



# Blackwell Automation Ltd



Ships



Rail



Super Yachts



Oil & Gas



# Who are Blackwell Automation

2

We are an automation and process control systems company based in Colchester, Essex, UK, specialising in system integrations, control systems and instrumentation.

We have a wealth of experience in the marine, rail and oil & gas industry's operating in them for over 15 years.

As a small company we are able to provide excellent customer service with high customer focus and attention at very competitive rates.

## **Mission Statement**

To provide automation solutions to a wide variety of market places with a high quality, efficient and competitive service using the best automation equipment / practices available that meets the requirements of our customers.

# What we do

Our services include (full turnkey solutions);

**Design;** the ability to take your requirement and tailor make a solution for you. We involve you in every step so, you can add any personal touches you like to how the process is to operate, or leave it to us to innovate.

We write all our own software in-house, produce all engineering documentation and drawings ourselves, build the panels in-house and test in-house.

**Installation / Commissioning;** after the product has passed a successful in-house Factory Acceptance Test, we deliver, install and commission the system on-site

**Servicing / Life Support / Maintenance;** we look after our product through its life cycle through service / maintenance visits, breakdowns and upgrades

As well as designing and offering our own full turnkey solutions, we are able to assist with any part of your own engineering which can be contracted out to us, such as;

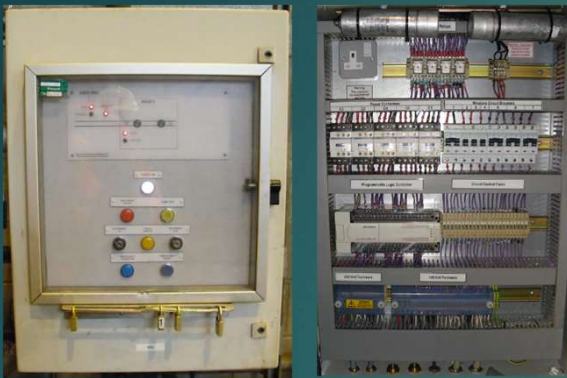
- In-house engineering (drawings, PLC and HMI programming)
- Technical author
- Project management
- In-house testing and FAT setups of your own systems at your factory
- Panel building and wiring
- Installations
- Commissioning
- Upgrades
- Service visits – call outs (world wide)
- Maintenance visits
- Instrumentation calibration and setup



# Depot Protection Systems

5

We can offer maintenance and support on your existing system, so, no need for expensive time consuming upgrades.



## Do you have an existing DPS?

We can offer full health checks to ensure correct operation and obsolescence reviews. Full operational check of internal control panels components and replacements / upgrades of end of life devices.



## Do you have track mounted devices?

We offer maintenance, health checks and supply of replacement or new devices, such as derailers and train wheel detection sensors

# Depot Protection Systems cont.

6



## Do you have OLE?

Replacement keys and locks or new key exchanges to control the release of keys to energise / isolate the OLE.



## Do you have Aspect (signals) and Beacons?

Replacement devices to upgrade to modern LED devices.



## Does your DPS have a PLC

We can carry out software backups and archiving in case of PLC failure. We also offer software modifications and upgrades of the PLC to the latest alternative. – Do you require Remote monitoring?

# Depot Protection Systems cont.

7

## A New System

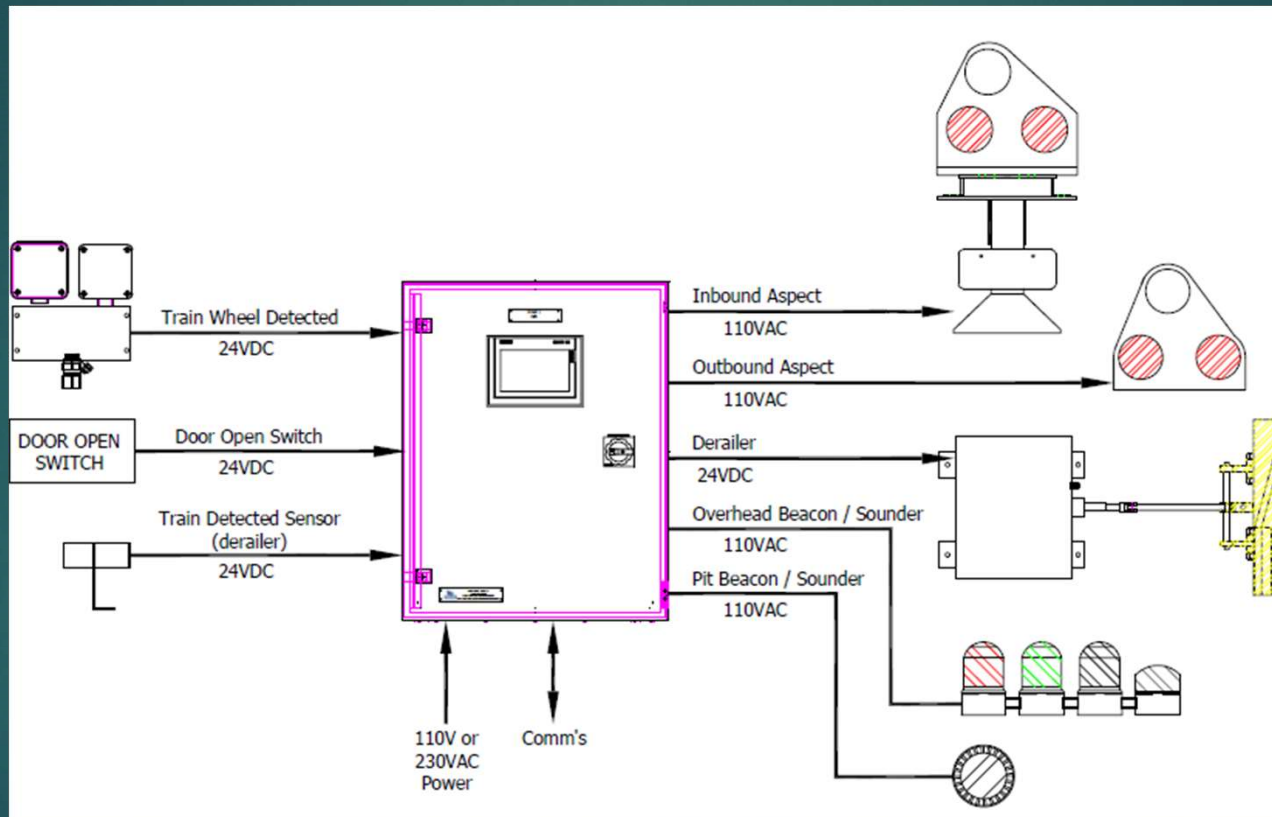
Commercially  
available off the  
shelf items

Simple systems, to  
complex

P.I.N. number ID  
systems

RFID systems

Biometrics



Central system can  
be designed to meet SIL2  
(Safety Integrity Level)

Remote Monitoring

SCADA – PC – Mimics /  
Graphics

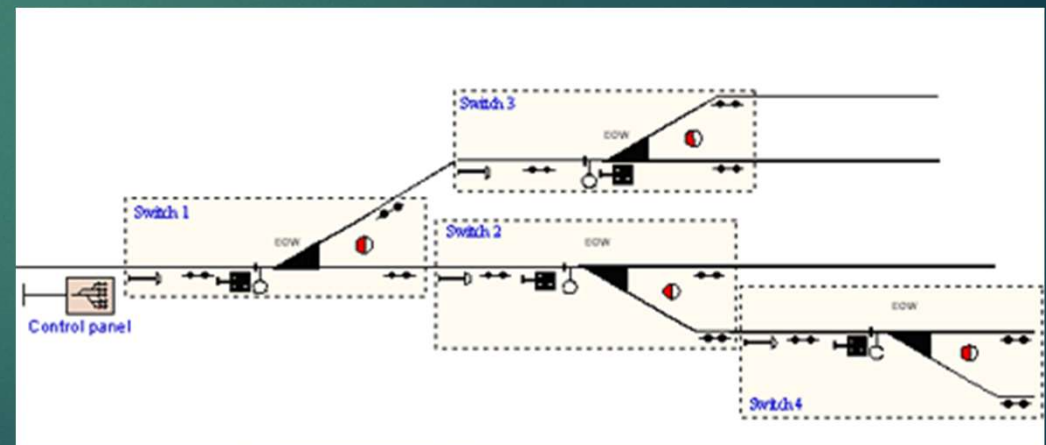
Integrated to signalling  
and points controls



# Points Control

By using a series of Aspects (signalling indications), wheel detection and points machines, the points on a railway can be controlled, monitored and provide indication to the driver.

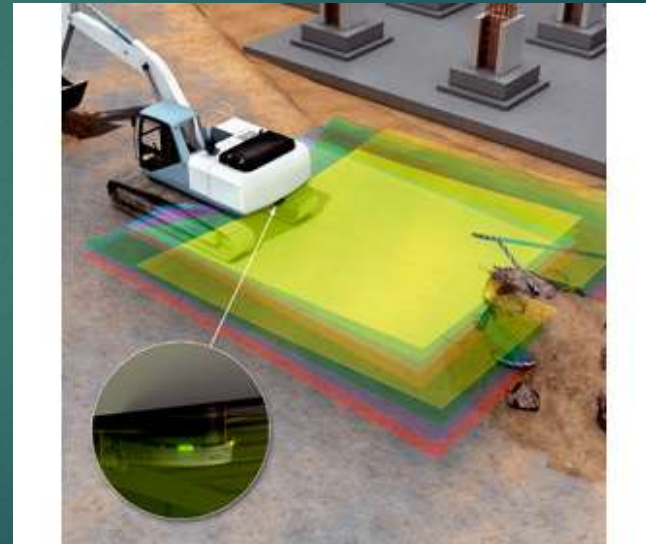
- PLC remotely operated points control from a SCADA PC system
- Off the shelf hardware / software to SIL2 if required
- Interlock with Depot Protection System
- Route indicators
- Password / RFID authorisation security





# Excavator Zone

In medium-sized diggers, the machine operator's view is significantly restricted, thus increasing the risk of accidents. The sensor mounted on the excavator detects objects within collision range of the vehicle and alerts the machine operator in good time. This allows any possible collisions with objects to be detected and avoided. Less damage is caused to the machine and its surroundings, and digger availability is increased. Repair costs are decreased at the same time



# HVAC Controls

10

Control over a buildings HVAC controls by monitoring and controlling heating and cooling pumps / fans / dampers etc.



# Position Monitoring & Control

11

To upgrade an existing hydraulic machines controls from fully human operated to fully electric PLC automated control.

Design, supply, install and commissioning a position control system using;

- Electric linear actuator with servo
- PLC with pre-loaded recipes
- Encoder absolute positioner





# Thruster Controls Systems

12

- Akdemik Tofiq Ismayilov – Allen Bradley / Rockwell and Lyngso Marine PLC
- DSV Eclipse – PCB and Lyngso Marine PLC
- Mighty Servant 3 – Lyngso Marine PLC

Azimuth, CPP and Bow Thruster Control Upgrade interfacing to ships Dynamic Positioning System



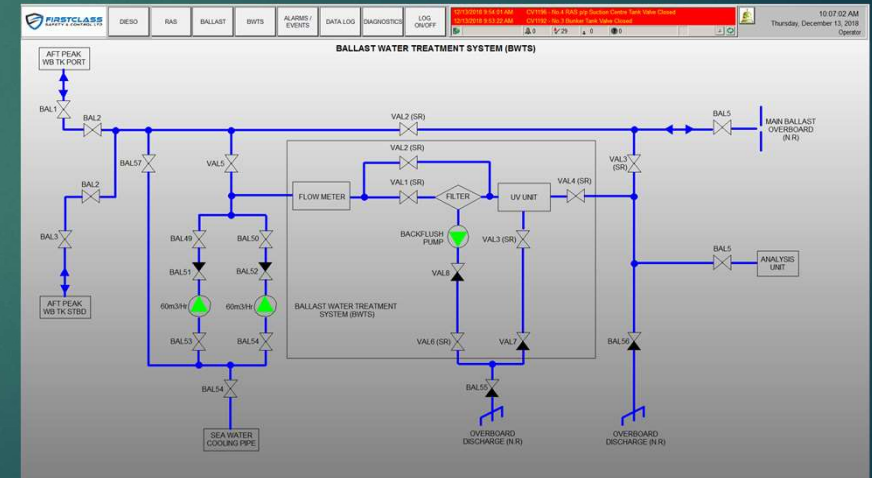


# Valve Controls

13

- RFA Diligence – Lyngso Marine PLC
- RFA Argus – Allen Bradley / Rockwell PLC

Remote Control and Monitoring of ballast and fuel valves for transfer and Replenishment at Sea (RAS)



# Propulsion Controls

14

- M/Y Whitecloud – PCB / Rexroth PLC solution
- Saga Sapphire – Lyngso Marine PLC solution

Main Engine Propulsion control , controlling the engine start/stop, safety shutdowns and RPM via MCR, bridge and wing stations.





# Alarm & Monitoring System

15

- Irish Navy – Lyngso Marine Solution
- M/Y Leander– Lyngso Marine PLC solution
- Mighty Servant 3 – Lyngso Marine
- Sand Harrier – Lyngso Marine
- RFA Black Rover – Lyngso Marine
- M/Y Whitecloud



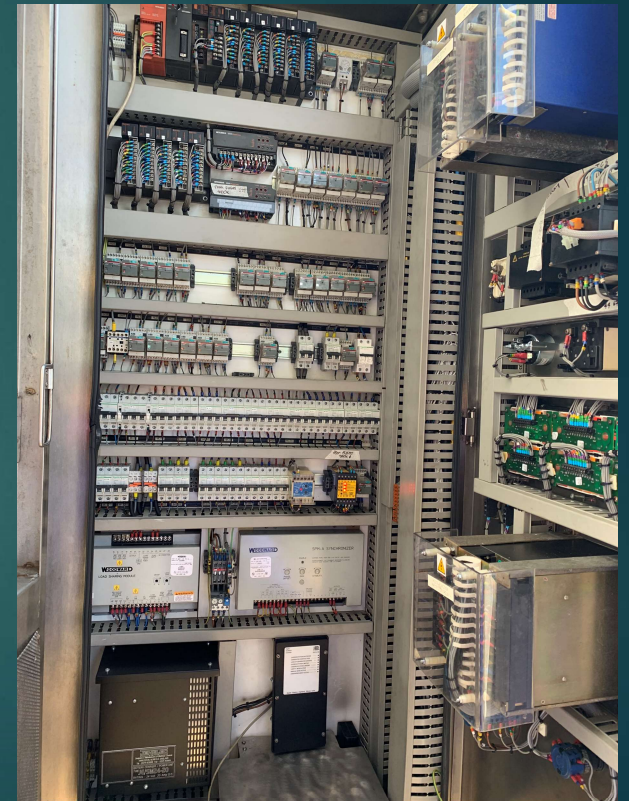
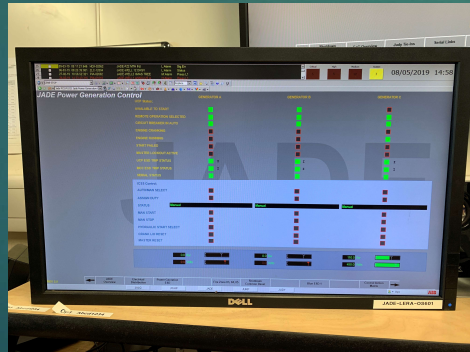
A fully UMS Alarm & Monitoring System with Machinery Controls MCAS



# Generator Controls

16

Designing, upgrading, servicing, FAT testing, maintaining,  
installing and commissioning generator control systems.  
Load bank full load trials  
Diagnosing and commissioning generator control systems  
Wiring and maintenance on generators



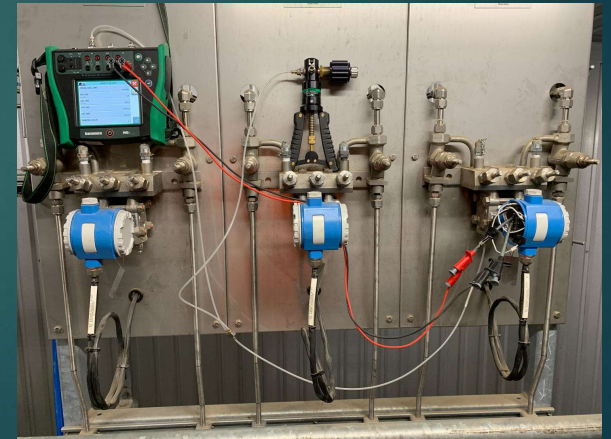


# Instrumentation & Calibration

17

- Power plants
- Plant / machinery instrumentation
- HART instrumentation

Loop checking to DCS (Distributed Control System)  
Supply of new instrumentation  
Calibration of existing instrumentation

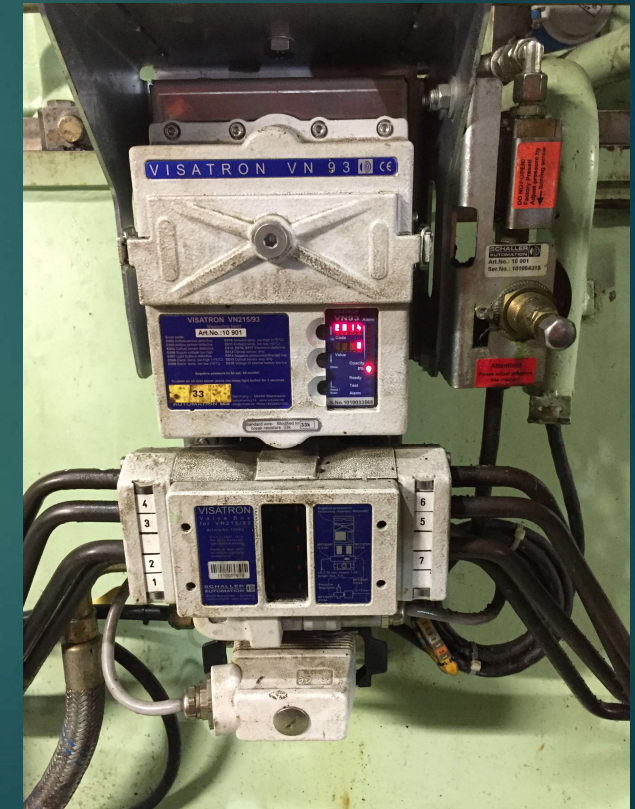


# Schaller Oil Mist Detectors

18

- Numerous engines
- Fully trained and qualified on Schaller training course

The service / supply of Schaller Oil Mist Detectors

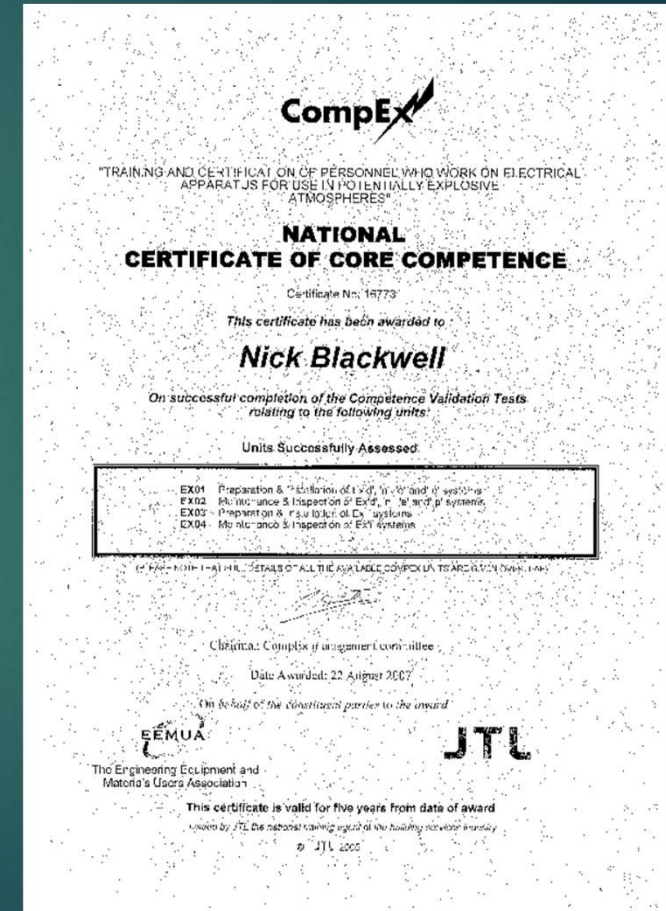




# ATEX / Hazardous Area

19

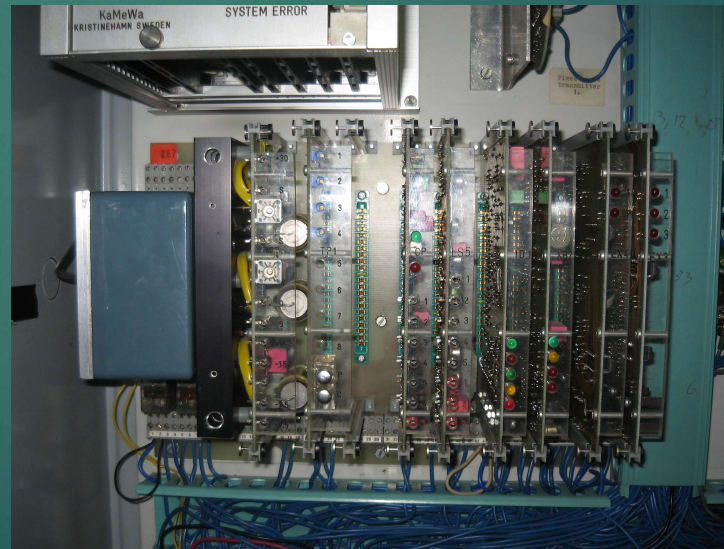
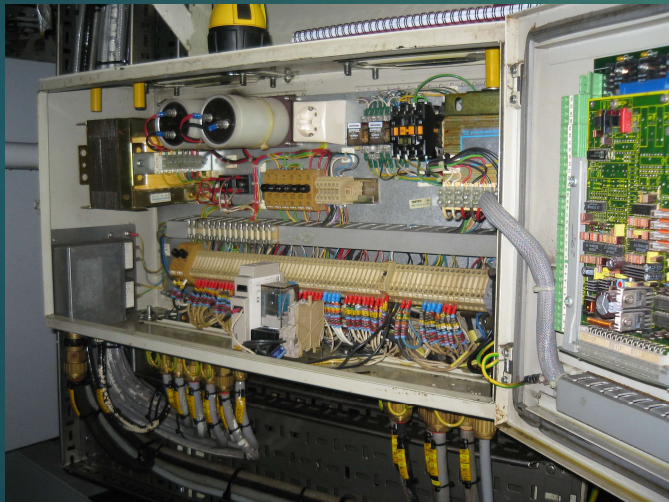
- Fully trained on CompEx Course
- Installation acceptance of hazardous areas
- Monitoring / Controlling machinery in hazardous areas



# Obsolesce / Vintage Systems

20

- Service / setting up of older control systems that are now obsolete





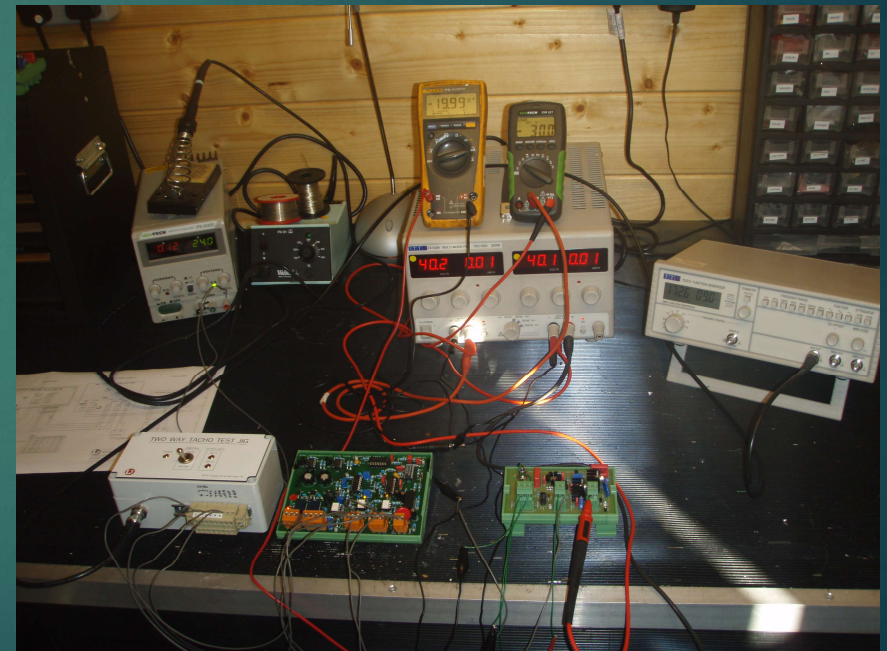
# PCB Repair

21

- All non-microprocessor based PCB's repaired and tested in-house



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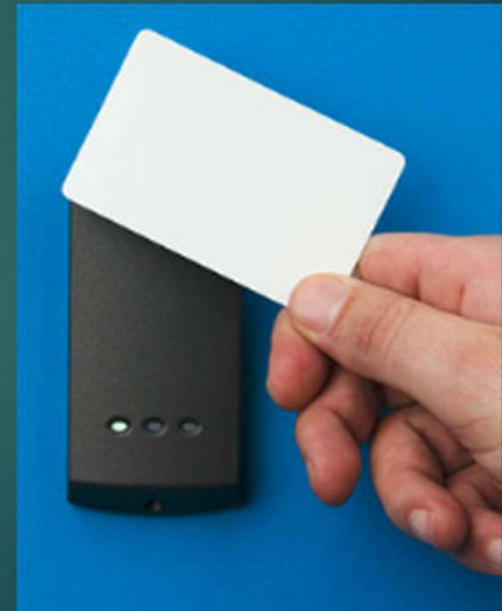
- Emergency Shut Down (ESD) Systems
- Power Management Systems
- Generator controls
- Instrumentation calibration and commissioning
- Installation and Commissioning of third party equipment



# Access Control

23

- RFID access control
- Door release
- Restrict access to individuals to certain areas or machinery use
- Smart cards, fobs, wrist bands etc





# And More...

24

- What ever your control / automation requirements, please get in touch to see how we can be off service to you

We have recently been involved with;

- Machine controls
- Position controls
- Fuelling controls (restricted use, flow / level control and monitoring)



# Contact

25

For any service / support or enquires, please use the following contact information.

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