



# 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.

The EBI 300 and EBI 310 USB data loggers are suitable for multi-use, the EBI 330 USB data loggers are single-use versions which can be ordered preconfigured and are used especially when returning a more expensive multi-use data 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](http://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](http://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 guidelines



EBI 300-WM2 Wall Mount for EBI 300/310

## Which data logger is right for you?

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

\*With attached probe only.



## EBI 300 / 310 Multi-Use USB Data Loggers



**EBI 300**  
*Standard version*



**EBI 310**  
*High precision version*

### Technical Data

Measurement range/ operating temperature	-30 °C ... +70 °C (-22 °F ... +158 °F)	-30 °C ... +75 °C (-22 °F ... +167 °F)
Accuracy	±0.5 °C (-20 °C ... +40 °C / -4 °F ... +104 °F) ±0.8 °C for the remaining measurement range	±0.2 °C (-30 °C ... +30 °C / -22 °F ... +86 °F) ±0.5 °C for the remaining measurement range
Sensor	NTC	PT 1000
Memory capacity	40,000 measurements	120,000 measurements
Alarm	2 limits	5 ranges
PDF creation	PDF	PDF/A 1b
LED	Yes (red)	Yes (red and yellow)
Resolution	0.1 °C	
Storage temperature	-40 °C ... +85 °C (-40 °F ... +185 °F)	
Sample rate	1 min ... 24 h	1 s ... 24 h
Measurement modes	<ul style="list-style-type: none"> <li>• Endless measurement               <ul style="list-style-type: none"> <li>• Start / Stop</li> </ul> </li> <li>• Measurement until end of memory               <ul style="list-style-type: none"> <li>• Start with key press</li> </ul> </li> </ul>	
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	



## EBI 330 Single-Use USB Data Loggers



**EBI 330-T30**

*Standard version*



**EBI 330-T85**

*Deep temperature version*

### Technical Data

Measurement range/ operating temperature	-30 °C ... +60 °C (-22 °F ... +140 °F)	-85 °C ... +50 °C (-121 °F ... +122 °F)
Accuracy	±0.5 °C (-20 °C ... +40 °C / -4 °F ... +104 °F) ±0.8 °C for the remaining measurement range	±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	NTC	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"> <li>• Start with key press</li> <li>• Start immediately until end of memory</li> </ul>	
Display	-	
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	Lithium button cell (TL-2450), 3.6 V
Battery lifetime	100 days	100 days at temperatures down to -30 °C (-22 °F); 100 hours at temperatures below -30 °C (-22 °F)

# External Probes

## General technical data, valid for all external 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

... for EBI 300



### TPC 300 External NTC temperature probe

*Fast, flexible core temperature measurements*

#### 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, pointed
Cable	PVC, L = 1 m
Protection class	IP 65

### TPH 400 External capacitive humidity probe

*Relative humidity monitoring in storages and during transport*



#### Technical Data:

Measurement/operating range	Humidity: 0% rH ... 100% rH Temperature: -30 °C ... +70 °C (-22 °F ... +158 °F)
Humidity measurement range	0% rH ... 100% rH
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

... for EBI 310



### TPX 220 External Pt 1000 precision temperature probe

*Measurement of high and low temperatures*

#### 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

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

### Measurements in dry ice



#### 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 (Customized lengths up to 3 m possible on request)
Battery	1 lithium cell in EBI 310, 1 lithium battery in TPX 250, both user exchangeable
Battery lifetime	Up to 2 years, application dependent ( <b>EBI 310</b> ) 10 transports of max. 100 hours each ( <b>TPX 250</b> )
Protection class	IP 65

## TPX 310 External 2-channel Pt 1000 precision temperature probe

### Temperature monitoring in storages and during transport, process monitoring



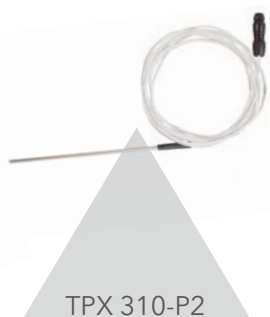
#### Technical Data:

Measurement range (probe)	-200 °C ... +400 °C (-328 °F ... +752 °F), depending on sensor 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



TPX 310-P2



TPX 310-P3



TPX 310-P4

	TPX 310-P1	TPX 310-P2	TPX 310-P3	TPX 310-P4
Measurement range	-200 °C ... +200 °C (-328 °F ... +392 °F)	-50 °C ... +180 °C (-58 °F ... +356 °F)	-50 °C ... +180 °C (-58 °F ... +356 °F)	+200 °C ... +400 °C (+392 °F ... +752 °F)
Needle	L: 45 mm Ø: 5 mm blunt	L: 130 mm Ø: 3 mm blunt	L: 130 mm Ø: 3 mm blunt	L: 50 mm Ø: 1.5 mm blunt
Cable	L: PTFE 3 m	L: PTFE 3 m	L: PTFE 1 m	L: metal 3 m

## TPH 500 External capacitive humidity probe

### Relative humidity monitoring in storages and during transport



#### 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

## How to order:

Type	Description	Part No.
EBI 300	Standard USB Data Logger	1340-6330
EBI 310	High Precision USB Data Logger	1340-6331
TPC 300	External Temperature Probe for EBI 300 (-35 °C ... +70 °C / -31 °F ... +158 °F)	1341-6331
TPH 400	External Humidity Probe for EBI 300 (0% rH ... 100% rH)	1341-6336
TPX 220	External Temperature Probe for EBI 310 (-200 °C ... +250 °C / -328 °F ... +482 °F)	1341-6332
TPX 250	External Temperature Probe for EBI 310 with additional battery (-85 °C ... +50 °C / -121 °F ... +122 °F)	1341-6333
TPX 310	2-Channel Temperature Probe for EBI 310 (-200 °C ... +400 °C / -328 °F ... +752 °F)	1341-6335
TPX 310-P1	External Sensor for TPX 310, L = 45 mm, Ø = 5 mm, 3 m PTFE cable	1341-6338
TPX 310-P2	External Sensor for TPX 310, L = 130 mm, Ø = 3 mm, 3 m PTFE cable	1341-6339
TPX 310-P3	External Sensor for TPX 310, L = 130 mm, Ø = 3 mm, 1 m PTFE cable	1341-6340
TPX 310-P4	External Sensor for TPX 310, L = 50 mm, Ø = 1.5 mm, 3 m metal cable	1341-6341
TPH 500	External Humidity Probe for EBI 310 (0% rH ... 100% rH)	1341-6337
EBI 300-WM2	Wall Mount for EBI 300 / 310	1340-6341

	Description	Package Unit	
EBI 330-T30	Single-use USB data logger (-30 °C ... +60 °C / -22 °F ... +140 °F)	10 pieces	1340-6332
EBI 330-T85	Single-use USB data logger (-85 °C ... +50 °C / -121 °F ... +122 °F)	10 pieces	1340-6333



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