



MULTI-BOX
THE BOX COMPANY



Product Catalog Enclosures



300 Roundhill Drive
Rockaway, NJ 07866
Tel: 973-586-2500 Fax: 973-586-1590
www.norstat.com

MULTI-BOX – The Box Company



Information

Enclosures and accessories shown in this catalog are products of the company MULTI-BOX

MULTI-BOX has been a specialist for standardised and customised aluminium and plastic enclosures since more than 30 years. Our enclosures are used in a variety of ways and serve as packaging for electronic or electro-technical devices in mechanical engineering, measurement and process control technology. Thanks to our extensive product and service range we offer our customers individual enclosure solutions for any application area. Our service extends from mechanical processing through to optical design and assembly of components. With our unique in-house production depth and variety of products, we manufacture customised solutions day by day. Our customers can reach us around the world through more than 20 international sales representations or get in direct contact with our headquarter in Germany.

We are your reliable partner in enclosure issues from construction to production. The individual requirements of our customers are a priority at MULTI-BOX.



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MULTI-BOX – Customised solutions from one source



MULTI-BOX is characterised by high performance in customising, design and mounting of aluminium and plastic enclosures. With our own plastic injection production we control the value chain of our

products right from the beginning, ensure high quality and offer great flexibility to our customers. Please inform yourself about our wide service range and rely on decades of operating experience in enclosures.



Surface design

Make more out of your product!
With below mentioned surface design services we offer a wide range of possibilities in order to create an individual product design or prepare your enclosures for the final application:

- Silk screen printing
- Pad printing
- Engraving
- Labelling
- 2 components liquid coating in special colours (according to RAL)
- Powder coating in special colours (according to RAL)



Mechanical processing

With our modern machinery equipment we transform standard products into customised solutions day by day. Thanks to high performance CNC-machines we can mill, drill and cut threads according to customer requirements. Additionally we cut profile enclosures on special lengths and produce customised mounting plates. Please contact us and provide detailed drawings with your individual request.



EMC-shielding

According to your requirements we offer three options of protection against external interferences:

- Copper-chromate-nickel-vaporisation
- Aluminium-vaporisation
- Coating with copper conductive lacquer



Assembling and mounting

Concentrate on elementary things!

Make use of our wide accessory assortment and purchase your full configured enclosures from us. With our qualified staff and professional equipment we offer the installation of following components:

- Terminal blocks
- Cable glands
- Membrane keyboards
- Pressure adjusting elements
- Thread inserts
- Seals
- Battery compartments
- DIN rails
- Mounting plates
- Plug connectors
- Distance bolts
- Earthing bolts

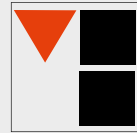
In addition we offer following services:

- Gluing displays
- Inserting of additional mounting possibilities
- Professional mounting of supplied components

Sample service

Make use of our sample service and test products on site. Within a few days we deliver requested enclosures and you can assure yourself of product quality and fitting of components.

MULTI-BOX – Services



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Less commissioning work

With our extensive range of services and products, we offer customers individual enclosure solutions for every application area. Our service extends from mechanical processing through to optical design and assembly of various components. Benefit from our unique in-house production depth and purchase your full configured enclosure directly from the manufacturer.



Assured quality

With our centralised production at the Kirchleugern site we have a direct influence on the whole value creation chain of our products. We attach great importance to quality and efficiency in all areas. We are EN ISO 9001:2008 certified to continuously check our working processes and production steps.



No reject risk

Rely on our decades of experience in finishing enclosures and reduce your risk of rejects. MULTI-BOX supplies 100%.



Our service is your advantage



Short delivery times & individual local advice

In order to guarantee short delivery times, we keep our standard products in stock for you. Individualisation of the enclosure takes place with the corresponding order. With our modern machinery park and centralised production, we manufacture your individual enclosure solutions in the shortest time possible. Our external sales reps are available at all times to answer any questions and are pleased to give you local advice.



Guaranteed delivery service




















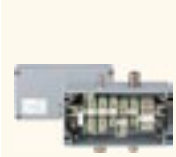


The individual production stages and all information on your enclosures are recorded and saved in our system with an individual item number. This means we can guarantee our customers identical replacement deliveries even after several years.



Increased flexibility with our own plastic injection production

With our plastic injection department at the Kirchleugern site, we can offer our customers the highest level of flexibility. Optical design of the enclosure in special colours in accordance to RAL specifications is as possible as special materials for particular applications.

MULTI-BOX – Product overview

Aluminium-Enclosures	MBA	DELTA-BOX	TAST	MINI-TAST	MBAS	MBAL	
							
Plastic-Enclosures	MBP	MBM	MBT	MBT / Series 2000	MBT / Multi-Color	MBT / Mem-brane-Recess	
							
Ex-Enclosures	MBPO-ST	MBRCA	MBRC2	MBS	MBEU	MBZA	
							
Special-Enclosures	Ex-empty	Ex-e	Ex-i				
							
	Plastics and Aluminium						
							



Extensive product portfolio

MULTI-BOX offers a wide range of different enclosure solutions. We generally differentiate between four categories.

Our standard enclosures made of **Aluminium** are manufactured with aluminium die casting or gravity casting methods. Coating with a Polyester-based powder paint takes place after chromating. A 1000 hour salt spray test was successfully completed.

Enclosures made of Aluminium extruded profiles form another block. They are available in different versions and particularly characterised by the versatile applications and length variability.

Various materials are used in the area of **plastics**. Besides Polyester enclosures we offer standard enclosures made of UV-resistant Polycarbonate or ABS. Polystyrene and Noryl are also processed. Other specific materials for special applications are available upon request. Please contact us for selection of the right material for your application.

Ex-Enclosures are always used when explosive concentrations of gases, vapours or dusts occur in the installation area. A separate certificate proves the constructional safety of the component enclosure.

Alongside an extensive range of different standard enclosures, MULTI-BOX offers **Special Enclosures** made of plastics and aluminium. In cooperation with our customers, we take over both, the design as well as technical implementation of exclusive enclosure solutions. The result is cost efficient and tailor-made enclosure solutions from one source.

Aluminium-Enclosures MBA

Protection class IP 66



MBA-Enclosures are universal, sturdy and easy to adapt „packaging“ of electrical, electronic and pneumatic components. Manufacturing takes place using the die casting or gravity die casting method. MBA-Enclosures can be mechanically processed in a number of ways and there are almost no limits to customised surface design. As terminal enclosures they can be assembled according to a module system with various clamps and cable glands. In measurement and control technology they are often used for encapsulating sensors. Additionally they serve as junction enclosures for cables and lines or take on the job of protecting highly sensitive electronics against water, dirt and dust.



- All enclosures fulfil protection class IP 66 in accordance with DIN EN 60529
- Standard sealing PUR-foamed
- Temperature resistance: -40 °C to +100 °C
- The cover screws cannot be lost and are made of stainless steel
- The enclosure is fixed outside of the sealing area with separated fixing channels
- Temperature resistance with silicone sealing: -50 °C to +140 °C
- Special seals, such as ones made of silicone, are available on request
- The standard enclosure colour is light grey, similar to RAL 7001
- Special colours are available on request
- A seawater resistant version is available with chromating and coating after mechanical processing
- An EMC design with a lacquer free spring-groove system and conducting cover seal is available on request
- Accessories: Optional accessories are listed in the table of sizes

Article number	Type	L	B	H	TS	M	WL	GA	SI	SL	EMV	IS
		mm	mm	mm								
0101100100	MBA 504530	50	45	30						•		
0101100200	MBA 606030	58	64	34					•	•	•	
0101100300	MBA 606045	58	64	45					•	•	•	
0101100400	MBA 906030	98	64	35					•	•	•	
0101100500	MBA 906045	98	64	35					•	•	•	
0101100600	MBA 156030	150	64	34					•	•	•	
0101100700	MBA 156045	150	64	45					•	•	•	
0101100800	MBA 708050	75	80	54					•	•	•	
0101100900	MBA 708055	75	80	57	•	•			•	•	•	•
0101101000	MBA 128050	125	80	54	•				•	•	•	
0101101100	MBA 128055	125	80	57	•	•			•	•	•	•
0101101200	MBA 128012	125	80	125	•	•			•	•	•	
0101101300	MBA 178055	175	80	57	•	•			•	•	•	•
0101101400	MBA 258050	250	80	54	•				•	•	•	
0101101500	MBA 258065	250	80	65	•				•	•	•	
0101105500	MBA 101080	100	100	80	•	•	•	•	•	•	•	•
0101101600	MBA 121265	122	120	65	•	•	•	•	•	•	•	•
0101101700	MBA 121275	122	120	75	•	•	•	•	•	•	•	
0101101800	MBA 121280	122	120	80	•	•	•	•	•	•	•	•
0101101900	MBA 121290	122	120	90	•	•	•	•	•	•	•	
0101102000	MBA 221265	220	120	65	•	•	•	•	•	•	•	•
0101102100	MBA 221275	220	120	75	•	•	•	•	•	•	•	
0101102200	MBA 221280	220	120	80	•	•	•	•	•	•	•	•
0101102300	MBA 221290	220	120	90	•	•	•	•	•	•	•	
0101102400	MBA 361280	360	122	80	•	•	•	•	•	•	•	
0101104500	MBA 141490	140	140	90	•	•	•	•	•	•	•	•
0101102500	MBA 161690	160	160	90	•	•	•	•	•	•	•	•
0101104000	MBA 261665	260	160	65	•	•	•	•	•	•	•	•
0101102600	MBA 261690	260	160	90	•	•	•	•	•	•	•	•
0101102800	MBA 361690	360	160	90	•	•	•	•	•	•	•	•
0101102900	MBA 561690	560	160	90	•	•	•	•	•	•	•	•
0101103000	MBA 202311	200	230	110	•	•	•	•	•	•	•	•
0101104100	MBA 202318	200	230	180	•	•	•	•	•	•	•	•
0101103100	MBA 282311	280	230	110	•	•	•	•	•	•	•	•
0101103200	MBA 332311	330	230	110	•	•	•	•	•	•	•	•
0101103300	MBA 332318	330	230	180	•	•	•	•	•	•	•	•
0101103400	MBA 402311	400	230	110	•	•	•	•	•	•	•	•
0101103500	MBA 403111	400	310	110	•	•	•	•	•		•	
0101103600	MBA 403118	400	310	180	•	•	•	•	•		•	
0101103700	MBA 602311	600	230	110	•	•	•	•	•	•	•	•
0101103800	MBA 603111	600	310	110	•	•	•	•	•		•	
0101103900	MBA 603118	600	310	180	•	•	•	•	•		•	

L = Length, **B** = Breadth, **H** = Height, **TS** = Mounting rail, **M** = Mounting plate, **WL** = Wall mounting bracket set, **GA** = External hinge set, **SI** = Silicone cover sealing, **SL** = Seawater resistant coating, **EMV** = EMC version, **IS** = Hex socket head screws

Technical drawings and further information about our products can be found online at www.multi-box.com

Profile-Enclosures DELTA-BOX

Protection class IP 43 / 54



Delta-Box-Enclosures are made of aluminium profile and unite a compact and nicely shaped design with extremely good stability. The range can be used universally and consists of seven profile sizes of which the length can be individually adapted. Groove guides in the base allow convenient assembly of PCBs in European card format or other electronic components. The installation of a battery compartment MB 92 (1 x 9-V or 2 x Mignon) is possible in the end cap. The aluminium front plates are 2 mm thick and silver anodised. The end caps are made of impact-proof ABS.



- All enclosures fulfil protection class IP 43 in accordance with DIN EN 60529
- With an additional stamping seal IP 54 can be reached
- Temperature resistance: -20 °C to +80 °C
- The standard enclosure colour is black, similar to RAL 9005
- Special colours are available on request
- Delta-Box-Enclosures are available in seven profile heights
- Special lengths are available on request
- Accessories: EMC-Version, IP 54 sealing kit, Battery compartment MB 92 (1x9-V or 2xMignon)

Article number	Type	L	B	H	FÜ	IP 54	EMV
		mm	mm	mm			
1501100100	DELTA-BOX 80	84	80	40	•		•
1501100200	DELTA-BOX 130	134	80	40	•		•
1501100300	DELTA-BOX 180	184	80	40	•		•
1501100400	DELTA-BOX 210	214	80	40	•		•
1501100500	DELTA-BOX 1130	134	106	50	•	•	•
1501100600	DELTA-BOX 1180	184	106	50	•	•	•
1501100700	DELTA-BOX 1210	214	106	50	•	•	•
1501100800	DELTA-BOX 1300	300	106	50	•	•	•
1501100900	DELTA-BOX 2130	134	166	35	•	•	•
1501101000	DELTA-BOX 2180	184	166	35	•	•	•
1501101100	DELTA-BOX 2210	214	166	35	•	•	•
1501101200	DELTA-BOX 2300	300	166	35	•	•	•
1501101300	DELTA-BOX 3130	134	120	35	•	•	•
1501101400	DELTA-BOX 3180	184	120	35	•	•	•
1501101500	DELTA-BOX 3210	214	120	35	•	•	•
1501101600	DELTA-BOX 3300	300	120	35	•	•	•
1501101700	DELTA-BOX 4130	134	166	50	•	•	•
1501101800	DELTA-BOX 4180	184	166	50	•	•	•
1501101900	DELTA-BOX 4210	214	166	50	•	•	•
1501102000	DELTA-BOX 4300	300	166	50	•	•	•
1501102100	DELTA-BOX 5130	134	106	70	•		•
1501102200	DELTA-BOX 5180	184	106	70	•		•
1501102300	DELTA-BOX 5210	214	106	70	•		•
1501102400	DELTA-BOX 5300	300	106	70	•		•
1501102500	DELTA-BOX 6130	134	166	70	•		•
1501102600	DELTA-BOX 6180	184	166	70	•		•
1501102700	DELTA-BOX 6210	214	166	70	•		•
1501102800	DELTA-BOX 6300	300	166	70	•		•

L = Length, **B** = Breadth, **H** = Height, **FÜ** = Rubber feet (4 pieces), **IP 54** = Additional seal IP 54, **EMV** = EMC version

Technical drawings and further information about our products can be found online at www.multi-box.com

Keyboard-Enclosures TAST

Protection class IP 43



TAST-Enclosures made of extruded aluminium profile serve as desk, wall or machine enclosures. They are preferably used as keyboard, operating elements or displays. The dimensions and groove guides in the base allow convenient assembly of PCBs in European card format or other electronic components. The aluminium front plates are 2 mm thick and silver anodised. The end caps are made of impact-proof ABS.

- All enclosures fulfil protection class IP 43 in accordance with DIN EN 60529
- Temperature resistance: -20 °C to +80 °C
- The standard enclosure colour is light grey/dark grey, similar to RAL 7035/7012
- Special colours are available on request
- TAST-Enclosures are available in two profile heights
- Special lengths are available on request
- Accessories: Battery compartment MB 92 (1x9-V or 2xMignon), Plug in screw nuts, Rubber feet

Article number	Type	L	B	H	FÜ	VM
		mm	mm	mm		
1101100400	TAST 100	118	168	45	•	•
1101100500	TAST 170	178	168	45	•	•
1101100600	TAST 230	252	168	45	•	•
1101100700	TAST 330	338	168	45	•	•
1101100800	TAST 1100	118	168	65	•	•
1101100900	TAST 1170	178	168	65	•	•
1101101000	TAST 1230	252	168	65	•	•
1101101100	TAST 1330	338	168	65	•	•

L = Length, **B** = Breadth, **H** = Height, **FÜ** = Rubber feet (4 pieces), **VM** = Plug in screw nut (4 pieces)

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Keyboard-Enclosures MINI-TAST

Protection class IP 43



MINI-TAST-Enclosures made of extruded aluminium profile serve as desk, wall or machine enclosures. They convince with the slimline design and are preferably used as keyboard, operating elements or displays in control and measurement technology. The dimensions and groove guides in the base allow convenient assembly of PCBs in European card format or other electronic components. The aluminium front plates are 2 mm thick and silver anodised. The end caps are made of impact-proof ABS.

- All enclosures fulfil protection class IP 43 in accordance with DIN EN 60529
- Temperature resistance: -20 °C to +80 °C
- The standard enclosure colour is black, similar to RAL 9005
- Special colours are available on request
- MINI-TAST-Enclosures are available in two profile heights
- Special lengths are available on request
- Accessories: Battery compartment MB 92 (1x9-V or 2xMignon), Plug in screw nuts, Rubber feet

Article number	Type	L	B	H	FÜ	VM
		mm	mm	mm		
1101100100	MINI-TAST 90	92	168	45	•	•
1101100200	MINI-TAST 110	112	168	45	•	•
1101100300	MINI-TAST 130	132	168	45	•	•

L = Length, **B** = Breadth, **H** = Height, **FÜ** = Rubber feet (4 pieces), **VM** = Plug in screw nut (4 pieces)

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Instrument-Panel-Enclosures MBAS

Protection class IP 43 / 65



MBAS-Enclosures made of extruded aluminium profile are preferably used for control and display tasks. The inner circumferential guide grooves allow simple assembly of PCBs and other components. The enclosure can be used in line with EMC without further treatment. Front frames and end caps are made of fibre glass reinforced Polyamide.



- All enclosures fulfil protection class IP 43 in accordance with DIN EN 60529
- With an additional seal IP 65 can be reached
- Temperature resistance: -20 °C to +80 °C
- The standard enclosure colour is silver/black, similar to RAL 9006/9005
- Special colours are available on request
- Special lengths are available on request
- Accessories: Optional accessories are listed in the table of sizes

Article number	Type	L	B	T	FAS	RWG	RWO	DI	BA
		mm	mm	mm					
2101100100	MBAS 964806	96	48	68	•	•	•	•	•
2101100200	MBAS 964808	96	48	90	•	•	•	•	•
2101100300	MBAS 964816	96	48	124	•	•	•	•	•
2101100400	MBAS 964838	96	48	146	•	•	•	•	•
2101100500	MBAS 964810	96	48	114,5	•	•	•	•	•
2101100600	MBAS 964863	96	48	170,5	•	•	•	•	•
2101100700	MBAS 727206	72	72	68	•	•	•	•	•
2101100800	MBAS 727208	72	72	90	•	•	•	•	•
2101100900	MBAS 727216	72	72	124	•	•	•	•	•
2101101000	MBAS 727238	72	72	146	•	•	•	•	•
2101101100	MBAS 727210	72	72	114,5	•	•	•	•	•
2101101200	MBAS 727263	72	72	170,5	•	•	•	•	•
2101101300	MBAS 969606	96	96	68	•	•	•	•	•
2101101400	MBAS 969608	96	96	90	•	•	•	•	•
2101101500	MBAS 969616	96	96	124	•	•	•	•	•
2101101600	MBAS 969638	96	96	146	•	•	•	•	•
2101101700	MBAS 969610	96	96	114,5	•	•	•	•	•
2101101800	MBAS 969663	96	96	170,5	•	•	•	•	•

L = Length, **B** = Breadth, **T** = Depth, **FAS** = Aluminium front plate (drilled), **RWG** = Rear panel, **RWO** = Rear panel (closed), **DI** = Seal, **BA** = Aluminium rear panel insert (drilled)

Technical drawings and further information about our products can be found online at www.multi-box.com

Mini-Card-Enclosures MBAL

Protection class IP 43 / 65



MBAL-Enclosures made of extruded aluminium profile are preferably used for small controls. The inner circumferential guide grooves allow simple assembly of PCBs and other components. The enclosure can be used in line with EMC without further treatment. Front frames and end caps are made of fibre glass reinforced Polyamide.



- All enclosures fulfil protection class IP 43 in accordance with DIN EN 60529
- With an additional seal IP 65 can be reached
- Temperature resistance: -20 °C to +80 °C
- The standard enclosure colour is silver/black, similar to RAL 9006/9005
- Special colours are available on request
- Special lengths are available on request
- Accessories: Optional accessories are listed in the table of sizes

Article number	Type	L	B	T	FAS	RWG	RWO	DI	BA
		mm	mm	mm					
2201100100	MBAL 964806	89	44	68	•	•	•	•	•
2201100200	MBAL 964808	89	44	90	•	•	•	•	•
2201100300	MBAL 964816	89	44	124	•	•	•	•	•
2201100400	MBAL 964838	89	44	146	•	•	•	•	•
2201100500	MBAL 964810	89	44	114,5	•	•	•	•	•
2201100600	MBAL 964863	89	44	170,5	•	•	•	•	•
2201100700	MBAL 727206	65	65	68	•	•	•	•	•
2201100800	MBAL 727208	65	65	90	•	•	•	•	•
2201100900	MBAL 727216	65	65	124	•	•	•	•	•
2201101000	MBAL 727238	65	65	146	•	•	•	•	•
2201101100	MBAL 727210	65	65	114,5	•	•	•	•	•
2201101200	MBAL 727263	65	65	170,5	•	•	•	•	•
2201101300	MBAL 969606	89	89	68	•	•	•	•	•
2201101400	MBAL 969608	89	89	90	•	•	•	•	•
2201101500	MBAL 969616	89	89	124	•	•	•	•	•
2201101600	MBAL 969638	89	89	146	•	•	•	•	•
2201101700	MBAL 969610	89	89	114,5	•	•	•	•	•
2201101800	MBAL 969663	89	89	170,5	•	•	•	•	•

L = Length, **B** = Breadth, **T** = Depth, **FAS** = Aluminium front plate (drilled), **RWG** = Rear panel, **RWO** = Rear panel (closed), **DI** = Seal, **BA** = Aluminium rear panel insert (drilled)

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Commando-Card-Enclosures KDCA

Protection class IP 43 / 54



KDCA-Enclosures are made of two aluminium u-profiles and are primarily used as command, desk or wall enclosures. With the practical Europe card insert, varied application options result. The aluminium front plates are 1 mm thick and silver anodised. The back wall and front frame are made of impact-proof ABS.



- All enclosures fulfil protection class IP 43 in accordance with DIN EN 60529
- With an additional seal IP 54 can be reached
- Temperature resistance: -20 °C to +80 °C
- The standard enclosure colour is silver/black, similar to RAL 9006/9005
- Special colours are available on request
- Special lengths are available on request
- Accessories: Handle, rubber feet, positioning panel

Article number	Type	L	B	H	HG	FÜ	AB
		mm	mm	mm			
0901100100	KDCA 105010	118	104	50		•	•
0901100200	KDCA 105017	188	104	50		•	•
0901100300	KDCA 105019	208	104	50		•	•
0901100400	KDCA 105022	238	104	50		•	•
0901100500	KDCA 101010	118	104	104	•	•	•
0901100600	KDCA 101017	188	104	104	•	•	•
0901100700	KDCA 101019	208	104	104	•	•	•
0901100800	KDCA 101022	238	104	104	•	•	•
0901100900	KDCA 161010	118	104	158	•	•	•
0901101000	KDCA 161017	188	104	158	•	•	•
0901101100	KDCA 161019	208	104	158	•	•	•
0901101200	KDCA 161022	238	104	158	•	•	•

L = Length, **B** = Breadth, **H** = Height, **HG** = Handle, **FÜ** = Rubber feet (4 pieces), **AB** = Positioning panel

Technical drawings and further information about our products can be found online at www.multi-box.com

Multi-Card-Enclosures MBCA

Protection class IP 43 / 54



MBCA-Enclosures are made of two assembled aluminium u-profiles and are primarily used as wall or machine enclosures. With the practical Europe card insert, varied application options result. The back wall and front frame are made of impact-proof ABS.

- All enclosures fulfil protection class IP 43 in accordance with DIN EN 60529
- With an additional seal IP 54 can be reached
- Temperature resistance: -20 °C to +80 °C
- The standard enclosure colour is silver/black, similar to RAL 9006/9005
- Special colours are available on request
- Special lengths are available on request
- Accessories: Handle, rubber feet, positioning panel

Article number	Type	L	B	H	HG	FÜ	AB
		mm	mm	mm			
1001100100	MBCA 105010	106	104	50		•	•
1001100200	MBCA 105017	176	104	50		•	•
1001100300	MBCA 105019	196	104	50		•	•
1001100400	MBCA 105022	226	104	50		•	•
1001100500	MBCA 101010	106	104	104	•	•	•
1001100600	MBCA 101017	176	104	104	•	•	•
1001100700	MBCA 101019	196	104	104	•	•	•
1001100800	MBCA 101022	226	104	104	•	•	•
1001100900	MBCA 161010	106	104	158	•	•	•
1001101000	MBCA 161017	176	104	158	•	•	•
1001101100	MBCA 161019	196	104	158	•	•	•
1001101200	MBCA 161022	226	104	158	•	•	•

L = Length, **B** = Breadth, **H** = Height, **HG** = Handle, **FÜ** = Rubber feet (4 pieces), **AB** = Positioning panel

Technical drawings and further information about our products can be found online at www.multi-box.com

Electronic-Profile-Enclosures ETP

Protection class IP 40



ETP-Enclosures are made of two assembled aluminium u-profiles and are primarily used as wall or control enclosures. Connection of the profiles with a groove/spring system and aluminium end caps give this enclosure high stability. The inner guide grooves allow simple assembly of PCBs and other components. Direct assembling on mounting rails (TS 35) is possible with an adapter.



- All enclosures fulfil protection class IP 40 in accordance with DIN EN 60529
- Temperature resistance: -20 °C to +80 °C
- The standard colour is black, similar to RAL 9005
- Special lengths are available on request
- Accessories: Wall mounting brackets , adapter for mounting rail TS 35

Article number	Type	L	B	H	RA
		mm	mm	mm	
2501100100	ETP 104513	130	105	45	•
2501100200	ETP 104518	180	105	45	•
2501100300	ETP 104521	210	105	45	•
2501100400	ETP 106613	130	105	66	•
2501100500	ETP 106618	180	105	66	•
2501100600	ETP 106621	210	105	66	•
2501100700	ETP 108713	130	105	87	
2501100800	ETP 108718	180	105	87	
2501100900	ETP 108721	210	105	87	
2501101000	ETP 104513 WM*	130	105	45	•
2501101100	ETP 104518 WM*	180	105	45	•
2501101200	ETP 104521 WM*	210	105	45	•
2501101300	ETP 106613 WM*	130	105	66	•
2501101400	ETP 106618 WM*	180	105	66	•
2501101500	ETP 106621 WM*	210	105	66	•
2501101600	ETP 108713 WM*	130	105	87	
2501101700	ETP 108718 WM*	180	105	87	
2501101800	ETP 108721 WM*	210	105	87	

* for wall mounting

L = Length, **B** = Breadth, **H** = Height, **RA** = Adapter for mounting rail TS 35

Technical drawings and further information about our products can be found online at www.multi-box.com

Polyester-Enclosures MBP

Protection class IP 66



MBP-Enclosures correspond with the high requirements of the mechanical engineering, shipbuilding, galvanic and petrochemical industry. Besides good resistance to most solvents and acids, fibre glass reinforced Polyester is inflammable and self-extinguishing. The enclosures are preferably used as terminal enclosures or as command and information enclosures in chemically aggressive environments such as refineries or road tunnels.



- All enclosures fulfil protection class IP 66 in accordance with DIN EN 60529
- The cover screws cannot be lost and are made of stainless steel
- The enclosure is fixed outside of the sealing area with separated fixing channels
- Temperature resistance with neoprene seal: -40 °C to +110 °C
- Temperature resistance with silicone seal: -50 °C to +140 °C
- The neoprene cover seal is oil and petrol resistant
- Special seals, such as ones made of silicone, are available on request
- The standard enclosure colour is light grey, similar to RAL 7001
- Special colours are available on request
- Accessories: Optional accessories are listed in the table of sizes

Article number	Type	L	B	H	TS	M	WL	SI
		mm	mm	mm				
0201100100	MBP 807555	80	75	55	•	•		•
0201100200	MBP 807575	80	75	75	•			•
0201100300	MBP 117550	110	75	50	•	•		•
0201100350	MBP 117555	110	75	55	•	•		•
0201100400	MBP 117575	110	75	75	•			•
0201100500	MBP 167555	160	75	55	•	•		•
0201100600	MBP 167575	160	75	75	•	•		•
0201100700	MBP 197555	190	75	55	•	•		•
0201100800	MBP 197575	190	75	75	•			•
0201100900	MBP 237550	230	75	50	•	•		•
0201101000	MBP 237575	230	75	75	•			•
0201101100	MBP 121290	122	120	90	•	•	•	•
0201101200	MBP 161690	160	160	90	•	•	•	•
0201101300	MBP 221290	220	120	90	•	•	•	•
0201101400	MBP 261690	260	160	90	•	•	•	•
0201101500	MBP 361690	360	160	90	•	•	•	•
0201101600	MBP 252512	255	250	120	•	•	•	•
0201101650	MBP 252516	255	250	160	•	•	•	•
0201101700	MBP 402512	400	250	120	•	•	•	•
0201101750	MBP 402516	400	250	160	•	•	•	•
0201101800	MBP 404012	400	405	120	•	•	•	•
0201101900	MBP 561690	560	160	90	•	•	•	•
0201102000	MBP 602512	600	250	120	•	•	•	•

L = Length, **B** = Breadth, **H** = Height, **TS** = Mounting rail, **M** = Mounting plate, **WL** = Wall mounting brackets, **SI** = Silicone cover sealing,

Technical drawings and further information about our products can be found online at www.multi-box.com

Polycarbonate-Enclosures MBM

Protection class IP 65



MBM-Enclosures offer excellent properties for „packaging“ electronic and electrical components as well as complete control systems. Thanks to the high UV-resistance of the material, these enclosures can be used in indoor areas and outside elements. Our MBM-Enclosures can be mechanically processed in a number of ways and there are almost no limits to customised surface design with silk screen printing and membrane keyboards. The enclosures are available with a grey or transparent cover **(K)**.



- All enclosures fulfil protection class IP 65 in accordance with DIN EN 60529
- Standard sealing PUR-foamed
- Temperature resistance: -40 °C to +100 °C
- The cover screws cannot be lost and are made of stainless steel
- The enclosure is fixed outside of the sealing area with separated fixing channels
- The standard enclosure colour is light light grey, similar to RAL 7035
- Special colours are available on request
- An EMC version with copper paint and conductive cover seal is available
- Accessories: Optional accessories are listed in the table of sizes

Article number	Type	L	B	H	TS	M	FÜ	GAM	SI	WL	K	RD	IS
		mm	mm	mm									
0301100100	MBM 050504	52	50	35		•					•	•	
0301100200	MBM 060504	65	50	35		•					•	•	
0301100400	MBM 060505	65	50	45		•							
0301100500	MBM 060545	65	50	45		•							
0301100600	MBM 060555	65	50	55		•							
0301100700	MBM 060603	58	64	37					•				
0301100800	MBM 090603	98	64	37					•	•	•		
0301101000	MBM 080805	82	80	55	•	•	•		•	•	•	•	•
0301101200	MBM 080807	82	80	65	•	•	•		•	•	•	•	
0301101300	MBM 080809	82	80	85		•	•		•	•	•	•	•
0301101400	MBM 080810	82	80	95		•	•		•	•	•	•	
0301101500	MBM 128035	120	80	36		•	•		•	•			
0301101600	MBM 128040	120	80	41		•	•	•	•	•	•	•	•
0301101700	MBM 128045	120	80	47		•	•	•	•	•	•	•	•
0301101900	MBM 128050	120	80	50		•	•		•	•			
0301102100	MBM 128055	120	80	55	•	•	•	•	•	•	•	•	•
0301102300	MBM 128060	120	80	60	•	•	•	•	•	•	•	•	
0301102330	MBM 128060	120	80	60		•	•		•	•	•	•	
0301102340	MBM 128065	120	80	65		•	•	•	•	•	•	•	
0301102500	MBM 128070	120	80	70	•	•	•	•	•	•	•	•	
0301102550	MBM 128070	120	80	70		•	•	•	•	•	•	•	
0301102700	MBM 128080	120	80	80	•	•	•		•	•	•		
0301102750	MBM 128080	120	80	80		•	•	•	•	•	•		
0301102900	MBM 128085	120	80	85	•	•	•	•	•	•	•	•	•
0301103100	MBM 128090	120	80	90	•	•	•	•	•	•	•	•	
0301103300	MBM 128010	120	80	100	•	•	•	•	•	•	•	•	
0301103500	MBM 168055	160	80	55	•	•	•	•	•	•	•	•	•
0301103700	MBM 168060	160	80	60	•	•	•	•	•	•	•	•	
0301103800	MBM 168085	160	80	85		•	•	•	•	•	•	•	•
0301103900	MBM 168090	160	80	90		•	•	•	•	•	•	•	
0301104000	MBM 208055	200	80	55	•						•		
0301104200	MBM 121255	122	120	55	•	•	•	•	•	•	•	•	•
0301104400	MBM 121275	122	120	75	•	•	•	•	•	•	•	•	
0301104600	MBM 121285	122	120	85	•	•	•	•	•	•	•	•	•
0301104800	MBM 121211	122	120	105	•	•	•	•	•	•	•	•	
0301104900	MBM 161255	160	120	55		•	•	•	•	•	•	•	•
0301105000	MBM 161270	160	120	70		•	•	•	•	•	•	•	
0301105100	MBM 161275	160	120	75	•	•	•	•	•	•	•		
0301105200	MBM 161290	160	120	90		•	•	•	•	•	•	•	
0301105300	MBM 161212	160	120	120	•	•	•	•	•	•	•	•	
0301105400	MBM 161214	160	120	140	•	•	•	•	•	•	•		
0301105500	MBM 161665	160	160	65	•	•	•	•	•	•	•	•	
0301105600	MBM 201255	200	120	55		•	•	•	•	•	•	•	•
0301105700	MBM 201270	200	120	70		•	•	•	•	•	•	•	
0301105800	MBM 201275	200	120	75	•	•	•	•	•	•	•	•	•
0301106100	MBM 201290	200	120	90	•	•	•	•	•	•	•	•	
0301106200	MBM 201555	200	150	55	•	•	•	•	•	•	•	•	•
0301106300	MBM 201575	200	150	75	•	•	•	•	•	•	•	•	•
0301106400	MBM 201580	200	150	80	•	•	•	•	•	•	•	•	
0301106500	MBM 201510	200	150	100	•	•	•	•	•	•	•	•	
0301106600	MBM 201511	200	150	105	•	•	•	•	•	•	•		
0301106700	MBM 201513	200	150	125	•	•	•	•	•	•	•		
0301106800	MBM 241210	240	120	100		•	•	•	•	•	•	•	
0301106900	MBM 241270	240	120	70	•	•	•	•	•	•	•	•	
0301107030	MBM 241670	240	160	70	•	•	•	•	•	•	•	•	•
0301107000	MBM 241690	240	160	90	•	•	•	•	•	•	•	•	•
0301107100	MBM 241612	240	160	120	•	•	•	•	•	•	•	•	
0301107200	MBM 251655	250	160	55		•	•	•	•	•	•	•	•
0301107300	MBM 251685	250	160	85		•	•	•	•	•	•	•	
0301107400	MBM 251690	250	160	90		•	•	•	•	•	•	•	•
0301107500	MBM 251611	250	160	115		•	•	•	•	•	•	•	
0301107600	MBM 251612	250	160	120		•	•	•	•	•	•	•	
0301107700	MBM 251615	250	160	150		•	•	•	•	•	•	•	
0301107800	MBM 302365	300	230	65	•	•	•	•	•	•	•		
0301107900	MBM 302385	300	230	85	•	•	•	•	•	•	•	•	
0301108000	MBM 302311	300	230	110	•	•	•	•	•	•	•		
0301108200	MBM 341555	340	150	55	•	•	•	•	•	•	•		
0301108300	MBM 341580	340	150	75	•	•	•	•	•	•	•		
0301108500	MBM 341510	340	150	100	•	•	•	•	•	•	•		
0301108600	MBM 341512	340	150	120	•	•	•	•	•	•	•		
0301108700	MBM 362015	340	200	150		•	•	•	•	•	•		

L = Length, **B** = Breadth, **H** = Height, **TS** = Mounting rail, **M** = Mounting plate, **FÜ** = Rubber feet (4 pieces), **GAM** = External hinge set (2 pieces), **SI** = Silicone cover sealing, **WL** = Wall mounting brackets, **K** = Clear cover, **RD** = Knurled screws, **IS** = Hex socket head screws

Technical drawings and further information about our products can be found online at www.multi-box.com

ABS-Enclosures MBT

Protection class IP 65



MBT-Enclosures offer excellent properties for „packaging“ electronic and electrical components as well as complete control systems in indoor areas. Our MBT-Enclosures can be mechanically processed in a number of ways and there are almost no limits to customised surface design with silk screen printing and membrane keyboards. The enclosures are available with a grey or transparent cover **(K)**.



- All enclosures fulfil protection class IP 65 in accordance with DIN EN 60529
- Standard sealing PUR-foamed
- Temperature resistance: -40 °C to +80 °C
- The cover screws cannot be lost and are made of stainless steel
- The enclosure is fixed outside of the sealing area with separated fixing channels
- The standard enclosure colour is light light grey, similar to RAL 7035
- Special colours are available on request
- An EMC version with copper paint and conductive cover seal is available
- Accessories: Optional accessories are listed in the table of sizes

Article number	Type	L	B	H	TS	M	FÜ	GAM	SI	WL	K	RD	IS
		mm	mm	mm									
0401100100	MBT 050504	52	50	35		•					•	•	
0401100200	MBT 060504	65	50	35		•					•	•	
0401100400	MBT 060505	65	50	45		•							
0401100500	MBT 060545	65	50	45		•							
0401100600	MBT 060555	65	50	55		•							
0401100700	MBT 060603	58	64	37					•				
0401100800	MBT 090603	98	64	37					•	•	•		
0401101000	MBT 080805	82	80	55	•	•	•		•	•	•	•	•
0401101200	MBT 080807	82	80	65	•	•	•		•	•	•	•	
0401101300	MBT 080809	82	80	85		•	•		•	•	•	•	•
0401101400	MBT 080810	82	80	95		•	•		•	•	•	•	
0401101500	MBT 128035	120	80	36		•	•		•	•			
0401101600	MBT 128040	120	80	41		•	•	•	•	•	•	•	•
0401101700	MBT 128045	120	80	47		•	•	•	•	•	•	•	•
0401101900	MBT 128050	120	80	50	•	•	•		•	•			
0401102100	MBT 128055	120	80	55	•	•	•	•	•	•	•	•	•
0401102300	MBT 128060	120	80	60	•	•	•	•	•	•	•	•	
0401102330	MBT 128060	120	80	60		•	•		•	•	•	•	
0401102340	MBT 128065	120	80	65		•	•	•	•	•	•		
0401102500	MBT 128070	120	80	70	•	•	•	•	•	•	•	•	
0401102550	MBT 128070	120	80	70		•	•	•	•	•	•	•	
0401102700	MBT 128080	120	80	80	•	•	•		•	•	•		
0401102750	MBT 128080	120	80	80		•	•	•	•	•	•		
0401102900	MBT 128085	120	80	85	•	•	•	•	•	•	•	•	•
0401103100	MBT 128090	120	80	90	•	•	•	•	•	•	•	•	
0401103300	MBT 128010	120	80	100	•	•	•	•	•	•	•	•	
0401103500	MBT 168055	160	80	55	•	•	•	•	•	•	•	•	•
0401103700	MBT 168060	160	80	60	•	•	•	•	•	•	•	•	
0401103800	MBT 168085	160	80	85		•	•	•	•	•	•	•	•
0401103900	MBT 168090	160	80	90		•	•	•	•	•	•	•	
0401104000	MBT 208055	200	80	55	•						•		
0401104200	MBT 121255	122	120	55	•	•	•	•	•	•	•	•	•
0401104400	MBT 121275	122	120	75	•	•	•	•	•	•	•	•	
0401104600	MBT 121285	122	120	85	•	•	•	•	•	•	•	•	•
0401104800	MBT 121211	122	120	105	•	•	•	•	•	•	•	•	
0401104900	MBT 161255	160	120	55		•	•	•	•	•	•	•	•
0401105000	MBT 161270	160	120	70		•	•	•	•	•	•	•	
0401105100	MBT 161275	160	120	75	•	•	•	•	•	•	•		
0401105200	MBT 161290	160	120	90		•	•	•	•	•	•	•	
0401105300	MBT 161212	160	120	120	•	•	•	•	•	•	•	•	
0401105400	MBT 161214	160	120	140	•	•	•	•	•	•	•		
0401105500	MBT 161665	160	160	65	•	•	•	•	•	•	•	•	
0401105600	MBT 201255	200	120	55		•	•	•	•	•	•	•	•
0401105700	MBT 201270	200	120	70		•	•	•	•	•	•	•	
0401105800	MBT 201275	200	120	75	•	•	•	•	•	•	•	•	•
0401106100	MBT 201290	200	120	90	•	•	•	•	•	•	•	•	
0401106200	MBT 201555	200	150	55	•	•	•	•	•	•	•	•	•
0401106300	MBT 201575	200	150	75	•	•	•	•	•	•	•	•	•
0401106400	MBT 201580	200	150	80	•	•	•	•	•	•	•	•	
0401106500	MBT 201510	200	150	100	•	•	•	•	•	•	•	•	
0401106600	MBT 201511	200	150	105	•	•	•	•	•	•	•		
0401106700	MBT 201513	200	150	125	•	•	•	•	•	•	•		
0401106800	MBT 241210	240	120	100		•	•	•	•	•	•	•	
0401106900	MBT 241270	240	120	70	•	•	•	•	•	•	•	•	
0401107030	MBT 241670	240	160	70	•	•	•	•	•	•	•	•	•
0401107000	MBT 241690	240	160	90	•	•	•	•	•	•	•	•	•
0401107100	MBT 241612	240	160	120	•	•	•	•	•	•	•	•	
0401107200	MBT 251655	250	160	55		•	•	•	•	•	•	•	•
0401107300	MBT 251685	250	160	85		•	•	•	•	•	•	•	
0401107400	MBT 251690	250	160	90		•	•	•	•	•	•	•	•
0401107500	MBT 251611	250	160	115		•	•	•	•	•	•	•	
0401107600	MBT 251612	250	160	120		•	•	•	•	•	•	•	
0401107700	MBT 251615	250	160	150		•	•	•	•	•	•	•	
0401107800	MBT 302365	300	230	65	•	•	•	•	•	•	•		
0401107900	MBT 302385	300	230	85	•	•	•	•	•	•	•	•	
0401108000	MBT 302311	300	230	110	•	•	•	•	•	•	•		
0401108200	MBT 341555	340	150	55	•	•	•	•	•	•	•		
0401108300	MBT 341580	340	150	75	•	•	•	•	•	•	•		
0401108500	MBT 341510	340	150	100	•	•	•	•	•	•	•		
0401108600	MBT 341512	340	150	120	•	•	•	•	•	•	•		
0401108700	MBT 362015	340	200	150		•	•	•	•	•	•		

L = Length, **B** = Breadth, **H** = Height, **TS** = Mounting rail, **M** = Mounting plate, **FÜ** = Rubber feet (4 pieces), **GAM** = External hinge set (2 pieces), **SI** = Silicone cover sealing, **WL** = Wall mounting brackets, **K** = Clear cover, **RD** = Knurled screws, **IS** = Hex socket head screws

Technical drawings and further information about our products can be found online at www.multi-box.com

ABS-Enclosures MBT / Series 2000

Protection class IP 65



Series 2000 is a further development of the MBT-Enclosures made of ABS in an elegant, black design. Cover strips in different colours serve the purpose of concealing the cover screws, give added value to the enclosure appearance and allow individual colour design. Our Series 2000 Enclosures can be mechanically processed in a number of ways and there are almost no limits to customised surface design with silk screen printing and membrane keyboards. The enclosure cover is available optionally with a recess of 1.0 mm for the use of keyboards or front plates. There is also the possibility of mounting a PCB in the enclosure cover. The enclosures are available with a black or transparent cover **(K)**.



- All enclosures fulfil protection class IP 65 in accordance with DIN EN 60529
- Standard sealing PUR-foamed
- Temperature resistance: -40 °C to +80 °C
- The cover screws cannot be lost and are made of stainless steel
- The enclosure is fixed outside of the sealing area with separated fixing channels
- The standard enclosure colour is black, similar to RAL 9005
- Special colours are available on request
- Cover strips are available in yellow, silver, red, pink, black and blue
- An EMC version with copper paint and conductive cover seal is available
- Accessories: Optional accessories are listed in the table of sizes

Article number	Type	L	B	H	TS	M	FÜ	GAM	SI	WL	K
	With black cover	mm	mm	mm							
2001100100	MBT 080865 A*	82	80	65	•	•	•	•	•	•	
2001100200	MBT 080895 A*	82	80	95	•	•	•	•	•	•	
2001100500	MBT 128052 A*	120	80	52		•	•	•	•	•	
2001100600	MBT 128065 A*	120	80	65	•	•	•	•	•	•	
2001100700	MBT 128095 A*	120	80	95	•	•	•	•	•	•	
2001101100	MBT 168065 A*	160	80	65	•	•	•	•	•	•	
2001101200	MBT 168095 A*	160	80	95		•	•	•	•	•	
2001101500	MBT 248060 A*	240	80	60		•	•	•	•	•	
2001101600	MBT 248080 A*	240	80	80		•	•	•	•	•	
2001101700	MBT 121265 A*	122	120	65	•	•	•	•	•	•	
2001101800	MBT 121295 A*	122	120	95	•	•	•	•	•	•	
2001102100	MBT 161265 A*	160	120	65		•	•	•	•	•	
2001102200	MBT 161285 A*	160	120	85	•	•	•	•	•	•	
2001102500	MBT 201265 A*	200	120	65		•	•	•	•	•	
2001102600	MBT 201285 A*	200	120	85	•	•	•	•	•	•	
2001100300	MBT 080865 FT**/A*	82	80	65	•	•	•	•	•	•	
2001100400	MBT 080895 FT**/A*	82	80	95	•	•	•	•	•	•	
2001100800	MBT 128052 FT**/A*	120	80	52		•	•	•	•	•	
2001100900	MBT 128065 FT**/A*	120	80	65	•	•	•	•	•	•	
2001101000	MBT 128095 FT**/A*	120	80	95	•	•	•	•	•	•	
2001101300	MBT 168065 FT**/A*	160	80	65	•	•	•	•	•	•	
2001101400	MBT 168095 FT**/A*	160	80	95		•	•	•	•	•	
2001101900	MBT 121265 FT**/A*	122	120	65	•	•	•	•	•	•	
2001102000	MBT 121295 FT**/A*	122	120	95	•	•	•	•	•	•	
2001102300	MBT 161265 FT**/A*	160	120	65		•	•	•	•	•	
2001102400	MBT 161285 FT**/A*	160	120	85	•	•	•	•	•	•	
2001102700	MBT 201265 FT**/A*	200	120	65		•	•	•	•	•	
2001102800	MBT 201285 FT**/A*	200	120	85	•	•	•	•	•	•	
	With transparent cover										
2002100100	MBT 080865K A*	82	80	65	•	•	•	•	•	•	•
2002100200	MBT 080895K A*	82	80	95	•	•	•	•	•	•	•
2002100500	MBT 128052K A*	120	80	52		•	•	•	•	•	•
2002100600	MBT 128065K A*	120	80	65	•	•	•	•	•	•	•
2002100700	MBT 128095K A*	120	80	95	•	•	•	•	•	•	•
2002101100	MBT 168065K A*	160	80	65	•	•	•	•	•	•	•
2002101200	MBT 168095K A*	160	80	95		•	•	•	•	•	•
2002101500	MBT 248060K A*	240	80	60		•	•	•	•	•	•
2002101600	MBT 248080K A*	240	80	80		•	•	•	•	•	•
2002101700	MBT 121265K A*	122	120	65	•	•	•	•	•	•	•
2002101800	MBT 121295K A*	122	120	95	•	•	•	•	•	•	•
2002102100	MBT 161265K A*	160	120	65		•	•	•	•	•	•
2002102200	MBT 161285K A*	160	120	85	•	•	•	•	•	•	•
2002102500	MBT 201265K A*	200	120	65		•	•	•	•	•	•
2002102600	MBT 201285K A*	200	120	85	•	•	•	•	•	•	•
2002100300	MBT 080865K FT**/A*	82	80	65	•	•	•	•	•	•	•
2002100400	MBT 080895K FT**/A*	82	80	95	•	•	•	•	•	•	•
2002100800	MBT 128052K FT**/A*	120	80	52		•	•	•	•	•	•
2002100900	MBT 128065K FT**/A*	120	80	65	•	•	•	•	•	•	•
2002101000	MBT 128095K FT**/A*	120	80	95	•	•	•	•	•	•	•
2002101300	MBT 168065K FT**/A*	160	80	65	•	•	•	•	•	•	•
2002101400	MBT 168095K FT**/A*	160	80	95		•	•	•	•	•	•
2002101900	MBT 121265K FT**/A*	122	120	65	•	•	•	•	•	•	•
2002102000	MBT 121295K FT**/A*	122	120	95	•	•	•	•	•	•	•
2002102300	MBT 161265K FT**/A*	160	120	65		•	•	•	•	•	•
2002102400	MBT 161285K FT**/A*	160	120	85	•	•	•	•	•	•	•
2002102700	MBT 201265K FT**/A*	200	120	65		•	•	•	•	•	•
2002102800	MBT 201285K FT**/A*	200	120	85	•	•	•	•	•	•	•

* Cover strips

** Membrane recess

L = Length, **B** = Breadth, **H** = Height, **TS** = Mounting rail, **M** = Mounting plate, **FÜ** = Rubber feet (4 pieces), **GAM** = External hinge set (2 pieces), **SI** = Silicone cover sealing, **WL** = Wall mounting brackets, **K** = Clear cover

ABS-Enclosures MBT / Multi-Colour

Protection class IP 65



It doesn't always need to be grey!

With our Multi-Colour-Enclosures made of ABS, we offer the possibility of designing the colour of your products and visually upgrading them even for small quantities. Multi-Colour-Enclosures offer excellent properties for „packaging“ electronic and electrical components as well as complete control systems in indoor areas. Our enclosures can be mechanically processed in a number of ways and there are almost no limits to customised surface design with silk screen printing or membrane keyboards.



- All enclosures fulfil protection class IP 65 in accordance with DIN EN 60529
- Standard sealing PUR-foamed
- Temperature resistance: -40 °C to +80 °C
- The cover screws cannot be lost and are made of stainless steel
- The enclosure is fixed outside of the sealing area with separated fixing channels
- An EMC version with copper paint and conductive cover seal is available
- Colours on stock:
 - RAL 3020 / Red
 - RAL 1023 / Yellow
 - RAL 5017 / Blue
 - RAL 9005 / Black
 - RAL 7035 / Light Grey
- Special colours are available on request
- Accessories: Optional accessories are listed in the table of sizes

Article number	Type	L	B	H	TS	M	FÜ	GAM	SI	WL	Color
		mm	mm	mm							
0401101000	MBT 080805	82	80	55	•	•	•		•	•	grey
0401102100	MBT 128055	120	80	55	•	•	•	•	•	•	grey
0401104200	MBT 121255	122	120	55	•	•	•	•	•	•	grey
0401103500	MBT 168055	160	80	55	•	•	•	•	•	•	grey
0401104900	MBT 161255	160	120	55	•	•	•	•	•	•	grey
0401105900	MBT 201275	200	120	75	•	•	•	•	•	•	grey
0401101010	MBT 080805	82	80	55	•	•	•		•	•	black
0401102110	MBT 128055	120	80	55	•	•	•	•	•	•	black
0401104211	MBT 121255	122	120	55	•	•	•	•	•	•	black
0401103110	MBT 168055	160	80	55	•	•	•	•	•	•	black
0401104950	MBT 161255	160	120	55	•	•	•	•	•	•	black
0401105910	MBT 201275	200	120	75	•	•	•	•	•	•	black
0401101020	MBT 080805	82	80	55	•	•	•		•	•	yellow
0401102120	MBT 128055	120	80	55	•	•	•	•	•	•	yellow
0401104230	MBT 121255	122	120	55	•	•	•	•	•	•	yellow
0401103550	MBT 168055	160	80	55	•	•	•	•	•	•	yellow
0401104920	MBT 161255	160	120	55	•	•	•	•	•	•	yellow
0401105920	MBT 201275	200	120	75	•	•	•	•	•	•	yellow
0401101030	MBT 080805	82	80	55	•	•	•		•	•	red
0401102130	MBT 128055	120	80	55	•	•	•	•	•	•	red
0401104240	MBT 121255	122	120	55	•	•	•	•	•	•	red
0401103530	MBT 168055	160	80	55	•	•	•	•	•	•	red
0401104930	MBT 161255	160	120	55	•	•	•	•	•	•	red
0401105930	MBT 201275	200	120	75	•	•	•	•	•	•	red
0401101040	MBT 080805	82	80	55	•	•	•		•	•	blue
0401102140	MBT 128055	120	80	55	•	•	•	•	•	•	blue
0401104250	MBT 121255	122	120	55	•	•	•	•	•	•	blue
0401103540	MBT 168055	160	80	55	•	•	•	•	•	•	blue
0401104940	MBT 161255	160	120	55	•	•	•	•	•	•	blue
0401105940	MBT 201275	200	120	75	•	•	•	•	•	•	blue

L = Length, **B** = Breadth, **H** = Height, **TS** = Mounting rail, **M** = Mounting plate, **FÜ** = Rubber feet (4 pieces), **GAM** = External hinge set (2 pieces), **SI** = Silicone cover sealing, **WL** = Wall mounting brackets

ABS-Enclosures MBT / Membrane Recess

Protection class IP 65



ABS Enclosures with membrane recess offer excellent properties for „packaging“ electronic and electrical components as well as complete control systems in indoor areas. Our enclosures can be mechanically processed in a number of ways and there are almost no limits to customised surface design with silk screen printing or membrane keyboards.



- All enclosures fulfil protection class IP 65 in accordance with DIN EN 60529
- Standard sealing PUR-foamed
- Temperature resistance: -40 °C to +80 °C
- The cover screws cannot be lost and are made of stainless steel
- The enclosure is fixed outside of the sealing area with separated fixing channels
- The standard enclosure colour is light grey, similar to RAL 7035
- Special colours are available on request
- An EMC version with copper paint and conductive cover seal is available
- Accessories: Optional accessories are listed in the table of sizes

Article number	Type	L	B	H	TS	M	FÜ	GAM	SI	WL
		mm	mm	mm						
0421101600	MBT 128040 FT	120	80	40	•	•	•	•	•	•
0421102100	MBT 128055 FT	120	80	55	•	•	•	•	•	•
0421102340	MBT 128065 FT	120	80	65	•	•	•	•	•	•
0421102900	MBT 128085 FT	120	80	85	•	•	•	•	•	•
0421103500	MBT 168055 FT	160	80	55	•	•	•	•	•	•
0421103800	MBT 168085 FT	160	80	85	•	•	•	•	•	•
0421104200	MBT 121255 FT	120	120	55	•	•	•	•	•	•
0421104600	MBT 121285 FT	120	120	85	•	•	•	•	•	•
0421105600	MBT 201255 FT	200	120	55	•	•	•	•	•	•
0421105900	MBT 201275 FT	200	120	75	•	•	•	•	•	•
0421106400	MBT 201580 FT	200	150	80	•	•	•	•	•	•
0401106550	MBT 201510 FT	200	150	100	•	•	•	•	•	•
0401108100	MBT 341555 FT	340	150	55	•	•	•	•	•	•
0401108400	MBT 341510 FT	340	150	100	•	•	•	•	•	•

L = Length, **B** = Breadth, **H** = Height, **TS** = Mounting rail, **M** = Mounting plate, **FÜ** = Rubber feet (4 pieces), **GAM** = External hinge set (2 pieces),
SI = Silicone cover sealing, **WL** = Wall mounting brackets

MACRO-TAST-Enclosures

Protection class IP 65



MACRO-TAST Keyboard Enclosures with aluminium front plate are used for a variety of tasks in control and display technology. The enclosures are available to choose from in Polycarbonate or ABS.

- All enclosures fulfil protection class IP 65 in accordance with DIN EN 60529
- Standard sealing PUR-foamed
- Temperature resistance in ABS: -40 °C to +80 °C
- Temperature resistance in PC: -40 °C to +100 °C
- The cover screws cannot be lost and are made of stainless steel
- The enclosure is fixed outside of the sealing area with separated fixing channels
- The standard enclosure colour is light grey, similar to RAL 7035
- Special colours are available on request
- Accessories: Optional accessories are listed in the table of sizes

Article number	Type	L	B	H	TS	M	FÜ	SI	WL
		mm	mm	mm					
0301109100	MBM 201268 R	200	120	68		•	•	•	•
0301109300	MBM 201288 R	200	120	88	•	•	•	•	•
0301109400	MBM 241283 R	240	120	83	•	•	•	•	•
0301109500	MBM 241211 R	240	120	113		•	•	•	•
0401109100	MBT 201268 R	200	120	68		•	•	•	•
0401109300	MBT 201288 R	200	120	88	•	•	•	•	•
0401109400	MBT 241283 R	240	120	83	•	•	•	•	•
0401109500	MBT 241211 R	240	120	113		•	•	•	•

L = Length, **B** = Breadth, **H** = Height, **TS** = Mounting rail, **M** = Mounting plate, **FÜ** = Rubber feet (4 pieces), **SI** = Silicone cover sealing, **WL** = Wall mounting brackets

Technical drawings and further information about our products can be found online at www.multi-box.com

DUO-BOX

Protection class IP 65



The Duo-Box is an enclosure with two functional areas. Electronic components can be separated from electrical connection technology for example. The enclosures are available in Polycarbonate or ABS. As an option the Duo-Box is also available with a transparent cover (**K**).

- All enclosures fulfil protection class IP 65 in accordance with DIN EN 60529
- Standard sealing PUR-foamed
- Temperature resistance in ABS: -40 °C to +80 °C
- Temperature resistance in PC: -40 °C to +100 °C
- The cover screws cannot be lost and are made of stainless steel
- The enclosure is fixed outside of the sealing area with separated fixing channels
- The standard enclosure colour is light grey, similar to RAL 7035
- Special colours are available on request
- An EMC version with copper paint and conductive cover seal is available
- Accessories: Optional accessories are listed in the table of sizes

Article number	Type	L	B	H	M	FÜ	GAM	SI	WL	K
		mm	mm	mm						
0301108800	MBM 178055	170	80	55	•	•	•	•	•	
0301108900	MBM 178060	170	80	60	•	•	•	•	•	
0301109000	MBM 178070	170	80	70	•	•	•	•	•	
0401108800	MBT 178055	170	80	55	•	•	•	•	•	
0401108900	MBT 178060	170	80	60	•	•	•	•	•	
0401109000	MBT 178070	170	80	70	•	•	•	•	•	
0402108800	MBT 178055K	170	80	55	•	•	•	•	•	•
0402108900	MBT 178060K	170	80	60	•	•	•	•	•	•
0402109000	MBT 178070K	170	80	70	•	•	•	•	•	•

L = Length, **B** = Breadth, **H** = Height, **TS** = Mounting rail, **M** = Mounting plate, **FÜ** = Rubber feet (4 pieces), **GAM** = External hinge set (2 pieces), **SI** = Silicone cover sealing, **WL** = Wall mounting brackets, **K** = Clear cover

ALPHA-BOX

Protection class IP 40 / 65



The ALPHA-BOX made of ABS is a functional electronics enclosure in contemporary design. This product convinces with varied assembly options for circuit boards and other electronic components.

- All enclosures fulfil protection class IP 40 in accordance with DIN EN 60529
- With an additional seal IP 65 can be reached
- Temperature resistance: -40 °C to +80 °C
- The standard enclosure colour is grey, similar to RAL 7032
- Special colours are available on request
- Accessories: Optional accessories are listed in the table of sizes

Article number	Type	L	B	H	FÜ	WL	DO
		mm	mm	mm			
2301100100	MB 127040	125	70	40	•	•	•
2301100200	MB 158545	150	85	45	•	•	•
2301100300	MB 201150	200	115	50	•	•	•
2301100400	MB 127040 STE/CEE*	125	70	40			

L = Length, **B** = Breadth, **H** = Height, **M** = Mounting plate, **FÜ** = Rubber feet (4 pieces), **WL** = Wall mounting brackets, **DO** = Cover installation mounting kit

Technical drawings and further information about our products can be found online at www.multi-box.com

QUADRO-BOX

Protection class IP 40



The Quadro-Box made of ABS is a functional electronics enclosure in contemporary design. The triple plug combination of cover, front plates and enclosure base offer perfect ease of assembly for PCBs and other electronic components. A dual fixing system allows the user to choose between screw and snap-lock fixing for the individual enclosure components.

- All enclosures fulfil protection class IP 40 in accordance with DIN EN 60529
- Temperature resistance: -40 °C to +80 °C
- The standard enclosure colour is light grey, similar to RAL 7035
- Special colours are available on request
- Front plates are available in plastic (standard) or aluminum
- Accessories: Optional accessories are listed in the table of sizes

Article number	Type	L	B	H	FÜ	F
		mm	mm	mm		
1801100100	MB 075 w. screw-lock	75	75	45	•	•
1801100200	MB 100 w. snap-lock	100	100	55	•	•
1801100300	MB 150 w. screw-lock	150	150	65	•	•
1801100400	MB 075 w. snap-lock	75	75	45	•	•
1801100500	MB 100 w. screw-lock	100	100	55	•	•
1801100600	MB 150 w. snap-lock	150	150	65	•	•

L = Length, **B** = Breadth, **H** = Height, **FÜ** = Rubber feet (4 pieces), **F** = Front plate aluminium

Electronic-Enclosures MBPO

Protection class IP 20



Electronic-Enclosures MBPO in a shapely design made of impact resistant Polystyrene are particularly suited to „packaging“ small controls and desk units. Excellent stability is achieved with the groove and spring sealing and the base parts that open to the side allow fast and uncomplicated assembly of construction elements.

The cover is invisibly screwed on from the underside in the standard version. Fixing from the top side of the cover is also possible as an alternative.



- All enclosures fulfil protection class IP 20 in accordance with DIN EN 60529
- Temperature resistance: -20 °C to +60 °C
- The standard enclosure colours: Base part dark grey similar to RAL 7012 / Cover part light grey similar to RAL 7035
- Special colours are available on request
- Versions with air slots or isolated ground receptacle plug are available from stock
- Accessories: Optional accessories are listed in the table of sizes

Article number	Type	L	B	H	DOM	DOB	S	FÜ	WL
		mm	mm	mm					
0501100100	MBPO 181160	188	110	60	•	•	•	•	•
0501100200	MBPO 655045	65	50	45				•	•
0501100300	MBPO 105025	100	50	25				•	•
0501100400	MBPO 105040	100	50	40	•	•	•	•	•
0501100500	MBPO 126540	120	65	40	•	•	•	•	•
0501100600	MBPO 126565	120	65	65	•	•	•	•	•
0501100700	MBPO 158055	150	80	55	•	•	•	•	•
0501100800	MBPO 158080	150	80	80	•	•	•	•	•
0501100900	MBPO 181140	188	110	40	•	•	•	•	
0501101000	MBPO 655030	65	50	30				•	•
0501101100	MBPO 181170	188	110	70	•	•	•	•	•
0501101200	MBPO 181110	188	110	100	•	•	•	•	•
0501101300	MBPO 181112	188	110	120	•	•	•	•	•
0501101700	MBPO 105040 LÜ So	100	50	40	•	•	•	•	•
0501101900	MBPO 126540 LÜ So	120	65	40				•	•
0501102200	MBPO 158055 LÜ So	150	80	55	•	•	•	•	•
0501102600	MBPO 181170 LÜ So	188	110	70	•	Standard		•	•

L = Length, **B** = Breadth, **H** = Height, **DOM** = Cover installation mounting kit, **DOB** = Cover fixing (drilled), **S** = Spring lock, **FÜ** = Rubber feet (4 pieces),
WL = Wall mounting brackets

Electronic-Connector-Enclosures MBPO-ST

Protection class IP 20



Electronic-Connector-Enclosures with different plug versions made of flame-resistant and impact resistant Polystyrene are frequently used for industrial power packs and chargers. Plugs in Schuko, European, Swiss and French versions are available as options. Excellent stability is achieved with the groove and spring sealing and the base parts that open to the side allow fast and uncomplicated assembly of construction elements. The cover is invisibly screwed on from the underside in the standard version. Fixing from the top side of the cover is also possible as an alternative.



- All enclosures fulfil protection class IP 20 in accordance with DIN EN 60529
- Temperature resistance: -20 °C to +60 °C
- The standard enclosure colours: Base part dark grey similar to RAL 7012 / Cover part light grey similar to RAL 7035
- Special colours are available on request
- Versions with air slots, integrated Schuko-Plug or French version are available from stock
- Accessories: Optional accessories are listed in the table of sizes

Article number	Type	L	B	H	DOM	DOB
		mm	mm	mm		
0501101500	MBPO 126555 DO CEE*	120	65	55		
0601100100	MBPO 655030 ST*	65	50	30		
0601100200	MBPO 655030 STE*	65	50	30		
0601100300	MBPO 655030 ST CEE*	65	50	30		
0601100400	MBPO 655045 ST CEE*	65	50	45		
0601100500	MBPO 655045 ST*	65	50	45		
0601100600	MBPO 655045 STE*	65	50	45		
0601100700	MBPO 105025 ST*	100	50	25		
0601100800	MBPO 105025 STE*	100	50	25		
0601100900	MBPO 105025 STEURO*	100	50	25		
0601101000	MBPO 105025 ST CH*	100	50	25		
0601101100	MBPO 105025 ST CEE*	100	50	25		
0601101200	MBPO 105040 ST*	100	50	40	•	•
0601101300	MBPO 105040 STE*	100	50	40	•	•
0601101400	MBPO 105040 STEURO*	100	50	40	•	•
0601101500	MBPO 105040 ST CH*	100	50	40	•	•
0601101600	MBPO 105040 ST CEE*	100	50	40	•	•
0601101700	MBPO 126540 ST*	120	65	40	•	•
0601101800	MBPO 126540 STE*	120	65	40	•	•
0601101900	MBPO 126540 ST CEE*	120	65	40		
0601102000	MBPO 126565 ST*	120	65	65	•	•
0601102100	MBPO 126565 STE*	120	65	65	•	•
0601102200	MBPO 126565 ST CEE*	120	65	65		
0601102300	MBPO 126555 STE DO*	120	65	55		
0601102400	MBPO 126555 ST DO CEE*	120	65	55		

L = Length, **B** = Breadth, **H** = Height, **DOM** = Cover installation mounting kit, **DOB** = Cover fixing (drilled),

ST* = Plug without earthing

STE* = Schuko plug with earthing

ST CEE* = French plug version with earthing

ST CH* = Swiss plug version with earthing

ST EURO* = Europe plug version without earthing

DO* = Schuko-socket with earthing

DO CEE* = French socket with earthing

Controller-Card-Enclosures MBRCA

Protection class IP 40 / 54



The practical Controller-Card-Enclosure MBRCA made of flame and impact resistant Polystyrene are particularly suited to small controls and used in measurement and control technology. The enclosures have two function compartments and an open front side with a recessed edge to fix an aluminium front plate. With the separate connection compartment cover, free access to the terminal connection is possible. Knockouts for PG inserts are available in the connection compartment wall. 7 x M3 threaded sockets are provided to fix circuit boards or assembly plates inside.



- MBRCA-Enclosures with plastic covers fulfil protection class IP 54 in accordance with DIN EN 60529
- MBRCA-Enclosures with aluminium frontplate (without cover) fulfil protection class IP 40 in accordance with DIN EN 60529
- Temperature resistance: -20 °C to +60 °C
- The standard enclosure colours is light grey, similar to RAL 7035
- Special colours are available on request
- Accessories: Optional accessories are listed in the table of sizes

Article number	Type	Protection class	L	B	T	F	KL	M	SV	WL
			mm	mm	mm					
0701100100	MBRCA 13	IP 40	130	180	78	•		•		•
0701100200	MBRCA 13K	IP 54	130	180	98	•		•	•	•
0701100300	MBRCA 14	IP 40	130	180	96	•		•		•
0701100400	MBRCA 14K	IP 54	130	180	116	•		•	•	•
0701100500	MBRCA 16	IP 40	165	155	69	•		•		•
0701100600	MBRCA 16K	IP 54	165	155	88	•		•	•	•
0701100700	MBRCA 17	IP 40	165	155	96	•		•		•
0701100800	MBRCA 17K	IP 54	165	155	115	•		•	•	•
0701100900	MBRCA 20	IP 40	213	180	80	•		•		•
0701101000	MBRCA 20K	IP 54	213	180	96	•		•	•	•
0701101100	MBRCA 25	IP 40	257	214	108	•		•		•
0701101200	MBRCA 25K	IP 54	257	214	128	•		•	•	•
0701101300	MBRCA 30	IP 40	295	250	86	•		•		•
0701101400	MBRCA 30K	IP 54	295	250	107	•		•	•	•
0701101500	MBRCA 31	IP 40	295	250	107	•		•		•
0701101600	MBRCA 31K	IP 54	295	250	128	•		•	•	•
0701101700	MBR 20	IP 40	213	180	80,5	•	•	•		

L = Length, **B** = Breadth, **T** = Depth, **F** = Front plate aluminium, **KL** = Clear cover (pluggable), **M** = Mounting plate, **SV** = Quick release fastener, **WL** = Wall mounting brackets

Technical drawings and further information about our products can be found online at www.multi-box.com

Controller-Card-Enclosures MBRC2

Protection class IP 65



The new Controller-Card-Enclosure MBRC2 has a larger connection space and all versions are offered in protection class IP 65. Another advantage is the hinged membrane cover, which can also be combined with a transparent lid. Six different cover variations allow a large application range in the control system, measurement and control technology. Available as an option with or without preformed knockouts in the connection compartment.



- All enclosures fulfil protection class IP 65 in accordance with DIN EN 60529
- Standard material ABS (Polycarbonate available on request)
- Temperature resistance: -40 °C to +80 °C
- The standard enclosure colour is light grey, similar to RAL 7035
- Special colours are available on request

Type	Number/Type of knockouts
MBRC2-13	1 x M12, 1 x M16, 1 x M20
MBRC2-16	1 x M12, 1 x M16, 1 x M20
MBRC2-20	1 x M12, 1 x M16, 1 x M20

Type	L	B	UH*	K	F	FK	R	RA	RG
	mm	mm	mm						
MBRC2-13	206	150	76	MBRC2-13 K 0742130100	MBRC2-13 F 0742130200	MBRC2-13 FK 0742130300	MBRC2-13 R 0742130400	MBRC2-13 RA 07421301500	MBRC2-13 RG 0742130600
MBRC2-16	180	185	66	MBRC2-16 K 0742160100	MBRC2-16 F 0742160200	MBRC2-16 FK 0742160300	MBRC2-16 R 0742160400	MBRC2-16 RA 0742160500	MBRC2-16 RG 0742160600
MBRC2-20	200	233	78	MBRC2-20 K 0742200100	MBRC2-20 F 0742200200	MBRC2-20 FK 0742200300	MBRC2-20 R 0742200400	MBRC2-20 RA 0742200500	MBRC2-20 RG 0742200600

* Total height (**H**) = base height (**UH**) + cover height (**DH**)

K = Clear cover (**DH** = 18 mm)

F = Membrane cover (**DH** = 12 mm)

FK = Membrane cover and clear lid (**DH** = 30 mm)

R = Frame (**DH** = 12 mm)

RA = Frame with aluminium front plate (**DH** = 12 mm)

RG = Framecover closed (**DH** = 12 mm)

L = Length, **B** = Breadth, **UH** = Base height, **DH** = Cover height

Instrument-Panel-Enclosures MBS

Protection class IP 43



Instrument-Panel-Enclosures MBS are made of fibre glass reinforced Noryl and have been specially developed for measurement and display technology in accordance with DIN 43700. The circumferential guide grooves inside the enclosure result in universal applications for circuit board installations. A front frame for the use of different front plates, such as aluminium or fibre glass, is also available.



- All enclosures fulfil protection class IP 43 in accordance with DIN EN 60529
- Temperature resistance: -40 °C to +100 °C
- The standard enclosure colour is black, similar to RAL 9005
- Special colours are available on request
- Different installation depths on stock
- Rear panel cutouts are available on request
- Accessories: Aluminium front plate, Translucent red filter plate, Plexiglas display, Rear panel, Front frame, Seals, Fixation clips

Article number	Type	L	B	H	F	FS	RW	DI	B
		mm	mm	mm					
0801100100	MBS 484806	48	48	60,5	•	•	•	•	•
0801100200	MBS 484808	48	48	82,5	•	•	•	•	•
0801100300	MBS 484816	48	48	116,5	•	•	•	•	•
0801100400	MBS 484838	48	48	138,5	•	•	•	•	•
0801100500	MBS 484810	48	48	107	•	•	•	•	•
0801100600	MBS 484863	48	48	163	•	•	•	•	•
0801100700	MBS 964806	96	48	60,5	•	•	•	•	•
0801100800	MBS 964808	96	48	82,5	•	•	•	•	•
0801100900	MBS 964816	96	48	116,5	•	•	•	•	•
0801101000	MBS 964838	96	48	138,5	•	•	•	•	•
0801101100	MBS 964810	96	48	107	•	•	•	•	•
0801101200	MBS 964863	96	48	163	•	•	•	•	•
0801101300	MBS 969606	96	96	60,5	•	•	•	•	•
0801101400	MBS 969608	96	96	82,5	•	•	•	•	•
0801101500	MBS 969616	96	96	116,5	•	•	•	•	•
0801101600	MBS 969638	96	96	138,5	•	•	•	•	•
0801101700	MBS 969610	96	96	107	•	•	•	•	•
0801101800	MBS 969663	96	96	163	•	•	•	•	•
0801101900	MBS 727206	72	72	60,5	•	•	•	•	•
0801102000	MBS 727208	72	72	82,5	•	•	•	•	•
0801102100	MBS 727216	72	72	116,5	•	•	•	•	•
0801102200	MBS 727238	72	72	138,5	•	•	•	•	•
0801102300	MBS 727210	72	72	107	•	•	•	•	•
0801102400	MBS 727263	72	72	163	•	•	•	•	•
0801102500	MBS 147206	144	72	60,5	•	•	•	•	•
0801102600	MBS 147208	144	72	82,5	•	•	•	•	•
0801102700	MBS 147216	144	72	116,5	•	•	•	•	•
0801102800	MBS 147238	144	72	138,5	•	•	•	•	•
0801102900	MBS 147210	144	72	107	•	•	•	•	•
0801103000	MBS 147263	144	72	163	•	•	•	•	•
0801103100	MBS 141406	144	144	60,5	•	•	•	•	•
0801103200	MBS 141408	144	144	82,5	•	•	•	•	•
0801103300	MBS 141416	144	144	116,5	•	•	•	•	•
0801103400	MBS 141438	144	144	138,5	•	•	•	•	•
0801103500	MBS 141410	144	144	107	•	•	•	•	•
0801103600	MBS 141463	144	144	163	•	•	•	•	•

L = Length, **B** = Breadth, **T** = Depth, **F** = Front plate aluminium, **FS** = Translucent red filter plate, **RWRWRW** = Rear panel, **DI** = Seal, **B** =

Front frame

Multi-Euro-Card-Enclosures MBEU

Protection class IP 43



Multi-Euro-Card-Enclosures MBEU made of ABS are used for varied application options with circuit boards in European card format. The functional triple plug combination of front plates and enclosure base with the enclosure top offer perfect ease of assembly.



- All enclosures fulfil protection class IP 43 in accordance with DIN EN 60529
- Temperature resistance: -40 °C to +80 °C
- The standard enclosure colours: Base dark grey similar to RAL 7012, Cover light grey similar to RAL 7035
- Special colours are available on request
- Accessories: Optional accessories are listed in the table of sizes

Article number	Type	L	B	H	FÜ
		mm	mm	mm	
1601100100	MBEU 191255	190	115	50	•
1601100200	MBEU 191265	190	115	60	•
1601100300	MBEU 191275	190	115	70	•

L = Length, **B** = Breadth, **H** = Height, **FÜ** = Rubber feet (4 pieces)

Technical drawings and further information about our products can be found online at www.multi-box.com

Plug-Card-Enclosures MBZA

Protection class IP 40



Plug-Card-Enclosures MBZA with gold-plated contacts offer the possibility of direct contacting between the circuit boards and connection terminal. The enclosures are used in different areas for small control systems. The enclosure cover is made of Polystyrene, and the base of fibre glass reinforced Polyamide.

The following versions are available as alternatives:

12-pole = MBZA 12 = 12 connection terminals
16-pole = MBZA 16 = 16 connection terminals



- All enclosures fulfil protection class IP 40 in accordance with DIN EN 60529
- Temperature resistance: -20 °C to +80 °C
- The standard enclosure colours: Base black similar to RAL 9005, Cover light grey similar to RAL 7035
- Special colours are available on request
- Accessories: Optional accessories are listed in the table of sizes

Article number	Type	L	B	H	Pole	NOS	SL
		mm	mm	mm			
1701100100	MBZA 12	112	52	106	12	•	•
1701100200	MBZA 16	150	75	106	16	•	•

L = Length, **B** = Breadth, **H** = Height, **NOS** = Norm rail mounting kit, **SL** = Protective conductor

Plug-Socket-Enclosures MBRE

Protection class IP 43



8 or 11 pole Plug-Socket-Enclosures MBRE for varied application options in control technology. Two different installation depths and guide grooves in the cover provide scope for freedom of design. The top part of the enclosure is made of ABS and the base is Noryl.



- All enclosures fulfil protection class IP 43 in accordance with DIN EN 60529
- Temperature resistance: -20 °C to +60 °C
- The standard enclosure colours: Base black similar to RAL 9005, Cover light grey similar to RAL 7035
- Special colours are available on request

Article number	Type	L	B	H	Poles
		mm	mm	mm	
1301100100	MBRE 110710	76	38	71	11
1301100200	MBRE 111200	76	38	120	11
1301100300	MBRE 080710	76	38	71	8
1301100400	MBRE 081200	76	38	120	8
1301100500	MBRE 000710 WM*	76	38		
1301100600	MBRE 001200 WM*	76	38		

* Wall mounting flange

L = Length, **B** = Breadth, **H** = Height

Technical drawings and further information about our products can be found online at www.multi-box.com

Control-Enclosure MBRS 19

Protection class IP 42



The MBRS-19 Control-Enclosure is a completely new enclosure concept and allows simple connection technology for up to 19 special cage clamp terminals from the company Wago. These can be clipped directly onto the enclosure base. A corresponding terminal strip contacts the board, which can easily be mounted into the enclosure cover.



- All enclosures fulfil protection class IP 42 in accordance with DIN EN 60529
- Temperature resistance: -40 °C to +80 °C
- The standard enclosure colours: Base dark grey similar to RAL 7012, Cover light grey similar to RAL 7035
- Special colours are available on request

Advantages of the new concept:

1. Freely accessible and large connection space
2. Pluggable cable entries
3. Advanced and screwless clamp technology
4. Quick exchange of measurement- and control technique without demounting the electrical connections and the housing base

Article number	Type	L	B	H	Connectors max.
		mm	mm	mm	
290190000	MBRS 19	164	111	51	19

L = Length, **B** = Breadth, **H** = Height

Measure-Enclosure MEBO

Protection class IP 43



Measure-Enclosure MEBO made of ABS is used as handheld-enclosure for a variety of applications. It has a recess area for membrane keyboards or other operating elements. Furthermore, there are various visual openings for digital displays and a design with side sliding switch. A battery compartment accessible from the outside is also available.

- All enclosures fulfil protection class IP 43 in accordance with DIN EN 60529
- Temperature resistance: -40 °C to +80 °C
- The standard enclosure colour is black, similar to RAL 9005
- Special colours are available on request
- Accessories: Optional accessories are listed in the table of sizes

Article number	Type	L	B	H	FÜ	D
		mm	mm	mm		
1201100100	MEBO 152358	150	80	30	•	•
1201100200	MEBO 152358 S*	150	80	30	•	•
1201100300	MEBO 151848	150	80	30	•	•
1201100400	MEBO 151848 S*	150	80	30	•	•

* with side sliding switch

L = Length, B = Breadth, H = Height, FÜ = Rubber feet (4 pieces), D = Display plate

Technical drawings and further information about our products can be found online at www.multi-box.com

Mobile-Enclosures MBMO

Protection class IP 42



Mobile-Enclosures MBMO made of ABS with rubberised soft touch sides not only feel comfortable in the hand, they also have a nicely shaped design and are suitable for a variety of tasks in measurement and control technology. The triple plug combination of cover, front plate and enclosure base offers perfect ease of assembly for electronic components. Covers offer a recess for membrane keyboards and a battery compartment (9V and 2 x Mignon) is available as an option.

- All enclosures fulfil protection class IP 42 in accordance with DIN EN 60529
- Temperature resistance: -40 °C to +80 °C
- The standard enclosure colours are black similar to RAL 9005 or grey similar to RAL 7035
- Special colours are available on request
- Accessories: Optional accessories are listed in the table of sizes

Article number	Type	L	B	H	BA	Color
		mm	mm	mm		
1202100100	MBMO 128025	120	80	25		grey
1202100101	MBMO 128025	120	80	25		black
1202100200	MBMO 128025	120	80	25	•	grey
1202100201	MBMO 128025	120	80	25	•	black
1202100300	MBMO 159025	150	90	25		grey
1202100301	MBMO 159025	150	90	25		black
1202100400	MBMO 159025	150	90	25	•	grey
1202100401	MBMO 159025	150	90	25	•	black

L = Length, **B** = Breadth, **H** = Height, **BABABA** = Battery compartment

Explosion-Proofed-Enclosures MBA Ex-empty

Protection class IP 66



MULTI-BOX Aluminium-Ex empty enclosures made of aluminium are conform to all requirements for installation fields where explosive concentrations of gases, steams and dusts can appear (zones 1 and 2 as well as 21 and 22).

MBA-Ex empty enclosures have a components certificate confirming constructive security to the mechanical component "enclosure". Thus, the enclosure specific parameter does not have to be retested and reapproved when registering a new Ex-product which simplifies the approval process considerably.

After installing approved electrical and electrotechnical components into the enclosure, the complete unit has to be retested followed by a proof of heating.



- Test report no. : IB-10-3-248 according to ATEX for zones 1 and 2 as well as 21 and 22
- EC-Prototype Examination Certificate IBExU 10 ATEX 1158U according to directive 94/9/EC
- Continuous operation temperature from -55°C up to +135°C
- Protection classification IP 66 according to EN 60529
- Examinations and standards EN60079-0, EN60079-7 and EN60079-31
- Lid screws made of 1.4301 which cannot be lost
- Silicone lid seal glued as o-ring
- Exterior earthing connection from 2,5 mm² up to 120 mm²
- Earthing connection points in the interior
- Type plate on the inner side of the lid marked with a «U» standing for incomplete equipment
- Markings Ex II 2G Exe II C Gb and Ex II 2D Ex tb III C Db
- Powder-coating similar to RAL 7001

Accessories on demand:

- Mounting plates made of galvanised steel sheet
- Wall mounting brackets made of steel
- External hinges for the lid made of aluminium
- Earthing busbars and earthing bolts
- Ex-tested cable glands and sealing plugs made of steel, brass or polyamide

Processing on demand:

- All metric threads, armoured pipe threads and special threads (with a minimum distance of 2-5 mm up to the sealing edge)
- Pass drillings, cavities and millings (with a minimum distance of 2-5 mm up to the sealing edge)
- Recesses and millings for inspection glasses in the enclosure lid
- Deepening and recesses for foils and film keypads
- Special colours and markings in silk-screen printing or pad printing

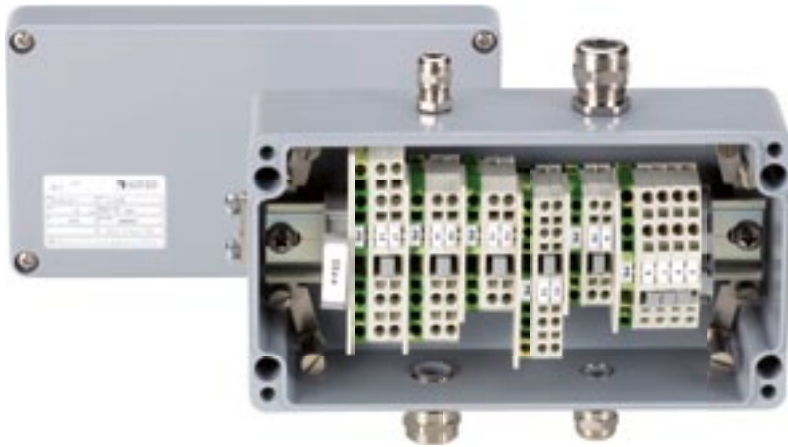
Article number	Type	L	B	H	TS	M	WL	GA
		mm	mm	mm				
3111100200	MBA-Ex empty 606030	58	64	34				
3111100400	MBA-Ex empty 906030	98	64	35				
3111100600	MBA-Ex empty 156030	150	64	34				
3111100900	MBA-Ex empty 708055	75	80	57	•	•		
3111101100	MBA-Ex empty 128055	125	80	57	•	•		•
3111101300	MBA-Ex empty 178055	175	80	57	•	•		•
3111101400	MBA-Ex empty 258050	150	80	54	•	•		•
3111105500	MBA-Ex empty 101080	180	100	85	•	•	•	•
3111101600	MBA-Ex empty 121265	122	120	65	•	•	•	•
3111101800	MBA-Ex empty 121280	122	120	80	•	•	•	•
3111101900	MBA-Ex empty 121290	122	120	90	•	•	•	•
3111104500	MBA-Ex empty 141490	140	140	90	•	•	•	•
3111102000	MBA-Ex empty 221265	220	120	65	•	•	•	•
3111102200	MBA-Ex empty 221280	220	120	80	•	•	•	•
3111102300	MBA-Ex empty 221290	220	120	90	•	•	•	•
3111102400	MBA-Ex empty 361280	360	122	80	•	•	•	•
3111102500	MBA-Ex empty 161690	160	160	90	•	•	•	•
3111104000	MBA-Ex empty 261665	260	160	65	•	•	•	•
3111102600	MBA-Ex empty 261690	260	160	90	•	•	•	•
3111102800	MBA-Ex empty 361690	360	160	90	•	•	•	•
3111102900	MBA-Ex empty 561690	560	160	90	•	•	•	•
3111103000	MBA-Ex empty 202311	200	230	110	•	•	•	•
3111103100	MBA-Ex empty 282311	280	230	110	•	•	•	•
3111103202	MBA-Ex empty 332311	330	230	110	•	•	•	•
3111103300	MBA-Ex empty 332318	330	230	180	•	•	•	•
3111103400	MBA-Ex empty 402311	400	230	110	•	•	•	•
3111103500	MBA-Ex empty 403111	400	310	110	•	•	•	•
3111103600	MBA-Ex empty 403118	400	310	180	•	•	•	•
3111103700	MBA-Ex empty 602311	600	230	110	•	•	•	•
3111103800	MBA-Ex empty 603111	600	310	110	•	•	•	•
3111103900	MBA-Ex empty 603118	600	310	180	•	•	•	•

L = Length, **B** = Breadth, **H** = Height, **TS** = Mounting rail, **M** = Mounting plate, **WL** = Wall mounting brackets, **GAGAGA** = External

hinges

Explosion-Proofed-Enclosures MBA-Ex e

Protection class IP 66



MULTI-BOX Aluminium-Ex e junction boxes are conform to all requirements for installation fields where explosive concentrations of gases, steams and dusts can appear (zones 1 and 2 as well as 21 and 22). MBA-Ex e enclosures can be used in the temperature classes T4 up to T6.

Temperature class 6 signifies that, even in case of warming the assembly of terminals, the maximum total temperature does not exceed 85°C neither inside nor outside the enclosure. Thus, combustible gases, steams and dusts cannot be fired.

By the exterior earthing, the enclosures are included in the potential compensation. This completely avoids electrostatic charging and sparks resulting from it. If the premises permit, the Ex-junction boxes of protection type increased safety «e» can be combined with intrinsically safe «i» power circuits. The minimum clearance and creepage distance between the terminals of both power circuits must then be 50 mm. Even in this case there is no heating of the intrinsically safe power circuit.



- Test report no. : IB-10-3-248 according to ATEX for zones 1 and 2 as well as 21 and 22
- EC-Prototype Examination Certificate IBExU 10ATEX1159 according to directive 94/9/EC
- Continuous operation temperature from -55°C up to +135°C
- Protection classification IP 66 according to EN 60529
- Examinations and standards EN 60079-0:2009, EN 60079-7:2007, EN 60079-11:2007 and EN 60079-31:2009
- Lid screws made of 1.4301 which cannot be lost
- Silicone lid seal glued as o-ring
- Exterior earthing connection from 2,5 mm² up to 120 mm²
- Mounting rail TS 15/7,5 or TS 35/7,5
- Earthing connection points in the interior optionally by busbars for protective conductors, by holding angles for protective conductors or by PE-terminals
- Markings Ex II 2G Ex e II C T6 to T4 Gb or Ex II 2D Ex tb III C T 85°C Db
- Type plate on the outer side of the lid indicating the maximum voltage
- Powder-coating similar to RAL 7001

Accessories on demand:

- Certified earthing connection terminals and series terminals (according to acceptance)
- Ex-tested cable glands and sealing plugs made of steel, brass or polyamide
- Earthing busbars and earthing bolts
- Mounting plates made of galvanised steel sheet
- Wall mounting brackets made of steel
- External hinges for the lid made of aluminium

Processing on demand:

- All metric threads, armoured pipe threads, pass drillings and special threads (minimum distance between the single threads and the sealing edge of the enclosure according to the certificate of acceptance)
- Special colours according to RAL-specification
- Silk-screen printing or engraving for marking the enclosure
- Description plates made of plastic

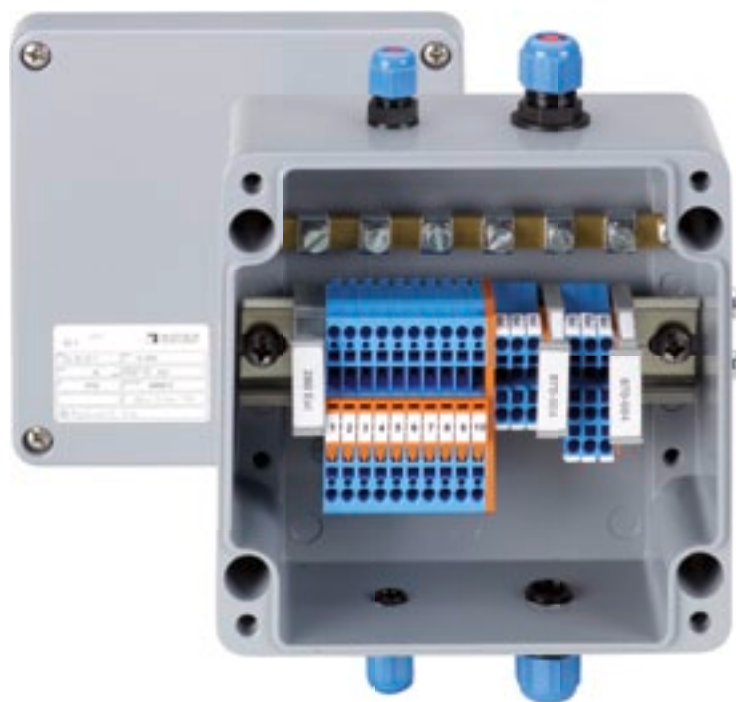
Article number	Type	L	B	H	TS	M	WL	GA
		mm	mm	mm				
3121100200	MBA-Ex e 606030	58	64	34				
3121100400	MBA-Ex e 906030	98	64	35				
3121100600	MBA-Ex e 156030	150	64	34				
3121100900	MBA-Ex e 708055	75	80	57	•	•		
3121101100	MBA-Ex e 128055	125	80	57	•	•		•
3121101300	MBA-Ex e 178055	175	80	57	•	•		•
3121101400	MBA-Ex e 258050	150	80	54	•	•		•
3121105500	MBA-Ex e 101080	100	100	80	•	•	•	•
3121101600	MBA-Ex e 121265	122	120	65	•	•	•	•
3121101800	MBA-Ex e 121280	122	120	80	•	•	•	•
3121101900	MBA-Ex e 121290	122	120	90	•	•	•	•
3121104500	MBA-Ex e 141490	140	140	90	•	•	•	•
3121102000	MBA-Ex e 221265	220	120	65	•	•	•	•
3121102200	MBA-Ex e 221280	220	120	80	•	•	•	•
3121102300	MBA-Ex e 221290	220	120	90	•	•	•	•
3121102400	MBA-Ex e 361280	360	122	80	•	•	•	•
3121102500	MBA-Ex e 161690	160	160	90	•	•	•	•
3121104000	MBA-Ex e 261665	260	160	65	•	•	•	•
3121102600	MBA-Ex e 261690	260	160	90	•	•	•	•
3121102800	MBA-Ex e 361690	360	160	90	•	•	•	•
3121102900	MBA-Ex e 561690	560	160	90	•	•	•	•
3121103000	MBA-Ex e 202311	200	230	110	•	•	•	•
3121103100	MBA-Ex e 282311	280	230	110	•	•	•	•
3121103202	MBA-Ex e 332311	330	230	110	•	•	•	•
3121103300	MBA-Ex e 332318	330	230	180	•	•	•	•
3121103400	MBA-Ex e 402311	400	230	110	•	•	•	•
3121103500	MBA-Ex e 403111	400	310	110	•	•	•	•
3121103600	MBA-Ex e 403118	400	310	180	•	•	•	•
3121103700	MBA-Ex e 602311	600	230	110	•	•	•	•
3121103800	MBA-Ex e 603111	600	310	110	•	•	•	•
3121103900	MBA-Ex e 603118	600	310	180	•	•	•	•

L = Length, **B** = Breadth, **H** = Height, **TS** = Mounting rail, **M** = Mounting plate, **WL** = Wall mounting brackets, **GAGAGA** =

External hinges

Explosion-Proofed-Enclosures MBA-Ex i

Protection class IP 66



MULTI-BOX Aluminium-Ex i junction boxes are conform to all requirements for installation fields where explosive concentrations of gases, steams and dusts can appear (zones 1 and as well as 21 and 22). MBA-Ex i enclosures can be used in the temperature classes T4 up to T6.

The explosion protection of so called intrinsically safe enclosures «i» is based upon the low voltage and electricity connected in the enclosure (e.g. data or telephone lines).

Thanks to the limit of ignition energy, the occurrence of a spark is absolutely impossible. Even rising the temperature or heating our Ex i-junction boxes assembled with the maximum amount of series terminals cannot cause any explosion.

By the exterior earthing, the enclosures are included in the potential compensation. This completely avoids electrostatic charging and sparks resulting from it. In order to make visible an intrinsically safe power circuit when installing Ex i-enclosures, once has to choose blue or blue marked cable glands and blue terminals.



- Test report no.: IB-10-3-248 according to ATEX for zones 1 and 2 as well as 21 and 22
- EC-Prototype Examination Certificate IBExU 10ATEX1159 according to directive 94/9/EC
- Continuous operation temperature from -55°C up to +135°C
- Protection classification IP 66 according to EN 60529
- Examinations and standards EN 60079-0:2009, EN 60079-7:2007, EN 60079-11:2007 and EN 60079-31:2009
- Lid screws made of 1.4301 which cannot be lost
- Silicone lid seal glued as o-ring
- Exterior earthing connection from 2,5 mm² up to 120 mm²
- Mounting rail TS 15/7,5 or TS 35/7,5
- Earthing connection points in the interior optionally by busbars for protective conductors, by holding angles for protective conductors or by PE-terminals
- Markings Ex II 2G Ex ia II C T6 to T4 Gb or Ex II 2D Ex tb III C T 85°C Db
- Type plate on the outer side of the lid
- Powder-coating similar to RAL 7001

Accessories on demand:

- Certified earthing connection terminals and series terminals (according to acceptance)
- Ex-tested cable glands and sealing plugs made of steel, brass or polyamide
- Earthing busbars and earthing bolts
- Mounting plates made of galvanised steel sheet
- Wall mounting brackets made of steel
- External hinges for the lid made of aluminium

Processing on demand:

- All metric threads, armoured pipe threads, pass drillings and special threads (minimum distance between the single threads and the sealing edge of the enclosure according to the certificate of acceptance)
- Special colours according to RAL-specification
- Silk-screen printing or engraving for marking the enclosure
- Description plates made of plastic

Article number	Type	L	B	H	TS	M	WL	GA
		mm	mm	mm				
3131100200	MBA-Ex i 606030	58	64	34				
3131100400	MBA-Ex i 906030	98	64	35				
3131100600	MBA-Ex i 156030	150	64	34				
3131100900	MBA-Ex i 708055	75	80	57	•	•		
3131101100	MBA-Ex i 128055	125	80	57	•	•		•
3131101300	MBA-Ex i 178055	175	80	57	•	•		•
3131101400	MBA-Ex i 258050	150	80	54	•	•		•
3131105500	MBA-Ex i 101080	100	100	80	•	•	•	•
3131101600	MBA-Ex i 121265	122	120	65	•	•	•	•
3131101800	MBA-Ex i 121280	122	120	80	•	•	•	•
3131101900	MBA-Ex i 121290	122	120	90	•	•	•	•
3131104500	MBA-Ex i 141490	140	140	90	•	•	•	•
3131102000	MBA-Ex i 221265	220	120	65	•	•	•	•
3131102200	MBA-Ex i 221280	220	120	80	•	•	•	•
3131102300	MBA-Ex i 221290	220	120	90	•	•	•	•
3131102400	MBA-Ex i 361280	360	122	80	•	•	•	•
3131102500	MBA-Ex i 161690	160	160	90	•	•	•	•
3131104000	MBA-Ex i 261665	260	160	65	•	•	•	•
3131102600	MBA-Ex i 261690	260	160	90	•	•	•	•
3131102800	MBA-Ex i 361690	360	160	90	•	•	•	•
3131102900	MBA-Ex i 561690	560	160	90	•	•	•	•
3131103000	MBA-Ex i 202311	200	230	110	•	•	•	•
3131103100	MBA-Ex i 282311	280	230	110	•	•	•	•
3131103202	MBA-Ex i 332311	330	230	110	•	•	•	•
3131103300	MBA-Ex i 332318	330	230	180	•	•	•	•
3131103400	MBA-Ex i 402311	400	230	110	•	•	•	•
3131103500	MBA-Ex i 403111	400	310	110	•	•	•	•
3131103600	MBA-Ex i 403118	400	310	180	•	•	•	•
3131103700	MBA-Ex i 602311	600	230	110	•	•	•	•
3131103800	MBA-Ex i 603111	600	310	110	•	•	•	•
3131103900	MBA-Ex i 603118	600	310	180	•	•	•	•

L = Length, **B** = Breadth, **H** = Height, **TS** = Mounting rail, **M** = Mounting plate, **WL** = Wall mounting brackets, **GAGAGA** =

External hinges

Special-Enclosures

You have the idea – we take care of everything else



Alongside an extensive range of different standard enclosures, MULTI-BOX offers special enclosures made of plastics and aluminium.

In close cooperation with our customers we cover the design and the technical implementation of exclusive enclosure solutions. You receive design and construction documents according to your specification book. Our experienced project team advises you on the choice of materials, takes care of mouldmaking and manufactures your special enclosure. We accompany you from the initial concept to series production. The result is cost-efficient and customised enclosure solutions from one source.



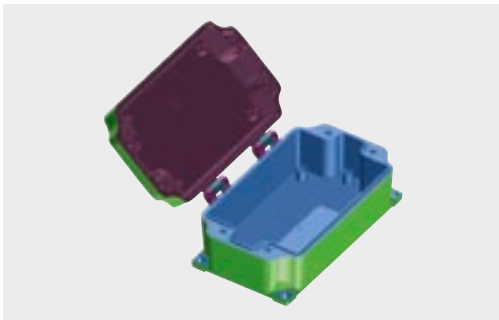
Our services in the area of Special-Enclosures:

- Technical advice for individual enclosure solutions
- Selection of manufacturing materials
- Preparation of design and construction documents in accordance with your specification book
- Feasibility studies and revision of existing constructions
- Preparation of prototypes as stereolithography samples
- Construction and procurement of injection moulds
- Construction and procurement of die casting moulds
- Series manufacturing
- Mechanical processing (CNC)
- Visual design (powder coating, screen printing, engraving etc.)
- Assembly work and completion
- Quality documentation, certification and tests



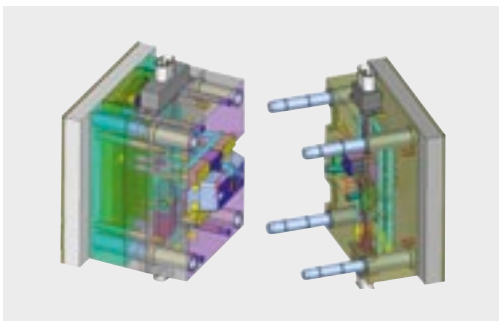
Design & Construction

In close cooperation with our customers we cover the design and technical implementation of exclusive enclosure solutions. You receive design and construction documents according to your requirements or specification book.



Development & Prototyping

As soon as final 3D constructions are available, we prepare stereolithography samples of the form parts. This means you can test the enclosure or subsequent installations in practice before the corresponding moulds are produced.



Setup of moulds

We use raw materials in the highest quality for our moulds and only standard components from reputable manufacturers are installed. All components are optimally set out for the corresponding injection parts, material and the required output quantity.



Series production

After completing the mould construction, we produce your requested enclosure in our in house plastic injection department. You can decide on the use of special materials or an individual colour design for the moulded parts.



Tailor made enclosure solutions

With our unique production depth, we have a direct influence on the full value creation chain of our products. We offer our customers tailor-made enclosure solutions from construction and mouldmaking through to printing or assembling the special enclosure. The result is cost-efficient and customised enclosure solutions from one source.

Accessories



Cable glands (plastic) POV5

- Made of impact resistant Polyamide 6
- Sealing insert made of Neoprene
- Temperature resistance: -30 °C to +90 °C
- Protection Class IP 68 - 5 bar DIN EN 60529
- Vibration-resistant seat of cap nut
- Available in RAL 7035 (light grey), RAL 7001 (silver grey) and RAL 9005 (black)

Thread	Type	RAL 7035	RAL 7001	RAL 9005	Ø Cable	GL	SW	VE
		Art. no.	Art. no.	Art. no.	mm	mm	mm	Items
PG 7	POVSP 7	1908103607	1908103707	1908103807	3 - 6,5	8	15	100
PG 9	POVSP 9	1908103609	1908103709	1908103809	4 - 8	8	19	100
PG 11	POVSP 11	1908103611	1908103711	1908103811	4,5 - 10	8	22	100
PG 13	POVSP 13	1908103613	1908103713	1908103813	6 - 12	9	24	100
PG 16	POVSP 16	1908103616	1908103716	1908103816	10 - 14	11	27	100
PG 21	POVSP 21	1908103621	1908103721	1908103821	13 - 18	11	33	100
PG 29	POVSP 29	1908103629	1908103729	1908103829	18 - 25	11	42	25
PG 36	POVSP 36	1908103636	1908103736	1908103836	22 - 32	13	53	10
PG 42	POVSP 42	1908103642	1908103742	1908103842	30 - 38	13	60	10
PG 48	POVSP 48	1908103648	1908103748	1908103848	34 - 44	14	65	10
M 12	POVSM 12	1908103912	1908104012	1908104112	3 - 6,5	8	15	100
M 16	POVSM 16	1908103916	1908104016	1908104116	4,5 - 10	8	19	100
M 20	POVSM 20	1908103920	1908104020	1908104120	6 - 12	9	24	100
M 25	POVSM 25	1908103925	1908104025	1908104125	9 - 17	10	30	50
M 32	POVSM 32	1908103932	1908104032	1908104132	11 - 21	10	36	25
M 40	POVSM 40	1908103940	1908104040	1908104140	19 - 28	10	46	10
M 50	POVSM 50	1908103950	1908104050	1908104150	27 - 35	12	55	5
M 63	POVSM 63	1908103963	1908104063	1908104163	32 - 42	12	66	5



Locknuts (plastic) KUGM

- Made of Polystyrene (PG sizes)
Temperature resistance: -20 °C to +60 °C
- Made of Polyamide (M sizes)
Temperature resistance: -30 °C to +90 °C
- Color RAL 7035 (light grey)

Thread	Type	Art. no.	SW	VE
			mm	Items
PG 7	KUGMP 7	1908100907	19	100
PG 9	KUGMP 9	1908100909	22	100
PG 11	KUGMP 11	1908100911	24	100
PG 13	KUGMP 13	1908100913	27	100
PG 16	KUGMP 16	1908100916	30	100
PG 21	KUGMP 21	1908100921	36	50
PG 29	KUGMP 29	1908100929	46	25
PG 36	KUGMP 36	1908100936	60	10
PG 42	KUGMP 42	1908100942	65	10
PG 48	KUGMP 48	1908100948	70	10
M 12	KUGMM 12	1908101912	17	100
M 16	KUGMM 16	1908101916	22	100
M 20	KUGMM 20	1908101920	24	100
M 25	KUGMM 25	1908101925	32	100
M 32	KUGMM 32	1908101932	41	25
M 40	KUGMM 40	1908101940	50	10
M 50	KUGMM 50	1908101950	60	10
M 63	KUGMM 63	1908101963	72	5



Cable glands (brass) MSKV

- Made of nickel-plated Brass
- Sealing insert made of Neoprene
- Clamping insert made of Polyamide 6
- O-ring made of NBR
- Protection IP 68 - 5 bar DIN EN 60529
- Temperature resistance: -40 °C to +100 °C

Thread	Type	Art. no.	Ø Cable	GL	SW	VE
			mm	mm	mm	Items
PG 7	MSKVP 7	1908200207	3 - 6,5	6	14	50
PG 9	MSKVP 9	1908200209	4 - 8	6	17	50
PG 11	MSKVP 11	1908200211	4,5 - 10	6,5	20	50
PG 13	MSKVP 13	1908200213	6 - 12	6,5	22	50
PG 16	MSKVP 16	1908200216	10 - 14	6	24	25
PG 21	MSKVP 21	1908200221	13 - 18	7,5	30	25
PG 29	MSKVP 29	1908200229	18 - 25	8	40	20
PG 36	MSKVP 36	1908200236	22 - 32	9	50	15
PG 42	MSKVP 42	1908200242	30 - 38	12	58	12
PG 48	MSKVP 48	1908200248	34 - 44	14	64	10
M 12	MSKVM 12	1908200312	3 - 6,5	6,5	14	50
M 16	MSKVM 16	1908200316	4 - 8	7	18	50
M 20	MSKVM 20	1908200320	6 - 12	8	22	50
M 25	MSKVM 25	1908200325	10 - 14	8	27	25
M 32	MSKVM 32	1908200332	13 - 18	9	34	20
M 40	MSKVM 40	1908200340	18 - 25	9	43	20
M 50	MSKVM 50	1908200350	22 - 32	9	55	12
M 63	MSKVM 63	1908200363	34 - 44	14	68	10



Locknuts (brass) MEGM

- Made of nickel-plated Brass

Thread	Type	Art. no.	SW	VE
			mm	Items
PG 7	MEGMP 7	1908200707	15	100
PG 9	MEGMP 9	1908200709	18	100
PG 11	MEGMP 11	1908200711	21	100
PG 13	MEGMP 13	1908200713	23	100
PG 16	MEGMP 16	1908200716	26	100
PG 21	MEGMP 21	1908200721	32	100
PG 29	MEGMP 29	1908200729	41	100
PG 36	MEGMP 36	1908200736	51	50
PG 42	MEGMP 42	1908200742	60	50
PG 48	MEGMP 48	1908200748	64	50
M 12	MEGMM 12	1908201712	15	100
M 16	MEGMM 16	1908201716	19	100
M 20	MEGMM 20	1908201720	24	100
M 25	MEGMM 25	1908201725	29	100
M 32	MEGMM 32	1908201732	36	100
M 40	MEGMM 40	1908201740	46	50
M 50	MEGMM 50	1908201750	50	50
M 63	MEGMM 63	1908201763	70	50



Sealing plugs (plastic) BLK

- Made of Polystyrene (PG sizes), Temperature resistance: -20 °C to +60 °C
- Made of Polyamide GF (M sizes), Temperature resistance: -30 °C to +90 °C
- Protection Class IP 54 in accordance with DIN EN 60529 (without sealing)
- Protection Class IP 65 in accordance with DIN EN 60529 (with sealing)
- Color RAL 7035 (light grey), further colours on request

Thread	Type	Art. no.	Collar GL	Collar Ø	VE
			mm	mm	Items
PG 7	BLKP 7	1908101007	6	15	100
PG 9	BLKP 9	1908101009	6	19	100
PG 11	BLKP 11	1908101011	6	22	100
PG 13	BLKP 13	1908101013	6	25	100
PG 16	BLKP 16	1908101016	6	27	100
PG 21	BLKP 21	1908101021	8	33	100
PG 29	BLKP 29	1908101029	8	44	25
PG 36	BLKP 36	1908101036	10	55	10
PG 42	BLKP 42	1908101042	10	62	10
PG 48	BLKP 48	1908101048	12	69	5
M 12	BLKM 12	1908102112	5	17	100
M 16	BLKM 16	1908102116	6	21	100
M 20	BLKM 20	1908102120	6	25	100
M 25	BLKM 25	1908102125	7	30	100
M 32	BLKM 32	1908102132	8	38	25
M 40	BLKM 40	1908102140	8	46	10
M 50	BLKM 50	1908102150	9	56	10
M 63	BLKM 63	1908102163	10	69	10



Sealing plugs (brass) BLME

- Made of nickel-plated Brass
- O-ring made of NBR
- Temperature resistance: -30 °C to +100 °C
- Protection Class IP 65 in accordance with DIN EN 60529

Thread	Type	Art. no.	GL	Ø	VE
			mm	mm	Items
PG 7	BLMEP 7	1908200907	4,5	16	100
PG 9	BLMEP 9	1908200909	4,5	19	100
PG 11	BLMEP 11	1908200911	4,5	22	100
PG 13	BLMEP 13	1908200913	6	24	100
PG 16	BLMEP 16	1908200916	6	26	100
PG 21	BLMEP 21	1908200921	6	32	100
PG 29	BLMEP 29	1908200929	8	39	50
PG 36	BLMEP 36	1908200936	9	50	25
PG 42	BLMEP 42	1908200942	10	57	25
PG 48	BLMEP 48	1908200948	10	64	10
M 12	BLMEM 12	1908200412	4,5	16	100
M 16	BLMEM 16	1908200416	6	20	100
M 20	BLMEM 20	1908200420	6,5	24	100
M 25	BLMEM 25	1908200425	7	28	100
M 32	BLMEM 32	1908200432	8	35	50
M 40	BLMEM 40	1908200440	8	45	50
M 50	BLMEM 50	1908200450	9	55	25
M 63	BLMEM 63	1908200463	10	68	10



Grommets / Retch nipples (plastic) WN

- Made of LLD-PE
- Temperature resistance: -20 °C to +70 °C
- Colour RAL 7035 (light grey)
- Open version (O)
- Closed version (G)

Thread	Type	Art. no.	Ø Cable	GL	SW	VE
			mm	mm	mm	Items
PG 9	WNPG 9	1908103309	6 - 8	9,5		100
PG 11	WNPG 11	1908103311	7 - 10	10		100
PG 13	WNPG 13	1908103313	9 - 12	12		100
PG 16	WNPG 16	1908103316	9 - 14	12		100
PG 21	WNPG 21	1908103321	11 - 17	14		50
PG 29	WNPG 29	1908103329	18 - 24	16		50
PG 36	WNPG 36	1908103336	25 - 32	19		25
PG 42	WNPG 42	1908103342	33 - 39	23		25
PG 48	WNPG 48	1908103348	23 - 43	24		25
M 16	WNMO 16	1908103116	5 - 10	9,5	15	100
M 20	WNMO 20	1908103120	8 - 13,5	12	19	100
M 25	WNMO 25	1908103125	9 - 16	12	24	100
M 32	WNMO 32	1908103132	11 - 22	14	30	50
M 40	WNMO 40	1908103140	17 - 24	15	37	25
M 50	WNMO 50	1908103150	22 - 35	18	46	10
M 63	WNMO 63	1908103163	24 - 42	20	56	5
M 16	WNMG 16	1908103216	5 - 10	9,5	15	100
M 20	WNMG 20	1908103220	8 - 13,5	12	19	100
M 25	WNMG 25	1908103225	9 - 16	12	24	100
M 32	WNMG 32	1908103232	11 - 22	14	30	50
M 40	WNMG 40	1908103240	17 - 24	15	37	25
M 50	WNMG 50	1908103250	22 - 35	18	46	10
M 63	WNMG 63	1908103263	24 - 42	20	56	5

Definition of protection classes

in accordance to EN 60529

The protection class is indicated by a code, which is composed of the two letters IP and two digits for the degree of protection

First identification figure	Scope of protection	
	Scope of protection against contact and foreign substances	
	Description	Explanation
0	No protection	No particular protection for individuals against direct contact with active or moving parts. No protection of the equipment against penetration of hard foreign substances.
1	Protection against large foreign substances	Protection against coincidental large surface contact of active and inactive moving parts such as hands, but without protection against deliberate access to these parts. Protection against penetration of hard foreign substances, which have a larger diameter than 50 mm.
2	Protection against medium size foreign substances	Protection against contact with active or inactive parts with one's fingers. Protection against penetration of hard foreign substances, which have a diameter larger than 12 mm.
3	Protection against small foreign substances	Protection against contact with active or inactive parts with tools, wires or similar objects, which are larger than 2.5 mm. Protection against penetration of hard foreign substances, which have a diameter larger than 2.5 mm.
4	Protection against grain shaped foreign substances	Protection against contact with active or inactive parts with tools, wires or similar objects, which are larger than 1 mm.
5	Protection against accumulation of dust	Complete protection against contact with moving parts, which are under tension. Protection against dangerous accumulations of dust. The penetration of dust cannot completely be prevented, but is not allowed to accumulate in such amounts, which prevent the mode of operation.
6	Protection against dust inflow	Complete protection against contact with moving parts which are under tension or which are moving inside themselves. Protection against penetration of dust.

Second identification figure	Scope of protection	
	Scope of protection against water	
	Description	Explanation
0	No protection	No particular protection against water
1	Protection against vertically falling dropping water	Dropping water, which falls vertically is not allowed to have a harmful effect.
2	Protection against obliquely falling dropping water	Dropping water, which falls vertically in any angle to 15° is not allowed to have a harmful effect.
3	Protection against spray water	Water, which falls vertically in any angle to 60° is not allowed to have a harmful effect.
4	Protection against splash water	Water, which falls in all directions and is directed towards the equipment is not allowed to have a harmful effect.
5	Protection against jet water	Jetwater from a nozzle, which is sprayed against the equipment from all sides, is not allowed to have a harmful effect.
6	Protection against flooding	Water, which is caused by temporary flooding e.g. stormy sea, is not allowed to penetrate the equipment.
7	Protection when dipping	Water is not allowed to penetrate in harmful amounts when the equipment is dipped into water for a fixed pressure and time condition.
8	Protection when submerging	Water is not allowed to penetrate in harmful amounts when the equipment is submerged under water.
9K	Protection against penetration of water when cleaning with high-pressure / steam jet cleaner	Water, which is directed against the enclosure with high-pressure from all sides, is not allowed to have a harmful effect.

Characteristics of plastics

Mechanical, electrical, physical and chemical characteristics of ABS, Noryloxyd, Polycarbonate and Polyester.

Characteristics	Norm	Units	ABS	Noryl	Polycarbonate	Polyester
Mechanical characteristics						
Impact resistance	DIN 53453	kp/cm ²	>10	>15	>30	90
Flexure strength	DIN 53452	kp/cm ²	7100	950 - 1000	>950	1800
Tensile strength	DIN 53455	N/mm ²	46	450	650	850
Electrical characteristics						
Leakage current resistance	DIN 53480	Classification	KC 600	KC 175	KA 1	KA 36
Superficial resistance	DIN 53482	ohm	10 ¹³		10 ¹⁵	10 ¹³
Dielectric strength	DIN 53481	Kv/cm	-	350	350	180 - 200
Resistivity	DIN 53482	ohm x cm	>10 ¹⁵	10 ¹⁷	10 ¹⁷	10 ¹⁴
Physical characteristics						
Form resistance	DIN 53458	°C	+80	+95	+115 to +125	> +250
Melting temperature	DIN 53460	°C	+95	+142	+160 to +170	-
Temperature resistance		°C	-40 to +80	+110	-50 to +125	-50 to +140
Lightfastness	DIN 53388				4	7 - 8
Tropical and mold resistance	CEI 689-2-3				■	■
Water absorption	DIN 53472	mg	6	0,07	10	45
Specific weight	DIN 53479	g/cm ³	1,05	1,06	1,20	1,75
Refractoriness						
Combustibility	ASTM D-2863-70	% O ₂			24,3	24,4
Flame resistance	ASTM D-635-68		33	self-extinguishing	self-extinguishing	self-extinguishing
Glow wire test	DIN 53459				2c	2b
Heat radiation	C.S.T.B.					
Flammability	Nach UL 94		HB	V1	V2	V0

Chemical resistance of plastics and seals

When evaluating if an Enclosure is resistant against the influences of chemical substances, not only the enclosure material has to be considered but also the type of seal. The most important basic materials, which are frequently used in MULTI-BOX and the most frequently used chemical substances, are shown in the chart below. This chart only contains information where the materials are generally resistant against these medias. The concentration and the surrounding temperature also have to be considered. It is advisable to carry out an exact analysis to be able to evaluate the chemical resistance of the materials where more chemicals which are used in the same area at the same time.

Chemicals	ABS	Polyamide	Poly-carbonate	Polyester GRP	Chloroprene CR	PU-foamed	Silicone
	Enclosure				Seal		
Acetone	—	□	—	—	■	—	□
Formic acid	—	—	30	10	■	—	□
Ammoniac	—	20	—	—	■	■	■
Petrol	—	■	□	■	■	□	■
Benzene	—	—	—	■	—	—	—
Brake fluid		60	—	■	□	—	■
Butane		■	■		■	■	■
Butanol		■		■	■	□	—
Calcium chloride		■	■	■		■	
Chlorobenzene	—	□	—	■	—	—	—
Diesel oil	■		□	■	□	□	□
Acetic acid	10	—	10	40	—	□	—
Formaldehyde		■		30	—		■
Frigen 113			■	■	■		
Fruit juice		■	■	■	■	■	■
Glycerine	■	■	□	■	■	■	■
Heating oil	□	■	□	■	□	□	□
Hydraulic oil		■	■	■	■		□
Caustic potash		—	—	—	■	—	
Potassium chloride		■	■	■	■	■	■
Potassium hydroxide	■			—	■	■	□
Linseed oil		■	■	■	■	□	□
Methanol		□	—	—	■	□	■
Methyl chloride		—	—	—	—	—	—
Lactic acid	■	10	10	■	■	■	
Mineral oil	■	■	■	■	□	■	■
Engine oil		■	■	■	□	□	■
Sodium carbonate		■	■	■			
Sodium chloride		10	■	■	■	■	■
Sodium hydroxide	■			—	■	■	□
Caustic soda	—	10	—	40	50	□	—
Nitric acid	30	—	10	10	□	—	—
Hydrochloric acid	10	—	20	■	■	□	
Lubricating oil		■	■	■	□	□	■
Sulfur-carbon		□	—	—	—	—	—
Sulfuric acid	30	—	50	70	50		25
Soap sud		■	□	■	■	■	■
Dish soap			■		■	□	■
Turpentine oil		■		■	■	□	—
Carbon Tetrachloride	—	□		■	—	—	—
Toluene	—	■	—	■	—	□	—
Trichloroethylene	—	—		—	—	□	—
Water (distilled, river, tap, sea)	■	■	■	■	■	■	■
Wine acid		■	10	■	■		■
Xylene	—	■	—	■	—	□	—
Zinc sulphate			■	■	■		■
Lemon acid	10	10	10	■	■	■	■

■ = Resistant against all concentrations, □ = Conditionally resistant, 10 = Resistant against maximum % concentration, — = Non resistant

Characteristics of aluminium

Mechanical characteristics

MULTI-BOX Aluminium Enclosures made of DIN-alloy Al Si 9 are manufactured in pressure die casting and chilled casting. Therefore, different mechanical characteristics have been evaluated.

Al Si 9 according to DIN 172/Page 2			
	Measurement unit	Pressure diecasting* 3.2582.05	Chilled casting 3.2581.02
Tensile strength	N/mm ²	220 - 280	180 - 240
0.2 Limit	N/mm ²	140 - 180	80 - 110
Ultimate strain	%	ca. 3	6 - 12
Brinell hardness	HB	60 - 80	50 - 60
Impact test	J/cm ²	6 - 9	7 - 10

* Values on test bar

Physical characteristics

The physical characteristics are allowed to be influenced by permissible analytic tolerances and the casting method. The specific values are recommended values.

	Measurement unit	Gal Si 9
Density at 20°C	G/cm ³	2,65
Thermal conductivity co-efficient 20-200°C	10 ⁻⁶ K	20 - 23
Thermal conductivity 20°C	W cm K ⁻¹	1,5 - 1,7
Electrical conductivity 20°C	M Ω mm ⁻¹	17 - 27

Chemical behavior

The following chart is applicable for the alloy Al Si 9 which can be used for both casting methods.

Al Si 9		
Medium	Resistance	Comments
Acetone	Resistant	
Sea water	Resistant	Limited brackish water use
Ammoniac (dry)	Resistant	Limited Ammoniac damp use
Petrol	Resistant	
Benzene	Resistant	
Concrete	Resistant	
Heating oil	Resistant	
Petroleum	Resistant	
Water steam	Resistant	Limited hot steam use
Weather influences	Resistant	Limited extreme influences

Resistance to other media on request

Type of seal		
Condition	Standard (PU-foamed)	Silicone
Unpainted	-40 °C to +100 °C	-50 °C to +140 °C
Painted*	-40 °C to +100 °C	-50 °C to +140 °C

* In use with suitable paints or coatings

05 Compensation

1. Compensation claims because of neglect of duty from our side are independent from legal grounds, especially because of impossibility, delay, bad service, breach of secondary responsibilities, general responsibilities from contractual obligations illicit handlings are excluded. These do not apply:
 - a) for damage which cause injuries to life, bodies or health,
 - b) for other damages when these
 - aa) are caused deliberately or grossly negligent of duty through us or one of our managerial members of staff
 - bb) a substantial contractual obligation (cardinal obligation – especially contractual principle liability) has been violated
 - cc) a miscellaneous duty, which has purposely or non-purposely been violated by an assistant of the company which is not mentioned in bb). In the cases bb) and cc), the typical amount of the liability which could or may happen is restricted.
2. As long as the responsibility is excluded or restricted, these apply to the individual responsibility of our employees, members of staff, salespersons and assistants of the company.
3. The preceding liability exclusion is not applicable for claims according to the product liability law.
4. As far as the purchaser demands a replacement of expenditures, which he has taken in reliance on benefit receipt (§ 284 BGB), these expenses are limited to the amount of such expenses that a reasonable third party would have made.
5. The purchaser can withdraw from the contract when a neglect of duty through defective service of our side is justifiable

06 Reservation of title

1. We retain title to the goods delivered until full payment of the purchase price including all collateral claims are made. During running business contacts, the goods will stay in our ownership until they are fully paid and that all commitments against the purchaser, especially until they have been completely balanced, with a recognised current account of the purchaser.
 2. The purchaser is obliged to take care of the goods as long as the properties have not been transferred to them. The purchaser has to inform us immediately and in written form, when the delivered goods are damaged, misplaced, distraintment or has been exposed to any other third party.
- As far as the costs of the third party are not able to cover the court and out of court costs, the purchaser is liable for the developed costs.
3. The purchaser is allowed to resell and process the goods in a normal business volume. The requirements of the purchaser compared to his/her purchasers of reselling the goods, the purchaser is obliged to pay the agreed price (including VAT) to us. If the purchaser agrees a current account of the agreed price with the secondary purchaser, they have to balance the account to us. The assignment also includes any other legal reason (insurance, tort, compensation for loss of rights, etc) with respect to the conditional goods. This assignment shall apply regardless of whether the goods have been resold without or after processing. We accept the assignment.
 4. The purchaser is authorised up until the collection of receivables. Our authority to collect the receivables ourselves stays untouched. However, we will not collect our receivables as long as the purchaser obliges his/her payments, is not in payment default and especially if an insolvency procedure has not been opened or a bankruptcy is not present.
 5. The processing or transformation of the goods is always done for us. The processed goods serve as our security, but only to the value of the goods provided. Unless the conditional goods are processed with other objects, not belonging to us, we acquire title to the other processed items at the time of processing or combination.
 6. We commit ourselves, to release the above mentioned securities, if the value exceeds the claims to be secured by 20%.

07 Documents, protection rights

1. Pattern books, drawings and illustrations stay our property and have to be sent back immediately if demanded. It is forbidden for you to show our documents to competitors.
2. With manufacturing goods according to drawings, samples or other details of the purchaser, the purchaser relieves us from any claims or rights of third parties.

08 Terms of payment

1. Our payment terms are 10 days, 3% discount, 30 days net. The goods invoiced on the day of delivery, the purchaser, except for declaratory judgment or in writing granted counterclaims, is not entitled to withhold payment or to explain the offset.
2. In case the payment is not carried out at the agreed point of time, we are authorised to charge the usual bank interest rates as of the day in arrears. To cover the out of court collection costs, we will charge the purchaser 5,00 EUR and if this has to be repeated, the collection cost will be doubled. Discount charges, exchange charges and default interest are due immediately. Bills of exchange and checks are accepted for payment. Exchange are accepted subject to a discounting.
3. If it goes to our knowledge, that the creditworthiness of the purchaser is reduced and we are afraid, that the customer can not meet its payment obligations (eg check lock), we are entitled to refuse delivery or change to prepayment. We also reserve the right to refuse the delivery. If the delivery has already been carried out, the invoice sum or the rest of the payment has to be completed immediately.

09 Court of jurisdiction and choice of law

1. If the Purchaser is a merchant i.S.d. HGB, legal entity under public law or public law special fund, our company seat is place of performance and jurisdiction for all disputes arising from the contractual relationship, including on exchange and apparent liabilities arising, directly or indirectly disputes.
2. German rights apply to the contractual relationships.
3. Should any of these conditions be or become invalid, the validity of the contract and any other terms shall not be affected.

Worldwide Representation



Besides innovative products, people are the most important factor in the chain from the initial idea to commissioning. Expertise, understanding of the requirements and experience in the use of our products are the most important preconditions for the realisation of your ideas and wishes.

MULTI-BOX gives you experienced and professional contacts in our globally operating sales network. Make contact with us directly or contact one of our partners.

**Germany****MULTI-BOX GmbH**

Wallücker Bahndamm 7
DE-32278 Kirchlingern
Tel.: +49 5223 49107-0
Fax: +49 5223 49107-28
info@multi-box.com
www.multi-box.com

**Belgium****Hatenboer Elektro BV**

Klaverbladstraat 6a
BE-3560 Lummen
Tel.: 0032-16-572168
Fax: 0032-16-565582
belgie@hatenboer.com
www.hatenboer.com

**Denmark****Brodersen Controls ApS**

Trorodvej 8
DK-2950 Vedbaek
Tel.: 4546740000
Fax: 4546757336
bc@brodersencontrols.com
www.brodersencontrols.com

**Finland****Noretron Komponentit Oy**

Mankaantie 32
FI-2180 Espoo
Tel.: 00358 10 525 8000
Fax: 00358 10 525 8010
komponentit@noretron.fi
www.noretron.fi

**Greece****ADEM Electronics**

Karaiskaki str. 61
GR-13674 Aharnes Athens
Tel.: 0030 2102401961
Fax: 0030 2102401406
info@ademcomp.gr
www.ademcomp.gr

**Great Britain****ACAL BFI Central Procurement UK Limited**

3 The Business Centre Molly Millars Lane
GB-RG41 2EY Wokingham
Tel.: 0044-118-9788878
Fax: 0044-118-9776095
purchasing@acalcp.com
www.acaltechnology.com

Cadlow Enclosures

Bridge House, The green Redgrave
GB-IP22 IRP Diss, Norfolk
Tel.: 441379898810
Fax: 441379898812
Info@cadlow.co.uk
www.cadlow.co.uk

**Indonesia****Merce Alliance Pte Ltd**

No. 1 Maritime Square
09-23 HarbourFront Centre
99523 Singapore
Tel.: +65 62711 011
Fax: +65 62711 055
sales@mercealliance.com
www.mercealliance.com

**Italy****Emmeti S.N.C**

Via Ghislandi 22
IT-25125 Brescia
Tel.: 030/3541320
Fax: 030/3541382
info@emmetigroup.it
www.emmetigroup.it

**Malaysia****Merce Alliance Pte Ltd**

No. 1 Maritime Square
09-23 HarbourFront Centre
99523 Singapore
Tel.: +65 62711 011
Fax: +65 62711 055
sales@mercealliance.com
www.mercealliance.com

**Netherlands****Comdes Componenten B.V.**

Platinastraat 25-29
NL-2718 SZ Zoetermeer
Tel.: 0031-7936-25666
Fax: 0031-7936-25133
info@comdes.nl
www.comdes.nl

Hatenboer Elektro BV

Hazeldonk 6550
NL-4836 LD Breda
Tel.: 0031-76-5043222
Fax: 0031-76-5043221
info@hatenboer.com
www.hatenboer.com

LBHbox BV

Oerseweg 17
NL-7071 PP ULFT
Tel.: 0031-315640546
Fax: 0031-315640612
info@lbhbox.nl
www.lbhbox.nl

ViFa Elektrotechnik B.V.

Korenmaat 12b
NL-9405 TJ ASSEN
Tel.: 0031-592305860
Fax: 0031-592301736
info@vifa-elektrotechnik.nl
www.ViFa-Elektrotechnik.nl

**Norway****Treotham AS**

Olav Brunborgs vei 27
NO- 1396 Billingstad
Tel.: 4766778320
Fax: 4766778329
treotham@treotham.no
www.treotham.no

**Austria****E-Term Handels GmbH**

Feldstr. 11
AT-6020 Innsbruck
Tel.: 0043-5125842210
Fax: 0043-512584221-20
welcome@e-term.at
www.e-term.at

**Poland****APAR Biuro Handlowe**

ul. Galczynskiego 6
PL-05-090 Raszyn
Tel.: 48221012731
Fax: 48221012734
info@apar.pl
www.apar.pl

**Sweden****Garam Elektronik AB**

Tellusvägen 43
SE-18636 Vallentuna
Tel.: 4687100340
Fax: 4687104227
info@garam.se
www.garam.se

**Switzerland****EHS Elektrotechnik AG**

Industriestraße 26
CH-8604 Volketswil
Tel.: 0041/4490840-50
Fax: 0041/4490840-55
info@ehs.ch
www.ehs.ch

Hutmacher + Schlund AG

Tellistr. 116
CH-5000 Aarau
Tel.: 41628378055
Fax: 41628378056
info@hutmacher-schlund.ch
www.hutmacher-schlund.ch

**Singapore****Merce Alliance Pte Ltd**

No. 1 Maritime Square
09-23 HarbourFront Centre
SG-099253 Singapore
Tel.: 0065 6271 1011
Fax: 0065 6271 1055
sales@mercealliance.com
www.mercealliance.com

**Slovenia****PLASTRON d.o.o.**

Partizanska cesta 10
SL-9250 Gronja Radgona
Tel.: 38625611174
Fax: 38625611194
info@plastron.si
www.plastron.si

**Spain****FG sistemas eléctricos**

Falconera des Gestions, s.l.
Cinca, 37 nau 1 - P.I.Santa Margarita
ES-8223 Terrassa (Barcelona)
Tel.: 34937844188
Fax: 34937313343
info@falconera.es
www.falconera.es

**South Korea****SEOUL - METAL Company**

194-1 Bugok-li Jangeung-myon
KR-482-810 Yangju-si Kyongido
Tel.: 82318265000
Fax: 82318265002

**Thailand****Merce Alliance Pte Ltd**

No. 1 Maritime Square
09-23 HarbourFront Centre
99523 Singapore
Tel.: +65 62711 011
Fax: +65 62711 055
sales@mercealliance.com
www.mercealliance.com

**Czech Republic****SVK Elektronik s. r. o.**

Podebradská 186/56
CZ-18066 Praha 9
Tel.: 420266107483
Fax: 420266107321
svk@svk.cz
www.svk.cz

**US, Canada, Mexico****Norstat Inc**

300 Roundhill Drive Unit 4
Rockaway, NJ 07866
Tel.: 973-586-2500
Fax: 973-586-1590
sales@norstat.com
www.norstat.com



MULTI-BOX
THE BOX COMPANY



NORSTAT INC.

300 Roundhill Drive, Rockaway, NJ 07866
Tel: 973-586-2500, Fax: 973-586-1590
www.norstat.com, www.norstatblog.com