



QUALITY DELIVERED
Locally • Nationally • Internationally

CONTENTS

ABB	3 - 6
TE Connectivity/Seacon	7 - 8
Roxtec	9
nVent/Enclosures	10
Cable Glands and Accessories	11 - 12
Electrical Consumables	13- 15
Control Transformers	16 -17
Power Supplies	18
Instrumentation Products	19
Fuses	20
Metric Fasteners	21
Industrial Batteries	22
Thermal Management Systems	23 - 24
Industrial & Hazardous Area Lightings	25 - 26
Cable, Containment & Accessories	27 - 29
Industrial Plugs & Sockets	30
Earthing Conductor	31
Electrical Measurement Products	32
Marine Products	33 - 34
Fire Detection	35 -36
Digital Multimeters	37



Introduction



AEL has become a leading electrical supply company that provides world-class quality products to a diverse sector of industries.

Our processes, systems and people ensure our in-house technical expertise, reliability, integrity and value for money is always in focus, 'On time, Every time'. Our Excellence spans over three continents and covers strategic markets in the UK, USA, Mexico and the Caspian and Middle Eastern region.



History



AEL were founded in 1981 in Aberdeen as a Family business and have grown strategically over the years expanding to Houston in 2014, Baku in 2015 and Mexico in 2019.

Our reputation is built on our commitment to providing our customers with high quality electrical products that meet industry standards, such as IECEx/IEC/ATEX.



Our Vision and Values

At AEL our vision is always focused around our customers and their experience. Our robust systems, technical expertise and continual pursuit for improvements ensures we uphold our values to be on time, every time. We strive to be the international leader in the supply of electrical products and services and our commitment to constantly keep up with technological advancements and innovation reflects this.



ACCOUNTABILITY

Take responsibility for our actions, while remaining open to feedback and willing to change.

Do what's right for our customers and always do what we say we will.



EXCELLENCE

Develop and maintain strong, long lasting relationships by delivering on promises and providing great service
Encourage our people to think pro-actively and continually look for new ways to exceed customer expectations.



LEARN

Support the learning and development of our most important asset, our people. Learn from our experiences by developing our skills and knowledge which will help to enhance our relationships with our customers.



Our Quality Standards





AEL are ABB Valued providers supplying a complete range and portfolio of industrial technology products for customers in utilities, industry, transport and infrastructure.



Air Circuit Breakers

The best solution for restoring the service condition rapidly in case of fault, providing at the same time optimum protection of the electrical installation.

From the miniature circuit-breakers to the molded-case and air circuit-breakers of the standard and high-breaking capacity type, with the AEL range, every technical problem has been solved.

A reliable and advanced reply which, thanks to the interaction of electronics, is also present today in the control and operation stages of electrical installations.



Changeover Switches

Our change-over and transfer switches are designed to transfer loads from one power source to another in a wide variety of applications.

The range includes switches from 16 to 2500 Amperes, which can be operated manually, remotely by using a motor or automatically.



Contactors

The range comprises 4 and 5.5 kW mini-contactors, block contactors up to 560 kW (AC3), installation contactors for domestic and industrial use, bar-mounted contactors, thermal and electronic overload relays, and a wide range of add-on accessories ensuring flexibility and adaptability to customer specifications.



Distribution Boards

Offering a wide range of main distribution boards for every application, including modular conceptions, distinguished by multiple combination and customized construction possibilities.



Electronic Products & Relays

Providing low voltage electronic relays (thermistor relays, timer relays, monitoring relays, safety relays, interface relays, solid state relays, etc.) as well as protective relays for generators, transformers and substations.



Enclosures

From single family houses, multiple dwellings, industrial constructions like office and administration buildings, airports to special products, efficient enclosures and cable systems are used wherever power is metered and distributed.



Form 4 Type Mains Boards

Complete factory built assemblies can be specified for individual projects, on which the factory will be pleased to advise.



Manual Motor Starters

Manual Motor Starters (MMS) are protection devices for the main circuit. They combine motor control and protection in a single device.



Motors

A comprehensive range of reliable and high efficiency motors and generators for all applications. We have what it takes to help every industry and application reach new levels of efficiency and energy savings even under the most demanding conditions.

Combining the best available materials with superior technology, the electric motors and generators are designed to operate reliably no matter how challenging the process or application, and to have low life cycle costs.



Molded Case Circuit Breakers

Offering one of the most comprehensive lines of MCCB's with current ratings from 16A to 3200A and interrupt ratings up to 200kA at 480V.

Geared for Industrial, Commercial and OEM applications, when it comes to ready availability, easy installation, and quality, you need a supplier you can trust.

Products on offer are engineered to take on the most demanding conditions day after day.



Pilot Devices

The Modular Range includes operators, holders, contact blocks, lamp blocks and LED blocks that can be combined to get the required function.

Snap on feature reduces installation time and spring loaded tabs ensure that actuators and legend plates are in correct position.



Variable Speed Drives

A variable speed drive can reduce energy consumption by as much as 60%. For a 90 kW motor in continuous duty, this can mean over £9,000 per year. This is because the variable speed drive reduces the amount of energy drawn by the motor.



Miniature Circuit Breakers

MCBs are used throughout the world in all types of electrical installations. AEL can provide MCBs that are recognized by UL and CSA as supplementary circuit protectors in systems rated 240VAC and 480VAC.

MCBs are approved per IEC-898 and VDE 0641, and certified under IEC-947 and VDE 0660 standards for use in systems rated 415VAC.

MCBs can be applied to 16 2/3Hz – 400Hz and DC power systems. Continuous current ratings are as low as 0.2 amperes and up to 63 amperes maximum.

MCBs are of compact size and can be quickly mounted on standard 35mm DIN rail or can be front mounted by use of a front mounting kit. MCBs include line and load side terminals for conductors from 18 through 4AWG (0.75 – 25mm²).



PLC's

The supplier of choice for small equipment control applications to complex systems like web presses and distributed systems. AEL supply some of the fastest and most reliable PLC's available.



Switch Disconnectors

The switch-disconnector is largely used as the main switch in low voltage switchgear for distribution of power, starting and stopping motors and isolating loads during maintenance.



Switchfuses

From 16 to 1250 Amp, up to 690V. The switch fuse is used as the main switch in low voltage switchgears in the industry for distributing power and protecting motors, cables and other devices against short circuits and overloads.



Slim line Switch Fuses

The compact design of Slim Line fuses offer space saving solutions for the end user. This results in a cost effective switchboard system for a number of applications.



Softstarters

Softstarters are compact, multi-functional, easy to install, and easy to program. They are designed to control acceleration and deceleration of three-phase motors, with options available for current ranges from 3.6A through to 1810A.



Terminals

Improved usage of storage facilities and more efficient dispatching of products give faster turnaround with increased profitability.



ALTERNATIVE MANUFACTURERS ON OFFER





AUTHORIZED DISTRIBUTOR

AEL are distributors for TE Connectivity/Seacon supplying electrical and electronic products, engineered to reliably connect and protect the flow of data, power, and signal in electric vehicles and aircraft, digital factories and smart homes, life-saving medical devices, efficient utility networks, and the global communications infrastructure.

55 Series

This series of underwater electrical connectors has design features superior to other industry standard connectors, whilst remaining compatible and interchangeable with them. The 55 SERIES of dry-mate connectors are available in 5 shell sizes and are manufactured from 316L Stainless Steel as standard, although other materials such as Titanium, Aluminium Bronze and Alloy 625 are also available as options.



Mini Con

SEACON's well established MINI-CON range was originally developed for the purpose of supplying small diameter, high density and high pressure connectors.

Dry mateable, this connector series is manufactured from 316 Stainless Steel as standard, although other materials are available upon request including Titanium and Monel®.

Mini-Con

The inserts are manufactured from GLASS REINFORCED EPOXY (GRE) with copper alloy, gold plated contacts although glass sealed inserts are also available for high pressure applications. The MINI-CON series also offers optical and hybrid versions along with PBOF, PBOF-HP (High Pressure), reversed miniature inserts and self wiping miniatures.



Wet-Con and Micro

SEACON's WET-CON connector series was developed to provide inexpensive yet reliable rubber moulded connectors that allow the user to make and break connections both on the surface and underwater. The small size offers the same flexibility and reliability as our rubber moulded connectors, in a light-weight and user friendly model.

Manufactured using only high quality materials, the WET-CON bulkhead connector's metal shell is produced using DGS 1043 (UK spec) or CA630 per QQ-C-465 as standard, although other materials are available upon request including PEEK (Polyetheretherketone). Contacts are gold plated to MIL-G-45204 providing superior corrosion resistance.

The Micro WET-CON series allows for smaller through ports in a pressure vessel and a greater density of conductors in a compact area.



Opti-con Connector

As organizations in the subsea industry develop more applications with fibre optic technology in mind, there has been a dramatic increase in the quantity and complexity of electro-optic connector configurations needed to fit these applications. In order to meet the changing requirements of customers, TE has developed a comprehensive and extensive range of fibre optic products which are designed and manufactured to meet the specific and varied environmental conditions imposed on connectors today.

Our standard SEACON dry-mate optical products are based around three connector ranges; the MSS (Metal Shell Series), MINI-CON and OPTI-CON series which was developed in response to a need for a standard high quality electro-optic connector. TE can offer optical dry-mate, wet-mate, optical penetrators and optical fibre management systems.



Ethernet Connectors

As cable assemblies move into harsh subsea environments, component and termination choice becomes critical to overall system success. TE rigorously tests and evaluates its SEACON range of Cat5 and Cat5e Ethernet connectors to help ensure they can withstand harsh environments without impacting Ethernet cable performance.

Offering a wide range of dry-mate and wet-pluggable connectors suitable for Cat5 and Cat5e Ethernet applications. By utilizing already established connector designs, adding new cable solutions and applying specialized termination methods, we've developed a high integrity range of Ethernet cable assembly solutions that allows for high data transmission rates even in harsh environments.



Rubber Molded Connectors

TE Connectivity (TE)'s standard SEACON Rubber Molded connector series typically consists of an in-line female neoprene connector mated to a Glass Reinforced Epoxy (GRE) bulkhead connector. Various sizes are available ranging from single contact connectors up to 12 contact connectors. Most Rubber Molded connectors are available with pins and sockets reversed to help prevent mismatching of connectors, which otherwise look identical.

This also allows for socket type contacts in a connector where there is a possibility of a "power-on" situation. Many of the bulkhead type connectors are available in 316 stainless steel. Male in-line connectors round out the series allowing for in-line mated sets not requiring bulkhead penetration. In addition, the WOC (without cable) type connectors allow for field installation in the event that a connector is damaged while at sea and needs replacing, or for long cable lengths that make cable transportation cost prohibitive.



Hydralight Connectors

HydraLight optical wetmate connector enables high performance and reliability in many of the harshest subsea environments. It is offered in a standard 8 way configuration with Ultra Physical Contact (UPC) contacts. Angled Physical Contact (APC) contact configurations are available in 8 / 12 / 24 way. High performance, high reliability. HydraLight connectors have been sold worldwide. The connectors that have been installed underwater now have an accumulated operating time in excess of 290 million hours, yielding a Mean Time Between Failure (MTBF) of better than 61 million hours with a 99% confidence level.

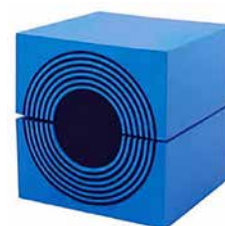




AEL are distributors for Roxtec who develops, manufactures and delivers flexible sealing solutions for cable and pipe penetrations. Roxtec modular-based transits are used for cable sealing and pipe sealing in numerous demanding industries and projects worldwide as the seals provide certified protection against multiple risks, including fire, gas and water.

Modules

A sealing module consists of two halves, and has removable layers and a centre core. One single module can seal a cable or pipe over a span of several different diameters simply by peeling layers from the module halves. This ensures a perfect fit.



Transit Frames

Our range of transit frames, for both welding and bolting, meet the stringent demands of offshore and maritime applications. Frame units are cut, welded, ground and stamped with date of manufacture and material specification for identification and traceability. The complete frames are inspected and then dipped in a corrosion-resistant paint before being inspected for quality.



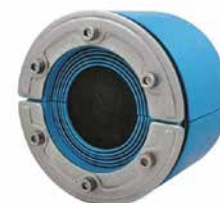
Insert Blocks

Insert blocks are manufactured from Lycron, a synthetic halogen-free polymer containing a lubricant that was specially developed according to our specifications to withstand fire, explosions, temperature variation, ageing, radiation and pests. The blocks are injection moulded to give precision components with a high degree of accuracy.



Cable & Pipe Seals

The SR Gland is designed to seal cables and pipes between 4 and 100 mm diameter. It can be supplied cut to allow pre-terminated cable/pipe to be installed. It is supplied with a centre core providing a seal prior to cable installation. Once complete, the seal will provide an effective barrier against fire, water, dust, vermin, etc.



EMC Solutions

On certain ships, offshore installations and land-based buildings, protection is required against electromagnetic pulse (due to lightning or nuclear blast) and interference, electronic sabotage (synthetic EMP) and static electricity. Such protection puts special demands on the design of transit components. Electrical interference is usually combated in transits by including a tempered metal sheet in blocks and components, which together systematically stop electrical disturbance from passing along the cable screening through the seal and successfully act as an extended wall screen.





AEL are distributors for nVent who a leading designer and manufacturer of electrical enclosures to safeguard your people and equipment.

Mild Steel Enclosures

Providing the range of mild steel IP 66 & NEMA Type 4 & 12 wall mounted enclosures that have been designed with the user in mind. Practical, efficient and with a wide range of standard sizes and accessories available from stock, the Multimount range offers a solution to virtually every application, or can be easily customized to suit specific requirements.



Stainless Steel Enclosures

The range of stainless steel (including grade 316) IP 66 & NEMA 4X enclosures designed with cleanliness and ingress protection in mind, as well as high resistance to corrosion which ensures performance of equipment.

Intended for harsh environments, the ASR range is the ideal solution for food and chemical industries, pharmaceutical plants, outdoor applications, offshore marine environments.



FRP Enclosures

These enclosures are made of fibreglass reinforced polyester. They are particularly robust, resistant to corrosive chemicals and are unaffected by rust. Because of this, they are strongly recommended for use in corrosive environments (quay sides, chemical industries, dairies, etc.) and applications exposed to the weather elements. Classed as "double insulated", they are especially suited to harsh/ hazardous environments.



Terminal Boxes

Choosing the right terminal box for your application is not a problem, with over 150 standard sizes available in six different types of material, we know we have the perfect box for you! Or if it's not available as standard, we can supply it on request. Although a relatively simple box with a screw on lid, we have still made sure our range has all the right approvals.



CABLE GLANDS AND ACCESSORIES

We are committed to meeting your needs and finding solutions. With an extensive range of Cable Glands and Accessories we are confident we have the product to meet your requirements.



Hazardous Area Cable Glands

Cable gland range incorporates innovative features that along with safety, enable faster installation, facilitate inspect ability of the cable gland in its operable condition, prevent corrosion of the cable armour/braid and in some cases help to go beyond the requirement of merely having the appropriate certification.



EX Adaptors. Reducers. Stopping Plugs

Adaptors, Reducers, and Stopping Plugs are designed to provide flexibility and versatility in the execution of construction works when there is a conflict between the type or size of the cable gland thread and the cable entry hole in the equipment.



Gland Accessories

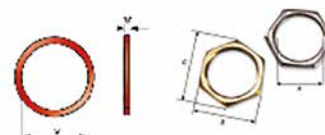
Providing slip on Earth Tags, installed between the cable gland and equipment, provide an earth bond connection as specified in BS6121:Part 5:1993 and also complies with category "B" rating specified in EN50262:1999.

Available in Stainless Steel as standard "shake-proof" Serrated Washers provided by AEL are fitted internally to the equipment and before a locknut act as an anti-vibration device to prevent the cable gland or other cable entry device and locknut arrangement from inadvertently loosening in service.

Fibre Sealing Washers are suitable for use on cable gland entry threads, to maintain ingress protection rating at the enclosure.

Nylon Washers are used to maintain ingress protection rating at the enclosure. Retaining 'pins' make nylon washer captive on metric cable gland entry thread.

Brass Locknuts are the recommended items used in securing brass cable glands, unions, adaptors, reducers, and stopper plugs to a gland plate or into equipment.

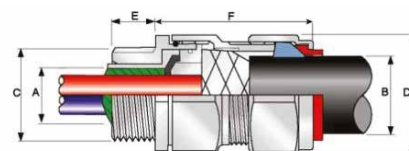


Providing earthing, grounding, bonding, insulation and strain relief

LET US HELP YOU FIND THE RIGHT CABLE GLANDS

Liquid Pour Resin Barrier Cable Gland

LPR cable gland is the revolutionary method for installing barrier glands. The LPR cable gland utilizes a liquid pour resin barrier seal, that vastly reduces installation time and associated costs. This solution is particularly effective on multi-core cables where traditional compound is difficult and time consuming to apply.



Flexible Conduits

With over 26 different metal conduit and 21 different non metallic conduit systems to choose from we are sure to have a system to meet your application. Systems are available in a wide variety of sizes, ranging from 10mm up to 106mm, manufactured from a range of materials with or without coverings/over braiding so to offer different properties.



Elbow Glands

Constructed from either brass, nickel-plated or stainless steel, with a nylon seal and epoxy resin, the Group I 90 degree flame-proof gland is a high quality, high specification product, ideal for Ex I & II 2 GD gas and dust, Exde IIC and Exe II applications.



EX Adaptors, Reducers, Stopping Plugs

With a comprehensive range of Adaptors, Reducers and Stopping Plugs provide a method of matching thread forms on hazardous area approved equipment whilst ensuring the integrity and approval of the installation is maintained.

Enlargers (/E) are used where the thread size of the Female side of the device is larger than the male side.

Reducers (/R) are used where the thread size of the female side of device is smaller than the male side.

Thread Converters (/TC) are used where a conversion is required between thread types, e.g. Metric to PG.

Manufactured in the UK, this new range of converters meets the latest ATEX / IECEx & CSA / UL standards. This means that all the standards are marked on the product around the main body. This allows for them to be seen easily once installed, a key component of the new standard.



ELECTRICAL CONSUMABLES

An extensive range of Electrical Consumables, we are confident we have the product to meet your requirements.



Cable Jointing

3M Cable Joints reduce time, labour and the cost that comes with electrical cable jointing. With over 30 years of cable jointing experience our extensive range of Low, Medium, High Voltage and Cold Shrink solutions offer reliability and ease of use when tackling a wide range of installations and voltages.



Electrical Earthing

3M offer a range of earthing solutions from shielding and grounding braid to constant force springs and earth bonding kits.



Electrical Tapes

Preferred by professionals, 3M Electrical Tapes and Mastics provide dependable insulation, moisture seals, mechanical protection, and colour-coding identification.



Resins

3MTM Resins provide a reliable, durable moisture barrier in a variety of applications, above ground or below, permanent or re-enterable, wet locations or dry.



Insulated Crimps

Tin-plated copper with vinyl-PVC insulation. The red types are suitable for cable from 0.4 to 1.5mm, the blue 1.1 to 2.6mm and the yellow 2.5 to 6.5mm.



Bootlace Ferrules

Made of Polypropylene conical cable entry funnel which can also be manufactured from a non-flammable material on request. Heat-resistant up to 105°C (221 degrees Fahrenheit). For conductors from 0.5 – 50.0 mm².



Crimp Tools

A wide product range includes crimping tools for wire-end ferrules and many other contacts. After stripping the insulation, a suitable contact or wire end ferrule can be crimped onto the end of the cable.

Crimping forms a secure connection between conductor and contact and has largely replaced soldering. Crimping denotes the creation of a homogeneous, permanent connection between conductor and connecting element.

The connection can be made only with high-quality precision tools. The result is a secure and reliable connection both in mechanical and electrical terms.



Cable Ties & Fixings

High quality, available in stock and a massive range of products. AEL's cable ties and fixings are there when you need them and at highly competitive prices.

Cable ties range from tiny 80mm ties used in the electronics industry right up to our giant 1030mm ties for heavy electrical and engineering uses.



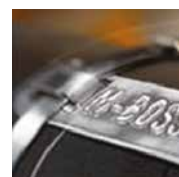
Insulation Products

The toughness and weather ability of the tubing makes it well suited to exposed applications for protection of cable joints. Ideal for application to extremely different diameter cable, connectors or components.



Identification Systems

Other offered products can speed up cable identification with their TIPS thermal transfer printing system that can print onto labels, heat shrink sleeving and their range of TIPTAG markers.



Application Tooling

High quality standards in the production industry are requiring fully automatic, precise bundling. Only the automation of bindings allows efficient manufacturing of high quantities in a consistent workflow.



Cable Markers & Accessories

Whatever your cable marking requirements, we can provide you with a suitable product. If you need to identify cables, we are sure that we can help and give you piece of mind that the cable will be clearly marked whenever you want to read it.



Marking Tools

High quality demands are placed on modern cable production. Shorter production cycles require increasingly flexible manufacturing processes.

Offering a wide range of easy to network fully automatic crimping machines to meet these requirements.



Secure

These are ideal for securing cables in demanding environments. We stock an extensive range of cable ties including standard nylon ties, colours ties as well as specialist LFH cable ties, resalable and metal content.



Cable Protection

Stocking a complete range of cable protection including PVC and Halogen-free, Easizip and spiral binding, polyester braided sleeving, neoprene sleeving and tools.

Also offering a new range of high temperature sleeving for high demand environments.



CONTROL TRANSFORMERS

AEL has experience in supplying standard and custom built 1 Phase & 3 Phase Control Transformers for safe and Hazardous locations (Class, Div & Zones).



Control Circuit Transformers

Multi-voltage, continuous rated control circuit transformer. With high specification touch proof terminals to IP20. Impregnated with a Class F varnish and with core earth terminal. Ambient temperature range -10 deg C to + 35 deg C. To EN 61558-1: Class E insulation.



Custom Built 1Ph Transformers

A comprehensive range of custom built single phase transformers designed specifically to customers own requirements. Any quantity can be produced, from single units to regular call-off orders. Sizes from 25VA to 20kVA (SE25 to SE2000 are designed with Class E (120 deg C) materials with additional option of Class F (155 deg C) designs from 500VA to 400kVA (SF 25000 and SGF 30k to SGF 400k. Class H option (180 deg C) is also available from 35kVA to 400kVA.

All transformers are air cooled and are fully varnish impregnated with an aesthetically appealing gentian blue, polyester varnish. Connections are via high specification touch proof terminals, giving both a compact design and ease of wiring.



Custom Built 3ph Transformers

A comprehensive range of custom built three phase transformers designed specifically to customers own requirements. Any quantity can be produced from single units to regular call-off orders.

Sizes from 120VA to 70kVA (TE120 to TE70000) are designed with Class E (120 deg C) materials with additional option of Class F (155 deg C) designs from 2.2kVA to 1000kVA or 1MVA (TF2200 to TF150000 and TGF 160k to TGF1000k. Class H option (180 deg C) is also available from 160kVA to 1000kVA or 1MVA.

All transformers are air cooled and are fully varnish impregnated with an aesthetically appealing golden polyester varnish. A full range of IP23 ventilated enclosures is available for all sizes.



Dry Type Cast Resin

Dry type cast resin type and oil cooled transformers up to 30MVA low and medium voltage, power and distribution dry type transformers. Both single and three phase with Class H insulation. Non-flammable construction with copper or aluminium windings and vacuum impregnated with Class H resins. Standards EN 61558 and EN 60076 (also Classes, E,B and F).



Auto Wound 1ph Transformers

Single phase variable auto transformer or variac. With 240V 50Hz input and 0... 270V 50Hz output. High efficiency with long life, high quality wiper design. Ambient temperature range from -10deg C to +45 deg C. With current ratings of 1A to 28A in either open type or enclosed versions. Ideal for testing electrical equipment where a controlled voltage needs to be applied.



Auto Wound 3ph Transformers

Three phase variable auto transformers or variac. With 415V 3ph 50Hz input and 0....470V 50Hz output. High efficiency with long life, high quality wiper design. Ambient temperature range -10 deg C to 45 deg C. With current ratings of 1A to 28A in either open type or enclosed versions. Ideal for testing electrical equipment where a controlled voltage needs to be applied.



Hard Wired Workshop Supply Transformer for 100v Supply

Wall or floor mounted enclosed transformer to IP23 for workshop applications. The input is 220~250V via internal tappings and has thermal overload protection. The output is 110V centre tap to earth (55V/0/55V). Output sockets are 2 x 110V 16A to BS EN 603609-1 (BS4343). Rating is 3kVA for 20 minutes or 1.5kVA continuous.



Custom Built Range of Enclosed Transformers with Accessories

A range of single or 3ph transformers with accessories. Can be designed in a variety of fixed or portable enclosures from IP20 to IP55. Accessories include MCB or fuse protection or thermal protection where practical.

Can be fitted with appliance inlets and output sockets and plugs, with wheels for ease of movement. Customised enclosures with cooling fans fitted and mains isolation if required.



POWER SUPPLIES

Highly Efficient, Compact & Lightweight DIN rail Power Supplies.



Industrial Power Supplies

With the ability to design and manufacture the DIN rail power supplies for industrial applications has allowed our suppliers to develop premium pioneering products. Some of the small sizes, industry leading efficiencies, ease of integration into machines and systems, very comprehensive datasheets, outstanding over-load behaviour are just some of the features which make our manufacturers the leaders in technology for DIN rail power supplies.



Slimline Power Supplies

The SDR-75 series (75W) makes the high efficiency slim DIN rail power product line more complete. Now, the diverse wattages of 75W, 120W, 240W, 480W and 960W are available for users' selection. The slim design of 32mm in width helps save the precious space on the rail and also makes it 41% smaller in size compare to its predecessor model DR-75. Meanwhile, SDR-75 also possesses 9~12.5% higher efficiency than corresponding models and the working temperature ranges from -30 ~ +70 degrees Celsius is superior to the range of -10 ~ +60 degree Celsius of DR-75, which responded to the trend of green power with energy saving concept.



Atex Approved Power

For use in hazardous locations, the DC/DC converters in the CD5 series have already been successfully approved for ATEX. These units have been tested according to EN 60079-15 and can be used in Zone 2, category 3G hazardous systems. Due to a number of requests, a selection of power supplies has also been ATEX-approved. Unlike with AC/DC converters, a separate order number is required for these power supplies since changes in the design had to be conducted.



INSTRUMENTATION PRODUCTS

AEL is a specialist supplier of Instrumentation Products that Control, Operate & protect assets in Harsh and Hazardous locations.



Intrinsic Safety & Process I/O

Supplying products where the manufacturers are world leaders in design for use in hazardous areas where there is a probability of explosive atmospheres. The products range from industry renowned (IS) barriers and isolators through to sophisticated process control products, all designed for the harsh environments often encountered in the process industry.



HART Interfacing

If you have smart field devices installed and you are not making full use of their capabilities, then you need HART® connection system. We have solutions that provide the connections between the HART® field instruments, the control systems and the process automation maintenance software. HART® multiplexer system provides on-line access from a PC to the HART® field devices for monitoring device performance. HART® devices may be selected for regular status monitoring and alerts to be issued if the status changes.



Visualization

Many industries require their operator terminals and HMI situated on the plant floor. Our instruments range of Visualization products include ruggedized and extended temperature range operator terminals and panel PCs suitable for both hazardous and non hazardous area mounting.



Fieldbus

Working closely with all major fieldbus control system manufacturers to develop integrated fieldbus power supply systems and compatible field wiring components. Power supply solutions typically support multiple fieldbus segments, and have a direct connection to the host controller via system cables. They provide a range of benefits such as lower engineering costs, faster assembly, cabinet space savings and reduced hardware costs. Fieldbus power supplies and wiring components are tested and approved according to rigorous control system manufacturer programs, demonstrating compatibility and allowing the user to select system components with confidence.



Industrial Ethernet

With the ability to supply a full range of "industrial strength" Ethernet products to satisfy the most demanding process applications. Our Ruggedized Ethernet range is designed to operate in the harsh and hazardous process control environment and features multi-port switches, Ethernet-to-Fiber converters and Giga-Bit connectivity. The full range is ATEX certified for Zone 2 and UL approved for Class 1/Div 2 hazardous areas.



FUSES

IEC, UL & CSA Fuses to support your Electrical Circuit Protection installations, explore our range of Low Voltage & Medium Voltage fuses.



IEC General Purpose Fuses

The better your over-current protection, the easier it is to minimize downtime and repair bills. Amp-Trap 2000® current-limiting fuses are a perfect example – they open in less than one-quarter cycle to provide the Type “2” protection that prevents costly equipment damage.



Miniature Fuses

For maximum protection in minimum space, look to our expansive line of miniature and glass fuses. It offers a broad scope of solutions for electronic applications, including sub-miniature and automotive fuses.



UL-CSA General Purpose Fuses

Unique dimensions for today's smaller equipment and components. Fast-acting general purpose fuse developed in response to the industry's demand for smaller equipment and components. The only fuse in their size with a full 600 VAC rating for all ampere ratings by UL standard 248-14 and CSA No. 59.2, and are the only fuses of this size with an interrupting rating of 100kA RMS. SBS fuses are 1-3/8" long, smaller by 1/8" than most standard midjet fuses and are available in 22 ampere ratings, from 2/10A to 30A.



Semiconductor Protection Fuses

With an extensive line of fuses matched by our selection of fuse blocks and holders. Choose from a wide range of traditional and space-saving fuse blocks, panel-mount and in-line holders, modular semiconductor fuse holders and more.



Medium Voltage Fuses

Most fuses have two elements in parallel, ensuring satisfactory operation at much smaller values of over-current than is possible with single element fuse. The elements are wound on a ceramic former, thus ensuring correct spacing of the elements from the body wall and from each other and hence giving assurance of correct operation in service.



METRIC FASTENERS

We are committed to meeting your needs and finding solutions. With an extensive range of Metric Fasteners, we are confident we have the product to meet your requirements.

BUMAX® **NORD-LOCK®**

Fasteners

The ISO METRIC screw threads are the worldwide most commonly used type of general-purpose screw thread. They were one of the first standards agreed when the International Organization for Standardization was set-up in 1947. AEL has the ability to supply Zinc Plated, Hot Dip Galv, Stainless Steel Grade A2, A4 & A4-80, High Tensile Steel:

- Bolts & Setscrews
- Socket Head Products
- Nuts
- Washers
- Threaded Rod
- Machine Screws
- Self Tapping Screws
- Self Drilling Screws
- Hex Head Coach Screws
- Petrochemical Studding & Nuts
- Nominal Bore Standard U Bolts
- Earth Bosses



Nord-Lock Bolt Securing

NORD-LOCK offer a superior bolt securing system that provides safe locking for bolted joints even when exposed to severe vibration and dynamic loads.

NORD-LOCK Bolt Securing Systems not only guarantee secure bolt locking, but also reduce installation time, and minimise maintenance costs. NORD-LOCK® Wheel Nuts safely secure wheel joints, eliminating unintentional loosening of wheel nuts on commercial heavy vehicles - both on-road and off-road. AEL has the ability to supply:

- Nord-Lock Washers
- Nord-Lock Wheel Nuts



INDUSTRIAL BATTERIES

With an extensive range of Industrial Batteries, we are confident we have the product to meet your requirements.



NP Series

Valve Regulated Lead-Acid Batteries

Yuasa NP, NPC and NPH Batteries Utilising the latest advanced design Oxygen Recombination Technology, Yuasa have applied their 80 years experience in the lead acid battery field to produce the optimum design of Sealed Lead Acid batteries.



SWL Series

Valve Regulated Lead-Acid Batteries Wet Con

The SWL range is an enhanced NPL design resulting in an improved energy to density ratio, giving up to 40% extra discharge capacity. All other attributes and operational characteristics are the same, thereby maintaining the benefit of a common mechanical and electrical design for users of both products.



YU Power Series

Deep Cycle Cyclic Batteries Supplies Wet Con

The low maintenance and valve regulated construction combine with heavy duty plates and unique separator systems to make Yu-Power™ cyclic capability twice as long as conventional counterparts.



Pro Spec

Power with advanced charge technology

The low maintenance and valve regulated construction combine with heavy duty plates and unique separator systems to make Yu-Power™ cyclic capability twice as long as conventional counterparts.



Chargers/Power Supply

Intelligent Battery Charger Series

This new charger has built-in intelligence. Designed to deliver exactly the right amount of charge automatically every time. Manufactured to BS456, IEC335, UL1236, EN60335, CE mark to EN5008 – 1.



THERMAL MANAGEMENT SYSTEMS

With an extensive range of Thermal Management Systems we are confident we have the product to meet your requirements.



Cooling Units

In addition to quality, function and performance, we have also taken into account the subject of 'service friendliness' while developing our cooling units.

The trouble-free running of your process controller is always at the centre of attention in the realisation phase of our products, as well as optimised energy consumption and usage of materials and time.



Air/Water Heat Exchanger

Our products don't require maintenance, have mounting-friendly seal, don't need to elaborate reworking of the mounting cut-out, have integrated thermostat and solenoid valve for temperature control and integrated temperature monitoring with alarm contact.



Innovative and Durable Solutions to Minimize Downtime

LET US HELP YOU FIND THE RIGHT SOLUTION FOR YOU

Filter Fan

You can save energy, resources and valuable time through the use 4th Generation Filter fans.

Over and above that, they provide for more reliability in the production process, because the innovative filter fans and filter mats from the 4th Generation enable an increase in the airflow of over 100% (system of protection IP 55), leading to expanded operating life that is several times longer and thus to longer service intervals.



Heater

The formation of condensation is one of the biggest dangers for electrical enclosures.

As long as they are working under load, the heat dissipation from the components will prevent any condensation from forming within the enclosure.

When there is no longer any heat load due to system downtime, there is a potential danger that components within the cabinet will form condensation.

This varies based on the dew point. And this is precisely where the function of the control cabinet heaters begins (radiant heaters and fan heaters).



Thermostat

A series of twin thermostats integrate independently switch-able thermostats.

They are available with N.C./N.O., N.C./N.C. and N.O./N.O. contacts with connected devices switched in different temperature ranges.



INDUSTRIAL & HAZARDOUS AREA LIGHTING

With an extensive range of Industrial and Hazardous Area Lighting, we are confident we have the product to meet your requirements.



Glamox Luxonic

KILLARK®



IECEx & UL LED Luminaries

An extensive collection of LED luminaries that offer innovative solutions for offshore, harsh and industrial environments.



Portable IECEx & UL Lamps

A modern way of illuminating hazardous confined spaces. Our portable Ex lamps have been designed especially for use in industrial environments.

They have been certified for Zone 1 or more and are particularly easy to handle and light in weight.



IECEx & UL Floodlights

Ex floodlight in metal design. Also available as portable version. Easy handling due to low weight.



IECEx & UL Pendant Light Fittings

Ex-Ceiling, pendant lights and floodlights that are designed for area illumination at medium/high luminaire installations.

Specially used at offshore platforms or within outdoor areas of onshore refineries. Illumination of loading zones as well as harbour areas our floodlights are also the first choice for installation.



Better the overall visibility for workers to help avoid accidents

LET US HELP YOU FIND THE RIGHT SOLUTION FOR YOU

IECEX & UL Searchlights

Powerful and explosion-protected portable searchlight suitable for use in a damp environment.



IECEX & UL Linear

IECEX & UL Linear light fittings can be used all over the world and are suited for lighting applications in hazardous areas where special requirements apply, e.g. offshore platforms in the North Sea or refineries in the Middle East.

The different light fitting families allow their optimum use in various environments.



IECEX & UL Escape Sign

Emergency escape sign luminaires can be adapted to suit the requirements of our customers and can be used for central or local emergency lighting systems in hazardous areas.

Robust polycarbonate and aluminium enclosures, an energy-saving LED technology and a



IECEX & UL Helideck

A helideck status-light system should be installed if the condition on the offshore structure may be hazardous for the helicopter or its occupants, for example, gas alarms.

The system should be visible 360° around the offshore structure with a flash rate of 120 flashes per minute.

It should also be fully automatic and controlled by means of a control panel in combination with the platform's gas-detection system.



CABLE, CONTAINMENT & ACCESSORIES

With an extensive range of Cables, Cable Glands, Trays and Accessories we are confident we have the product to meets your requirements.



RFOU (i), BFOU (i) Cable I Mud Resistant I NEK606

Halogen-free, mud resistant instrumentation cable RFOU(i)

Instrumentation:

- 1 pair > 12 pair 0.75mm & 1.5mm cores
- 1 triad > 8 triad 0.75mm & 1.5mm cores
- Halogen-free, mud resistant power cable RFOU

Power/Control:

- Control wiring available > 19 core
- Power cables available > 3x120mm & 4x50mm
- All available in grey or blue jacket



VFD, Data, Track, Control, Festoon & Profibus Cables

- Gaalflex VFD Cables
- Ethernet Cable
- Control & Connection Cables
- Gaalflex Data Cables
- Profibus DP Cables
- FlexFestoon Cables
- Track Cables



Control and Instrumentation

British Standard BS6883 covers the specifications for the shipboard fixed wiring of lighting, power, control, instrumentation and propulsion circuits. This Standard specifies the requirements and test methods for a wide variety of cables up to and including 8.7/15kV.

The cables are manufactured with low smoke halogen free materials which is an important factor on board a marine unit. Steel wire armoured cable, commonly abbreviated as SWA, is a hard-wearing power cable designed for the supply of mains electricity. It is one of a number of armoured electrical cables – which include 11 kV Cable and 33 kV Cable British

Standard BS5308 covers specifications for a range of instrumentation cables which we supply. These are available in a multitude of variants including Polyethylene (PE), Polyvinyl Chloride (PVC), Cross-Linked Polyethylene (XLPE), and Low Smoke Zero Halogen (LSZH) insulation materials, and armoured instrumentation cables.



Channel

Cable channels are suitable for applications where medium duty cable loads are to be supported over short to medium spans.

Finishes: G (hot dip galvanised), D (deep galvanised), PG (pre-galvanised), S (stainless steel) and E (powder coated).



Cable Tray

The distinctive slot pattern on cable tray systems provides installers with total flexibility for the positioning of nuts and bolts, cable ties and all ancillary items. Available in variety of types, from light duty through to extra heavy duty, each system is supported by a fully integrated range of time saving fixings and fittings.

Finishes: G (hot dip galvanised), D (deep galvanised), PG (pre-galvanised), S (stainless steel) and E (powder coated).



Cable Trunking

A complete range of trunking and fittings manufactured to standards as described in BS EN 50085-1:2005 and manufactured throughout in best quality hot dipped galvanised sheet steel to BS EN 10346:2009 giving maximum protection from corrosion.

Slotted Trunking. With innovative snap to length design, AEL offers a quick and easy to install open slot panel trunking system that doesn't compromise on quality. With its global standards approvals, slotted trunking system is ideal for almost any industrial application.



With in-depth knowledge and experience, we provide support and advice for any installation

LET US HELP YOU FIND THE RIGHT SOLUTION FOR YOU

Accessories

As a reliable 'single source' supplier of components to meet site requirements, AEL carry a vast range of fixings and accessories for complete cable management installations.



Cable Protection Systems

Export and array cables are critical for the safe transfer of the power generated from wind turbines to shore. Our subsea cable protection systems protect the cables against over bending. They also increase the strength and stiffness along the cables.



Cable Ladder

Offering a comprehensive system of slotted rail cable ladder which enables the coupling of lengths and fittings without the need for drilling. With fewer components and a wealth of innovative time-saving installation features, our cable ladder remains the market leader.



INDUSTRIAL PLUGS AND SOCKETS

With an extensive range of Industrial Plugs and Sockets, we are confident we have the product to meet your requirements.



Industrial Plugs and Sockets

Plugs and sockets with rated voltages above 50V must have an earth contact. To prevent incorrect insertion, a nose on the plug fits into a keyway in the socket, thus ensuring that the earth contact pin or tube is correctly positioned in accordance with the required electrical standard.



Switched Interlocked Sockets

Socket outlet with built in switch-disconnectors 16 – 32A. Enclosure in thermoplastic (PBT). Available as type MVS for IP44. The plug is connected with a vertical movement. (The outlet is in the bottom of the product). 16 – 32A products have two 20mm knock-outs in the top.



Combination Units

Tough and durable units available with Hypra Prisinter or panel mounting sockets.

These units feature a plug-in design that enables the base to be wired independently of the cover, making installation both quicker and easier.



EARTHING CONDUCTORS

Electrical Grounding, Bonding and connectivity products for Onshore & Offshore requirements.



Conductors

The conductor is the most important component of any earthing or structural lightning protection system. We offer three types of conductor: Flat tape, Solid circular and Stranded cable.

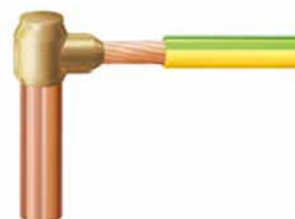
A range of conductor materials are available. Above ground, copper, aluminium and steel may be used. Below ground, copper is the most common choice due to its high resistance to corrosion.

It is important that earthing conductors should be correctly sized for their application, as they may be required to carry a considerable current for several seconds.



Earthing Materials

As with lightning protection, the first choice faced by the designer of an earthing system is the type of conductor to be used. The correct choice of conductor is extremely important, whether it be a simple below ground electrode or a complex computer room signal reference grid.



Electronics Systems Protection

Protection devices meet protection requirements at service entrance and local to equipment (to BS EN 62305) on all incoming / outgoing data & telecoms lines.



ELECTRICAL MEASUREMENT PRODUCTS

With an extensive range of Electrical Measurement Products (Flow, Level, Temperature, Differential) we are confident we have the product to meet your requirements.



Differential Pressure

Industry standard Differential Pressure gauges to measure fan and blower pressures, filter resistance, air velocity, furnace draft, pressure drop across orifice plates, liquid levels with bubbler systems and pressures in fluid amplifier or fluidic systems.

It also checks gas-air ratio controls and automatic valves, and monitors blood an respiratory pressures in medical care equipment.



Air Velocity

One of most popular precision air velocity instrument, the No. 400 is used to balance air conditioning systems, measure pressure drop across filters, and test fan and lower discharge and inlet pressures, as well as air velocity in ducts.

It offers the convenience of a dual purpose instrument - plus high accuracy on easy-to-read scales. The Series 400 includes "levelling" adjustment and glass bubble level, which makes it a versatile, all around manometer for the air conditioning and balancing contractor or industrial plant.



Flow, Level, Temperature

Flow indicators that display flow rate and total simultaneously, with a programmable relay and 4 to 20 mA option for flow rate or flow total. The PPM is a 1/8 DIN digital panel meter specifically designed for displaying flow rate and total from a pulsed input provided by open collector, NPN, PNP, TTL, switch contact, sine wave, or square wave.

Level indicators are ideal for high-visibility level indication in tight spaces. All stainless steel housing provides rugged durability with a diameter of only 1-1/4 inches (32 mm). Select the mounting type that will best fit your application and an indication length of up to 96 inches (244 cm). View-Rite level indicators incorporate a pressure tight housing with internal float that magnetically activates external level indication flags, switches, or transmitter.

Temperature indicators is ideal solution to monitor and verify temperature specific operations for those who must measure many different temperatures. The crayons are easy-to-use, simply mark a pre-heated surface with a colour change crayon. The colour will change immediately if the temperature is higher than the crayon's rating, or it will change within 1-2 seconds if it is lower than its rating.



MARINE PRODUCTS

With an extensive range of Marine Products, we are confident we have the product to meet your requirements.



Navigation Lights

Based on more than 30 years' experience in the industry, AEL is able to offer you a navigational aid system to mark the offshore structure in line with the national, industry and international (IALA) recommendations.



Recessed - Ex emb LED Luminaire

Available in Green (Helidecks), Red (Obstruction) or White (general lighting). This unit can be set on installation for constant light output or flashing. The LED technology should give the unit 100,000 hours of life (10 years+). Low output, Low maintenance.



Ex emb LED Traffic Light

This unit can be set on installation for constant light output or flashing. The LED technology should give the unit 100,000 hours of life (10 yr). Low output, Low maintenance.



Heating Technology

Industrial Electrical Heating Suitable for Use in Harsh or Hazardous Locations. The different heating systems and technology we offer can be used for all variations of electrical heating applications.



Marine Lighting

The design of luminaries is based on many years of experience and extensive research of our manufacturers in the field of professional marine lighting. Carefully selected materials are used to ensure maximum performance, low maintenance and a long trouble free life.



Foghorns

A high-quality design product, developed with experience of more than 1 million installations.

Audibility is determined not simply by the strength of sound emanating from the whistle much more is entailed to overcome absorption, distortion and local noise.

This quality is the result of more than 80 years of development provided by AEL's manufacturers.



Heating

The ability to supply all from individual components to complete heat tracing systems for the following applications:

- Winterisation of pipe systems, instruments, tanks and vessels
- Anti-icing/de-icing of helideck, safety and emergency areas
- Temperature maintenance of pipes, tanks and vessels
- Electrical process heating



Marine Heaters

Today's ship and offshore heaters have to meet extremely stringent requirements, first and foremost from insurance companies.

Marine heaters supplied by AEL are the only ones on the market that are produced completely from rustproof materials: constructed from aluminium sections, steel/aluminium heating elements and a switchbox made from self-extinguishing plastic.

The heaters are equipped with a dust proof and watertight switch box, anti vibration screws and fixed wall brackets.

The heaters are also equipped with a protection grille which has a 30° incline to the wall.



FIRE DETECTION

With an extensive range of Fire Detection Products, we are confident we have the product to meets your requirements.



Fire Detection

Fire detection systems that are developed for worldwide standards and regulations, and conforms with the CEN regulation EN 54 and maritime requirements (SOLAS).



Integrated Fire and Gas Detection

Providing the world's first interactive addressable system for integrated fire and gas detection: AutoSafe Integrated Fire and Gas Detection System (IFG), the only integrated fire and gas detection system that is approved according to IEC 61508 Safety Integrity Level 2 (SIL2).



Sounders and Sirens

Wide voltage range and a choice of sound outputs means there is a model to suit almost any type of application, from fire alarms to general signalling.



Combined Sounder/Beacon

Combined sounder-beacons provide an audible and visual alarm at the same point, saving installation and commissioning costs. Models are available for both, commercial and industrial applications.



Beacons

Beacons use either Xenon flash tubes or high efficiency LED's as their light source. In areas with high background noise, visual indicators accompany sounders to ensure that the alarm is recognized. Depending on the color and flash rate, beacons can provide additional information about the nature of the alarm.



Bells

The fire bell is the oldest form of a signalling device available in the market. Although they are not as flexible as electronic sounders, they produce a distinctive universally recognizable sound.



Ensure Ultimate Safety

LET US HELP YOU FIND THE RIGHT SOLUTION FOR YOU

Voice Sounders

Voice sounders combine normal sounder signals with a clear, synchronized voice message to help reduce confusion and distress during an active alarm.

Each individual message is preceded by a dedicated selectable tone and/or flashing beacon for clear and effective warning.



Self-Contained Alarms

Temporary Fire Alarms can be used for building sites or when the main fire alarm is out of operation.



Voice Alarm

In an emergency, people must not only be able to hear an alarm - but understand its message. AEL can provide voice alarms to avoid the use of confusing and often frightening emergency bells or sirens.

Voice alarms use a public address system (PA) to tell the public what the emergency is, where it is, and what to do.

A calm, authoritative voice - either a pre-recorded message or when necessary, a live announcement, gives the public clear and informative instructions.



DIGITAL MULTIMETERS

With an extensive range of Digital Multi-meters, we are confident we have the product to meet your requirements.



Clamp Testers

The extensive range includes models that feature wide opening jaws for safe, fast non-contact current measurement. The ergonomic design of clamp meters are ideal for measuring current in even the most confined of spaces.



Digital Multimeters

Multimeters are designed to help you do your job faster, more efficiently and with greater accuracy, there is a model for every budget and application.

Choose from hand held troubleshooters to ultra smart multi-meters packed with features, including the ability to log and graph data, as well as high-precision bench units in our showcase.



Earth Testers

Earth ground testers provide quick, accurate impedance measurements through several test methods which include:

- 3- and 4-pole Fall-of-Potential testing
- Selective testing
- Stake less testing
- 2-pole testing



Phase Rotation Testers

The product is effective for measuring phase rotation in all areas where three phase supplies are used to feed motors, drives and electrical systems.

The Fluke 9040 is a rotary field indicator and can provide clear indication of the 3 phase via an LCD display and the phase rotation direction to determine correct connections.

It allows rapid determination of phase sequence and has a voltage (up to 700 V) and frequency range suitable for commercial and industrial applications.

The included test probes have a variable clamping range for safe contact, also in industrial sockets.



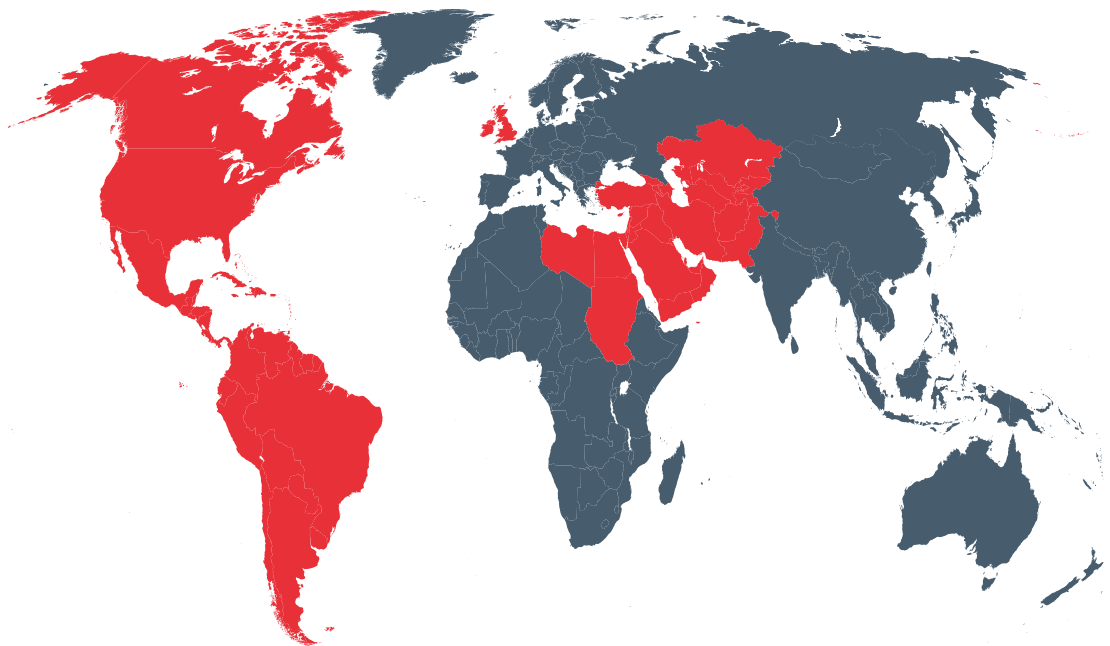
MANUFACTURERS WE WORK WITH



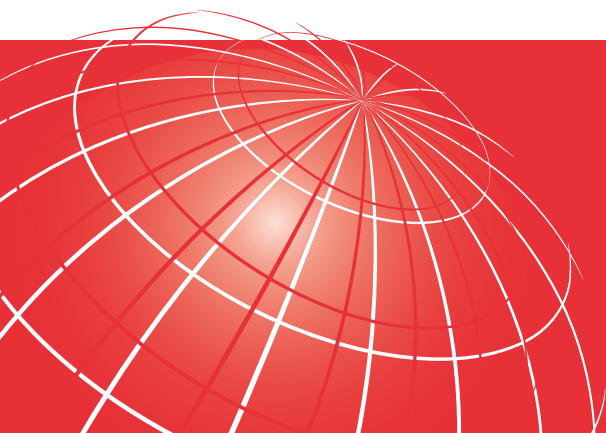


AEL is an established and experienced Specialist Electrical Distributor that can support your Hazardous area & Industrial requirements (IECEX, IEC & ATEX). We can also support with your Hazardous Location Requirements (NEC Classes, Divisions and Groups). Explore more about us and our expertise.

For more information our our full range of products visit our website or email our sales representatives
www.ael-electrical.com | sales@ael-electrical.co.uk



UK | NORTH AMERICA | CASPIAN | MIDDLE EAST | LATIN AMERICA



QUALITY DELIVERED
Locally • Nationally • Internationally