

for Validation Routine Control



Interfaces

Description:

- Read out up to four Logger simultaneous
- Compatible with different types of logger
- Optic status control

Applications:

- Programing and read out of data logger
- Control of logger parameter
- Service of logger e.g. battery exchange

EBI 11 Mini Data Loggers

The Perfect Solution for Tight Spaces

For temperature and pressure measurements in tight spaces, ebro offers the EBI 11 mini data loggers. Many configurations are available to suit your application, including data loggers with internal sensors, rigid metal probes, bendable metal probes, Luer-Lock connection or threaded connection versions.

The EBI 11 Mini Data Loggers are suitable not only for validation monitoring but can also be used for routine control monitoring.

Applications:

- For tight spaces, e.g. in small steam sterilizers, bottles, cans or bags
- Validation of steam sterilizers and autoclaves
- Validation of washer-disinfectors and washer-disinfectors for endoscopes
- Validation at canning etc.
- Pressure measurement up to 10 bar





Bendable metal probe

Rigid metal probe

Integrated (pressure) sensor

Luer-Lock connection

M5 thread connection



Interface

Programming the Data Loggers



Measurement During the Process



Automatic Data Evaluation

General technical specifications: valid for all EBI 11 logger types*

Accuracy: Temperature	±0.1 °C
Resolution: Temperature	0.01 °C
Accuracy: Pressure (pressure data loggers only)	±15 mbar (0 mbar ... 4000 mbar) ±20 mbar (4000 mbar ... 10000 mbar)
Resolution: Pressure (pressure data loggers only)	1 mbar
Sensor: Temperature	Pt 1000
Sensor: Pressure (pressure data loggers only)	Piezo resistive pressure sensor (temperature compensated)
Sampling rate	1 sec to 24 hours., adjustable
Measurement mode	<ul style="list-style-type: none"> • Endless measurement • Measurement start / stop time • Measure upon start time • Start immediately until end of memory
Storage temperature	0 °C ... +60 °C (+32 °F ... +140 °F)
Battery	Lithium, 2 x BR1225 A, 3 V, user replaceable
Dimensions (Ø x h)	16.5 mm x 24 mm (without probe) EBI 11-TP110: 16.5 mm x 48 mm EBI 11 Temperature Logger: 16.5 mm x 24 mm (without probe) EBI 11 Temperature / Pressure Logger: 16.5 mm x 48 mm (without connector)
Weight	Approximately 45 g
Housing material	V4A
Protection class	IP 68
Certificate	Factory calibration certificate

* Please find the exact technical data of each EBI 11 logger type on the next pages.

EBI 11-P100 Mini Temperature / Pressure Data Logger *Integrated sensor*



- 1 internal temperature sensor
- 1 internal pressure sensor, piezo resistive, temperature compensated

Technical Data

Measurement range: temperature	0 °C ... +150 °C (+32 °F ... +302 °F)
Measurement range: pressure	1 mbar to 10000 mbar
Data memory	2 x 7,500 measurement values
Sensor: temperature	Pt 1000, internal
Sensor: pressure	Piezo-resistive, internal, temperature compensated
Operating temperature	0 °C ... +150 °C (+32 °F ... +302 °F)

Type	Description	Part No.
EBI 11-P100	Mini Temperature / Pressure Data Logger, 1-channel	1340-6295

EBI 11-P111 Mini Temperature / Pressure Data Logger *Luer-Lock connection*



- 1 internal temperature sensor
- 1 internal pressure sensor, piezo resistive, temperature compensated

Technical Data

Measurement range: temperature	0 °C ... +150 °C (+32 °F ... +302 °F)
Measurement range: pressure	1 mbar to 10000 mbar
Data memory	2 x 7,500 measurement values
Sensor: temperature	Pt 1000, internal
Sensor: pressure	Piezo-resistive, internal, temperature compensated
Operating temperature	0 °C ... +150 °C (+32 °F ... +302 °F)

Type	Description	Part No.
EBI 11-P111	Mini Temperature / Pressure Data Logger, 1-channel, Luerlock	1340-6296

EBI 11-TP110 Mini Temperature / Pressure Data Logger *M5 thread connection*



- 1 internal temperature sensor
- 1 internal pressure sensor, piezo resistive, temperature compensated

Technical Data

Measurement range: temperature	0 °C ... +150 °C (+32 °F ... +302 °F)
Measurement range: pressure	1 mbar ... 10000 mbar
Data memory	2 x 7,500 measurement values
Sensor: temperature	Pt 1000, internal
Sensor: pressure	Piezo-resistive, internal, temperature compensated
Operating temperature	0 °C ... +150 °C (32 °F ... +302 °F)

Type	Description	Part No.
EBI 11-TP110	Mini Temperature / Pressure Data Logger	1340-6297

EBI 11-T23x Mini Temperature Data Logger Rigid metal probe



Please see page 12 for suitable bottle, can and bag adapters.



EBI 11-T230

- 1 external temperature sensor, axial, Pt 1000, Ø 3 mm

Technical Data

Measurement range: temperature	-30 °C ... +150 °C (-22 °F ... +302 °F)
Data memory	15,000 measurement values
Operating temperature	-30 °C ... +150 °C (-22 °F ... +302 °F)

Type	Description	Part No.
EBI 11-T230	Mini Temperature Data Logger, 1-channel, ext., L = 20 mm	1340-6290
EBI 11-T231	Mini Temperature Data Logger, 1-channel, ext., L = 50 mm	1340-6292
EBI 11-T233	Mini Temperature Data Logger, 1-channel, ext., L = 100 mm	1340-6293

EBI 11-T235 to T237 Mini Temperature Data Logger Rigid blunt metal probe



EBI 11-T235

- 1 external temperature sensor, axial, Pt 1000, Ø 2 mm

Technical Data

Measurement range: temperature	-30 °C ... +150 °C (-22 °F ... +302 °F)
Data memory	15,000 measurement values
Operating temperature	-30 °C ... +150 °C (-22 °F ... +302 °F)

Type	Description	Part No.
EBI 11-T235	Mini Temperature Data Logger, 1-channel, ext., L = 25 mm, blunt	1340-6270
EBI 11-T236	Mini Temperature Data Logger, 1-channel, ext., L = 80 mm, blunt	1340-6271
EBI 11-T237	Mini Temperature Data Logger, 1-channel, ext., L = 165 mm, blunt	1340-6272

EBI 11-T240 Mini Temperature Data Logger Bendable metal probe



- 1 external temperature sensor, axial, Pt 1000, bendable, Ø 1.5 mm

Technical Data

Measurement range: temperature	-30 °C ... +150 °C (-22 °F ... +302 °F)
Data memory	15,000 measurement values
Operating temperature	-30 °C ... +150 °C (-22 °F ... +302 °F)

Type	Description	Part No.
EBI 11-T240	Mini Temperature Data Logger, 1-channel, ext., L = 250 mm, flexible	1340-6291

Accessories for EBI 11



Set SI 1100

for EBI 10, EBI 100 and EBI 11

- 2-port Interface IF 100
- Software Winlog.pro
- USB connection
- Colored LEDs signaling programming, readout and incorrect development
- With antenna



Set SI 1110

for EBI 100 and EBI 11

- 2-port Interface IF 100-1
- Software Winlog.pro
- USB connection
- Colored LEDs signaling programming, readout and incorrect development



SI 1300 Set

for EBI 11

- 4-port Interface IF 300
- Software Winlog.pro
- USB connection
- Colored LED signalling programming, readout and incorrect development



Set SI 2100

for EBI 10, EBI 100 and EBI 11

- 2-port Interface IF 100
- Software Winlog.med
- USB connection
- Colored LEDs signaling programming, readout and incorrect development
- With antenna



SI 3300 Set

for EBI 11

- 4-port Interface IF 300
- Software Winlog.validation
- USB connection
- Colored LED signalling programming, readout and incorrect development





Battery change set AL 113
for EBI 11

Suitable for 3 battery exchanges; contains 6 batteries, 3 O-rings with grease and changing tools.



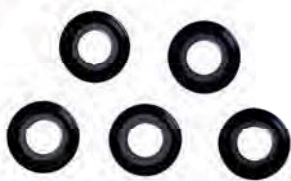
AL 114 can/bag adapter set
for EBI 11-T231 and EBI 11-T233



Bottle adapter set AL 115
for EBI 11-T230

Battery change set AL 113L
for EBI 11

Suitable for 10 battery exchanges; contains 20 batteries, 10 O-rings with grease and changing tools.



Sealing kit EBI11-Valiset

The set contains 5 seals. Developed for DAC universal and spypach dummy .

Type	Description	Part No.
SI 1100	Set: EBI IF 100 interface and Winlog.pro software	1340-6061
SI 1110	Set: EBI IF 100-1 interface and Winlog.pro software	1340-6561
SI 1300	Set: EBI IF 300 interface and Winlog.pro software	1340-6063
SI 2100	Set: EBI IF 100 interface and Winlog.med software	1340-6064
SI 3300	Set: EBI IF 300 interface and Winlog.validation software	1340-6069
AL 113	Battery changing set for EBI 11	1100-0120
AL 113L	Battery changing set for EBI 11	1100-0125
AL 114	Can / bag adapter set for EBI 11-T231 and EBI 11-T233	1340-6298
AL 115	Bottle adapter set for EBI 11-T230	1340-6299
Sealing kit	Sealing kit EBI11-Valiset	1340-0006



SL 3300 Complete Validation Set for DAC Universal, benchtop autoclaves as well as washer disinfectors



Very flexible data logger system to perform validations for various thermal processes in the DAC Universal and benchtop autoclaves according to ISO 17665/DIN 58929 as well as washer disinfectors according to ISO 15883.

This reliable system consists of user-friendly mini data loggers that can be placed directly in the processes and an evaluation software package that has been validated by the TÜV.

The set contains:

- 2 x EBI 11-T235 Mini Temperature Data Logger, Needle length = 25 mm
- 2 x EBI 11-T236 Mini Temperature Data Logger, Needle length = 80mm
- EBI 11-T237 Mini Temperature Data Logger, Needle length = 165mm
- EBI 11-P111 Mini Pressure Data Logger
- Sealing-kit for EBI 11
- EBI IF 300, 4-port Interface
- Winlog.validation, Software
- EBI-TAK-ALU, Aluminum carrying case



Adequate pH and conductivity meters, see page 146.

Type	Description	Part No.
SL 3300	Validation set for DAC Universal, benchtop autoclaves as well as washer disinfectors	1340-6082

AL 3310 Complete Lid Set for Validation DAC Universal



The set contains:

- 1 x Validation lid for use EBI 11 data logger
- 1 x Lid for test soil
- 1 x rinse adapter test soil

Type	Description	Part No.
AL 3310	Complete lid set for validation DAC Universal	1340-6051

SL 4001 **EBI 11 Mini Data Logger Set for Pasteurization and Sterilization**
for temperature monitoring in cans



The set contains:

- EBI 11-T23x Mini temperature data logger:
 Needle length: 20 mm,
 50 mm or 100 mm
(Special needle lengths on request)
- AL 114 can adapter set
- EBI IF 100 interface
- Winlog.pro software
- Aluminum carrying case



Please name us the correct type of data logger in your order.

Mini Temperature Data Logger, 1-channel	
Type	
Needle length = 20 mm	EBI 11-T230
Needle length = 50 mm	EBI 11-T231
Needle length = 100 mm	EBI 11-T233

Type	Description	Part No.
SL 4001	EBI 11 set for pasteurization and sterilization	1340-6091

