RTK UC625
Programmable Alarm Annunciator

- Alarm Sequence selectable to ISA S18.1-1979
- Available in a range of sizes from 12 to 40 ways
- Expansion units available to create larger systems
- Integral redundant supplies with universal inputs
- Two additional ‘power failure’ alarms with relay outputs
- Low Power Consumption
- Exclusive ASIC Technology for greater reliability
- Only 130 mm Installed Depth

An expandable compact alarm system

The UC625 Alarm System, developed from the field proven P625 range of alarm annunciators, offers the latest in ASIC technology packed into a compact design for applications where panel space is at a premium. The lightweight stainless steel construction gives a compact and simple to install modular unit which can easily be expanded by the addition of extra Alarm Cards.

Maintenance can be carried out live without the necessity of ‘gas checks’ or prior shutdown. Unlike explosionproof, purged and type ‘n’ systems, installation is simple and relatively low cost. With the addition of a number of ancillary devices a complete intrinsically safe alarm and control package can be provided.
**FEATURES & BENEFITS**

**Power Consumption**
Power consumption is kept to a minimum by the use of super-bright LEDs.

**Auto Accept Timer**
In unmanned applications it is common to have an automatic accept facility after a pre-set time, typically one minute; this is a standard feature on the UC625.

**Dual Horn Facility**
Two horn relays are fitted as standard and each pair of alarm ways can be selected to operate either a critical or non-critical integrally mounted horn relay.

In substation applications it is common for one relay to be used to operate the externally mounted station bell and the second relay to be used to operate a common power failure audible alarm.

**Sleep Mode**
All units are equipped with ‘Sleep’ mode which is typically used in substation applications where the visual and audible outputs are disabled during unmanned periods to reduce drain on the station batteries. Whilst in ‘Sleep’ mode, the alarm logic will continue to react in the normal way including the operation of the group alarm relays and individual repeat and common alarm relays – ONLY the drive signals to the LEDs and the audibles are disabled until the unit is placed back into the ‘Run’ mode.

**Input Response**
As standard, the input response is set to 22ms for optimum performance, however this delay is user programmable and can be reduced or extended to suit the exact site conditions.

**Auxiliary Relays**
Each channel is equipped with an integral relay facility, typically used to initiate inputs to third party devices such as RTU, SCADA or DCS systems.

On board DIL switches or jumpers allow the user to select the manner in which the relay responds; normally energised or de-energised relay state and if the contact is normally open or normally closed in the non-alarm state.

**Inputs**
All inputs are optically coupled and comply to the stringent requirements of the European Electromagnetic Compatibility and Low Voltage Directives.

The standard input voltage is 24VDC but 48VDC, 125VDC or 250VDC are available as an option.

**Integral Redundant Power Supplies**
In order to maintain the highest level of reliability in safety critical applications, all models are equipped with integrated dual power supplies. The standard unit is equipped with two fully isolated universal input supplies, each capable of accepting either 85-264VAC or 88-300VDC. As an option the secondary supply can be suitable for 24VDC if specified at the time of order.

**Field Contact Voltage Monitoring**
When using 24VDC the field contact voltage is supplied from the UC625. This supply is protected and fused and also monitored for failure. If this supply fails for any reason an output relay is tripped to warn operators that alarm information may be lost.

**Fully Field Programmable**
Flexible design allows selection of a range of features and a choice of operational alarm sequences, which are compliant to ISA S18.1 1979. Alarms can be set to operate from either a normally open or a normally closed volt-free signal contact.

**ASIC Technology**
The UC625 continues our success with field proven ASIC technology already employed in our range of alarm products, This gives the user both greater flexibility and reliability.
FEAT URES & BENEFITS

Film Legend Engraving
Because the exact text is often not known at the time of order, the UC625 has been developed to use acetate film legends which allows users to easily generate their own legends using a computer and laser printer.

Connections
All connections are made on the rear of the unit using two-part quick disconnect rising clamp terminals accepting up to 2.5mm² cable. All terminals are lockable using the screws at each end of the terminal making it impossible for terminals to fall out or be removed inadvertently.

Common Outputs
As standard, each unit is fitted with three common relays: Critical Audible Relay, Non-Critical Audible Relay and Common Alarm Relay. The common alarm relay is equipped with a reflash feature to indicate the occurrence of a new alarm within the unit.

Power Failure Alarms
Two channels within the annunciator are reserved for power failure monitoring. One monitors the presence of the primary supply and the other monitors the presence of the auxiliary supply.

Pushbutton Controls
Integral pushbuttons are provided for Functional Test, Acknowledge, Mute, and Reset which control the operation of the standard alarms within the instrument. The two power failure alarms have their pushbutton control lines wired to Customer terminals for connection to remote Functional Test, Accept and Reset pushbuttons. As an option, all alarms ways can be controlled from the integral pushbuttons.

Illumination
The UC625 is equipped with 8mm superbright red LEDs for increased reliability and minimal power consumption.

IP Rating
Flush panel units are IP51 rated, optional IP54 weatherproof doors or IP56 wall mounted enclosures are available.

Tropicalisation
In harsh environments where moisture or chemicals may be present in the atmosphere, there is an option to tropicalise the unit. This consists of spraying the unit with a conformal coating.

Serviceability
All normal servicing and maintenance is carried out from the front of the unit without the need for special tools.

SEQUENCE TABLES

**AUTOMATIC RESET**
Sequence Code A

**MANUAL RESET**
Sequence Code M

**RINGBACK**
Sequence Code R

**AUTOMATIC RESET FIRST OUT**
Sequence Code F1A

**MANUAL RESET FIRST OUT**
Sequence Code F2M-1
INPUTS

Alarm Contacts
All inputs are optically coupled and can be used for volt free Normally Open or Normally Closed contact inputs. Voltage inputs can also be used, these can be 24, 48, 125 or 250VAC/DC.

Alarm Contact and Cable Resistance
N/C contact-series resistance of contact cables 5k max.
N/O contact-parallel resistance of contact cables 150k min.

Surge Immunity
IEEE/ANSI C37.90.1
IEC 61000-4-4, 2KV

Input Response Time
The standard unit has a response time of 22ms. DIL switches are used to select alternative response times.

First-up Discrimination
Better than 5ms.

Input Protection
Inputs are protected against accidental connection to mains voltages (240VAC, 50Hz) or a 1000V Megger Test.

OUTPUTS

Visual
Back illumination by 8mm super-bright LEDs plus green Power On LED.

Relays
Individual signal duplicating relays, contacts rated at 125VDC max, 24VDC @ 2A
125VDC @ 100mA
Horn and group relays, contacts rated at 125VDC max, 24VDC @ 2A
125VDC @ 0.5A

Audible
Two integral audibles are included as standard, which can be inhibited as required.

SUPPLY

Supply 1
Voltage range 85-264VAC or 88-300VDC.

Supply 2
Voltage range 85-264VAC or 88-300VDC (Optional 24VDC).

GENERAL

Connections
Two part rising clamp terminals, for cables up to 2.5mm².

EMC Compliance
Immunity: EN61000-6-2:2005
Emissions: EN61000-6-4:2007

LVD Compliance
Compliant with EN61010-1:2010 and IEC61010-2-201

Environment
Operating Temp 0 to +60°C
Storage Temp –20 to +80°C
Humidity 0–95% RH, non-condensing

Protection
Front – IP61, Rear – IP20. The rear of the UC625 must be protected by an enclosure which is at least IP30 and secured by a tool or key

Pushbuttons
Integrally mounted Functional Test, Acknowledge, Mute and Reset pushbuttons for all standard alarms. One set of terminals for the two “power failure” alarms pushbutton circuits.

ORDER CODE

UC625 – ★ – ★ – ★ – H – ★ – 024D – R

MODEL NO. NO OF ALARMS LED COLOUR SUPPLY1  SUPPLY2 FIELD CONTACT VOLTAGE REPEAT RELAYS

UC625 12 RD=Red  H=Universal 88 to 300VDC or 88 to 265VDC
16 YW=Yellow
20 AM=Amber
24 GN=Green
28 WT=White
32 IN=Intermixed
36
40

MODEL NO. NO OF ALARMS LED COLOUR SUPPLY1 SUPPLY2 FIELD CONTACT VOLTAGE REPEAT RELAYS

UC625 048=48V
110=110V

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