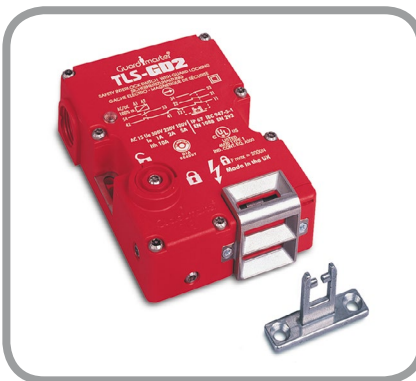


PRODUCTS AND SERVICES



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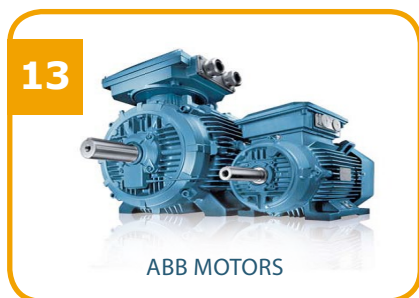


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HALCYON DRIVES

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Since 1991, Halcyon Drives have developed a reputation as a quality electrical engineering company for the excellent services and workmanship we provide, to both local and national industry. Organised into three customer focused areas including: specialist distribution, variable speed drive service and control panel builders, each delivered as a first-class solution to the customer.

Our distribution division is specialist, offering a focused portfolio of brands, allowing us to have the ability to focus on our customers requirements. Whether the customer has an understanding of their needs or requires support to determine the best solution available, we have the expertise and back up to offer advice and support.

Customer focus is a large priority of our business so we employ a team of service engineers with a wealth of experience who offer service and expertise technically for variable speed drives, for all industries and applications. Providing a solution to customers requirements no matter its complexity, is an achievable task.

The design and build of control panels completes our final division, boasting purpose built facilities and dedicated expertise to develop a panel to suit customers requirements.

With the three customer-focused areas of supply, service and build. Our primary objective is maintained Throughout to offer a quality service and product whilst adding value and making savings for the customer at every opportunity.

DISTRIBUTION

Halcyon Drives Ltd are partnered with leading brands including ABB, Rockwell Automation, Riello UPS & PULS. Because our portfolio is focused, our team is enabled to train on the supported product groups regularly, to provide a quality service to our clients. Whether it is pre or post sales support of the product ranges, our team are available to assist with your enquiry.



Specialist distributors of quality products, essential to supporting general industry. Our portfolio includes:

- ABB Variable Speed Drives
- ABB Induction Motors
- ABB Power Quality
- ABB Softstarters
- Rockwell Automation, Guardmaster - Safety
- Riello Uninterrupted Power Supplies
- PULS Din Railed Power Supplies



Each of our supplied product groups has a specialist dedicated to the knowledge of the products to offer peace of mind to the customer when trying to make a selection.

Committed to delivering current information to our customers we hold seminars each year free of charge, that provide an update or refresh of knowledge. Our demonstration room is also available all year round for customers/engineers to visit and gain a greater understanding of the products available.

SERVICES

Our alliance with ABB, forming our Authorized Value Provider partnership means we supply ABB Variable Speed Drives. We employ an experienced service team who offer a varied range of services of exceptional standard to our customers, offering peace of mind.

Our combined experience of applications and industry enable us to provide a solution to even the most complex of issues. For those applications that are classed as critical break down, we believe it is essential that a dedicated team of professionals are available to provide exceptional care anytime of the day.

OUR SERVICE CONTRACTS ARE AVAILABLE 24 HOURS A DAY, 7 DAYS A WEEK.

Our services also include:

- Maintenance Visits
- Service Contracts, 24 hour support
- Commission
- Installation
- Repair / Upgrade
- Recording of parameters
- Remote Monitoring
- Field Service
- Technical Telephone Support
- Project Management of large install/energy projects
- Energy Audit
- Power Factor Correction Surveys
- Harmonic Surveys
- Hire Drives
- Training

(See Pages 27-28 for further information)



CONTROL SYSTEMS

The foundations of our business were created with the building of control panels some 25 years ago. Located within a purpose built building in which we can produce a control panel of any design to our customers specifications and expectations.

It is important that we have these facilities to provide solutions for customers with varying requirements, whether it be a small panel built to a specification or a large motor control centre. Our engineering team are experienced in many industries and applications, and all our drawings are completed using CAD design software. We are also able to carry out PLC programming and system integration, as well as the facility to carry out factory acceptance tests. This is backed up with extensive after sales service and support to provide a complete solution, giving total peace of mind to our clients.

(See page 26 for further information)



ABB AUTHORIZED VALUE PROVIDER

As an ABB Authorized Value Provider we are fully trained in ABB products, tools, databases and services. Working as an extended division of ABB we are audited and receive regular training to provide a quality service to our mutual customers.

The products that we distribute for ABB are variable speed drives, low voltage motors, power quality products and softstarters. Providing excellent service is important to our business model, we go further than ABB's requirements and provide a service that is second to none.



Drives
Sales, Support & Service
Motors
Sales & Support

"ABB authorized value providers deliver the authorized offering of sales, support and service in close cooperation with ABB. They bring ABB's products and services straight to the customer's front door, with the addition of services such as application advice, energy saving calculations, installation, training, repair and servicing.

Halcyon Drives were a founding member of the UK authorised value provider network for drives and motors; thirteen years earlier they were a founder member of the Drives Alliance and Motor Service Partner networks, and for ten years before that they were an integral part of the ABB distributor network. A successful partnership spanning more than twenty years, delivering high quality products, services and solutions to our clients."

PETER MYATT, ABB.

ABB LOW VOLTAGE AC VARIABLE SPEED DRIVES

ABB LV AC drives can improve process efficiency, reduce energy consumption and improve productivity in numerous applications. The portfolio covers the complete spectrum of our customers' needs, from micro drives used in machine building to industrial drives used to control process lines. ABB drives are available directly from our stock.



WHAT IS AN ABB MICRO DRIVE?

The ABB micro drive meets the requirements of OEM's machinery builders and panel builders. It is a component that is purchased, together with other components, from a distributor. ABB micro drive is so small and simple that users of contactors and softstarters can switch to the benefits of variable-speed control. The ACS55 is a simple drive, programmed by switches. Extended programming is possible via a PC if required, as is programming without power.

ACS55

- Quick and easy installation - less than 5 minutes
- User interface via three rotary switches and a further eight on/off functions DIP switches located on panel front
- Can be programmed via DriveConfig if needed to access extended functions (useful to OEMs)
- Compact size and narrow shape
- Ideal drive for DIN-rail mounting
- Two mounting orientations
- 110 V single phase - input gives 240 V, 3 phase output
- IP20 as standard
- Potentiometer option
- Integral EMC filter for 1st environment (EN61800-3, unrestricted distribution (C1))
- Optimised Switching Frequency for low noise (up to 16kHz silent motor)



ACS150

- PID controller built-in
- DC hold stops ensures stationary motor shaft
- IR compensation improves starting torque for heavy loads
- Parameter lock prevents tampering by unauthorised staff
- DIN rail or screw mounting as standard
- IP20 enclosure
- Fixed basic control panel
- Two year warranty
- Flashdrop - parameter programming whilst drive is still in its box excellent for OEM's
- Protected against wiring errors: shows fault if power cable is inadvertently connected to motor terminals
- Automatic noise reduction
- Optional short or long parameter mode for standard or advanced users
- Unified height across the power range simplifies cabinet design



GENERAL PURPOSE DRIVE FOR FANS & PUMPS

WHAT IS AN ABB GENERAL PURPOSE DRIVE FOR FANS AND PUMPS?

A dedicated fan and pump controller, designed for squared-torque applications such as booster, submersible and irrigation pumps and centrifugal fans.

The drive design includes a powerful set of features which benefit pump and fan applications including built-in PID controllers and PFC (pump and fan control). The drives also have pre programmed protection functions such as pipe cleaning (anti-jam) and duty standby functionality, including soft pipe filling to reduce leaks.

These features, combined with pre-programmed application macros, an intuitive user interface, and several assistant screens, speed up the installation, parameter setting and commissioning of the drive.

ACS310

- Pump, soft pump and fan control (PFC and SPFC), for multi-pump and soft fill control
- Pipe cleaning (anti-jam) and pipe fill functions
- Multiple PID set points, allowing for automatic duty/assist/standby schemes to be implemented
- Energy efficiency counters, real-time clock
- Energy optimiser - optimises the motor control for the application to run with minimum energy requirements
- Load analyser for optimised dimensioning of the drive, motor and process
- Embedded Modbus RS-485 fieldbus interface
- FlashDrop tool for fast parameter setting, without mains power



MACHINERY DRIVE

WHAT IS AN ABB MACHINERY DRIVE?

ABB machinery drives are designed for the machine building sector. In serial type machinery the consumed time per unit is critical. The drive is designed to be optimal in terms of installation, setting parameters, available machinery features and commissioning. The basic product is as user friendly as possible, yet providing high intelligence. The drive offers diverse functionality to cater for the most demanding needs. The drive is also equipped with a dual-channel safe torque-off interface to SIL3/PL e.

ACS355

0.37KW TO 22KW

Motor control method - scalar, vector
(open and closed loop)

200/240 V, 1-phase supply, 0.37 kW - 2.2 kW

200/240 V, 3-phase supply, 0.37 kW - 11 kW

380/480 V, 3-phase supply, 0.37 kW - 22 kW



WHERE CAN IT BE USED?

ABB machinery drives are designed to meet the requirements of an extensive range of machinery applications. The drive is ideal for food and beverage, material handling, textile, printing, rubber and plastics and woodworking applications. The higher IP66 class variant meets all of the relevant hygiene requirements for the food and beverage industry.

HIGHLIGHTS

- FlashDrop - parameter programming with drive still in its box - excellent for OEM's
- Sequence programming designed for food, beverage and materials handling applications - 8-steps included
- Unified height and depth across the power range simplifies cabinet design
- Protected against wiring errors: shows fault if power cable is inadvertently connected to motor terminals
- Automatic noise reduction
- Own branding possible for large users

GENERAL PURPOSE DRIVE

WHAT IS AN ABB GENERAL PURPOSE DRIVE?

The ACS580 is part of the ABB all-compatible family, which means it uses the same keypad and same PC tool as the other drives in the family. The drive contains the new harmonised parameter set, so familiarity with the ABB industrial drive is closer than it ever has been.

ACS580

0.55KW TO 250KW

Motor control method - scalar or vector control (open or closed loop)

380 - 480 V, 3-phase supply, 0.55kW to 250kW

WHERE CAN IT BE USED?

The ABB general purpose drive is ideal in those situations where there is a need for simplicity to install, commission and use and where reasonable amounts of flexibility and functionality are required. The addition of STO, 24V support and improved fieldbus support, extends the applications.

HIGHLIGHTS

- Improved internal options including 24V support
- Integral EMC filter for 1st and 2nd environment as standard
- Assistant control panel with improved primary settings menu and back ups
- Wide power range in wall-mounted IP21 and IP55 variants
- Patented permanent magnet swinging choke for superior harmonic reduction, even at reduced motor load
- STO as standard SIL 3 PL e
- Flexible fieldbus system with built-in Modbus and numerous internally mountable fieldbus adapters
- SynRM, permanent magnet (PM) and induction motor control with improved motor platform
- New energy monitoring features



DRIVE FOR HVAC

WHAT IS AN ABB HVAC DRIVE?

ACH550 is a dedicated low voltage drive for heating, ventilation and air-conditioning (HVAC) applications. The drives are designed to meet the HVAC market requirements including harmonics and EMC standards and for easy integration with building management systems straight out of the box. They feature built-in control programmes specifically designed for HVAC applications like cooling tower fans, supply and return fans and booster pumps and condensers. With built-in PID control, native BACnet communication, timers, real-time clock and a calendar, ABB HVAC drives provide flexible solutions for a wide range of HVAC needs.

WHERE CAN IT BE USED?

ABB HVAC drives make maintaining a building's comfort zone easy, quick and energy efficient. The drives control the speed of pump, fan and compressor motors used in air handling units, cooling towers, chillers and other HVAC applications. They help reduce the HVAC systems energy consumption by up to 70%, and quite often they have payback times of less than a year. These highly reliable drives with built-in BACnet easily integrate into building management systems.

HIGHLIGHTS

- Built-in BACnet
- New energy monitoring features record energy, CO₂ and money saved (compared to equivalent DOL)
- Wide power range in wall-mounted IP21 and IP54 variants
- Intelligent HVAC control panel
- Programmed with several HVAC applications, including supply and return fans, cooling tower fans, booster pumps and condensers

ACH550

0.75KW TO 355KW

Motor control method - scalar, vector speed and torque (open and closed loop)

208/240 V, 3-phase supply, 0.75 kW - 75 kW

380 - 480 V, 3-phase supply, 0.75 W to 355 kW



WHAT IS THE ABB INDUSTRIAL DRIVE?

The ACS880 range contains a new harmonised parameter set, taking its features from all of the best functions within the existing ABB drive's family. The drive is programmed by the most intuitive and user-friendly keypad ABB has produced to date. A new PC tool is designed to incorporate all of the latest functionality including a free of charge entry level version and a professional level version. The drive also contains the very latest 4th generation DTC motor control core, making the drives all compatible with any motor available on the market today including asynchronous, permanent magnet and synchronous reluctance (SynRM).

ACS880

0.55 KW TO 2800 KW, ACS880

Motor control method - DTC or scalar

208 / 240 V, 3-phase supply, powers depends on range

380 / 415 V, 3-phase supply, powers depends on range

380 / 500 V, 3-phase supply, power depends on range

525 / 690 V, 3-phase supply, powers dependent on range

WHERE CAN IT BE USED?

The ABB industrial drive is ideally suited for the most demanding industrial applications. Constant torque and torque at zero speed are perfect due to the DTC core. Suitable applications include cranes, winders, hoists, extruders and heavy conveyors. Applications with high breakaway torque, like rubber mixers and highly precise applications like paper machines and engine dynamometers are easily handled.

HIGHLIGHTS

- Built-in safety functionality to satisfy the demands of IEC 62061 and ISO 13849-1
- Removable memory unit - zero re-commissioning
- Flexibility to programme more advanced applications
- Common user and process interface with fieldbus
- Common software tools for sizing and commissioning
- Innovative hardware variants
- Energy efficiency counters
- Energy optimised - optimises the motor control for the application
- Load analyser for optimised dimensioning of the drive, motor and process
- ACS880 ATEX Certified Package - See page 11



ABB DRIVES & MOTOR PACKAGES

ABB is one of the only companies that produce both variable speed drives and low voltage AC motors. As such they are well equipped to offer customers a perfectly designed, tested and approved matched pair, for whatever the motor driven application. In addition, ABB has devised a selection of bespoke drives and motor packages aimed at specific industry applications. In this catalogue we introduce five such packages.



IE2 & VSD MOTOR DRIVE PACKAGE

On the 1st January 2015, IE2 motors from 7.5 kW to 375 kW, that are new into the market, can only be used if fitted with a variable speed drive, in order to comply with the new European Minimum Energy Performance Standard (EU MEPS - see page 13).

ABB OFFER A WIDE RANGE OF VARIABLE SPEED DRIVES, ALL OF WHICH CAN BE FITTED TO IE2 MOTORS TO DELIVER EFFICIENT, RELIABLE AND COMPLIANT MOTOR CONTROL.

ABB MACHINERY DRIVE ACS355

- 0.37 kW to 22 kW
- FlashDrop - parameter programming with drive still in its box
- Sequence programming designed for food and beverage and materials handling applications

ABB GENERAL PURPOSE DRIVES ACS310

- 0.37 kW to 22 kW
- Pump and soft pump and fan control (PFC and SPFC)
- Pipe cleaning (anti-jam) and pipe fill functions

ABB DRIVE FOR HVAC ACH550

- 0.75 kW to 355 kW
- Quick installation
- Rapid start up, trouble free use, easy interfacing
- Built-in BACnet

ABB GENERAL PURPOSE DRIVES ACS580

- 0.55 kW to 250 kW
- Wide power range in wall-mounted IP21 and IP55 variants
- Sensorless vector and scalar control

ABB INDUSTRIAL DRIVE ACS880

- Intuitive control panel and PC tool
- Direct torque control (DTC) for precise open and closed loop control
- Built in safety features for simplified configuration
- Communication with all major automation networks
- Removable memory for easy drive commissioning and replacement
- Energy optimiser and energy efficiency information for monitoring and saving energy

GENERAL PERFORMANCE MOTORS

Combine convenience and easy handling seamlessly with ABB's engineering expertise, while providing standard variants and modifications. The motors can be tailored according to the specific needs of end users and OEM's.

- 0.06 kW to 355 kW
- One year warranty
- IE2 & IE3
- 2, 4 & 6 pole designs



PROCESS PERFORMANCE MOTORS

The flagship of ABB's standard low voltage motors. This range provides the most comprehensive, versatile set of motors for the process industries and heavy duty applications which are dependant on continuous reliability, lowest possible environmental impact and life cycle costs.

- 0.09kW to 1000 kW
- Three years warranty and an option to extend to five years
- IE2, IE3 & IE4
- All variant codes available for process industry applications



ATEX COMPLIANT MOTOR DRIVE PACKAGE

ATEX approved AC motor and drive combination gives safe, economical power combined with effective control. By choosing an ATEX compliant motor drive package, end users can be confident that it is optimised for their application, complies to ATEX 95 and is commercially beneficial, giving more available power for your money.

SPEAK TO OUR MOTOR SPECIALISTS TO HELP SELECT AN ABB ATEX PACKAGE SUCCESSFULLY

11

ABB MACHINERY DRIVE ACS355

- IP20 as standard (UL type 1 as option)
- IP66/69 variants
- Advanced functionality with sequence programming
- Configuration of unpowered drive in two seconds
- Compact installation
- STO as standard

ABB GENERAL PURPOSE DRIVES ACS550

- 0.37 kW to 355 kW
- Assistant control panel providing intuitive use of the drive
- Patented swinging choke for superior harmonic reduction
- Sensorless vector and scalar control

ABB INDUSTRIAL DRIVE ACS880

- Adaptive programming and CODESYS - like having a PLC (programmable logic controller) inside the drive
- DTC (direct torque control) proven motor control platform
- All major types of drive topology covered; 6-pulse, 12-pulse, 4 quadrant, low harmonic, air cooled and water cooled
- Built in safety module
- ATEX approved STO

HAZARDOUS AREA LOW VOLTAGE MOTORS

- Flameproof motors, frame size 80 to 450
- 0.18 kW to 710 kW
- Non sparking motors, frame size 71 to 450
- 0.09 kW to 1,000 kW
- Loadability curves optimised for ABB drives

ABB EX TD/DIP MOTORS

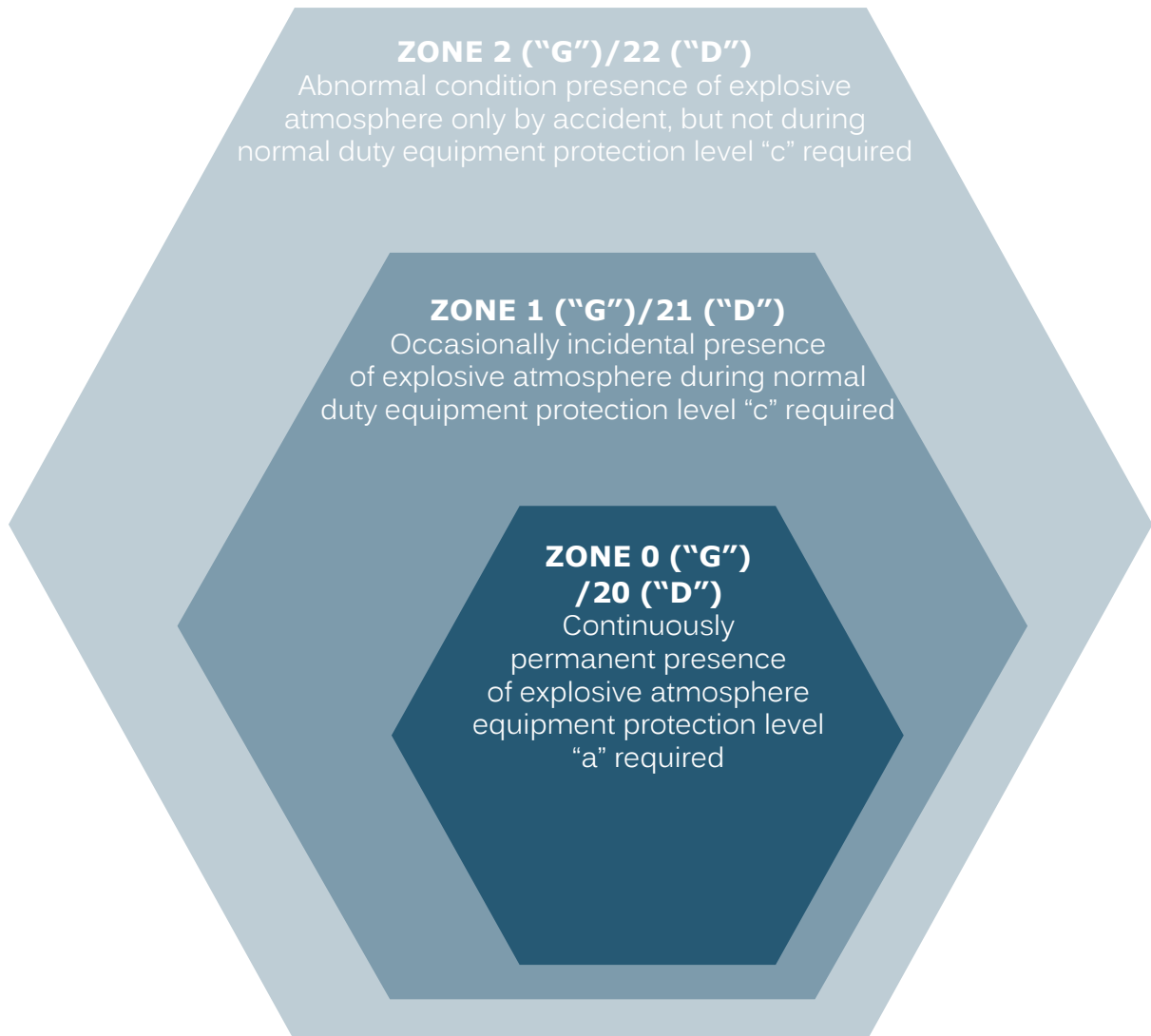
- EX tD/DIP motors, frame size 71 to 450
- 0.09 kW to 1,000 kW
- IP55 or IP65 for non conductive dust
- IP65 for conductive dust
- Loadability curves optimised for ABB Drives



EXPLOSIVE ATMOSPHERES

There are systems in place worldwide to classify explosive atmospheres by zones, according to the risk posed by explosive gas ("G") or dust ("D").

To ensure equipment can be safely used in potentially explosive atmospheres, the explosive atmospheres where the equipment is installed must be known. The temperature class of equipment must be compared with the spontaneous ignition the equipment of the gas mixtures concerned, and in specific cases the gas group must be known (e.g. regular flame proof protection).



GAS CLASSIFICATION			
Temperature class	Ignition temp. of gas/vapour C	Max. permitted temp. of equipment C	Gas examples
T1	>450	450	Hydrogen
T2	>300 >450	300	Ethanol
T3	>200 >300	200	Hydrogen Sulfide
T4	>135 >200	135	Diethyl Ether
T5	>100 >135	100	-
T6	>85 >100	85	Carbon Disulfide

GAS SUBDIVISION	
IIA	-120 gases and vapours, e.g. butane/petroleum/propane
IIB	-30 gases and vapours, e.g. ethylene/dimethyl ether/coke oven gas
IIC	three gases: hydrogen H ₂ /acetylene C ₂ H ₂ /carbon disulfide CS ₂

ABB MOTORS

LOW VOLTAGE AC MOTORS

ABB offer a comprehensive range of reliable and high efficiency motors for all applications. Combining the best available materials with superior technology, ABB AC electric motors are designed to operate reliably no matter how challenging the process or application and to have low life cycle costs. Halcyon has what it takes to help every industry and application reach new levels of efficiency and energy savings, even under the most demanding conditions.

Our offering has enabled us to become ABB AC motor specialists, offering an extensive range of IE2, IE3 and IE4 motors on safe area applications but also understanding the requirements for ATEX/IECEX motors for use on fixed and variable speed applications.

Legislation and the requirements of our customers are ever changing, therefore we believe our service and support is essential in helping our customers make the correct selection. Subsequently, our experienced team train regularly on ABB software including drive size and motor size, to meet demands.

With stocks held locally of up to 75kW as well as direct access to ABB stocks in Menden we have the ability to provide a next day delivery service of up to 500kW.



EUROPEAN MINIMUM ENERGY PERFORMANCE STANDARDS (EU MEPS)

2014

Regulation
EU 4/2014
introduced

2009

EuP Directive
2005/32/EC
Eco design
formally
adopted
EC 640/2009

MANDATORY EUP DIRECTIVE

APPLIES TO MOTORS:

- rated voltage up to 1000V
- single speed, three phase, 50 Hz
- 2, 4 and 6-pole
- rated output from 0.75kW to 375 kW
- S1 Duty

DOES NOT APPLY TO MOTORS DESIGNED TO OPERATE

EXCLUSIVELY:

- in potentially explosive atmospheres as designed in ATEX directive 94/9/EC
- brake motors
- ambient air temperature outside the range
- -30C to +60C
- altitudes exceeding 4000m asl
- maximum operating air temperature above 400C

IMPLEMENTATION TIMETABLE

PHASE 1 - FROM 16 JUNE, 2012

Motors must meet the IE2 efficiency level

PHASE 2 - FROM 1 JANUARY, 2015

Motors with a rated output of 7.5 kW - 375 kW must meet EITHER the IE3 efficiency level OR the IE2 level if fitted with variable speed drive

PHASE 3 - FROM 1 JANUARY, 2017

Motors with a rated output of 0.75kW - 375 kW must meet EITHER the IE3 efficiency level OR the IE2 level if fitted

2008

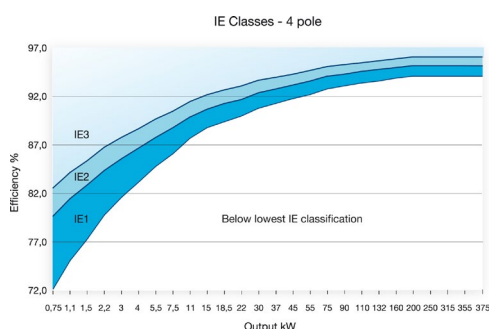
IEC 60034-30

STANDARD FOR LV MOTOR EFFICIENCY CLASSES

MOTORS COVERED BY STANDARD INCLUDE:

- Single speed, three phase, 50 and 60 Hz
- 2, 4 or 6 pole
- Rated output from 0.75 kW- 375 kW
- Rated voltage UN up to 1000V
- Duty type S1 (continuous duty) or S3 (intermittent periodic duty) with a rated cyclic duration factor of 80 percent or higher
- Capable of operating direct online 50 and 60 Hz

Super Premium Efficiency	IE4	Not yet defined
Premium Efficiency	IE3	Premium
High Efficiency	IE2	Comparable to Eff1
Standard Efficiency	IE1	Comparable to Eff2



2007

IEC 60034-2-1

STANDARD ON EFFICIENCY MEASUREMENT METHODS

Introduces new rules concerning the testing methods to be used for determining losses and efficiency.

The resulting efficiency values differ from those obtained under the previous IEC testing standard IEC 60034-2: 1996

ABB calculates efficiency values according to the indirect method, with additional losses determined from measurement. This is the preferred low uncertainty method outlined in the standard.



PROCESS PERFORMANCE MOTORS

WHAT IS A PROCESS PERFORMANCE MOTOR?

Process performance motors are the flagship of ABB's standard low voltage motors. This range provides the most comprehensive, versatile set of motors for the process industries and heavy duty applications which are dependent on continuous reliability, lowest possible environmental impact and life cycle costs. Their superior ability to perform reliably and efficiently, continuously and even under the most challenging circumstances, ensure that they power their way through the toughest tasks and conditions.

CAST IRON M3BP OR ALUMINIUM M3AA

Cast iron 80-355, 2, 4 & 6 poles

TEFC low voltage motors, cast iron, IP55, IC 411, single speed, 400 V 3 phase 50 Hz

Aluminium motors 80-250, 2, 4 & 6 poles

TEFC low voltage motors, aluminium, IP55, single speed. 400 V 3 phase 50 Hz

WHERE CAN IT BE USED?

- End users in continuous process industries
- Project OEM's
- Demanding industries:
 - pulp and paper
 - metals
 - minerals and mining

HIGHLIGHTS

- All variant codes possible for process industry
- Application knowledge and engineering
- With three years warranty and option to extend to five years
- IE3 and IE4



GENERAL PERFORMANCE MOTORS

WHAT IS AN ABB GENERAL PERFORMANCE MOTOR?

These motors combine convenience and easy handling seamlessly with ABB's engineering expertise, while at the same time providing standard variants and modifications. The motors can be tailored according to the specific needs of OEM's. The high modularity enables adding a wide variety of elements to the robust frame, thus making the overall solution to fit specific situation and customer need perfectly. As the user only pays for the enhancements needed and used, the motors are free from all unnecessary elements.

CAST IRON M2BAX OR ALUMINIUM M2AA

132-355, 2, 4 & 6 poles - cast iron

TEFC low voltage motors, cast iron, IP55, IC 411, single speed. 400 V 3 phase 50Hz

56-250, 2, 4 & 6 poles - Aluminium

WHERE CAN IT BE USED?

- End users in various industries
- Tailored serial project OEM
- Pumps
- Fans
- Compressors

HIGHLIGHTS

- Variant codes which OEM customers need
- One year warranty
- IE3
- 2, 4 & 6 pole



ABB POWER QUALITY / HARMONICS

ACTIVE FILTERING OF HARMONICS

THE COST OF POOR POWER QUALITY

Poor power quality results in financial loss in electrical networks, as well impacting on the environment and safety concerns.

THERE ARE THREE SIGNIFICANT CAUSES OF POOR POWER QUALITY IN NETWORKS:

- Reactive power (poor power factor)
- Harmonic pollution
- Imbalanced load

AS WELL AS THE FINANCIAL PENALTIES, POOR POWER QUALITY CAN RESULT IN:

- Frequent equipment failures
- Reduced equipment lifetime
- Production losses
- Reduced safety levels within installations
- Increased carbon footprint
- Non compliance with utility regulations



Additional costs can be incurred due to kWh losses in typical installed components such as transformers, cables and motors, as well as increased CO² emissions as more power has to be generated to satisfy these demands.

Poor power factor can result in increased maximum demand, and could even cause the agreed supply capacity to be exceeded, incurring further penalties, which are to be reviewed upward in the next few months. By improving the power factor, there may be an opportunity to revise the agreed supply capacity downward to reduce costs, which are typically between £0.80 and £1.00 per kVA per month. Alternatively, this could release some power to supply new plant and equipment without the need to increase availability.

Where the power factor is below 0.95, energy providers will penalise this with a tariff of about £0.002 per kvar consumed. Whilst this doesn't seem significant, a medium sized industrial installation with a poor power factor could be consuming more than 200,000kvar per month, at a cost of £400, or nearly £5,000 per annum.

Where significant harmonic currents are being generated in an installation, the effects on plant and equipment are listed above, but the energy provider has the power to impose limits on a connection and can insist that action is taken if required to meet their requirements. In the worst case, the energy provider has the power to disconnect a supply if it is polluting the network, or causing disturbance to other consumers.

Halcyon Drives can offer a complete power quality survey, which will identify the site load characteristics, including power factor and harmonic generation. We will then work with you to offer the most effective solution.

POWER PQF RANGE LV ACTIVE FILTERS PQFS - PQFI - PQFM - PQFK

The ABB Power Quality Filter offers unprecedented ability to clean the network from harmonics. The PQF actively eliminates the harmonics present in the supply system in a controlled way. It is insensitive to large network impedance changes due to change in network topology like paralleling of sources, or switching between mains supply and generator operation.

The PQF monitors the line current in real time and processes the measured harmonics as digital signals in a high power multi DSP (Digital Signal Processor) based system. The digital controller generates Pulse Width Modulated (PWM) signals that drive IGBT power modules which through line reactors inject harmonic currents in the network with exactly the opposite phase to the components that are to be filtered.

The PQF also offers communication facilities with the customer's existing communication network. This feature which uses Modbus RTU, allows the PQF to be easily monitored and controlled from a remote location. The Modbus communication feature can be used by means of an RS-232 to RS-485 converter (optional).

ADVANCE PFC EQUIPMENT RANGE

RVC PFC CONTROLLER

- Easy commissioning
- Complete auto set up (starting current-C/k, number of active outputs, type of switching sequence, phase shift, special connections).
- Easy to use thanks to a user friendly interface and ease of access to parameters for manual setting
- Highly efficient switching strategy combining integral, direct and circular switching

This allows the user to:

- Control the cost in presence of rapidly varying loads
 - Reduce the number of switchings
 - Avoid unnecessary intermediary switchings
 - Increase the lifetime of the capacitors and contractors
-
- Suitable for hot environments thanks to max. ambient temperature rating of 70°C
 - Insensitivity to the presence of harmonics
 - Overvoltage and undervoltage protection
 - An alarm contact is closed when the target cos is not reached within 6 minutes after all outputs have been switched on, the internal temperature of the RVC rises above 85°C or the power supply is out of range

ADVANCE AUTOMATIC CAPACITOR BANKS

POWERFUL AND COMPACT

- High power density - small dimensions
- Proven technology CLMD capacitors

EASY TO INSTALL

- Complete factory tested unit ready for connection
- Ample wiring space
- Wall fixings (A50, A100)
- Lifting lugs and floor mount (A200, A400)
- Bottom cable entry (optional top entry)

RELIABLE AND SAFE

- IP42 protection (closed door)
- Protected against direct contact (open door)
- HRC fuses
- Use of ABB components:
 - PF Controller
 - CLMD capacitors



CUBICLE PROTECTIVE DEVICE

MCCB can be included within the enclosure and interlocked with the main access door to provide complete cubicle protection.

SELECTOR SWITCHES

Each stage can be provided with selector switches and stage on indication.

FUTURE EXTENSION

Modular switching section trays incorporating appropriate capacitor units, contactors and line fuses and are available for future extension.

ABB SOFTSTARTERS

ABB offer a selection of four softstarter models to provide a solution for the varied needs of all customers requirements. Information on the most popular softstarters are highlighted below, for further details on the ABB Softstarter ranges is available on request.

PSE - THE EFFICIENT RANGE

The PSE has been designed to meet the most common requirements from the water segment and is specialized on pump operation. It combines the requested protections with a very compact design and built in bypass. Remote operation with external keypad or over fieldbus is available as an option.

- Two phase controlled
- Operational voltage: 208...600 V AC
- Wide rated control supply voltage: 100...250 V AC, 50/60 Hz
- Rated operational current: 18...370 A
- Voltage ramp and torque control for both start and stop
- Current limit
- Kick start
- Built in bypass for energy saving and easy installation
- Coated PCBA protecting from dust, moist and corrosive atmosphere
- Illuminated display that uses symbols to become language neutral
- External keypad rated IP66 (Type 1, 4X,12) as an option
- Fieldbus communication with FieldBusPlug adapter and the FieldBusPlug
- Analog output for display of motor current
- Electronic overload protection
- Underload protection
- Locked rotor protection



PSTX – THE ADVANCED RANGE

The PSTX combines many years of research and product development with extensive knowledge of application specific requirements and needs. It is our latest advancement in motor control and protection and adds new functionality and increased reliability.

- Three phase controlled
- Operational voltage: 208...690 VAC
- Wide rated control supply voltage: 100...250 V, 50/60 Hz
- PSTX Rated operational current: 30...1250 A (inside-delta: 2160 A)
- Both in-line and inside-delta connection
- Coated circuit boards protecting from dust, moist and corrosive atmosphere
- Detachable keypad rated IP66 (Type 1, 4X,12)
- Graphical display with 16 languages for easy setup and operation
- Built in bypass for energy saving and easy installation
- Built in Modbus RTU for monitoring and control
- Support for all major communication protocols
- Analog output for measurement of current, voltage, power factor etc.



PULS POWER SUPPLIES

PULS Power Supplies are a German manufactured DIN Rail power supply, boasting one of the leading quality manufacturers on the market place. A product that we utilise ourselves within our own control panels, because quality components are key to an excellent product and service.

The portfolio consists of three product families:

MINILINE (25-100W), SILVERLINE (40-960W) AND DIMENSION (80-480W)

The products fall into one of the following categories:

- Single phase AC/DC Power Supplies
- Three-phase AC/DC Power Supplies
- DC/DC Converter
- Redundant Power Supplies and Modules
- AS-interface® Power Supplies
- Buffer Modules

PULS Power Supplies can be applied in the following industries:

Machine construction, control and automation, plant and systems construction, robotics, drive technology, building automation, lighting technology, cleaning technology, construction machinery etc.

As the products have been certified to meet a wide range of codes and standards, they can be readily installed throughout the world.



MINILINE

The compact units with a robust plastic housing for the lower and medium power range

- Several output voltages
- Installs in seconds
- Also with a 400/480V input

DIMENSION FAMILIES

C-SERIES: A LOW COST AND EFFECTIVE SOLUTION IN A COMPACT DESIGN

Power Supplies and DC/DC converters for users looking for highly reliable power supplies in a compact housing. Focusing only on the essential features achieves significant advantages.

Q-SERIES: PREMIUM CLASS POWER SUPPLIES

Suitable when you need state-of-the-art technology and flexibility for demanding tasks. With high efficiencies, minimal losses, a compact housing and many other features, this series is the "Best-in Class".

X-SERIES: SEMI-REGULATED 3-PHASE POWER SUPPLIES

For motors and other loads with high power requirements. The X-series provides a low cost solution with benefits that include a compact design and maximum efficiency with only minor compromises in output voltage regulation precision and buffer time.

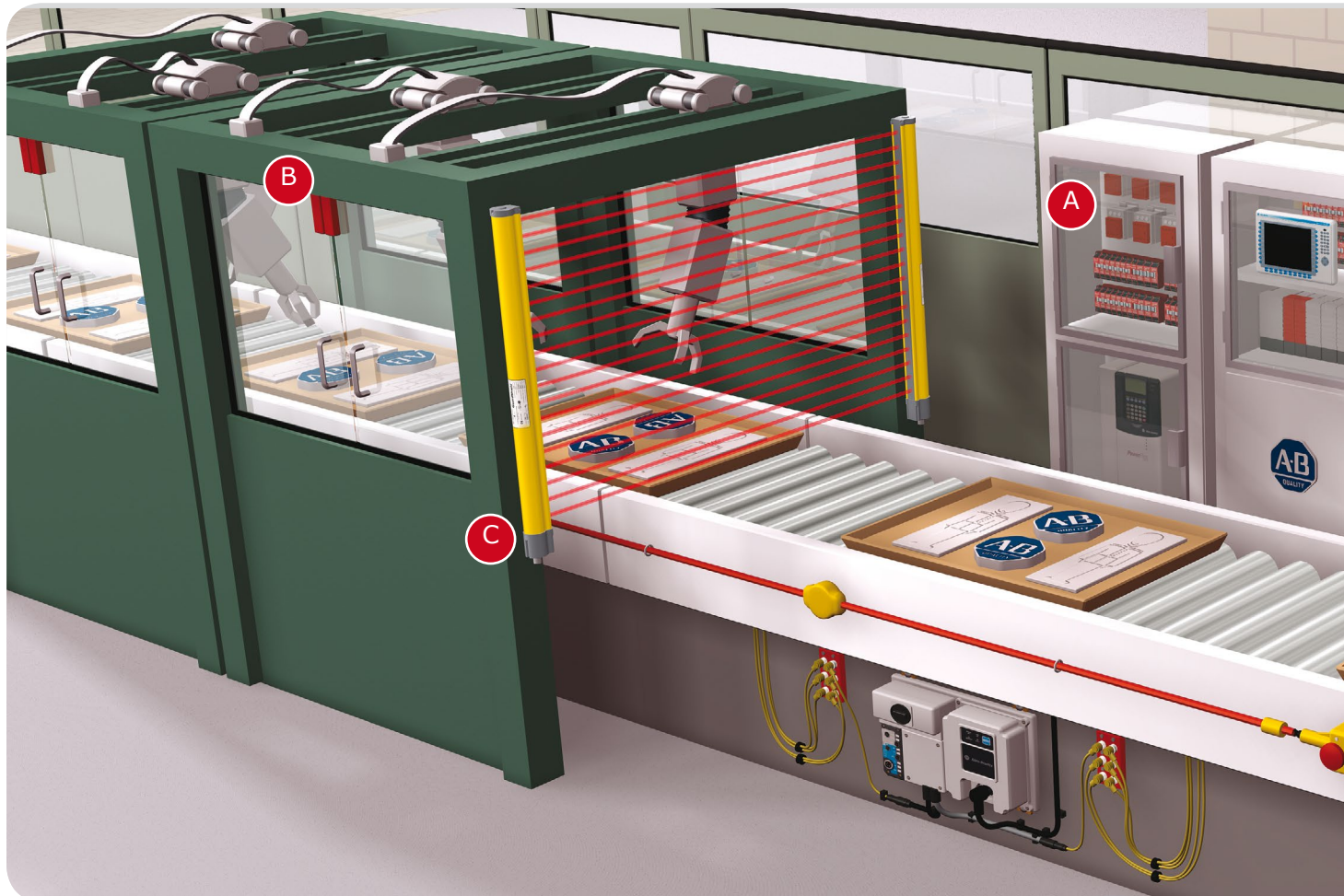


GUARDMASTER SAFETY

ROCKWELL AUTOMATION GUARDMASTER

Rockwell Automation produce a comprehensive selection of safety products to protect people, machinery and the environment while maximising uptime.

The products are built for high reliability, stability and quality allowing access to potentially hazardous areas only when the area is safe. Highlighted below are a selection of the most popular Guardmaster products.



A



SAFETY RELAYS

Safety Relays check and monitor a safety system and either allow the machine to start or execute commands to stop the machine. Single function safety relays are the most economical solution for smaller machines where a dedicated logic device is needed to complete the safety function. Modular and configurable monitoring safety relays are preferred where a large and diverse number of safeguarding devices and minimal zone control are required.

B



NON-CONTACT SWITCH

Our Non-contact interlock switches help you protect personnel and equipment. At the same time, flexibility and productivity are points that you must also consider as you design your safety system. For non-contact interlocks, no physical contact (under normal conditions) takes place between the switch and actuator.

C



POC LIGHT CURTAIN

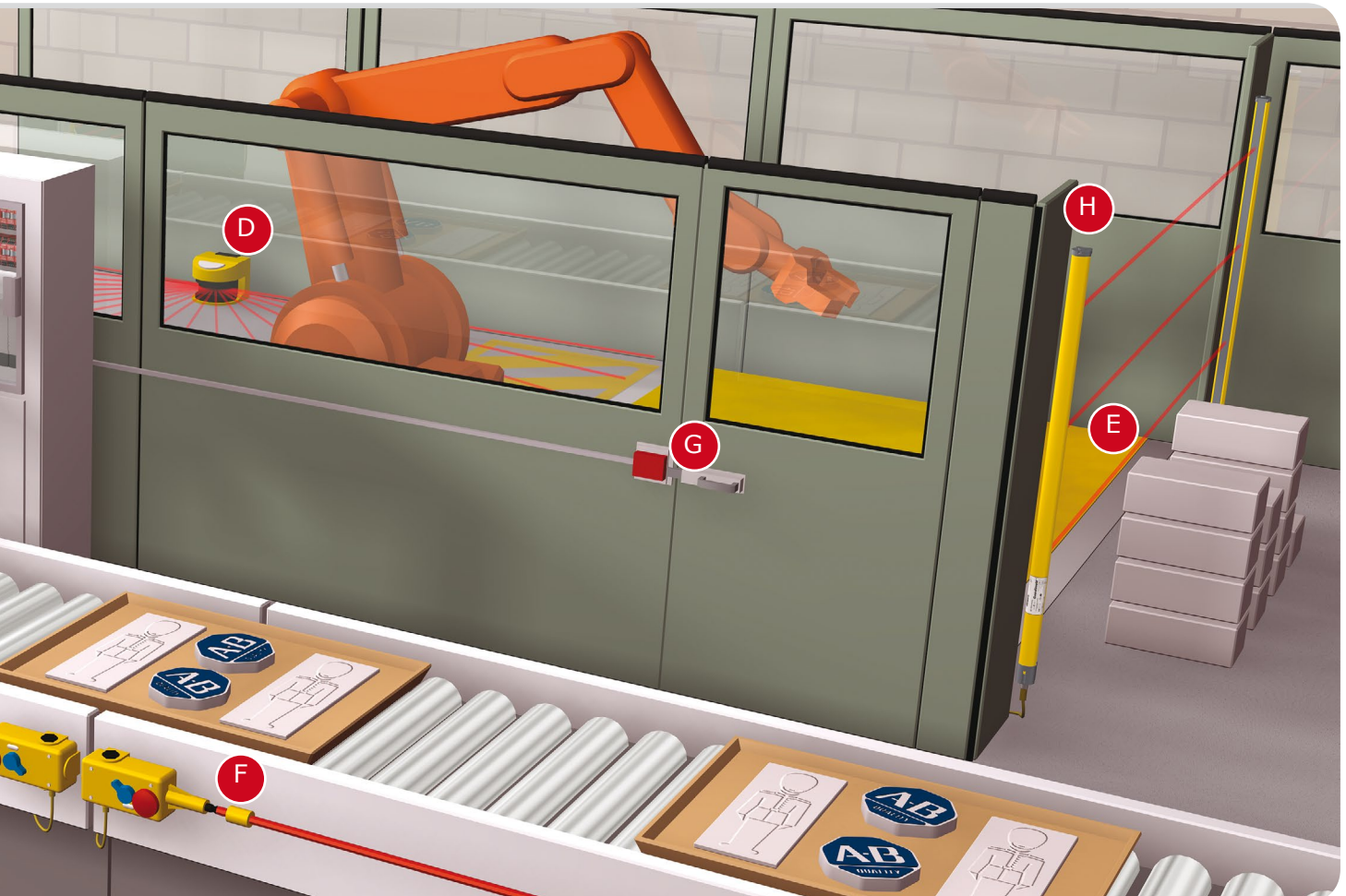
POC (Point of Contact) light curtains are opto-electronic presence sensing safety devices that detect the presence of an object in the light curtain's sensing field.

D**SAFEZONE LASER SCANNER**

Our SafeZone™ Safety Laser Scanners are compact devices that have switchable, configurable field sets (warning and safety).

**E****SAFETY MAT**

Our Bulletin 440F MatGuard™ Safety Mats are pressure sensitive safeguarding products that we designed to detect the presence of people on the sensing surfaces.

**F****CABLE PULL SWITCHES**

Our Lifeline™ 4 Cable Pull Switches can be installed along or around awkward machinery such as conveyors and provide a constant emergency stop access.

**G****GUARD LOCKING SWITCHES**

Our Guard Locking Switches protect hazardous areas where a danger is not immediately removed after a stop request. On many machines, removing power to the motor or actuator will not immediately stop the dangerous motion.

**H****LIGHT CURTAIN**

Our PAC (Perimeter Access Control) light curtains are multiple beam, short range safety light curtains that provide access detection at machine entry points.



SAFETY MATS

Pressure sensitive safeguarding products designed to detect people on the sensing surfaces and easy to install.

FEATURES

- Hardened steel plate construction
- No dead spots
- 4-wire system to detect opens and shorts
- Can withstand a static pressure of 4500 psi
- IP67 rated



APPLICATIONS

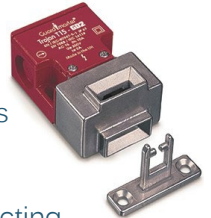
- Ideal for guarding floor space ensuring operators can not locate themselves near hazards
- Use as a combined trip and presence sensing system
- Use as a presence sensing system within a guarded perimeter

TONGUE INTERLOCK SWITCH

Universal Tongue Interlock Switches are universal tongue or key operated safety interlock switches. They fit at the leading edge of sliding, hinged or lift off guards. With dual key entry slots and rotatable heads, movable only by releasing the cover screws, these switches offer four actuator entry options.

FEATURES

- Strong and versatile, can be used in most applications
- Available in Standard and GD2 models
- Standard model has self ejecting tamper resistant actuator, only operates when mounted to the guard
- Contacts, 1 N.O. & 2 N.C. (sealed to IP67)
- Four possible actuator entry points, easy to install
- Optional semi-flexible actuator for operation on smaller radii doors (>60 mm)
- Optional catch mechanism for use on vibrating machinery
- Pneumatic versions of the Trojan available



TLS-GD2 GUARDSWITCH

The TLS-GD2 Guard Locking Switch is a positive-mode, tongue-operated interlock switch. It locks a machine guard closed until power is isolated then keeps the power isolated while the guard is open. The TLS-GD2 has three safety (N.C.) contacts and two auxiliary (N.O.) contacts.

FEATURES

- Power to release or power to lock
- High locking force 2000 N (450 lb)
- 2 N.C. and 1 N.O. for position monitoring
- 1 N.C. and 1 N.O. or 2 N.C. for lock monitoring
- Rotatable head—4 possible key entry slots
- Conforms to EN 1088 & EN 60947-5-1
- Escape release version available
- IP69K, suitable for high pressure, high temperature wash down



LIFELINE 3™

CABLE PULL SWITCHES

Our Lifeline™ 3 Cable Pull Switches are cable (rope) operated emergency-stop devices designed to meet the stringent requirements of ISO 13850 (Safety of Machinery—Emergency Stop Equipment). The Lifeline 3 system can be installed along or around awkward machinery and provides a constant-access emergency stop facility.

FEATURES

- Switches up to 30 m (98 ft) span
- Universal mounting and operation
- Switch lockout on cable pulled and cable slack
- Cable status indicator on switch lid
- Industry standard fixing centers to DIN/EN 50041
- Quick disconnect styles available



PROSAFE

TRAPPED KEY SWITCH

Our Exchange Units for Trapped Key Interlock Switches are used in an interlocking sequence to link together other devices in the ProSafe® range. These units cater to more complex operating sequences.

FEATURES

- A range of off-the-shelf units in various combinations
- Replaceable/easy to clean code barrels
- 316 stainless steel construction
- Primary keys in release secondary keys simultaneously
- Weatherproof stainless steel dust cap



SAFEDGES

SYSTEM COMPONENTS

The Safedge sensitive edge systems are used in a variety of applications where the edge of an object must be detected by contact. The Safedge system consists of three parts:

- 1) a C-rail, which is used to mount the profile;
 - 2) a profile, which contains the sensing surface;
 - 3) a control unit, which checks the operation of the profile and interfaces with the control system.
- A typical system is shown below.

TYPICAL APPLICATIONS

Typical applications for sensitive edge systems are:

- Sliding doors
- Sliding gates
- Automated guided
- Vehicles
- X-Y tables
- Fence tops
- Scissor jacks
- Loading platforms



SENSAGUARD

NON-CONTACT SWITCH

Featuring the latest generation of RFID technology for coding and inductive technology for sensing, SensaGuard's large sensing range and tolerance to misalignment is a cost effective solution that is ideally suited for a wide range of industrial safety applications. The SensaGuard product line is a Category 4/SIL 3 rated switch per EN954-1, TÜV functional safety approved to IEC 61508.

FEATURES

- Switches can be connected to a standard safety relay, for example, the MSR126, MSR127, MSR200/300 Family, SmartGuard™ and Safety I/O Blocks
- Multiple actuator sizes for large sensing distance
- IP69K environmental rating
- Short-circuit and over-voltage protection
- LED located on the switch for door status and troubleshooting
- Unique coded version
- Automatic learn process at unit power up
- Option to select if the sensor can learn a new actuator up to eight times or lock the unit so it can not learn another actuator
- Integrated latch version
- Adjustable magnetic latch force 20...60N
- Designed for easy mounting on aluminium profile



SAFETY RELAY

SINGLE FUNCTION

Our Guardmaster® Safety Relays check and monitor a safety system and either allow the machine to start or execute commands to stop the machine or control safety-related functions. Single-function safety relays are the most economical solution for smaller machines where a dedicated logic device is needed to complete the safety function. Modular and configurable safety relays are preferred where a large and diverse number of safeguarding devices and minimal zone control are required.

FEATURES

- Offers a broad range of safety functions
- Provides versatility through simple logic, reset and timing configurations
- Includes single wire safety relay connection which allows for ease of installation and system flexibility
- Terminals are grouped together by power inputs and outputs for clear connection
- Offers compact solution which saves energy and space on DIN rail
- Provides consistent terminal layouts and configuration allow simplified installation



Riello UPS fits conveniently within our product portfolio, a quality product built in Italy and designed to protect against power failure.

With power consumption increasing on a yearly basis the likelihood of industry being effected before residential power is significantly high. Some companies view an uninterrupted power supply as a critical tool to keep their plant/site/application running for a matter of time before critical information or product is lost/wasted. Below are four of Riello UPS's most popular products:



SENTINEL PRO

SENTINEL PRO is an on-line double-conversion UPS offering the highest levels of reliability and protection for critical servers, voice and data processing IT systems.

For long runtime applications, Sentinel Pro (ER models) can be fitted with matching battery extension packs which also include additional battery boost chargers. The UPS is highly efficient. SENTINEL PRO is designed to save energy and has a power-off push-button feature to reduce energy consumption to zero, when no load is connected or switched off.

SENTINEL PRO MODELS INCLUDE 700VA, 1000VA, 1500VA, 2200VA AND 3000VA.

SENTINEL DUAL

SENTINEL DUAL is designed to power critical loads such as servers, storage systems, telephone equipment, medical systems and industrial applications.

The UPS is ideal for Blade servers with an input power factor close to Unity (1). The UPS has can be used as tower UPS or within a rack mount cabinet, and takes up only 2U in height.

SENTINEL DUAL has a modern design, choice of functional formats, and represents the state of the art technology from the Riello UPS research and development team. The UPS can achieve an on-line operating efficiency of 92%.

For critical business continuity applications requiring long run times, SENTINEL DUAL can be installed with battery extension packs (ER models) with their own internal battery chargers to maintain sensible recharge times.

The UPS also incorporates the Riello UPS 'power-off' function found in other ECO Line UPS. Premium Dual is designed to save energy when no loads are connected.



DUAL IS THE HIGH DENSITY VERSION OF THE PREMIUM PRO RANGE OF DOUBLE-CONVERSION ON-LINE UPS.



MULTISENTRY

10-200 kVA

MULTI SENTRY is a state-of-the-art uninterruptible power supply, achieving the highest possible level of on-line double-conversion performance (VFI-SS-111) as defined within IEC EN 62040-3.

The UPS has been designed to protect critical information and telecommunications systems, networks, services and processes whose operation could be disrupted by poor power quality and/or breaks in their mains power supply.

The sizes available include: 10-12-15-20-30-40-60-80-100-120-160-200 kVA all with a three-phase input and output.

The MULTI SENTRY UPS is one of the most efficient UPS available with a minimal impact on its environment and power sources.

25

MULTI POWER

POWER RANGE: 294 KVA

3:3

1-28 X 42 KW UP TO 1 MW +

REDUNDANCY

The Riello MULTI POWER (MPW) is the ultimate modular UPS for data centres and other critical loads.

The MULTI POWER is designed to protect any critical high-density computer and IT environment, whilst achieving maximum availability. The MPW grows along with the demands of the business without oversizing the UPS - optimizing both the initial investment and the total cost of ownership. As soon as demand increases, the Riello MPW modular solution can expand its power capability, maintaining the highest levels of power protection, availability, redundancy and investment savings.

Digital technology has an increasingly strong influence on day to day activities in almost all sectors and applications such as healthcare, power generation, social networking, telecommunications, commerce and education.

Subsequently, any activities and equipment related to data storage, processing and transfer should be supplied from the most reliable power source. Multi power ensures that a scalable, secure, high quality power supply is available for a variety of critical load applications. The new MPW power modules feature the very latest in UPS technology. With its three level Neutral Point Clamped (NPC) inverter and Power Factor Corrected (PFC) input control, the MPW ensures the highest level of performance in terms of overall efficiency, input power factor and harmonic impact on the supply source.



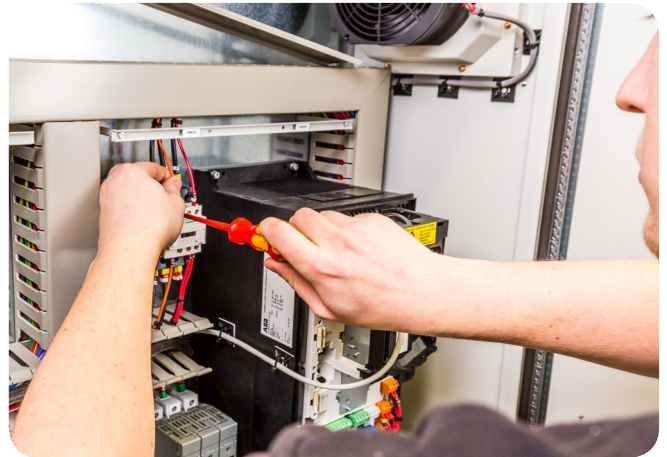
CONTROL PANELS

The design and manufacture of control systems and motor control centres for industrial processes and automation projects are a speciality of Halcyon Drives. Control panels can be built to customer specific requirements or we can provide the full design and build together with the customer to meet their needs. All of our control panels can be manufactured to EN60439-1 Form 1,2,3 & 4.

Our panels range from simple operator consoles or starters to complex PLC controlled networked systems, for a wide variety of industrial applications.

Automation applications and solutions are based on European harmonised standards and technical specifications to meet design, control and safety criteria. All schematics are produced utilising AutoCAD software. All components selected are market leading, renowned for their high quality offering, it is imperative that when the control panel is installed in its final location that the panel is reliable for the customer.

With our experience in process control, variable speed drives and our partnership with ABB our experience of applications in general industry is quite sophisticated. We work closely with the customer to deliver the best possible solution for their needs which we will discuss at the point of design.



PROGRAMMABLE CONTROLLERS

We have engineers who specialise in the programming of PLC's and Human Machine Interface (HMI) who also develop software. Our capabilities of programming include:

- Siemens
- Mitsubishi
- Allen Bradley
- Modicon
- Telemecanique

AUTOCAD (COMPUTER AIDED DESIGN)

All drawings are produced on AutoCAD using current European Symbols. Our Cable Numbering and cross reference system enables speedy location and identification of cables and components.

Each engineer produces their own design drawings, enabling us to work efficiently by eliminating the need for engineering sketches requiring conversion into CAD Drawings by a CAD operator.



MOTOR CONTROL CENTRES ARE BUILT WITH ASTA CERTIFIED BUSBAR AND RISER SYSTEMS AND FITTED WITH STARTER GEAR PROVIDING TYPE 2' CO-ORDINATION TO BS EN60947.

FACTORY ACCEPTANCE TESTING (FAT) AND COMMISSIONING

Once the control panel is built to the agreed specification the customer will be invited to an inspection and factory acceptance test, either written by the customer or we can produce one. Once we have proved that the control panel or Motor Control Centre Suite has met the criteria of the customer, the product can be transported to the destination and can be installed and commissioned by Halcyon Drives engineers. If the customer requires training on the product, this is a service we can offer to the customer too.

ABB VARIABLE SPEED DRIVE SERVICE

MAINTENANCE

Once a variable speed drive (VSD) has been purchased for installation or spares it is essential that regular maintenance is performed on the VSD's to increase longevity of its life cycle. Once a year is usually recommended, with any technology, maintenance is required.

MAINTENANCE VISITS

Maintenance visits are often employed to assist the client with the regular maintenance of variable speed drives, on site information will be reported back and recommendations will be made, we can also log the quantity of drives, serial numbers and parameters to help with the care as well as informing the client when a visit is due.

FIELD SERVICE

Our service engineers are available to attend site to repair breakdowns, however without a service contract this is within normal working hours and if a contracted breakdown occurred at the same time, we would be obliged to prioritise the contracted client.

SERVICE CONTRACTS

Critical plant where breakdowns carry heavy penalty charges or high downtime costs benefit from holding a service contract. Our contracts cover 24 hours a day, 7 days a week. We endeavour to be with you within an agreed number of hours to get the plant working as soon as possible. If the VSD is irreparable we have a fleet of hire drives, our priority is minimise your downtime, In these circumstances the engineer can take the unit to be our repairs workshop. Data from the units will be recorded in the eventuality we have to inject the parameters into a new unit. Maintenance visits will also be inclusive of your contract.

IF YOUR VARIABLE SPEED DRIVE NEEDS TO BE REPAIRED WE CAN PROVIDE YOU WITH A HIRE UNIT IN THE INTERIM.

REPAIR / UPGRADE

Our highly qualified repair team will assess your variable speed drive within our repair workshop to offer you a comparison of repair vs. the cost of a replacement unit. We always want to give the best advice, we believe we should provide all available information to help the customer make an informed decision.

TELEPHONE SUPPORT

Some of our more confident clients are happy to determine a fault on a variable speed drive themselves. However, there are a number of fault codes that we are happy to discuss remotely via telephone support. This can save you time in getting the unit running. Our telephone support is available during normal working hours unless you are within a contract which would give you 24/7 access.

COMMISSIONING AND INSTALLATION

Our service engineers have been fully trained to commission ABB variable speed drives, although the functionality of the keypad and its parameters are relatively user friendly, using one of our engineers can provide additional help when time is limited.

RECORDING OF PARAMETERS

Each time we conduct maintenance on site, parameters are recorded for the client as part of our service. However if you require your parameters to be recorded and stored we can do this as an option without having a maintenance visit conducted.

REMOTE MONITORING

Offering the capabilities to monitor the activity of your variable speed drive via the internet can be a more efficient method of monitoring. The software will alarm you if there is an issue with the variable speed drive without you being on site. Potentially this can prevent a critical breakdown before the situation arises.

PROJECT MANAGEMENT

As we offer full turn key solutions, we utilise project management on large installation projects.

ENERGY AUDIT

Where centrifugal fans and pumps are installed on site, there is potential to reduce energy consumption with the use of variable speed drives also making your processes run more efficiently too. Our energy audits are free of charge and are quite a simple exercise. We will attend site to view your applications and motor sizes, gain an understanding of your application, costs and energy consumption and produce a report that estimates potential savings. We would then look to retro fit a hire drive to monitor the savings on site to provide enough information for the customer to make a well considered decision.

POWER FACTOR CORRECTION SURVEYS / SERVICE

Power quality can be an issue to any industrial site consuming commercial volumes of electricity. Electricity must be consumed efficiently with its minimum performance of 0.95. Below 0.95 carries penalties charged by the electricity provider. We can assess your power consumption and determine whether improvements can be made and what benefits you will gain.

HARMONIC SURVEY

A site survey for the purpose of establishing the present levels of harmonic distortion can be carried out and would include:

ASSESSMENT OF EXISTING SITE CONDITIONS

TO CONDUCT A HARMONIC SURVEY IT IS NECESSARY TO ESTABLISH THE PRESENT SITE CONDITIONS

This includes investigation of the supply transformers; establishment of the Point of Common Coupling (PCC); assessment of the single line distribution including pertinent ancillary equipment such as Power Factor Correction equipment; method of connection of the monitoring equipment.

CONNECTION OF MONITORING EQUIPMENT

SITE VISIT TO CONNECT THE MONITORING EQUIPMENT

DISCONNECTION OF EQUIPMENT

SITE VISIT TO DISCONNECT MONITORING EQUIPMENT AFTER A PRE-DETERMINED MONITORING PERIOD

PRODUCE A REPORT OF THE FINDINGS

TO INCLUDE ALL INFORMATION REQUIRED UNDER G5/4

An associated computer program would be used to interpret current site results and predicted harmonic levels will confirm a customer solution to ensure current legislation compliance can be achieved.

CUSTOMER CARE

SEMINARS

As part of our strive to give our customers excellent service, each year we offer Rockwell Automation and ABB seminars. It is an excellent way to refresh on legislation, solutions and products available.

With ever changing criteria to meet it can be quite time consuming trying to keep up to date with information available. During these half day/day seminars run by Rockwell Automation Guardmaster and ABB products will be discussed as well as the legislation you must meet. There is also a questions and answers section so any specific questions that are applicable to your company can be discussed then. If you would like information on our upcoming seminars please send an e-mail to:

seminars@halcyondrives.com or alternatively contact the office on 0113 236 1509

TRAINING COURSES

Training courses are available for ABB Variable Speed Drives, there is a choice of two courses, a full day session covering Installation and a Maintenance Schedule or a half day session covering a Programming Schedule. These are run by Halcyon Drives in our purpose built training suite, or your facilities if this is better suited.

SAFETY TRAINING COURSES ARE ALSO AVAILABLE, THESE ARE RUN BY ROCKWELL AUTOMATION WITH AND INCLUDE A CITY AND GUILDS ACCREDITED TEST:

- CE Marking for Machinery
- Introduction to Functional Safety
- Functional Safety Program



DEMONSTRATION ROOM

Our Visual demonstrations are provided on a variety of our product ranges. Machinery safety and ABB variable speed drives play a key part in our demonstrations showing how the product groups can work together to provide a safer environment for our clients whilst running efficiently.



TECHNICAL ASSISTANCE

At Halcyon Drives we pride ourselves on the service that we can offer to our customers. Because our portfolio of products is focused, we specialise in each product area that we provide.

If you are unsure of the product required we can offer technical assistance to work with you to deliver a suitable solution. If on receipt of your product you require electrical advice for installation then we can help with this too. It is also possible for someone to attend site, review the area that requires safeguarding to provide a solution. Installation and commissioning services are also available.



STOCK PROFILE

Our stock profile of ABB Variable Speed Drives, ABB Motors and Rockwell Automation Guardmaster is extensive to provide customers with products on a next business day service.

We stock a wide variety of essential products, but please note particular products may be made to order and could carry a small lead time.



SAFECONTRACTOR



Safecontractor are the leading third party accreditation scheme which recognises very high standards in health and safety management amongst UK contractors. "Under the Safecontractor scheme, businesses undergo a vetting process which examines health and safety procedures and their track record for safe practice. Those companies meeting the high standard are included on a database, which is accessible to registered users only via a website.

PLEASE FEEL FREE TO CONTACT US WITH YOUR ENQUIRIES ON 0113 236 1509

CONTACT DETAILS

OUR OPENING TIMES ARE:

Monday to Thursday 8.30am to 5pm
Friday 8.30am to 4.30pm
Excluding Bank Holidays

SOCIAL MEDIA

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Halcyon Drives Ltd



@halcyon_drives



Halcyon Drives Ltd



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Halcyon Drives

NOTES

NOTES



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