341-6341

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
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	<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
Battery	Lithium button cell (CR2032), 3V
Battery lifetime	100 days

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
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	<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
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)

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