1

Enclosures







One of our core competencies is the design and manufacture of non-metallic electric enclosures. Various materials are used depending on environment and application.

The two main families of materials can be separated into:

- Plastics Injection Moulded
- Glass Reinforced Polyester (GRP) Compression Moulded

Plastics

18 Injection moulding machines up to 400T.



GRP - Compression moulding 80 machines up to 800T.



Technical Information







* Assembly

Stores

Glass Reinforced Polyester (GRP)

Modern industries demand structural materials that are lightweight, strong and versatile. Materials that resist corrosion and temperature extremes and which deliver freedom of design and low system costs. The ideal solution is a family of structural, fibre reinforced thermosets: SMC (Sheet Moulding Compound) and DMC (Dough Moulding Compound). These materials combine mechanical and physical properties with the lowest system cost, without compromising quality.

Exceptional electrical and UV properties make GRP the material of choice for outdoor electrical enclosures.

Allbro compounds its own SMC and DMC. Numerous formulations have been engineered to address different technical application challenges. Since DMC and SMC are composite materials, we are able to dramatically change aspects like strength, conductivity, surface finish, colour, chemical compatibility etc.

<u>Dough Moulding Compound (DMC)</u> (Also known as BMC)



Sheet Moulding Compound (SMC)



^{*} See Material Properties on Page 255 for detailed information

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DMC compared to **SMC**

<u>DMC</u>



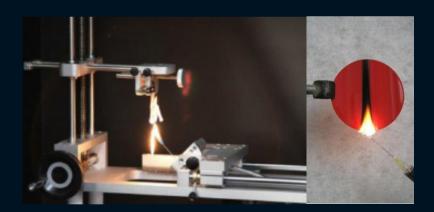
Fibre lengths 6, 12, 18 mm

<u>SMC</u>



Fibre lengths 25-50mm

SANS 60695-11-10 Needle Flame Test or UL94 - Flame Resistance Test



| 5VA Surface Burn | Burning stops within 60 seconds after five applications of five seconds each of a flame (larger than that used in Vertical burn testing) to a test bar. Test specimens MAY NOT have a burn-through (no hole). This is the highest (most flame retardant) UL94 rating. |
|------------------------|---|
| 5VB Surface Burn | Burning stops within 60 seconds after five applications of five seconds each of a flame (larger than that used in Vertical burn testing) to a test bar. Test specimens MAY HAVE a burn-through (a hole). |
| V-0 Vertical Burn | Burning stops within 10 seconds after two applications of ten seconds each of a flame to a test bar. NO flaming drips are allowed. |
| V-1 Vertical Burn | Burning stops within 60 seconds after two applications of ten seconds each of a flame to a test bar. NO flaming drips are allowed. |
| V-2 Vertical Burn | Burning stops within 60 seconds after two applications of ten seconds each of a flame to a test bar. Flaming drips ARE allowed. |
| H-B Horizontal Burn | Slow horizontal burning on a 3mm thick specimen with a burning rate of less than 3"/min or stops burning before the 5" mark. H-B rated materials are considered "self-extinguishing". This is the lowest (least flame retardant) UL94 rating. |

Technical Information

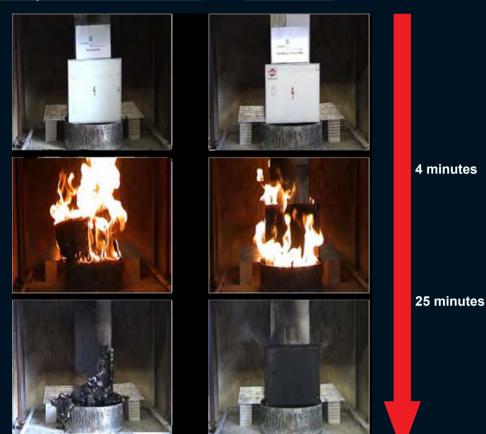


Extended - Real Life Flammability Test

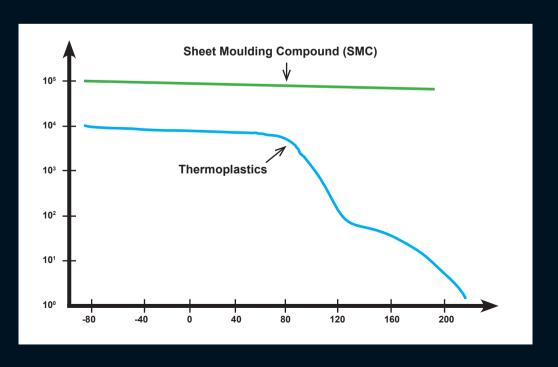
While Needle flame is an interesting flammability test for plastics in general the test below shows how much better SMC performs against even the most advanced engineered V0 plastics

Thermoplastic Cabinet UL94 V0

SMC Cabinet



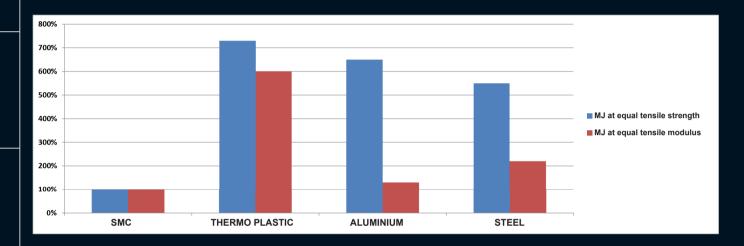
Retention of dimensional properties: GRP compared with plastics





"GRP is Green"

Energy use is an important element in the total environmental impact of a product. Producing materials from base materials requires energy in each step of the process. A way to compare the energy use for the production of a part is to calculate back to equal properties. In the graph below the relative use for producing a part with equal tensile strength and equal tensile stiffness is represented:



" a part produced in SMC requires 5-7 times less energy to be produced than producing the same part in steel, aluminium or thermoplastic materials at equal strength"















Some of Allbro's Latest innovations using GRP Composite Material

AlliVault

High Security Enclosures













* SMC manufacturing line



SMC and DMC manufacturing process

SMC is made as a continuous sheet. The resin paste is transferred to a doctor box where it is deposited onto a moving carrier film passing directly beneath. The doctor box controls the amount of the resin paste applied. Simultaneously, glass fibre rovings are fed into a rotary cutter above the resin-covered carrier film. Fibres are chopped to length (generally 25mm, or 50mm) and randomly deposited onto the resin paste. The amount of glass is controlled by the cutter and by the speed of the carrier film. Downstream from the chopping operation, a second carrier film is coated with resin paste and is laid, resin side down, on top of the chopped fibres. This stage of the process creates a resin paste and glass fibre 'sandwich' which is then sent through a series of compaction rollers where the glass fibres are consolidated with the resin paste and air is squeezed out of the sheet.

Sheet dimensions are normally 2-4 mm thick and 1.1 mm wide. The length and weight of the SMC sheet is determined by moulder preference for handling and is usually stored on a 350kg (standard) up to 1500kg rolls or bi-folded (like computer paper) into large bins. Modern SMC production is a highly automated and computer regulated process. Before the SMC can be used for moulding it must mature. This maturation time is necessary to allow the relatively low-viscosity resin to chemically thicken. The SMC will be kept in a maturation room at a controlled temperature (normally 48 hours at 30°C) and typically requires two to five days to reach the desired moulding viscosity. Usually SMC has a shelf life ranging from several weeks to several months from the date of manufacture. The time frame can be extended or reduced depending on the SMC formulation and storage conditions. A storage temperature of no higher than 20°C is recommended.

Like SMC, DMC is a fibre reinforced composite material which primarily consists of an amalgam of thermosetting resin, chopped glass fibre reinforcement and filler in the form of a bulk material. Additional ingredients such as low profile additives, cure initiators, thickeners and mould release agent are added to enhance processing performance. DMC is less loaded with glass fibres than SMC and fibre length is shorter at 6 to 12mm. Filler loadings are higher than for SMC. There are several techniques for the batch production of DMC. The most common mixing process involves a Z-blade mixers which amalgamates the resin paste, fillers, additives and reinforcements into a mass material with a dough-like consistency. The bulk product is packed in plastic bags impermeable to styrene diffusion and supplied in bins. Like with SMC, it can be supplied in pre-weighed charges according to customer needs.

IP Ratings for Enclosures (IEC60529)



IEC 60529 is an international standard that was created for the purpose of clarifying the capability of an enclosure to protect the contents from solid and liquid bodies.

IP ?? _____

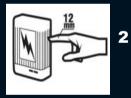
Protection against solid bodies



O No Protection



Protected against solid bodies larger than 50 mm (e.g. a hand)



Protected against solid bodies larger than 12 mm (e.g. a finger)



Protected against solid bodies larger than 2.5 mm (tools, wires)



Protected against solid bodies larger than 1 mm (fine tools, small wires)



Protected against dust (no harmful deposits)



6 Totally dust tight

Protection against liquids



O No Protection



Protected against vertically falling water droplets (condensation)



Protected against
water droplets
deflected at up
to 15° from vertical



3

6

Protected against rainwater at up to 60° from vertical



Protection against water spray from all directions



Protected against low - pressure water jets from all directions



Protected against powerful water jets from all directions



Protected against the effects of immersion



Protected against prolonged effects of immersion under pressure

ndex

Security Levels



No standard exists for enclosure access, so to make things easier we have created one of our own.

Security Level 1 2 3 4

Open Access - Enclosure can be opened without a tool.

Example:







Security Level 1 2 3 4

Limited Access - Tool is required

Example:

Locks







Security Level 1 2 3 4

Limited Access - Lockable

Example:





Security Level 1 2 3 4

Limited Access - Lockable/Vandal Resistant/Remote Access control/Monitoring

Example:





Insulators

Enclosure

ALLBRO

Enlec Polycarbonate Enclosures for Electronic & Electrical Applications











Mounting does NOT affect IP level (Many enclosures require drilling which compromises IP level)



1/4 Turn Stainless steel screws

(Self tapping screws that deteriorate the plastic or plastic screws they mount for which are not durable)



17 Different sizes (Widest range in South Africa)



Clean surface for mounting equipment or lables unlike other plastic enclosures that have unsighting sprew/injection marks



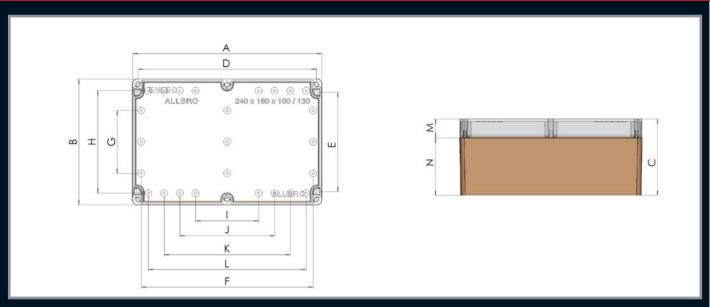
Flame Retardant
High Quality
Polycarbonate
Material
(Base & Lid)
See UL 94 (V0) and
Needle Flame (V0) on

page 10

Halogen Free







| | | | | | С | imensi | ons | | | | | | | Part N | umber | Part No |
|---------------|--------------|--------------|-----|-----|-----|--------|-----|-----|-----|-----|-----|----|-----|-------------------|------------------|------------------------------------|
| A (Height) | B (Width) | C (Depth) | D | Е | F | G | Н | T | J | K | L | M | N | Clear Lid IP66 | Grey Lid IP66 | Device Plate Sold Seperately |
| 80 | 80 | 55 | 68 | 50 | 58 | N/A | 58 | N/A | N/A | N/A | 40 | 15 | 40 | ENL080806C | ENL080806P | ENL0808DP |
| 120 | 80 | 55 | 106 | 46 | 96 | N/A | 58 | N/A | N/A | 40 | 80 | 15 | 40 | ENL120806C | ENL120806P | ENL1208DP |
| 120 | 80 | 90 | 106 | 46 | 96 | N/A | 58 | N/A | N/A | 40 | 80 | 15 | 75 | ENL120809C | ENL120809P | ENL1208DP |
| 120 | 120 | 55 | 106 | 86 | 100 | 40 | 98 | N/A | N/A | N/A | 80 | 15 | 40 | ENL121206C | ENL121206P | ENL1212DP |
| 120 | 120 | 90 | 106 | 86 | 100 | 40 | 98 | N/A | N/A | N/A | 80 | 15 | 75 | ENL121209C | ENL121209P | ENL1212DP |
| 160 | 80 | 55 | 146 | 46 | 136 | N/A | 58 | N/A | N/A | 60 | 120 | 15 | 40 | ENL160806C | ENL160806P | ENL1608DP |
| 160 | 80 | 90 | 146 | 46 | 136 | N/A | 58 | N/A | N/A | 60 | 120 | 15 | 75 | ENL160809C | ENL160809P | ENL1608DP |
| 160 | 120 | 90 | 146 | 86 | 136 | N/A | 90 | N/A | N/A | N/A | 120 | 15 | 75 | ENL161209C | ENL161209P | ENL1612DP |
| 160 | 160 | 90 | 146 | 126 | 140 | 80 | 130 | N/A | N/A | N/A | 120 | 15 | 75 | ENL161609C | ENL161609P | ENL1616DP |
| 200 | 120 | 90 | 186 | 86 | 176 | 40 | 90 | N/A | N/A | 116 | 160 | 15 | 75 | ENL201209C | ENL201209P | ENL2012DP |
| 200 | 150 | 90 | 186 | 116 | N/A | 56 | 118 | N/A | N/A | 80 | 160 | 15 | 75 | ENL201509C | ENL201509P | ENL2015DP |
| 240 | 120 | 100 | 226 | 86 | 218 | 40 | 90 | 80 | 120 | 160 | 200 | 25 | 75 | ENL241210C | ENL241210P | ENL2412DP |
| 240 | 160 | 100 | 226 | 126 | 218 | 80 | 130 | 80 | 120 | 160 | 200 | 25 | 75 | ENL241610C | ENL241610P | ENL2416DP |
| 240 | 160 | 130 | 226 | 126 | 218 | 80 | 130 | 80 | 120 | 160 | 200 | 55 | 75 | ENL241613C | ENL241613P | ENL2416DP |
| 300 | 230 | 100 | 286 | 196 | 278 | 150 | 200 | 140 | 180 | 220 | 260 | 25 | 75 | ENL302310C | ENL302310P | ENL3023DP |
| 300 | 230 | 130 | 286 | 196 | 278 | 150 | 200 | 140 | 180 | 220 | 260 | 55 | 75 | ENL302313C | ENL302313P | ENL3023DP |
| 360 | 200 | 150 | 346 | 166 | 338 | 120 | 170 | 200 | 240 | 280 | 320 | 50 | 100 | ENL362015C | ENL362015P | ENL3620DP |

| Description | Part Number |
|-------------------------|-------------|
| ENL-Hinges | ENL-H |
| ENL-Mounting Feet | ENL-M |
| ENL-2 Set 4 Screw Combo | ENL-4 |
| ENL-6 Set Screw Combo | ENL-6 |



Utilec Standard General Purpose Polyester Enclosures (GRP)



| MATERIAL | DMC (Dough Moulding Compound) | | | | | | | | |
|-------------------------------------|-------------------------------|---------------------------|-----------------|--|--|--|--|--|--|
| OPERATING TEMPERATURE | -50° C to + 200° C | | | | | | | | |
| GLOW WIRE CAPABILITY / FLAMMABILITY | 960° / UL94 V0 | | | | | | | | |
| EXPECTED UV LIFE (DIRECT EXPOSURE) | 25 years + | | | | | | | | |
| IP LEVEL | IP54 for slide lid app | olication, IP65 for screw | lid application | | | | | | |
| SECURITY LEVEL | 1 2 3 4 | | | | | | | | |
| ENVIRONMENT (INDOOR/OUTDOOR) | Indoor and Outdoor | use | | | | | | | |



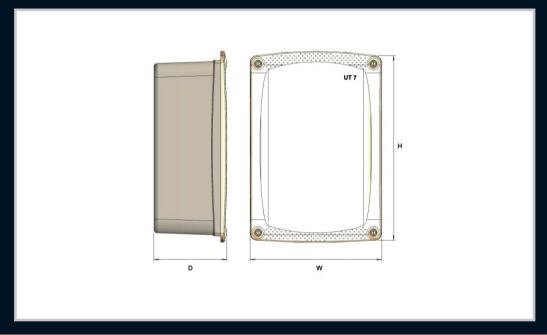


Note: Why slide lid? No gasket is used, so less chance of deterioation over several operations. Lifespan of IP level is increased.





| Description | Part Number |
|---------------------------|-------------|
| UT Mounting Feet | UT-MF |
| UT4 Shroud Kit | UT4-DIN |
| UT4 Shroud 6 Way Samite | UT4-SAM |
| UT6 Shroud 8 Way Din | UT6-DIN |
| UT-6 Shroud 11 Way Samite | UT6-SAM |
| UT10 Shroud 24 Way Din | UT10-DIN |
| UT10 Shroud 32 Way Samite | UT10-SAM |



| Product Name | External Dimensions (mm) | | | Internal | Dimensio | ns (mm) | Screw Lid IP66 | Slide Lid IP54 | Per Box | Device Plate Sold Seperately |
|--------------|--------------------------|-----|-----|----------|----------|---------|-------------------|-------------------|---------|---------------------------------|
| | Н | W | D | H1 | W1 | D1 | Part Number | Part Number | Qty | Part Number |
| UT1 | 80 | 80 | 60 | 122 | 110 | 70 | 040-751 | 040-752 | 10 | DEV-UT1 |
| UT2 | 110 | 110 | 90 | 155 | 144 | 100 | 040-655 | 040-714 | 9 | DEV-UT2 |
| UT3 | 160 | 110 | 90 | 204 | 144 | 100 | 040-670 | 040-715 | 8 | DEV-UT3 |
| UT4 | 210 | 160 | 90 | 253 | 194 | 100 | 040-656 | 040-716 | 8 | DEV-UT4 |
| UT4 -D | 211 | 160 | 180 | 253 | 194 | 186 | 040-753 | 040-761 | 6 | DEV-UT4 |
| UT5 | 210 | 210 | 125 | 257 | 246 | 136 | 040-657 | 040-717 | 6 | DEV-UT5 |
| UT6 | 260 | 210 | 125 | 307 | 246 | 136 | 040-658 | 040-718 | 4 | DEV-UT6 |
| UT7 | 310 | 210 | 125 | 357 | 246 | 136 | 040-671 | 040-719 | 4 | DEV-UT7 |
| UT8 | 310 | 260 | 165 | 359 | 298 | 176 | 040-672 | 040-720 | 2 | DEV-UT8 |
| UT9 | 310 | 310 | 165 | 359 | 348 | 176 | 040-673 | 040-721 | 2 | DEV-UT9 |
| UT10 | 410 | 410 | 165 | 459 | 448 | 176 | 040-674 | 040-722 | 2 | DEV-UT10 |

Hinges

Locks

Handles

Accessories

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| MATERIAL | DMC (Dough Moulding Compound) |
|-------------------------------------|--|
| OPERATING TEMPERATURE | -50° C to + 200° C |
| GLOW WIRE CAPABILITY / FLAMMABILITY | 960° / UL94 V0 |
| EXPECTED UV LIFE (DIRECT EXPOSURE) | 25 years + |
| IP LEVEL | IP54 |
| SECURITY LEVEL | With RL the security level differs between products. Please note individual security rating. |
| ENVIRONMENT (INDOOR/OUTDOOR) | Indoor and Outdoor use |

RL and AP series enclosures preceded the more modern and functional range of enclosures we call Allbrox. Although superceded for the most part, there are still some applications where these tried and tested versions are preferred.



Security Level: 2

| Part Number | Description | Н | W | D | Description | QTY |
|-------------|-------------|-----|-----|-----|----------------------------|-----|
| 040-727 | RL-1P | 150 | 150 | 100 | Plain (Screw fastened Lid) | 20 |
| 040-726 | RL-1HW/L | 150 | 150 | 100 | Hinged with window | 20 |
| 040-725 | RL-1HP | 150 | 150 | 100 | Hinged plain box | 20 |



Security Level: 2

| Part Number | Description | Н | W | D | Description | QTY |
|-------------|-------------|-----|-----|-----|----------------------------|-----|
| 040-730 | RL-2P | 200 | 145 | 100 | Plain (Screw Fastened Lid) | 4 |
| 040-728 | RL-2HP | 200 | 145 | 100 | Hinged plain box | 4 |
| 040-729 | RL-2HW | 200 | 145 | 100 | Hinged with window | 4 |
| 040-766 | RL-2CP | 200 | 145 | 165 | Plain (Screw Fastened Lid) | 4 |
| 040-764 | RL-2CHP | 200 | 145 | 165 | Hinged plain box | 4 |
| 040-765 | RL-2CHW | 200 | 145 | 165 | Hinged with window | 4 |

Note: C = Deep Base, Shallow Lid



Security Level: 2

| Part Number | Description | Н | W | D | Description | QTY |
|-------------|-------------|-----|-----|-----|----------------------------|-----|
| 040-769 | RL-3P | 260 | 220 | 230 | Plain (Screw fastened Lid) | 3 |
| 040-767 | RL-3HP | 260 | 220 | 230 | Hinged plain box | 3 |
| 040-768 | RL-3HW | 260 | 220 | 230 | Hinged with window | 3 |



Security Level: 2

| Part Number | Description | Н | W | D | Description | QTY |
|-------------|-------------|-----|-----|-----|----------------------------|-----|
| 040-733 | RL-4P | 350 | 250 | 160 | Plain (Screw fastened Lid) | 2 |
| 040-731/L | RL-HP | 350 | 250 | 160 | Hinged plain with latch | 2 |
| 040-732/L | RL-4HW | 350 | 250 | 160 | Hinged window with latch | 2 |
| 040-734 | RL-4DHP | 350 | 250 | 200 | Hinged Deep plain box | 4 |
| 040-735 | RL-4DHW | 350 | 250 | 200 | Hinged with window Deep | 4 |

Note: Special wired pole mounted enclosures available on request.



Hinges



Security Level: 3

| Part Number | Description | Н | W | D | Description | QTY |
|-------------|-------------|-----|-----|-----|----------------------------|-----|
| 040-738 | RL-5P | 390 | 300 | 200 | Plain (Screw fastened Lid) | 3 |
| 040-736/L | RL-5HP | 390 | 300 | 200 | Hinged plain with latch | 3 |
| 040-737/L | RL-5HW | 390 | 300 | 200 | Hinged window with latch | 3 |
| 040-741 | RL-5BP | 390 | 300 | 141 | Plain (Screw fastened Lid) | 3 |
| 040-739 | RL-5BHP | 390 | 300 | 141 | Hinged plain box | 3 |
| 040-740 | RL-5BHW | 390 | 300 | 141 | Hinged with window | 3 |

Note: B = Shallow Lid

Orange colour available on request - used here for illustration only. Standard colour is GREY.



Security Level: 3

| Part Number | Number Description | | W | D | Description | QTY |
|-------------|--------------------|-----|-----|-----|-----------------------|-----|
| 040-640 | RL-6D-P | 480 | 315 | 200 | Hinged plain box deep | 1 |



Security Level: 3

| Part Number | Description | | W | D | QTY |
|-------------|----------------------|-----|-----|-----|-----|
| AP2-A | AP2-A (DB-1 Shallow) | 600 | 450 | 165 | 1 |



Security Level: 3

| Part Number | Description | Н | W | D | QTY |
|-------------|--------------------------|-----|-----|-----|-----|
| AP3-A | AP3-A (DB-1 Deep) | 600 | 450 | 260 | 1 |
| AP3-S | AP3-S (DB-1T Box - Thin) | 600 | 450 | 75 | 1 |



| Part Number | Description | Н | W | D |
|-------------|-------------------------------|-----|-----|----|
| 020-293 | PB-small B-A | 27 | 124 | 22 |
| 020-292 | PB-medium B-B | 31 | 147 | 30 |
| 020-291 | PB-large B-C | 27 | 250 | 55 |
| 020-081 | DMC DEVICE PLATE RL2 (DEV-D) | 195 | 40 | 3 |
| 020-082 | DMC DEVICE PLATE RL1 (DEV-C) | 145 | 145 | 3 |
| 020-083 | DMC DEVICE PLATE RL3A (DEV-G) | 255 | 215 | 3 |
| 020-084 | DMC DEVICE PLATE RL3 (DEV-H) | 255 | 215 | 3 |
| 020-085 | DMC DEVICE PLATE RL4 (DEV-O) | 345 | 240 | 3 |
| 020-086 | DMC DEVICE PLATE RL5 (DEV-Q) | 385 | 295 | 3 |



| MATERIAL | DMC (Dough Mould | DMC (Dough Moulding Compound) | | | | | | |
|-------------------------------------|---|-------------------------------|--|--|--|--|--|--|
| OPERATING TEMPERATURE | +200°C on DMC lids and +110°C on Polycarbonate Lids | | | | | | | |
| GLOW WIRE CAPABILITY / FLAMMABILITY | 960° / UL94 V0 | | | | | | | |
| EXPECTED UV LIFE (DIRECT EXPOSURE) | 25 years + | | | | | | | |
| IP LEVEL | IP54 | | | | | | | |
| SECURITY LEVEL | 1 2 3 4 | | | | | | | |
| ENVIRONMENT (INDOOR/OUTDOOR) | Indoor and Outdoor use | | | | | | | |



| Di | imensio | ns | Base | Lid | 7035 RA | L Base | Orange | e Base | Qty | Device Plate (Sold Seprately) | |
|-----|---------|-----|------|-----|----------|-----------|------------|-----------|------------|-------------------------------|-----------------------------|
| Н | W | D | D | D | Grey Lid | Clear Lid | Orange Lid | Clear Lid | Per Box | SMC Version | Powder Coated Mild Steel |
| | | | | | IP 68 | IP 68 | IP 68 | IP 68 | | | |
| 186 | 151 | 132 | 90 | 50 | OK0-G | OK0-GC | OK0-O | OK0-OC | 4 | OKM-0 | OKM-0M |
| 260 | 165 | 160 | 135 | 45 | OK1-G | OK1-GC | OK1-O | OK1-OC | 4 | OKM-1 | OKM-1M |
| 260 | 260 | 160 | 137 | 48 | OK2-G | OK2-GC | OK2-O | OK2-OC | 2 | OKM-2 | OKM-2M |
| 340 | 260 | 160 | 135 | 50 | OK3-G | OK3-GC | OK3-O | OK3-OC | 2 | OKM-3 | OKM-3M |
| 530 | 340 | 160 | 135 | 45 | OK4-G | OK4-GC | OK4-O | OK4-OC | 1 | OKM-4 | OKM-4M |









| Part Number | Description |
|-------------|-----------------------------------|
| OKPH-G | DMC Hinge Set -Grey |
| OKPH-O | DMC Hinge Set -Orange |
| OKM-MS | Stainless Steel Mounting Brackets |
| OK-BP | Blind Plug |
| OK-G/SCREWS | Cover Sealing Screws |
| OKARI-HAND | Handle |
| OKI-INT | Interconnector |





Terminal Boxes High Impact Enclosures for tough environments



| MATERIAL | DMC (Dough Moulding Compound) |
|-------------------------------------|--|
| OPERATING TEMPERATURE | -50° C to + 200° C |
| GLOW WIRE CAPABILITY / FLAMMABILITY | 960° / UL94 V0 |
| EXPECTED UV LIFE (DIRECT EXPOSURE) | 25 years + |
| IP LEVEL | IP68 |
| SECURITY LEVEL | Security Level 1 for Round Enclosure and Security Level 2 for Square/Rectangle Enclosure |
| ENVIRONMENT (INDOOR/OUTDOOR) | Indoor and Outdoor use |

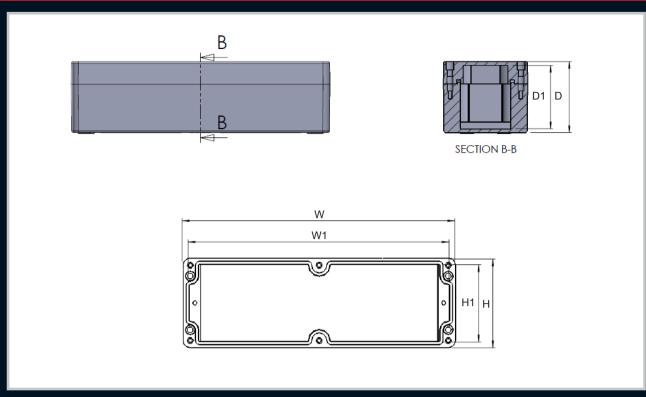




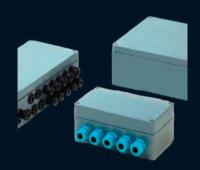


| Dimensions (mm) | | Part Number | Description | IP Level | QTY PER | |
|-----------------|-------|-------------|-------------|-------------|---------|-----|
| Н | W | D | | | | BOX |
| 108 | Round | 68 | 040-702 | UB40 (20mm) | 68 | 20 |
| 135 | Round | 85.5 | 040-793 | UB41 (25mm) | 68 | 20 |





| Extern | al Dimensio | ns (mm) | Interna | al Dimension: | s (mm) | Part N | Number | IP Level | QTY PER |
|--------|-------------|---------|---------|---------------|--------|-------------|------------|----------|---------|
| Н | W | D | H1 | W1 | D1 | Black (Eex) | Grey | | вох |
| 75 | 80 | 61 | 65 | 70 | 56 | 0808KE/I | 0808POK/I | 68 | 10 |
| 75 | 110 | 64 | 65 | 100 | 54 | 0811KE/I | 0811POK/I | 68 | 10 |
| 75 | 160 | 61 | 65 | 150 | 54 | 0816KE/I | 0816POK/I | 68 | 10 |
| 75 | 190 | 61 | 65 | 180 | 54 | 0819KE/I | 0819POK/I | 68 | 10 |
| 75 | 230 | 63 | 65 | 220 | 54 | 0823KE/I | 0823POK/I | 68 | 10 |
| 120 | 125 | 90 | 110 | 115 | 80 | 1212KE/I | 1212POK/I | 68 | 10 |
| 120 | 220 | 95 | 110 | 210 | 85 | 1222KE/I | 1222POK/I | 68 | 10 |
| 160 | 160 | 95 | 147 | 147 | 86 | 1616KE/I | 1616POK/I | 68 | 10 |
| 160 | 260 | 95 | 146 | 246 | 86 | 1626KE/I | 1626POK/I | 68 | 10 |
| 160 | 360 | 95 | 146 | 346 | 86 | 1636KE/I | 1636POK/I | 68 | 10 |
| 160 | 560 | 95 | 146 | 550 | 86 | 1656KE/I | 1656POK/I | 68 | 10 |
| 250 | 255 | 128 | 237 | 242 | 113 | 2526KE/I | 2526POK/I | 68 | 10 |
| 250 | 400 | 128 | 237 | 387 | 113 | 2540KE/I | 2540POK/I | 68 | 10 |
| 250 | 600 | 128 | 237 | 587 | 121 | 2560KE/I | 2560POK/I | 68 | 10 |
| 410 | 400 | 128 | 387 | 397 | 113 | 4140KE/I | 4140POK/I | 68 | 10 |
| 250 | 255 | 163 | 237 | 242 | 149 | 2526KE/DI | 2526POK/DI | 68 | 10 |
| 250 | 400 | 163 | 237 | 387 | 149 | 2540KE/DI | 2540POK/DI | 68 | 10 |







Hinges

Locks

Handles

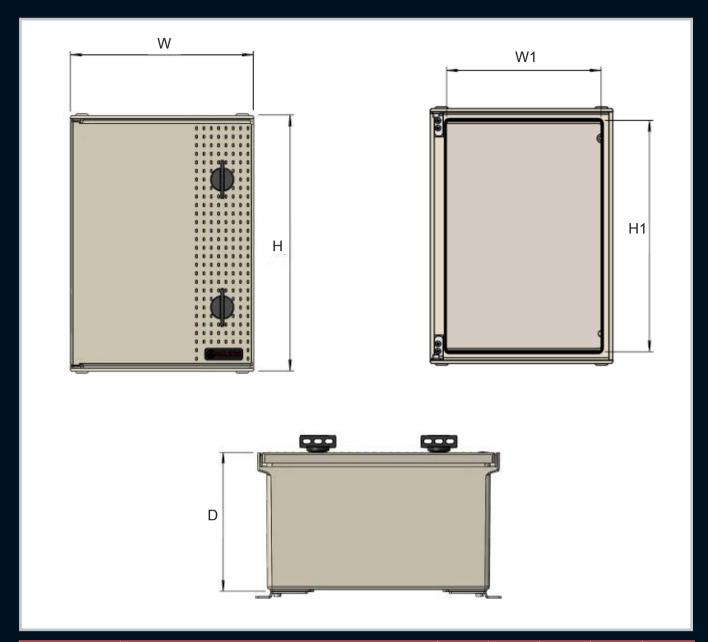
Accessories

Rotary Operatinon
Handles

| MATERIAL | SMC (Sheet Mouldir | SMC (Sheet Moulding Compound) | | | | | | |
|-------------------------------------|------------------------|-------------------------------|-----|--|--|--|--|--|
| OPERATING TEMPERATURE | -50° C to + 200° C | | | | | | | |
| GLOW WIRE CAPABILITY / FLAMMABILITY | 960° / UL94 V0 | 960° / UL94 V0 | | | | | | |
| EXPECTED UV LIFE (DIRECT EXPOSURE) | 25 years + | | | | | | | |
| IP LEVEL | Allbrox 3,4,5,6,7.1 is | IP66 and Allbrox 8 is IF | P65 | | | | | |
| SECURITY LEVEL | 1 2 3 4 | | | | | | | |
| ENVIRONMENT (INDOOR/OUTDOOR) | Indoor and Outdoor use | | | | | | | |







| Part Number | Description | W | Н | D | W1 | H1 |
|-------------|---|------|------|-----|-----|-----|
| ALL-003 | Allbrox 3 with SMC Device plate | 250 | 350 | 200 | 212 | 317 |
| ALL-004 | Allbrox 4 with SMC Device plate | 300 | 400 | 200 | 262 | 364 |
| ALL-005 | Allbrox 5 with SMC Device plate | 350 | 500 | 200 | 312 | 467 |
| ALL-006 | Allbrox 6 with SMC Device plate | 400 | 600 | 200 | 362 | 567 |
| ALL-007.1-P | Allbrox 7.1 Portrait with SMC Device plate | 710 | 828 | 287 | 634 | 754 |
| ALL-007.1-L | Allbrox 7.1 Landscape with SMC Device plate | 828 | 710 | 287 | 754 | 634 |
| ALL-008-P | Allbrox 8 Portrait with SMC Device plate | 800 | 1000 | 320 | 710 | 910 |
| ALL-008-L | Allbrox 8 Landscape SMC Device plate | 1000 | 800 | 320 | 910 | 710 |

ALLBRO

ALLBROX 4-6

Distribution Board Kit



Inner Doors



Allbrox Distribution Board Kit

| Part Number | Description | No. of Rows | MCB's Per Row | No. of Neutral Bars | No. of Earth Bars |
|---------------|--|-------------|---------------|---------------------|-------------------|
| ALL-004/DBK-A | Allbrox 4 Distribution Board Kit Assembled | 2 | 10 | 3 | 2 |
| ALL-004/DBK-F | Allbrox 4 Distribution Board Kit Flat Packed | 2 | 10 | 3 | 2 |
| ALL-005/DBK-A | Allbrox 5 Distribution Board Kit Assembled | 3 | 13 | 4 | 4 |
| ALL-005/DBK-F | Allbrox 5 Distribution Board Kit Flat Packed | 3 | 13 | 4 | 4 |
| ALL-006/DBK-A | Allbrox 6 Distribution Board Kit Assembled | 4 | 15 | 3 and 1 | 10 and 30 |
| ALL-006/DBK-F | Allbrox 5 Distribution Board Kit Flat Packed | 4 | 15 | 3 and 1 | 10 and 30 |

Allbrox Inner Door

| Part Number | Description |
|-----------------|----------------------|
| ALL-004/IN/DOOR | Allbrox 4 Inner Door |
| ALL-005/IN/DOOR | Allbrox 5 Inner Door |
| ALL-006/IN/DOOR | Allbrox 6 Inner Door |

Allbrox with PC Window

| Part Number | Description |
|-----------------|---|
| ALL-003/CLEARPC | Allbrox 3 with clear Polycarbonate window |
| ALL-004/CLEARPC | Allbrox 4 with clear Polycarbonate window |
| ALL-005/CLEARPC | Allbrox 5 with clear Polycarbonate window |
| ALL-006/CLEARPC | Allbrox 6 with clear Polycarbonate window |

ALLBROX 7.1





Door locator



Easily Removable door



Extra strength lid

ALLBROX 8





Door stay



Single cam individual locking system IP66



Internal Stainless steel hinges.



Chrome handle locking mechanism.



Single handle multi cam locking system IP65

FABLEC

ABS - Economy Range of General Purpose Plastic Enclosures



| MATERIAL | ABS Plastic | | | | |
|-------------------------------------|---|--|--|--|--|
| OPERATING TEMPERATURE | -30° C to + 90° C | | | | |
| GLOW WIRE CAPABILITY / FLAMMABILITY | 960° / UL94 V0 | | | | |
| EXPECTED UV LIFE (DIRECT EXPOSURE) | 2-3 Years (6 Years - Indirect exposure) | | | | |
| IP LEVEL | IP55 | | | | |
| SECURITY LEVEL | 1 2 3 4 | | | | |
| ENVIRONMENT (INDOOR/OUTDOOR) | Indoor and Outdoor use | | | | |





| Part Number | Description | Н | W | D | QTY |
|-------------|--|-----|-----|----|-----|
| FEP-0014 | ABS Enclosure - Standard Grey Lid | 100 | 100 | 70 | 80 |
| FEP-0016 | ABS Enclosure - Standard Grey Lid | 100 | 100 | 90 | 60 |
| FEP-0015 | ABS Enclosure - Standard Transparent Lid | 100 | 100 | 70 | 80 |
| FEP-0017 | ABS Enclosure - Standard Transparent Lid | 100 | 100 | 90 | 60 |



| Part Number | Description | Н | W | D | QTY |
|-------------|--|-----|-----|-----|-----|
| FEP-0022 | ABS Enclosure - Standard Grey Lid | 190 | 140 | 90 | 20 |
| FEP-0024 | ABS Enclosure - Deep Grey Lid | 190 | 140 | 135 | 16 |
| FEP-0023 | ABS Enclosure - Standard Transparent Lid | 190 | 140 | 190 | 20 |
| FEP-0025 | ABS Enclosure - Deep Transparent Lid | 190 | 140 | 135 | 16 |



| Part Number | Description | Н | W | D | QTY |
|-------------|--|-----|-----|-----|-----|
| FEP-0026 | ABS Enclosure - Standard Grey Lid | 240 | 190 | 100 | 10 |
| FEP-0028 | ABS Enclosure - Deep Grey Lid | 240 | 190 | 155 | 4 |
| FEP-0027 | ABS Enclosure - Standard Transparent Lid | 240 | 190 | 100 | 10 |



The concept of ready boards was introduced in the mid 90's as a rapid way to deploy basic electrical access to a large portion of the community who were without this commodity. Allbro (York) was the first company in South Africa to create a technically sound commercially viable and large scale production for this concept. Allbro remains one of the largest producers of this product while actively working on creating more sophisticated and sustainable distribution methods for basic electrical supply to the community.

2 Platforms

RB - A

RB-H



Available in different Bulkhead options (or no Bulkhead - No Lightswitch)

Standard Bulkhead

Slimline Bulkhead

New CFL only Bulkhead - will not close with standard globes, forcing the consumer to use Low power CFL's



| Part Number | Description |
|-------------|-----------------------------|
| BUL-60W | 60watt Bulkhead Ventilated |
| BUL-100W | 100watt Bulkhead Ventilated |

| Description |
|-------------------|
| Slimline Bulkhead |
| |

| Part Number | Description |
|-------------|--------------|
| LWB-001 | CFL Bulkhead |

Note: We invented these light fittings specifically for our ready boards but many markets now use them as stand alone light fittings.



Different Plugsets



SA Standard

13A Square Pin

Shucko

Different Mounting Options for Easy Deployment

Compact SMC Backing Board

<u>Large SMC Backing Board</u> <u>with Wiring Tunnel</u>

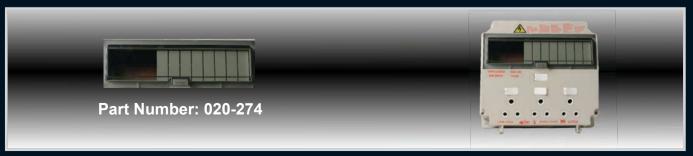


Rails

Rails with Perspex Meter Mounting Point



Optional Cover for RBH



Hinges

Lock

Handle

Accessori

Rotary Operating
Handles

nsulator

Equipme

nae



Different Breaker Options



Swan LS Onesto NUR

ABB CBI GE Schneider

Chint

Some PRE - configured Options



| Part Number | Earth Leakage | MCB'S | No of 3 Pin Switched Socket Outlets | Bulkhead Light Fitting with Switch |
|--------------------|------------------|----------|---|--|
| 040-705 (RBH1) | 63A | 2 x 20A | 3 | - |
| 040-707 (RBH1B) | 63A | 2 x 20 A | 3 | 1 |



| Part Number | Earth Leakage | MCB'S | No of 3 Pin Switched Socket Outlets | Bulkhead Light Fitting with Switch |
|-------------|------------------|---------|---|--|
| RB-AB10/63 | 63A | 1 x 20A | 3 | - |
| RB-AB2/63 | 63A | 1 x 20A | 3 | 1 |

Splitmeter Ready Board



| Part Number | Earth Leakage | MCB'S | No of 3 Pin Switched Socket Outlets | Bulkhead Light Fitting with Switch |
|-------------|------------------|---------|---|--|
| 040-706 | 63A | 1 x 20A | 2 | - |



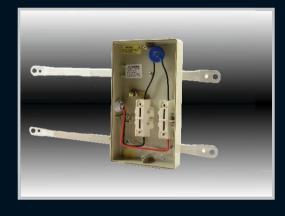
Universal Base for Pre- payment meters

Passive With Rails & Plugset



| Part Number | Description | QTY |
|-------------|-------------------------------------|-----|
| PAS | Passive Base with Rails and Plugset | 1 |

Passive With Rails



| Part Number | Description | QTY |
|-------------|-------------------------|-----|
| PAS-1 | Passive Base with Rails | 1 |

Passive



| Part Number | Description | QTY |
|-------------|--|-----|
| PAS-2 | Passive Base with glands and hole cover | 1 |
| PAS -3 | Passive base with no rails, no glands, no hole cover | 1 |

Hinges

S

Handles

Accessories

Rotary Operating Handles

Insulators

Enclosures

Locks



To cater for the vast array of Ready Board configuration we have designed the table below

| 10 6 | ater | for the v | ast ar | ray of Re | eady Bo | ard cor | ırıguraı | ion we | nave desi | gnea tne | table below: |
|------------------------|---------------------------------|-------------------------------|---------------------------------|------------------------------|-------------------------|------------------|-------------------------------|-----------------|----------------------------|---|--|
| | 0 None | 1 1×10A SP MCB | 2 1 x 20A SP MCB | 3 1×32A SP MCB | 4 1 × 6A SP MCB | 5 1 x 63A SP MCB | 6 1×16A SP MCB | 7 1 x25A SP MCB | <u>Note:</u> | Please note that number indicates position & current rating of breaker. | Example: (22) = 2 x 20A (212) = 1 x 20A 1 x10A, 1 x 20A |
| Earth Leakage/ Main | E 63EL 63A DP EL Isol | | C GL breaker combination | L 40A EL | 0 None | | | | | | |
| Main Switch/Iso | 0 None | 1 1×25A MCB 2 1×10A MCB | 3 1×16A2P MCB | 4 1×40A MCB 5 1×50A MCB | | | | | | | |
| Breaker Type | S Swan | A ABB | O Onesto | - rs - rs | ⊕ 39 9 | | <u> </u> | N NUR | Schneider | T Chint | O None |
| Plug Type | Z SA type | S Shuko type | 6. 6. | B BS type | | | | | | | |
| Mounting | 0 None | L Large SMC backing board | | S Small SMC backing board | R Rails | | P Rails with perspex mounting | | E Rails with Passive | M Mounting Plate | G Rails with 4x4 plugset |
| Globe | 0 None | G Globe 14w CFL | F | | | | | | | | |
| Bulkhead | 0 No Bulkhead | B Standard Bulkhead | | C CFL-Round | S Slimline | | X 5m Lead with Lampshade | | M 3m lead with Bulkhead | | |
| Configuration | H Horizontal | | A Vertical | | | | | | | | |
| | RB Ready Board | | | | | | | | | | |

Index

Insulators



How the coding system works

Example:

You are looking for the following requirements in your Ready Board:

- Horizontal configuration
- Standard Bulkhead
- With a Globe
- Large mounting plate
- SA type plug
- Swan breakers
- No mainswitch
- Earth Leakage
- 2 x 20A SP MCB
- 1 x 16A SP MCB
- 1 x 32A SP MCB

Your code is then created using the table on the previous page and looks like this:

RBHBGLZS0E2263

* Should you need any assistance please contact our sales department.





nclosures

Hinges

Locks

Handles

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Dtary Operating
Handles

nsulator

I ransforme Equipment

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| Н | W | D | Part Number | Description | QTY |
|----|-----|----|-------------|-----------------------------------|-----|
| 85 | 130 | 70 | 040-609 | PSO-1 (S15) | 24 |
| 85 | 130 | 70 | 040-662 | PSO-1/A with single socket outlet | 24 |



| Н | W | D | Part Number | Description | QTY |
|----|-----|----|-------------|---------------------------------|-----|
| 85 | 130 | 70 | 040-609/ISO | PSO-1/ ISO with 60 Amp Isolator | 24 |



| Н | W | D | Part Number | Description | QTY |
|-----|-----|----|-------------|--------------------------------------|-----|
| 130 | 130 | 70 | 040-754 | S15- Duo Empty Double socket outlet | 12 |
| 130 | 130 | 70 | 040-770 | S15/A- Duo with Double socket outlet | 12 |



| Н | W | D | Part Number | Description | QTY |
|-----|-----|----|-------------|-----------------------------------|-----|
| 130 | 173 | 88 | 040-610 | PSO-2 (F010) | 12 |
| 130 | 173 | 88 | 040-663 | PSO-2/A with double socket outlet | 12 |

Socket Outlet Boxes and Surface Extension Boxes





| Н | W | D | Part Number | Description | QTY |
|-----|-----|----|-------------|---|-----|
| 118 | 70 | 36 | 040-723 | A-42 Single surface mount socket outlet box (DMC version) | 20 |
| 118 | 118 | 36 | 040-724 | A-44 Double surface mount socket outlet box (DMC version) | 20 |



| Part Number | Description | Н | W | D | QTY |
|-------------|------------------|-----|-----|----|-----|
| 040-788 | PVC 4x2 Wall Box | 62 | 107 | 51 | 10 |
| 040-789 | PVC 4x4 Wall Box | 109 | 108 | 51 | 10 |



| Part Number | Description | Н | W | D | QTY |
|-------------|-----------------------|-----|-----|----|-----|
| 040-790 | PVC 4x2 Extension Box | 127 | 81 | 42 | 10 |
| 040-791 | PVC 4x4 Extension Box | 127 | 127 | 42 | 10 |



| Pa | rt Number | Description | Н | W | D | QTY |
|-----|-----------|----------------------|-----|-----|----|-----|
| 040 | -633 | DMC ST - 1 box (S64) | 149 | 109 | 55 | 40 |

Hinges

Locks

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Rotary Operating Handles

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Transformer Equipment

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Fitted Pool Boxes



| Н | W | D | Part Number | Description | QTY | |
|-----|-----|-----|----------------|-----------------------------------|-----|----------|
| 315 | 185 | 120 | 040-659 | WP-1 with 125VA & Dial Timer | 4 | Pool-Fit |
| 315 | 185 | 120 | 040-660 | WP-1 with 125VA & PanasonicTimer | 4 | Pool-Fit |
| 315 | 185 | 120 | 040-683 | WP-1 with 300VA & Dial Timer | 4 | Pool-Fit |
| 315 | 185 | 120 | 040-684 | WP-1 with 300VA & Panasonic Timer | 4 | Pool-Fit |

Empty Pool Boxes



| Н | W | D | Part Number | Description | QTY | |
|-----|-----|-----|-------------|--------------------------------|-----|-------------------|
| 315 | 185 | 120 | 040-617 | WP-1Din E+N Bar | 6 | Pool -Din |
| 315 | 185 | 120 | 040-667 | WP-1Sam E+N Bar | 6 | Pool - Sam |
| 315 | 185 | 120 | 040-668 | WP-1 Din+Wood Block | 6 | Pool- 5way Din |
| 315 | 185 | 120 | 040-669 | WP-1 Sam+Wood Block | 6 | Pool- 6way Sam |
| 315 | 185 | 120 | 040-689 | WP-1 Din + Raised wooden block | 6 | Pool-Din wood |



New Fitted Pool Box

| Н | W | D | Part Number | Description | QTY | ΙP |
|-----|-----|-----|-------------|------------------------|-----|----|
| 220 | 250 | 100 | 040-771 | DBH-1 Pool Fit (50VA) | 1 | 54 |
| 220 | 250 | 100 | 040-785 | DBH-1 Pool Fit (125VA) | 1 | 54 |

Surface Distribution Boxes





| Н | W | D | Part Number | Description | IP Level | QTY |
|-----|-----|----|-------------|--|----------|-----|
| 200 | 110 | 60 | 040-744 | YB4 Din (Holds 4 Din type breakers | 31 | 20 |
| 200 | 110 | 60 | 040-758 | YB5 Sam (Holds 5 Samite type break- ers) | 31 | 4 |



| Н | W | D | Part Number | Description | IP Level | QTY |
|-----|-----|----|-------------|---|----------|-----|
| 240 | 190 | 70 | 040-759 | YB6/11 Sam (Holds 11 Samite type breakers) | 31 | 10 |



| Н | W | D | Part Number | Description | IP Level | QTY |
|-----|-----|----|-------------|--|----------|-----|
| 365 | 255 | 73 | 040-363 | MP-16 with E/N Bar Sam or Din (Holds 11 Din type breakers and 20 Samite type breakers) | 31 | 5 |
| 365 | 255 | 73 | 040-704 | MP-16 Screw on Lid (Holds 11 Din type breakers and 20 Samite type breakers) | 31 | 5 |



| Н | W | D | Part Number | Description | IP | QTY |
|-----|-----|-----|-------------|---|----|-----|
| 220 | 250 | 100 | 040-711 | DBH-1 Outdoor DB without Circuit Breakers (Holds 12 Din Type breakers) | 54 | 1 |





| Н | W | D | Part Number | Description | IP | QTY |
|-----|-----|----|-------------|--|----|-----|
| 215 | 150 | 80 | 040-690 | F081-SAM (Holds 8 Samite type breakers) | 54 | 8 |

^{*} Slide Lid

Hinges

Locks

Handles

Accessories

Rotary Operating Handles

Insulators

Transformer Equipment

naex

12 Way Distribution Board

New GRP Flush and Surface Mount Distribution Boards



| Н | W | D | Part Number | Description | ΙP | QTY |
|-----|-----|-----|-------------|---|----|-----|
| 220 | 250 | 100 | 020-309 | Flush mount distribution board with cover | 65 | 1 |
| 220 | 250 | 100 | 020-310 | Surface mount distribution board with cover | 65 | 1 |

17 Way Distribution Board



| Н | W | D | Part Number | Description | IP | QTY |
|-----|-----|-----|-------------|--|----|-----|
| 220 | 250 | 100 | 020-311 | Flush mount distribution board with samite cover | 65 | 1 |
| 220 | 250 | 100 | 020-312 | Surface mount distribution board with samite cover | 65 | 1 |



Weather Proof Distribution Boxes Hinged Lids





| Н | W | D | Part Number | Description | IP | QTY |
|-----|-----|----|-------------|----------------------------------|----|-----|
| 200 | 110 | 60 | 040-760 | WDB5- B 5 Way Sam Surface Box | 65 | 4 |



| Н | W | D | Part Number | Description | IP | QTY |
|-----|-----|-----|-------------|-----------------------------------|----|-----|
| 350 | 250 | 160 | 040-745 | WDB8 - B 8 Way Din Surface Box | 65 | 2 |



| Н | W | D | Part Number | Description | IP | QTY |
|-----|-----|-----|-------------|-----------------------------------|----|-----|
| 350 | 250 | 160 | 040-746 | WDB12-B 12 Way Sam Surface Box | 65 | 2 |



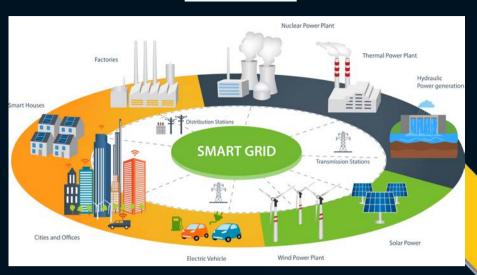
| Н | W | D | Part Number | Description | ΙP | QTY |
|-----|-----|-----|-------------|-----------------------------------|----|-----|
| 400 | 300 | 140 | 040-747 | WDB20-B 20 Way Din Surafce Box | 65 | 2 |



| Н | W | D | Part Number | Description | IP | QTY |
|-----|-----|-----|-------------|-----------------------------------|----|-----|
| 400 | 300 | 140 | 040-743 | WDB24-B 24 Way Sam Surface Box | 65 | 2 |

SMART GRIDS

ALLBRO



MICRO/MINI GRIDS



OFF GRID









Note: Backing Boards are a great way to pre-fit a solution for fast and reliable deployment.

nciosures

Hinges

Locks

Handles

Accessorio

Rotary Operating Handles

insulators

Transforme

Inde

| Part Number and Description | | H (mm) | W (mm) | D (mm) |
|--|---------------------------------|-----------|-----------|-----------|
| Part Number: 040-644 SAP Number: 0168788 CB11 - 1-2 Way pole top box with 1x50A breaker | CANCER CEVARIE MISCEL | 200 | 100 | 90 |
| Part Number: 040-677 SAP Number: 0168574 CB21 - 2-4 Way pole top box with 1x50A breaker | CALLSTER SEPVILLE LIGGERI | 200 | 100 | 90 |
| Part Number: 040-639 SAP Number: 0168787 CB4 - 4 Way pole top box with 1x125A breaker | | 350 | 218 | 136 |
| Part Number: 040-682 SAP Number: 0168710 CB458 - 5-8 Way pole top box with 2x50A breaker | | 350 | 218 | 136 |

Pole Top Enclosures for Distribution and Metering



Slide Lid Type (Empty)

| Part Number and Description | Front Closed | Front Open | Back | H (mm) | W (mm) | D (mm) |
|---|---|---------------|------|-----------|-----------|-----------|
| Part Number: 040-645 CB44 - Single meter empty enclosure | | | | 235 | 105 | 120 |
| Part Number: 040-794 CB45 - Single meter empty enclosure | | and a second | | 325 | 169 | 133 |
| Part Number: BUN5-1S5P BUN5 - 5 Way empty enclosure | | | | 309 | 209 | 121 |
| Part Number: BUN-6WAY BUN6 - 6 Way Samite empty enclosure | | | | 309 | 209 | 121 |
| Part Number: BUN-9WAY BUN9 - 9 Way Samite empty enclosure | | don't the man | | 340 | 260 | 150 |
| Part Number: 040-643 CB9 - Empty enclosure | DANOERI GEVARII IROOZI A | | | 295 | 140 | 85 |
| Part Number: 040-637 CB1 Slide Lid - Empty enclosure | DAHGESP GEWALI DECOM | | | 255 | 185 | 120 |
| Part Number: 040-636 CB2 - Empty enclosure | (A) | | | 410 | 300 | 200 |

Handles

Pole Top Enclosures for Distribution and Metering Hinged Type - Normal Duty





| Part Number | Description | Н | W | D |
|-------------|-------------|-----|-----|-----|
| 040-903 | TILT 3 | 350 | 218 | 136 |
| 040-904 | TILT 5 | 350 | 310 | 136 |
| 040-905 | TILT 6 | 480 | 355 | 149 |

Wall Mounting or Pole Mounting - (No Additional Parts Required for Either Method)



Pole Mounting



Wall Mounting

Pole Top Enclosures for Distribution and Metering Hinged Type - Normal Duty





AllTilt 6 3-phase



AllTilt 6 3-phase





AllTilt 6 4-way splitmeter



AllTilt 6 4-way

Pole Top Enclosures for Distribution and Metering Hinged Type - Heavy Duty



The value and complexity of equipment deployed across vast geographical areas has increased massively. The need to protect the function of these networks and devices has been met with all sorts of interesting ideas. Some challenges have been brilliantly overcome, but no solution has been able to completely address the convergence of the challenges that exist in this environment.

Often-overlooked or forgotten challenges

<u>Vandalism:</u> Due to the high value of enclosure content, bypassing a smart meter, disabling a surveillance system or simply stripping the contents for sale on the black market are growing global realities.

Access Control: Ease of access for authorised personnel is often adversely affected when trying to address vandalism challenge. Monitoring and tracking of authorised personnel is important as criminal elements sometimes gain authorised status.

IP Level (Water and Dust): While companies do their utmost to solve new challenges the primary function of the enclosure is sometimes forgotten. Electrical systems fail because of three main factors, Temperature, water and dust. The latter two are addressed by the international standard IEC61529 (SANS IEC 61529). Enclosures that are hand-made differ from each other and simply do not seal consistently.

UV resilience and weatherability: Accelerated UV testing is primarily a measure of colour degradation. However, real life exposure has to cope with temperature cycling. rain and particle rich wind. International standards do not currently exist to test this, leaving real life long-term fields trials to provide the only genuine test of an enclosures' ability to withstand the elements.

Human contact risk / shock hazard: When the solution to vandalism involves metallic materials there is a serious risk for personnel an public to come into contact with live electrical circuits. When such an enclosure is on a pole the risk for the person working at height is exaggerated.

Flammability: Some plastic materials are able to absorb impact very well. If one strikes a garden refuse bin with a hammer it just bounces off. The cautionary embossed words on the lid "No hot ash" point to a serious flaw in using such materials within an electrical network. All electrical enclosures are supposed to be non-flammable or at least self-extinguishing. Most utility companies require compliance to IEC 62208, which stipulates the parameters of glow wire testing and flammability. Using these materials specifically to address vandalism would incorrectly suppose that vandals only have access to hammers and not matches.

Weight: Whilst modern composites constantly deliver greater strength to weight performance there is no way to get around the fact that weight is added when increasing the strength of a mechanical part. Keeping this weight down to a level that allows installation and does not compromise the pole or wall structure is a real challenge.

Signal interference: Some materials create a faraday cage effect and interfere with signals that often form part of the function of the installed equipment. Antennae that are mounted outside the enclosure are a vulnerable point that also attract unwanted attention.

Announcement

Solving the above challenges is complicated and the resulting solution normally becomes costly bringing the price into question.

AllVault is the name given to the latest innovation. Experience learned while pioneering composite mahole chamber design allowed Allbro to create what we believe is the strongest composite enclosure ever to be sold commercially.

AllVault has been designed to address every one of the above challenges. The cost of lost revenue is not measured in the time and capital it takes to replace infrastructure. Systems that are bypassed or are out of order represent enormous values that can never be recovered. The financial case to be made to justify investment in this area is a very straightforward conclusion to prove.



| Part Number | Description | Н | W | D |
|-------------|--|-----|-----|-----|
| 040-906 | AllVault empty with mechanical nut (IP 66) | 581 | 403 | 201 |

AllVault is a world first. This high security outdoor box is made to offer exceptional protection from dust, water and unwanted personnel. The structure of the box is as important as the locking system and access control. Various locking systems have been catered for.

| <u>Mechanical</u> | Central Access Control and Tracking | Full GPS Based Access Control |
|---|--|--|
| Simple and Effective Mechanical Locking Options | Dock and Trace key systems that allow central tracking of technician activity on weekley/cyclical basis. | Live GPS based Access Control System |
| Coded Nuts (1000 variations) with magnetic caps works like coded wheel mag nuts | Multilock® Click Lock Rayonics® Dockable Key | Inductive Interface to GLAM lock Bluetooth interface GLAM Enabled Lock GLAM centralised management platform |

More modern ranges like Utilec (page 20) and Terminal (page 26) were designed to replace several of these products. Some clients still prefer the older models for specific applications so we have decided to include them in the latest catalogue.

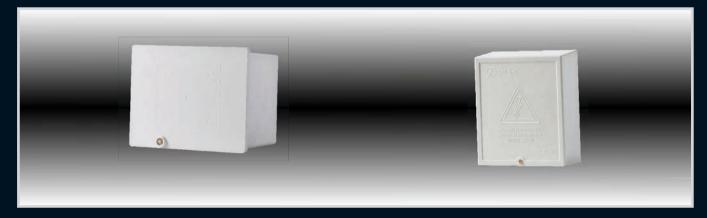
Slide Lids



| 040-607 | UB-1 | | | |
|-----------------------------|------|--|--|--|
| 190 x 170 x 157 (H, W, D) | | | | |
| 040-608 | UB-2 | | | |
| 310 x 335 x 100 (H, W, D) | | | | |

| 040-615 | UB-4boxes/lid (U2) | | |
|-----------------------------|-------------------------------|--|--|
| 315 x 185 x 120 (H, W, D) | | | |
| 040-666 | UB-4s/lid with wood (U2-M) | | |
| 315 x 185 x 120 (H, W, D) | | | |

| 040-661 | UB-7boxes/lid Trilock (ut-s1) | |
|-----------------------------|-----------------------------------|--|
| 305 x 305 x 155 (H, W, D) | | |
| 040-623 | UB-7boxes/lidCOM- PLETE (U7-A) | |
| 305 x 305 x 155 (H, W, D) | | |



| 040-624 | UB-8Telkom Small Lid | |
|---------------------------------|-------------------------|--|
| 195 x 245 x 216 (H, W, D) | | |
| 040-625 UB-9Telkom Largo Lid | | |
| 212 x 365 x 250 (H, W, D) | | |

| 040-701 | CB60 (S60) |
|----------------|---------------|
| 160 x 140 x 60 | O (H, W, D) |



Screw Lids



040-756 S11 200 x 110 x 40 (H, W, D)

| 040-757 | (S13DEEP) |
|---------------|-------------------|
| 230 x 130 x 1 | 60 (H, W, D) |
| 040-653 | MPS13box (S13) |
| 230 x 130 x 1 | 20 (H, W, D) |

| 040-654 | MPS14box (S14) |
|----------------------------|-------------------|
| 260 x 160 x 93 (H, W, D) | |

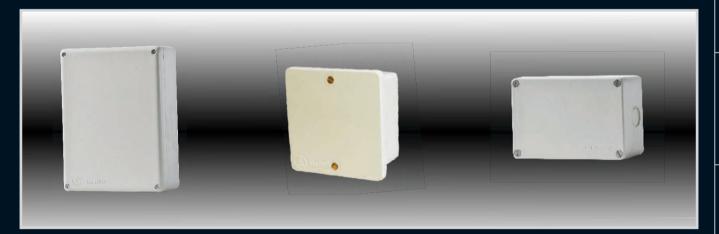
| 040-605 | PB-1box |
|---------------------------|---------|
| 100 x 97 x 77 (H, W, D) | |
| 040-606 | PB-2box |
| 141 x 97 x 77 (H, W, D) | |



| 040-630 | UB-4Ascrew on lid (U2-S1) |
|----------------|------------------------------|
| 315 x 185 x 12 | 0(H W D) |

| 040-762 | EMB1-BTelephoneDB with board (UB5-B) |
|-----------|--------------------------------------|
| 400 x 300 | x 100 (H, W, D) |

| 040-703 | RF-1Rooftop box |
|----------------------|-----------------|
| 108 x 65 (H, W, D) | |



| 040-601 | MPAbox (S10) | |
|-----------------------------|--------------|--|
| 170 x 106 x 78 (H, W, D) | | |
| 040-602 | MPBbox (S12) | |
| 205 x 155 x 70 (H, W, D) | | |
| 040-603 | MPCbox (S3S) | |
| 305 x 205 x 110 (H, W, D) | | |

| 040-626 | MPEbox (J1) |
|--------------|-------------|
| 87 x 87 x 50 | (H, W, D) |

| Į | 040-600 | MPXbox (S5B) |
|---|---------------|---------------|
| | 120 x 80 x 55 | i (H, W, D) |
| | 040-755 | MPXDeep |
| | | (S5DEEP) |
| | 110 x 70 x 80 | (H, W, D) |

Hinges

_ocks

Handles

Accessorie

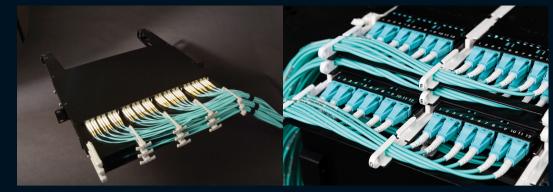
Rotary Operating
Handles

Insulator

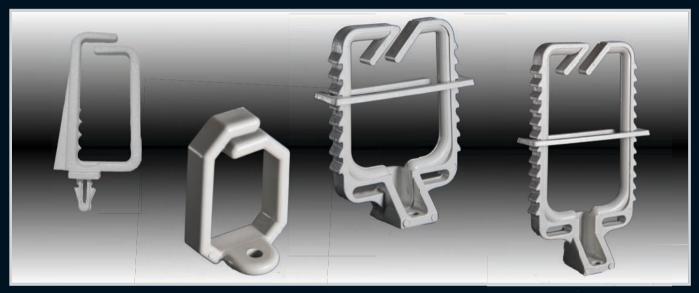
Transformer Equipment

Index





* Examples of similar applications



| Part Number | Description |
|-------------|--------------------------|
| FTP-0004 | 100 PR Jumper Guide |
| FTP-0005 | 100 PR Jumper Guide Clip |
| FTP-0006 | 300 PR Jumper Guide |
| FTP-0008 | 600 PR Jumper Guide |



| Part Number | Description |
|-------------|---------------------------|
| FTP-0010 | RJ45 - Single Wall Outlet |
| FTP-0011 | RJ45 - Double Wall Outlet |