

# Newsletter

Volume 15, Issue No.3

September 2014



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## AT A GLANCE...

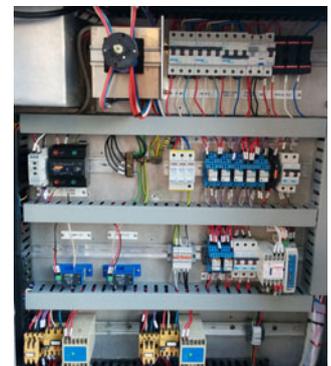
### UNITYWATER OUTSTATION PROJECT COMPLETED.

After 12 months of hard work and three contract sections, the Automation IT team has now completed the Unitywater outstation upgrade project. With two hundred and forty five (245) sewage pump station cutovers completed, the project was delivered on budget and close out reports have indicated the clients satisfaction with the results achieved. The “as built” documentation was the largest haul seen on an Automation IT project, drawing numbers were in excess of three thousand five hundred (>3500).

A big appreciative thanks goes out to our team of engineers, project managers and other internal staff who have worked tirelessly throughout the project, also our subcontractors & suppliers and last but certainly not least our client Unitywater.



One of the 245 outstations



Pump Control Enclosure

## CHANGES UNDERWAY FOR MACHINERY SAFETY STANDARD AS4024.

### FUNCTIONAL SAFETY CONCEPTS FROM ISO13849 ADDED TO AS4024 AS SECTION 1503

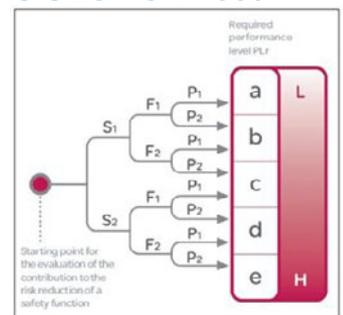
The AS4024-2006 series of standards has long been the reference of choice for Australian machine builders and system integrators looking to provide machine safety services. While the standard as a whole has been quite good, the sections specifically addressing safety related parts of control systems (1501 & 1502) have not really addressed functional safety concerns or required justification that a certain level of performance has been achieved. In addition to this the risk assessment process to determine category requirements is a little too open to interpretations or opinion as to severity of possible injuries.

AS/NZS 4024.1503:2014 (ISO13849.1) incorporates functional safety concepts and introduces Performance Levels (PL) as a measure of required and achieved integrity for safety functions. Whilst this standard still utilises the concept of Safety Categories (CAT) as detailed in AS4024.1501, this is only one component of what is required to achieve a performance level, with requirements to determine mean time to dangerous failure (MTTFd) and Diagnostic Coverage (DC) of a channel, and to consider both common cause and systematic failures.

To add to the confusion, AS62061:2006 (adapted from IEC62061:2005) is also an accepted standard in Australia for safety of machinery. This means that there are now three different standards that can currently be used to demonstrate that plant or equipment provides an adequate degree of safety.

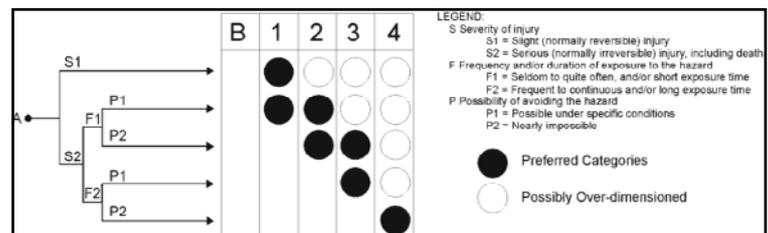
There is a joint working group engaged in combining ISO13849.1:2006 and IEC62061:2005. The resulting standard is expected to replace both AS4024.1501:2006 and AS/NZS 4024.1503:2014. The initial estimate for the completion of this combined standard is 2016.

Automation IT has engineers certified by TUV Rheinland as being skilled in machine safety applications. For assistance, auditing or certification services in this area please contact Automation IT.



Determination of the Performance Level requested (PLr)

S = Severity of injury  
 S1 = Slight (normally reversible) injury  
 S2 = Serious (normally irreversible) injury including death  
 F = Frequency and/or exposure time to the hazard  
 F1 = Seldom to loss often and/or the exposure time is short  
 F2 = Frequent to continuous and/or the exposure time is long  
 P = Possibility of avoiding the hazard or limiting the harm  
 P1 = Possible under specific conditions  
 P2 = Scarcely possible  
 L = Low contribution to risk reduction  
 H = High contribution to risk reduction



Above: The traditional AS4024 Risk assessment graph

Above, Top Right: The ISO13849 version—more detailed, no overlapping performance levels and less guesswork

# More News...

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## PROJECT NEWS

### PROJECT NEWS

#### Unitywater Pump Station Upgrades:

After twelve months of hectic planning and execution, Automation IT have now completed the sewage pump stations upgrades for Unitywater across the Sunshine Coast and northern Moreton Bay regions.

#### Seqwater Image Flat Water Treatment Plant Upgrade:

The Seqwater Image Flat WTP Upgrade is progressing well, Automation IT continues to cut over the existing plant in preparation for final stages of programming the new section. At this stage the project is running on time and the anticipated final commissioning is on track to be completed prior to Christmas.

#### BMA Blackwater Change Management Upgrade:

Automation IT is implementing an MDT AutoSave change management project for BMA Blackwater. MDT Autosave is an enterprise source management software solution to protect, save, restore, discover, and track changes in industrial programmable devices and documents.

Many of the world's largest manufacturers rely on MDT AutoSave to overcome automation challenges by decreasing downtime and errors, maintaining security and increasing productivity.

Autosave provide advanced version control, automatic backup and recovery, and program compare features for the most comprehensive range of devices and editors in the industry.

Contact us for any further information or to discuss any upcoming network opportunities at your plant!

#### Automation IT Social Scene:

The Automation IT crew took some time out in July to cruise around the Gold Coast Broadwater in a luxury launch, cruising among the \$1,000,000+ boats in the Gold Coast waterways while taking in the luxurious views.

Many thanks to the Automation IT management team for organising a great day out for staff and partners to help put a very busy 6 months behind us.

#### New baby arrivals:

Jude Francis Greenaway	Born 21st June	3.51kg
Emily Meiqi Ai	Born 26th June	3.13kg

## OTHER NEWS

### G20 LEADERS SUMMIT BRISBANE 15th—16th NOV



The G20 Leaders' Summit will be held on 15 and 16 November in Brisbane, Queensland. The principal meeting venue will be the Brisbane Convention and Exhibition Centre, and as many as 4,000 delegates and 3,000 media representatives are expected to attend.

The Leaders' Summit is the most important event in the G20 year. The summit provides a valuable opportunity for leaders to discuss a wide range of global economic issues and to use their collective power to improve people's lives. The summit is informed by the policy discussions held throughout the year. At the end of the summit, leaders release a communiqué which outlines the G20 policy discussions and commitments.

Automation IT will be providing control system engineering services and resources during this extremely important event, ensuring critical infrastructure is continuously monitored and system integrity is maintained. This involves providing on-site monitoring of critical plant on a rotating 24 hour basis. This will ensure an immediate response in the unlikely event that a critical system operation is compromised.

Automation IT has extensive experience in the design, testing, implementation and support of critical infrastructure control and back-up systems, contact us today to find out more about our capabilities and services.

#### Other Industry Events:

Hirschmann Design Seminar 27th to 29th October
Rockwell Automation Fair 19th & 20th November
Queensland Gas Conference 25th & 26th November

## RPEQ CONSIDERATIONS

When it comes to engineering projects in Queensland, there is a lot of discussion around compliance and legal requirements. Engineering projects by their very nature are complex, with a lot at stake from multiple areas including financial, legal and occupational health and safety.

A Registered Professional Engineer of Queensland (RPEQ) has been screened by Engineers Australia and the Board of Professional Engineers of Queensland to be competent in not only their respective engineering discipline, but bound by ethics along with legal obligations.

The Board of Professional Engineers QLD (BPEQ) has stepped up its efforts with regard to enforcement of Professional Engineering services. Earlier this year, the BPEQ successfully brought charges against an individual for carrying out engineering services without legitimate registration with the Queensland professional engineers board.

As per Queensland legislation, anyone providing engineering services without an RPEQ is breaking the law and is exposed to litigation. In this case, the defendant was charged with over 140 offences and fined over \$500,000 for breaches of the Professional Engineers Act.

Automation IT has extensive experience with countless Queensland engineering projects across numerous industries. We employ multiple RPEQ's, along with experienced TUV machine safety certified engineers, this ensures our engineering services and solutions offer the best protection for our clients projects.



## PRODUCT NEWS

**Schneider Electric M221 PLC - The best in-class performance for it's size.**



The M221 is an excellent option where a small PLC is required for non-critical plant. It has a broad choice of expansion options utilizing the TM3 modules, with up to 264 digital and 114 analogue I/O, features include:

- Compact Size and DIN Mount
- SD card slot
- USB, Ethernet and Serial Ports
- Relay or Transistor I/O
- Response time down to 5 µs for fast input
- 2 Analogue inputs built in

The M221 utilizes SoMachine software, a MachineStruxure solution which is easy to configure and available as a free download, this allows the intuitive automation of simple machines within just four steps: Hardware configuration, programming, display configuration, commissioning – and your machine is running!

Being Schneider's Integration Partner of the Year, Automation IT have extensive experience, knowledge and capability to engineer a wide range of Schneider Electric control system solutions. From compact PLC's such as the M221, to large scale mission critical plants where safety, reliability and performance is essential.

## SUPPLIER NEWS

### Inaco Automation Controls Changes

Inaco Automation Controls have been a supplier and distributor of an extensive range of products, including Rockwell Automation and Allen Bradley, Rittal, Cisco, Prosoft, Fluke, Panduit and Belden to name a few. Inaco moved from their long time premises in Welch Street Underwood to new premises at Greystone Street Tingalpa. On the 1st of November Inaco Automation Controls will be renamed Rexel Industrial Automation.



Automation IT have had a long standing relationship with Inaco, and although their name and location may be changing, we anticipate the same excellent service and support to continue. On behalf of all the staff at Automation IT, we wish Inaco all the best as Rexel Industrial Automation and look forward to a prosperous and ongoing relationship well into the future.