Temporary Power Distribution

Temporary Power Distribution you can trust.

Product Catalogue

Welcome to IDE.

At IDE, our success and your satisfaction are built on three key pillars: quality, innovation, and teamwork. These core values, combined with our broad range of products and services and deep expertise across various industries, distinguish us from the competition.

When you partner with IDE, you can trust that we'll deliver results, which is crucial in the power distribution sector.
As a forward-thinking company, IDE has developed their very own Energy Management System, adaptable for all industries from events, construction to film and tv.

Corporate Social Responsibility and Sustainability are central to our approach. IDE's long-term strategies focus on minimizing environmental impact, enhancing efficiency, and giving back to the community.

SDIPTECH

Proud to be part of the Sdiptech Group.

IDE Systems and IDE Rental is fully owned by Sdiptech AB since September 2021. Sdiptech is a technology group that acquires and develops companies within the infrastructure sector with solutions that contributes to more sustainable, efficient and safe societies.

Contents

Quality products, built by expert engineers for 30 years.

Great products begin with exceptional design. By incorporating essential features into our distribution boards, our products are tailored to meet the needs of all industries.

HDPE material, suitable for all weather types.

ABB breakers

Mennekes sockets

Tested to BS 7671

Lifting and forklift handles

Built by IDE in the UK

Investment in the latest manufacturing equipment has enabled us to build to customer requirements effectively. We have also invested in our people, developing their skills for the future of the temporary power industry.

All products are built in house, which allows us to control lead times for our customers. We take the time to build solid partnerships with industry leading suppliers, so that our customers can have the best product.

Quality and safety assured: Accredited to ISO 9001:2015, and fully compliant with global electrical practices, every item of equipment is thoroughly tested before it leaves our premises.

We have a high quality manufacturing centre based in Cannock, UK. All equipment is assembled by skilled staff and they incorporate only the highest quality components to ensure maximum performance and reliability.

Your Power, Your Way.

At IDE, we can partner with you to maximise the value of your power distribution assets and provide expert guidance on key decisions. This includes not only how you source your equipment but also how to manage your budgets more effectively.

We offer a comprehensive, integrated service that helps you find the ideal balance between purchasing and renting equipment, considering your specific concerns around capital and operational expenditures.

We also assist with forward planning to ensure your procurement strategy is future-proof, helping you get the most out of both your power distribution setup and IDE's expert services.

Our goal is to help you create the perfect mix of purchase and hire solutions to meet your business and market needs.

To help you build the best temporary network, we can design custom distribution boards tailored to your exact requirements.

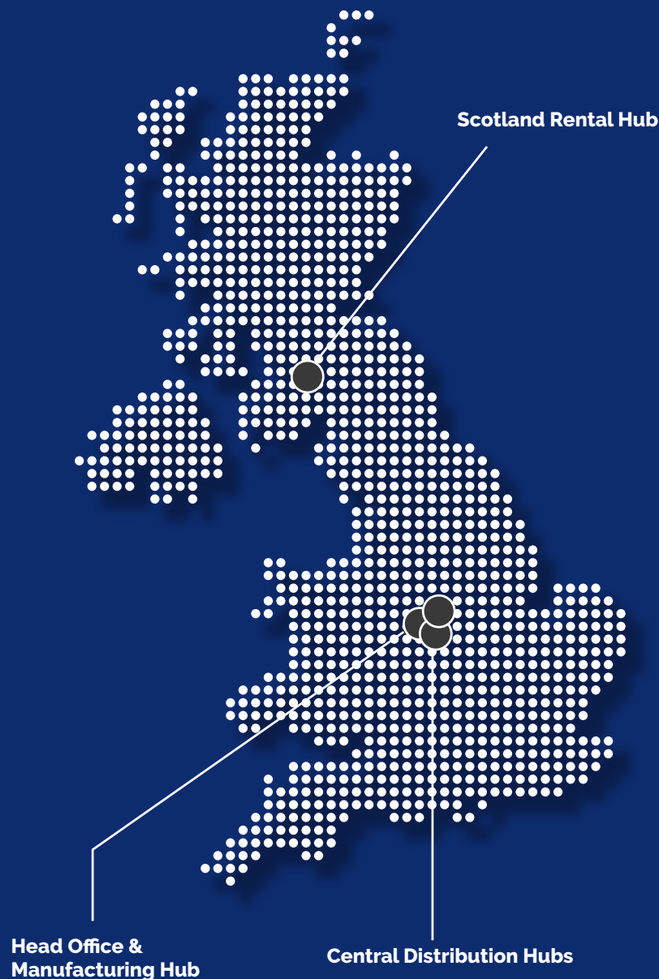
Purchase and Hire from the industry experts.

Built in the UK, Trusted Worldwide.

IDE is proud to work with customers around the world, providing innovative solutions for events and projects of all sizes. Whether it's a small local event or a large-scale international project, our team is dedicated to delivering excellence.

We have strategically located central distribution hubs, allowing us to efficiently ship our products globally. This global reach ensures that no matter where our customers are, they receive the products and support they need, on time and with precision.

From concept to completion, IDE remains committed to providing exceptional service and seamless execution across diverse markets.



Working in partnership with all industries.

Here are some of the industries we work with...

Events Industry
Compact solutions designed to distribute temporary power from one area to another. Easy to relocate across site and blends in well with the surrounding environment.

Our plug and play solutions ensure a quick connection from local generators directly to the end user and include safety features such as emergency stops and individual socket protection to ensure that the entire temporary power network is protected.

Construction Industry
Our temporary power equipment is designed to withstand the tough conditions of construction sites and is used to power site cabins, heaters, lighting, tools and plant equipment.

All of our temporary power solutions are trusted within the construction industry and are designed to meet the ISO9001:2015 accreditation.

Generator Industry
Our temporary power distribution equipment is compatible with all different types of generators and is designed to be relocatable across site. We also design and build solutions that allow a quick connection to a back-up power source in the event of power failure/shutdown.

Facilities Managment Industry
We specialise in designing solutions that allow a quick connection to a back-up power source in the event of power failure and/or shutdown. We can also supply temporary overlays when maintenance work is carried out on your facility's existing switchgear.

Film and TV Industry
Working with production companies and studios, we help advance their sustainability goals by installing Erica, our energy management system. Erica enables seamless monitoring and optimisation of energy consumption, reducing carbon footprints on set and during production.

Commitment to Sustainability, Driven by Innovation.

Our Commitment

As a responsible employer IDE is committed to taking action on the UN's sustainable development goals.

We have identified 6 of the 17 UN goals that are applicable to IDE's business operations:

- Good Health and Well Being
- Gender Equality
- Affordable and Clean Energy
- Decent Work and Economic Growth
- Responsible Consumption and Production
- Climate Action

IDE ensure that these areas are taken into account during our day-to-day business operations.

Targets & Reporting

Being part of the *Sdiptech Group*, IDE reports annually on the following areas, in order to demonstrate transparency and progress towards the UN sustainability goals.

The areas reported on include:

- Environmental: IDE shall reduce its carbon dioxide intensity (CO_2e/turnover) from its own operations by 50% within five years (between 2021 and 2026).
- Social: By 2030, IDE shall be gender equal (men and women represented in the range of 40–60%) in leading positions.
- Governance: IDE will have incentives that are linked to sustainability-related goals.
- Financial: IDE will contribute to one or more of UN Sustainable Development Goals.

At IDE we believe that our products, services and operations should add positive value to the environment, customers, colleagues and the communities that we work within. Operating in a sustainable and responsible manner is in our DNA. Our approach to developing a zero-carbon future is to provide innovation through our iDesign business.

IDE's product innovations, such as Erica power monitoring and control and temporary electric vehicle chargers assist our customers in transitioning towards a low carbon economy.

Temporary Power Distribution Boards from 16A to 400A.

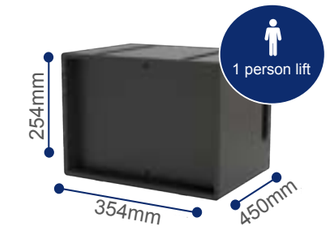
At IDE we are dedicated to helping our customers succeed, whether running a power hire business, looking for contingency power solutions or delivering bespoke products. With a broad range of services and technical support we can help you meet your goals.

All ‘MD’ range of boards are made from High-density polyethylene (HDPE). The 300-Grade High Density Polyethylen, offers good impact resistance, chemical resistance and high rigidity.

Key Features:
> Density of 0.96 g/cm^3
> Impact strength of 10 kJ/m^2
> Less than 0.01% moisture absorption
> Service temperature from -50 to +80˚C
> Greater than 1014Ω surface resistance

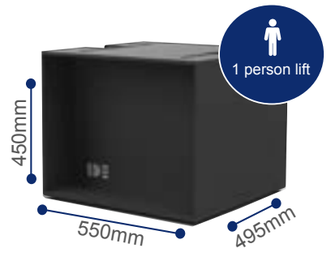
Connection options, plug ‘n’ play through either:
> Cee form connectors
> Power safe connectors
> All MD Boards are stackable

Built & designed to the following legislation:
> Manufactured to UK and International standards.

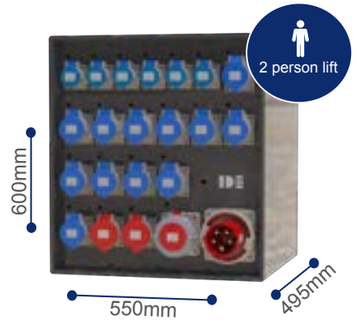


Size 0

Size 1



Size 2



Size 3

Size 4

Size 5

Size 6

All boards are manufactured with adequate lifting points either handles or forklift pockets.

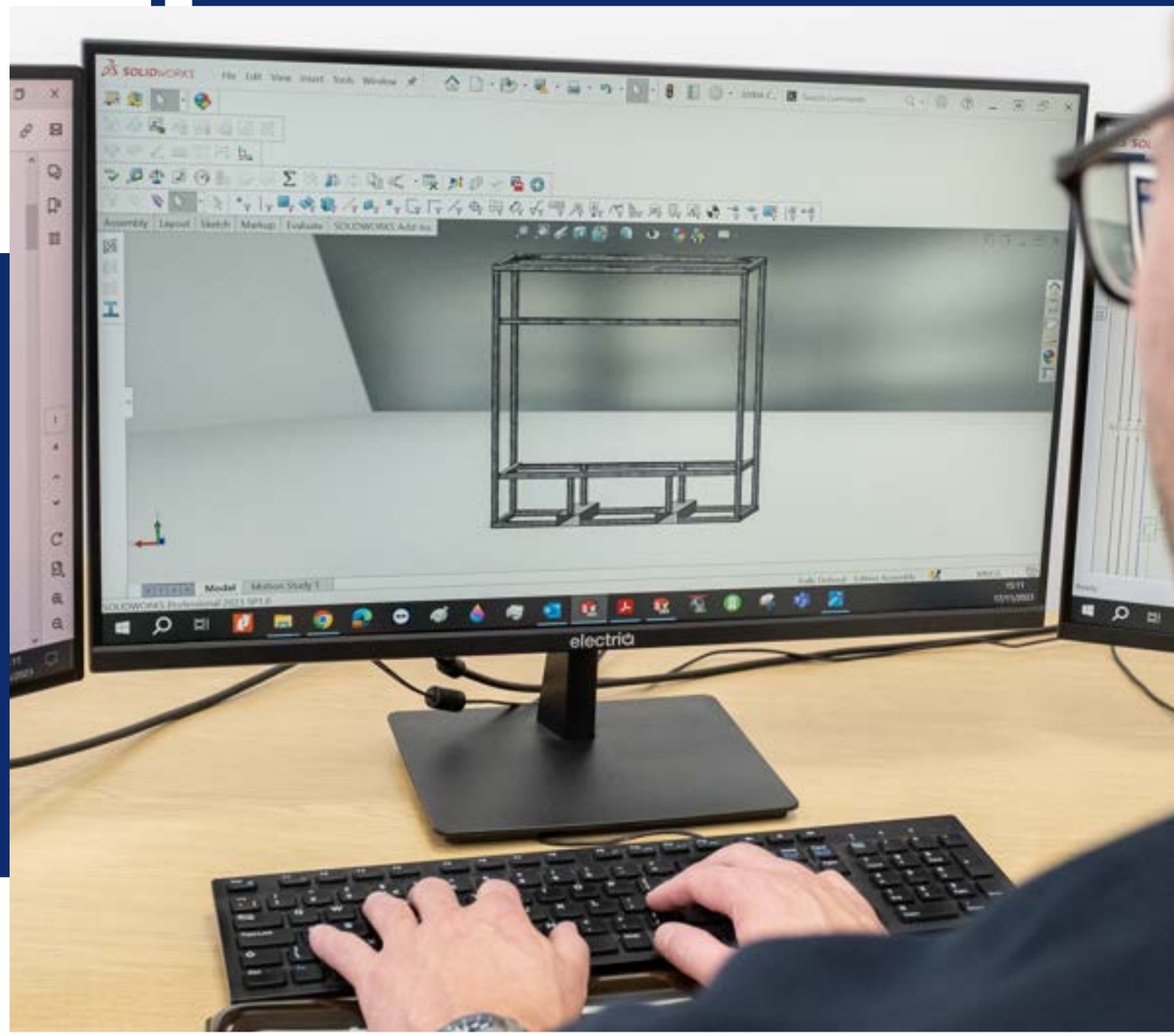
Sizes 0 to 4 have manufactured lifting handles within the board. Sizes 5 to 6 have stainless steel crash frames complete with forklift pockets.

All front & back plates can be manufactured to customer specification dependant on space. Sockets and back plates are recessed fully to protect during transit. Full width rail support bars for all switch gear.

Engineered to Your Specifications.

Designing the perfect distribution board is simple with our experienced team of engineers. Collaborate with us to create a tailored solution for your site.
Our team is constantly researching and developing innovative products to meet the evolving needs of our customers, ensuring that we provide solutions that are highly relevant and beneficial to your industry.

"Innovative Designs, Outstanding Products"



Electrical Estimators

Your first port of call, they can go through the enquiry in detail advising on what can be the best fit for your site.

Electrical Engineers

They design your circuit to meet requirements of the sites as well as regulations.

Product Engineers

Bring your design to life through 3D product renders (CAD) using Solidworks.

400A Range.

MD400

Incomer
400A 400V 3P+N+E Powerlock Drain Connectors. Protection: 400A 4 Pole MCCB

Outgoing
- 400A 400V 3P+N+E Powerlock Source Connectors (feed through). Protection: No
- 4 x 125A 400V 3P+N+E IP67 Pnl Mnt Skt. Protection: 4 x 125A 4 Pole MCCB c/w Adjustable/Switchable Earth Leakage

Dimensions
H1092 x W612 x D495 (mm)

Weight
95kg

MD402

Incomer
400A 400V 3P+N+E Powerlock Drain Connectors. Protection: 400A 4 Pole MCCB

Outgoing
- 400A 400V 3P+N+E Powerlock Source Connectors (feed through). Protection: No
- 3 x 125A 400V 3P+N+E IP67 Pnl Mnt Skt. Protection: 3 x 125A 4 Pole MCCB c/w Adjustable/Switchable Earth Leakage
- 3 x 63A 400V 3P+N+E IP67 Pnl Mnt Skt. Protection: 3 x 63A 4 Pole C-Type MCB & 100mA RCD
- 3 x 63A 230V 1P+N+E IP67 Pnl Mnt Skt. Protection: 3 x 63A 2 Pole C-Type MCB & 100mA RCD
- 3 x 32A 400V 3P+N+E IP67 Pnl Mnt Skt. Protection: 3 x 32A 4 Pole 30mA C-Type RCBO
- 3 x 16A 230V 1P+N+E IP67 Pnl Mnt Skt. Protection: 3 x 16A 2 Pole 30mA C-Type RCBO

Dimensions
H1392 x W612 x D495 (mm)

Weight
110kg

MD403

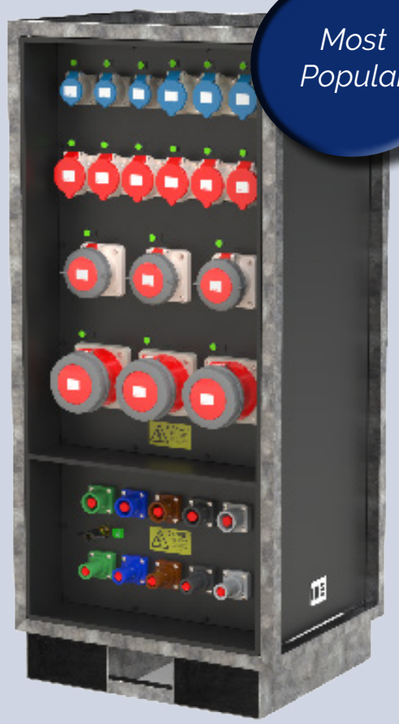
Incomer
400A 400V 3P+N+E Powerlock Drain Connectors. Protection: 400A 4 Pole MCCB

Outgoing
- 400A 400V 3P+N+E Powerlock Source Connectors (feed through). Protection: No
- 3 x 125A 400V 3P+N+E IP67 Pnl Mnt Skt. Protection: 3 x 125A 4 Pole MCCB c/w Adjustable/Switchable Earth Leakage
- 3 x 63A 400V 3P+N+E IP67 Pnl Mnt Skt. Protection: 3 x 63A 4 Pole C-Type MCB c/w Adjustable/Switchable Earth Leakage & 100mA RCD
- 6 x 32A 230V 1P+N+E IP67 Pnl Mnt Skt. Protection: 3 x 32A 2 Pole C-Type MCB & 100mA RCD
- 3 x 32A 230V 1P+N+E IP67 Pnl Mnt Skt. Protection: 3 x 32A 4 Pole 30mA C-Type RCBO
- 3 x 16A 230V 1P+N+E IP67 Pnl Mnt Skt. Protection: 2 x 16A 2 Pole 30mA C-Type RCBO

Dimensions
H1392 x W612 x D495 (mm)

Weight
110kg

Most Popular



MD405

Incomer
400A 400V 3P+N+E Powerlock Drain Connectors. Protection: 400A 4 Pole MCCB

Outgoing
- 6 x 63A 400V 3P+N+E IP67 Pnl Mnt Skt. Protection: 6 x 63A 4 Pole C-Type MCB c/w Adjustable/Switchable Earth Leakage

Dimensions
H750 x W550 x D495 (mm)

Weight
70kg

Plug 'n' play ✓ | Relocatable ✓ | IP Rated ✓ | Protection on individual sockets ✓

400A Range.

MD407

Incomer
400A 400V 3P+N+E Powerlock Drain Connectors. Protection: 400A 4 Pole C-Type MCCB

Outgoing
- 2 x 125A 400V 3P+N+E IP67 Pnl Mnt Skt. Protection: 2 x 125A 4 Pole C-Type MCCB c/w Adjustable/Switchable Earth Leakage

Dimensions
H450 x W550 x D495 (mm)

Weight
45kg

MD408

Incomer
400A 400V 3P+N+E Powerlock Drain Connectors. Protection: 400A 4 Pole MCCB

Outgoing
- 400A 400V 3P+N+E Powerlock Source Connectors (feed through).
- 4 x 125A 400V 3P+N+E IP67 Pnl Mnt Skt. Protection: 4 x 125A 4 Pole MCCB c/w Adjustable/Switchable Earth Leakage
- 2 x 63A 400V 3P+N+E IP67 Pnl Mnt Skt. Protection: 2 x 63A 4 Pole C-Type MCB & 100mA RCD

Dimensions
H1092 x W612 x D495 (mm)

Weight
105kg

Optimising your temporary power distribution network
IDE supplies a full range of temporary power distribution panels from 4000A generator connections to small dual 16A sockets, and all connecting cable to ensure you optimise your temporary power network. We fit the product to the application.

For a low carbon future
Our experienced design team have taken on the challenge to help reduce carbon emissions by creating new temporary power products using smart technology. We are investing in new products and technology for a low carbon future.

Quality and safety assured
Every time any of our products leave our rental depot or manufacturing base, we test operation and safety.
This includes EVERY socket, EVERY breaker, EVERY cable connection to ensure the highest reliability.

Long-term partnership
We can help you plan ahead, ensuring you get the best from your temporary power distribution set-up and our expert services. We can also manage your complete distribution fleet, or provide one stop rental management.

125A Range.

MD10

Incomer
125A 400V 3P+N+E IP67 Appliance Inlet.
Protection: 125A 4 Pole MCCB

Outgoing
- 3 x 63A 400V 3P+N+E IP67 Pnl Mnt Skt.
  Protection: 3 x 63A 4 Pole C-Type 100 mA MCB + 4 Pole 100mA RCD
- 3 x 63A 230V 1P+N+E IP67 Pnl Mnt Skt.
  Protection: 3 x 63A 2 Pole C-Type 100 mA MCB + 2 Pole 100mA RCD
- 3 x 32A 230V 1P+N+E IP44 Pnl Mnt Skt.
  Protection: 3 x 32A 2 Pole 30mA RCBO
- 3 x 16A 230V 1P+N+E IP44 Pnl Mnt Skt.
  Protection: 3 x 16A 2 Pole 30mA RCBO

Dimensions
H600 x W550 x D495 (mm)

Weight
45kg

MD30

Incomer
125A 400V 3P+N+E IP67 Appliance Inlet.
Protection: 125A 4 Pole C-Type MCCB

Outgoing
- 2 x 63A 400V 3P+N+E IP44 Pnl Mnt Skt.
  Protection: 2 x 63A 4 Pole C-Type MCB c/w Adjustable Earth Leakage
- 2 x 32A 400V 3P+N+E IP44 Pnl Mnt Skt.
  Protection: 2 x 32A 4Pole C-Type MCB c/w Adjustable Earth Leakage
- 3 x 32A 230V 1P+N+E IP44 Pnl Mnt Skt.
  Protection: 3 x 32A 2 Pole 30mA RCBO
- 9 x 16A 230V 1P+N+E IP44 Pnl Mnt Skt.
  Protection: 9 x 16A 2 Pole 30mA RCBO

Dimensions
H750 x W550 x D495 (mm)

Weight
48kg

Plug 'n' play ✓ | Relocatable ✓ | IP Rated ✓ | Protection on individual sockets ✓

MD32

Incomer
125A 400V 3P+N+E IP67 Appliance Inlet.
Protection: 125A 4 Pole MCCB

Outgoing
- 1 x 63A 400V 3P+N+E IP44 Pnl Mnt Skt.
  Protection: 63A 4 Pole C-Type MCB
- 2 x 32A 400V 3P+N+E IP44 Pnl Mnt Skt.
  Protection: 2 x 32A 4 Pole 30mA RCBO
- 12 x 32A 230V 1P+N+E IP44 Pnl Mnt Skt.
  Protection: 12 x 32A 2 Pole 30mA RCBO
- 6 x 16A 230V 1P+N+E IP44 Pnl Mnt Skt.
  Protection: 6 x 16A 2 Pole 30mA RCBO

Dimensions
H600 x W550 x D495 (mm)

Weight
41kg

Most Popular

MD35

Incomer
125A 400V 3P+N+E IP67 Appliance Inlet.
Protection: 125A 4 Pole MCCB

Outgoing
- 6 x 32A 400V 3P+N+E IP44 Pnl Mnt Skt.
  Protection: 6 x 32A 4 Pole 30mA RCBO

Dimensions
H450 x W550 x D495 (mm)

Weight
30kg

63A Range.

Most Popular

MD2

Incomer
63A 400V 3P+N+E IP67 Appliance Inlet.
Protection: 63A 4 Pole MCB

Outgoing
- 63A 400V 3P+N+E IP67 socket unprotected feedthrough.
- 12 x 16A 230V 1P+N+E IP44 Pnl Mnt Skt. Protection: 12 x 16A 2Pole 30 mA RCBO
- 6 x 32A 230V 1P+N+E IP44 Pnl Mnt Skt. Protection: 6 x 32A 2Pole 30 mA RCBO

Dimensions
H600 x W550 x D495 (mm)

Weight
32kg

MD76

Incomer
63A 400V 3P+N+E IP67 Appliance Inlet.
Protection: 63A 4 Pole MCB (unprotected feed through).

Outgoing
- 3 x 32A 400V 3P+N+E IP44 Pnl Mnt Skt. Protection: 3 x 32A 4 Pole MCB c/w Adjustable Earth Leakage
- 3 x 32A 230V 1P+N+E IP44 Pnl Mnt Skt. Protection: 3 x 32A 2 Pole 30mA RCBO
- 12 x 16A 230V 1P+N+E IP44 Pnl Mnt Skt. Protection: 12 x 16A 2 Pole 30mA RCBO

Dimensions
H600 x W550 x D495 (mm)

Weight
28kg

MD31

Incomer
63A 400V 3P+N+E IP67 Appliance Inlet.
Protection: 63A 4 Pole C-Type MCB

Outgoing
- 63A 400V 3P+N+E IP44 Pnl Mnt Skt. Feedthrough not protected
- 2 x 32A 400V 3P+N+E IP44 Pnl Mnt Skt. Protection: 2 x 32A 4Pole C-Type MCB c/w Adjustable Earth Leakage
- 3 x 32A 230V 1P+N+E IP44 Pnl Mnt Skt. Protection: 3 x 32A 2 Pole 30mA C-Type RCBO
- 9 x 16A 230V 1P+N+E IP44 Pnl Mnt Skt. Protection: 9 x 16A 2 Pole 30mA C-Type RCBO

Dimensions
H600 x W550 x D495 (mm)

Weight
36kg

MD63

Incomer
63A 400V 3P+N+E IP67 Appliance Inlet.
Protection: 63A 4 Pole MCB

Outgoing
- 63A 400V 3P+N+E IP44 Pnl Mnt Skt. Feedthrough not protected
- 3 x 32A 400V 3P+N+E IP44 Pnl Mnt Skt. Protection: 3 x 32A 4 Pole 30mA RCBO
- 6 x 32A 230V 1P+N+E IP44 Pnl Mnt Skt. Protection: 6 x 32A 2 Pole 30mA RCBO
- 6 x 16A 230V 1P+N+E IP44 Pnl Mnt Skt. Protection: 6 x 16A 2 Pole 30mA RCBO

Dimensions
H600 x W550 x D495 (mm)

Weight
34kg

MD6

Incomer
63A/3 5core 1 m Flying lead

Outgoing
- Unprotected feed through
- 2 x 32/3 sockets IP44 - 4P MCB

Dimensions
H254 x W354 x D250 (mm)

Weight
17kg

32/16A Range.

MD11

Incomer
32A 400V 3P+N+E IP44 Appliance Inlet.
Protection: no

Outgoing
- 3 x 32A 230V 1P+N+E IP44 Pnl Mnt Skt.
  Protection: 3 x 32A 2 Pole 30mA RCBO

Dimensions
H300 x W400 x D350 (mm)

Weight
10kg

MD12

Incomer
32A 400V 3P+N+E IP44 Appliance Inlet.
Protection: 32A 4P MCB (unprotected feedthrough).

Outgoing
- 9 x 16A 230V 1P+N+E IP44 Pnl Mnt Skt.
  Protection: 9 x 16A 2 Pole 30mA RCBO

Dimensions
H340 x W400 x D350 (mm)

Weight
12kg

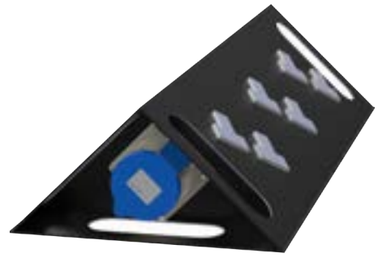
MD18

Incomer
32A 400V 3P+N+E IP44 Plug on a 1m Lead.
Protection: No

Outgoing
- 2 x 16A 400V 3P+N+E IP44 Pnl Mnt Skt.
  Protection: 2 x 16A 4 Pole 30mA RCBO

Dimensions
H300 x W400 x D350 (mm)

Weight
5kg



MD17

Incomer
32A 230V 1P+N+E IP67 Appliance Inlet.
Unprotected feed through.

Outgoing
- 1 x 32A 230V 1P+N+E IP44 Pnl Mnt Skt.
  Protection: No
- 12 x 13A 230V 1P+N+E IP44 Pnl Mnt Skt.
  Unprotected feed through.

Dimensions
H125 x W245 x D550 (mm)

Weight
5kg

MD42

Incomer
32A 230V 3Pin IP44 1m lead Plug
Protection: no

Outgoing
- 4 x 16A 2 pole 30ma RCBO

Dimensions
H300 x W400 D350mm (mm)

Weight
6kg

MD75

Incomer
32A 400V 3P+N+E IP67 Appliance Inlet.
Protection: 32A 4 Pole MCB, (unprotected feed through).

Outgoing
- 6 x 32A 230V 1P+N+E IP44 Pnl Mnt Skt.
  Protection: 6 x 32A 2 Pole 30mA RCBO
- 6 x 16A 230V 1P+N+E IP44 Pnl Mnt Skt.
  Protection: 6 x 16A 2 Pole 30mA RCBO

Dimensions
H450 x W550 x D495 (mm)

Weight
28kg

High Power Distribution.

MD630 - 1600

Range available:
- 630A
- 800A
- 1000A
- 1250A
- 1600A

Incomer
630A 3P + N Copper Stubs . Protection:
630A 4 Pole MCCB

Outgoing
- As per requirement

Dimensions
H1550 x W1300 x D500 (mm)

Weight
265kg

MD2000

Incomer
2000A 3P+N Terminals 2000A 4 Pole ACB

Outgoing
- 6 No. 400A 3P+N Copper Stubs
- 6 No. 400A 4 Pole MCCB's c/w programmable and switchable earth leakage. (All MCB's have C-Type trip curves. All RCD's and RCBO's are Type A)

Dimensions
H 2100 x W 2220 x D 850 (mm)

Weight
1200kg

Features and Benefits:

> Entire panel is fixed within a load tested 3mm galvanised mild steel crash frame with crane lifting points and integral 200mm x 115mm forklift pockets.

> The frame allows bottom entry up to 240mm² HO7 cables and exit of 240mm² HO7 cables, either through solid gland plate or bruches gland plate.

> Internal and external copper earth bars complete with brass studs with panel clearance to allow lug on within each incoming and outgoing section.

OPTIONAL UPGRADE: Each outgoing section is fitted with its own Multi-Function power monitor, earth leakage protection, and compartment anti-condensation heater.

MD3200-4000

Incomer
4000A 3P+N Terminals 4000A 4 Pole ACB

Outgoing
- 4 No. 1600A 3P+N Copper Stubs
- 4 No. 1600A 4 Pole MCCB's

Dimensions
H2100 x W2140 x D1300 (mm)

Weight
1400kg

Plug 'n' play ✓ | Relocatable ✓ | IP Rated ✓ | Protection on individual sockets ✓

Site Power Distribution Boards and Transformers.

Our Site Distribution boards are 100% configurable to suit your project needs, and to ensure longevity our boards are made out of steel to withstand tough on-site conditions. For different projects the board can be reconfigured, with easy breaker and socket changes.

‘Our board is an asset that can be re-used and re-configured as needed’

Our design complies with BS 7375:2010 legislation which Includes the requirement for separate lockable access to outgoing breakers and main breaker. Built in house under ISO9000 quality systems at our manufacturing centre, where we also offer annual testing and spare parts.

Our 10kVA and 20kVA transformers are designed to provide on-site power for tools and other machinery and are available to hire from all of our three rental centres across the UK.

Site Power Distribution.

SD63A - 125A Compact

Total sockets available:	10
Max Mod:	40
Incoming Breaker:	63A - 125A

Dimensions
H1220 x W660 x D400 (mm)

Weight
50kg

SD125A - 250A Standard

Total sockets available:	20
Max Mod:	40
Incoming Breaker:	125A - 250A

Dimensions
H1450 x W900 x D400 (mm)

Weight
115kg

SD250A - 400A Plus

Incomer

Total sockets available:	24
Max Mod:	56
Incoming Breaker:	250A - 400A

Dimensions
H1450 x W900 x D400 (mm)

Weight
125kg

Site Transformers.

ST103

Incoming
32A 3Φ 400V Plug

Outgoing
2 x 32A 110V, 4 x 16A 110V, 16A Incomer Protection, 2 x 32A 2P MCB, 2 x 16A 2P MCB

Dimensions
H605 x W570 x D420 (mm)

Weight
84kg

ST203

Incoming
63A 3Φ 400V Plug

Outgoing
4 x 32A 110V, 8 x 16A 110V, 32A Incomer Protection, 4 x 32A 2P MCB,

Dimensions
H725 x W525 x D570 (mm)

Weight
140kg

Safety First, Excellence Always.

All IDE equipment undergoes thorough testing by our in-house electricians before every hire. Upon request, we can provide equipment with a valid test certificate. Additionally, we offer annual testing services for your equipment and can issue the necessary certification.

We are fully qualified to the 18th Edition IET BS 7671 standards.
Our team can assist with installation requirements for generator and load bank connections, as well as temporary overlay panel installations.

At our rental depot, we've developed a cable tester that quickly checks the safety of each cable in just minutes, ensuring a fast turnaround for our customers.

To support your business, we provide a variety of training packages covering basic electrical safety and the proper use of power distribution equipment. Training sessions can be coordinated through your area sales manager.

> All boards and cables are tested by our team of engineers.

Fixed Power.

Medical Scanner Connection Point.

Designed to supply power to a range of mobile unit diagnostic modalities such as CT, MRI and PET scanners, our MRI Connection Points are a vital component of most MRI installation projects.

Features and Benefits:

- Indoor & outdoor use
- Wall Mounted or Within a Stainless Steel Crash Frame
- Incoming hardwire connection to M10 terminals with 250mm spreading distance.
- Door interlocking handle with padlock facility.
- 2 No. CAT 5e IP67 data sockets and a 2 wire IP54 Telephone connection point, for use by others as required.

DS2

Incomer
3P + N + E (Hardwire) . Protection: 250A 4 Pole MCCB Adjustable Earth Leakage

Outgoing
- 250A Marechal DS2 Socket 3Phase, Protection: 250A 4 Pole MCCB c/w adjustable Earth Leakage

Dimensions
H650 x W650 x D200 (mm)

Weight
32kg

DS2 - Temporary Installation

Incomer
250A 3P + N + E (Hardwire)

Outgoing
- 250A Marechal DS2 Socket 3Phase, Protection: 250A 4 Pole MCCB c/w adjustable Earth Leakage

Dimensions
H1450 x W890 x D400 (mm)

Weight
80kg

Grey (RAL7035) textured powder coated stainless steel construction (1.4003 grade). 316 option available. Separate incoming compartment with external panel key lock door and padlock hasp. Aluminium gland plate. Assembled to IP54.

Power Cluster.

Outdoor Power Cluster are designed as a wall mount, compact solution which is fed from the mains supply, allowing a safe and quick connection of cable to distribute temporary power across your facility.

This product can be designed to suit the requirements of your project and our power clusters are designed and manufactured in Stainless Steel for outdoor use.

A fixed power solution which can be positioned into the ground to safely connect cranes and other lifting equipment to a mains power supply.

As well as being installed on-site to connect a wide range of applications safely to a mains power supply with a multiple of outgoing voltages.

Power Cluster

Incomer
200A Hardwired 3 Phase

Outgoing
- 1 x 125A/3 Phase
- 2 x 63A/3 Phase
- 2 x 63A/1 Phase
- 2 x 16A/1Phase
- 2 x 13A 230V socket

Bespoke column.

Automatic Mains Failure.

The automatic mains failure (AMF) panel is designed to divert power from your main generator to your back-up generator in the event of power failure.

Our automatic mains failure panels are manufactured from High Density Polyethylene (HDPE) which has a high resistance against harsh weather conditions and chemical corrosion.

AMF: 125A - 250A

Incomer
- Input 1 (Mains): Termination, 3P+N+E Hardwire. Protection, 125A - 250A 4 Pole Contactor.
- Input 2 (Generator): Termination, 3P+N+E Hardwire Protection, 125A - 250A 4 Pole Contactor

Outgoing
- Termination, 3P+N+E Hardwire Protection, N/A Aux 16A 230V 1P+N+E Socket 16A 2 Pole 30mA RCBO (All MCB's have C-Type trip curves. All RCD's and RCBO's are Type A)

Dimensions
H1400 x W985 x D500 (mm)

Weight
75kg

AMF: 400A

Incomer
- Input 1 (Mains): 3P + N + E (Hardwire). Protection: 400A 4 Pole Contactor
- Input 2 (Generator): 3P + N + E (Hardwire) . Protection: 400A 4 Pole Contactor

Outgoing
- 3P + N + E (Hardwire) . Protection: N/A Aux: 32A 230V 1P+N+E socket. Protection: 32A 2 Pole 30mA RCBO

Dimensions
H1700 x W985 x D530 (mm)

Weight
206kg

AMF 125A Event

Incomer
- Input 1 (Mains): 125A 400V 5 pin IP67 inlet. Protection: 125A 4 pole contactor
- Input 2 (Generator): 125A 400V 5 pin IP67 inlet. Protection: 125A 4 pole contactor

Outgoing
- (Load) : 125A 400V 5 pin IP67 socket. Protection: N/A. Aux: 16A 230V 3 Pin IP44 socket. Protection: 16A 2 Pole 30mA RCBO

Dimensions
H600 x W550 x D495 (mm)

Weight
45kg

Automatic Mains Failure.

AMF: 1600A - 3200A

Incomer
- Input 1 (Mains): 3P + N + E (Hardwire). Protection: 1600A 4 Pole ACB
- Input 2 (Generator): 3P + N + E (Hardwire) . Protection: 1600A 4 Pole ACB

Outgoing
- Load: 3P + N + E (Hardwire) . Protection: N/A, Aux: 32A 400V 3P+N+E socket. Protection: 32A 4 Pole 30mA RCBO

Dimensions
H2360 x W2100 x D920 (mm)

Weight
750kg

AMF: 630 - 800A

Incomer
- Input 1 (Mains): Termination, 3P+N+E Hardwire Protection, 630 - 800A 4 Pole Contactor
- Input 2 (Generator): Termination, 3P+N+E Hardwire Protection, 630 - 800A 4 Pole Contactor

Outgoing
- (Load): Termination, 3P+N+E Hardwire Protection, N/A Aux 32A 230V 1P+N+E Socket 32A 2 Pole 30mA RCBO (All MCB's have C-Type trip curves. All RCD's and RCBO's are Type A)

Dimensions
H1800 x W1260 x D600 (mm)

Weight
320kg

AMF: 400A Event

Incomer
- 400A 400V 3P+N+E IP67 Appliance Inlet. (Mains and Generator).

Outgoing
- 400A 400V Powerlocks (inc 16A 1P+N+E Battery Charger Socket)

Dimensions
H942 x W612 x D495 (mm)

Weight
88kg

All temporary power distribution equipment is manufactured by IDE in the UK and tested to BS 7671 (12 Months Certification).

The products used within our distribution systems conform to EN 60309, EN 60529, EN 60947 and have a 12 month warranty.

Loadbank Connection.

Our Load Bank Connection (LBC) can be fitted inside or outside of a building, allowing a safe and quick connection of a testing load bank to your back-up generator when it is undergoing testing/maintenance.

Features and Benefits:
> Powerlock type (Source) connections for a quick easy connection
> Powder coated Stainless Steel enclosure
> Floor standing steel enclosure fitted with M12 fixing points
> Slim Design

We supply solutions which can be connected to your load bank when the back-up generator is undergoing testing/maintenance. **Regular load banking is strongly advised to ensure that your generator will perform when the need arises.**

LBC: 400A - 600A

Incomer
- Fully rated copper connections (hard-wired)

Outgoing
- 1 x 500A 3P+N+E Powerlock source

Dimensions
H400 x W538 X D265 (mm)

Weight
24kg

LBC: 800A - 1000A

Incomer
- Fully rated copper connections (hard-wired)

Outgoing
- 2 x 500A 3P+N+E Powerlock source

Dimensions
H400 x W538 X D265 (mm)

Weight
24kg

LBC: 2000A - 3200A

Incomer
- Fully rated copper connections (hard-wired)

Outgoing
- 5 x 500A 3P+N+E Powerlock source

Dimensions
H18350 x W950 x D360 (mm)

Weight
150kg - 250kg

LBC: 1250A

Incomer
- Fully rated copper connections (hard-wired)

Outgoing
- 3 x 500A 3P+N+E Powerlock source

Dimensions
H1835 x W950 X D400 (mm)

Weight
150kg - 250kg

LBC: 1600A

Incomer
- Fully rated copper connections (hard-wired)

Outgoing
- 4 x 500A 3P+N+E Powerlock source

Dimensions
H1835 x W950 X D400 (mm)

Weight
150kg - 250kg

Generator Connection.

GCP: 800A - 1000A

Incomer
- 2 x 500A/800A 3P + N + E Powerlock Drain.

Outgoing
- Fully rated copper connections (hardwired)

Dimensions
H400 x W538 x D265 (mm)

Weight
24kg

GCP: 400A - 630A

Incomer
- 1 x 500A/800A 3P+N+E Powerlock Drain.

Outgoing
- Fully rated copper connections (hardwired)

Dimensions
H400 x W538 x D265 (mm)

Weight
24kg

GCP: 400A (lockoff connections)

Incomer
- 3P + N + E Powerlock Drain.

Outgoing
- Fully rated copper connections (hardwired)

Dimensions
H750 x W500 x D250 (mm)

Weight
35kg

GCP: 1250A

Incomer
- 3 x 500A 3P+N+E Powerlock Drain.

Outgoing
- Fully rated copper connections (hardwired)

Dimensions
H1835 x W950 X D400 (mm)

Weight
150kg - 250kg

GCP: 1600A

Incomer
- 4 x 500A 3P+N+E Powerlock Drain.

Outgoing
- Fully rated copper connections (hardwired)

Dimensions
H1835 x W950 X D400 (mm)

Weight
150kg - 250kg

Our Generator Connection Points are designed to restore power to critical applications. They can be fitted inside or outside of a building, allowing a safe and quick connection of a back-up generator to your facility's electrical system when required.

Highest reliability components and switchgear
You need to know that, when it's needed, the contingency power can be relied upon. *We use the highest quality switchgear in all our products, giving you confidence.*

Generator Connection.

GCP: 2000A

Incomer
- 5 x 500A 3P+N+E Powerlock Type (Drain) Protection: N/A IP: 54

Outgoing
- Fully rated copper connections (hardwired)

Dimensions
H1835 x W950 X D400 (mm)

Weight
150kg - 250kg

GCP: 2500A

Incomer
- 5 x 800A 3P+N+E Powerlock Type (Drain) Protection: N/A IP: 54

Outgoing
- Fully rated copper connections (hardwired)

Dimensions
H1835 x W950 X D400 (mm)

Weight
150kg - 250kg

GCP: 3200A

Incomer
- 3P + N + E 500A Powerlock Drain. Protection: N/A

Outgoing
- Fully rated copper connections (hardwired)

Dimensions
H18350 x W950 x D360 (mm)

Weight
150kg - 250kg

Inline Protection.

High current Inline Protection units designed to support a range of generator applications such as load banking, testing and maintenance. Inline Protection (IP) units provide an added level of safety where needed. Offering over load and residual current detection to protect personnel and equipment.

IP32

Incomer
- 32A 400V IP67 Plug

Outgoing
- 32A 400V 5 Pin IP44 socket. Protection: 32A 4 pole 30mA RCD

Dimensions
H350 x W450 x D400 (mm)

Weight
10kg

IP63

Incomer
- 63A 400V IP67 Plug

Outgoing
- 63A 400V 5 Pin IP67 socket. Protection: 63A 4 pole 30mA RCD

Dimensions
H350 x W450 x D400 (mm)

Weight
12kg

IP400

Incomer
- 400A 400V 3P+N+E Powerlock drain connectors.

Outgoing
- 400A 400V Powerlock source connectors. Protection: 400A 4P MCCB

Dimensions
H450 x W550 x D495 (mm)

Weight
27kg

IP630

Incomer
- 630A 400V 3P+N+E Powerlock drain connectors.

Outgoing
- 630A 400V Powerlock source connectors. Protection: 630A 4P MCCB

Dimensions
H600 x W550 x D495 (mm)

Weight
40kg

IP630 S

Incomer
- 630A 400V 3P+N+E Powerlock drain connectors.

Outgoing
- 2 x 630A 400V Powerlock source connectors. Protection: 630A 4 pole MCCB

Dimensions
H600 x W550 x D495 (mm)

Weight
40kg

IP800 - 4000

Range available:
- 800
- 1000
- 1600
- 4000

Incomer
- 3P + N + E (Hardwire) . Protection: 1600A 4 Pole ACB

Outgoing
- 3P + N + E (Hardwire) . Protection: N/A

Dimensions
H2320 x W960 x D900(mm)

Weight
1000kg

Cables and Accessories.

Multi core cables

IDE supply multi-core HO7RN-F double insulated cable, which is flexible and fitted with a plug and coupler at each end – allowing the user to make connections to temporary generators and distribution boards. Our cable is designed to withstand: harsh weather, oils/grease, mechanical/thermal stresses and conforms to BS EN 7919.

Single phase

Amps	Voltage	Length (m)	Cable (mm²)	Weight (kgs)	Order code
16	230	5	2.5	1.0	CR1635
		10		2.0	CR16310
		15		3.0	CR16315
		20		4.0	CR16320
		25		5.0	CR16325
		50		10.0	CR16350
32	230	5	6	1.8	CR3235
		10		3.6	CR32310
		15		5.4	CR32315
		20		7.2	CR32320
		25		9.0	CR32325
		50		18.0	CR32350
63	230	5	16	4.8	CR6335
		10		9.6	CR63310
		15		14.4	CR63315
		20		19.2	CR63320
		25		24.0	CR63325
		50		48.0	CR63350

Three phase

Amps	Voltage	Length (m)	Cable (mm²)	Weight (kgs)	Order code
16	400	5	2.5	1.6	CR1655
		10		3.2	CR16510
		15		4.8	CR16515
		20		6.4	CR16520
		25		8.0	CR16525
		50		16.0	CR16550
32	400	5	6	2.9	CR3255
		10		5.8	CR32510
		15		8.7	CR32515
		20		11.6	CR32520
		25		14.0	CR32525
		50		28.0	CR32550
63	400	5	16	7.5	CR6355
		10		15.0	CR63510
		15		22.5	CR63515
		20		30.0	CR63520
		25		36.0	CR63525
		50		72.0	CR63550
125	400	5	35	17.0	CR12555
		10		33.0	CR125510
		15		50.0	CR125515
		20		65.0	CR125520
		25		82.0	CR125525
		50		163.0	CR125550

Powerlock Source to Lug

All weights are based on a 5 wire set

Amps	Length (m)	Cable (mm²)	Weight (kgs)	Order code
365	3	120	25	PSL1203
425	3	150	32	PSL1503
560	3	240	46	PSL2403

Powerlock Drain to Lug

Amps	Length (m)	Cable (mm²)	Weight (kgs)	Order code
365	3	120	25	PDL1203
425	3	150	32	PDL1503
560	3	240	46	PDL2403

Powerlock Drain to Source

Amps	Length (m)	Cable (mm²)	Weight (kgs)	Order code
425	5	150	9.8	PDS1505
	10		19.2	PDS15010
	15		29	PDS15015
	20		37.8	PDS15020
	25		47.6	PDS15025
	50		95	PDS15050
560	5	240	15	PDS2405
	10		30	PDS24010
	15		45	PDS24015
	20		58.8	PDS24020
	25		73.8	PDS24025
	50		147.4	PDS24050

Lug to Lug

Amps	Length (m)	Cable (mm²)	Weight (kgs)	Order code
425	5	150	9.8	LL1505
	10		19.2	LL15010
	15		29	LL15015
	20		37.8	LL15020
	25		47.6	LL15025
	50		95	LL15050
560	5	240	15	LL2405
	10		30	LL24010
	15		45	LL24015
	20		58.8	LL24020
	25		73.8	LL24025
	50		147.4	LL24050

CABLE ENDS EXPLAINED

Power lock source
Often referred to as “female” ends, the Power lock source connectors are terminated to the drain end to allow the secure connection of cable to a generator and other electrical supplies.

Power lock drain
Often referred to as “male” ends, the Power lock drain connectors are terminated to the source end to allow the secure connection of cable to a generator and other electrical supplies.

Lugged ends
Terminated to the ends of cable to allow for a secure connection of cable to generators and other electrical supplies.

Standard M12, we can cater to M16.

Cable Ramps

IDE supply TR1x5 channel cable ramps which can be used on a wide range of applications including events, construction sites and any environment where cable protection is required.

Cable Ramps

100% Non-Conductive cable ramps. Highly Visible Red (RAL3020) and Black colour combination with unique tread pattern providing increase grip on side ramps.

Designed for low volume vehicular traffic and all pedestrian areas, indoor or external applications between -40˚C and +49˚C. Interlocking compatible with Linebacker models.

Dimensions
H50 x W445 x L910(mm)

Weight
9kg

Junction boxes

IDE junction boxes are designed to terminate lugged ends of a cable and can be used to extend or split cable.

JB630

Specification
- Conductors: 5 No. 630A stud terminals
- Terminations: 1 No. M12 stud. Terminals on 70mm Ctrs.
- Protection: Inner hinged door

Dimensions
H260 x W610 x D490 (mm)

Weight
15kg

erica

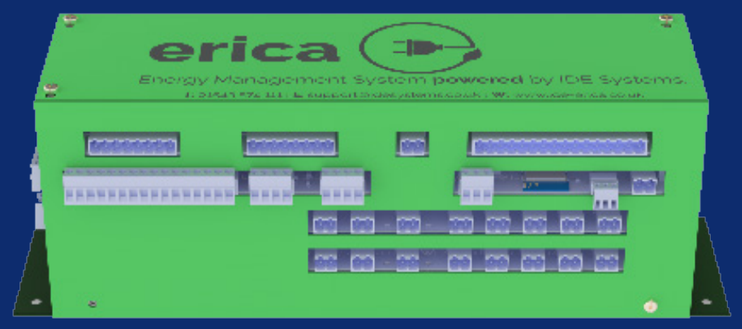
Energy Management System.
www.ide-erica.co.uk

Identify areas where energy can be reduced using smart technology.

Erica, energy management tool plays an important role in designing cost effective and low carbon solutions for temporary power installations.

Where can Erica be used?

Construction sites,
Events and festivals,
Film and TV industry,
and many more!



Carbon Impact Product.

Key Features.

- **2in1** Power Distribution board containing the Erica module, no additional equipment required.
- Cloud Based Solution.
- Capability to turn power on and off using the online dashboard.
- Live data monitoring.
- Different profiles and labels for each connection.
- Connection via WIFI or 4G.
- Pre-set power controls.
- User-friendly dashboard.

Why use Erica?

The Erica module is contained within the site distribution board, meaning no additional equipment is required on site.

The erica site board can be hardwired or socketed (plug & play).

Reducing site energy consumption provides sites/sets with the opportunity to downsize large, noisy diesel generators with smaller ones or move to low carbon solutions, such as battery hybrid units, solar pods or an electricity grid connection from renewable sources.

Erica Inline Monitoring

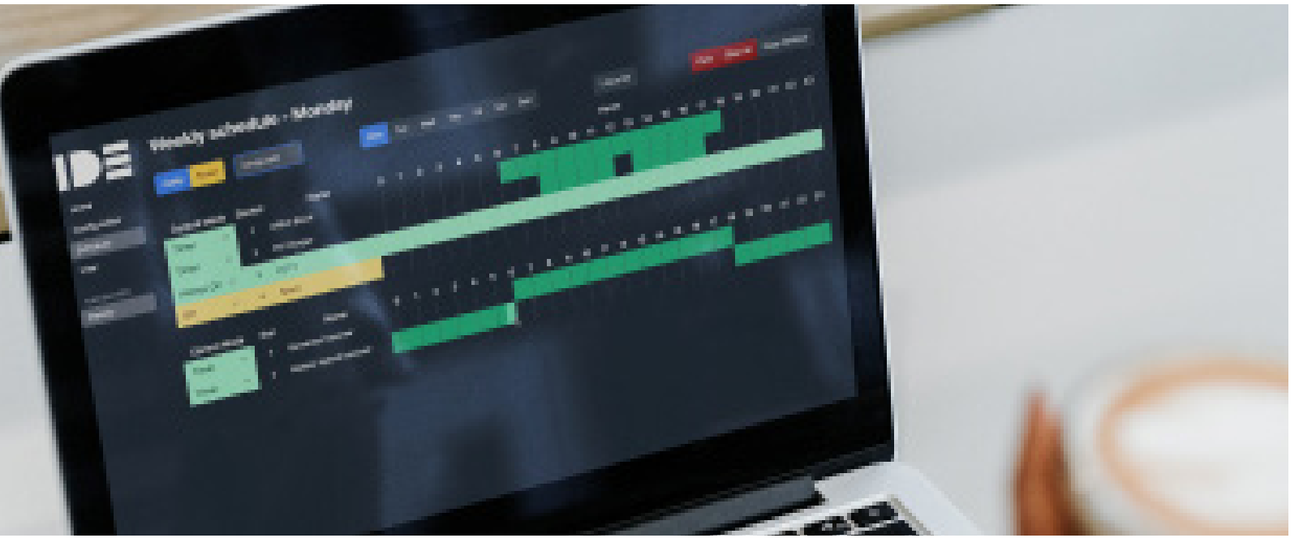
Great solution for quick exercise of monitoring energy for one cable.

Features:

- Inline board containing the Erica module.
- Cloud Based Solution.
- Live data monitoring.
- Connection via WIFI or 4G
- User-friendly dashboard

Product:

- IM32m 32A Inline Monitor + Erica - 32a 3ph
- IM63m 63A Inline Monitor + Erica - 63a 3ph
- IM125m 125A Inline Monitor + Erica - 125a 3ph
- IM400m 400A Inline Monitor + Erica - 400a 3ph
- IM800m 800A Inline Monitor + Erica - 800a 3ph



Erica Energy Management

Great solution for full control and automation onsite.

Features:

- Power Distribution board containing the Erica module, no additional equipment required.
- Cloud Based Solution.
- Capability to turn power on and off by each socket
- Live data monitoring.
- Different profiles and labels for each connection.
- Connection via WIFI or 4G.
- Pre-set power controls.
- User-friendly dashboard.

Product:

- 63a Site Board - 10 slots + Erica Monitoring & Control - 63a 1&3ph
- 125a Site Board - 10 slots + Erica Monitoring & Control - 125a 1&3ph
- 125a Site Board - 20 slots + Erica Monitoring & Control - 125a 3ph
- 125a Site Board - 24 slots + Erica Monitoring & Control - 125a 3ph
- 200a Site Board - 20 slots + Erica Monitoring & Control - 200a 3ph
- 200a Site Board - 24 slots + Erica Monitoring & Control - 200a 3ph
- 250a Site Board - 20 slots + Erica Monitoring & Control - 250a 3ph
- 400a Site Board - 20 slots + Erica Monitoring & Control - 400a 3ph

Product:

- MD075e + Erica Monitoring & Control - 32a 3ph
- MD002e + Erica Monitoring & Control - 63a 3ph
- MD031e + Erica Monitoring & Control - 63a 3ph
- MD063e + Erica Monitoring & Control - 63a 3ph
- MD030e + Erica Monitoring & Control - 125a 3ph
- MD032e + Erica Monitoring & Control - 125a 3ph
- MD125e + Erica Monitoring & Control - 125a 3ph
- MD406e + Erica Monitoring & Control - 400a 3ph

Ecolync Energy Management

Great solution for large construction sites, total power control and load shedding.

Features:

- Cloud Based Solution.
- Capability to turn power on and off by each cabin
- Connection via WIFI or 4G.
- Pre-set power controls.
- User-friendly dashboard.
- Reduces peaks in energy demand automatically,
- enabling a reduction in fuel consumption and carbon
- emissions.
- Individual receiver placed in each cabin to reduce interference.
- Considers the ambient outside temperature so that space and
- water heating can be optimised.

Product:

- Eco Lync Control Unit - 125a 3ph
- Eco Lync Receiver

Integrated Solutions

We can integrate the Erica module into various scenarios.

For example we can place the Erica module into:

- Battery packs
- Generators
- Your own temporary power distribution boards
- Or we can design a bespoke board for your site

Dedicated Erica Support team.

Site Survery
IDE's regional teams can carry out site surveys to identify site power monitoring & control requirements and provide a proposal for implementation.

Erica Site Set Up
IDE's field engineers provide erica power monitoring setup, plus train and support the site on setting erica timers to reduce power wastage on sites.

Energy Reporting
IDE's erica support team provides bespoke energy reports and recommendations to meet your clients reporting requirements.

Product Repairs & Maintenance
IDE offer a repairs and maintenance service for damaged equipment.

Annual Test & Inspection
As well as onsite support, IDE provide annual testing & inspection services for client owned equipment.

IT Services
IDE's IT can provide API connections to enable power data to be integrated into customer's own systems.

Temporary Electric Vehicle Chargers
www.ide-ev.co.uk

A UK manufacturer of Temporary Electric Vehicle Chargers.

Our Electric Vehicle Chargers are portable, robust and a great addition to your temporary power network. They can be added to temporary sites such as events, construction sites as well as film and tv production sets.

Specification:
> Dual Type 2 outlets
> Variable kW rating available (up to 22kW)
> PEN loss detection system
> 6mA DC feedback detection system
> 30mA Earth Leakage Protection
> IP54 rating
> LED socket indicators
> Various payment methods and backoffice systems

All EV chargers are manufactured in the UK by IDE Systems, using quality components. Our team are available for all types of support including installation.

Carbon Impact Product Range

Key Features.

- Set up in minutes.
- Easy to deploy, transport and store.
- Simple plug and play design.
- Portable and free standing.
- Charge up to 2 x electric vehicles at the same time.
- Dynamic load sharing - group of chargers set to a maximum kW.
- EV charger units include an optional cloud-based billing and operating system. Charging sessions are managed via a mobile APP (iOS & Android).

Freestanding EV

Portable, Robust & Reliable, the IDEV SmartCharge AC charging unit has been designed to charge electric vehicles from a temporary power source.

Product:

- Input: 32A 3phase - Output: 1x 22 kW, no feed through.
- Input: 63A 3phase - Output: 2x 7.4 kW, C/W feed through.
- Input 63A 3phase - Output: 2x 22 kW, no feed through.
- Input 32A 3phase - Output: 2x 11 kW or 1 x 22 kW, no feed through.
- Input 63A 1phase - Output: 2x 7.4 kW, no feed through.

Dimensions:
Width: 350mm x Height: 690mm x Depth: 330mm

Weight:
25KG

Portable Smart EV

Portable, Robust & Reliable, the IDEV SmartCharge AC charging unit has been designed to charge electric vehicles from a temporary power source.

Product:

- Input: 63A 3phase - Output: 2x 7.4 kW, C/W feed through.
- Input: 63A 1phase - Output: 2x 7.4 kW, no feed through.
- Input 32A 3phase - Output: 1 x 22 kW, no feed through.
- Input 32A 3phase - Output: 2x 11 kW or 1 x 22 kW, no feed through
- Input 63A 3phase - Output: 2x 22kW, no feed through.

Dimensions:
Width: Width: 430mm x Height: 710mm x Depth: 335mm

Weight:
34KG

Crashframe EV

Portable, Robust & Reliable, the IDEV SmartCharge AC charging unit has been designed to charge electric vehicles from a temporary power source.

Product:

- Input: 32A 3phase - Output: 1x 22 kW, no feed through.
- Input: 32A 3phase - Output: 2x 11 or 1 x 22kw, no feed through
- Input: 63A 3phase - Output: 2x 22 kW, no feed through.
- Input: 63A 3phase - Output: 2x 7.4kw, C/W feed through
- Input: 63A 1phase - Output: 2x 7.4kw, no feed through

Dimensions:
Width: 612mm x Height: 1292mm x Depth: 330mm

Weight:
59KG

Useful Information and Guides.

Electrical Definitions.

Parameter	Designation	Unit
Volts	V or U	V (Volts) sometimes known as (E) electrical difference
Voltage between line to neutral	VL-N	V (Volts)
Voltage between line to line	VL-L	V (Volts)
Current	I	A (Amps)
Resistance	R	(Ohms)
Frequency	f	Hz (Hertz)
Power	P	W (Watts)
The magnitude of real power in units of Watts (W)	|P|	W (Watts)
Reactive Power	Q	VAr (Volts Amps Reactive)
Apparent power	|S|	VA (Volts Amps)
Power Factor	Pf (nominal value 0.8pf)	Dimensionless with the range -1 to +1
Inductance	L	H (Henrys)
Capacitance	C	F (Farads)
Impedance	XL or XC Inductive or Capacitive	(Ohms)
Phase angle of current relative to voltage in degrees	(Pronounced Phi)	Degrees
Square root of 3	3 (1.732)	3 phase calculations

Types of breakers.

MCB (Miniature Circuit Breaker) Often used in smaller power applications where the voltage does not exceed 400V

MCCB (Moulded Case Circuit Breaker) Often used in larger power applications for use up to 690V

RCBO (Residual Current Circuit Breaker with Overload is an RCD/RCCB) with overload protection

ELR (Earth Leakage Relay) is a device that, combined with a CT (Current Transformer) detects current differential between phase and neutral. Ultimately determining earth leakage used with a Shunt can operate a MCB or a MCCB (to the off position)

IP Explanation and Ratings.

BS EN 60529 outlines an international classification system for the sealing effectiveness of enclosures of electrical equipment against the intrusion of foreign bodies (i.e. tools, dust, fingers and moisture). This classification system utilizes the letters “IP” (“Ingress Protection”) followed by two or three digits. (A third digit is sometimes used. An “x” is used for one of the digits if there is only one class of protection; i.e.
IPX4 which addresses moisture resistance only).

Degrees of Protection - First Digit

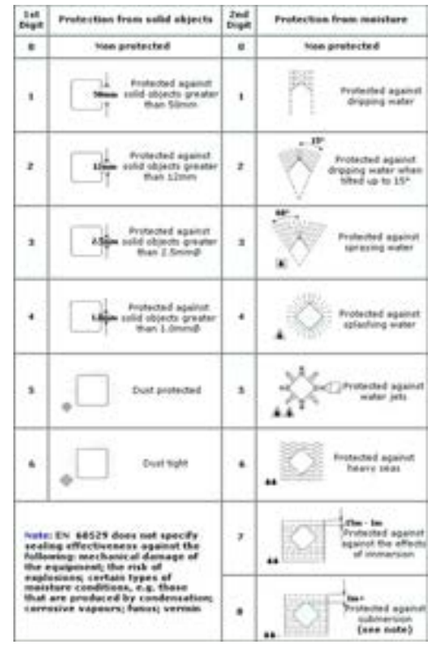
The first digit of the IP code indicates the degree that persons are protected against contact with moving parts (other than smooth rotating shafts, etc.) and the degree that equipment is protected against solid foreign bodies intruding into an enclosure.

0	No special protection
1	Protection from a large part of the body such as a hand (but no protection from deliberate access); from solid objects greater than 50mm in diameter
2	Protection against fingers or other object not greater than 80mm in length and 12mm in diameter
3	Protection from entry by tools, wires, etc., with a diameter of thickness greater than 1.0mm
4	Protection from entry by solid objects with a diameter or thickness greater than 1.0mm
5	Protection from the amount of dust that would interfere with the operation of the equipment
6	Dust tight

Degrees of Protection - Second Digit

The second digit indicates the degree of protection of the equipment inside the enclosure against the harmful entry of various forms of moisture (e.g. dripping, spraying, submersion, etc.) Submersion depth and time must be specified by the end-user. The requirement must be more onerous than IP67.

0	No special protection
1	Protection from dripping water (vertical)
2	Protection from dripping water (@ 15°)
3	Protection from sprayed water
4	Protection from splashed water.
5	Protection from water projected from a nozzle
6	Protection against heavy seas, or powerful jets of water.
7	Protection against immersion
8	Protection against complete, continuous submersion in water



The IP Code Symbols

The chart opposite illustrates the use of special symbols in the IP classification system. In the “1st digit” column, not the grid-like symbols net to numbers 5 and 6. In the “2nd digit” column numbers 3-8 are symbolised by teardrop shaped symbols, sometimes enclosed in a box or a triangle, sometimes unenclosed (#7-8). These symbols can be placed on equipment to illustrate the IP protection provided.

Cable and kVA Charts.

Cable Data

H07RN-F is a double insulated, Ethylene Propylene Rubber, flexible cable (usually black) designed to withstand: the weather, oils/greases, mechanical and thermal stresses. Applications include: industrial environments, mobile power supplies, worksites, events for audio and visual equipment, drainage and water treatment, and dams and port areas. Conforms to BS EN 7919.

H07RN-F

No. x Cross Sectional Area (mm2)	Max Current In Free Air (A@30˚C)	Approx. Overall Diameter (mm)	Approx. Cable Weight (kg/m)	Approx Voltage Drop (V/ km)	Gland Size (Brass mm)	Gland Size (Plastic mm)
1 x 35	162	18.5	0.52	1.1	25	25
1 x 50	198	21	0.72	0.77	25	32
1 x 70	256	23.5	0.97	0.57	32	32
1 x 95	314	26	1.24	0.46	32	32
1 x 120	365	28.5	1.54	0.38	32	40
1 x 150	422	31.5	1.89	0.32	40	40
1 x 185	484	34.5	2.3	0.26	40	40
1 x 240	573	38	2.94	0.23	50S	50
1 x 300	663	41.5	3.66	0.2	50	N/A
3 x 2.5	29	14.5	0.21	14	20	20L
3 x 6	52	20	0.39	5.7	25	25
3 x 16	86	29.5	1.0	2.2	32	32
3 x 35	140	38	1.89	1.0	50S	50
5 x 2.5	29	17	0.32	14	25	25
5 x 6	52	24.5	0.63	5.7	32	32
5 x 16	86	35.5	1.53	2.2	40	40
5 x 35	140	41.5	3.59	1.0	50	N/A
18 x 1.5	22	23	0.7	23	32	32

kVA Ratings

The generator kVA rating to ampere conversion chart below is assuming a power factor of 0.8.

		Single Phase			Three Phase					
kW	kVA	220V	230V	240V	380V	400V	415V	440V	460V	480V
6	7.5	34.1	32.6	31.3	11.4	10.8	10.4	9.8	9.4	9.0
9	10.0	45.5	43.5	41.7	15.2	14.4	13.9	13.1	12.6	12.0
12	15.0	68.2	65.2	62.5	22.8	21.7	20.9	19.7	18.8	18.0
16	20.0	90.9	87.0	83.3	30.4	28.9	27.8	26.2	25.1	24.1
20	25.0	114.0	109.0	104.0	38.0	36.1	34.8	32.8	31.4	30.1
24	30.0	136.0	130.0	125.0	45.6	43.4	41.7	39.4	37.7	36.1
32	40.0	182.0	174.0	167.0	60.8	57.7	55.6	52.5	50.2	48.1
40	50.0	227.0	217.0	208.0	76.0	72.2	69.6	65.6	62.8	60.1
48	60.0	273.0	261.0	250.0	91.2	86.6	83.5	78.7	75.3	72.2
60	75.0	341.0	326.0	313.0	114.0	108.0	104.0	98.4	94.1	90.2
80	100.0	455.0	435.0	417.0	152.0	144.0	139.0	131.0	126.0	120.0
100	125.0	568.0	543.0	521.0	190.0	180.0	174.0	164.0	157.0	150.0
120	150.0	682.0	652.0	625.0	228.0	217.0	209.0	197.0	188.0	180.0
140	175.0	795.0	761.0	729.0	266.0	253.0	243.0	230.0	220.0	210.0
160	200.0	909.0	870.0	833.0	304.0	289.0	278.0	262.0	251.0	241.0
200	250.0	1136.0	1087.0	1042.0	380.0	361.0	348.0	328.0	314.0	301.0
240	300.0	1364.0	1304.0	1250.0	456.0	433.0	417.0	394.0	377.0	361.0
320	400.0	-	-	-	608.0	577.0	556.0	525.0	502.0	481.0
400	500.0	-	-	-	760.0	722.0	696.0	656.0	628.0	601.0
480	600.0	-	-	-	912.0	866.0	835.0	787.0	753.0	722.0
560	700.0	-	-	-	1064.0	1010.0	974.0	919.0	879.0	842.0
640	800.0	-	-	-	1216.0	1155.0	1113.0	1050.0	1004.0	962.0
720	900.0	-	-	-	1367.0	1299.0	1252.0	1181.0	1130.0	1083.0
800	1000.0	-	-	-	1519.0	1443.0	1391.0	1312.0	1255.0	1203.0
1000	1250.0	-	-	-	1899.0	1804.0	1739.0	1640.0	1569.0	1504.0
1200	1500.0	-	-	-	2279.0	2165.0	2087.0	1968.0	1883.0	1804.0
1400	1750.0	-	-	-	2659.0	2526.0	2435.0	2296.0	2197.0	2105.0
1600	2000.0	-	-	-	3039.0	2887.0	2782.0	2624.0	2510.0	2406.0

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