FIBOX®

ENCLOSURE CATALOGUE

Version 3.5 GB

FIBOX

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www.fibox.com

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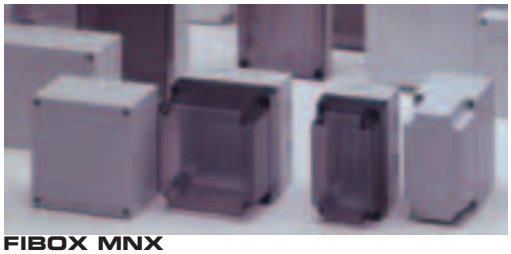

FIBOX MNX

SMALL TO MEDIUM SIZE ENCLOSURES

PC / ABS 52 x 50 x 40 mm – 300 x 230 x 110 mm

P / AL 50 x 45 x 31,5 mm – 600 x 310 x 180 mm

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190 x 190 x 130 mm – 760 x 560 x 250 mm

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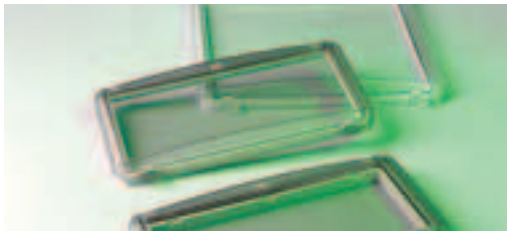

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FIBOX COMPANY PRESENTATION

Fibox enclosures are manufactured in modern factories located in the Helsinki, Finland metropolitan area and in Inchon, the Republic of Korea.

35 YEARS EXPERIENCE IN THERMOPLASTIC ENCLOSURES

In 1966, FIBOX introduced the first modular enclosures moulded from polycarbonate plastic. These enclosures began a new era in electrical panel building. From the beginning, a commitment to continuous product improvement and an on going product development has fuelled a dramatic and rapid growth for the company.

FIBOX, a privately-owned Finnish company, is one of the largest enclosure manufactures in the world, and is the market leader in thermoplastic enclosures used for protecting electrical and electronic components operating in hostile environments.

Whatever your application, the FIBOX enclosure family features the widest range of high quality enclosures for the packaging and protection of electrical and electronic components and systems. Enclosures can be delivered in standard off the shelf configurations or customised to your exact specifications. Fibox Oy Ab earned the ISO 9001:2000 Quality Certification for all its operations in 1992.

Fibox voluntarily submits its products for third party testing and evaluation, and currently has many third party listings including, UL, CSA, KEMA, FIMKO, DNV, LR, etc. The company enclosures are rated EN 60529 even up to IP 68. In addition, nearly all products are rated for use in hazardous areas.

CONTINUOUS PRODUCT DEVELOPMENT

The FIBOX enclosure range features over 500 different standard enclosures made of polycarbonate, ABS, polyester fibre-glass and aluminium. Fibox is the industry leader in developing both new products and new technologies for moulding thermoplastic enclosures. At Fibox, we consider moulding technology an essential part of product development.

For example, the new FIBOX MNX enclosure is the first to utilise direct injection of the enclosure gasket material during the body moulding process. This new process ensures precision moulding of the gasket guaranteeing superior enclosure protection ratings. Fibox is the only manufacturer applying this technology to enclosures.

Another example is FIBOX's emphasis on multiple slide technology for mould construction. While much more costly, this type of mould provides our OEM customers cost effective alternatives for modifying standard enclosures to meet their specific needs.

But more important than technical leadership, is the FIBOX commitment to understanding the needs of its customers. All our products are designed in close cooperation with our customers. We use input from our global customer base to produce new enclosure ranges, useful accessories and on-going product improvements and enhancements.

MORE INFORMATION

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FIBOX's policy is to continually improve its products.
Specifications in this Enclosure Catalogue are subject to change without notice.

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FIBOX is on the WEB for YOU

Find Fibox support services on the world wide web.

Visit our multi-language WEB site. As a global, multinational company, our home page is available in English, French, German, Swedish, Korean and Finnish.

No time for drawing enclosures?

At **www.fibox.com**, Fibox lends a helping hand to designers with CAD format drawings which can be easily downloaded. Select only the drawings you need for your selected enclosure and complete your design quickly. Save time with drawings available in both inches and millimetres.

Need technical specifications, accessories or agency approvals?

At **www.fibox.com**, you can obtain the technical information you need to complete your design. Select your enclosure, and print a PDF file with a photo, dimensional drawing (in metric and inches), part numbers, ordering codes, technical data and regulatory agency approvals. There is even a list of correct accessories, ready for you to print. Select only the information you want and need!

The world changes and so do we.

At **www.fibox.com**, you can see the latest Fibox products and services. As a leader in injection moulding for the electrical and electronics industries, there is always something new at Fibox. Visit our WEB site to keep abreast of new products and services, the latest in customising options, or our growing list of accessories. Our electronic newsletter will introduce you to new products, new applications and new services, plus add a personal touch as you get to know Fibox around the world.

Need technical or promotional material?

At **www.fibox.com**, you can request our catalogue, full colour data sheets, press releases, manufacturers declarations, CD-ROM and much more. Just click the envelope and specify what you need.

Your thoughts, please!
Give us feedback. Tell us what you like and what you don't like! Contact us via **www.fibox.com**, or E-mail us at **info@fibox.fi**. We are committed to continually improving our service to you. Please help us by sharing your opinions with us.

YOU surf to US and let US serve YOU

FIBOX®

FIBOX MNX

FIBOX PICCOLO

FIBOX EURONORD

FIBOX MCE CONTROL

FIBOX MCE FEM

FIBOX MCE ISO

FIBOX SOLID

FIBOX EK

FIBOX CAB

FIBOX QUICK

FIBOX SPACE LINK

FIBOX CARDMASTER

FIBOX EX

FIBOX WINDOWS

FIBOX

FIBOX QUALITY CREATES CUSTOMER ADVANTAGE

Fibox has developed a sophisticated quality system to assure our customers of the reliability and consistency of our products and our service. All aspects of our operations, from design and development through to production and product delivery, are documented to ensure superior performance. Performance you can rely on.

Fibox is an ISO 9001 certified manufacturer and was awarded its certificate by Bureau Veritas Quality International in 1992. This approval covers specifications defined by ISO 9001:2000.

THE FIBOX QUALITY POLICY

The Fibox approach to quality is documented in the Fibox Quality Policy manual.

THE FIBOX QUALITY SYSTEM

The Fibox quality system applies not only to product quality and safety, but availability of product, accuracy of shipments, technical support and customer service. The continued success of this program is assured by regular internal and independent external audits.

NEMA/UL CLASSIFICATIONS OF PROTECTION

The National Electrical Manufacturers Association (NEMA) is a US Manufacturers Organisation which actively promotes standardised product specifications for electrical apparatus.

NEMA performance criteria and test methods are used by Underwriters' Laboratories as guidelines for investigation and listing of electrical enclosures.

Approximate IP equivalents in parentheses

NEMA 1:	Indoor use primarily to provide a degree of protection against contact with the enclosed equipment and against a limited amount of falling dirt. (IP30)
2:	Indoor use to provide a degree of protection against limited amounts of falling water and dirt. (IP31)
3:	Outdoor use to provide a degree of protection against windblown dust, rain, and sleet; undamaged by the formation of ice on the enclosure. (IP64)
3R:	Outdoor use to provide a degree of protection against falling rain and sleet: undamaged by the formation of ice on the enclosure. (IP32)
3S:	Outdoor use to provide a degree of protection against windblown dust, rain and sleet; external mechanisms remain operable while ice laden.
4:	Indoor or outdoor use to provide a degree of protection against splashing water, windblown dust and rain, hose directed water; undamaged by the formation of ice on the enclosure. (IP66)
4X:	Indoor or outdoor use to provide a degree of protection against splashing water, windblown dust and rain, hose directed water; undamaged by the formation of ice on the enclosure, resists corrosion. (IP66)
6:	Indoor or outdoor use to provide a degree of protection against the entry of water during temporary submersion at a limited depth; undamaged by the formation of ice on the enclosure.
6P:	Indoor and outdoor use to provide a degree of protection against the entry of water during prolonged submersion at a limited depth.
11:	Indoor use to provide by oil immersion a degree of protection of the enclosed equipment against the corrosive effects of corrosive liquids and gases.
12,12K:	Indoor use to provide a degree of protection against dust, falling dirt and dripping noncorrosive liquids. (IP65)
13:	Indoor use to provide a degree of protection against dust and spraying of water, oil and noncorrosive coolants. (IP65)

FIBOX

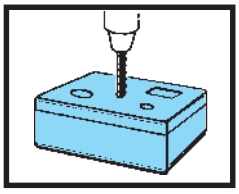
THE IP AND IK CLASSIFICATIONS

Ingress protection class of enclosures is given in the form of IP classification, a two digit coding which is shown below. Fibox has tested the enclosures according to IEC 529 or the newer EN 60529 4:1992. The latter requires the second digit to be tested from class 6 upwards separately to each level of class, thus the double marking IP 66 / IP 67 indicates that the actual tests have been made for both levels.

The European standard for empty enclosures, EN 50298:98 includes the IK impact test. This test is described in EN 50102, and as Fibox enclosures are tested to EN 50298:98, the data for impact resistance are available as well.

FIRST NUMBER Protection against solid objects		SECOND NUMBER Protection against liquids		IK CODE Protection against mechanical impacts	
IP	TEST	IP	TEST	IK	TEST
0	no protection	0	no protection	00	no protection
1	protected against solid objects up to 50 mm e.g. accidental touch by hands.	1	protected against vertically falling drops of water.	01-05	impact < 1 joule
2	protected against solid objects up to 12 mm e.g. fingers.	2	protected against direct sprays of water up to 15° from the vertical.	06	impact 1 joule
3	protected against solid objects over 2,5 mm (tools+ small wires).	3	protected against sprays to 60° from the vertical.	07	impact 2 joule
4	protected against solid objects over 1mm (tools+ small wires).	4	protected against water sprayed from all directions - limited ingress permitted.	08	impact 5 joule
5	protected against dust - limited ingress permitted (no harmful deposit).	5	protected against low pressure jets of water from all directions - limited ingress permitted.	09	impact 10 joule
6	totally protected against dust.	6	protected against strong jets of water e.g. for use on shipdecks - limited ingress permitted.	10	impact 20 joule
		7	protected against the affects of immersion between 15 cm and 1 m.		
		8	protected against long periods of immersion under pressure.		

FIBOX

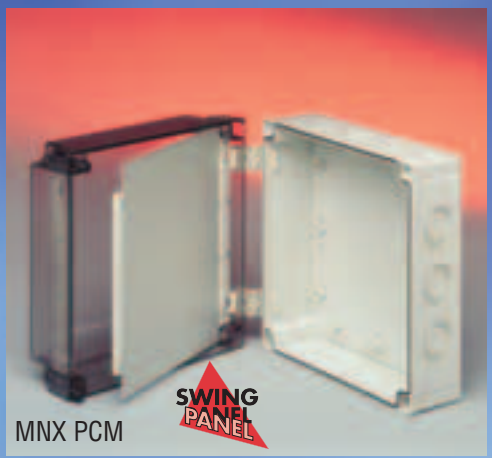


FIBOX MNX

Pat.Reg. 384648, 400513, 400512

MNX PC

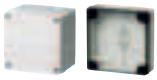
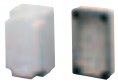
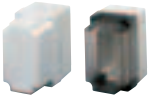
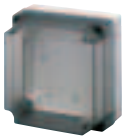
MNX ABS



MNX PCM

The FIBOX MNX range of enclosures represents the culmination of 35 years experience in enclosure design and manufacture. Unique tooling defines a new "State of the Art" for injection moulding. The FIBOX MNX polycarbonate and ABS range has been designed to house and protect electrical and electronic components in hostile environments. Three body depths, and up to 4 cover choices per body size, create over 240 variations. Covers are available opaque or transparent "smoked grey". A wide selection of accessories is available including a hinged "Swing Out" inner panel, the "Swing Panel".

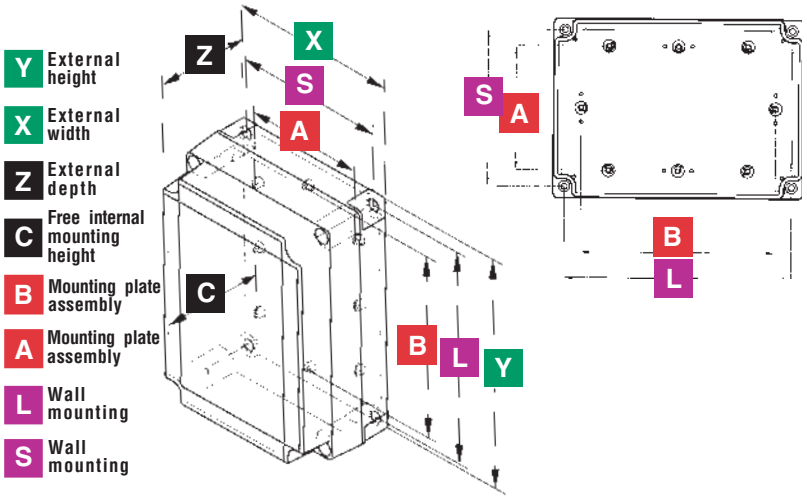
FIBOX MNX PC

FIBOX MNX POLYCARBONATE **PC: IP 66/67 and IP 66, IK 08**	Z mm	C mm	Including: Enclosure cover with cover screws and wing heads for cover screws, base with mounting plate screws and gasket. ORDER SYMBOL Grey cover		ORDER SYMBOL Smoked transparent cover		B x A L x S mm
PC 95 L / PC 95 H Y x X 100 mm 100 mm 	35 50 60 75	28.8 45.6 53.8 70.6	PC 95/35 LG PC 95/50 LG PC 95/60 HG PC 95/75 HG		PC 95/35 LT PC 95/50 LT PC 95/60 HT PC 95/75 HT		B x A 70 x 45 L x S 83.5 x 83.5
PC 100 L Y x X 130 mm 80 mm 	35 50 75 100	24.1 41.0 61.0 90.9	PC 100/35 LG PC 100/50 LG PC 100/75 LG PC 100/100 LG		PC 100/35 LT PC 100/50 LT PC 100/75 LT PC 100/100 LT		B x A 90 x 40 L x S 113.5 x 63.5
PC 100 H Y x X 130 mm 80 mm 	60 75 100 125	44.5 61.0 86.3 111.3	PC 100/60 HG PC 100/75 HG PC 100/100 HG PC 100/125 HG		PC 100/60 HT PC 100/75 HT PC 100/100 HT PC 100/125 HT		B x A 90 x 40 L x S 113.5 x 63.5
PC 125 L Y x X 130 mm 130 mm 	35 50 75 100	24.0 40.9 65.9 90.9	PC 125/35 LG PC 125/50 LG PC 125/75 LG PC 125/100 LG		PC 125/35 LT PC 125/50 LT PC 125/75 LT PC 125/100 LT		B x A 90 x 90 L x S 113.5 x 113.5
PC 125 H Y x X 130 mm 130 mm	60 75 100 125	44.4 61.0 86.2 111.3	PC 125/60 HG PC 125/75 HG PC 125/100 HG PC 125/125 HG		PC 125/60 HT PC 125/75 HT PC 125/100 HT PC 125/125 HT		B x A 90 x 90 L x S 113.5 x 113.5
PC 150 L Y x X 180 mm 130 mm	35 50 75 100 125	23.6 41.0 65.9 90.9 115.5	PC 150/35 LG PC 150/50 LG PC 150/75 LG PC 150/100 LG PC 150/125 LG		PC 150/35 LT PC 150/50 LT PC 150/75 LT PC 150/100 LT PC 150/125 LT		B x A 140 x 90 L x S 163.5 x 113.5
PC 150 H Y x X 180 mm 130 mm	60 75 100 125 150	44.0 61.3 86.3 111.3 135,9	PC 150/60 HG PC 150/75 HG PC 150/100 HG PC 150/125 HG PC 150/150 HG		PC 150/60 HT PC 150/75 HT PC 150/100 HT PC 150/125 HT PC 150/150 HT		B x A 140 x 90 L x S 163.5 x 113.5
PC 175 H Y x X 180 mm 180 mm	60 75 100 125 150	44.0 61.0 86.3 111.0 135.9	PC 175/60 HG PC 175/75 HG PC 175/100 HG PC 175/125 HG PC 175/150 HG		PC 175/60 HT PC 175/75 HT PC175/100 HT PC 175/125 HT PC 175/150 HT		B x A 140 x 140 L x S 163.5 x 163.5
PC 200 H Y x X 255 mm 180 mm PC 200 XH	63 75 100 150	47.5 61.2 86.3 135.9	PC 200/63 HG PC 200/75 HG PC 200/100 HG PC 200/150 HG		PC 200/63 HT PC 200/75 HT PC 200/100 HT PC 200/150 HT		B x A 215 x 140
	88 100 125 175	71.5 86.8 111.9 161.5	PC 200/88 XHG PC 200/100 XHG PC 200/125 XHG PC 200/175 XHG		PC 200/88 XHT PC 200/100 XHT PC 200/125 XHT PC 200/175 XHT		L x S 238.5 x 163.5

External height Y — External width X — External depth Z — Free internal mounting height C — Mounting plate assembly B x A — Wall mounting L x S

L (low base) =enclosure with the low 25 mm base, H (high base) = enclosure with the high 50 mm base, XH (extra high base) = enclosure with the extra high 75 mm base,
T= smoked transparent cover with black cover screws and black wing heads, G= grey cover with grey cover screws and grey wing heads.

FIBOX MNX PC



SYMBOLS AND ABBREVIATIONS

PC 100 / 60 L G

- G: Cover G = Grey; T = Smoked grey transparent
- L: Base height — L= Low 25 mm; H= High 50 mm; XH= Extra high 75 mm
- 60: Total height = base + cover
- 100: Size (length + width/2)
- PC: Enclosure range/type

PC Smooth sides
ABS Smooth sides
PCM Sides with metric knock-outs

FIBOX MNX F COVER FOR MEMBRANE KEYBOARDS

Please order separately: cover II 150/10 GF or II 175/10 GF, appropriate enclosure base (see chart below) and cover screw set. For 150L bases use MBS LL -screw set and for 150H and 175H bases MBS LH set. Screw sets include 4 x grey cover screws, 4 x grey wing heads and 4 x mounting plate screws.

Y x X mm	Z mm	C mm	ORDER SYMBOL/ Base	PRODUCT		B x A L x S mm
180 x 130	35	23,6	PC 150L	PC low base		140 x 90 163.5 x 113.5
			A 150L	Low ABS base		
180 x 130	60	44,0	PC 150H	PC base		140 x 90 163.5 x 113.5
			PCM 150	PC base with metric knock-outs		
			A 150H	ABS base		
180 x 180	60	44,0	PC 175H	PC base		140 x 140 163.5 x 163.5
			PCM 175	PC base with metric knock-outs		
			A 175H	ABS base		

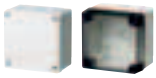
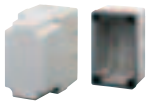
FIBOX MNX PCM WITH METRIC KNOCK-OUTS

Amount of metric knock-outs in FIBOX MNX PCM:

Y x X mm		KNOCK-OUT OPENINGS Long side	KNOCK-OUT OPENINGS Short side	
	ORDER SYMBOL	Number of openings x metric size	Number of openings x metric size	
100 x 100	PCM 95	2 x M20	-	
130 x 80	PCM 100	2 x M32/M20	1 x M25/M16	
130 x 130	PCM 125	2 x M32/M20	2 x M25/M16	
180 x 130	PCM 150	3 x M25/M16	2 x M32/M20	
180 x 180	PCM 175	3 x M32/M20	3 x M25/M16	
255 x 180	PCM 200	3 x M25/M16 + 2 x M32/M20	3 x M32/M20	
255 x 180	PCM 200X	8 x M20, 1 x /M50/M32	2 x M32/M20, 1 x M20	

For more information, please see next page.

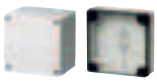
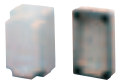
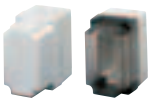
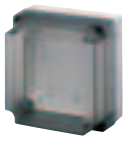
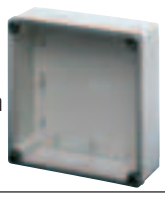
FIBOX MNX PCM WITH METRIC KNOCK-OUTS

FIBOX MNX POLYCARBONATE **PC: IP 66/67 and IP 66, IK 08**	Z mm	C mm	Including: Enclosure cover with cover screws and wing heads for cover screws, base with mounting plate screws and gasket. ORDER SYMBOL Grey cover		ORDER SYMBOL Smoked transparent cover		B x A L x S mm
PCM 95 Y x X 100 mm 100 mm 	60 75	53.8 70.6	PCM 95/60 G PCM 95/75 G		PCM 95/60 T PCM 95/75 T		B x A 70 x 45 L x S 83.5 x 83.5
PCM 100 Y x X 130 mm 80 mm 	60 75 100 125	44.5 61.0 86.3 111.3	PCM 100/60 G PCM 100/75 G PCM 100/100 G PCM 100/125 G		PCM 100/60 T PCM 100/75 T PCM 100/100 T PCM 100/125 T		B x A 90 x 40 L x S 113.5 x 63.5
PCM 125 Y x X 130 mm 130 mm	60 75 100 125	44.4 61.0 86.2 111.3	PCM 125/60 G PCM 125/75 G PCM 125/100 G PCM 125/125 G		PCM 125/60 T PCM 125/75 T PCM 125/100 T PCM 125/125 T		B x A 90 x 90 L x S 113.5 x 113.5
PCM 150 Y x X 180 mm 130 mm	60 75 100 125 150	44.0 61.0 86.3 111.3 135.9	PCM 150/60 G PCM 150/75 G PCM 150/100 G PCM 150/125 G PCM 150/150 G		PCM 150/60 T PCM 150/75 T PCM 150/100 T PCM 150/125 T PCM 150/150 T		B x A 140 x 90 L x S 163.5 x 113.5
PCM 175 Y x X 180 mm 180 mm	60 75 100 125 150	44.0 61.0 86.3 111.3 135.9	PCM 175/60 G PCM 175/75 G PCM 175/100 G PCM 175/125 G PCM 175/150 G		PCM 175/60 T PCM 175/75 T PCM 175/100 T PCM 175/125 T PCM 175/150 T		B x A 140 x 140 L x S 163.5 x 163.5
PCM 200 Y x X 255 mm 180 mm	63 75 100 150	47.5 61.2 86.3 135.9	PCM 200/63 G PCM 200/75 G PCM 200/100 G PCM 200/150 G		PCM 200/63 T PCM 200/75 T PCM 200/100 T PCM 200/150 T		B x A 215 x 140
PCM 200 X Y x X 255 mm 180 mm	88 100 125 175	71.5 86.8 111.9 161.5	PCM 200/88 XG PCM 200/100 XG PCM 200/125 XG PCM 200/175 XG		PCM 200/88 XT PCM 200/100 XT PCM 200/125 XT PCM 200/175 XT		L x S 238.5 x 163.5

External height Y — External width X — External depth Z — Free internal mounting height C — Mounting plate assembly B x A — Wall mounting L x S

Enclosure with the high 50 mm base, X (extra high base) = enclosure with the extra high 75 mm base,
T= smoked transparent cover with black cover screws and black wing heads, G= grey cover with grey cover screws and grey wing heads.

FIBOX MNX ABS

FIBOX MNX ABS **ABS: IP 66/67 and IP 66, IK 07**	Z mm	C mm	Including: Enclosure cover with cover screws and wing heads for cover screws, base with mounting plate screws and gasket. ORDER SYMBOL Grey cover		ORDER SYMBOL Smoked transparent cover		B x A L x S mm
ABS 95 L / ABS 95 H Y x X 100 mm 100 mm 	35 50 60 75	28.8 45.6 53.8 70.6	ABS 95/35 LG ABS 95/50 LG ABS 95/60 HG ABS 95/75 HG		ABS 95/35 LT ABS 95/50 LT ABS 95/60 HT ABS 95/75 HT		B x A 70 x 45 L x S 83.5 x 83.5
ABS 100 L Y x X 130 mm 80 mm 	35 50 75 100	24.1 41.0 61.0 90.9	ABS 100/35 LG ABS 100/50 LG ABS 100/75 LG ABS 100/100 LG		ABS 100/35 LT ABS 100/50 LT ABS 100/75 LT ABS 100/100 LT		B x A 90 x 40 L x S 113.5 x 63.5
ABS 100 H Y x X 130 mm 80 mm 	60 75 100 125	44.5 61.0 86.3 111.3	PC 100/60 HG PC 100/75 HG PC 100/100 HG PC 100/125 HG		ABS 100/60 HT ABS 100/75 HT ABS 100/100 HT ABS 100/125 HT		B x A 90 x 40 L x S 113.5 x 63.5
ABS 125 L Y x X 130 mm 130 mm 	35 50 75 100	24.0 40.9 65.9 90.9	ABS 125/35 LG ABS 125/50 LG ABS 125/75 LG ABS 125/100 LG		ABS 125/35 LT ABS 125/50 LT ABS 125/75 LT ABS 125/100 LT		B x A 90 x 90 L x S 113.5 x 113.5
ABS 125 H Y x X 130 mm 130 mm	60 75 100 125	44.4 61.0 86.2 111.3	ABS 125/60 HG ABS 125/75 HG ABS 125/100 HG ABS 125/125 HG		ABS 125/60 HT ABS 125/75 HT ABS 125/100 HT ABS 125/125 HT		B x A 90 x 90 L x S 113.5 x 113.5
ABS 150 L Y x X 180 mm 130 mm	35 50 75 100 125	23.6 41.0 65.9 90.9 115.5	ABS 150/35 LG ABS 150/50 LG ABS 150/75 LG ABS 150/100 LG ABS 150/125 LG		ABS 150/35 LT ABS 150/50 LT ABS 150/75 LT ABS 150/100 LT ABS 150/125 LT		B x A 140 x 90 L x S 163.5 x 113.5
ABS 150 H Y x X 180 mm 130 mm	60 75 100 125 150	44.0 61.3 86.3 111.3 135,9	ABS 150/60 HG ABS 150/75 HG ABS 150/100 HG ABS 150/125 HG ABS 150/150 HG		ABS 150/60 HT ABS 150/75 HT ABS 150/100 HT ABS 150/125 HT ABS 150/150 HT		B x A 140 x 90 L x S 163.5 x 113.5
ABS 175 H Y x X 180 mm 180 mm 	60 75 100 125 150	44.0 61.0 86.3 111.0 135.9	ABS 175/60 HG ABS 175/75 HG ABS 175/100 HG ABS 175/125 HG ABS 175/150 HG		ABS 175/60 HT ABS 175/75 HT ABS 175/100 HT ABS 175/125 HT ABS 175/150 HT		B x A 140 x 140 L x S 163.5 x 163.5
ABS 200 H Y x X 255 mm 180 mm ABS 200 XH	63 75 100 150	47.5 61.2 86.3 135.9	ABS 200/63 HG ABS 200/75 HG ABS 200/100 HG ABS 200/150 HG		ABS 200/63 HT ABS 200/75 HT ABS 200/100 HT ABS 200/150 HT		B x A 215 x 140
	88 100 125 175	71.5 86.8 111.9 161.5	ABS 200/88 XHG ABS 200/100 XHG ABS 200/125 XHG ABS 200/175 XHG		ABS 200/88 XHT ABS 200/100 XHT ABS 200/125 XHT ABS 200/175 XHT		L x S 238.5 x 163.5

External height Y | External width X | External depth Z | Free internal mounting height C | Mounting plate assembly B x A | Wall mounting L x S

L (low base) =enclosure with the low 25 mm base, H (high base) = enclosure with the high 50 mm base, XH (extra high base) = enclosure with the extra high 75 mm base,
T= smoked transparent cover with black cover screws and black wing heads, G= grey cover with grey cover screws and grey wing heads.

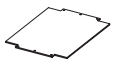
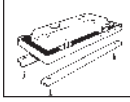
FIBOX MNX PC/ABS

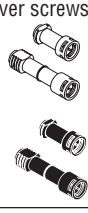
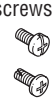
TECHNICAL INFORMATION

PROPERTY		POLYCARBONATE (PC)	ABS	CONFORMITY TO STANDARDS (UL, CSA, CE, Lloyds, BV, FI)
Ingress Protection (EN 60529)		IP66/IP 67 and IP66	IP66/67 and IP66	**USA** Enclosures for Electrical Equipment PC: UL Type 1, 4, 4X, 6 (12 and 13) (UL 50/508) ABS: NEMA 1, 4, 4X, 6 (12 and 13)
Impact Resistance (EN 50102)		IK 08	IK 07	**Canada** Industrial Control Equipment Enclosures for Electrical Equipment/ULc
Temperature Range (short term)	Celsius Fahrenheit	-40°. . .120°C -40°. . .250°F	-40°. . .80°C -40°. . .175°F	**Europe** Enclosures for Switch Gear and Control Gear Assemblies EN 50298:1998
Temperature Range (continuous)	Celsius Fahrenheit	-40°. . .80°C -40°. . .175°F	-40°. . .60°C -40°. . .140°F	**Europe** Safety of Information Technology Equipment EN 60950
Electrical Insulation		Totally insulated ⧈	Totally insulated ⧈	**Australia** Enclosures for switch gear and control gear AS 3132-1991
Light Grey Parts Colour		RAL 7035 Industry Grey	RAL 7035 Industry Grey	
Transparent Clear PC Cover		Smoked Grey	Smoked Grey	
Cover Screws		Black or Grey	Black or Grey	
Cover Screws		Polyamide (PA)	Polyamide (PA)	
Gasket		PUR/TPE	PUR/TPE	
Enclosure Flammability Rating		UL94-5V	UL94HB	UL 746 C 5 in. vertical flame test
Glow Wire Test		960°C	650°C	IEC 695-2-1, Self-extinguishing
Non-toxicity		Halogen Free	Halogen Free	
UV resistance		UL 508 720 hours in "Weatherometer"		
Chemical Resistance *		Good	Good	

Data subject to change without notice. *Consult separate raw material data for more detailed information

ACCESSORIES

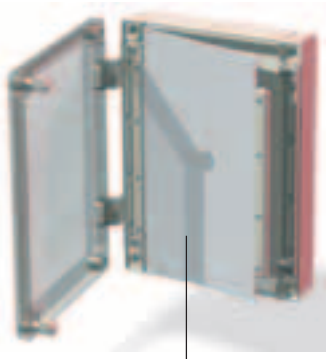
Product	Order symbol	Size mm	
MNX front plate 	FP A 100/130 FP A 125/130 FP A 150/180 FP A 175/180 FP A 200/180	120 x 62 120 x 112 170 x 112 170 x 162 237 x 170	
MNX front plate hinge series, 2 pcs incl. screws	HFP 130 HFP 180	130 180	
Mounting plate	MIV 95 MIV 100 MIV 125 MIV 150 MIV 175 MIV 200	66 x 80 98 x 48 98 x 98 148 x 98 148 x 148 223 x 148	
Mounting rail DIN 35	B-3 MIV 5 MIV 10 MIV 15 MIV 20	35 x 80 35 x 50 35 x 100 35 x 150 35 x 225	
Mounting rail DIN 15	MIN 5 MIN 10 MIN 15 MIN 20	15 x 50 15 x 100 15x 150 15 x 225	
Mounting foot kit, 4 pcs. incl. screws	FP 22046		
Inspection windows 	L02 L04 L06 L08 L10	60 x 77 96 x 77 130 x 77 162 x 77 199 x 77	

Product	Order symbol	Size mm	
Plastic hinges (2 pcs) Incl. mounting screws	TH A		
MNX sealing plug, grey MNX sealing plug, black	DP 14553 DP 14553B		
Water plug	MB 12189		
Cover plug	MB 14560		
Ventilation device	MB 10631		
Cover screws 	SS 14550L SS 14551H SS 14550BL SS 14551BH		
Wing heads for cover screws	MB 14552 MB 14552B		
Mounting plate screws 	MR ZN 2.9x6.5 KN 3.9x9.5	2.9 x 6.5 3.9 x 9.5	

POLYCARBONATE AND ABS ENCLOSURE

MULTI PURPOSE MOUNTING PODS

The 50 mm (H) base features 3 levels for component mounting. The highest level provides component clearance under the Printed Circuit Board. The middle level is ideal for DIN rail mounting. The lowest level permits snap-in mounting of PCB's.



Please ask for Fibox mounting and machining service for terminal blocks and cable glands.

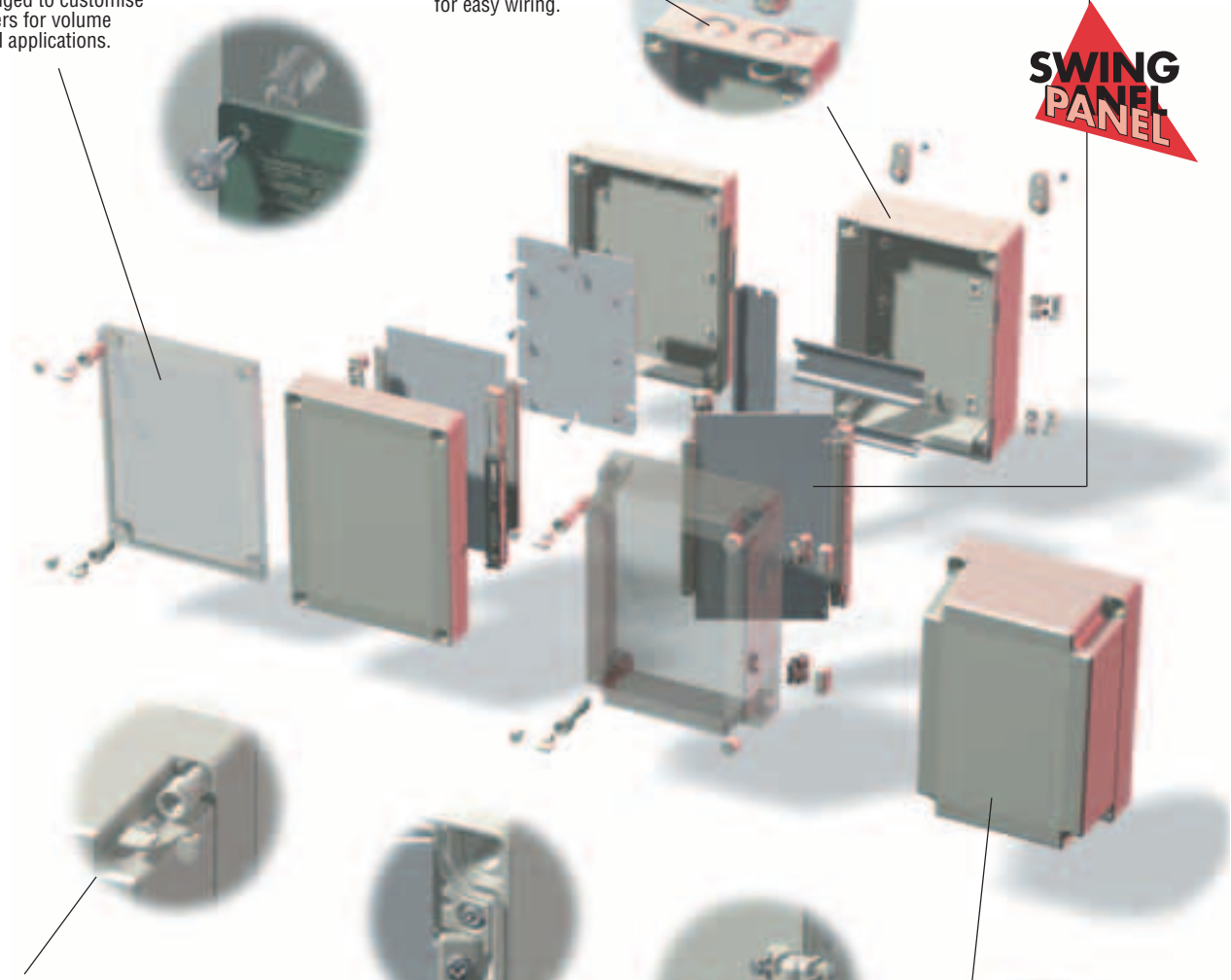
VERSATILE COVERS

Grey opaque or smoked transparent polycarbonate covers provide a stylish finish to any installed equipment. Tooling may be cost effectively changed to customise covers for volume OEM applications.

FIBOX MNX PCM

Enclosure features metric knock-outs moulded in place for easy wiring.

SWING PANEL



FUNCTIONAL COVER SCREWS

The enclosure is supplied with corrosion free plastic cover screws. A wing head screw can be snapped in place for opening without tools. Grey covers are supplied with grey screws. Smoked transparent covers are supplied with black screws.

HINGED INNER PANEL

For instrumentation mounting, aluminum inner panels can be hinged right or left. Unique brackets allow mounting in either base or cover. The brackets permit mounting at variable depths.

RUGGED HINGE

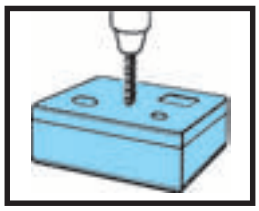
An optional corrosion free hinge is available. Mounted on the outside, fixing screws are hidden by decorative covers.

MEMBRANE KEY-BOARD RECESS

The cover features a slightly recessed area ideal for overlays and membrane key pads. Special cover available for sizes 150 and 175, see page 9.

FIBOX CUSTOMIZING SERVICES

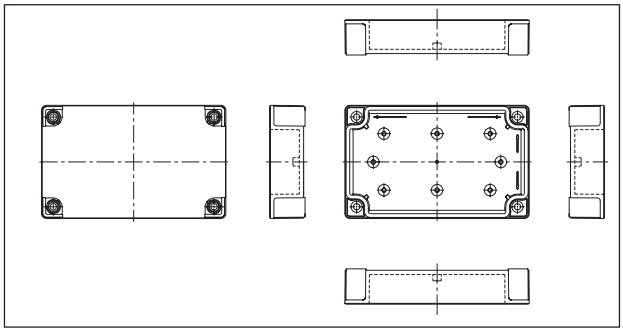
FIBOX MACHINING SERVICES



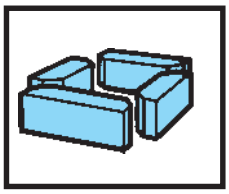
To increase the range and flexibility of our enclosure solutions, Fibox has developed a comprehensive range of services, permitting cost effective customisation for specific applications. The two most important of these are machining services and customised tooling.

Our sophisticated CNC machinery can supply enclosures with holes, cutouts and openings to your specification. This solution is best suited for small to medium volumes of enclosures. Fibox knowledge of enclosure materials ensures that he machining method is compatible with the chosen enclosure material.

Prior to machining a production run, Fibox requires customer approved drawings. Either the customer or Fibox can create these drawings. Enclosure specifications and technical data are available on our latest CD-ROM or on the WEB WWW.FIBOX.COM. CAD support drawings are available in IGES, DWG and DXF formats adaptable to your design system requirements.



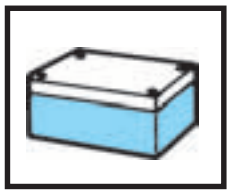
CUSTOMISED TOOLING



For large volume OEM requirements, it is often possible to customise the moulding of a standard product to meet the OEM's specific needs. Provided the mould is a sophisticated multiple slide mould, any enclosure side may be customised without requiring an entirely new mould. It is important that the OEM consult with Fibox early in your design process to determine what, if any, mould change restrictions exist.

Altering an existing Fibox mould can be a very cost effective alternative to creating a custom mould. In essence, you lease a high volume, standard product mould with minimal initial tooling cost. This can shorten product development times and permit customising even those products with projected short life cycles. Your new product reaches the market sooner.

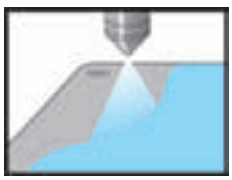
COLOURED PLASTIC ENCLOSURES



Fibox offers custom moulding of standard enclosures in customer specified colours. Standard colour specifications are based upon the RAL system, however custom colour matching is possible.
The type of plastic has significant impact on colour match, colour consistency and cost. Please consult your Fibox representative for guidance.

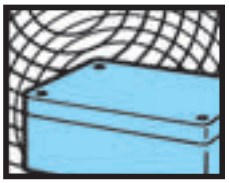
Custom colour molding becomes economical in volumes over 1000 pieces, but lower volumes are possible. Cost adders are based upon increased raw material costs, plus the cost to prepare moulds prior to production and then clean the moulds after production. These mould preparation costs are highly volume dependent.

PAINTED ENCLOSURES



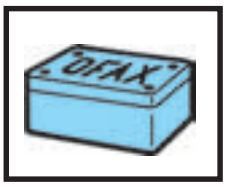
Painting enclosures is recommended for plastic enclosures when volumes do not justify custom moulding. Critical colour matching, if required, is also easier to accomplish with paint. Paint type is dependent upon the choice of enclosure material. Please consult your Fibox representative for guidance.

EMC - PLASTIC ENCLOSURES



Plastic enclosures can be prepared to provide EMC shielding. Various methods are available, but painting the internal surface with Ni conductive paint is the preferred method. This coating, combined with a conductive gasket material such as CHO-SEAL 1350, can provide significant shielding levels. Proper selection of materials is very application specific. Please consult your Fibox representative for guidance.

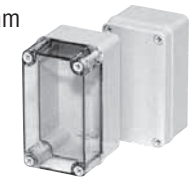
PRINTED ENCLOSURES



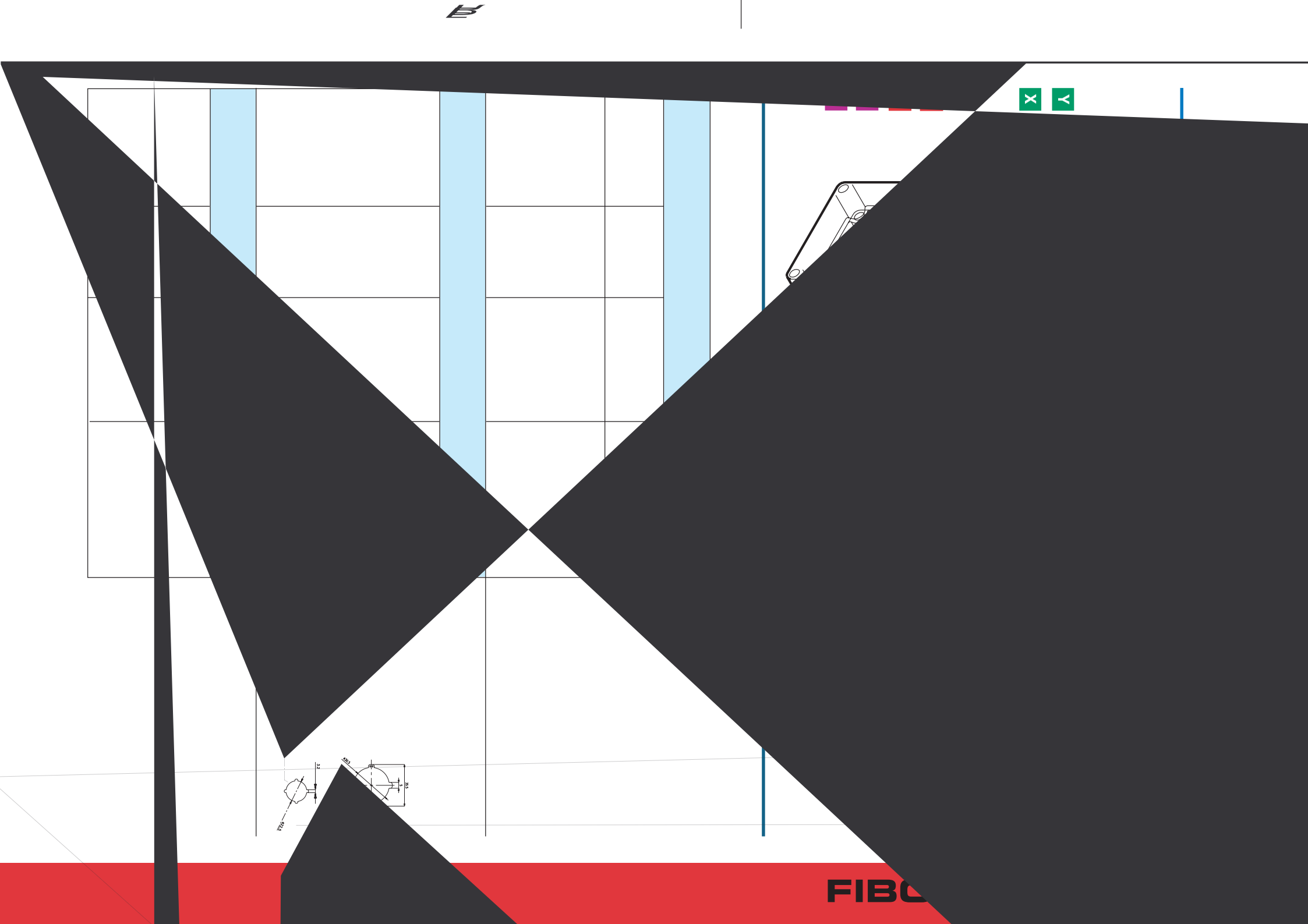
Silk screen printing is recommended for enclosure batches of less than 1000 pieces. This method is mainly suitable for flat surfaces, and can be used for large areas.

Tampo printing is the best solution for volumes greater than 1000 pieces. It is suitable for printing on both flat and curved surfaces of limited size. Tampo printing is also ideal for tight spots like the inside surface of the enclosure.

FIBOX PICCOLO

FIBOX PICCOLO **PC: IP66 / IP67, IK 08** **ABS: IP66 / IP67, IK 07**	Z mm	C mm	Including: Enclosure base, cover with PUR gasket, 4 cover screws, and mounting screws. ORDER SYMBOL Grey cover		ORDER SYMBOL Transparent cover		B x A L x S mm
PICCOLO B Y x X 110 mm 80 mm	65 85 65 85	52 72 52 72	PC B 65 G PC B 85 G ABS B 65 G ABS B 85 G		PC B 65 T PC B 85 T ABS B 65 T ABS B 85 T		B 75 L x S 90 x 60
PICCOLO C Y x X 140 mm 80 mm	65 85 65 85	52 72 52 72	PC C 65 G PC C 85 G ABS C 65 G ABS C 85 G		PC C 65 T PC C 85 T ABS C 65 T ABS C 85 T		B 105 L x S 120 x 60
PICCOLO D Y x X 170 mm 80 mm 	65 85 65 85	52 72 52 72	PC D 65 G PC D 85 G ABS D 65 G ABS D 85 G		PC D 65 T PC D 85 T ABS D 65 T ABS D 85 T		B 135 L x S 150 x 60
PICCOLO F Y x X 230 mm 80 mm	65 85 65 85	52 72 52 72	PC F 65 G PC F 85 G ABS F 65 G ABS F 85 G		PC F 65 T PC F 85 T ABS F 65 T ABS F 85 T		B 195 L x S 210 x 60
PICCOLO H Y x X 170 mm 140 mm	95 95	81.7 81.7	PC H 95 G ABS H 95 G		PC H 95 T ABS H 95 T		B x A 130 x 100 L x S 152 x 122
PICCOLO M Y x X 230 mm 140 mm	95 95 125 125	81.7 81.7 111.7 111.7	PC M 95 G ABS M 95 G PC MH 125 G ABS MH 125 G		PC M 95 T ABS M 95 T PC MH 125 T ABS MH 125 T		B x A 190 x 100 S x L 212 x 122

External height Y | External width X | External depth Z | Free internal mounting height C | Mounting plate assembly B x A | Wall mounting L x S


X
Y
FIBO

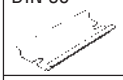
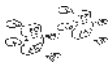
FIBOX PICCOLO

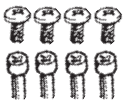
TECHNICAL INFORMATION

PROPERTY		POLYCARBONATE (PC)	ABS	CONFORMITY TO STANDARDS (UL, CSA, CE, Lloyds, BV, FI)
Ingress Protection (EN 60529)		IP66/IP67	IP66/67	**USA** Enclosures for Electrical Equipment PC: UL Type 1, 4X, 6, 12 and 13 (UL 50/508) ABS: NEMA 1, 4, 4X, 6, 12 and 13
Impact Resistance (EN 50102)		IK 08	IK 07	**Canada** Industrial Control Equipment Enclosures for Electrical Equipment/ULc
Temperature Range (short term)	Celsius Fahrenheit	-40°. . .120°C -40°. . .250°F	-40°. . .80°C -40°. . .175°F	**Europe** Enclosures for Switch Gear and Control Gear Assemblies EN 50298:1998
Temperature Range (continuous)	Celsius Fahrenheit	-40°. . .80°C -40°. . .175°F	-40°. . .60°C -40°. . .140°F	**Europe** Safety of Information Technology Equipment EN 60950
Electrical Insulation		Totally insulated ⧈	Totally insulated ⧈	**Australia** Enclosures for switch gear and control gear AS 3132-1991
Light Grey Parts Colour		RAL 7035 Industry Grey	RAL 7035 Industry Grey	
Transparent Clear PC Cover		Clear Transparent	Clear Transparent	
Cover Screws		RAL 7035	RAL 7035	
Cover Screws		Polyamide (PA)	Polyamide (PA)	
Gasket		PUR	PUR	
Enclosure Flammability Rating		UL94-5V	UL94HB	UL 746 C 5 in. vertical flame test
Glow Wire Test		960°C	650°C	IEC 695-2-1, Self-extinguishing
Non-toxicity		Halogen Free	Halogen Free	
UV resistance		UL 508 720 hours in "Weatherometer"		
Chemical Resistance *		Good	Good	

Data subject to change without notice. *Consult separate raw material data for more detailed information

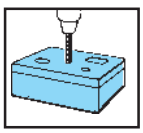
ACCESSORIES

Product	Order symbol	Size mm	
Mounting plate	B-MP C-MP D-MP F-MP H-MP M-MP	80 x 54 110 x 54 140 x 54 200 x 54 125 x 94 185 x 94	
Mounting rail DIN 35 	B-3 CHM-3 DH-3 FM-3	35 x 80 35 x 110 35 x 140 35 x 200	
Inspection windows	L02 L04 L06 L08 L10	60 x 77 96 x 77 130 x 77 162 x 77 199 x 77	
Ventilation device	MB 10631		
Hinges	TH A		
Hinges, 1 pair incl. screws 	PA 22039		

Product	Order symbol	Size mm	
Mounting foot kit, 2 pcs incl. screws	FP 22040		
Mounting foot kit, 4 pcs incl. screws	FP 22046		
Screw sets 	MB S-20 KN MB S-40 KN MB S-20 BKN MB S-40 BKN		
Cover screws	Grey S-20 S-40 Black S-20B S-40B	0.8 1.6 0.8 1.6	20 40 20 40
Mounting screw	KN 3.9 x 9.5		

CUSTOMISATION

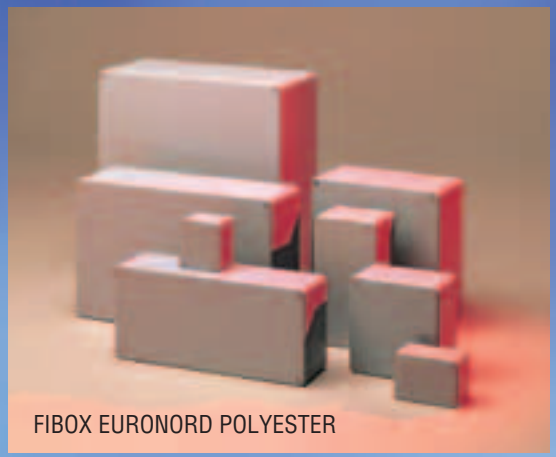
Enclosures can be machined, painted, screen printed and preassembled to meet your customisation requirements. Fibox's service centre offers complete CNC machining, hinge mounting, screen printing, assembly and much more. Our wide selection of enclosures and accessories can be customised to create a unique enclosure meeting your application requirements.



FIBOX EURONORD

FIBOX EURONORD

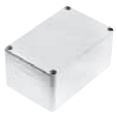
FIBOX EURONORD ALUMINIUM

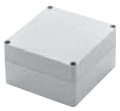


FIBOX EURONORD POLYESTER

The FIBOX EURONORD range of enclosures is specifically designed for housing DIN-rail mounted terminal blocks. Additionally, these enclosures are excellent for packaging sensors for process control applications. FIBOX EURONORD enclosures are available moulded from polycarbonate, ABS or polyester (GRP). FIBOX EURONORD enclosures are also available in cast aluminium. The enclosures are rated EN 60529 IP 66/67.

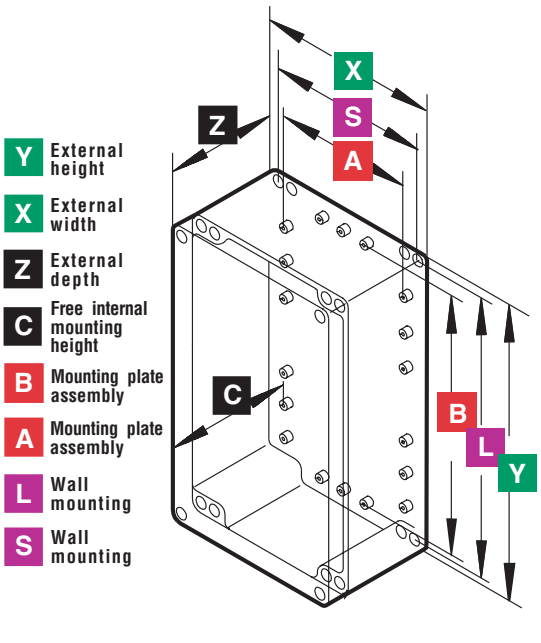
FIBOX EURONORD II

FIBOX EURONORD II **PC: IP66 / IP67, IK 08/IK 07** **ABS: IP66 / IP67, IK 07**	Z x C B x A L x S mm	GREY COVER AND TRANSPARENT COVER ORDER SYMBOL	
050504 Y x X 52 mm 50 mm 	Z / C 40 x 30 B 16.4 L x S 40 x 38	PC 050504 AB 050504	
050705 Y x X 65 mm 50 mm 	Z / C 45 x 35 B 38 L x S 53 x 38	PCT 050705 PC 050705 AB 050705	
080807 Y x X 82 mm 80 mm 	Z / C 65 x 53.5 B x A 58 x 43.5 L x S 70 x 50	PCT 080807 PC 080807 AB 080807	
081206 Y x X 120 mm 80 mm 	Z / C 55 x 42 B x A 81.5 x 58.0 L x S 108 x 50	PCT 081206 PC 081206 AB 081206	
081607 Y x X 160 mm 80 mm 	Z / C 65 x 54 B x A 121.5 x 58 L x S 148 x 50	PCT 081607 PC 081607 AB 081607	
081610 Y x X 160 mm 80 mm 	Z / C 95 x 84 B x A 121.5 x 58 L x S 148 x 50	PCT 081610 PC 081610 AB 081610	

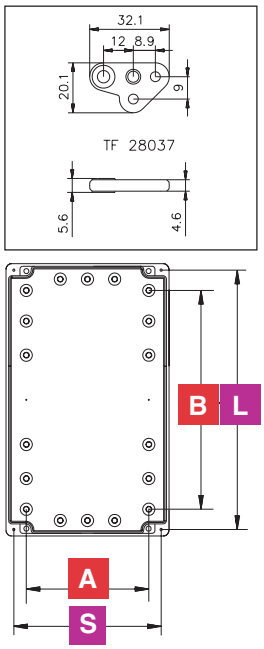
FIBOX EURONORD II **PC: IP66 / IP67, IK 08/IK 07** **ABS: IP66 / IP67, IK 07**	Z x C B x A L x S mm	GREY COVER AND TRANSPARENT COVER ORDER SYMBOL	
121207 Y x X 122 mm 120 mm 	Z / C 65 x 54 B x A 98 x 83.5 L x S 110 x 90	PCT 121207 PC 121207 AB 121207	
121210 Y x X 122 mm 120 mm 	Z / C 95 x 84 B x A 98 x 83.5 L x S 110 x 90	PCT 121210 PC 121210 AB 121210	
121609 Y x X 160 mm 120 mm 	Z / C 90 x 78 B x A 90.5 x 120 L x S 148 x 88	PCT 121609 PC 121609 AB 121609	
122008 Y x X 200 mm 120 mm 	Z / C 75 x 62 B x A 160.5 x 90.5 L x S 188 x 89	PCT 122008 PC 122008 AB 122008	
152008 Y x X 201 mm 151 mm 	Z / C 80 x 68.5 B x A 160 x 118 L x S 189 x 118	PCT 152008 PC 152008 AB 152008	
162509 Y x X 250 mm 160 mm 	Z / C 90 x 78 B x A 201.5 x 138.5 L x S 238 x 130	PCT 162509 PC 162509 AB 162509	

External height Y | External width X | External depth Z | Free internal mounting height C | Mounting plate assembly B x A | Wall mounting L x S

Including: Enclosure body, cover with PUR gasket, cover screws, and mounting screws. T= smoked transparent cover G= grey cover



TF 28037
fastening lug measures



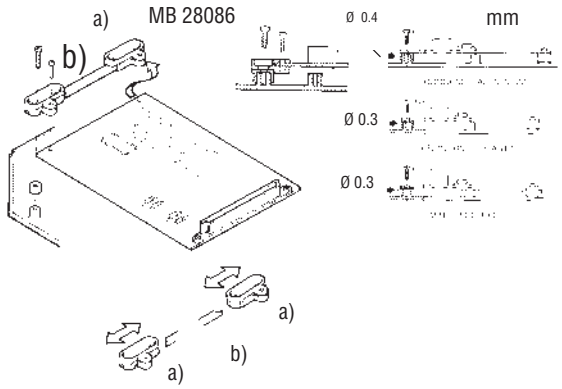
SYMBOLS AND ABBREVIATIONS

PCT 05 07 05
- Height
- Length
- Width
- Enclosure type
  - PCT polycarbonate with transparent cover
  - PC polycarbonate with grey cover
  - AB ABS plastic
  - Al Aluminium
  - P polyester / fibreglass (GRP)

FIBOX EURONORD II **PC: IP66 / IP67, IK 08/IK 07** **ABS: IP66 / IP67, IK 07**	Z x C B x A L x S mm	GREY COVER AND TRANSPARENT COVER ORDER SYMBOL	
162513 Y x X 250 mm 160 mm 	Z / C 125 x 113 B x A 201.5 x 138.5 L x S 238 x 130	PCT 162513 PC 162513 AB 162513	
233009 Y x X 300 mm 230 mm 	Z / C 87 x 75 B x A 255 x 198 L x S 288 x 200	PCT 233009 PC 233009 AB 233009	
233011 Y x X 300 mm 230 mm 	Z / C 110 x 98 B x A 255 x 198 L x S 288 x 200	PCT 233011 PC 233011 AB 233011	

CIRCUIT BOARD BRACKET

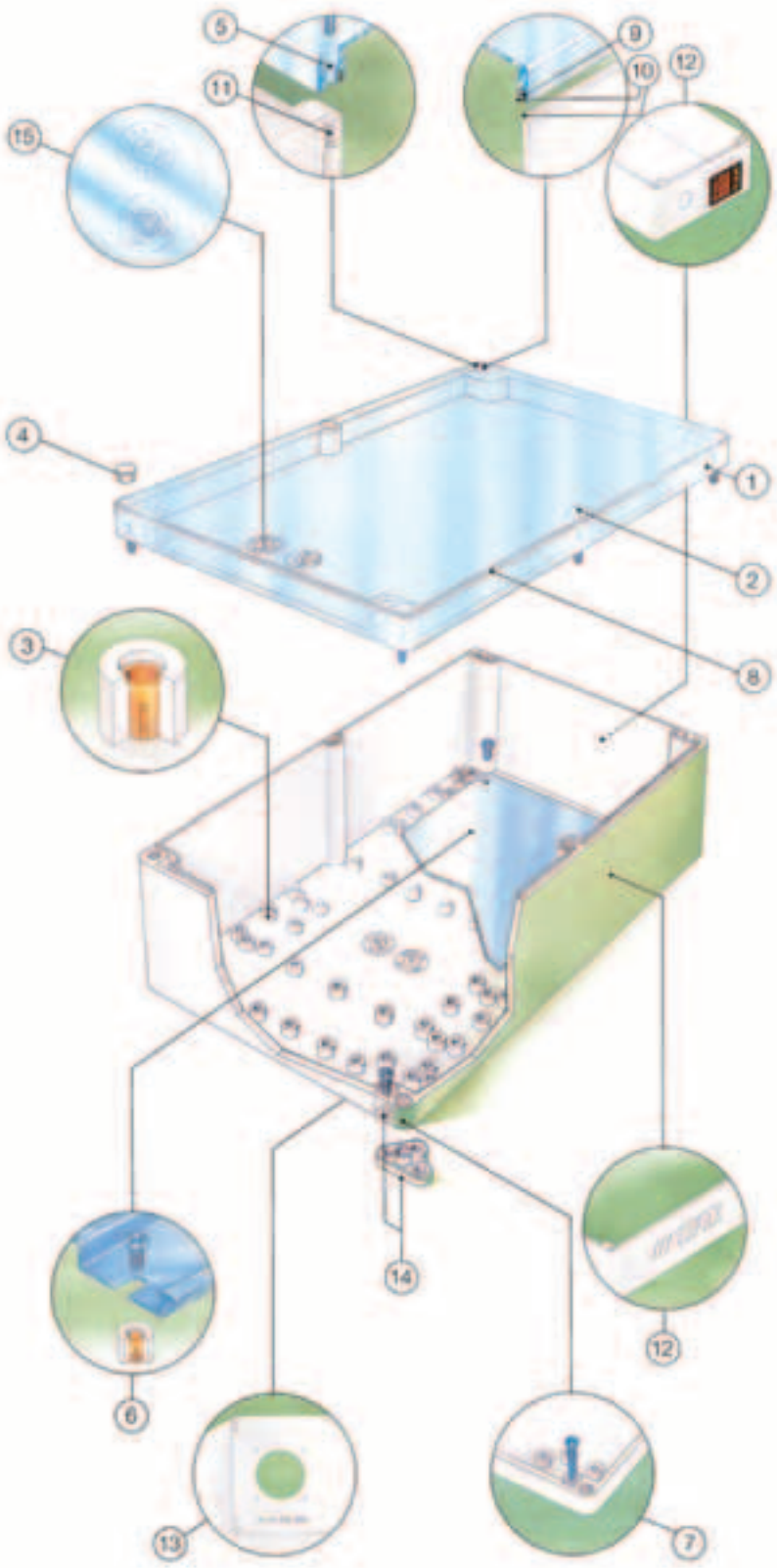
Printed circuit boards and mounting plates often need special mounting supports that offer flexibility in positioning the boards across the enclosure body. Mounting supports also raise the board above the enclosure bottom, especially effective when using two sided boards. This circuit board bracket has a standard E1 (IEC 297-3, DIN 41494) Eurocard screw mounting distance of 89 mm (3.5") accepting M2,5 to M4 screws. The bracket can also be used for nonstandard boards by separating the ends of the bracket (a) from the connector bridge (b).
If the bracket is not needed, the adapter parts for each individual mounting pod size can be used only for raising the board above the enclosure body level.



CIRCUIT BOARD BRACKET		
ORDER SYMBOL	Standard Mounting Distance	Remarks
MB 28086	89 mm	Adapter for EURONORD, PICCOLO, MINI. Direct mount to EK, SOLID, EKI.

FIBOX EURONORD II

POLYCARBONATE AND ABS ENCLOSURES



1. Enclosure covers are moulded with state of the art technology. Depending upon size, covers are injection moulded from the edge or the inside surface. The outer surface is free of "gate marks" creating a smooth area for labels, decals or screen printing.

2. Cover screws are designed for automatic assembly using normal tools or PosiDrive Phillips screwdrivers. Slightly ferrite, F1stainless screws work with magnetised drivers. Screws fully tighten in 4 revolutions.

3. Fibox Euronorm II enclosures feature more mounting points than the competitors' products. F1 style screws are provided for mounting inner panels and Din rails. Enclosures feature low height mounting pods, thus maximising internal usable depth. Brass M3 inserts are also available.

4. Decorative cover plugs create a smooth finished appearance.

5. Cover screws are held captive, but are still removable.

6. Assorted mounting plates and Din rails are available.

7. Enclosures can be wall mounted through the base holes. This reduces both mounting area and possible vandalism. Mounting holes are outside the gasket area maintaining water tight protection.

8. The Euronorm II features a slightly bevelled edge design creating a modern look.

9. Robotically applied, foamed in place PUR gaskets are moulded into the unique designed gasket groove. The tight adhesion and low compression set of PUR gasket material ensures protection ratings of NEMA 4 and IP 66/67.

10. An extension strip structure reinforces the inner gasket groove edge, protecting against side impact.

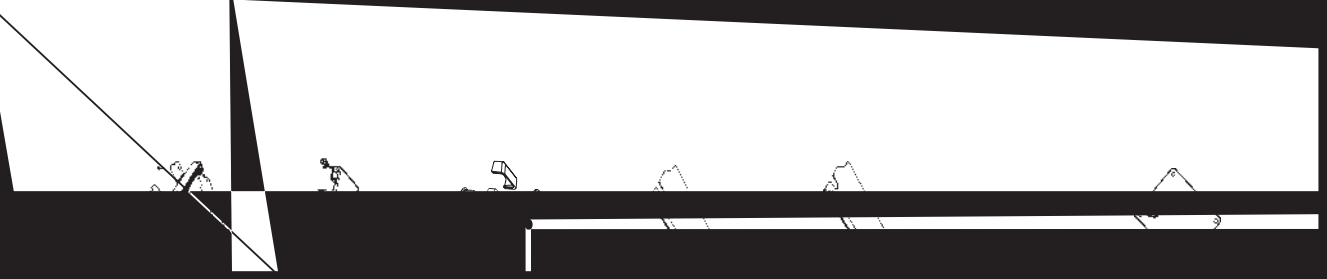
11. Special injection moulded plastic threads allow the cover screws to fasten quickly, while preventing sticking and corrosion.

12. The enclosure sides have space for mounting switches, sensors, or cable glands. Smooth sides allow decals or screen printing of logos. Fibox can customise enclosures with cut-outs, drilled or machined holes, and knock-out openings to the customers specifications.

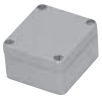
13. Customisation of the back and sides of the enclosure can be supplied by Fibox.

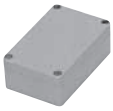
14. Optional wall mounting brackets (feet) allow 4 external mounting points for hanging the enclosure, even when the cover is in place.

15. Fibox is an ISO 9001 manufacturer. Each enclosure part (cover and base) bears a code number, indication of manufacturing date and type of plastic, i.e. PC, ABS, etc. These indications are moulded into the part for quality control purposes and for compliance with European recycling regulations.

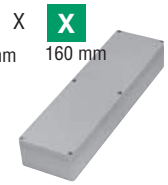
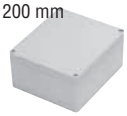
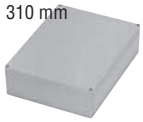
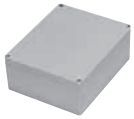
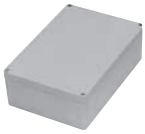


FIBOX EURONORD II





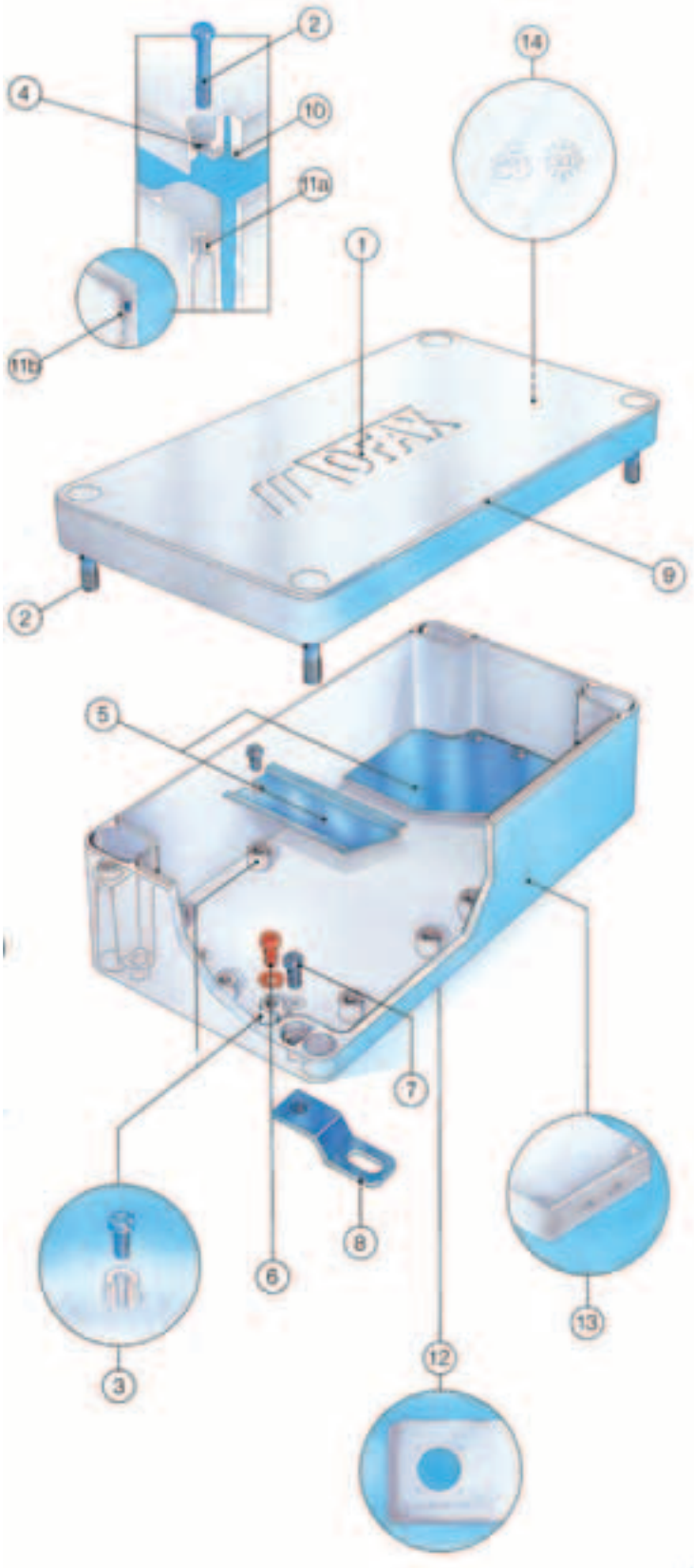
FIBOX EURONORD II

FIBOX EURONORD II ALUMINIUM **IP66 / IP67, IK 08**	Z x C B x A L x S mm	ORDER SYMBOL		FIBOX EURONORD II ALUMINIUM **IP66 / IP67, IK 08**	Z x C B x A L x S mm	ORDER SYMBOL	
AL 165609 Y x X 560 mm 160 mm 	Z x C 90 x 72 B x A 530 x 76 L x S 540 x 110	AL 165609		AL 236011 Y x X 600 mm 230 mm 	Z x C 110 x 90 B x A 570 x 144 L x S 580 x 180	AL 236011	
AL 232011 Y x X 230 mm 200 mm 	Z x C 110 x 93 B x A 144 x 170 L x S 180 x 180	AL 232011		AL 314011 Y x X 402 mm 310 mm 	Z x C 110 x 90 B x A 372.5 x 223.5 L x S 382.5 x 261	AL 314011	
AL 232018 Y x X 230 mm 200 mm 	Z x C 180 x 162 B x A 144 x 170 L x S 180 x 180	AL 232018		AL 314018 Y x X 402 mm 310 mm 	Z x C 180 x 162 B x A 372.5 x 223.5 L x S 382.5 x 261	AL 314018	
AL 232811 Y x X 280 mm 230 mm 	Z x C 110 x 93 B x A 250 x 144 L x S 260 x 180	AL 232811		AL 316011 Y x X 600 mm 310 mm 	Z x C 110 x 92 B x A 570x 223.5 L x S 580 x 261	AL 316011	
AL 233311 Y x X 330 mm 230 mm 	Z x C 110 x 93 B x A 300 x 144 L x S 310 x 180	AL 233311		AL 316018 Y x X 600 mm 310 mm 	Z x C 180 x 162 B x A 570 x 223.5 L x S 580 x 261	AL 316018	
AL 233318 Y x X 330 mm 230 mm 	Z x C 180 x 162 B x A 300 x 144 L x S 310 x 180	AL 233318					
AL 234011 Y x X 401 mm 230 mm 	Z x C 110 x 92 B x A 373 x 144 L x S 381 x 180	AL 234011					

External height Y — External width X — External depth Z — Free internal mounting height C — Mounting plate assembly B x A — Wall mounting L x S

FIBOX EURONORD II

ALUMINIUM ENCLOSURES



1. Enclosure covers can be custom designed. Modifications include holes, cutouts, flanges, and frames. Even external changes such as cooling ribs (heat sinks) are possible. OEMís receive the enclosure ready for assembly.

2. Cover screws are designed for automatic assembly using normal tools or PosiDrive Phillips screwdrivers. Slightly ferrite, FI stainless screws work with magnetised drivers.

3. This enclosure has more internal mounting points than other enclosures on the market. There are threaded M4 or M6 mounting pods at both interior ends of the bases. Along the interior sides, the enclosure bases have rows of pods ready for M3 Taptite (smaller enclosures) and M5 Taptite (larger enclosures). Alternatively, pods can be machined for M4 or M5 mounting screws. Helicoil inserts are available in English thread sizes.

   The large number of mounting pods, especially in the bigger enclosures, creates many alternatives for mounting components. Various sized mounting plates are easily installed. DIN rails can be mounted either vertically or horizontally permitting high density terminal block installation.

   Usable internal depth is maximised as Euronorm II has the lowest height mounting pods on the market.

4. A special retainer keeps cover screws captive. No more lost hardware.

5. A variety of mounting plate sizes are available, plus TS35 and TS15 DIN rail cut to size.

6. Proper electrical earthing is ensured with copper plated screws and paint free grounding pods.

7. The enclosures can be mounted through the base. The mounting holes are outside the gasket area; maintaining the water tight seal. Oval shaped mounting holes accommodate mounting centre variations.

8. Optional stainless steel wall mounting plates permit mounting without opening the enclosure.

9. The Euronorm II features a slightly bevelled edge design creating a modern look.

10. Robotically applied, foamed in place PUR gaskets are into the unique designed gasket groove. The tight adhesion and low compression set of PUR gasket material insures protection ratings of NEMA 4 and IP 66/67.

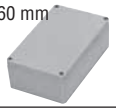
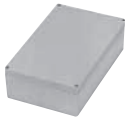
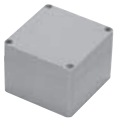
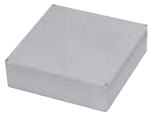
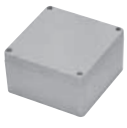
11. Enclosure bases are tapped to receive cover screws, either M4 or M6, depending upon enclosure size. Optional special thread types are available, as are Helicoil special steel thread inserts which prevent cover screws from corroding even in saltwater environments.

12. Customisation of the back and sides of the enclosure can be supplied by Fibox.

13. Larger enclosures have lots of space for mounting instruments, switches, sensors, indicators and connectors. Smooth sides permit easy machining and allow decal and screen printing. Fibox can customise the enclosure with openings, cut-outs, holes and tapped holes. Changes can add unique options, for example, conduit hub openings or cooling fins.

14. Manufactured using unique techniques. These enclosures have straight sides (no draft angle) which means conduit and cable fitting are at right angles, insuring stress free connections. Further, straight sides mean that enclosures can be securely "ganged" together without gaps.

FIBOX EURONORD II

FIBOX EURONORD II POLYESTER (GRP) **IP65, IK 08**	Z x C B x A L x S mm	ORDER SYMBOL		FIBOX EURONORD II POLYESTER (GRP) **IP65, IK 08**	Z x C B x A L x S mm	ORDER SYMBOL	
P 080806 Y x X 80 mm 75 mm 	Z x C 55 x 47 B 59 L x S 68 x 45	P 080806		P 162609 Y x X 260 mm 160 mm 	Z x C 92 x 75 B x A 233 x 76 L x S 240 x 110	P 162609	
P 081106 Y x X 110 mm 75 mm 	Z x C 55 x 47 B 89 L x S 98 x 45	P 081106		P 163609 Y x X 360 mm 160 mm 	Z x C 91 x 74.5 B x A 333 x 76 L x S 340 x 110	P 163609	
P 081606 Y x X 160 mm 75 mm 	Z x C 55 x 47 B 139 L x S 148 x 45	P 081606		P 252612 Y x X 257 mm 251 mm 	Z x C 121 x 105 B x A 227.5 x 100 L x S 236 x 200.5	P 252612	
P 081906 Y x X 190 mm 75 mm 	Z x C 55 x 47 B 169 L x S 178 x 45	P 081906		P 254012 Y x X 400 mm 250 mm 	Z x C 120 x 104.5 B x A 372.5 x 100 L x S 381.5 x 201	P 254012	
P 121209 Y x X 122 mm 120 mm 	Z x C 90 x 75 B x A 95 x 52 L x S 106 x 82	P 121209		P 404012 Y x X 405 mm 400 mm 	Z x C 120 x 105 B x A 373.5 x 250.5 L x S 381.5 x 356	P 404012	
P 122209 Y x X 220 mm 120 mm 	Z x C 90 x 75 B x A 193 x 52 L x S 204 x 82	P 122209					
P 161609 Y x X 160 mm 160 mm 	Z x C 91 x 75 B x A 132 x 76 L x S 140 x 110	P 161609					

External height Y — External width X — External depth Z — Free internal mounting height C — Mounting plate assembly B x A — Wall mounting L x S

FIBOX EURONORD II

TECHNICAL INFORMATION FOR EURONORD ALUMINIUM- AND POLYESTER ENCLOSURES

PROPERTY		AlSi Cast ALUMINIUM	CONFORMITY TO STANDARDS (UL, CSA, CE, Lloyds, BV, FI)
Ingress Protection		IP66/67	**USA** Enclosures for Electrical Equipment
(EN 60529)			UL Type 1, 4, 4X, 6, 12 and 13 (50/508)
Impact Resistance		IK 08	**Canada** Industrial Control Equipment
(EN 50102)			Enclosures for Electrical Equipment/ULc
Temperature Range	Celsius	-50°. . .140°C	**Europe** Safety of Information Technology Equipment
(short term)	Fahrenheit	-60°. . .285°F	EN 60950
Temperature Range	Celsius	-50°. . .80°C	
(continuous)	Fahrenheit	-60°. . .175°F	
Polyester Powder Paint Colour		RAL 7001	
Cover Screws		Stainless Steel	
Gasket		PUR/Neoprene	
Chemical Resistance *		Good	

PROPERTY		FIBERGLASS	CONFORMITY TO STANDARDS (UL, CSA, CE, Lloyds, BV, FI)
Ingress Protection		IP65	**USA** Enclosures for Electrical Equipment
(EN 60529)			NEMA 1, 4, 4X, 6, 12 and 13
Impact Resistance		IK 08	**Canada** Industrial Control Equipment
(EN 50102)			Enclosures for Electrical Equipment/ULc
Temperature Range	Celsius	-50°. . .120°C	**Europe** Safety of Information Technology Equipment
(short term)	Fahrenheit	-60°. . .250°F	EN 60950
Temperature Range	Celsius	-40°. . .80°C	**Australia** Enclosures for switch gear and control gear
(continuous)	Fahrenheit	-40°. . .175°F	AS 3132-1991
Electrical Insulation		Totally insulated ⧈	UL 746 C 5 in. vertical flame test
Colour		RAL 7001, grey	IEC 695-2-1, Self-extinguishing
Enclosure Flammability Rating		UL94-5V	
Glow Wire test		960°C	
Cover Screws		Stainless Steel	
Gasket		EPDM	
Chemical Resistance *		Good	

Data subject to change without notice. *Consult separate raw material data for more detailed information

ACCESSORIES FOR EURONORD ALUMINIUM ENCLOSURES

Product	Order symbol	Size mm	
Mounting plate	AM 0808 AM 0813 AM 0818 AM 0825 AM 1212 AM 1222 AM 1236 AM 1616 AM 1626 AM 1636 AM 1656 AM 2320 AM 2328 AM 2333 AM 2340 AM 2360 AM 3140 AM 3160	69 x 64 69 x 114 69 x 164 69 x 240 107 x 110 107 x 207 107 x 347 146 x 146 146 x 244 146 x 346 146 x 545 215 x 184 215 x 264 215 x 315 215 x 385 215 x 586 294 x 387 293 x 585	
Mounting rail DIN 15	ARM 0610 ARM 0615 ARM 0808 ARM 0813 ARM 0818 ARM 0825	15 x 88 15 x 140 15 x 65 15 x 115 15 x 165 15 x 240	
Mounting rail DIN 35	ARH 12 ARH 22 ARH 36 ARH 16 ARH 26 ARH 1636 ARH 1656 ARH 2320 ARH 2328 ARH 2333 ARH 40 ARH 60	35 x 105 35 x 203 35 x 343 35 x 140 35 x 240 35 x 340 35 x 540 35 x 180 35 x 260 35 x 310 35 x 383 35 x 580	
Earth screw Earth screw Mounting screw Screw set Ground screw	MR 28550M MR 28546CU MR 28548ZN MRS 38546 MR 28547CU	M4 x 6 M4 x 6 M4 x 6 M6 x 8	

Product	Order symbol	Size mm	
Mounting screw Screw set Cover screw Cover screw	MR 28549ZN MRS 38547 MR 10425 MR 10635	 M4 x 20 M6 x 30	
Mounting foot kit	MRS 28540 MRS 28541	11 x 42 15 x 50	
Mounting screw	MR 28550 MR 28546CU MR 28548ZN MRS 38546 MR 28547CU MR 28549ZN MRS 38547 MR 75003 MR 75005 MRHC 406 MRHC 609	M4 x 6 M4 x 6 M6 x 8 M6 x 8 M3 M5 M4 M6	
Cover screw	MRS 28544A4 MRS 28545WH	M6 x 30 M6 x 30	

ACCESSORIES FOR EURONORD POLYESTER

Product	Order symbol	Size mm	
Mounting plate	PM 0808 PM 0811 PM 0816 PM 0819 PM 1616 PM 1626 PM 2526 PM 2540 PM 4040	64 x 69 64 x 99 64 x 149 64 x 179 146 x 146 146 x 244 231 x 240 231 x 383 390 x 385	
Mounting rail DIN 15	PRM 0811 PRM 0816 PRM 0819	15 x 99 15 x 149 15 x 179	
Mounting rail DIN 35	PRH 2526	35 x 238	
Hinge kit 1 pair includes screws	AH A/B PH A		
Mounting lug kit	MRS 28540 MRS 28541	11x42 15x50	

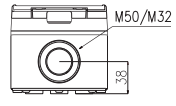
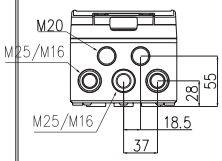
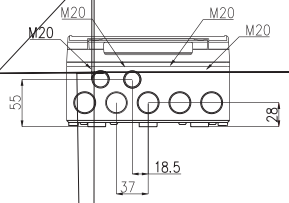
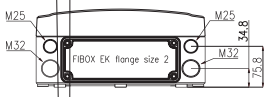
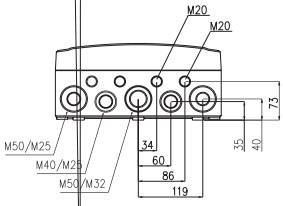
FIBOX MCE

MCE CONTROL •
MCE FEM •
MCE ISO •

The FIBOX MCE modular component enclosures offer a practical and modern design to automation, control and switch gear applications from IP 55 (MCE FEM and MCE ISO) to IP 65 (MCE CONTROL). In MCE CONTROL and MCE FEM unique features include multiple membrane cable glands (Multi-FEM). In larger (14+) sizes a variety of flange plates is available for the standard size 2 knock-out. All cable entry knock-outs in Fibox MCE are in metric dimensions to reflect modern trends. Application specific wiring can be achieved from any direction, easily, quickly and securely.

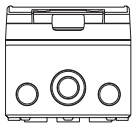
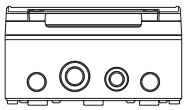
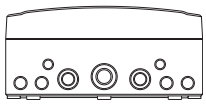
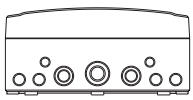
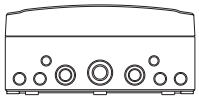
MCE CONTROL, MCE FEM, MCE ISO

FIBOX MCE CONTROL

	L S		
Y X Z			
Y X Z			
■ X Z			
Y X Z			
Y X Z			

Y X Z L S FIBOX MCE CONTROL L/S 155/60 5914

FIBOX MCE ISO

FIBOX MCE ISO **Polystyrene: IP 55, IK 07**	L x S mm	**Including:** Modular component enclosure with TPE gaskets, mounted DIN 35-rail, wall mount cover plugs and mounting instructions. ORDER SYMBOL		Endplates
MCE ISO 5 Y x X x Z 200 mm 116 mm 105 mm 5 	L/S 155/60	MCE ISO 5 P/P		MCE 5 P 5 
MCE ISO 9 Y x X x Z 200 mm 190 mm 105 mm 9 	L/S 155/120	MCE ISO 9 P/P		MCE 9 P 9 
MCE ISO 14 Y x X x Z 280 mm 306 mm 145 mm 14 	L/S 236/220	MCE ISO 14 P/P		MCE 14 P 14 
MCE ISO 28 Y x X x Z 430 mm 306 mm 145 mm 28 	L/S 386/220	MCE ISO 28 P/P		MCE 28 P 28 
MCE ISO 42 Y x X x Z 580 mm 306 mm 145 mm 42 	L/S 536/220	MCE ISO 42 P/P		MCE 42 P 42 

External height Y — External width X — External depth Z — Wall mounting trough the base L x S

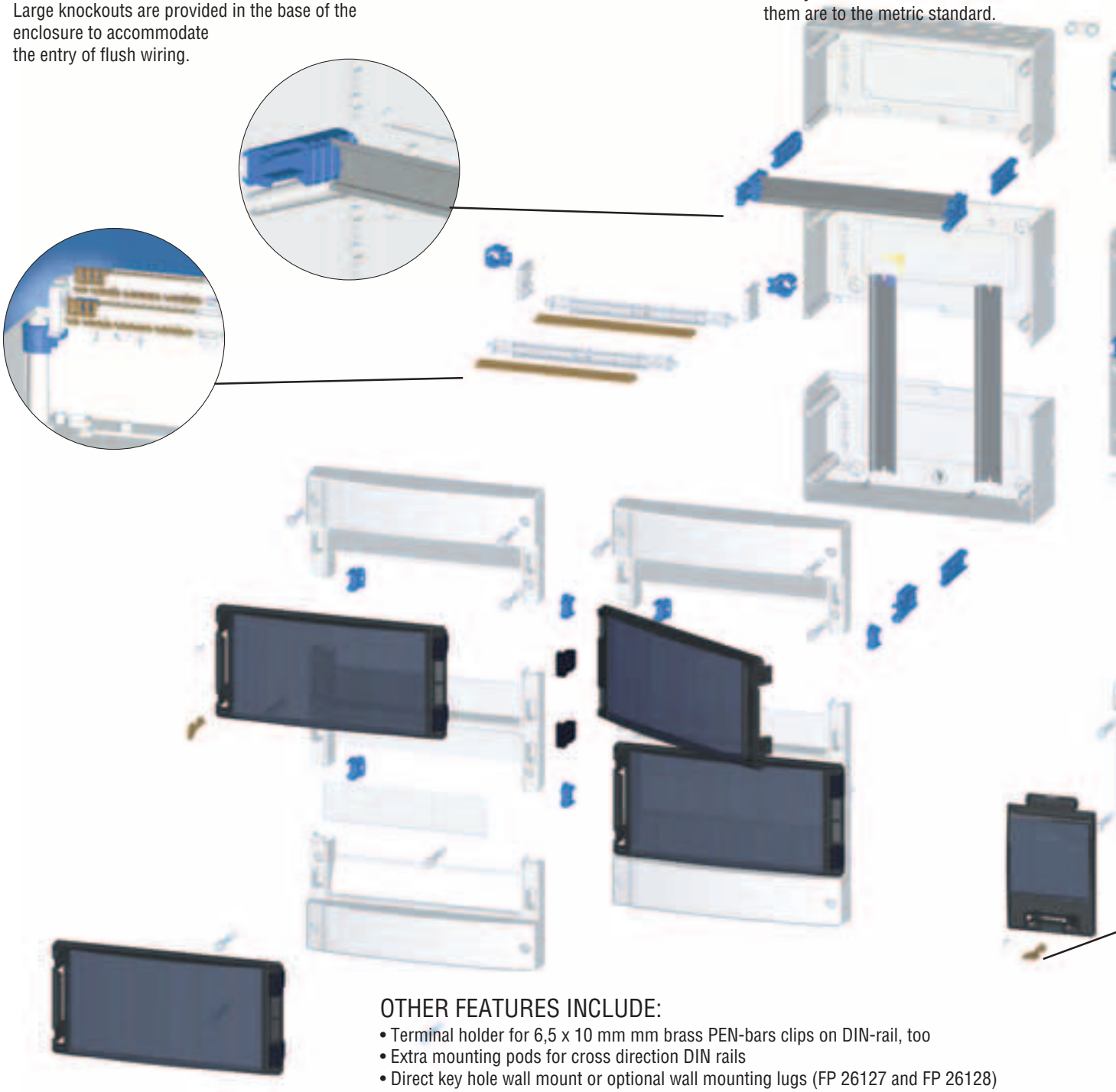
FIBOX MCE CONTROL

SPACIOUS AND EASY TO WIRE

PEN supports are positioned to allow optimum wiring space inside the enclosure. Their position also makes wiring as easy as possible.
DIN rails are mounted away from the base of the enclosure and on units of
14+ modules the position is adjustable.
Large knockouts are provided in the base of the enclosure to accommodate
the entry of flush wiring.

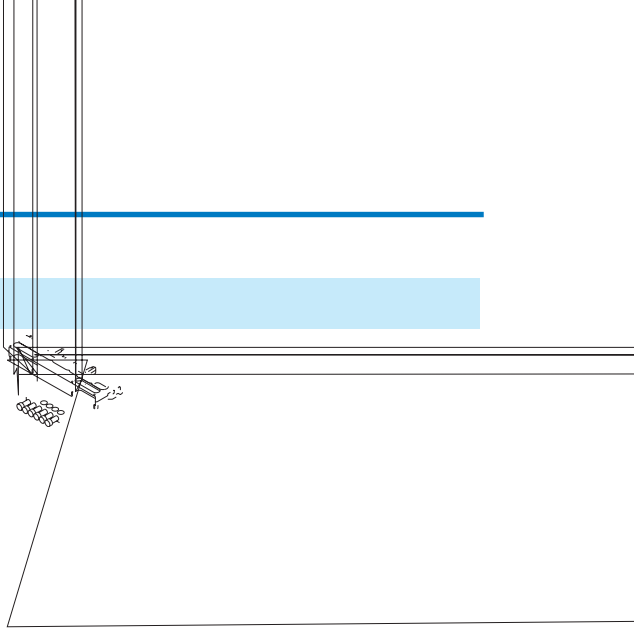
EVERY WIRING CONFIGURATION MADE POSSIBLE

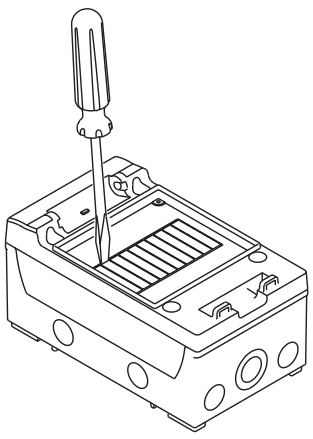
"MULTI FEM", multi-cable membrane glands, size M50, enable quick and effective entry of 3 x Ø 6-10 mm, 3 x Ø 10-14 mm through one single membrane while maintaining IP65.
In sizes for 14 modules and above many gland plate options are available including blind, metric, PG, threaded, NPT and membrane versions.
There are cable entries on five sides of every MCE enclosure and all of them are to the metric standard.

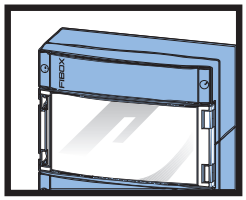


OTHER FEATURES INCLUDE:

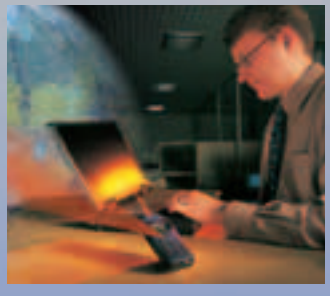
- Terminal holder for 6,5 x 10 mm mm brass PEN-bars clips on DIN-rail, too
- Extra mounting pods for cross direction DIN rails
- Direct key hole wall mount or optional wall mounting lugs (FP 26127 and FP 26128)
- Size 2/FL 21 knock-out for standard gland plates
- Front aperture can be covered with plates (mounting screw holes provided)
- Window can be replaced with instrumentation cover (14+ sizes)
- Enclosures can be connected to each other in all four directions due to the smooth sides and M20 knock-outs
- Enclosure can be mounted directly on flush mounted junction boxes via purpose designed knock-outs in the bottom of the enclosure







FIBOX®



FIBOX SOLID

FIBOX SOLID SC II

FIBOX SOLID METRIC KNOCK-OUTS

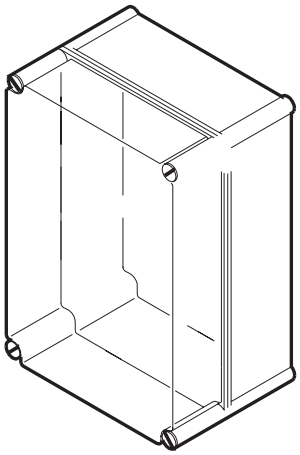
FIBOX SOLID HINGED COVER
Cover with hinges, more information page 44.

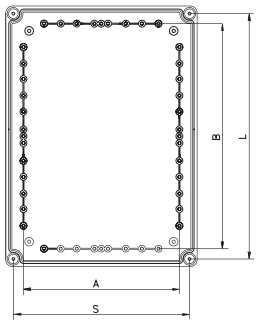
The FIBOX SOLID SC II range, SM range and SOLID Hinged Cover range offer a clear alternative to polyester enclosures. Moulded with impact resistant polycarbonate or ABS plastic, the FIBOX SOLID range is available as a screw cover enclosure or as a hinged cover enclosure.
The enclosures are rated EN 60529 IP66 / IP67.

FIBOX SOLID

FIBOX SOLID **PC: IP66 / IP67, IK 08** **ABS: IP66 / IP67, IK 08**	Z mm	C mm	Including: Enclosure base, 4 cross head cover screws, and mounting screws. ORDER SYMBOL Grey cover		ORDER SYMBOL Transparent cover		B x A L x S mm
PC 1919 ABS 1919 Y x X 190 mm 190 mm 	130 130 180 180	115 115 165 165	Cover 30 mm PC 1919 13 G ABS 1919 13 G Cover 80 mm PC 1919 18 G ABS 1919 18 G		Cover 30 mm PC 1919 13 T ABS 1919 13 T Cover 80 mm PC 1919 18 T ABS 1919 18 T		B x A 120 x 120 L x S 164 x 164
PC 2819 ABS 2819 Y x X 280 mm 190 mm 	130 130 180 180	115 115 165 165	Cover 30 mm PC 2819 13 G ABS 2819 13 G Cover 80 mm PC 2819 18 G ABS 2819 18 G		Cover 30 mm PC 2819 13 T ABS 2819 13 T Cover 80 mm PC 2819 18 T ABS 2819 18 T		B x A 210 x 120 L x S 254 x 164
PC 3819 ABS 3819 Y x X 380 mm 190 mm 	130 130 180 180	115 115 165 165	Cover 30 mm PC 3819 13 G ABS 3819 13 G Cover 80 mm PC 3819 18 G ABS 3819 18 G		Cover 30 mm PC 3819 13 T ABS 3819 13 T Cover 80 mm PC 3819 18 T ABS 3819 18 T		B x A 310 x 120 L x S 354 x 164
PC 2828 ABS 2828 Y x X 280 mm 280 mm 	130 130 180 180	115 115 165 165	Cover 30 mm PC 2828 13 G ABS 2828 13 G Cover 80 mm PC 2828 18 G ABS 2828 18 G		Cover 30 mm PC 2828 13 T ABS 2828 13 T Cover 80 mm PC 2828 18 T ABS 2828 18 T		B x A 210 x 210 L x S 254 x 254
PC 3828 ABS 3828 Y x X 380 mm 280 mm 	130 130 180 180	115 115 165 165	Cover 30 mm PC 3828 13 G ABS 3828 13 G Cover 80 mm PC 3828 18 G ABS 3828 18 G		Cover 30 mm PC 3828 13 T ABS 3828 13 T Cover 80 mm PC 3828 18 T ABS 3828 18 T		B x A 310 x 210 L x S 354 x 254

External height Y | External width X | External depth Z | Free internal mounting height C | Mounting plate assembly B x A | Wall mounting L x S





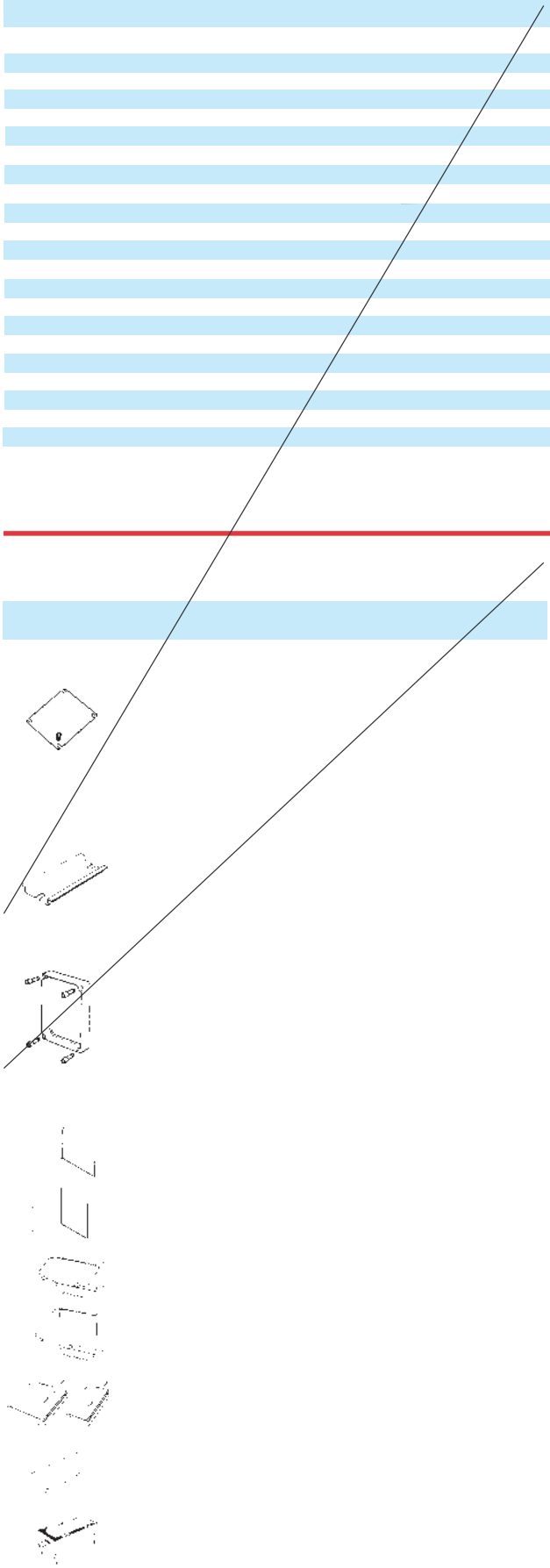
							L S
Y X							
Y X							

FIBOX SOLID SM WITH METRIC KNOCK-OUTS

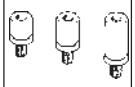
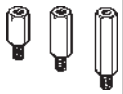
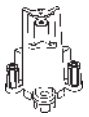
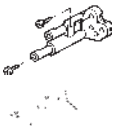
FIBOX SOLID SM **PC: IP66 / IP67, IK 08** **ABS: IP66 / IP67, IK 08**	Z mm	C mm	Including: Enclosure base, 4 slotted cover screws, and mounting screws. ORDER SYMBOL Grey cover		ORDER SYMBOL Transparent cover		B x A L x S mm
SM 1928 Y x X 280 mm 190 mm 	130 180	115 165	SM 1928 13 G SM 1928 18 G		SM 1928 13 T SM 1928 18 T		B x A 210 x 120 L x S 254 x 164
SM 2819 Y x X 190 mm 280 mm 	130 180	115 165	SM 2819 13 G SM 2819 18 G		SM 2819 13 T SM 2819 18 T		B x A 210 x 120 L x S 254 x 164
SM 2828 Y x X 280 mm 280 mm 	130 180	115 165	SM 2828 13 G SM 2828 18 G		SM 2828 13 T SM 2828 18 T		B x A 210 x 210 L x S 254 x 254
SM 2838 Y x X 380 mm 280 mm 	130 180	115 165	SM 2838 13 G SM 2838 18 G		SM 2838 13 T SM 2838 18 T		B x A 310 x 210 L x S 354 x 254

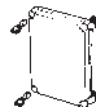
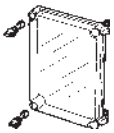
External height Y External width X External depth Z Free internal mounting height C Mounting plate assembly B x A Wall mounting L x S

OX SOLID



ACCESSORIES

Product	Order symbol	Size mm	
Spacers 	MR 10726 MR 10727 MR 10728 MR 10729	15, M6 (inner) 20, M6 (inner) 30, M6 (inner) 54, M6 (inner)	
	HR 10 HR 15 HR 20 HR 30	10, M6/M6 15, M6/M6 20, M6/M6 30, M6/M6	
	FA 12052 FA 12053	14, M5 (inner) 42, M5 (inner)	
	MB 10686	15/34	
	FX 20 set		
	MB FP88	88	
	MB FP882	88	
Lock	MB10597		
Mounting feet	MB 10674		
Triangular key	MB 10673 set		
Front plates for Solid SM enclosures	FP12-2819 FP12-2828 FP12x2-2828 FP12x2-2838 FP12x3-2838 FP12x3-2856		

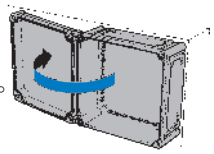
Product			
FIBOX SOLID HINGED COVER	The unique new FIBOX SOLID hinge is assembled on the cover. The hinged cover can be easily mounted to the enclosure base without drilling holes or other modification. Field replacement of screw covers is easily accomplished without modification. This cover is suitable for the FIBOX EK, SOLID and FEX products. Available in opaque grey (G) or transparent (T) polycarbonate.		
	Order symbol	Size mm	Order symbol
	EKH 30-G-2FSH EKJ 30-G-FSH19 EKJ 30-G-2FSH EKM 30-G-2FSH EKO 30-G-2FSH EKP 30-G-2FSH EKT 30-G-3FSH EKU 30-G-3FSH EKH 80-G-2FSH EKJ 80-G-2FSH EKM 80-G-2FSH EKO 80-G-2FSH EKP 80-G-2FSH	190 x 190 x 30 190 x 280 x 30 280 x 190 x 30 380 x 190 x 30 280 x 280 x 30 380 x 280 x 30 560 x 280 x 30 560 x 380 x 30 190 x 190 x 80 280 x 190 x 80 380 x 190 x 80 280 x 280 x 80 380 x 280 x 80	EKH 30-T-2FSH EKJ 30-T-FSH19 EKJ 30-T-2FSH EKM 30-T-2FSH EKO 30-T-2FSH EKP 30-T-2FSH EKT 30-T-3FSH EKU 30-T-3FSH EKH 80-T-2FSH EKJ 80-T-2FSH EKM 80-T-2FSH EKO 80-T-2FSH EKP 80-T-2FSH
	ABS 2819 30-G-2FSH ABS 3819 30-G-2FSH ABS 2828 30-G-2FSH ABS 3828 30-G-2FSH ABS 2819 80-G-2FSH ABS 3819 80-G-2FSH ABS 2828 80-G-2FSH ABS 3828 80-G-2FSH	280 x 190 x 30 380 x 190 x 30 280 x 280 x 30 380 x 280 x 30 280 x 190 x 80 380 x 190 x 80 280 x 280 x 80 380 x 280 x 80	

FIBOX SOLID HINGED COVER

FULL OPENING ANGLE

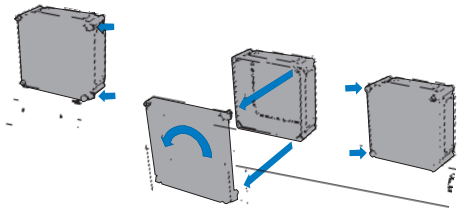
The hinged cover opening exceeds 180 degrees allowing complete access to the interior of the enclosure.

>180°



REVERSABLE LEFT / RIGHT OPENING

The the hinged cover may be mounted on the left side or on the right side. Hinging is field reversible and easily accomplished.



FIBOX SOLID SC II ENCLOSURES

These cabinets, are made from high impact resistant polycarbonate material, and will withstand harsh industrial environments. They have ready mounted hinges and quick lock screws. Protection to IP65 is maintained when fastened. The enclosure base features many internal mounting pods for various assembly requirements. SOLID SC enclosures offer a large number of accessories. Transparent cover options allow visual inspection of equipment installed inside the enclosure.

Approvals: IP65

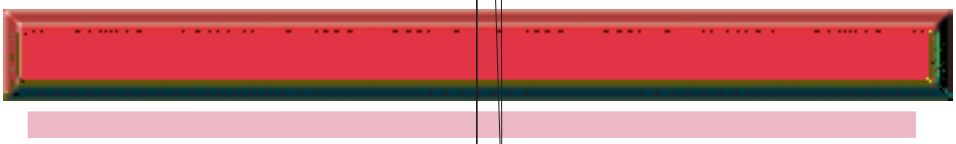
Order symbol		Size mm	
Grey cover	Transparent cover		
SC 281913 G II	SC 281913 T II	280 x 190 x 130	
SC 281918 G II	SC 281918 T II	280 x 190 x 180	
SC 381913 G II	SC 381913 T II	380 x 190 x 130	
SC 381918 G II	SC 381918 T II	380 x 190 x 180	
SC 282813 G II	SC 282813 T II	280 x 280 x 130	
SC 282818 G II	SC 282818 T II	280 x 280 x 180	
SC 382813 G II	SC 382813 T II	380 x 280 x 130	
SC 382818 G II	SC 382818 T II	380 x 280 x 180	
SC 562813 G II	SC 562813 T II	560 x 280 x 130	
SC 563818 G II	SC 563818 T II	560 x 380 x 180	

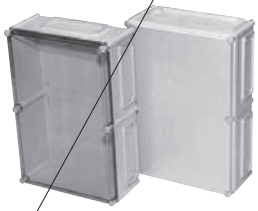
FIBOX EK

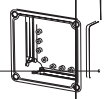
FOUR EASY STEPS TO BUILD A DISTRIBUTION PANEL THAT WORKS

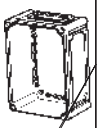
BASE | **FURNISH** | **CLAD** | **ROOF**

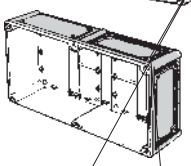
Medium to large size enclosures manufactured using impact resistant polycarbonate.
Available with one or more flange openings. The flange openings allow modular assembly of several enclosures and the addition of various size cable glands and knockout flanges. Select from a large selection of standard flanges or request flanges machined separately to customer specifications. The EK bases feature multiple mounting pods.
A large range of accessories is available.

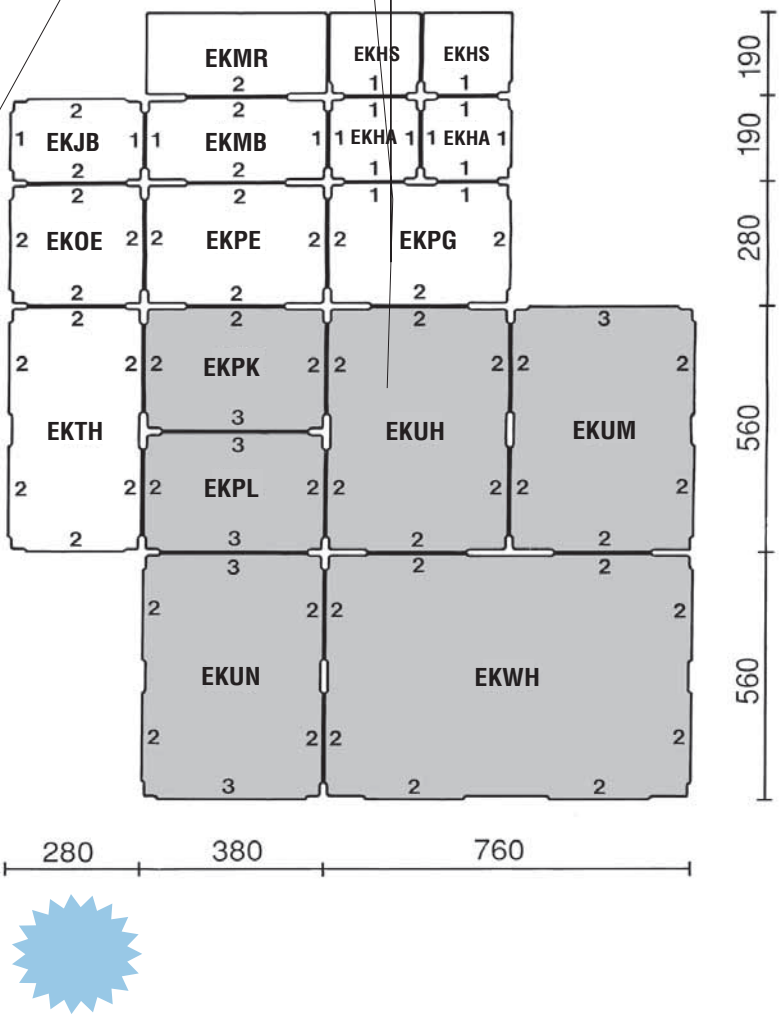








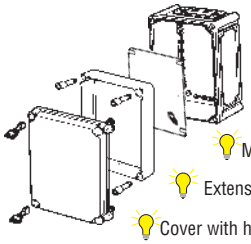



EKMR
EKHS
EKHS
EKJB
EKMB
EKHA
EKHA
EKOE
EKPE
EKPG
EKPK
EKTH
EKUH
EKUM
EKPL
EKUN
EKWH
190
190
280
560
560
280
380
760

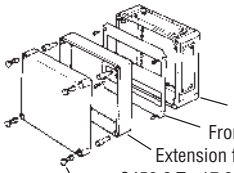
BASE

EXAMPLE OF THE ASSEMBLY OF ONE ENCLOSURE

THE SIZE OF THE WHOLE ENCLOSURE ACCORDING TO THE LETTER:
The enclosure sized (280x190x230) can be assembled as follows:



Base, EKJB 280x190x100
Mounting plate, EKJVT 238x148
Extension frame, EKJZR 280x190x50
Cover with hinges, EKJ30-G-2FSH 280x190x80



The order symbol indicates the size (FP 12x2-2828) or the toolnumber (SS 10256) of some products

Base, EKOE 280x280x100
Front plate, FP 12x2-2828
Extension frame, EKOZR
C459.8 Tm17 0 0 Tw58100**ORDER**
Screw, SS10256

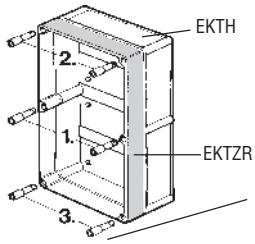
ASSEMBLYING ENCLOSURES

The plate connectors can be used to assemble bases or flanges and bases

Plastic head screw

	ORDER SYMBOL	SIZE
Connector set + 4 screws	MB 10671	1
Connector set + 4 screws	MB 10670	2
Connector set + 4 screws	MB 10672	3
Plastic head screw for the assembly of bases with sixe 1 opening	MB 10472	M6x30
Plastic head screw for the assembly of bases with size 2 openings	MB 10474	M8x30
Lock nuts for plastic head screws	M6	M6
	M8	M8

EXTENSION FRAMES



Extension frame 50 mm, between base and cover.

Extension frame screws included

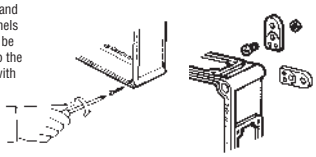
	SIZE mm
EKJZR	280x190x50
EKMZR	380x190x50
EKOZR	280x280x50
EKPZR	380x280x50
EKTZR	560x280x50
EKUZR	560x380x50

SUPPORT FLANGES

	ORDER SYMBOL	SIZE
Support flange	MB 10025	2
Support flange	MB 10026	1

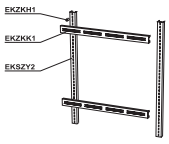
WALL FASTENING LUG

Separate enclosures and small distribution panels (2-4 enclosures) can be assembled straight to the wall with screws or with wall fastening lugs.



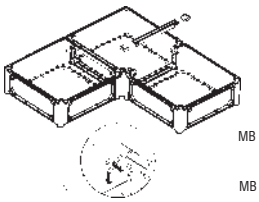
	ORDER SYMBOL
Wall fastening lug set, 4 pcs incl. screws	MB 10674

FASTENING OF BIG SYSTEMS

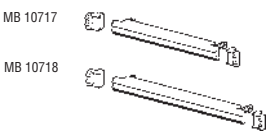


	ORDER SYMBOL
Connecting rail, standard length 2000 mm	EKZKK1
Stud rail, standard length 2000 mm	EKSZY2
Lock for connecting rail	EKZKH1

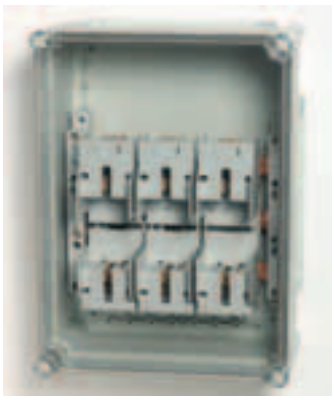
THE BASE CONNECTORS



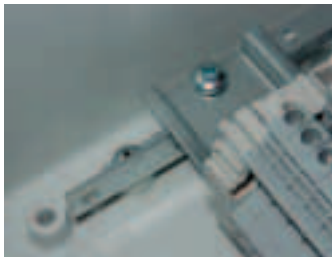
The plate connectors can be used for assembling bases together or flanges to bases.

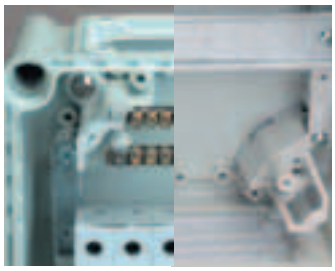


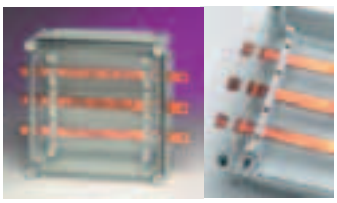
	ORDER SYMBOL	SIZE
Connection bridge and gasket	MB 10717	2
Connection bridge and gasket	MB 10718	3



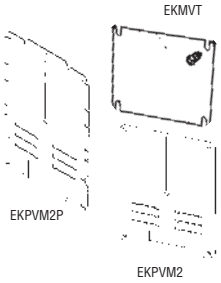
FURNISH







MOUNTING PLATES

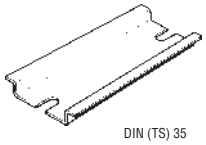


	ORDER SYMBOL	SIZE mm
Mounting plate, metal	EK**H**VT	148x148
Mounting plate, metal	EK**J**VT	238x148
Mounting plate, metal	EK**M**VT	338x148
Mounting plate, metal	EK**O**VT	238x238
Mounting plate, metal	EK**P**VT	338x238
Mounting plate, metal	EK**T**VT	518x238
Mounting plate, metal	EK**U**VT	518x338

Note!
EK-mounting plates also for Solid-enclosure.

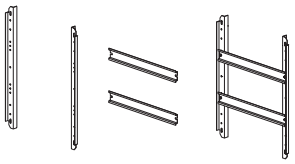
KWh-mounting plate, metal	EKPVM2	338x238
KWh- mounting plate, plastic	EKPVM2P	338x238
Accessory screws for mounting the KWn meter	M6x16	6x16

DIN RAILS



	ORDER SYMBOL	SIZE mm
DIN-rail	EKV 12	35x160
DIN-rail	EKV 22	35x235
DIN-rail	EKV 32	35x335
DIN-rail	EKV 50	35x500
Self-cutting mounting screw	MSM PT 5x10	4.8x9.5

DIN RAIL FRAME

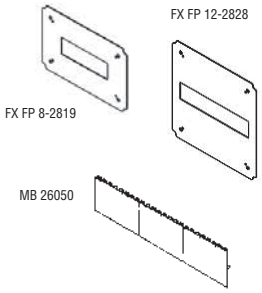


	ORDER SYMBOL	SIZE mm
DIN frame profile	MS PROF 19	87
DIN frame profile	MS PROF 28	166
DIN frame profile	MS PROF 38	266
DIN frame profile	MS PROF 56	444

Screws for DIN-rail (terminal) assembly order MSM PT 5x10

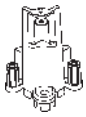
FX FP FRONT PLATES FX20 SET -CORNER STUDS

Note!
Openings for DIN-modules



	ORDER SYMBOL	SIZE mm
Blue 2 mm PC front plate	FX FP 8-2819	280x190
Blue 2 mm PC front plate	FX FP 12-2828	280x280
Blue 2 mm PC front plate	FX FP 2*12-2838	280x380
Blue 2 mm PC front plate	FX FP 3*12-2856	280x560
Cover plate (12 mod.)	MB 26050	

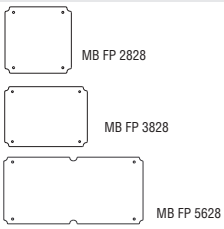
CORNER STUD FX 2000



	ORDER SYMBOL	SIZE mm
Set of corner studs FX 2000	FX20 SET	
Corner stud FX 2000 (separate)	MB 10791	
Front plate screw FX 2000	MB 10792	
PE/N brass bar	MS BAR 2+18	10x6.5x187
Screws for mounting PE/N brass bar	MR 28005EU	40x18

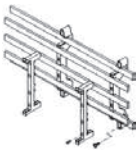
FURNISH

MB FP FRONT PLATES FOR MB 60MM BUS-BAR HOLDES



	ORDER SYMBOL	SIZE mm
Blue 2 mm PC front plate	MB FP 2828	280x280
Blue 2 mm PC front plate	MB FP 3828	380x280
Blue 2 mm PC front plate	MB FP 5628	560x280

60 MM BUS-BAR

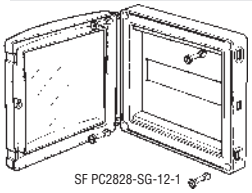


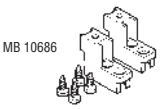
	ORDER SYMBOL
Bus-bar support set incl. screws and support	MB 60MM

For assembling to middle of the enclosure use screws KN4.8x13

RATED CURRENT		250 A	400 A
Bus-bar sizes	L1, L2, L3	20 x 5 mm	20 x 10 mm
	PE/N	15 x 5 mm	15 x 5 mm

SOLID FRAME COVERS

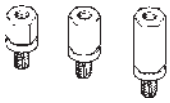


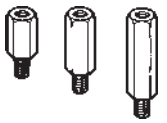


	ORDER SYMBOL	SIZE mm
Solid Frame covers		
With opening 1x12 mod.	SF PC2828-SG-12-1	280x280x54
With opening 2x12 mod.	SF PC2828-SG-12-2	280x280x54
DIN-rail	EKV 22	35x235
Extension for DIN rail/mbc	MB 10686	15/34

Note!
SOLIDFRAME cover fits to EKOE and SOLID 2828 bases

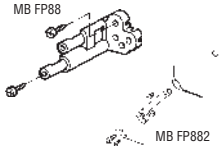
SPACERS

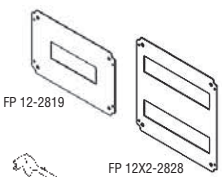




	ORDER SYMBOL	SIZE mm
M6 spacers, self-cutting for corners of the base	MR 10726	15
M6 spacers, self-cutting for corners of the base	MR 10727	20
M6 spacers, self-cutting for corners of the base	MR 10728	30
M6 spacers, self-cutting for corners of the base	MR 10729	54
M6/M6 extension for MR spacer	HR 10	10
M6/M6 extension for MR spacer	HR 15	15
M6/M6 extension for MR spacer	HR 20	20
M6/M6 extension for MR spacer	HR 30	30
M5 spacers, self-cutting for middle mounting pods	FA 12052	42
	FA 12053	14

FP FRONT PLATES FOR FB88 AND FP882 SPACERS





	ORDER SYMBOL	SIZE mm
Distance spacer for front plates, 1set, 2 pcs	MB FP88	88
Distance spacer for front plates, 1set, 2 pcs	MB FP882	88
FP front plate with DIN-openings	FP12-2819	280x190
FP front plate with DIN-openings	FP12-2828	280x280
FP front plate with DIN-openings	FP12x2-2828	280x280
FP front plate with DIN-openings	FP12x2-2838	280x380
FP front plate with DIN-openings	FP12x3-2838	280x380
FP front plate with DIN-openings	FP12x3-2856	280x560
N/PE-terminal bracket, incl. 2 pcs of MR 26100 terminals (16-holes)	MB 26069SET	
Terminal bus-bar clamp, 25 mm²	MS BAR CLAMP	
Terminal bus-bar clamp, 35 mm²	MR 26145	

FIBOX EK

PLATES

METRIC!

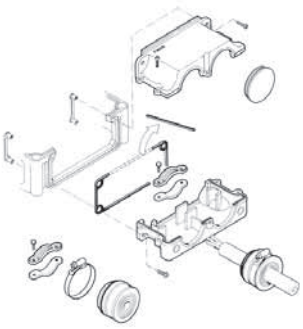
MEMBRANE FLANGE PLATE

PLATE EXTENSION

WATER PLUG VENTILATOR

GLAD

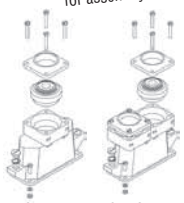
CABLE ENTRY BOXES



	ORDER SYMBOL
Including: base, cover, cover screws, 1 blind plug, 1 pull-off, hose clamp with screws, membrane cable gland, and plate connector set.	MB 2260
Accessory set Including: membrane cable gland, pull-off, and hose clamp with screws.	MB 2260A

CABLE ENTRY

Use plastic head screws for assembly



	ORDER SYMBOL	FLANGE SIZE
Cable entry,1 cable (incl. rubber gasket)	HIBOX 16	2
Cable entry, 2 cables (incl. rubber gasket)	DSHIBOX 26	2
Cable entry (1 cable)	EPA 1130	1
Cable entry (2 cables)	EPA 1230	1
Cable entry (1 cable)	EPA 2160	2
Cable entry (2 cables)	EPA 2260	2
		SIZE MM
Rubber gasket for cable entry EPA 1130-1230	MK 10426	10-31
Rubber gasket for cable entry EPA 2160-2260	MK 10428	28-60

CABLE GLANDS

METRIC!

Metric Cable gland, PA

PA=cable glands in polyamide
Grey RAL 7035
Temperature range
-40° (–+100°)

New metric dimensions EN 60423!

ORDER SYMBOL	FOR CABLE mm	METRIC SIZE	CLEARANCE HOLE Ø mm
GPA M12	3-6	M12x1,5	12.5
GPA M16	5-10	M16x1,5	16.5
GPA M20	8-13	M20x1,5	20.5
GPA M25	11-17	M25x1,5	25.5
GPA M32	15-21	M32x1,5	32.5
GPA M40	19-28	M40x1,5	40.5
GPA M50	27-35	M50x1,5	50.5
GPA M63	32-42	M63x1,5	60.5

Metric Hexagonal lock nut PA

B=lock nuts for cable gland, polyamide

GPA M12-B	M12x1,5
GPA M16-B	M16x1,5
GPA M20-B	M20x1,5
GPA M25-B	M25x1,5
GPA M32-B	M32x1,5
GPA M40-B	M40x1,5
GPA M50-B	M50x1,5
GPA M63-B	M63x1,5

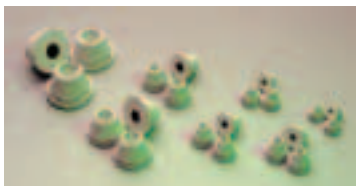
Membrane cable glands
EPDM
IP 65 (EN 60529)
Wall thickness (C) 1,5 -5 mm

FEM 3-5	3-5	M12	12.5
FEM 5-7	5-7	M16	16.5
FEM 7-10	7-10	M20	20.5
FEM 10-14/23	10-14	M23/PG16	23.5
FEM 10-14/25	10-14	M25	25.5
FEM 14-20	14-20	M32	32.5
FEM 20-26	20-26	M40	40.5
FEM 26-35	26-35	M50	50.5
FEM 30-45	30-45	M60	60.5

Multifem — MFM 8-12 — 3x6-10, 3x10-14 — M50 — 50,5

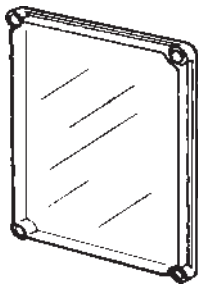
Membrane cable glands
Flame resistance UL 96-V2
Grey RAL 7035
Temperature range
-50°C–+70°C
Fet 5-7 for cables 5-7 ø
Fet 7-10 for cables 7-10 ø etc.

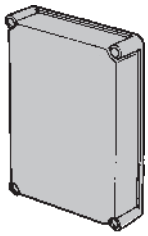
ORDER SYMBOL	FOR CABLE mm	CLEARANCE HOLE, PG
FET 5-7	5-7	PG 9
FET 7-10	7-10	PG 11
FET 8-14	8-14	PG 16
FET 14-20	14-20	PG 21
FET 20-26	20-26	PG 29
FET 26-35	26-35	PG 36



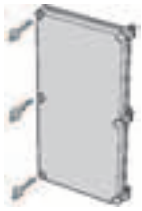
FIBOX EK

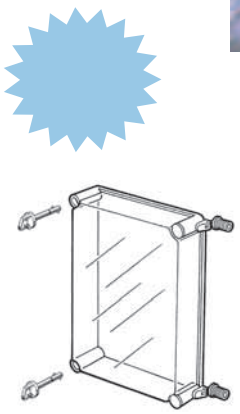
COVERS

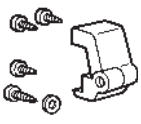




EKM 80-G

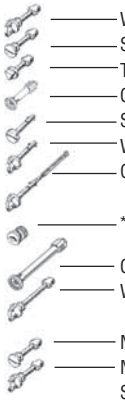






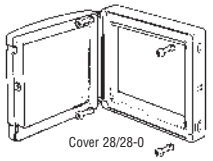
ROOF

COVERS SCREWS

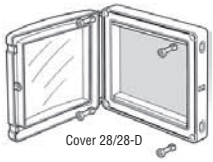


	ORDER SYMBOL	FOR COVERS
Wing head screw	HS 10255	30
Slotted head screw, sealable	SS 10535	30
Triangle head screw	DS 10581	30/80/100
Cross head screw	CS 10256	30/100
Slotted head screw, quick-lock, *)	SS 10544	30/100
Wing head screw, quick-lock, *)	HS 10533	30
Quick-locking wing head screw, hinged, *)	HS 10532	30
*) Threaded bushing *) Threaded bushing (needed for quick-locking screws)	MB 10534	
Cross head screw	SS 10563	80
Wing head screw	HS 10562	80
Noryl slotted head screw (good chemical resistance)	SS 10256N	30
Noryl wing head screw (good chemical resistance)	HS 10255N	30
Set of four cross head screws	SS 10256-4	30/100
Set of six cross head screws	SS 10256-6	30/100
Set of four cross head screws	SS 10563-4	80

SOLID FRAME

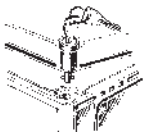


Solid Frames also fit EKOE and SOLID 2828 beses.



	ORDER SYMBOL	SIZE mm
Frame, with opening	Cover 28/28-O	280x280
Front plate aluminium	FP 28/28	
Frame, no opening	Cover 28/28-D	280x280
Key lock set	MR 26065	

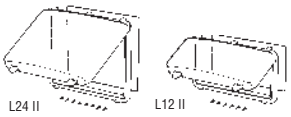
KEY-LOCK SET

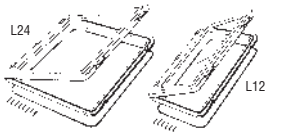


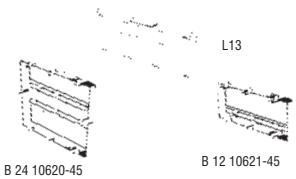
	ORDER SYMBOL
Key-lock set incl., lock and 2 keys for 30 mm covers	MB 10597

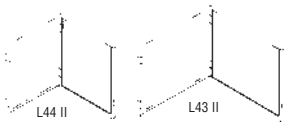
INSPECTION WINDOWS

The order symbol indicates the amount of the DIN modules for exsample L08=8 modules.

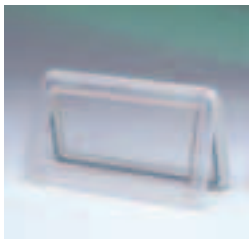




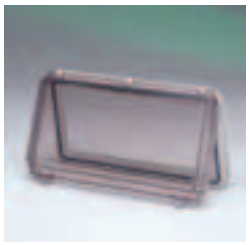




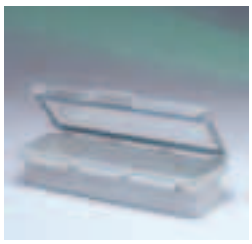
	ORDER SYMBOL	SIZE mm
Windows, IP 65	L12 II	248x128
Windows, IP 65	L24 II	248x128
Windows, IP 65	L12	248x128
Windows, IP 65	L24	248x128
Windows, IP 65	L13	257x108
Windows, IP 54	L10	199x77
Windows, IP 54	L08	162x77
Windows, IP 54	L06	130x77
Windows, IP 54	L04	96x77
Windows, IP 54	L02	60x77
Front plates for L 12 windows	B12 10621-45	
Front plates for L 24 windows	B24 10620-45	
Large size windows, IP 65,	L44 II	377x331
for enclosure EKW 100-G	L43 II	331x277



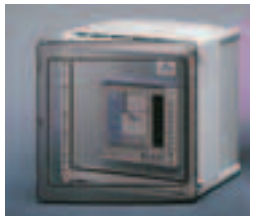
L 12 clear



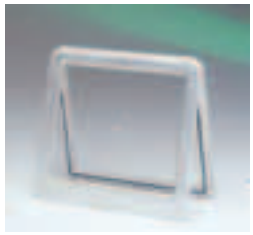
L 12 II transparent smoked grey



L 13 clear



SOLID FRAME application

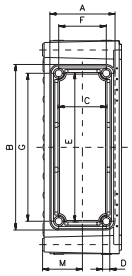


L 24 clear

L 44 II transparent smoked grey

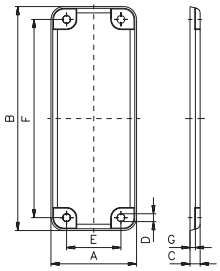
L 43 II transparent smoked grey

DIMENSIONAL DRAWINGS



FLANGE OPENINGS

Plate size	Dimensions							
	A	B	C	D	E	F	G	M
1	48	138	33	7	121	30	120	31
2	86	217	63	9,5	195	62	193	52
3	127	332	101	11,5	306	80	292	71



COVER PLATES

Order symbol	Plate size	Dimensions						
		A	B	C	D	E	F	G
MB 10215	1	49	140,5	10	7	30	120	5
MB 10546	2	85	217	10	9,5	62	193	5
MB 10324	3	127	332	15	11,5	80	292	8

TECHNICAL INFORMATION

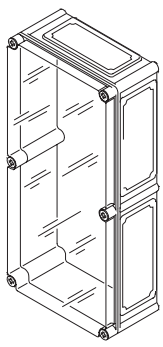
PROPERTY		POLYCARBONATE (PC)	CONFORMITY TO STANDARDS
Ingress Protection		IP66/IP67	**USA** Enclosures for Electrical Equipment
(EN 60529)			PC: UL Type 1, 3, 3S, 4, 4X, 6, 6P and 12 (UL 50/508)
Impact Resistance		IK 08	**Canada** Industrial Control Equipment
(EN 50102)			Enclosures for Electrical Equipment/ULc
Temperature Range	Celsius	-40°. . .120°C	**Europe** Enclosures for Switch Gear and Control Gear Assemblies
(short term)	Fahrenheit	-40°. . .250°F	EN 50298:1998
Temperature Range	Celsius	-40°. . .80°C	**Europe** Safety of Information Technology Equipment
(continuous)	Fahrenheit	-40°. . .175°F	EN 60950
Electrical Insulation		Totally insulated ⧈	**Australia** Enclosures for switch gear and control gear
			AS 3132-1991
Light Grey Parts Colour		RAL 7035	**DNV** PC: DNV Rules for Classification of Ships and Mobile
		Industry Grey	Offshore Units
Transparent Clear PC Cover		Clear Transparent	**GL** PC: GL Regulations for the Performance of Type Test, Part 1
Cover Screws		RAL 7035	
Cover Screws		Polyamide (PA)	**LR** Marine offshore and industrial installations
Gasket		PUR	**BV** BV Rules
Enclosure Flammability Rating		UL94-5V	UL 746 C 5 in. vertical flame test
Glow Wire Test		960°C	IEC 695-2-1, Self-extinguishing
Non-toxicity		Halogen Free	DIN/VDE 0472, Part 815
UV resistance		UL 508	**CE, FI**-mark
		720 hours in "Weatherometer"	
Chemical Resistance *		Good	

Data subject to change without notice. *Consult separate raw material data for more detailed information

NEW!

EK enclosure sets

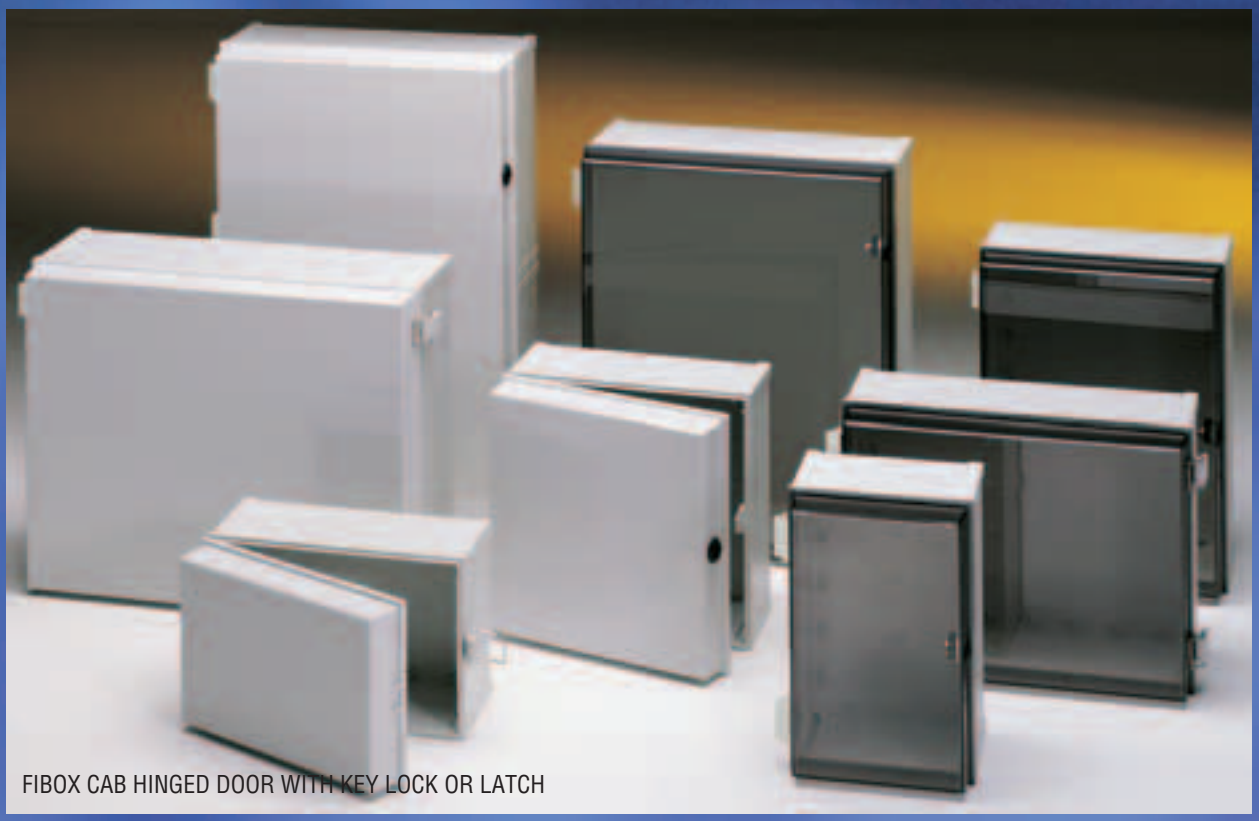
Some most popular EK sizes are now available as complete enclosures with just one order symbol.
Sets include base, cover and cover screws. Naturaly same wide SOLID/EK accessory range allows you to customise these "easy-to-order" sets to your needs.



EKTH 130 T

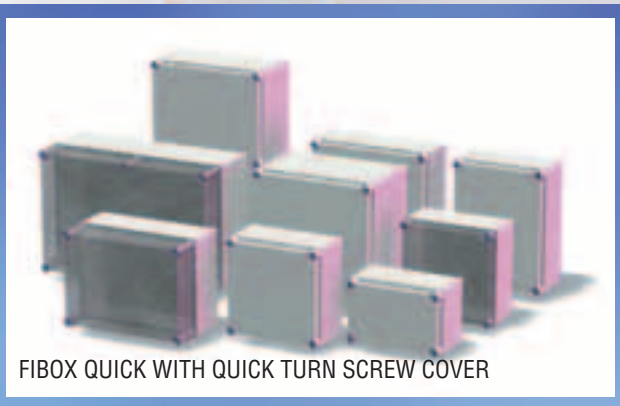
ORDER SYMBOL	SIZE mm
EKHA 130 G	190x190x130
EKJB 130 G	280x190x130
EKMB 130 G	380x190x130
EKOE 130 G	280x280x130
EKPE 130 G	380x280x130
EKTH 130 G	560x280x130
EKUH 180 G	560x380x180
EKWH 250 G	760x560x250
EKHA 130 T	190x190x130
EKJB 130 T	280x190x130
EKMB 130 T	380x190x130
EKOE 130 T	280x280x130
EKPE 130 T	380x280x130
EKTH 130 T	560x280x130
EKUH 180 T	560x380x180

FIBOX
CAB QUICK



FIBOX CAB HINGED DOOR WITH KEY LOCK OR LATCH

FIBOX SPACE LINK

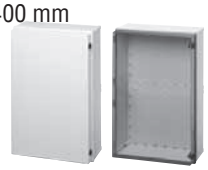


FIBOX QUICK WITH QUICK TURN SCREW COVER

FIBOX CAB PC/ABS wall mounting cabinets are manufactured using high impact resistant polycarbonate or ABS material, withstanding harsh, hostile industrial environments. The FIBOX QUICK lock system allows easy access to the enclosure, while still ensuring tight sealing. The enclosure is rated EN 60529 IP66/IP67.
The cabinet base features numerous internal mounting pods, allowing ease in component assembly and installation.
FIBOX CAB PC/ABS (hinged one), FIBOX QUICK PC/ABS (screw cover).Transparent "smoked grey" cover options allows easy viewing of installed control equipment and indicators.

FIBOX CAB, FIBOX QUICK, FIBOX SPACE LINK

FIBOX CAB PC/ABS

CAB ENCLOSURE WITH KEY LOCKS **PC: IP 65, IK 08** **ABS: IP 65, IK 08**	**Z** mm	**C** **mm**	Including: Cabinet base, door with EPDM gasket, 3 mm double bit lock(s) with key, hinges, mounting plate screws, and corner plugs. ORDER SYMBOL Grey door 3 mm double bit key		ORDER SYMBOL Smoked transparent cover 3 mm double bit key		**B** x **A** **L** x **S** mm
CAB PC/ABS 302018 G3B CAB PC/ABS 302018 T3B **Y** x **X** 300 mm 200 mm 	180 180	168 168	CAB PC 302018 G3B CAB ABS 302018 G3B		CAB PC 302018 T3B CAB ABS 302018 T3B		B x A 260 x 160 L x S 272 x 172
CAB PC/ABS 303018 G3B CAB PC/ABS 303018 T3B **Y** x **X** 300 mm 300 mm 	180 180	168 168	CAB PC 303018 G3B CAB ABS 303018 G3B		CAB PC 303018 T3B CAB ABS 303018 T3B		B x A 260 x 260 L x S 272 X 272
CAB PC/ABS 403018 G3B CAB PC/ABS 403018 T3B **Y** x **X** 400 mm 300 mm 	180 180	167 167	CAB PC 403018 G3B CAB ABS 403018 G3B		CAB PC 403018 T3B CAB ABS 403018 T3B		B x A 260 x 360 L x S 372 x 272
CAB PC/ABS 504020 G3B CAB PC/ABS 504020 T3B **Y** x **X** 500 mm 400 mm 	200 200	185 185	CAB PC 504020 G3B CAB ABS 504020 G3B		CAB PC 504020 T3B CAB ABS 504020 T3B		B x A 360 x 460 L x S 472 x 372
CAB PC/ABS 604022 G3B CAB PC/ABS 604022 T3B **Y** x **X** 600 mm 400 mm 	220 220	207 207	CAB PC 604022 G3B CAB ABS 604022 G3B		CAB PC 604022 T3B CAB ABS 604022 T3B		B x A 360 x 560 L x S 572 x 372

External height **Y** External width **X** External depth **Z** Free internal mounting height **C** Mounting plate assembly **B** x **A** Wall mounting **L** x **S**

T= smoked transparent cover G= grey cover

CAB ENCLOSURE WITH LATCHES **PC: IP 65, IK 08** **ABS: IP 65, IK 08**	Z mm	C mm	Including: Cabinet base, door with EPDM gasket, hinges, latches, mounting plate screws, and corner plugs. ORDER SYMBOL Grey door Hinges on short sides		ORDER SYMBOL Smoked transparent cover Hinges on long side		B x A L x S mm
CAB PC/ABS 203018 CAB PC/ABS 302018 Y x X 300 mm 200 mm	180 180 180 180	168 168 168 168	CAB PC 203018 G CAB PC 203018 T CAB ABS 203018 G CAB ABS 203018 T		CAB PC 302018 G CAB PC 302018 T CAB ABS 302018 G CAB ABS 302018 T		B x A 260 x 160 L x S 272 x 172
CAB PC/ABS 303018 Y x X 300 mm 300 mm	180 180 180 180	168 168 168 168	CAB PC 303018 G CAB PC 303018 T CAB ABS 303018 G CAB ABS 303018 T				B x A 260 x 260 L x S 272 X 272
CAB PC/ABS 304018 CAB PC/ABS 403018 Y x X 400 mm 300 mm	180 180 180 180	167 167 167 167	CAB PC 304018 G CAB PC 304018 T CAB ABS 304018 G CAB ABS 304018 T		CAB PC 403018 G CAB PC 403018 T CAB ABS 403018 G CAB ABS 403018 T		B x A 260 x 360 L x S 372 x 272
CAB PC/ABS 405020 CAB PC/ABS 504020 Y x X 500 mm 400 mm	200 200 200 200	185 185 185 185	CAB PC 405020 G CAB PC 405020 T CAB ABS 405020 G CAB ABS 405020 T		CAB PC 504020 G CAB PC 504020 T CAB ABS 504020 G CAB ABS 504020 T		B x A 360 x 460 L x S 472 x 372
CAB PC/ABS 604022 Y x X 600 mm 400 mm	220 220 220 220	207 207 207 207			CAB PC 604022 G CAB PC 604022 T CAB ABS 604022 G CAB ABS 604022 T		B x A 560 x 360 L x S 572 x 372

External height Y External width X External depth Z Free internal mounting height C Mounting plate assembly B x A Wall mounting L x S

T= smoked transparent cover G= grey cover

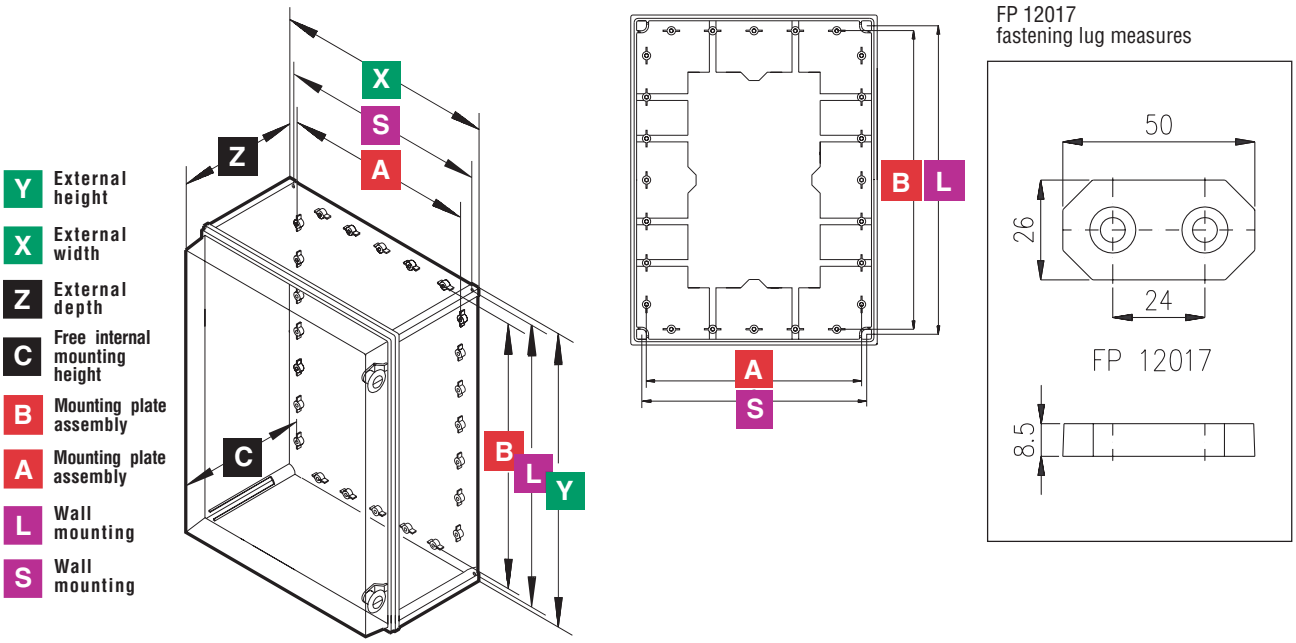
FIBOX CAB PC/ABS

SYMBOLS AND ABBREVIATIONS

FIBOX CAB AND FIBOX QUICK

CAB PC Q 30 20 18 G 3B

- 3B — 3 bit keylock
- G — Door G = Grey, T = Smoked grey transparent
- 18 — Total depth of the Cabinet in cm
- 20 — Total width of the Cabinet in cm
- 30 — Total height of the Cabinet in cm **HINGES ARE ON THIS SIDE**
- Q — Quick cover screws, **NO HINGES**
- PC — Material of the Cabinet base PC (Polycarbonate) or ABS
- CAB — Enclosure range CAB/QUICK



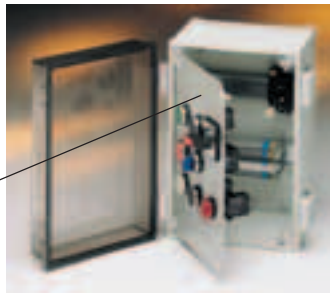
FP 12017
fastening lug measures

TECHNICAL INFORMATION FOR CAB ENCLOSURES

PROPERTY		POLYCARBONATE (PC)	ABS	CONFORMITY TO STANDARDS (UL, CSA, CE, Lloyds, BV, FI)
Ingress Protection (EN 60529)		IP65	IP65	**USA** Enclosures for Electrical Equipment PC: UL Type 1, 4, 4X, 12 and 13 (UL 50/508) ABS: NEMA 1, 4, 4X, 12 and 13
Impact Resistance (EN 50102)		IK 08	IK 08	**Canada** Industrial Control Equipment Enclosures for Electrical Equipment/ULc
Temperature Range (short term)	Celsius	-40°. . .120°C	-40°. . .80°C	**Europe** Enclosures for Switch Gear and Control Gear Assemblies
	Fahrenheit	-40°. . .250°F	-40°. . .175°F	EN 50298:1998
Temperature Range (continuous)	Celsius	-40°. . .80°C	-40°. . .60°C	**Europe** Safety of Information Technology Equipment
	Fahrenheit	-40°. . .175°F	-40°. . .140°F	EN 60950
Electrical Insulation		Totally insulated ⊡	Totally insulated ⊡	**Australia** Enclosures for switch gear and control gear AS 3132-1991
Light Grey Parts Colour		RAL 7035 Industry Grey	RAL 7035 Industry Grey	
Transparent Clear PC Cover		Smoked Grey	Smoked Grey	
Hinges and Latches (PC)		RAL 7035	RAL 7035	
Gasket		PUR/EPDM	PUR/EPDM	
Enclosure Flammability Rating		UL94-5V	UL94HB	UL 746 C 5 in. vertical flame test
Glow Wire Test		960°C	650°C	IEC 695-2-1, Self-extinguishing
Non-toxicity		Halogen Free	Halogen Free	
UV resistance		UL 508 720 hours in "Weatherometer"		
Chemical Resistance *		Good	Good	

Data subject to change without notice. *Consult separate raw material data for more detailed information

POLYCARBONATE AND ABS CABINETS WITH KEY LOCKS OR WITH LATCHES



POLYCARBONATE AND ABS

CAB PC / ABS enclosures feature innovative design and unique latch and locking options. Optional smoked transparent covers provide excellent visibility plus UV protection for internal components.

SWING DOOR

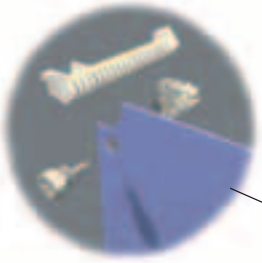
Pat.Reg. 400865

WALL FASTENING FEET

Wall mounting is achieved directly through the enclosure or by using optional wall mounting feet for hanging the enclosure.

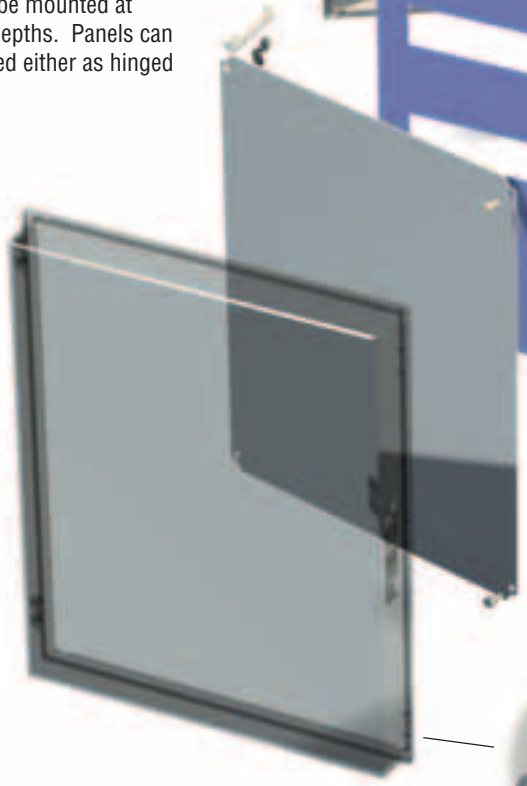
HINGED INNER PANEL (SWING DOOR)

For instrumentation mounting, aluminium inner panels can be hinged right or left. Panels swing a full 90 degrees permitting total access to components mounted inside the cabinet.



ADJUSTABLE DEPTH

Unique brackets allow inner panels to be mounted at different depths. Panels can be mounted either as hinged or fixed.



MOUNTING FRAMES

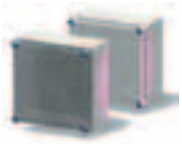
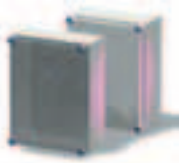
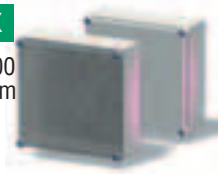
PADLOCKABLE LATCH

Enclosures are available hinged either on the long or short side. Quick release latches feature a built-in provision for padlocking.

KEY LOCK

CAB enclosures are available with a 1/4 turn DIN lock supplied with a standard 3mm double bit plastic key.

FIBOX QUICK

FIBOX QUICK PC AND ABS ENCLOSURE **PC and ABS: IP 66/IP 67, IK 08**	Z mm	C mm	Including: Enclosure base, cover, screws 4x CS12137, and mounting screws. ORDER SYMBOL Grey cover		ORDER SYMBOL Smoked transparent cover		B x A L x S mm
CAB PCQ 23 CAB ABSQ 23 Y x X 300 mm 200 mm	170 170	158 158	CAB PCQ 302017 G CAB ABSQ 302017 G		CAB PCQ 302017 T CAB ABSQ 302017 T		B x A 260 x 160 L x S 272 x 172
CAB PCQ 33 CAB ABSQ 33 Y x X 300 mm 300 mm 	170 170	158 158	CAB PCQ 303017 G CAB ABSQ 303017 G		CAB PCQ 303017 T CAB ABSQ 303017 T		B x A 260 x 260 L x S 272 X 272
CAB PCQ 43 CAB ABSQ 43 Y x X 400 mm 300 mm 	170 170 230 230	158 158 218 218	CAB PCQ 403017 G CAB ABSQ 403017 G CAB PCQ 403023 G CAB ABSQ 403023 G		CAB PCQ 403017 T CAB ABSQ 403017T CAB PCQ 403023 T CAB ABSQ 403023 T		B x A 360 x 260 L x S 372 x 272
CAB PCQ 44 CAB ABSQ 44 Y x X 400 mm 400 mm 	170 170 +100	158 158 +100	CAB PCQ 404017 G CAB ABSQ 404017 G EKI EXT 44 Extension frame for multi-times additional 100 mm		CAB PCQ 404017 T CAB ABSQ 404017 T EKI EXT 44		B x A 360 x 360 L x S 372 x 372
CAB PCQ 63 Y x X 600 mm 300 mm	170	158	CAB PCQ 603017 G		CAB PCQ 603017 T		B x A 560 x 260 L x S 572 x 272
CAB PCQ 64 CAB ABSQ 64 Y x X 600 mm 400 mm	210 210 270 270	198 198 258 258	CAB PCQ 604021 G CAB ABSQ 604021 G CAB PCQ 604027 G CAB ABSQ 604027 G		CAB PCQ 604021 T CAB ABSQ 604021 T CAB PCQ 604027 T CAB ABSQ 604027 T		B x A 560 x 360 L x S 572 x 372

External height Y — External width X — External depth Z — Free internal mounting height C — Mounting plate assembly B x A — Wall mounting L x S

FIBOX QUICK – QUICK TURN COVER SCREW

HINGED INNER PANEL (SWING DOOR)

For instrumentation mounting, aluminium and insulated plastic inner panels can be hinged right or left. Panels swing a full 90 degrees permitting total access to components mounted inside the cabinet.

ADJUSTABLE DEPTH

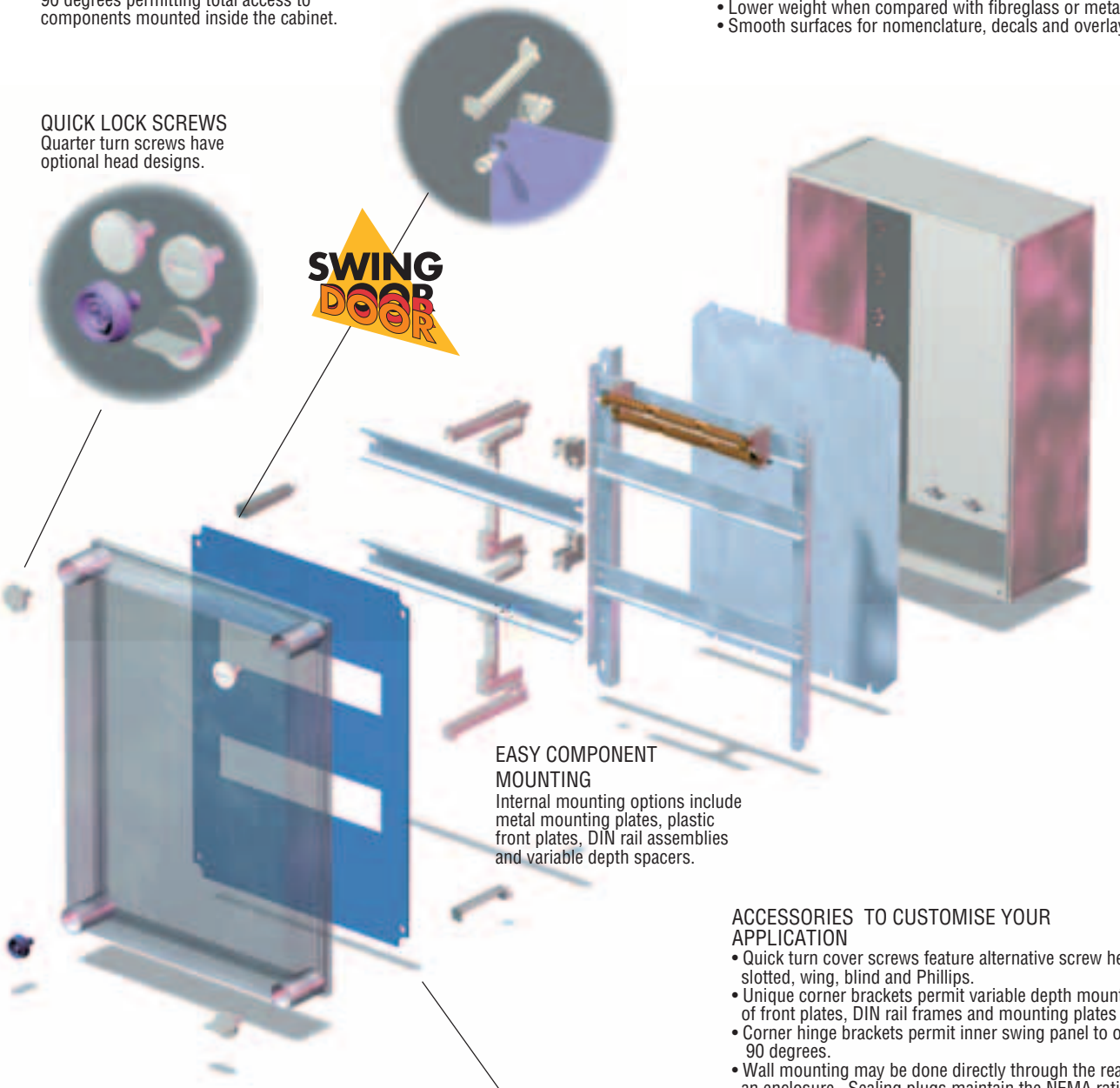
Unique brackets allow panels to be mounted at different depths. Panels can be mounted either as hinged or fixed.

NEW DESIGN WITH STYLE

- Increased wall thickness adds strength and rigidity
- Smoked grey transparent cover provides excellent component visibility
- More flexibility in component mounting with large number of mounting pods
- Lower weight when compared with fibreglass or metal
- Smooth surfaces for nomenclature, decals and overlays

QUICK LOCK SCREWS

Quarter turn screws have optional head designs.



EASY COMPONENT MOUNTING

Internal mounting options include metal mounting plates, plastic front plates, DIN rail assemblies and variable depth spacers.

ACCESSORIES TO CUSTOMISE YOUR APPLICATION

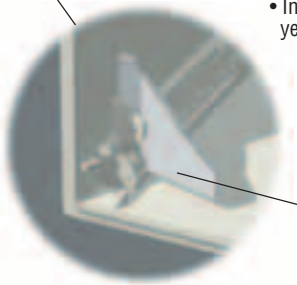
- Quick turn cover screws feature alternative screw heads: slotted, wing, blind and Phillips.
- Unique corner brackets permit variable depth mounting of front plates, DIN rail frames and mounting plates
- Corner hinge brackets permit inner swing panel to open 90 degrees.
- Wall mounting may be done directly through the rear of an enclosure. Sealing plugs maintain the NEMA rating. Alternatively, optional wall mounting feet may be added using the brass mounting inserts on the rear of the enclosure.
- Inspection windows provide access to components, yet maintain IP ratings.

SPACE AND MORE SPACE

Unique corner pod design leaves maximum mounting space without limiting accessories.

Moulded in place, perimeter gasket allows full enclosure base opening (no door return to reduce opening.)

Depth increase with enclosure size. Two optional 100mm high covers increase overall usable depth.



Pat.Reg. 400865

FIBOX SPACE LINK

FIBOX SPACE LINK **PC: IP 65**	Z mm	C mm	Please order separately: Enclosure base, cover and screws QUICK SET. (see page 60), for EKI 63 and EKI 64, 2 x QUICK SET. ORDER SYMBOL Grey cover		ORDER SYMBOL Smoked transparent cover		B x A L x S mm
EKI 23 Y x X 200 mm 300 mm	170	158	Base: EKI 23-2 EKI 23-4 Cover: EKI 23/40G		Base: EKI 23-2 EKI 23-4 Cover: EKI 23/40T		B x A 260 x 160 L x S 272 x 172
EKI 33 Y x X 300 mm 300 mm	170	158	Base: EKI 33-2 EKI 33-4 Cover: EKI 33/40G		Base: EKI 33-2 EKI 33-4 Cover: EKI 33/40T		B x A 260 x 260 L x S 272 X 272
EKI 43 Y x X 400 mm 300 mm	170 230	158 218	Base: EKI 43-5A EKI 43-4 Cover: EKI 43/40G EKI 43/100G		Base: EKI 43-5A EKI 43-4 Cover: EKI 43/40T EKI 43/100T		B x A 360 x 260 L x S 372 x 272
EKI 44 Y x X 400 mm 400 mm	170 +100	158 +100	Base: EKI 44-4 Cover: EKI 44/40G EKI EXT 44 Extension frame adds 100 mm depth, use many. See page 64.		Base: 44-4 Cover: EKI 44/40T EKI EXT 44		B x A 360 x 360 L x S 372 x 372
EKI 63 Y x X 600 mm 300 mm	170	158	Base: EKI 63-6 Cover: EKI 63/40G		Base: EKI 63-6 Cover: EKI 63/40T		B x A 560 x 260 L x S 572 x 272
EKI 64 Y x X 600 mm 400 mm	210 270	198 258	Base: EKI 64H - 4EPA EKI 64H - 6 Cover: EKI 64/40G EKI 64/100G		Base: EKI 64H - 4EPA EKI 64H - 6 Cover: EKI 64/40T EKI 64/100T		B x A 560 x 360 L x S 572 x 372

External height Y External width X External depth Z Free internal mounting height C Mounting plate assembly B x A Wall mounting L x S

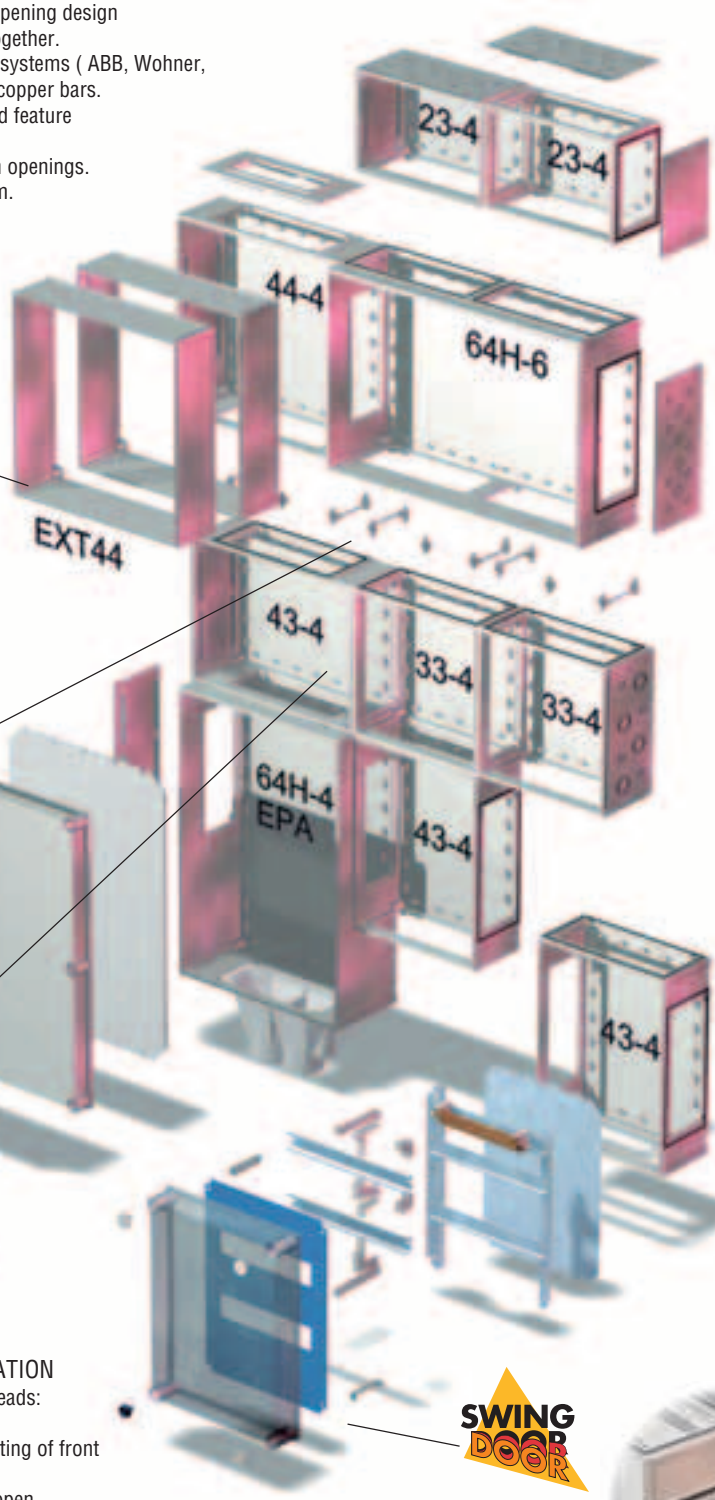
FIBOX SPACE LINK - LARGE FLANGE OPENINGS FOR EASY ASSEMBLY

COMPREHENSIVE ASSEMBLY SYSTEM

- New quick-link system plus a more rugged flange opening design making it easier to connect enclosure assemblies together.
- Flange support system works with popular bus bar systems (ABB, Wohner, Weber, etc.) designed for 5 x 20 and 10 x 30 mm copper bars.
- New DIN rail frames ease DIN module mounting and feature front plate corner brackets.
- Inspection windows with standard DIN 17.5/45 mm openings. New sizes include 377 x 331 mm and 331 x 277 mm.

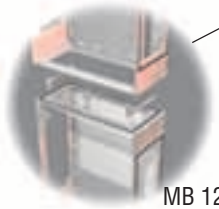
EXTENSION FRAMES

Available in 400 x 400 mm and when stacked create additional depth in 100mm increments., for example, 170mm, 270mm, 370mm, etc.



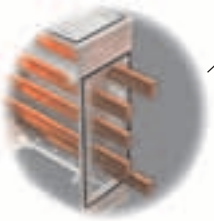
QUICK-LINK SYSTEM

Assembly of the enclosures faster than ever.



MB 12287F3 set

60 MM BUS-BAR SYSTEM



Pat.Reg. 400865

ACCESSORIES TO CUSTOMIZE YOUR APPLICATION

- Quick turn cover screws feature alternative screw heads: slotted, wing, blind and Phillips.
- Unique corner brackets permit variable depth mounting of front plates, DIN rail frames and mounting plates
- Corner hinge brackets permit inner swing panel to open 90 degrees.
- Wall mounting may be done directly through rear of enclosure. Sealing plugs maintain the NEMA rating. Alternatively, optional wall mounting feet may be added using the brass mounting inserts on the rear of the enclosure.
- Inspection widows provide access to components, while maintaining NEMA ratings.
- Hinges, spacers, ventilators, etc.
- Flange plates with knockouts or blank.
- Variety of cable glands, strain relief and conduit fittings.

MOUNTING RAILS AND PLATES

Internal mounting options include metal mounting panels, blue polycarbonate front plates, DIN rail assemblies with variable depth spacers.

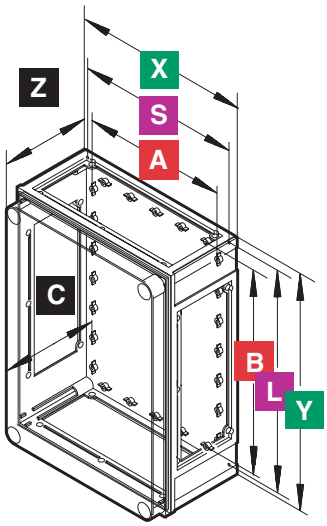
SNAP-IN SYSTEM

Fastest way to assemble the flanges.

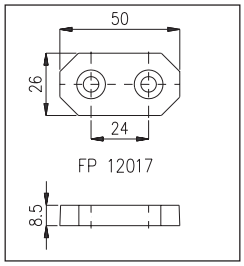
FIBOX SPACE LINK

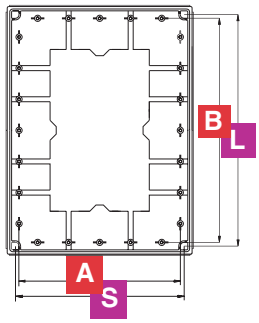
SYMBOLS AND ABBREVIATIONS

- **Y** External height
- **X** External width
- **Z** External depth
- **C** Free internal mounting height
- **B** Mounting plate assembly
- **A** Mounting plate assembly
- **L** Wall mounting
- **S** Wall mounting



FP 12017
fastening lug measures





QUICK SET

Screw set for Space Link and Quick includes:

4 x CS 12137 cover screws head, blue
4 x MSM PT 5x10 mounting plate screw
4 x SP 12087 internal corner plug, red

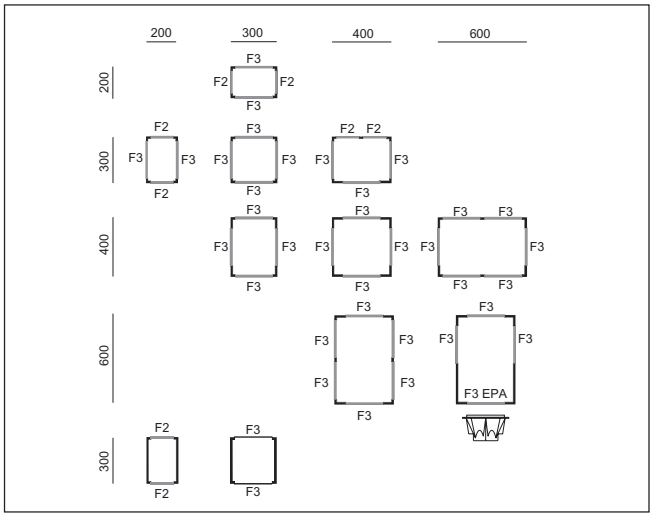
(4 x) CS 12137

(4 x) MSM PT 5x10

(4 x) SP 12087

Please order one QUICK SET for each SPACE LINK enclosure except 2 for EKI 63 and EKI 64.

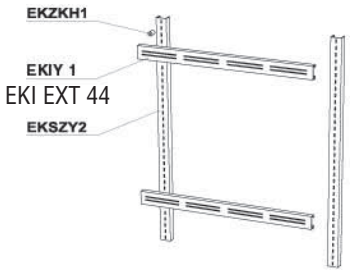
ASSEMBLY OF SPACE LINK ENCLOSURES

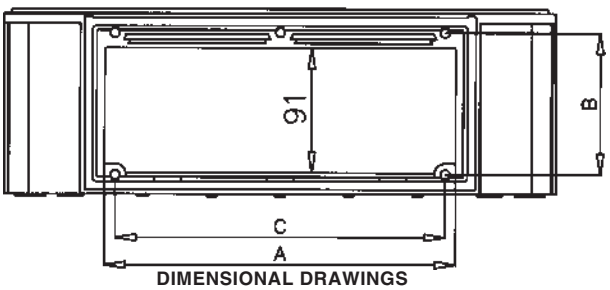


POLYCARBONATE FLANGES

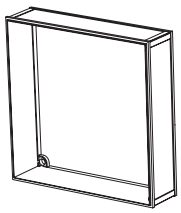
Ordering symbol	Size	Openings
F3/12014	F3	no opening
F3/12022	F3	12xPg16/9 + 7xPg16
F3/12088	F3	4xPg36/29 + 4xPg16
F3/12028	F3	4xPg21 + 9xPg16 = for plate size 2 in EK range
F3/12187	F3	6 x M20/M25, 4 x M25/M32
F3/12023	F3	C-opening (SFS)
F3/EPA	F3/EPA	C-opening (SFS) incl. MB 12288 plate + 2xFA 12114
F2/12015	F2	no opening
F2/12042	F2	6xPg16/9 + 5xPg16
F2/12041	F2	4xPg16 + 3xPg21
F2/12089	F2	4xPg 16+3xPg 29
F2/12069	F2	2xPg 36+1xPg 16

EXTENSION FRAME
In size 400 x 400 mm
allow unlimited depth
170mm,
270mm,
370mm
470 mm etc...





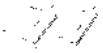
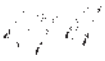
DIMENSIONAL DRAWINGS OF THE FIBOX EKI FLANGE OPENINGS F2 AND F3



TYPE	A	B	C
F2	155	102	140
F3	255	102	240

FIBOX

ACCESSORIES FOR CAB - AND QUICK ENCLOSURES

Product	Order symbol	Size mm	
Inspection windows L44 II L43II L24 II L12 II  L 24 L 12 L 13 L02-L10	L44 II L43 II L24 II L12 II L24 L12 L13 L10 L08 L06 L04 L02	377 x 331 331 x 277 248 x 218 248 x 128 248 x 218 248 x 128 257 x 108 199 x 77 162 x 77 130 x 77 96 x 77 60 x 77	
Front plates for windows L12 and L24 	B12 10621-45 B24 10620-45	12 modules 24 modules 1 module = 17,5 mm	
Cover screws heads Blue Grey Grey Grey	CS 12137 SS 12136 HS 12112 BS 12138		
Hinge set *Only to CAB*	MB CH SET		
Latch set *Only to CAB*	MB CL SET		
Hinge set *Only to QUICK*	PAT 12040		
Wall fastening lug Set of four, incl screws M6x10	FP 12017		
Corner plug 	SP 12087		
Key 	MB 12235		
DIN rail support	FP 12190		
Spacers	FA 12053 FA 12052 MB 10686 set		
Mounting screws	MSM PT 5x10		
Ventilation device	MB 10564 II MB 10631		
Water plug	MB 12189		
Pole mount set 	PM 60 PM 120		

Product	Order symbol	
Bush-bar support flange	BBSF	
Support flanges 	F2/12291 F3/12290	
PE bus-bar, DIN-rail clip-on, blue	MS BAR 7 B	
N bus-bar, DIN-rail clip-on, green/yellow	MS BAR 7 GY	
Terminal support, DIN-rail clip-on Mounting screw for MS TS. Order separately.	MS TS KN 2.9x9.5	
PE/N terminal bus-bar 25+ 10 mm²	MS BAR 2+18	
PE/N terminal bus-bar 35+ 10 mm²	MS BAR 3+24	
PE/N terminal bus-bar 10 mm²	MS BAR 96	
Terminal bus-bar clamp, 25 mm²	MS BAR CLAMP	
Terminal bus-bar clamp, 35 mm²	MR 26145	

Cable entry direct mount to flange opening

Product	Order symbol	Size mm	
For F3-size flange open.	F3/12101	2 x 30-60 mm cables	
For F2-size flange open.	F2/12102	1x 30-60 mm cables	
Connect. kit	MB F3F2	For F2/12101 and F3/12101	
Cable gasket	MK 10428	28-60 mm cables	

Cable entry with cable gasket for gland plate F3/EPA

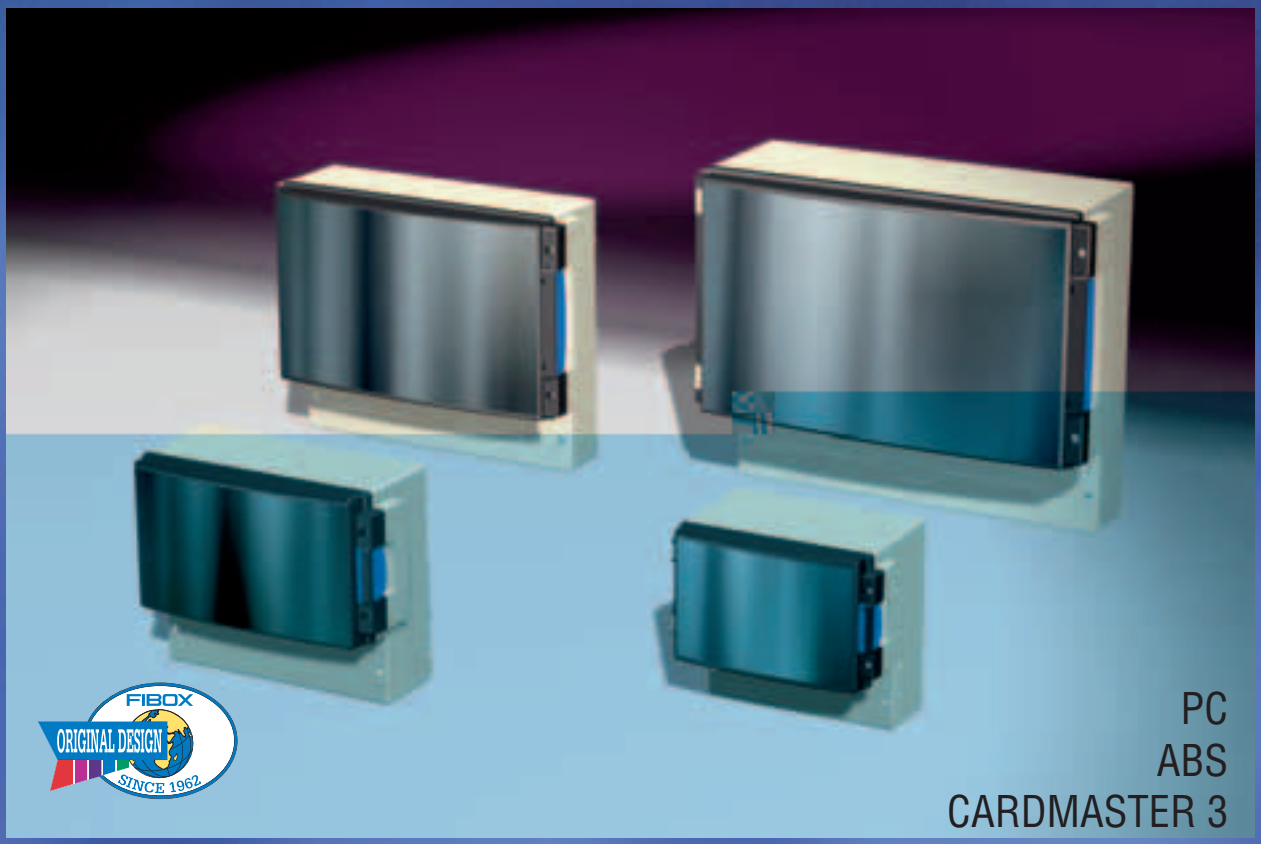
Product	Order symbol	Size mm	
Cable entry with cable gasket	HIBOX 16	1 x 37-62 mm cables	
Cable entry with two cable gasket	DSHIBOX 26	2 x 37-62 mm cables	
Cable entry kit	F3/EPA	Connecting HIBOX/DSHIBOX to EKI bases	

Cable entry for gland plate F3/EPA

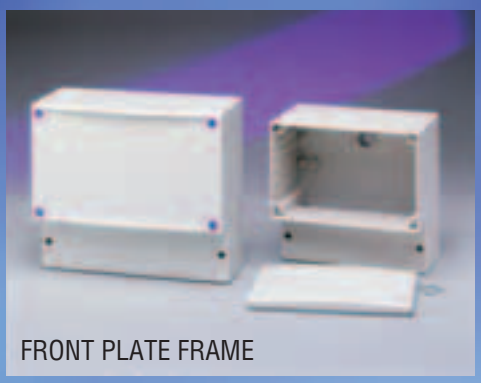
Product	Order symbol	Size mm	
Cable entry Cable entry	EPA 2160 EPA 2260	1 x 28-60 mm 2 x 28-60 mm	
Connector set	MB 10670	Size 2 flange opening	
Gland plate gasket	MK 10438	Size 2 flange opening	
Cable gasket 	MK 10428	28-60 mm cables	

FIBOX
CARDMASTER

FIBOX CARDMASTER



CARDMASTER 3

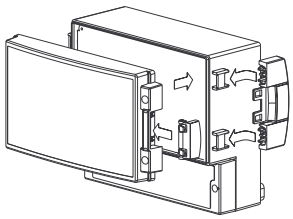

FRONT PLATE FRAME

A new generation of FIBOX CARDMASTER enclosures, featuring improved design and colours, is available in polycarbonate and ABS. Designed for use with modular components, the FIBOX CARDMASTER 3 range is ideal for packaging instrumentation, measurement, monitoring and process control equipment.
The enclosure has built in PCB card guides and a separate terminal wiring compartment.
Hinged transparent covers have quick release latches.
All sizes available in either impact resistant polycarbonate or ABS.
New accessory front plate frame also available.

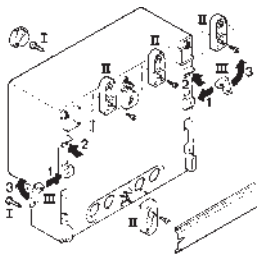
FIBOX CARDMASTER 3

Features

Ecology also in design
more mounting pods and no brass inserts for better recycling



Terminal compartment
K9/F3ourts foreasy wirling



50 % more space for terminals
Standard terminals can be used

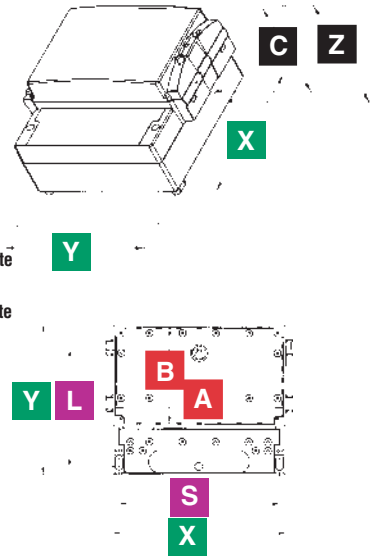
CARDMASTER 3 PC AND ABS ENCLOSURE **PC: IP 65, IK08/IK07** **ABS: IP 65, IK07**			**Including:** Enclosure base, transparent cover, termination compartment cover, polyamide hinges, locking devices, and 8 mounting screws		**Including:** Enclosure base, terminal compartment cover, and 8 mounting screws. (A transparent cover and hinges are not included.)		B A L S
			ORDER SYMBOL		ORDER SYMBOL		
17/16-LC3 17/16-L3 **Y** x **X** 166 mm 160 mm	80 80	58 58			PC 17/16-LC3 ABS 17/16-LC3		
	104	58			PC 17/16-LFC3		
	106 106	84 84	PC 17/16-L3 ABS 17/16-L3				
17/16-C3 17/16-3 **Y** x **X** 166 mm 160 mm	105 105	86 86			PC 17/16-C3 ABS 17/16-C3		
	119,5	86,7			PC 17/16-FC3		
	134 134	113 113	PC 17/16-3 ABS 17/16-3				
21/18-C3 21/18-3 **Y** x **X** 213 mm 185 mm	87 87	71 71			PC 21/18-C3 ABS 21/18-C3		
	102	71			PC 21/18-FC3		
	118 118	97 97	PC 21/18-3 ABS 21/18-3				
28/28-0 II 28/28-D II **Y** x **X** 280 mm 280 mm	153 153	150 150	PC 28/28-0 II ABS 28/28-0 II				
	154 154	84 84			PC 28/28-D II ABS 28/28-D II		

Y **X** **B** **A** **L** **S**

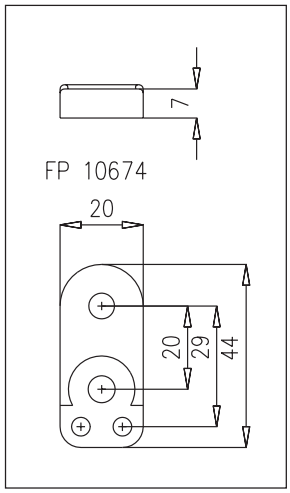
FIBOX CARDMASTER 3

SYMBOLS AND ABBREVIATIONS

Y External height
X External width
Z External depth
C Free internal mounting height
B Mounting plate assembly
A Mounting plate assembly
L Wall mounting
S Wall mounting



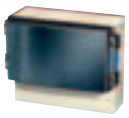
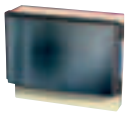
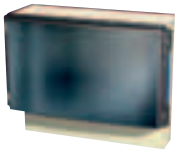
FP 10674
fastening lug measures



CARDMASTER 3

PC 17/16-LFC3
ABS 17/16-3

- Type
  L=low base
  C3=without main cover and hinge lugs
  3=with hinged cover
  FC3=with screw mounted plastic cover
- Width /length
- Enclosure material
  PC Polycarbonate
  ABS ABS-plastic

CARDMASTER PC AND ABS ENCLOSURE **PC: IP 65, IK08/IK07** **ABS: IP 65, IK07**	**Z** mm	**C** mm	Including: Enclosure base, transparent cover, termination compartment cover, polyamide hinges, locking devices, and 6 mounting screws ORDER SYMBOL Transparent cover		Including: Enclosure base, termination compartment cover, front plate, and 6 mounting screws ORDER SYMBOL No main cover		**B** x **A** **L** x **S** mm
21/18-1  **Y** x **X** 185 mm 213 mm Remarks: USA: Incl. FP 21/18 and PC with 3 x 0.85" knock-outs.	113	91	PC 21/18-3 USA				See www.Fibox.com for dimensional drawings.
30/25-3 30/25-C3  **Y** x **X** 256 mm 296 mm Remarks: USA: Incl. FP 30/25 and PC with 5 x 0.85" knock-outs.	123 123 123	103 103 103	PC 30/25-3 ABS 30/25-3 PC 30/25-3 USA				See www.Fibox.com for dimensional drawings.
	92 92	68 68			PC 30/25-C3 ABS 30/25-C3		
36/31-3 36/31-C3  **Y** x **X** 316 mm 363 mm Remarks: USA: Incl. FP 36/31 and PC with 2 x 0.85" and 2 x 1.09" knock-outs.	162 162 162	139 139 139	PC 36/31-3 ABS 36/31-3 PC 36/31-3 USA				See www.Fibox.com for dimensional drawings.
	130 130	105 105			PC 36/31-C3 ABS 36/31-C3		

FIBOX CARDMASTER

TECHNICAL INFORMATION FOR CARDMASTER 3

PROPERTY		POLYCARBONATE (PC)	ABS	CONFORMITY TO STANDARDS (UL, CSA, CE, Lloyds, BV, FI)
Ingress Protection (EN 60529)		IP65	IP65	**USA** Enclosures for Electrical Equipment PC: UL Type 1 and 12K (UL 50/508) PC/ABS: NEMA 1, 4, 4X, 6, 12 and 13
Impact Resistance (EN 50102)		IK 08/IK 07	IK 07	**Canada** Industrial Control Equipment Enclosures for Electrical Equipment/ULc
Temperature Range (short term)	Celsius	-40°. . .120°C	-40°. . .80°C	**Europe** Enclosures for Switch Gear and Control Gear Assemblies
	Fahrenheit	-40°. . .250°F	-40°. . .175°F	EN 50298:1998
Temperature Range (continuous)	Celsius	-40°. . .80°C	-40°. . .60°C	**Europe** Safety of Information Technology Equipment
	Fahrenheit	-40°. . .175°F	-40°. . .140°F	EN 60950
Electrical Insulation		Totally insulated ⧈	Totally insulated ⧈	**Australia** Enclosures for switch gear and control gear AS 3132-1991
Light Grey Parts Colour		RAL 7035 Industry Grey	RAL 7035 Industry Grey	
Transparent Clear PC Cover		Smoked Grey	Smoked Grey	
Latches (PA)		RAL 5023 Blue	RAL 5023 Blue	
Gasket		PUR/EPDM	PUR/EPDM	
Enclosure Flammability Rating		UL94-5V	UL94HB	UL 746 C 5 in. vertical flame test
Glow Wire Test		960°C	650°C	IEC 695-2-1, Self-extinguishing
Non-toxicity		Halogen Free	Halogen Free	
UV resistance		UL 508 720 hours in "Weatherometer"		
Chemical Resistance *		Good	Good	

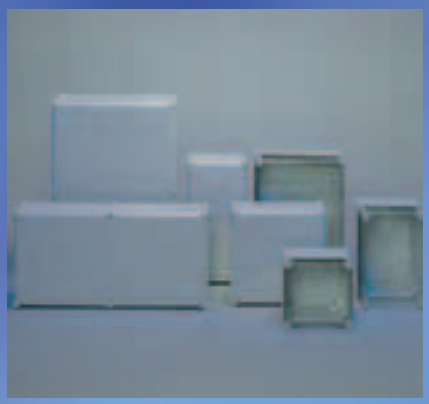
Data subject to change without notice. *Consult separate raw material data for more detailed information

ACCESSORIES

Product/size	Order symbol	Size mm	
Front plate	FP 17/16 FP 21/18 FP 28/28 FP 30/25 FP 36/31	160 x 100 207 x 119 254 x 254 290 x 190 351 x 225	
Back panels	MP 17/16 MP 21/18 MP 30/25 MP 36/31	136 x 133 200 x 142 282 x 215 345 x 258	
Cover	CM 17/16-3T CM 21/18-3T CM 30/25-3T CM 36/31-3T	166 x 106 x 29 213 x 125 x 30 296 x 196 x 36 363 x 271 x 36	
Wall mounting lug 17/16-21/18	FP 10674		

Product/size	Order symbol	Size mm	
Set of hinges & latches	SET 17/16-21/18-3 SET 30/25-3 SET 36/31-3		
DIN-rail support	MB 20064 SET		
Frame front plate, closed IP 65	FC PC 17/16 FC PC 21/18	160 x 100 203 x 115	

FIBOX EX



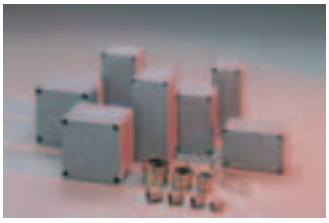
FIBOX EX

FIBOX ALX

FIBOX ALX
ALUMINIUM ENCLOSURE
At least IP 54, IK 08

Including: Enclosure base, cover, cover screws, mounting screws, earth screws and earth terminal.

Y mm	X mm	ORDER SYMBOL Grey cover	Z mm	C mm
50	45	ALX 050503	32	20
60	66	ALX 060605	46	35
100	66	ALX 061005	46	35
152	65	ALX 061505	46	35
82	77	ALX 080806	57	45
127	81	ALX 081306	57	45
177	81	ALX 081806	57	45
252	81	ALX 082506	57	45
125	124	ALX 121208	81	64
222	125	ALX 122208	81	64
362	125	ALX 123608	81	74
163	162	ALX 161609	91	74
263	162	ALX 162609	91	74



FIBOX ALX aluminium enclosures for housing terminal blocks, electronic devices and other industrial components. These enclosures are made from high quality, non corrosive aluminium.

ATEX

VTT 03 ATEX Q 002
VTT 03 ATEX 044U (II 2 G, EEx e II)
VTT 03 ATEX 137U (II 3 D)
Supplement 1 to VTT 03 ATEX 044U and VTT 03 ATEX 137U

ACCESSORIES

Order symbol	Size mm
Mounting plate	
AM 0808	69 x 64
AM 0813	69 x 114
AM 0818	69 x 164
AM 0825	69 x 240
AM 1212	107 x 110
AM 1222	107 x 207
AM 1236	107 x 347
AM 1616	146 x 146
AM 1626	146 x 244
AM 1636	146 x 346
AM 1656	146 x 545
AM 2320	215 x 184
AM 2328	215 x 264
AM 2333	215 x 315
AM 2340	215 x 385
AM 2360	215 x 586
AM 3140	294 x 387
AM 3160	293 x 585
Mounting rail DIN 15	
ARM 0610	15 x 88
ARM 0615	15 x 140
ARM 0808	15 x 65
ARM 0813	15 x 115
ARM 0818	15 x 165
ARM 0825	15 x 240
Mounting rail DIN 35	
ARH 12	35 x 105
ARH 22	35 x 203
ARH 36	35 x 343
ARH 16	35 x 140
ARH 26	35 x 240
ARH 1636	35 x 340
ARH 1656	35 x 540
ARH 2320	35 x 180
ARH 2328	35 x 260
ARH 2333	35 x 310
ARH 40	35 x 383
ARH 60	35 x 580
Wall mounting lugs	
MRS 28540	
MRS 28541	

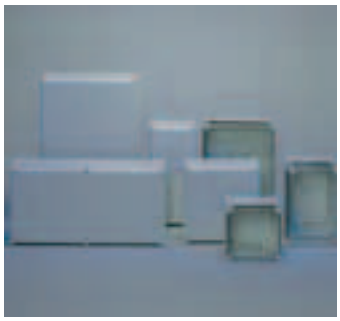
More accessories and dimensions; see page 28.

TECHNICAL INFORMATION

PROPERTY	AlSi CAST ALUMINIUM	CONFORMITY TO STANDARDS
Ingress Protection	At least IP 54	**USA** Enclosures for Electrical Equipment
(EN 60529)	IP66/IP67	NEMA 1, 4, 4X, 6 12 and 13 (50/508)
Impact Resistance	7J	**Europe** Electrical apparatus for potentially explosive atmospheres
(EN 50014)		**EN 50014: 1997 + A1.....A5, Genreral requirements**
ALX 050503 to ALX 082506		**EN 50019: 1997 + A1.....A5, Increased safety "e"**
Temperature Range Celsius	-50°. . .140°C	
(short term) Fahrenheit	-60°. . .285°F	
Temperature Range Celsius	-10°. . .80°C	
(continuous) Fahrenheit	14°. . .175°F	
Gasket	Silicone	
ALX 121208 to ALX 162609		
Temperature Range Celsius	-50°. . .140°C	
(short term) Fahrenheit	-60°. . .285°F	
Temperature Range Celsius	-25°. . .80°C	
(continuous) Fahrenheit	-13°. . .175°F	
Gasket	PUR	
Polyester Powder Paint Colour	RAL 7001 grey	
Cover Screws	Stainless Steel	
Chemical Resistance *	Good	

Data subject to change without notice. *Consult separate raw material data for more detailed information. Also bigger Ex sizes available.

External height **Y** External width **X** External depth **Z** Free internal mounting height **C**

FIBOX FEX-PC-7 POLYCARBONATE ENCLOSURE **At least IP 54**	Y mm	X mm	Including: Enclosure base, cover, cover screws, and mounting screws. ORDER SYMBOL Grey cover	EAN-code	ORDER SYMBOL Transparent cover		Z X C mm
	190	190	FEX 1919 13 G		FEX 1919 13 T		130 x 115
	190	190	FEX 1919 18 G		FEX 1919 18 T		180 x 165
	280	190	FEX 2819 13 G		FEX 2819 13 T		130 x 115
	280	190	FEX 2819 18 G		FEX 2819 18 T		180 x 165
The FEX-PC-7 range is suitable for enclosing terminals and other equipment in harsh environmental conditions such as petrochemical sites or off-shore platforms.	380	190	FEX 3819 13 G		FEX 3819 13 T		130 x 115
	380	190	FEX 3819 18 G		FEX 3819 18 T		180 x 165
	280	280	FEX 2828 13 G		FEX 2828 13 T		130 x 115
	280	280	FEX 2828 18 G		FEX 2828 18 T		180 x 165
CERTIFICATES: - VTT 03 ATEX Q 002 - VTT 03 ATEX 043U (II 2 G, EEx e II) - VTT 03 ATEX 136U (II 3 D) - FIMKO: IP67 to IEC529 - Germanischer Lloyd	380	280	FEX 3828 13 G		FEX 3828 13 T		130 x 115
	380	280	FEX 3828 18 G		FEX 3828 18 T		180 x 165
	560	280	FEX 5628 13 G		FEX 5628 13 T		130 x 115
	560	380	FEX 5638 18 G		FEX 5638 18 T		180 x 165
	Accessories, see pages 43-44.						

TECHNICAL INFORMATION

PROPERTY		POLYCARBONATE (PC)	CONFORMITY TO STANDARDS
Ingress Protectionat (EN 60529)		At least IP 54 IP66/IP67	**Europe** Electrical apparatus for potentially explosive atmospheres **EN 50014: 1977 + A1….A5, General requirements** **EN 50019: 1997 + A1….A5, Increased safety "e"**
Impact Resistance (EN 50014)		4J	
Temperature Range (short term)	Celsius	-40°. . .120°C	
	Fahrenheit	-40°. . .250°F	
Temperature Range (continuous)	Celsius	-10°. . .80°C	
	Fahrenheit	14°. . .175°F	
Electrical Insulation		Totally insulated ⧈	
Light Grey Parts Colour		RAL 7035	
Industry Grey			
Transparent Clear PC Cover		Clear Transparent	
Cover Screws		RAL 7035	
Cover Screws		Polyamide (PA)	
Gasket		Silicone	
Enclosure Flammability Rating		UL94-5V	UL 746 C 5 in. vertical flame test
Glow Wire Test		960°C	IEC 695-2-1, Self-extinguishing
Non-toxicity		Halogen Free	
UV resistance		UL 508, 720 hours in "Weatherometer"	
Chemical Resistance *		Good	

Data subject to change without notice. *Consult separate raw material data for more detailed information

External height **Y** External width **X** External depth **Z** Free internal mounting height **C**

FIBOX PEX

FIBOX PEX POLYESTER ENCLOSURE **At least IP 54**	X mm	Y mm	Including: Enclosure base, cover, cover screws, and mounting screws. ORDER SYMBOL Grey cover	Z mm	C mm
	75	80	PEX 080806	55	47
	75	110	PEX 081106	55	47
	75	160	PEX 081606	55	47
	75	190	PEX 081906	55	47
	120	122	PEX 121209	90	75
	120	220	PEX 122209	90	75
	160	160	PEX 161609	90	75
	160	260	PEX 162609	90	75
	160	360	PEX 163609	90	75
	250	255	PEX 252612	120	105
	250	400	PEX 254012	120	105
	405	400	PEX 404012	120	105

The FIBOX PEX product family is suitable for enclosing terminals and other electrical equipment in the most demanding environments such as mining or chemical industries.

CERTIFICATES:
- PTB: EEx e II

ACCESSORIES

Order symbol	Size mm
Mounting plate	
PM 0808	64 x 69
PM 0811	64 x 99
PM 0816	64 x 149
PM 0819	64 x 179
PM 1616	146 x 146
PM 1626	146 x 244
PM 2526	231 x 240
PM 2540	231 x 383
PM 4040	390 x 385
Mounting rail DIN 15	
PRM 0811	15 x 99
PRM 0816	15 x 149
PRM 0819	15 x 179
Mounting rail DIN 35	
PRH 2526	35 x 238
Hinge kit (1 pair includes screws)	
AH A/B	
PH A	
Mounting foot kit	
MRS 28540	11x42
MRS 28541	15x50

More accessories and dimensions; see page 28.

TECHNICAL INFORMATION

PROPERTY		POLYESTER	CONFORMITY TO STANDARDS
Ingress Protection		IP 65	**USA** Enclosures for Electrical Equipment
(EN 60529)		At least IP 54	NEMA 1, 4, 4X, 6 12 and 13
Impact Resistance		7J	UL 746 C 5 in. vertical flame test
(EN 50014)			IEC 695-2-1, Self-extinguishing
Temperature Range	Celsius	-40°. . .120°C	
(short term)	Fahrenheit	-40°. . .250°F	
Temperature Range	Celsius	-10°. . .80°C	
(continuous)	Fahrenheit	14°. . .175°F	
Electrical Insulation		Totally insulation ⊡	
Enclosure Flammability Rating		UL94-5V	UL 746 C 5 in. vertical flame test
Glow Wire Test		960°C	IEC 695-2-1, Self-extinguishing
Cover screws		Stainless Steel	
Gasket		EPDM	
Chemical Resistance *		Good	

Data subject to change without notice. *Consult separate raw material data for more detailed information

External height **Y** External width **X** External depth **Z** Free internal mounting height **C**

EX CERTIFICATION OF ENCLOSURES

Fibox EX enclosures are made for use in hazardous areas. They are designed, tested and manufactured to international standards. The certificates are issued by the manufacturer under licence from a test authority. All certified products are labelled clearly in compliance with the certification.

An enclosure with Component Certification will achieve the specified degree of safety in use when selected, assembled and installed correctly. The Component Certification establishes the acceptability of the empty enclosure for use as a component part of equipment which is certified by a Certificate of Conformity. Only equipment with a Certificate of Conformity should be installed in hazardous areas.

Hazardous areas are referred to as they are classified under CENELEC European Norms:

Zone 0 = Zone in which an explosive gas/air mixture is continuously present or present for long periods.

Zone 1 = Zone in which an explosive gas/air mixture is likely to occur in normal operation.

Zone 2 = Zone in which an explosive gas/air mixture is not likely to occur in normal operation and if arises, will only last for a short period.

EXPLANATION OF CERTIFICATE SYMBOLS

The following tables can be used as practical quick guides. For more detailed information please contact your local Fibox representative.

The different EX protection types specified are:

Protection typ	Symbol	Test Standard
Increased safety	e	EN 50019
Non-sparking	n	-
Flameproof	d	EN 50018
Intrinsically safe	i	EN 50020
Special protection	s	-
Encapsulation	m	EN 50028
Oil immersion	o	EN 50015
Pressurisation	p	EN 50016
Sand or powder filled	q	EN 50017

Classification of gas groups to IEC standards:

Gas Group	Representative Gas
I	Methane
II A	Prophane
II B	Ethylene
II C	Acetylene and Hydrogen

Temperature classification to EN standards of the maximum surface temperature allowed for any part of an apparatus:

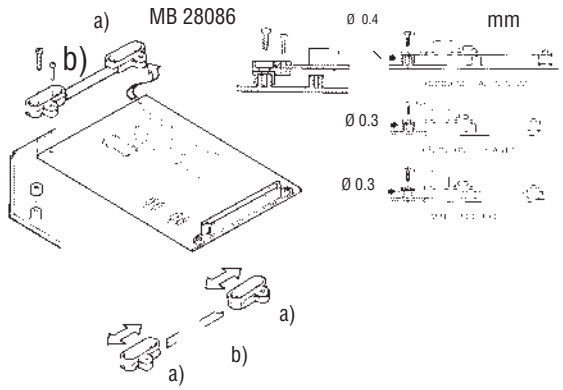
Temperature Class	Max. Surface Temperature
T1	450 °C
T2	300 °C
T3	200 °C
T4	135 °C
T5	100 °C
T6	85 °C

These temperature classifications are applicable only to mounted enclosures which have a Certificate of Conformity.

CIRCUIT BOARD BRACKET

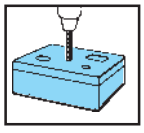
Printed circuit boards and mounting plates often need special mounting supports that offer flexibility in positioning the boards across the enclosure body. Mounting supports also raise the board above the enclosure bottom, especially effective when using two sided boards. This circuit board bracket has a standard E1 (IEC 297-3, DIN 41494) Eurocard screw mounting distance of 89 mm (3.5") accepting M2,5 to M4 screws. The bracket can also be used for nonstandard boards by separating the ends of the bracket (a) from the connector bridge (b).
If the bracket is not needed, the adapter parts for each individual mounting pod size can be used only for raising the board above the enclosure base level.

CIRCUIT BOARD BRACKET			
ORDER SYMBOL	Standard Mounting Distance mm	inches	Remarks
MB 28086	89	3.5	Adapter for EURONORD, PICCOLO, MINI. Direct mount to EK, SOLID, EKI, ALX, PC-7, PEX.



CUSTOMISATION

Enclosures can be machined, painted, screen printed and preassembled to meet your customisation requirements. Fibox's service center offers complete CNC machining, hinge mounting, screen printing, assembly and much more. Our wide selection of enclosures and accessories can be customised to create a unique enclosure meeting your application requirements.

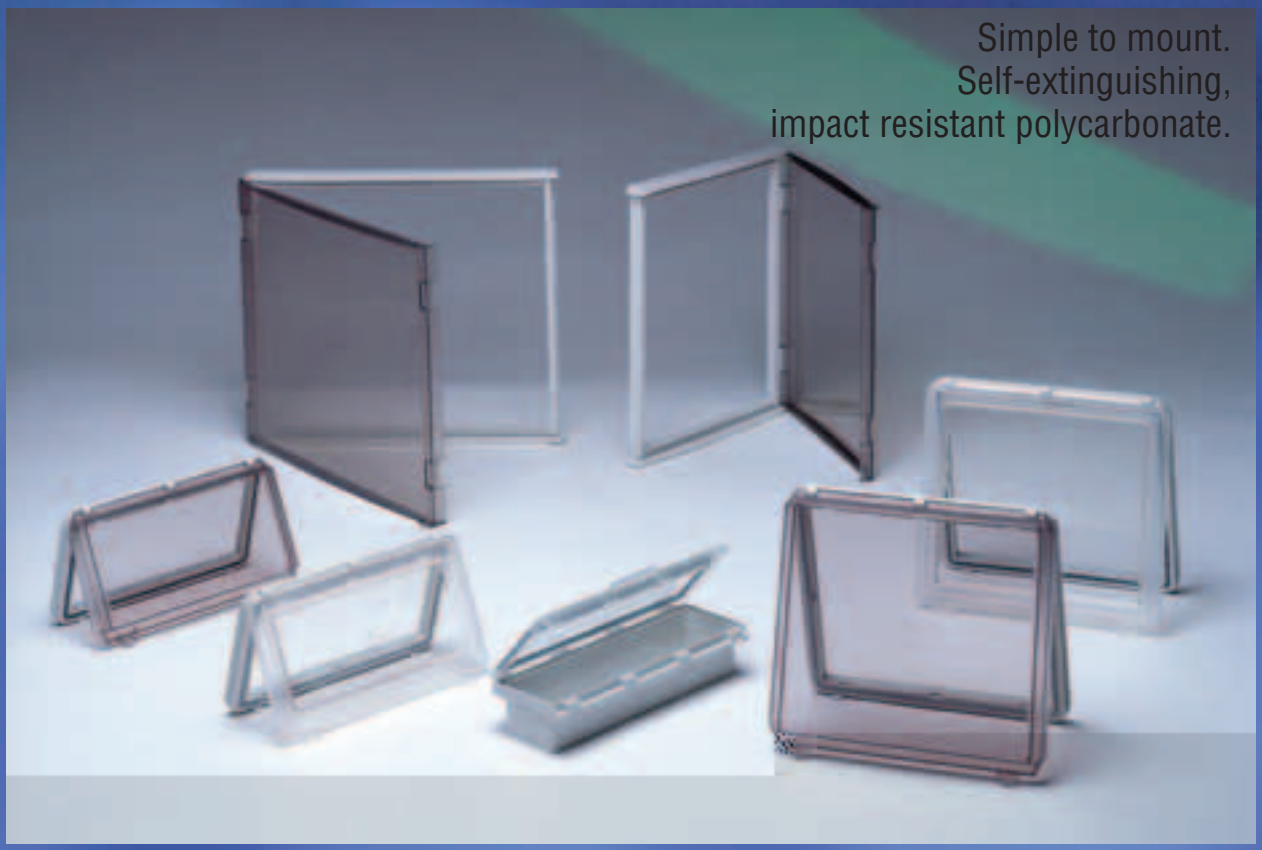


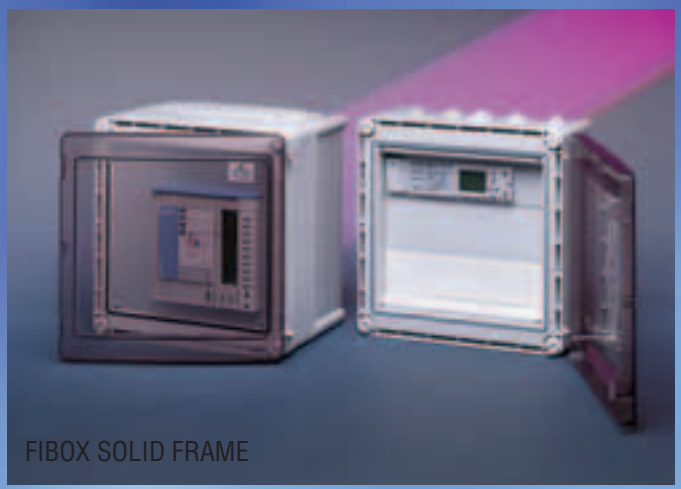
FIBOX®

CONTRACT MANUFACTURING

www.fibox.com

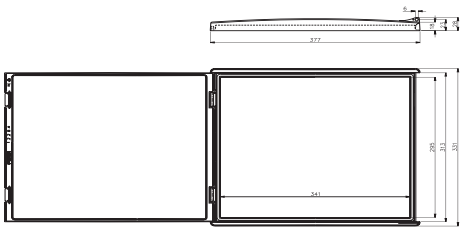
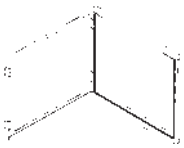
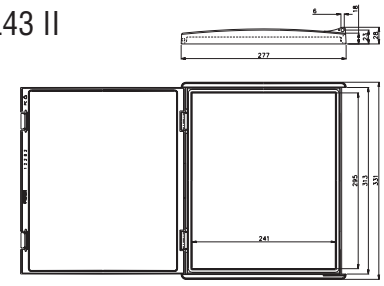
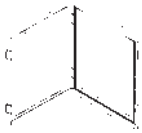
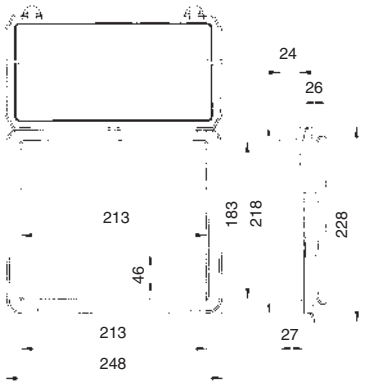
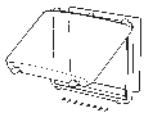
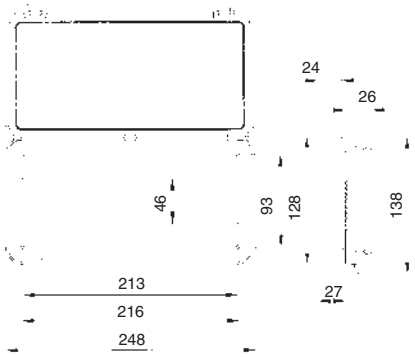
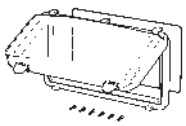
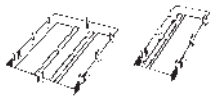
FIBOX WINDOWS

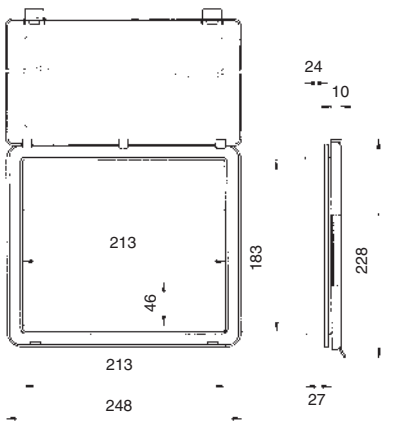
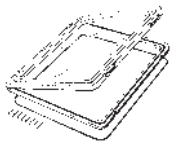
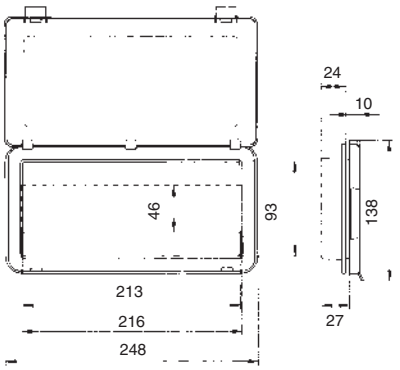
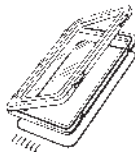
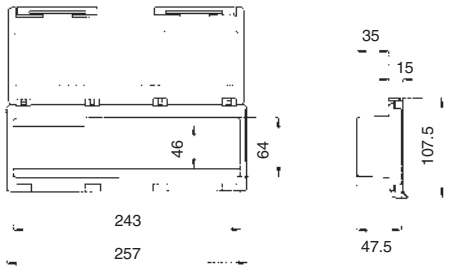
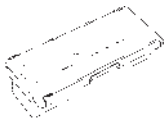
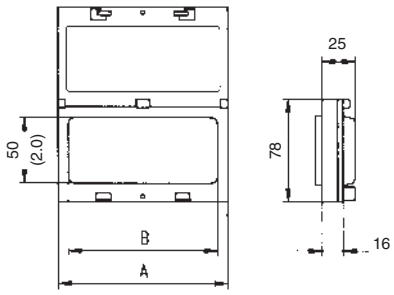
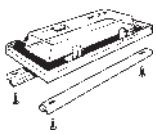



FIBOX SOLID FRAME

FIBOX Inspection Windows permit both viewing and access to IP rating and controls which are surface mounted on plastic or metal enclosures. While providing access, when cover closed, these inspection windows maintain enclosure environmental ratings up to IP 65. Four new second generation windows L12 II, L24 II, L43 II and L44 II, feature transparent smoked grey polycarbonate with textured sides and stylish design.

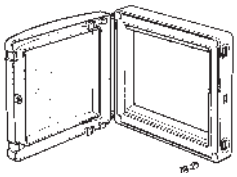
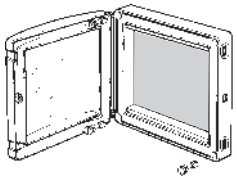
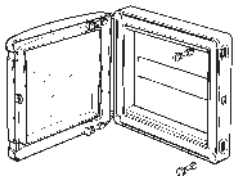
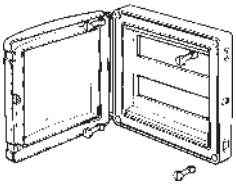
FIBOX

FIBOX INSPECTION WINDOWS	Remarks	IP	Size mm	ORDER SYMBOL	
L44 II 	For 36 modules (1 module = 17,5 mm)  Smoked transparent cover	65	377 x 331	L44 II	
L43 II 	For 26 modules  Smoked transparent cover	65	331 x 277	L43 II	
L24 II 	For 24 modules High cover  Smoked transparent cover	65	248 x 218	L24 II	
L12 II Pat.Reg. 383990 	For 12 modules High cover  Smoked transparent cover	65	248 x 128	L12 II	
FRONT PLATES FOR WINDOWS L12, L 24, L12 II and L24 II 	12 modules 2 x 12 modules	65		B12 10621-45 B24 10620-45	

FIBOX INSPECTION WINDOWS	Remarks	IP	Size mm	ORDER SYMBOL	
L24 	For 24 modules Low clear cover 	65	248 x 218	L24	
L12 	For 12 modules Low clear cover 	65	248 x 128	L12	
L13 	For 13 modules Clear cover 	65	257 x 108	L13	
L02-L10 	For 10 modules For 8 modules For 6 modules For 4 modules For 2 modules Clear cover 	54 54 54 54 54	199 x 77 162 x 77 130 x 77 96 x 77 60 x 77	L10 L08 L06 L04 L02	

TYPE	A		B	
	mm	in.	mm	in.
L02	59	2.3	44	1.7
L04	94.5	3.7	78	3.1
L06	129.5	5.1	114	4.5
L08	163	6.4	146	5.7
L10	200	7.9	183	7.2

FIBOX

FIBOX SOLID FRAMES	Remarks	Size mm	ORDER SYMBOL	
	Frame, with opening Smoked transparent cover	280 x 280	Cover 28/28-0	
	Frame, no opening Smoked transparent cover	280 x 280	Cover 28/28-D	
	Frame with one DIN opening Smoked transparent cover	280 x 280 x 54	SF PC2828-SG-12-1	
	Frame with two DIN openings Smoked transparent cover	280 x 280 x 54	SF PC2828-SG-12-2	

Data subject to change without notice.

FEATURES YOU'VE NEVER SEEN BEFORE

Ingress protection: IP 54-IP 65

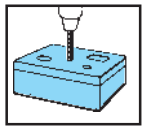
Temperature range: - 40°C – +120°C

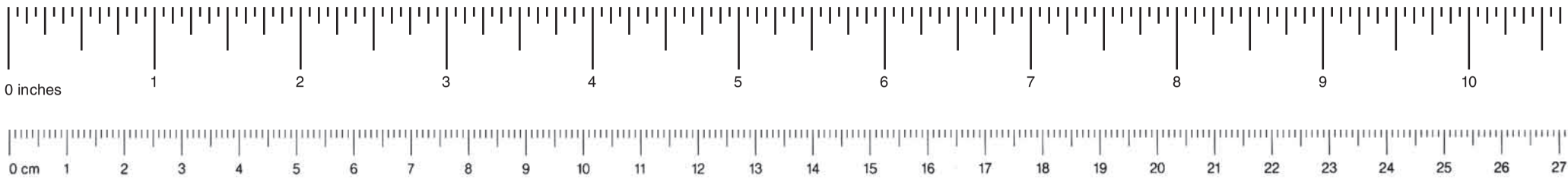
- Chemical resistance to concentrated mineral acids, organic acid, oxidants, deducing agents, neutral /acid salt solutions, grease & oil
- Resistance to U.V. radiation
- Self-extinguishing to UL94
- Non-hygroscopic

Data subject to change without notice.

CUSTOMISATION

Enclosures can be machined, painted, screen printed and preassembled to meet your customisation requirements. Fibox's service centre offers complete CNC machining, hinge mounting, screen printing, assembly and much more. Our wide selection of enclosures and accessories can be customised to create a unique enclosure meeting your application requirements.

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