Professional Data Logger

FOR VALIDATION, ROUTINE CONTROL AND PROCESS MONITORING

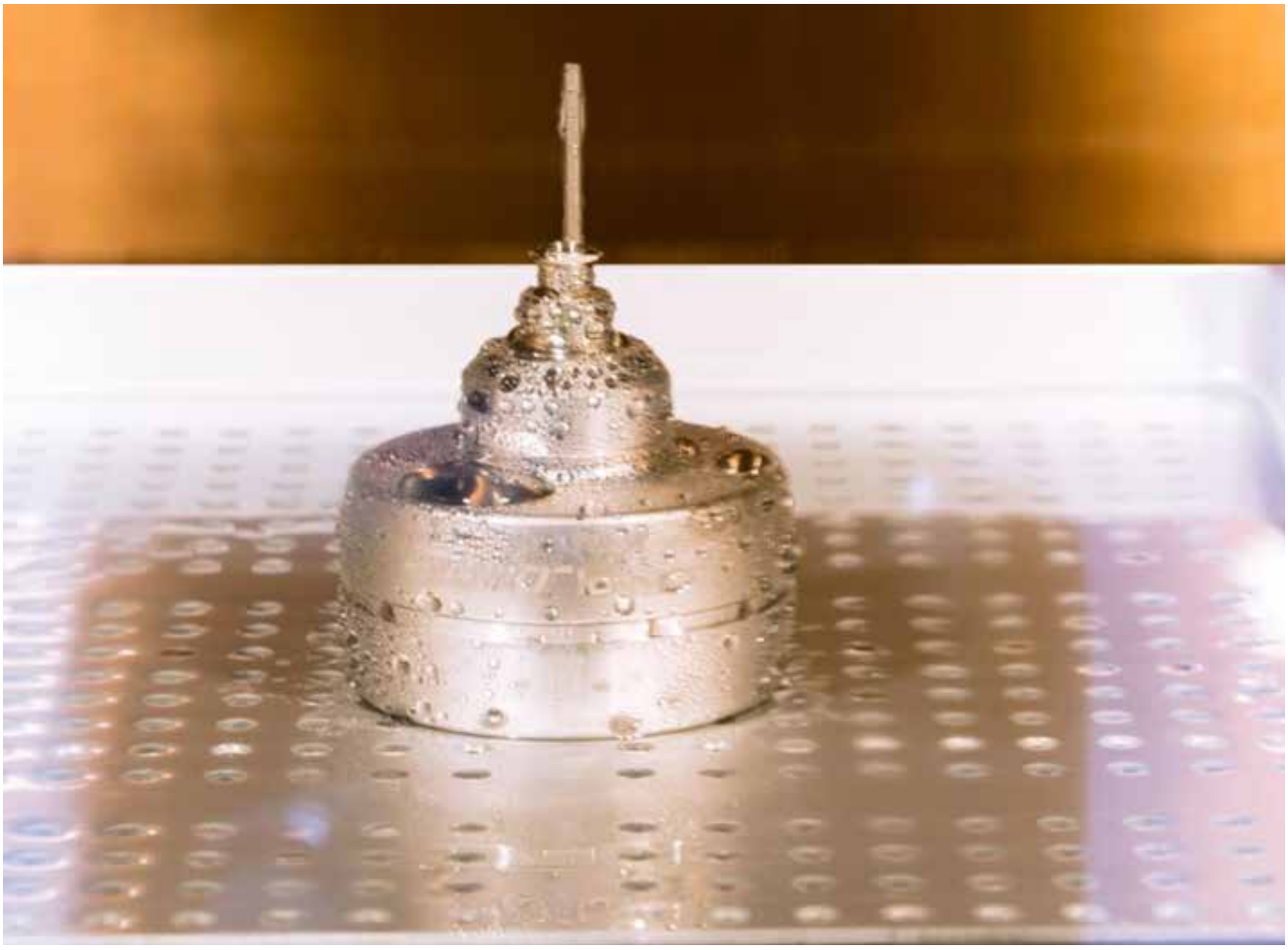
MEDICINE
FOOD
PHARMACEUTICAL
LABORATORY

2018

-ebro-
a xylem brand

EBI 12 – The new data logger generation

- High quality stainless steel housing
- Application range from -90 °C to 150 °C
- High temperature accuracy up to 0.05 °C
- Extended temperature measurement range -200 °C to +400 °C
- Pressure measurement up to 4,000 mbar
- Precision pressure measurement 0.1 mbar
- High pressure accuracy up to 0.25 mbar
- Humidity measurement from 0% rH to 100% rH
- Conductivity measurement 1 to 2,000 µS/cm
- Radio mode for real-time monitoring
- ATEX approved
- Full compatibility Interface EBI IF-100, EBI IF-150 and EBI IF-200
- Full compatibility to Winlog software



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Temperature data logger of EBI 12 series

General technical specifications for EBI 12 T series

Operating temperature: logger	-90 °C … +150 °C (-130 °F ... 302 °F)*
Operating temperature: radio operation	-30 °C … +150 °C (-22 °F ... 302 °F)
Temperature accuracy	±1.5 °C (-200 °C … -85 °C)* ±0.5 °C (-85 °C … -40 °C)* ±0.2 °C (-40 °C … 0 °C)* ±0.1 °C (0 °C ... +120 °C)* ±0.05 °C (+120 °C … +140 °C)* ± 0.1 °C (+140 °C … +150 °C)* ± 0.5 °C (+150 °C … +250 °C)* ± 0.8 °C (+250 °C … +400 °C)*
Time accuracy	< 5 sec (24 h)
Temperature resolution	0.01 °C
Memory	Max. 100,000 measurement values (total)*
Sensor	Pt 1000, Class A
Interval	250 ms ... 24 hours.*
Measurement mode	• Endless measurement • Start / stop measurement • Measure upon start temperature • Start immediately until end of memory
Storage temperature	0 °C … +125 °C
Battery	Lithium cell, 3.6 V, user replaceable
Dimensions (Ø x H)	48 mm x 24 mm**
Weight	Approximately 110 g **
Housing material	316 L Stainless steel / PEEK
Protection class	IP 68
Certificate	Factory calibration certificate

** Deviating specifications can be found in the product descriptions.*
*** Dimensions and weight may be differerent depending on the type.*

EBI 12-T100 Temperature Data Logger *with internal temperature sensor*

Application sample

- For process monitoring during convenience food production
- For routine control in badpan washers
- For temperature mappings

Technical Data

Measurement range	-90 °C ... +150 °C (-130 °F ... +302 °F)
Data memory	100,000 measurement values

- 1 internal temperature sensor
- Particularly robust

Type	Description	Part No.
EBI 12-T100	Internal temperature sensor	1340-6600

EBI 12-T100-EX Temperature Data Logger *with internal temperature sensor*

Application sample

- To measure in raw material storage

Technical Data

Use in EX Area	-40 °C ... +85 °C (-40 °F ... +185 °F)
Data memory	100,000 measurement values

Approximately available from end of Q1 2018

- 1 internal temperature sensor
- Particularly robust

Type	Description	Part No.
EBI 12-T100-EX	Internal temperature sensor	1340-6600-EX

EBI 12-T101 Temperature Data Logger *with internal temperature sensor*

Application sample

- For use in dry ice and in cryogenic
- In bedpan washers and washing machines

Technical Data

Measurement range	-90 °C ... +105 °C (-130 °F ... +221 °F)
Accuracy	± 0.5 °C (-90 °C … -40 °C) ± 0.3 °C (-40 °C … +105 °C)
Sampling rate	1 s ... 24 h
Data memory	27,000 measurement values

- 1 internal temperature sensor
- Particularly robust

Type	Description	Part No.
EBI 12-T101	Internal temperature sensor	1340-6601

EBI 12-T21X Temperature Data Logger *rigid metal probe*

Application sample

- For process monitoring during convenience food production

Technical Data

Measurement range	-40 °C ... +150 °C (-40 °F ... +302 °F)
Accuracy	± 0.1 °C (0 °C … +150 °C) ± 0.3 °C (-40 °C … 0 °C)
Sampling rate	1 s ... 24 h
Data memory	27,000 measurement values

- 1 external temperature probe, Ø 3 mm
- Radial pointed

Type	Description	Part No.
EBI 12-T210	Needle length = 50 mm	1340-6602
EBI 12-T211	Needle length = 75 mm	1340-6603

EBI 12-T23X Deep Temperature Data Logger
rigid metal probe

Application sample

- Ideal for use in canning for pasteurization control

Technical Data

Measurement range	-40 °C ... +150 °C (-40 °F ... +302 °F)
Accuracy	± 0.1 °C (0 °C … +150 °C) ± 0.3 °C (-40 °C … 0 °C)
Sampling rate	1 s ... 24 h
Data memory	27,000 measurement values

- Axial pointed, M5 Thread
- 1 external temperature probe, Ø 3 mm
- Various needle length available

Type	Description	Part No.
EBI 12-T230	Needle length = 50 mm	1340-6606
EBI 12-T231	Needle length = 75 mm	1340-6607
EBI 12-T232	Needle length = 100 mm	1340-6608
EBI 12-T233	Needle length = 150 mm	1340-6609

EBI 12-T43X Temperature Data Logger
rigid metal probes

Application sample

- Ideal for use in canning for pasteurization control

Technical Data

Measurement range	-40 °C ... +150 °C (-40 °F ... +302 °F)
Accuracy	± 0.1 °C (0 °C … +150 °C) ± 0.3 °C (-40 °C… 0 °C)
Sampling rate	1 s ... 24 h
Data memory	2 x 13,500 measurement values

Approximately available from end of Q2 2018

- Axial pointed, M5 Thread
- 2 external temperature probes, Ø 3 mm
- Various needle length available

Type	Description	Part No.
EBI 12-T430	Needle length = 50 mm	1340-6614
EBI 12-T431	Needle length = 75 mm	1340-6615
EBI 12-T432	Needle length = 100 mm	1340-6616
EBI 12-T433	Needle length = 150 mm	1340-6617

EBI 12-T46X Bottle Logger
rigid metal probe

Application sample

- Ideal for use in bottles

Technical Data

Measurement range	-40 °C ... +150 °C (-40 °F ... +302 °F)
Accuracy	± 0.3 °C (-40 °C ... +150 °C)
Sampling rate	1 s ... 24 h
Data memory	2 x 13,500 measurement values

Approximately available from end of Q2 2018

- Axial, blunt, M10 thread
- 1 external temperature probe, Ø 6 mm
- 1 external temperature probe, Ø 3 mm
- Various needle lengths available

Type	Description	Part No.
EBI 12-T461	Needle length = 135 mm	1340-6623
EBI 12-T462	Needle length = 190 mm	1340-6624
EBI 12-T463	Needle length = 245 mm	1340-6625
EBI 12-T464	Needle length = 270 mm	1340-6626
EBI 12-T465	Needle length = 300 mm	1340-6627

EBI 12-T22X Temperature Data Logger
bendable metal probe

Application sample

- Measurement in drain of sterilizers
- In oven (protected by Thermal-Isolation-Box)

Technical Data

Measurement range	**EBI 12-T220:** -200 °C ... +200 °C (-328 °F ...+392 °F) **EBI 12-T221:** -200 °C ... +400 °C (-328 °F ... +752 °F)
Data memory	100,000 measurement values

- 1 external temperature probe, Ø 1.5 mm
- Radial arranged

Type	Description	Part No.
EBI 12-T220	Needle length = 250 mm	1340-6604
EBI 12-T221	Needle length = 500 mm	1340-6605

EBI 12-T220-EX Temperature Data Logger
bendable metal probe

Application sample

- EtO sterilization

Technical Data

Use in EX Area	-40 °C ... +85 °C (-40 °F ... +185 °F)
Data memory	100,000 measurement values

Approximately available from end of Q1 2018

- 1 external temperature probe, Ø 1,5 mm
- Radial arranged

Type	Description	Part No.
EBI 12-T220-EX	Needle Length = 250 mm	1340-6604-EX

EBI 12-T24X Temperature Data Logger
bendable metal probe

Application sample

- In washer disinfectors
- H_2O_2 sterilization

Technical Data

Measurement range	-200 °C ... +200 °C (-328 °F ... +392 °F)
Data memory	100,000 measurement values

- 1 external temperature probe, Ø 1,5 mm
- Axial arranged

Type	Description	Part No.
EBI 12-T240	Needle Length = 250 mm	1340-6611
EBI 12-T241	Needle Length = 500 mm	1340-6612

EBI 12-T421 Temperature Data Logger
bendable metal probes

Application sample

- In oven (in combination with Thermal-Insulation-Box)
- In washer disinfectors

Technical Data

Measurement range	-200 °C ... +400 °C (-328 °F ... +752 °F)
Data memory	2 x 50,000 measurement values

Approximately available from end of Q1 2018

- 2 external temperature probes, Ø 1.5 mm
- Radial arranged

Type	Description	Part No.
EBI 12-T421	Needle Length = 500mm	1340-6630

EBI 12-T441 Temperature Data Logger
bendable metal probes

Application sample

- In washer disinfectors
- H_2O_2 sterilization

Technical Data

Measurement range	-200 °C ... +200 °C (-328 °F ... +392 °F)
Data memory	2 x 50,000 measurement values

- 2 external temperature probes, Ø 1.5 mm
- Axial arranged

Type	Description	Part No.
EBI 12-T441	Needle Length = 500 mm	1340-6629

EBI 12-T441-EX Temperature Data Logger
bendable metal probes

Application sample

- EtO sterilization

Technical Data

Use in EX Area	-40 °C ... +85 °C (-40 °F ... +185 °F)
Data memory	2 x 50,000 measurement values

Approximately available from end of Q1 2018

- 2 external temperature probes, Ø 1.5 mm
- Axial arranged

Type	Description	Part No.
EBI 12-T441-EX	Needle Length = 500 mm	1340-6629-EX

EBI 12-T490 Temperature Data Logger
flexible cable probes

Application sample

- Steam serilizer

Technical Data

Measurement range	-20 °C ... +150 °C (-4 °F ... +302 °F)
Data memory	2 x 50,000 measurement values

- 2 external temperature probes, Ø 1.2 mm
- Radial arranged

Type	Description	Part No.
EBI 12-T490	Cable Length = 600 mm	1340-6634

EBI 12-T690 Temperature Data Logger
flexible cable probes

Application sample

- Steam sterilizer

Technical Data

Measurement range	-20 °C ... +150 °C (-4 °F ... +302 °F)
Data memory	4 x 25,000 measurement values

- 4 external temperature probes, Ø 1.2 mm
- Radial arranged

Type	Description	Part No.
EBI 12-T690	Cable Length = 600 mm	1340-6635

EBI 12-T47X Temperature Data Logger
flexible cable probes

Application sample

- Steam serilizer

Technical Data

Measurement range	-20 °C ... +150 °C (-4 °F ... +302 °F)
Data memory	2 x 50,000 measurement values

- 2 external temperature probes, Ø 1.2 mm
- Axial arranged

Type	Description	Part No.
EBI 12-T470	Cable Length = 600 mm	1340-6640
EBI 12-T471	Cable Length = 1,200 mm	1340-6644

EBI 12-T671 Temperature Data Logger
flexible cable probes

Application sample

- Steam serilizer

Technical Data

Measurement range	-20 °C ... +150 °C (-4 °F ... +302 °F)
Data memory	4 x 25,000 measurement values

- 4 external temperature probes, Ø 1.2 mm
- Axial arranged

Type	Description	Part No.
EBI 12-T671	Cable Length = 1,200 mm	1340-6645

Set SI 1100
for EBI 12 and EBI 11
- 2-port Interface IF 100
- Software Winlog.pro
- USB connection
- Colored LEDs signaling programming, readout and incorrect development
- Includes antenna

Set SI 1200
for EBI 12
- 4-port Interface IF 200
- Software Winlog.pro
- USB connection
- Colored LEDs signaling programming, readout and incorrect development
- Includes antenna

Set SI 2100
for EBI 12 and EBI 11
- 2-port Interface IF 100
- Software Winlog.med
- USB connection
- Colored LEDs signaling programming, readout and incorrect development
- Includes antenna

Set SI 2110
for EBI 12
- 4-port Interface IF 200
- Software Winlog.med
- USB connection
- Colored LEDs signaling programming, readout and incorrect development
- Includes antenna

Set SI 2150
for EBI 12 and EBI 16
- 1-port Interface IF 150
- Software Winlog.med
- USB connection
- Colored LEDs signaling programming, readout and incorrect development

Set SI 3200
for EBI 12
- 4-port Interface IF 200
- Software Winlog.validation
- USB connection
- Colored LEDs signaling programming, readout and incorrect development
- Includes antenna

AL 112
for IF100 and IF 200
- Developed for real time monitoring
- AL 112 is a cable with 3 m lenght
- Antenna placement in the field of the door seal of a sterilizer or washer-disinfector
- Antenna steam-tight
- It is possible by a sealing to introduce it in the chamber

Can adapter set
EBI DA-Set
With this adapter set you can fix the data loggers at cans or plastic bags. Designed for data loggers of the EBI 12 series with axial, radial or external probes. Hereby you assure the use to ensure proper probes placement.

Accessories and Interface-Sets

Battery replacement set AL 120
for EBI 12
Consisting of 3 batteries, 6 O-rings with grease and opening tool EBI 12

Battery set AL 104
for EBI 12
Consisting of 3 batteries, 8 O-rings with grease

AL 121 opening tool EBI 12
To open the data loggers e.g. for battery change

AL 122 eyelet ring EBI 12
For securing the EBI 12 data loggers in process

Holding clamps probes
To hold the flexible cable probes of the EBI 12 data loggers.

AL 190 Silicone cable strap
To hold the flexible cable probes of the EBI 12 data loggers

Can adapter EBI DA
for bottle loggers
(*see page 14*)

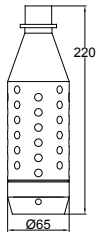
Bottle adapter EBI FL-S
silicone
for bottle loggers
(*see page 14*)

Grommets for sensor fixing EBI NI-140
Allows precise mounting of the logger sensor
in cans and glass.

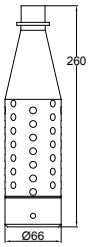
Compression fitting EBI KV-3
Allows precise mounting of the logger sensor
in glass (caps).

Dummy bottle

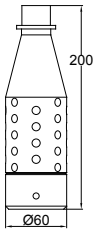
Please find EBI 12-T23X Temperature data logger from page 13.



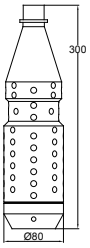
Dummy C



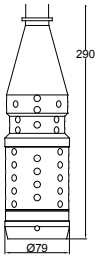
Dummy 0,5 l



Dummy E



Dummy 1 l



Dummy 0,7 l

The dummy bottles can be screwed to the ground. This allows the EBI 12 to be positioned within the bottle.

Type	Description	Part No.
SI 1100	Set: Interface EBI IF 100 and Software Winlog.pro	1340-6061
SI 1200	Set: Interface EBI IF 200 and Software Winlog.pro	1340-6062
SI 2100	Set: Interface EBI IF 100 and Software Winlog.med	1340-6064
SI 2110	Set: Interface EBI IF 200 and Software Winlog.med	1340-6095
SI 2150	Set: Interface EBI IF 150 and Software Winlog.med	1340-6193
SI 3200	Set: Interface EBI IF 200 and Software Winlog.validation	1340-6068
AL 100	Silicone protection box for EBI 12 Temperature Data Logger	1340-6020
AL 101	Silicone protection box for EBI 12 Pressure Data Logger	1340-6021
AL 102	Silicone protection box for EBI 12 Temperature Data Logger	1340-6022
AL 120	Battery change set for EBI 12	1100-0130
AL 121	Battery change tool (2 parts) EBI 12	1100-0131
AL 122	Eyelet ring EBI 12	1100-0132
AL 104	Battery set for EBI 12	1100-0118
AL 106	Silicone protection box for EBI 12 Temperature Data Logger	1340-6023
AL 107	Silicone protection box for EBI 12 Temperature Data Logger	1340-6024
AL 112	Antenna steam sterilizer	1340-6007
AL 190	Silicone cable strap set	1248-0190
AL 285	Logger-Check	1248-0285
Clamp	Holding clamps for probes	1340-0005
EBI TIB	Thermal Isolation box, 160 x 160 x 82 mm	1340-1894
EBI TIB 2	Thermal Isolation box, 160 x 160 x 60 mm	1340-1892
EBI DA	Can adapter for bottle loggers	1340-1963
EBI DA-Set	Can adapter set for bottle loggers	1340-1984
EBI FL-S	Bottle adapter, silicone	1340-1961
EBI NI-140	Grommets for sensor fixing up to 140 °C (100 pieces)	1340-1988
EBI KV-3	Compression fitting	1340-2005
Dummy C	Dummy Bottle POM 220x65mm	1340-2255
Dummy 0,5L	Dummy Bottle POM 0,5l	1340-2256
Dummy E	Dummy Bottle POM 200x60mm	1340-2257
Dummy 1L	Dummy Bottle POM 1l	1340-2258
Dummy 0,7L	Dummy Bottle POM 0,7l	1340-2259

Silicone protection box

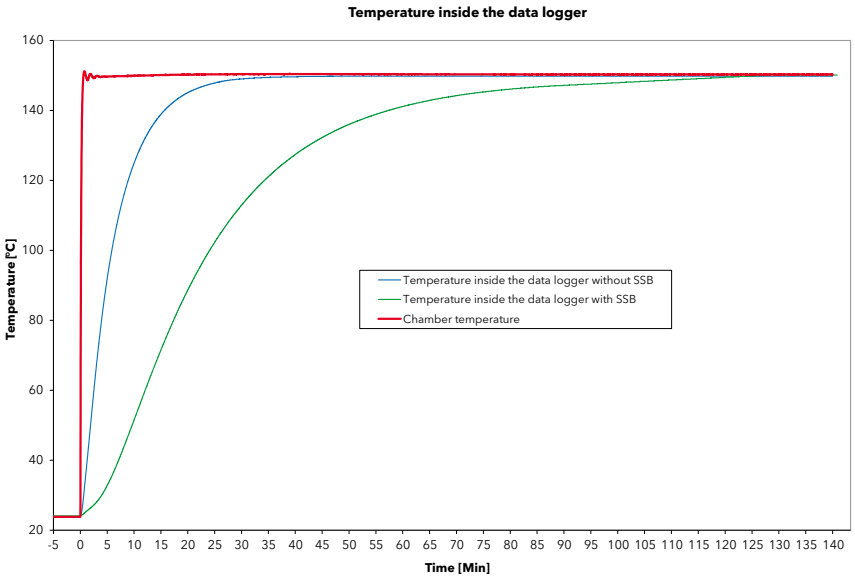
- Protects EBI 12 Data Loggers against heat peaks
- Protects EBI 12 Data Loggers against mechanical damage
- Extends the life of EBI 12 Data Loggers

Silicone protection box AL 101
for e.g.
EBI 12-TP222,
EBI 12- TP322,
EBI 12-TP422 and
EBI 12-TP45x

Ø 78 mm,
Height: 50 mm

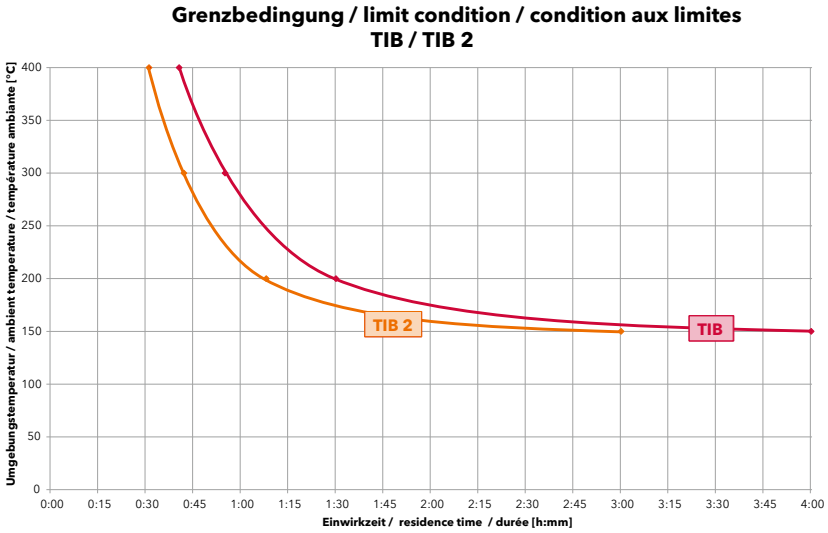
Silicone protection box AL 107
for e.g.
EBI 12- T24x,
EBI 12-T441,
EBI 12- T67x und
EBI 12-T471

Ø 78 mm,
Height: 44 mm



Thermal Insulation Boxes

- Usable from +150 °C ... +400 °C
- Thermal protection of data loggers
- Stainless steel

Thermal insulation boxes EBI TIB and EBI TIB 2
for EBI 12-T221 and EBI 12-T421

- EBI TIB: 160 mm x 160 mm x 82 mm
- EBI TIB 2: 160 mm x 160 mm x 60 mm