BOTOUCH

Integration of touch screens into standard and customised enclosures

Touch screen integration

From a standard enclosure to your specific application.

We integrate touch screens / displays into virtually all standard and custom enclosures for you. We use for this a sealant technology developed and legally protected by BOPLA. The touch screen and glass units can also be joined by means of optical bonding.

Combination with the other services we provide, such as machining, ESD-safe all-in assembly and packaging, results in a genuine "All-round no worries" package for you.

8.

7.

1.

STANDARD ENCLOSURE FROM STOCK

The standard BOPLA enclosure is the starting point for every application.

2.

ENCLOSURE MACHINING AND LASER MARKING

Our range of modern machines permits various machining operations and surface treatments, including laser marking and printing.

3.

4.

PRINTING OF THE GLASS PLATE

The glass plate is printed in conformity to your specifications using screen-printing.

2

ESD-SAFE CUSTOMISED PACKAGING

Sensitive equipment needs shipping- and ESD-safe packaging. We use a tailor-made solution to ensure that your equipment can be safely stored and shipped.

ALL-IN ASSEMBLY OF THE ENCLOSURE

If you wish, we can install further elements, such as PCBs, cable glands and complex electronics ESD-safe. We will also be pleased to perform final inspection of the entire application for you.

6.

RETAINING PLATE INSTALLATION USING OUR OWN BOPLA METHOD

A retaining plate is needed to stabilise the touch screen / display unit. We use a sealant technology developed and legally protected by ourselves for fitting: a floating support system effectively balances out dimensional and machining tolerances, thermal expansion effects and mechanical loads. Selection of exactly the right sealant makes it possible to meet a broad range of requirements.

BONDING OF THE TOUCH SCREEN / DISPLAY UNIT

The complete unit is positioned in the enclosure and bonded by means of a film of adhesive.

5.
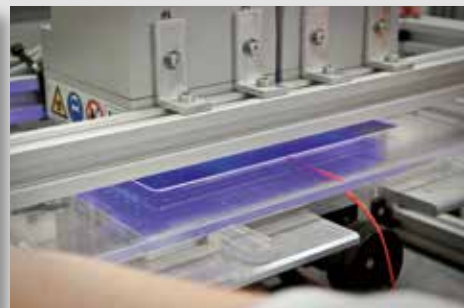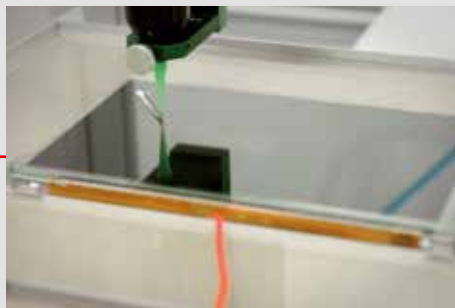
OPTICAL BONDING: JOINING OF GLASS AND TOUCH SCREEN / DISPLAY

The touch screen / display is joined to the glass front by means of optical bonding. Unlike an air gap, liquid adhesive bonding of the two components achieves a high-quality visual effect combined with mechanical stability.

Touch screen integration

Standard enclosures

Nearly all our standard enclosures permit integration of commercially available displays of various sizes, and also of resistive and capacitive touch screens. The touch screen can additionally be combined with a conventional membrane keypad if the customer wishes.

Solutions incorporating a continuous front membrane for resistive or a cover glass for capacitive touch screens are also available for applications in which there must be no dirt-collecting edges, such as medical and foodstuffs technology.

Tastomat
Display combined with customised membrane keypad and rotary switch.
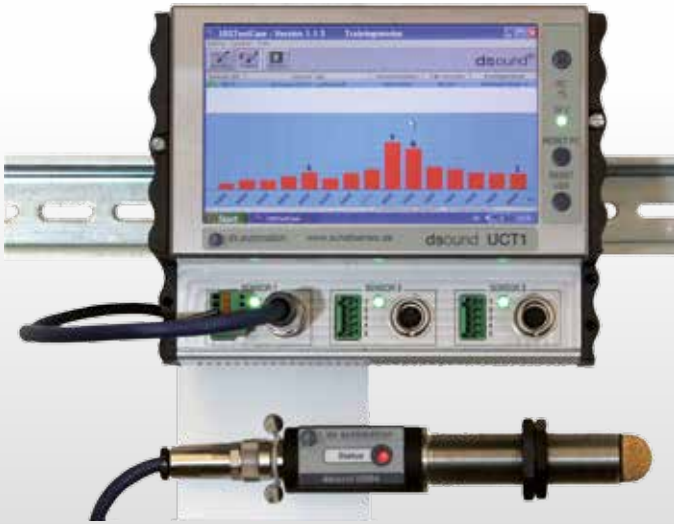

Alu-Topline
Capacitive touch screen combined with capacitive ITO keys.

Alu-Topline
Capacitive touch screen combined with RFID module.

Aluplan
Display combined with customised membrane keypad.

Alurail
Integration of display into enclosure for DIN-rail mounting.

Botego
Capacitive touch screen in desktop enclosure.

Bocube Alu
With back-printed glass plate and bonded touch screen / display unit.

BOS-Streamline
Display combined with customised membrane keypad.

Alustyle
Resistive touch screen under a continuous membrane.

Bocube
With back-printed glass plate, bonded touch screen / display unit + SBC.

Touch screen integration

Customised solutions

Are you looking for ways of implementing your own styling, or do you want to develop your own enclosure for integration of a touch screen / display? We'll be pleased to advise you on customised enclosure solutions!

Customised supporting plate
Resistive touch screen combined with customised membrane keypad.

Customised Profiline keypad
Illuminated keypad with resistive touch screen on a PCB.

Combination with conventional HMI solutions is also possible.

BoTouch Plastic, IP 65
10.1″ touch screen / display integration.

BoTouch special type
For surface-mounted installation.

BoTouch Aluminium
Profiline keypad (illuminated) with resistive touch screen.

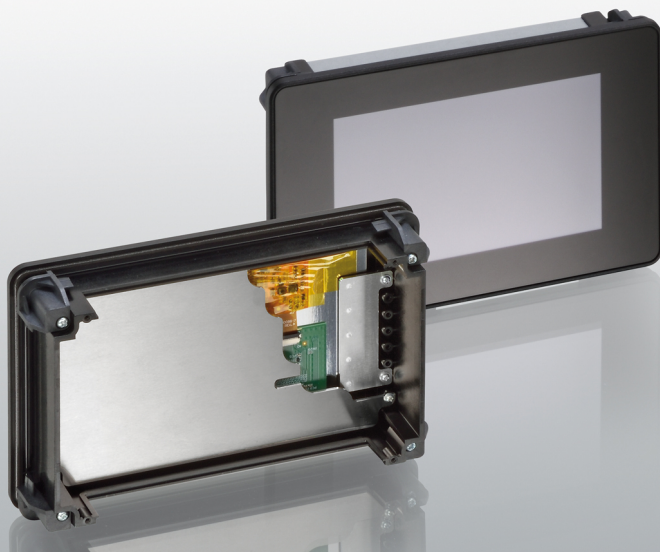**Customised enclosure**
Capacitive touch screen.

BoTouch Plastic
Display combined with capacitive keypad and RFID reader.

Customised front panel
Resistive touch screen combined with RFID module.

7

BoTouch

- BoTouch Plastic (BTK / BTK-IP) designed for use with capacitive touch screens (from 4.3" to 10.4")
- BoTouch Aluminium (BTA) designed for use with resistive touch screens (from 5.7" to 12.1")
- project-specific variants on request
- enclosure front / front membrane: project-specific printing
- rear hood / enclosure frame fitted with clamps for panel installation
- project-specific display retaining plate made of aluminium (the following are required for preparation work: sample, CAD data or a datasheet for the touch/display combination.)
- starter kits are available consisting of enclosure incl. mounted display for various designs

Colour:
BTK / BTK-IP: black, similar to RAL 9005;
BTA: customer-specific

Protection class:
BTK-IP: IP 65/DIN EN 60529
BTK / BTA: Up to IP 65/DIN EN 60529 for the installation area

Enclosure material:
Rear hood: galvanised sheet steel
Rear panel: anodised aluminium
BTK enclosure frame: PC UL 94 V0
BTK-IP enclosure frame: PA 6.6 GF 30 UL 94 V0
BTA front frame: aluminium (anodised or powder-coated)

8

Individual enclosures, optimised for the installation of capacitive and resistive touch screens


Using an installation process which is trademarked by BOPLA, the display is fixed by means of a retaining plate.
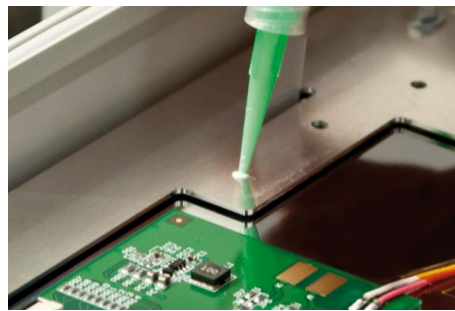

The installation process efficiently compensates for dimensional and processing tolerances, and also for the effects of thermal expansion or mechanical loads such as vibrations.
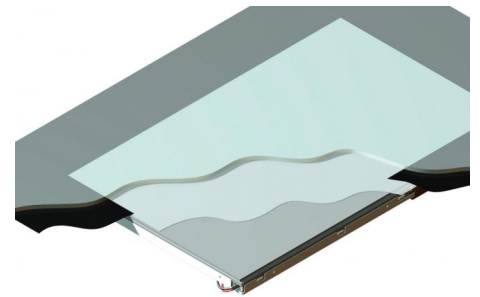

BTK(-IP): Optimal touch function by glueing the display to the glass pane using the optical bonding process.
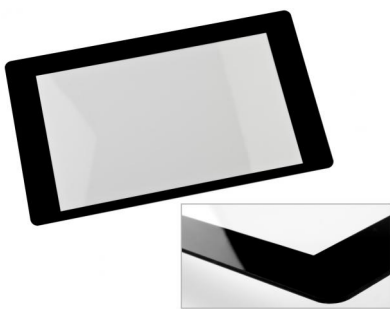

BTK(-IP): A 2 mm thick mineral glass pane which is backprinted and designed for specific projects ensures optimal protection and a clear view of the display.
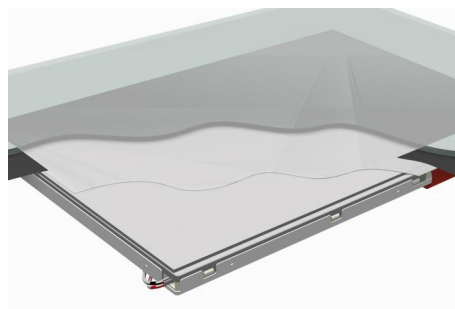

BTA: Depending on the display used, a standardised appearance is created by means of full-surface lamination of the display with the front membrane.
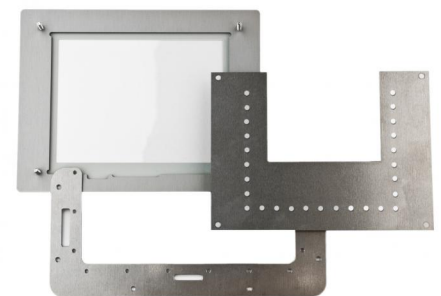
BTA: The project-specific aluminium front frame offers a wide range of options for individual designs. Special sizes are also possible.
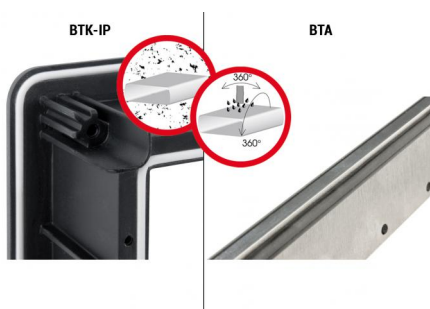
BTK-IP: This version provides ingress protection of IP 65 for the enclosure and to the installation area; BTK / BTA = IP 65 to the installation area only.
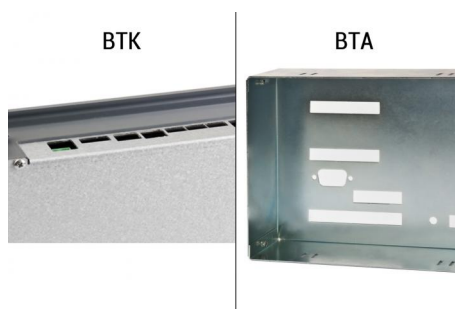
On request, the sturdy rear hood / rear panel can be supplied with break-throughs; optional printing.
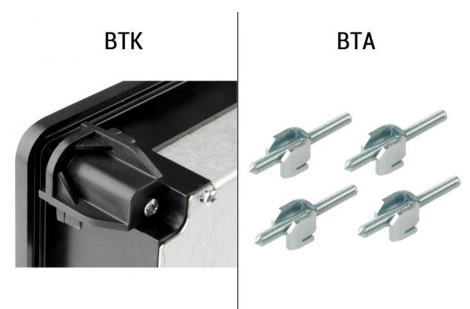
Clamps ensure that the enclosure fits securely in the control panel.

BoTouch | Plastic

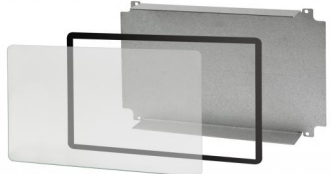## BoTouch plastic, set

Model	Order no.	Display max.
BTK 5.0-9005 Set	78010505.S1	5"
BTK 7.0-9005 Set	78010705.S1	7"
BTK 10.4-9005 Set	78011045.S1	10.4"

Scope of delivery:
- 1 enclosure frame with foamed seal
- 4 clamps incl. screws
- 4 screws for rear hood fixing
- 1 glass pane, 2 mm, unprinted (chemical anti-reflection coating)
- 1 stick-on frame to fix the glass pane
- 1 rear hood (closed), 1 mm, installation version, galvanised sheet steel, corrosion-protected

BoTouch Plastic Starter kit (black, similar to RAL 9005)

Model	Order no.	Note
BTK 5.0-Starter-Kit	78010505.MT1	5"; Display: G-ETM0500G0BDH6
BTK 7.0-Starter-Kit	78010705.MT1	7"; Display: G-ETM0700G0EDH6

Scope of delivery:
- 1 front frame
- 1 glass pane incl. single-colour printing (black, similar to RAL 9005)
- 1 display G-ET... fully-mounted using optical bonding process with display retaining plate
- 1 rear hood
- 1 aluminium mounting panel (2 mm)
- 2 display retaining plates
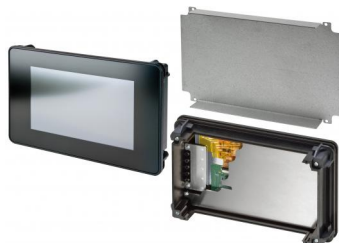
BoTouch front frame, plastic (PC UL 94 V0), black (similar to RAL 9005)

Model	Order no.	Display max.
BTK 5.0-9005	78010505	5"
BTK 7.0-9005	78010705	7"
BTK 10.4-9005	78011045	10.4"

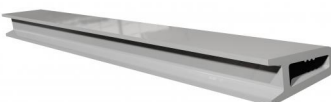Scope of delivery: 1 enclosure frame with foamed seal, 4 clamps incl. screws, 4 screws for rear hood fixing

BoTouch press-in profile set

Model	Order no.	Note
BTK 5.0-AP	78080500	For BTK 5.0-9005
BTK 7.0-AP	78080700	For BTK 7.0-9005
BTK 10.4-AP	78081040	For BTK 10.4-9005

Scope of delivery: 2 profiles for longitudinal side mounting, 2 profiles for short-side mounting (only BTK 10.4)
Note: Recommended for thin / delicate installation areas and IP protection requirement.
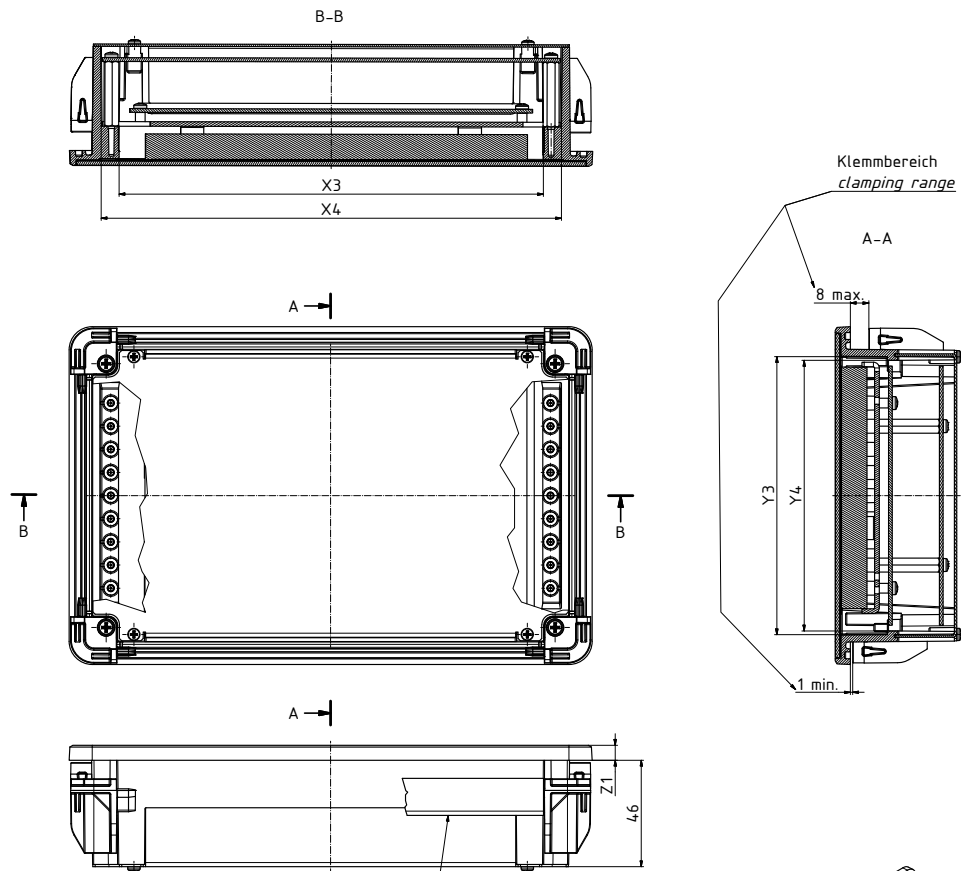
* = Available on request

B–B

X3
X4

Klemmbereich
clamping range

A–A

8 max.

Y3
Y4

1 min.

A

B   B

A

Z1
46

Bei Einsatz eines Andrückprofilsatzes BTK...–AP kann es zu
Einschränkungen des Anschlussbereiches kommen.
When using a Press–in profile set BTK...–AP
it may limit the connection area.

ISO (1 : 2)

X1
X2

Y1
Y2

5" – 10,4" Display

R1,25
R10

Einbauöffnung
fitting opening

X5

Y5

R2 zulässig
R2 allowed

Maßtabelle /											
Modell / Model	X1	X2	X3	X4	X5	Y1	Y2	Y3	Y4	Y5	Z1
BoTouch–Kst 5,0"	166	160	123,3	138,9	148	116	110	90,15	86,9	98	6,5
BoTouch–Kst 7,0"	226	220	183,3	198,9	208	146	140	120,15	116,9	128	6,5
BoTouch–Kst 10,4"	316	310	271,3	287,9	298	236	230	208,15	204,9	218	7

BoTouch | Plastic IP 65

BoTouch plastic, ingress protection IP 65, set

Model	Order no.	Display max.
BTK-IP 4.3-9005 Set	78010435.S1	4.3"
BTK-IP 10.1-9005 Set	78011015.S1	10.1"

Scope of delivery:
- 1 enclosure frame with foamed seals
- 4 clamps incl. screws
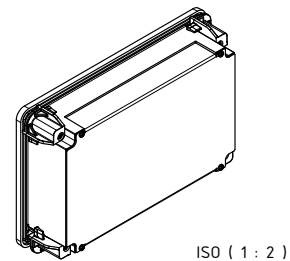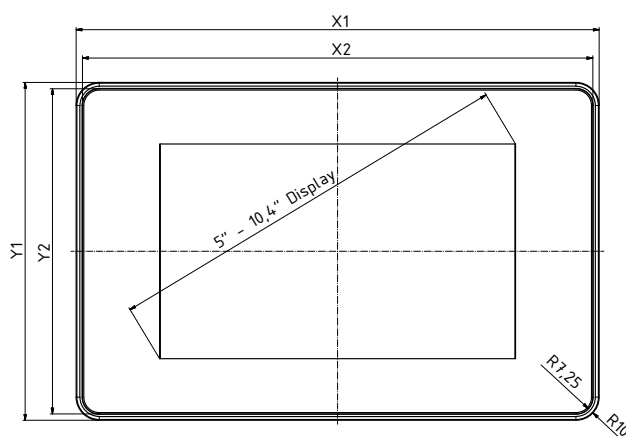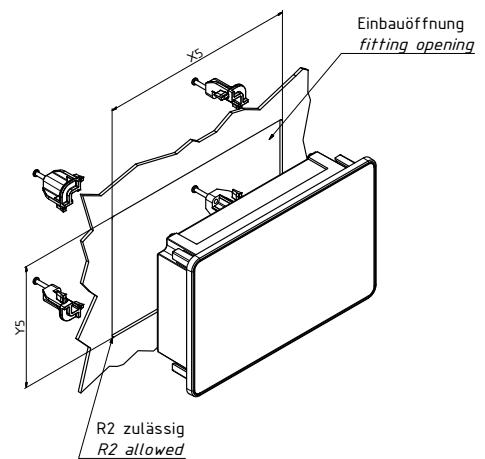- screws for rear panel fixing
- 1 glass pane, 1.6 mm (BTK 4.3-IP) or 2 mm (BTK 10.1-IP), unprinted, (chemical anti-reflection coating)
- 1 stick-on frame to fix the glass pane
- rear panel, 3 mm, anodised aluminium with foamed seals

BoTouch front frame, plastic (PA 6.6 GF 30 UL 94 V0), ingress protection IP 65, black (similar to RAL 9005)

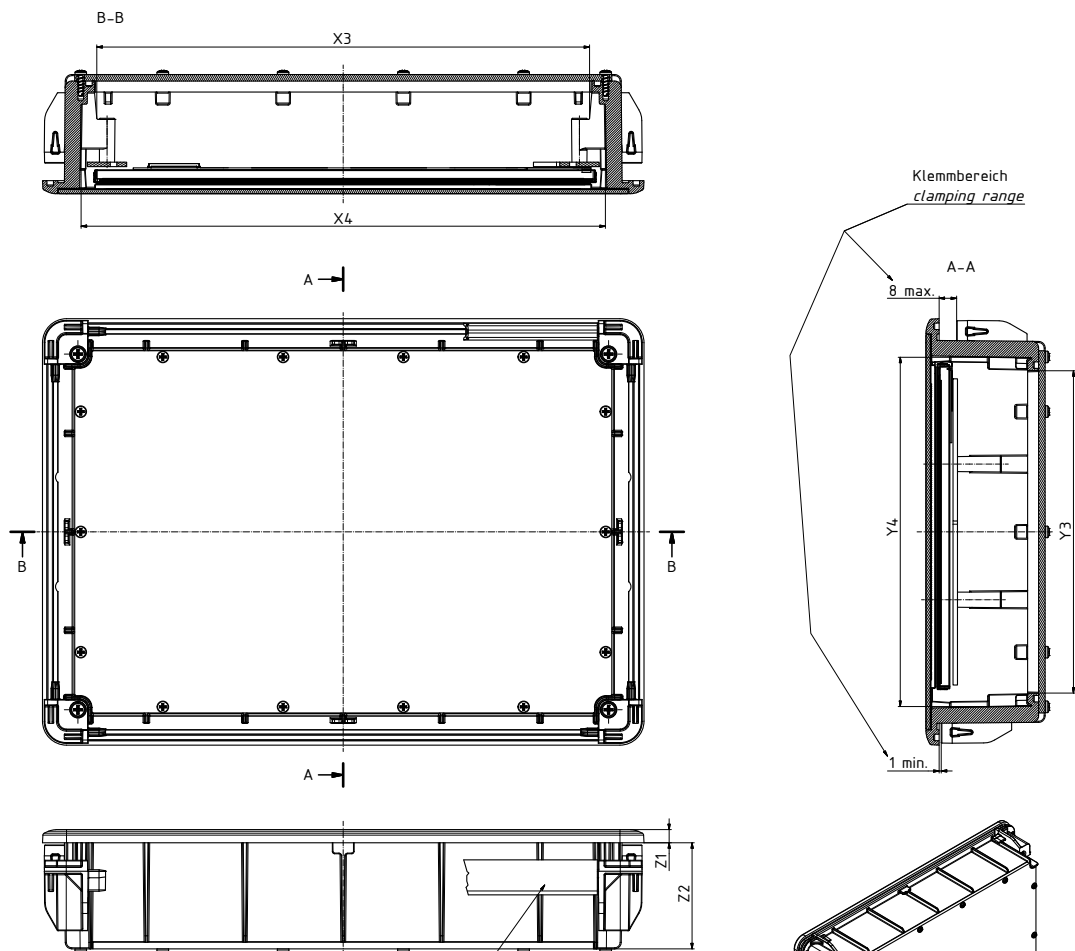| Model	Order no.	Display max.
BTK 4.3-IP-9005	78010435	4.3"
BTK 10.1-IP-9005	78011015	10.1"

Scope of delivery: 1 enclosure frame, 4 clamps incl. screws, screws for rear panel fixing
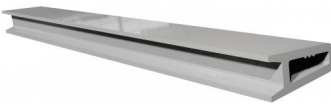
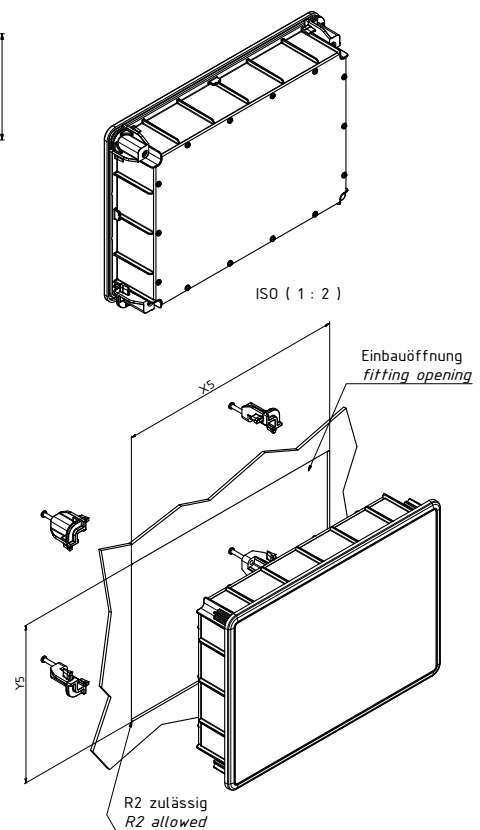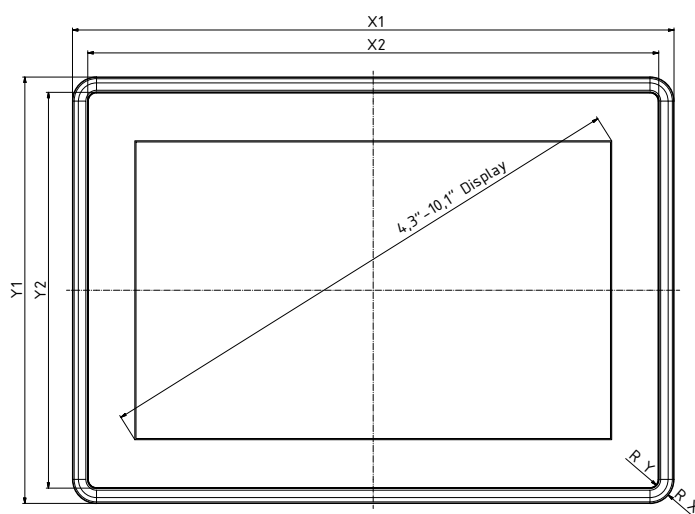## BoTouch press-in profile set

Model	Order no.	Note
BTK 10.1-AP	78081010	For BTK 10.1-IP-9005

Scope of delivery: 2 profiles for longitudinal side mounting, 2 profiles for short-side mounting

* = Available on request

B–B

X3

X4

A

A

B

B

Klemmbereich
clamping range

A–A

8 max.

1 min.

Y4

Y3

Z1

Z2

Bei Einsatz eines Andrückprofilsatzes BTK ...–AP kann es zu
Einschränkungen des Anschlussbereiches kommen.
*When using a Press–in profile set BTK ...–AP
it may limit the connection area.*

ISO (1 : 2)

X1

X2

4,3"–10,1" Display

Y1

Y2

R Y

R X

Einbauöffnung
fitting opening

X5

Y5

R2 zulässig
R2 allowed

Maßtabelle /														
Modell / Model	X1	X2	X3	X4	X5	Y1	Y2	Y3	Y4	Y5	Z1	Z2	R X	R Y
BoTouch–Kst 4,3"–IP	142	126,8	94,9	107,4	125	102	87,3	56,9	69,6	85	5,3	35,5	R2	R0
BoTouch–Kst 10,1"–IP	275	261	225,3	239,7	256,5	195	181	147,4	159,7	176,5	6	48,5	R11	R4

BoTouch | Aluminium

BoTouch front frame, anodised aluminium

Model	Order no.	Display max.
BTA 5.7-Alu	78020571*	5.7"
BTA 7.0-Alu	78020701*	7"
BTA 8.4-Alu	78020841*	8.4"
BTA 10.4-Alu	78021041*	10.4"
BTA 12.1-Alu	78021211*	12.1"

Scope of delivery: 1 front frame with fitted CR seal

Note: The front frame is also available anodised or powder-coated.

** The front membrane is manufactured/printed to customer specifications.

BoTouch rear hood, sheet steel, 1mm

Model	Order no.	Note
BTA 5.7-RH	78050570	For BTA 5.7-Alu
BTA 7.0-RH	78050700	For BTA 7.0-Alu
BTA 8.4-RH	78050840	For BTA 8.4-Alu
BTA 10.4-RH	78051040	For BTA 10.4-Alu
BTA 12.1-RH	78051210	For BTA 12.1-Alu

Scope of delivery: 1 rear hood, distance bolts, screws for rear hood mounting, 4 clamps for control panel mounting
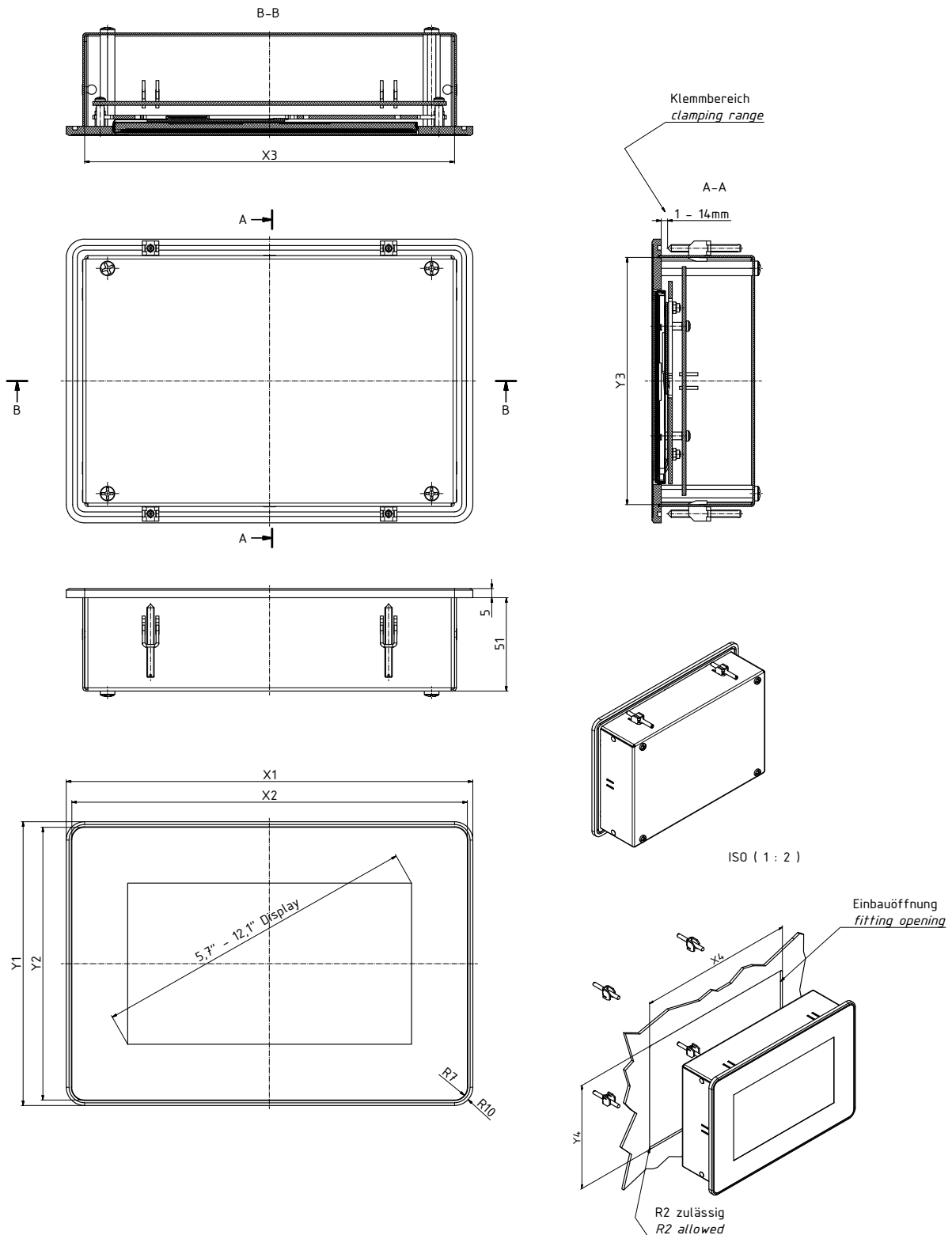
BoTouch Aluminium Starter kit

Model	Order no.	Note
BTA 5.7-Starter-Kit	78020571.MT1	5.7"; Display: G-ETV570G0DHU
BTA 7.0-Starter-Kit	78020701.MT1	7"; Display: G-ET0700G8DH6

Scope of delivery:
- 1 enclosure front
- 1 single-colour back-printed front membrane
- 1 display G-ET... fully mounted with display retaining plate
- 1 rear hood including distance bolts, screws and clamps
- 1 aluminium mounting panel (2 mm)

* = Available on request

B-B

X3

Klemmbereich
clamping range

A-A

1 - 14mm

Y3

A

B

B

A

5

51

X1

X2

Y1

Y2

5,7" - 12,1" Display

R7

R10

ISO (1 : 2)

Einbauöffnung
fitting opening

X4

Y4

R2 zulässig
R2 allowed

Maßtabelle / dimension table								
Modell / Model	X1	X2	X3	X4	Y1	Y2	Y3	Y4
BoTouch-Alu BTA-5,7"	182	176	162	166	155	149	135	139
BoTouch-Alu BTA-7,0"	222	216	202	208	155	149	135	139
BoTouch-Alu BTA-8,4"	260	254	240	244	215	209	195	199
BoTouch-Alu BTA-10,4"	310	304	290	294	255	249	235	239
BoTouch-Alu BTA-12,1"	350	344	330	334	285	279	265	269

BOPLA

A Phoenix Mecano Company

HP U

cm