

# Alarm Solutions to the Worldwide Process and Power Industries



**Alarm Annunciators**

**Event Recorders**

**Hazardous Area Notification**

**Engineered Solutions**





# ALARM ANNUNCIATORS

As a world leading supplier of process alarm equipment, RTK Instruments will be able to provide a solution for all safe and hazardous area industrial applications. Used to monitor critical alarms, our Alarm Annunciators are all designed as modular products, manufactured to your exact needs, with a range of options added as required.



## 725B Alarm Annunciator/Event Recorder

The 725B brings together many years of development in Alarm Annunciator technology and represents the best available investment in protection for your industrial plant.

Using advanced communication techniques, coupled with RTK Instruments' unique multi-redundant design, the 725B Annunciator gives the best combination of flexibility, usability, reliability and cost of ownership.

- 1ms event recording functionality up to 256 channels
- Multi-redundant design, no single source of failure
- Advanced diagnostics
- Fully software configurable through USB port

## SIL725 Safety Annunciator



The SIL725 Safety Annunciator is designed and manufactured to provide a high safety integrity for critical alarm applications and for use as a component part of a safety instrumented system. The unit is third party certified by SIRA using the CASS methodology to a safety integrity level of SIL2.

- SIRA certified at safety integrity level SIL2 to IEC61508
- Modular construction from 1 to 128 channels
- Each channel configurable from the front

## Series 725 Alarm Annunciator



The fully programmable Series 725 Annunciator is the perfect solution for monitoring critical process alarms. With the unique multi-redundant design and a proven history of 100,000s of alarm points world-wide, this Annunciator can be manufactured in any shape and size to your exact requirement. There are also a host of options to choose from including repeat relays, time delays and serial communications.

- Three window sizes and six window colors
- Up to 256 channels
- Fully user programmable per point from the front

## UC625 Alarm Annunciator



A cost effective, compact Annunciator packed with useful features, this product is ideal for machine alarms and sub-station alarm monitoring. With thousands of units operating reliably in the field, particularly in transmission and distribution, the UC625 has proven itself in harsh environments. Despite the size, this unit is still fully programmable and uses a multi-redundant design.

- Dual universal redundant power supply
- Programmable time delays
- Individual repeat relays

## System 9000 Remote Logic Annunciator



This feature rich, remote logic Annunciator has the ability to handle thousands of alarms channels. The multi-redundant design is also extended to the PSU and the serial communications. The system is based on a standard Eurorack and is programmable from the front and also through software. A wide variety of displays or mimics can be driven from this system including the RTK range of Lampbox Displays.

- Expandable up to 1000s of alarm channels
- Can be used as a multiplexer and data gatherer
- Can be linked to Alarm Management Software



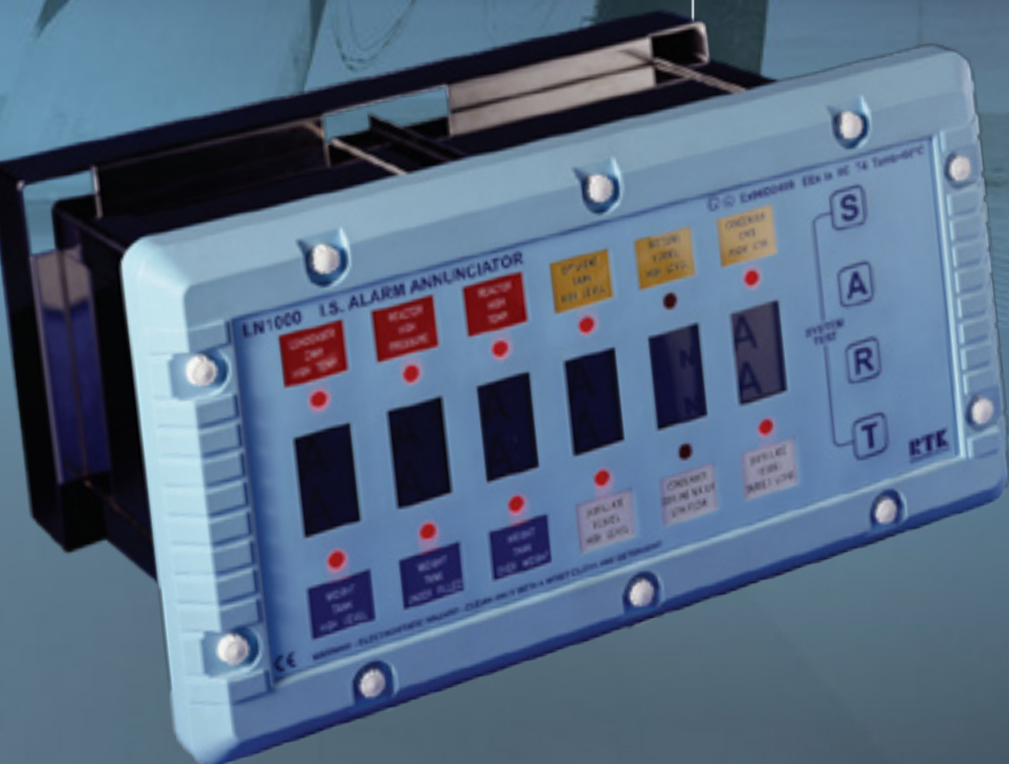
# ALARM ANNUNCIATORS

A full range of Annunciators is available for installation in the heart of the hazardous area. Units are available with different protection concepts to suit the particular application. These include explosion proof, intrinsically safe and Type "n". To extend the range of applications and improve connectivity between safe and hazardous areas, IS Relays and IS Multiplexers are also manufactured.

## LN1000 Intrinsically Safe Annunciator

A world exclusive design allowing complete alarm annunciator capabilities in the heart of the hazardous area. This is a unique solution for monitoring and displaying critical alarm operators within any zone. The combination LCD and LED displays show all the alarm information for all of the alarm channels. The tough yet lightweight stainless and polyurethane enclosure is sealed to IP65.

- Certified for use in any zone
- 32 channels can be driven from one interface
- Simple to commission and maintain



## PEX7250 Explosion Proof Annunciator

This Annunciator offers a vast range of features and benefits normally reserved for use in safe area annunciators only. All windows are illuminated with ultra-bright LEDs and are available in the full range of colors and window sizes. The same options are available as for the Series 725, 725B & SIL725 Alarm Annunciators.

- Three window sizes and six window colors
- Available from 4 to 56 alarm channels
- RS485 MODBUS communications option



## NEX7250 Zone 2 Annunciator

Similar to the PEX7250, this Annunciator is self-certified to the ATEX Directive for use in Zone 2 hazardous areas. The unit can be wall or panel mounting and is sealed to IP54. Complete alarm packages can be designed and configured ready to mount, with suitable PSUs, pushbuttons and audibles.

- Three window sizes and six window colors
- Available from 10 to 90 alarm channels
- Can be supplied with Zone 2 PSUs



## S10 Intrinsically Safe Multiplexer

Introduced as the world's first intrinsically Safe Multiplexer, there are a huge quantity of S10s working successfully in the field. The S10 transmitter accepts digital signals from switch contacts in the hazardous area and transmits their status to the safe area receiver on a single cable pair which also carries the power requirements of the transmitter.

- Compact
- Fast response time
- Simple installation



## DA-149 Intrinsically Safe Relay

A critical part of the system is the ability to interface between safe and hazardous areas. The DA-149 range of Intrinsically Safe Relays is used to undertake the task of transferring signals either way between the safe and hazardous areas or between equipment within the hazardous area. So a hazardous area annunciator can provide drive signals back into the safe area and safe area alarm information can be indicated within the hazardous area.

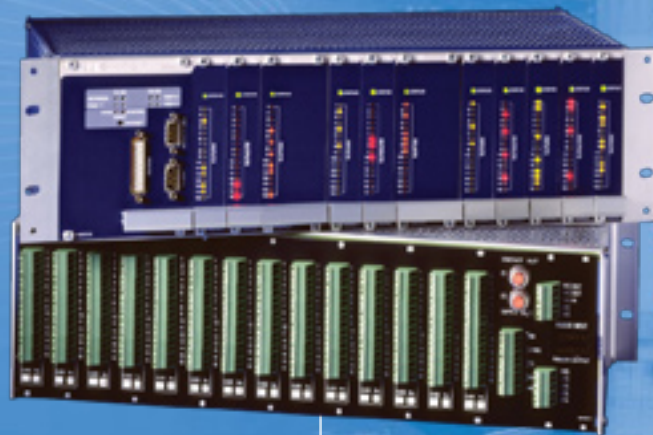
- Can transfer signals from safe to hazardous area or vice versa
- Extremely low current consumption
- High switching capacity on contacts





# EVENT RECORDERS

RTK Instruments leads the way with the latest technically advanced Sequence of Events Recorders and combined Alarm Annunciators. These can be rack mounted systems for large applications or smaller combined Event Recorder/Annunciators which are suitable for time-stamping applications right down to a few channels per unit.



## 9000TS Combined Event Recorder/Annunciator

A technically advanced distributed system, capable of a high speed event capture to a true 1ms resolution on all alarms. Expandable up to 4,000 channels, this high integrity product has distributed non-volatile memory allowing up to 15,000 events to be buffered prior to printing and/or transmitting through the communications port.

The 9000TS is even available with a dual redundant communications option to ensure the security of event data. Various communication outputs and protocols are available including IEC60870 and DNP3.

The combined Annunciator/Event Recorder can be used to indicate the fault for immediate action and then provide details of the exact chain of events for later analysis. A range of Lampbox Displays is available to display the alarm information.

- Various communication protocols
- Synchronised through GPS, IRIG-B or pulse
- Simple configuration using the setup software provided
- Configurable alarm shelving to avoid nuisance trips

## 725B Event Recorder



The 725B brings together many years of development in Alarm Annunciator technology and represents the best available investment in protection for your industrial plant. The Annunciator can be supplied with an integral Event Recorder, time stamping to 1ms, and is ideal for applications where the alarm channels are distributed over a large plant area as the units remain extremely cost effective even with only a small number of channels.

- 1ms event recording functionality up to 256 channels
- Multi-redundant design, no single source of failure
- Advanced diagnostics
- Fully software configurable through USB port



This software has been designed as a ready to use standard package to provide alarm display information in conjunction with RTK Annunciators. When used with the 9000TS Event Recorder, the time is also logged to a resolution of 1ms. The software can be set up to the user's requirements and provides an easy method of viewing current alarms and historical data as well as being able to filter by time, text or priority and to export to databases or spreadsheets for further analysis. This package can be used as a platform to create further Alarm Management Software for more complex display or analysis requirements. This may include dual redundant systems with industrial servers etc.

- Import settings from spreadsheet
- Export to database
- View and record system errors

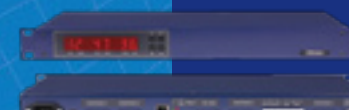
## Lampbox Display



Used where the alarm logic is controlled elsewhere, the RTK modular Lampbox Displays come with either lamp or LED illumination and can be manufactured in almost any shape and size. Versions are available for hazardous areas or high voltage inputs.

- Integral control components and/or audibles
- A range of window sizes and colors
- Simple replacement for multiple pilot lights

## 4850 Master Clock



Global time synchronisation of multiple 9000TS systems can be achieved to a resolution of 1ms to world time standards. This 1U high 19" rack mounted unit presents the 9000TS system with a combination of serial communications and one second pulses to ensure devices in the alarm management infrastructure share an accurate and common time reference.

- AC or DC Supply
- Status relay output
- Optional GPS aerial and interface



# HAZARDOUS AREA NOTIFICATION

Operators working within a hazardous area need to be quickly and clearly informed of any potential hazard. Our range of Notification products serves this purpose perfectly.



## DA132 Intrinsically Safe Sounder

A sound output up to 100dB and a selection of 32 different tones makes this compact Sounder a perfect solution for notification of personnel working within hazardous areas. The unit is sealed to IP65 and certified to European ATEX standards and the emerging IECEx international standard.

- Dual certification
- 32 different tones and up to 100dB output
- Simple installation

## DA135 Intrinsically Safe Beacon

Not just a simple beacon, this is a range of rugged field mounting devices suitable for the harshest of environments. The DA135 is available in 5 colors and can be used in conjunction with the sounders to create a full single point Annunciator. Using either multi-flash or dual color versions, they can be used to highlight a process becoming more critical.

- IP65 housing with separate terminal enclosure
- Multi-flash and dual color versions
- Can be linked to Sounder to create full annunciator

## DA170/DA180 LED Cluster



The DA170 range of LED Clusters consists of 22mm super-bright LED pilot lights in six different colors and matching illuminated pushbuttons/selector switches. As an extension to this range the DA180 Giant LED Clusters are larger 66mm diameter units which give clear indication from a distance and from the side. The Clusters can be supplied as loose items or pre-installed in stainless steel or GRP enclosures ready for immediate mounting on site.

- Suitable for zones 1 and 2
- 22 or 66mm diameter lens
- Tough impact resistant IP65 casing

## P861 Intrinsically Safe LED



A certified LED lamp which provides visual on/off indication of process conditions in hazardous areas. The standard BA9s can be supplied as part of a pilot light or supplied separately to be used in any suitable standard switch or lamp assembly.

- Available in six colors
- Current limited

## LN870 Intrinsically Safe Light Tower



Providing visual indication of process conditions, this unique hazardous area Light Tower can be supplied up to five tiers high in any combination of up to five colors. The unit incorporates a special vibration absorber and is either direct or pole mounting.

- LED illumination
- Two tiers driven from one Barrier/Isolator
- IP54 sealing option

## DFR30IS Lampbox Display



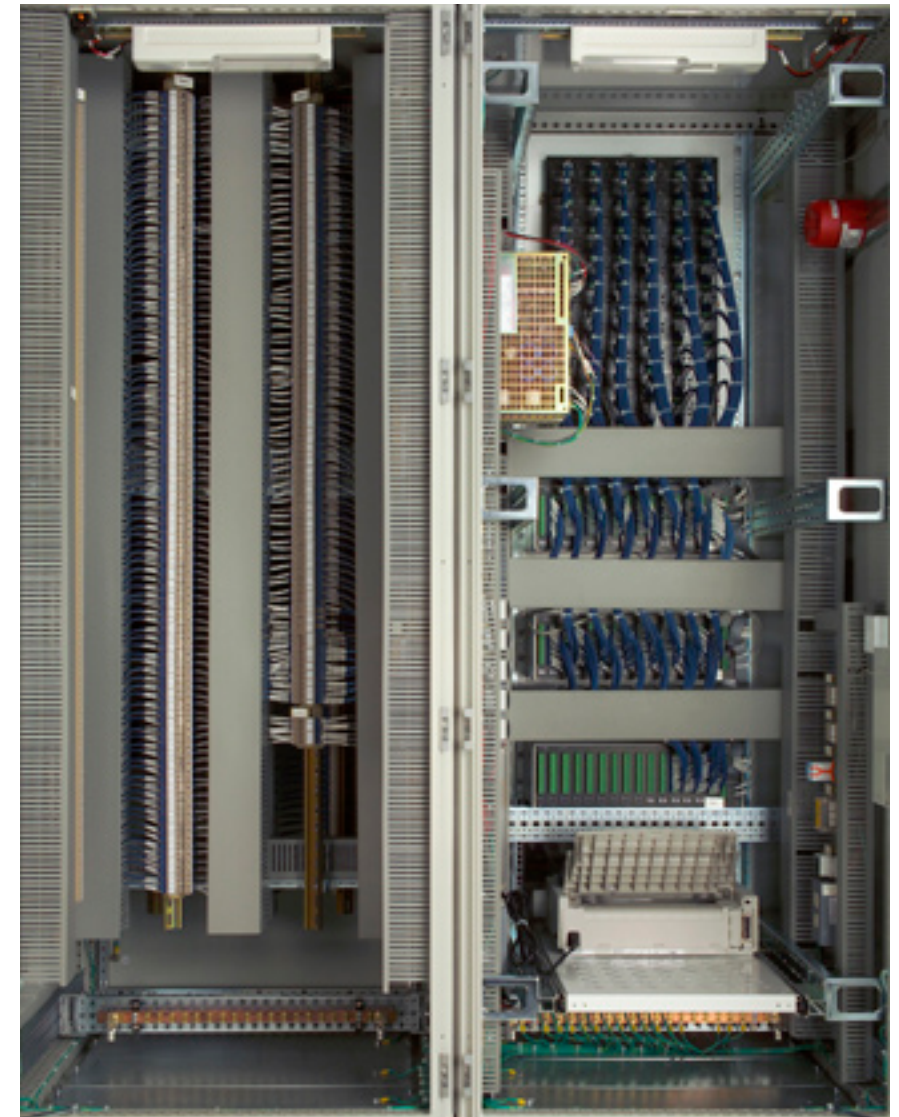
The simple backlit flashing display is regarded as the clearest way of alerting operators to abnormal conditions on complex process plants. The DFR30IS Lampbox Display provides a clear, bright display and is approved for use in Zone 1 and Zone 2 hazardous areas.

- Three window sizes and six window colors
- Bright LED illumination
- Integral control push buttons

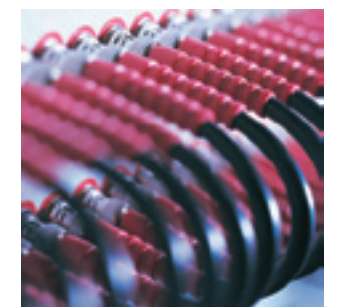


# ENGINEERED SOLUTIONS

Many clients require much more than the simple supply of loose products. To service these customers our experienced team of engineers can provide a consultancy service to help them select the most appropriate solution. These solutions can consist of any intrinsically safe/explosion proof system or custom alarm/event recording system. The solutions we provide often include a combination of hardware and software pre-installed and configured to match the client's particular application.



Our systems team will manage each project throughout its life-cycle. This will include creation of the specification and design of the complete system for approval by the client. Following approval, the project passes to production where the complete system, including any software and related IT hardware, is fabricated and wired. The finished package, with all agreed documentation, is then ready for the Factory Acceptance Test prior to shipment to site. Commissioning and training can also be provided if required.





# PROFILE

## Established

For over 35 years RTK Instruments Ltd has built up a reputation as a world leading manufacturer of process alarm products of all types to the worldwide process and power industries. Original and field proven designs have been developed and improved over many years. We can offer a solution for all safe and hazardous area industrial applications.

## Customer support

At RTK we pride ourselves on providing the best customer support for application help, pre sales commercial and technical clarification and after sales support. Our products are designed and manufactured ourselves at our modern facility in the UK. Our internal Engineered Solutions Department will also advise you on applications and product suitability and help with commissioning if required. If you experience any problems we are there to provide technical support and advice. This life-time support comes free of charge.

## 5 year warranty as standard

RTK Instruments provides a comprehensive 5 year warranty on all our standard products, all included within the quoted price. When reviewing product suppliers it is always essential to measure the cost of ownership not just cost to purchase.

## Quality products built to quality standards

As recognition of our successful adoption of international quality management systems we are audited against the ISO9001:2000 standard by the BSI and have now held this certification for almost 15 years. In addition to this certification we also have a license to manufacture certified products for use in hazardous areas and safety related products which involves a regular third party audit by Baseefa Ltd to their own stringent quality assurance schemes.

## Research and Development

We make significant investments into research and development in all areas of alarm and event monitoring in order to continue to meet our customers' changing needs and to ensure our products are at the forefront of technology. Our aim is to launch innovative products to help customers monitor critical processes and keep their plants running safely and reliably.

# CLIENT LIST

ABB Automation Technology	Imperial Oil
ABB Energy Automation	KBR
ABB Power	Mitsubishi
Abbotts Laboratories	Nalco Chemical Co
Accordis	National Power
ADWEA	Novartis
Air Liquide	NPIL Pharma
Akzo Nobel	NRG Energy
Alstom Marine Systems	Oak Ridge National Laboratory
Alstom Projects	Occidental Petroleum
Alstom T&D	Oil States Industries
AMEC Group	Pacific Gas and Electric Co
Ansaldo Energia	Pakistan Petroleum
Areva	Pemex
Astra Zeneca	Penske Logistics
Atlas Copco Comptec	Petroplus
Atomic Weapons Establishment	Pilkington
Aventis	PowerGen
Babcock International	Qualitrol Hathaway Corp
Bahrain Petroleum Co	Reliance Petroleum
Balfour Beatty	Repsol
BNFL	Roche
BNFL Magnox Generation	Saint Gobain Abrasives
BOC	Samsung
BP Chemicals	Saudi Aramco
British Energy	Saudi Basic Industries Corporation
Centrica	Saudi Electricity Co
Chemoxy International	Saudi Kayan Petrochemicals Co
Clariant	Schlumberger
ConEdison of New York	Schneider Electric
Conoco-Phillips	Scottish Hydro Electric
Corus	Scottish Power
Courtaulds	Seabridge Marine
Croda	SEWA
Cruickshank & Partners	Shasun Pharma Solutions
DEWA	Shell
Doosan Babcock Energy	Siemens T&D
Ecopetrol	Siemens VA Tech
Emerson	Snamprogetti
Emirates Trading Authority	SONY Electronics
Enichem	Steris Corporation
Esso Petroleum	TEAS
Exelon Generation	Tengizchevroil
ExxonMobil	Test Automation and Controls
Fluor Daniel	Texaco
Foster Wheeler	Total Oil
General Electric	TYCO Dorman Smith
Glaxo SmithKline	TYCO Telecommunicatians (US) Inc
Hawker Siddeley	UKAEA
Honeywell	Ultra Petroleum Equipment Corp
Huntsman Petrochemical	United Utilites
Hyundai Heavy Industries	Valero Refining
ICI	Virelec
ICS Triplex Silvertch Systems Inc	Yokogawa

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