



erica

Onsite Power Monitoring Tool



Reduce Power Wastage, Costs
and Carbon Emissions.

We're on your side.

erica by IDE is a smart power monitoring solution which plays an important role in designing cost effective and low carbon solutions for temporary and fixed power installations.



By measuring power loads over time, and across an entire site installation the power needs can be analysed to determine the best mix of diesel generator, hybrid and alternative power sources.



The cloud based solution developed by IDE for the temporary and fixed power market delivers multi-socket power circuit monitoring with full cloud based data recording, and real time load measurement in a cost effective package.



The monitoring solution can be fitted to the complete range of site distribution boards supplied by IDE or as part of a permanent installation. It requires no specialist knowledge for installation.

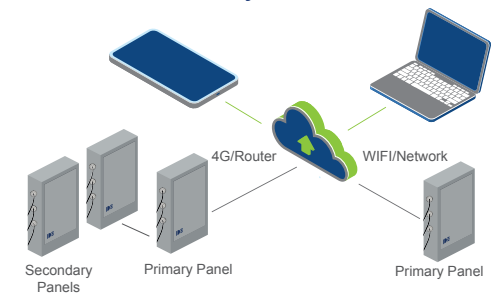
Installation

Site installation can be carried out by the usual electrical team, and uses either an on site internet connection or a 4G independent router.

Each measurement channel is labelled to reflect the usage e.g. Canteen, Site Office etc., and reports are generated to show power usage, with the capability to update every 5 seconds.

Multiple systems can be connected together to use a single data connection, with a combined report of all connections.

Cloud Based Control System



Reporting

View detailed power usage reports through the widely used Microsoft PowerBI reporting suite. Totally customisable for your needs, grouping data and providing drill down. IDE provide standard report templates to get you going, and can develop bespoke solutions.

Whether it's understanding maximum power needs, identifying trends or highlighting out of hours power, usage reports give clear information to act upon. The live monitoring dashboard gives real time power data helping you to monitor usage and pre-empt breakdown or potential overloading.



Live Readings

U3 Phase	Energy	RMS Current	RMS Voltage	Active Power	Apparent Power	Peak Current	Trips Status	Current Rating
1	2176.774	0.514	V1 228.7	1.191	1.501	0.514	OK	32
2	219.384	0.149	V1 228.7	0.218	0.346	0.150	OK	32
3	2242.417	0.754	V1 228.7	1.724	1.786	0.772	OK	32
4	0	0	V1 228.7	0	0.001	0.002	OK	32

Optimising Power Distribution.

By using detailed power measurement these estimates can be refined and the solution optimized.

Optimising Power Distribution

When designing a temporary power network there are many criteria to consider, and this can change over time as requirements change. Many of these criteria are just assumed from "rule of thumb", or based on worst case scenarios. By using detailed power measurement these estimates can be refined and the solution optimized.



How much power do I need?
What is my peak requirement, and for how long?
How close to the limit is my system at every point?
Who is using the most power and for what?
Is my generator over /under sized?
Can I use hybrid solutions to improve generator efficiency and reduce emissions per kwh?
How much power am I losing in my cables?
What is my diversity across the site?

Benefits

Benefits will depend on current utilisation and source of power. From case studies data has shown generators typically at 35-40% loading, with peaks rarely above 45%. Therefore many generator sizes could be reduced by 1/3 saving fuel and emissions with no end user change.

Identifying wasted power can drive further reduction, saving cost. As part of a carbon reduction programme erica can identify savings, and support compliance with low environmental impact policies.



Lower cost per kWh



Lower emissions per kWh



Reduced generator maintenance costs



Higher reliability



Ability to charge per Kw used, encouraging power saving



Better experiences for onsite personnel and event goes through reduced air pollution

IDE is ideally placed to rent or sell erica enabled distribution equipment to meet your need. The solution can also be managed by IDE providing an easy to access reporting suite with full back up from our qualified teams. If you need help understanding how to improve your power network, IDE can deliver a full analysis report and suggest ways to achieve your goals, whether it's cost reduction, improved reliability, carbon reduction or a combination.

New Feature:

Erica has the ability to pro-actively switch off power to different cabins at the appropriate times, and can be easily set up on site or via web access.

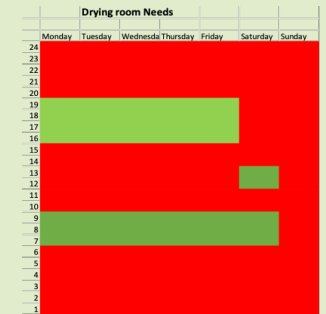
Construction sites have many different uses of power, but one of the main needs is staff welfare, covering drying rooms, canteen and office facilities.

Erica monitoring has shown that site discipline in turning off heaters and lighting during non-working time is inconsistent, and more often these are left on 24/7.

Drying rooms are used to store and dry employee's clothes, and are mainly needed at the end and beginning of shifts. By setting a power profile to provide heating when needed, then turning off after the drying period, significant power can be saved. In the example, the drying room comes on an hour before the end of working time, and stays on for 3 hours afterwards to dry equipment. It then turns off through the night, which would normally be left on as no one is on site. Savings below:

Up to 128 hours saved

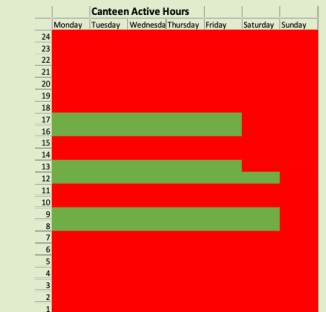
270 kg of CO₂



Canteen facilities may only be needed at break times, and could be heated at these times only. In the example heating would be required for only 33 hours a week. Savings below:

135 operating hours saved

280 kg of CO₂



Erica can have different profiles for each connection, and be set in 30 minute sections throughout the day. It also provides a simple "power boost" function that will enable sockets for an hour should an onsite need arise.

With web access alongside timed control, Erica can also be set up with advanced algorithms to control peak loads and share power amongst outlets. For instance, when used with IDEV chargers, these could be enabled when drying rooms are off, but disabled when they are on. This helps in controlling the maximum power on site and therefore, the possibility of reducing generator size.

Erica enabled products.

Erica enabled products provide real time monitoring and data capture, and work with IDE's remote monitoring and analysis solutions. They can be specified with WIFI or 4G connectivity.



MD2 - e

A 63A three-phase (400V) power distribution box designed to distribute temporary power from one area to another. The 63A plug and play temporary power distribution board is easy to relocate across site and blends in with the surrounding environment. All switchgear and Tri-rated wiring is housed within a purpose built high density polyethylene enclosure (HDPE) , with recessed socket and switchgear panels for mechanical protection.

Specification:

- > Incomer: 63A 400V 3P+N+E IP67 Appliance Inlet. Protection: 63A 4 Pole C-Type MCB
- > Outgoing: 6 x 32A 230V 1P+N+E IP44 Pnl Mnt Skt. Protection: 6 x 32A 2 Pole 30mA RCBO
- > Outgoing: 12 x 16A 230V 1P+N+E IP44 Pnl Mnt Skt. Protection: 12 x 16A 2 Pole 30mA RCBO
- > Outgoing: 63A 400V 3P+N+E IP67 Pnl Mnt Skt (through). Protection: N/A
- > Dimensions: H610 x W525 x D470 (mm)
- > Weight – 32kg



MD32 - e

The enclosure is fabricated from black 10mm thick 300-grade high density polyethylene, offering good impact resistance, chemical resistance and high rigidity. Density of 0.96 g/cm³, less than 0.01% moisture absorption, service temperature from -50 to +80°C with greater than 1014 surface resistance. IK09 Rated.

Specification:

- > Incomer: 125A 400V 3P+N+E IP67 Appliance Inlet. Protection: 125A 4 Pole MCCB
- > Outgoing: 63A 400V 3P+N+E IP44 Pnl Mnt Skt. Protection: 63A 4 Pole C-Type MCB
- > Outgoing: 2 x 32A 400V 3P+N+E IP44 Pnl Mnt Skt. Protection: 2 x 32A 4 Pole 30mA RCBO
- > Outgoing: 12 x 32A 230V 1P+N+E IP44 Pnl Mnt Skt. Protection: 12 x 32A 2 Pole 30mA RCBO
- > Outgoing: 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



MD402 - e

The enclosure is fabricated from black 10mm thick 300-grade high density polyethylene, offering good impact resistance, chemical resistance and high rigidity. Density of 0.96 g/cm³, less than 0.01% moisture absorption, service temperature from -50 to +80°C with greater than 1014 surface resistance. IK09 Rated.

Specification:

- > Incomer: 400A 400V 3P+N+E Powerlock Drain Connectors. Protection: 400A 4 Pole MCCB
- > Outgoing: 400A 400V 3P+N+E Powerlock Source Connectors(through). Protection: N/A
- > Outgoing: 3 x 125A 400V 3P+N+E IP67 Pnl Mnt Skt. Protection: 3 x 125A 4 Pole MCCB c/w Adjustable/Switchable Earth Leakage
- > Outgoing: 3 x 63A 400V 3P+N+E IP67 Pnl Mnt Skt. Protection: 3 x 63A 4 Pole C-Type MCB & 100mA RCD
- > Outgoing: 3 x 63A 230V 1P+N+E IP67 Pnl Mnt Skt. Protection: 3 x 63A 2 Pole C-Type MCB & 100mA RCD
- > Outgoing: 3 x 32A 400V 3P+N+E IP67 Pnl Mnt Skt. Protection: 3 x 32A 4 Pole 30mA C-Type RCBO
- > Outgoing: 2 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
- > Weight 110kg

Erica enabled products.

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SD125 - e

The 125A site distribution board has a bottom entry 3mm aluminium gland plate, top mounted rain cover, and pre-punched sides to allow for socket mounting (16A, 32A & 63A - IP44 & IP67). The enclosure is mounted within a galvanized box section floor stand which can be easily relocated across site. The equipment has an incoming 4 pole thermal magnetic strip and optional adjustable/switchable incoming earth leakage can be added if required. The 4 pole busbar distribution system allows an easy connection for 2 pole and 4 pole outgoing devices such as RCD's and RCBO's. The internal earth bar is bonded to external studs on enclosure and frame. The equipment has an incoming 125A IP67 flying lead to allow for connection to a temporary generator.

Options:

- > 230V - 400V single and three phase - 50hz
- > Interchangeable socket outlets from 16A - 63A
- > IP44 or IP67 available
- > Glanded hardwire facility
- > MCB'S have C - type trip curves, all RCD's and RCBO's are type A
- > IP rating: IP54 up to IP65
- > Stainless steel 1.4003 or Zintec 2.00 mm enclosures available
- > Door interlocking pad lockable handle
- > Secondary door for access to main supply for safe isolation
- > Galvanised crash frame, forklift pockets and lifting points
- > Optional switchable and adjustable earth leakage
- > External earth stud on crash frame and enclosure
- > RAL colours available upon request



SD200 - e

200A temporary site distribution board designed for use on construction sites and temporary electrical installations. The 200A temporary site distribution board is manufactured from stainless steel and features a hardwired facility with a glanded incomer, which allows the solution to be connected directly to a standby generator. We offer a range of interchangeable single and three phase socket outlets which can be fitted to the temporary site distribution board based on the requirements of your project.

Options:

- > 230V - 400V single and three phase - 50hz
- > Interchangeable socket outlets from 16A - 63A
- > IP44 or IP67 available
- > Glanded hardwire facility
- > MCB'S have C - type trip curves, all RCD's and RCBO's are type A
- > IP rating: IP54 up to IP65
- > Stainless steel 1.4003 or Zintec 2.00 mm enclosures available
- > Door interlocking pad lockable handle
- > Secondary door for access to main supply for safe isolation
- > Galvanised crash frame, forklift pockets and certified lifting points
- > Optional switchable and adjustable earth leakage
- > External earth stud on crash frame and enclosure
- > RAL colours available upon request



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.

Speak to an IDE Adviser.

Contact us today to see how we can help with your project.

Call us:
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