

# UC625 Programmable Alarm Annunciator

An expandable compact alarm system

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 5.12" (130 mm) Installed Depth

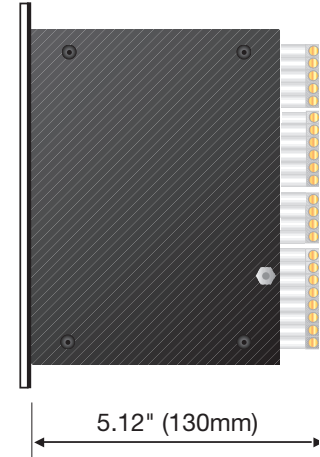
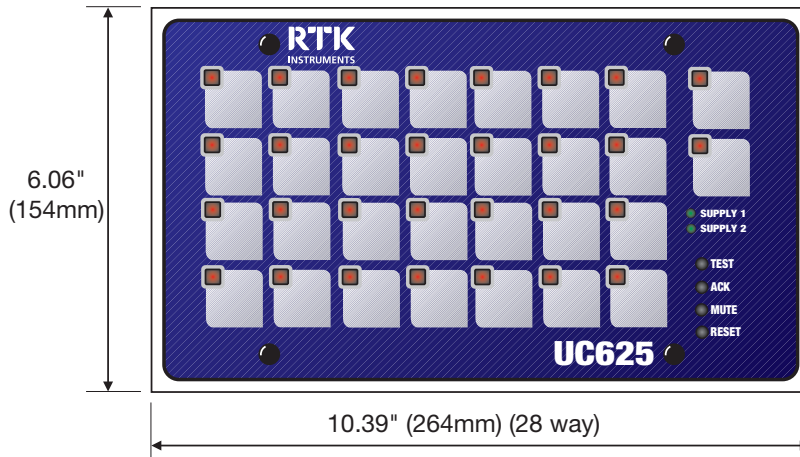
The UC625 Alarm System, developed from the field proven P625 range of alarm annunciators, offers the latest in ASIC technology packed into a compact design for applications where panel space is at a premium.

The field proven multi-redundant ASIC design of this annunciator provides the user with the best combination of flexibility and reliability. The UC625 is designed as a complete alarm system with integral redundant supplies, audibles, relays and pushbuttons for the most cost effective solution for monitoring critical process alarms.

Programmable alarm sequence, signal duplicating relays, dual horn relays, LED display, proven ASIC technology and dual redundant universal power inputs make the UC625 an ideal choice for all industrial sectors.



# Features & Benefits



### Various Sizes

Various sizes are available from 12 to 40 alarm points. Each unit is supplied with two additional alarm points for monitoring the two integral power supplies. Dimensions are as follows:

No. OF WAYS	OVERALL IN INCHES		CUT-OUT IN INCHES	
	HEIGHT	WIDTH	HEIGHT	WIDTH
12	6.06	5.98	5.55	5.35
16	6.06	7.09	5.55	6.46
20	6.06	8.19	5.55	7.56
24	6.06	9.29	5.55	8.66
28	6.06	10.39	5.55	9.76
32	6.06	11.5	5.55	10.87
36	6.06	12.6	5.55	11.97
40	6.06	13.7	5.55	13.07

No. OF WAYS	OVERALL IN MM		CUT-OUT IN MM	
	HEIGHT	WIDTH	HEIGHT	WIDTH
12	154	152	141	136
16	154	180	141	164
20	154	208	141	192
24	154	236	141	220
28	154	264	141	248
32	154	292	141	276
36	154	320	141	304
40	154	348	141	332

### 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.

### 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 88-360VDC. As an option the secondary supply can be suitable for 24VDC if specified at the time of order.

### 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. While 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.

# Features & 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 12 AWG (2.5mm<sup>2</sup>) wire.

## 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 super-bright 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

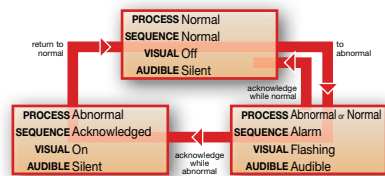
All normal servicing and maintenance is carried out from the front of the unit without the need for special tools.



# Sequence Tables

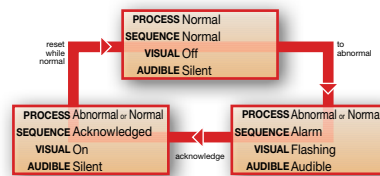
**AUTOMATIC RESET**

**Sequence Code A**



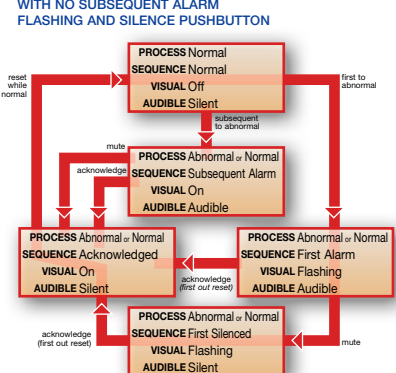
**MANUAL RESET**

**Sequence Code M**



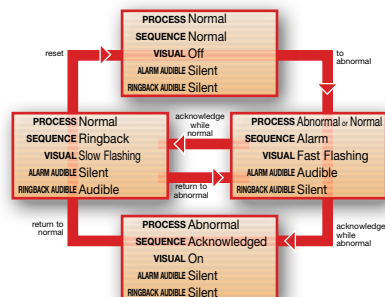
**MANUAL RESET FIRST OUT WITH NO SUBSEQUENT ALARM FLASHING AND SILENCE PUSHBUTTON**

**Sequence F2M-1**



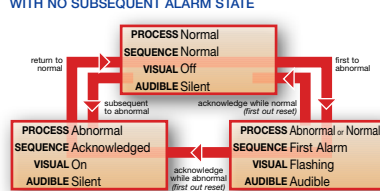
**RINGBACK**

**Sequence Code R**



**AUTOMATIC RESET FIRST OUT WITH NO SUBSEQUENT ALARM STATE**

**Sequence F1A**



# Technical Specification

## 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 5kΩ max.

N/O contact-parallel resistance of contact cables 150k Ω 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 60VDC max, 24VDC @ 2A max.

Horn and group relays, contacts rated at 220VDC max, 125VDC @ 0.5A, 24VDC @ 2A.

### Audible

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

## Supply

### Supply 1

Voltage range 85-264VAC or 88-360VDC.

### Supply 2

Voltage range 85-264VAC or 88-360VDC (Optional 24VDC).

## General

### Connections

Two part rising clamp terminals, for wires up to 12 AWG (2.5mm<sup>2</sup>).

### EMC Compliance

Immunity: EN61000-6-2:2001

Emissions: EN61000-6-4:2001.

### LVD Compliance

Designed and manufactured to EN61010-1:1993.

### Environment

Operating Temp 32 to 140°F (0 to +60°C)

Storage Temp -4 to 176°F (-20 to +80°C)

Humidity 0-95% RH, non-condensing

### Protection

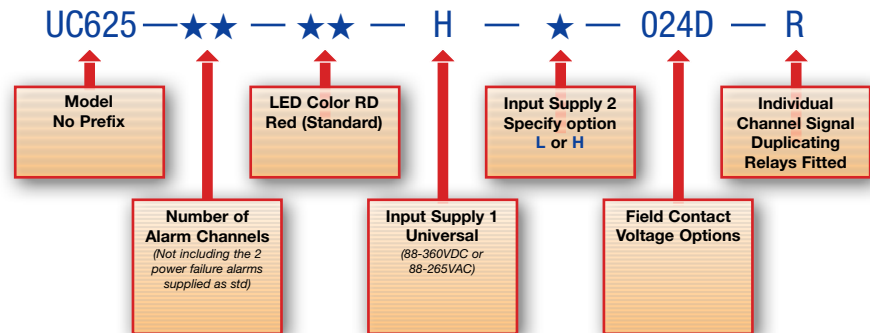
Front – IP51, Rear – IP20.

### 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



MODEL NO.	NO OF ALARMS	LED COLOR	SUPPLY 1	**SUPPLY 2	FIELD CONTACT VOLTAGE	REPEAT RELAYS
UC625	12	RD = Red YL = Yellow AM = Amber GN = Green WT = White	H = Universal 88 to 360VDC or 88 to 265 VAC	Optional L = 24VDC or H = Universal 88 to 264VAC or 88 to 360VDC	Standard	R = Repeat Relay Option Fitted
	16				024D = 24V	
	20				Optional Powered Inputs	
	24				048 = 48V	
	28				110 = 110V	
	32				250 = 250V	
	36					
40						

Due to our policy of continuous product development, we reserve the right to amend specifications without notice.



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