



Axis Controls

CONTROL PANELS & PLC AUTOMATION SYSTEMS

Manufacturers of bespoke electrical control panels



"We use Axis Controls for quality products and components.
A reliable company that gives us confidence to deliver
bespoke machines"



Quality is our No.1 priority



About Us



Axis Controls (NW) are a UK based electrical control panel builder and systems integrator with UL508A accreditation. For over a decade we have designed and produced control panel and automation solutions for OEMs, machine builders and a wide variety of industrial end users.

From our site in Southport we design and build control systems for a wide range of industrial manufacturing and control applications. Each systems is fully bespoke and designed to your specific requirements, delivered to a specified lead time.

We use the very latest electrical design software - ePlan Pro Panel

Professional, alongside Solidworks for 3D modelling of components and laser cutting of control panel doors.

We are ISO 9001 accredited and have full traceability throughout our manufacturing process. We use MRP software that controls and tracks each panel build; from quotation, parts ordering, goods receipt, job cards for work processes to final inspection and dispatch.

All control panels built by Axis Controls are assembled to the highest standards and are fully compliant with the relevant British and European standards and directives.

Bespoke

Each and every electrical control panel we build is bespoke and designed to your individual requirements.

Quality

We pride ourselves on building high quality electrical control panels with components sourced from leading manufacturers.

Complete Solutions

We offer complete electrical and automation system solutions, from initial consultation to design and manufacture. All electrical control systems come with aftersales support available.



If you have an electrical control system requirement, or if you are an OEM looking to change your control panel builder, we would love to have the opportunity to meet and discuss how Axis Controls could help your business. We have a wealth of experience in control system design and applications, and we may be able to offer a suggestion or solution.

Site visits are free and give us the opportunity to completely understand your process requirements.

Axis Controls are UL 508A Certified!

Axis Controls guarantee that our bespoke electrical control panels are designed, built and installed in line with the UL 508A quality and safety standards.



How do we comply with UL 508A?

- We calculate the short circuit current rating (SCCR) for the entire control panel, and ensure this calculated rating is clearly stated on a label located within the control panel.
- Where specified; Axis Controls provide labels indicating the proper size and type of fuses to be used for control panel maintenance.
- Within the control panel, we arrange components in a way that follows the minimum air-space requirements determined by UL.
- We will include a series of "as built" drawings within the control panel when it is dispatched to you.
- When requested we use markings to indicate the proper torque ratings on the electrical connections as specified by the component manufacturer.
- Each control panel indicates the correct use and location of E-Stop buttons with yellow legend plates, as specified by UL.
- All components used by Axis Controls are certified as safe for use under the UL 508A certification.

Case Studies

Over the last decade, Axis Controls have recommended the best and most cost-effective solutions to our customers.



Winding Process

Axis Controls were commissioned by an machine builder to build a waste winding system.

For this machine we used a Allen-Bradley PowerFlex variable speed drive panel, featuring a range of both PowerFlex 525 and 735 drives with EtherNet and IP communications, alongside a CompactLogix PLC system.

We also used a Woehner busbar system for power distribution and Sick safety solutions.



Drying Systems

We were commissioned by a food manufacturer to create a multi-zone french-fry drying system.

For this machine we used Rittal multi-bay control panel, complete with an Allen-Bradley CompactLogix PLC system, alongside various ABB drives, an ABB isolator and ABB MCCBs & Contractors.

We also used a Woehner busbar system, with Sick FlexiSoft safety system, and Pheonix contact relays.



VSD Systems

A local automation company asked us to design and build a chick hatchery conveyor control system.

This control panel design was based around Siemens soft starters and Parker 650 variable speed drives. The sequence control for this automation was based around an Omron PLC, with an Omron touchscreen operator interface.

We used a Pilz modular safety controller was used for the E-stops and guard switches.

Force Ventilation Fans



Forced ventilation units are available in frame sizes 56 to 225 with a removable extended adaptor. These extended adaptors can be modified to suit all type of motors. The diameter and the length; as well as side punching, special bores and hand release slots can be made according to customer requirements. Frame sizes up to 355 are available upon request.

What Happens If I Don't Use A Force Vent Fan?

If you don't use a force ventilation fan on a motor that is running at less than 25 Hz, you may experience:

- Motor over-heating
- Reduction of output power
- Motor winding stress
- Thermistor over-temperature faults
- Reduced motor life

Axis Controls supply Force Ventilation Fans for most major brands of motors. However, if we don't stock the exact model to suit your requirements, please contact us as we can usually adapt a similar unit to your specification.

Three Phase Force Vent Fans

Standard AC motors are cooled by an axially mounted fan at the non-drive end of the motor and are covered with a cowl. This design is ideal when the motor is operated at its optimum speed, as the fan rotates at the speed of the drive shaft.

However, with the rapidly increasing use of invertors or AC variable speeds drives, it is essential to use a system of force ventilation to deliver the required cooling across the body of the motor. Insufficient cooling will result in loss of output power, nuisance trips, and premature failure of the motor, resulting in production downtime.

Nearly all motor manufacturers offer their own force ventilation fans - but often as an very expensive extra.

Our solution is innovative and extremely cost effective in comparison, with huge savings to be made on the manufacturers' prices.

We stock Force Ventilation Fans suitable for the following motor manufactures;



Single Phase FV Fan Solutions

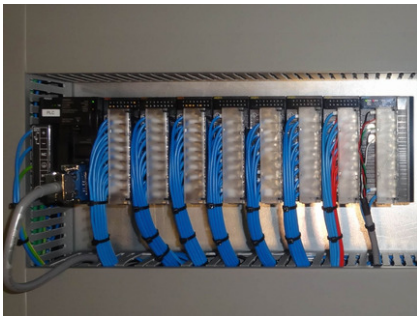
Most standard AC induction motors have a cooling fan mounted at the non drive end of the motor shaft, covered by a fan cowl. The fan blade rotates at the same speed as the shaft. This fan provides optimum cooling performance when the motor is run at its standard design frequency of 50 or 60 Hz.



The single phase FV units are available in frame size 63 up to 132.

We also stock a range of extended force ventilation fan solutions, that allow space for a break and encoder system.

PLC Touchscreen Systems

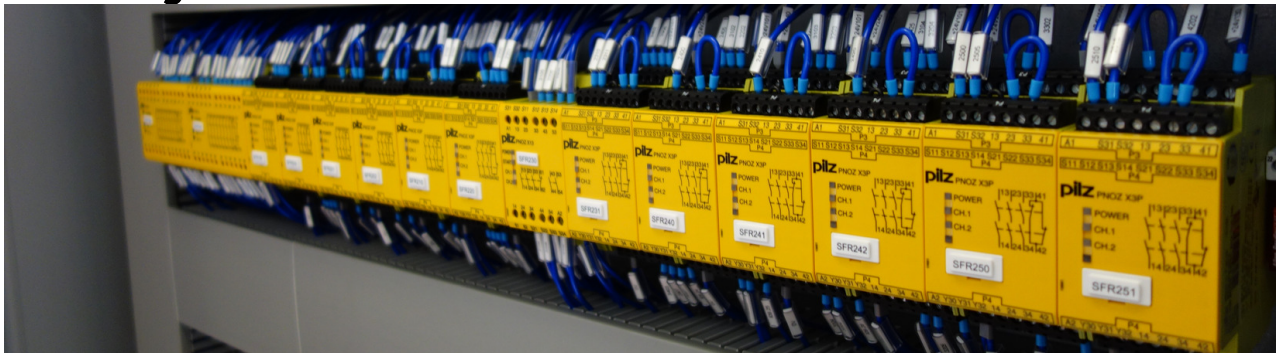


PLC, HMI & SCADA System Integration

Manufacturing in the UK has had to become increasingly more efficient in order to compete in the global market. Therefore, control systems have become an integral part of the manufacturing process. System design, ease of operator control and overall machine performance are key to effective industrial production systems.

Axis Controls specialise in the design, build & program complete automation control systems, using the very latest hardware from leading manufacturers such as Allen-Bradley, Omron, Schneider and Siemens. We can also design SCADA solutions from Omron, Siemens and Wonderware.

Safety Solutions

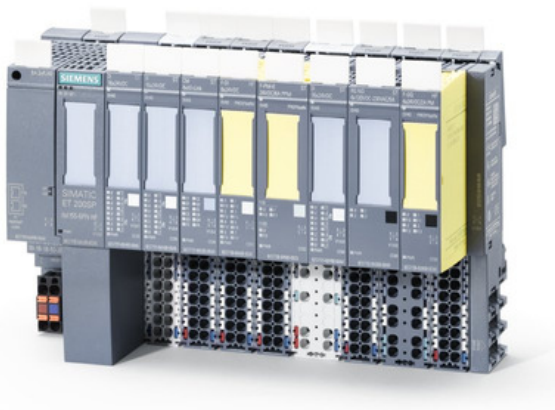


Pilz Safety Solutions

With our experience of practical safety systems, using the large range of Pilz safety products, we can design the right solution for your machine safety application.

Sick FlexiSoft Programmable Safety Solutions

The controller can grow on a module by module basis as a given task evolves. This means that Flexi Soft can be perfectly adapted to different applications.



Siemens PROFIsafe

As a Siemens systems integrator, Axis Controls can design tailored PLC based safety solutions for any industrial or manufacturing process.



Axis Controls stock a wide variety of components and products that we recommend for use in automation solutions, process control solutions and electrical control panels.

Quality Components



We always recommend the very best, and most cost effective, products for use in automation and control systems to our customers. We understand for manufacturer industries, it is vital to maintain the control systems. The majority of components can be ordered for next day delivery.

- * We can offer the full range of Siemens IE3 AC motors, fitted with a force ventilation fan or blower; even on short lead times.
- * We also supply a full range of Sick encoders.
- * We can provide a wide variety of quality sensors, that are easy to integrate, from a number of leading brands.
- * We can also supply a range of dynamic breaking resistors.



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