

S E R I E S

X11CA

COMPUTER ANNUNCIATORS



**RONAN**

ENGINEERING  
COMPANY



The Ronan Series X11CA Computer Annunciators are the latest generation of Ronan's state-of-the-art annunciators offered in window models. The X11CA is designed for the process and power industries' requirements, providing the most economical approach while offering the most advanced data acquisition in serial technology and monitoring, along with Ronan's high quality and performance standard. The systems in the Window Annunciator feature Monalarm, Dualarm, Trialarm and Quadalarm within Ronan's standard 3.50 inch (88.90 mm) by 3.50 inch (88.90 mm) mechanical cabinet modules.

A system common trouble and a per-point auxiliary relay output may be utilized for field contact repeater or for remote group alarms. The system monitors internal routines and communication backbone, signaled by dedicated LED or relay contact closure.

The X11CA is equipped with a host interface module that provides advanced communication interface protocols to interface with an external host computer, local network, or plant network.

## FEATURES

### INPUTS

- Dry Contact, System Powered 24 Vdc
- Normally Open/Normally Closed
- Live Contacts (Isolated)
- 24 Vdc, 48 Vdc, 125 Vdc or 115 Vac, 240 Vac

### SEQUENCE

- All Standard ISA Sequences – User Configurable

### OUTPUTS

- Dual Audible – Configurable
- Auxiliary Contact
  - Double Throw Selectable
  - Normally Energized or De-energized
  - GP or HS Relays
  - May be Added in the Field
- Common System Trouble Alarm
- Reflash System Trouble Alarm
- Serial Alarm Input/Output Protocol
  - Ronan Proprietary
  - MODBUS RTU Slave
  - TCP/IP
  - DNP 3.0
- Alarm Serial Interface
  - Object Linking and Embedding for Process Control (OPC)

### DESIGN TECHNOLOGY

- Microprocessor Based
- High Noise Immunity

- Field Proven Off-the-shelf Worldwide
- Serial Input/Output
- Comprehensive User Configuration with Standard Windows Software

### MECHANICAL

- Flush Ergonomic Front Panel Design
- Total 7.50 Inches (190.50 mm) Deep
- Light Weight
- Reinforced Terminal Block

### LIGHTING

- LED – Colors: Red, Green, Amber, White, Blue
- Dual Bulbs – 2 Watts Each *(Can use 1 Watt with Transparent Film)*

### COLOR CODING

- Eight Bezel Colors
- Colored Lenses
- Sandwich Lenses

### WARRANTY

- Three (3) Years

### APPROVALS

- UL – Underwriters Laboratories
- CUL – Canadian Underwriters Laboratories

### EMI/RFI CAPABILITY

- IEC 801-1, -2, -3, -4
- CE Compliant to EN50081-2/EN50082-2

The Ronan X11CA Computer Annunciator Systems with microprocessor based electronics are assembled from basic 3.50 inch (88.90 mm) by 3.50 inch (88.90 mm) modules to make up the overall size requirements and number of windows required.

The mechanical modules assembled from aluminum castings and extrusions provide excellent heat dissipation for a continuously lit annunciator system and feature the structural strength required in industrial applications. The rear terminal is designed as a single piece molded plastic assembly per window for durability. A small 4.65 inch (118.11 mm) wide x 7.45 inch (189.23 mm) high x 1.00 inch (25.40 mm) deep module (interface module), is provided to connect the system to an external host.

All enclosures are painted with baked black semigloss enamel. Custom colors are optionally available.



**NEMA 4 OR NEMA 12 WINDOW**

The Panel-mount enclosure may be enhanced with a NEMA 4 or NEMA 12 door assembly to seal the front of the alarm system against control panels where it is subject to moisture or corrosive atmosphere. The door is supplied with a clear acrylic window, sealed with a neoprene gasket. Gasketing is supplied for sealing between door frame and control panels.



**PANEL - MOUNT**

The Panel-mount NEMA 1 type enclosure, for control panel applications, mounts through a rectangular cutout and secures to the panel with a number of simple clamping devices supplied with each system.



**RACK - MOUNT**

The Ronan alarm system with various window sizes is available for standard 19.00 inch (482.60 mm) or 24.00 inch (609.60 mm) relay rack mounting. The five mechanical module wide unit is suitable for 19.00 inch (482.60 mm), and the six module wide unit can be used for 24.00 inch (609.60 mm) rack spacing.



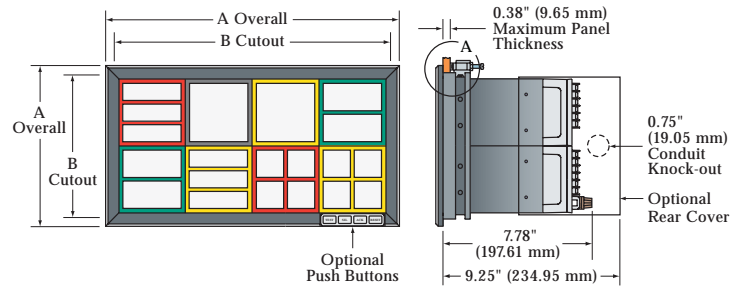
**SURFACE - MOUNT**

The Ronan Surface-mounted mechanical arrangement alarm system provides front termination access. It is used for applications where the annunciator is to be in an explosion proof housing or NEMA enclosure, and for applications where a surface mounted window annunciator is found more suitable.

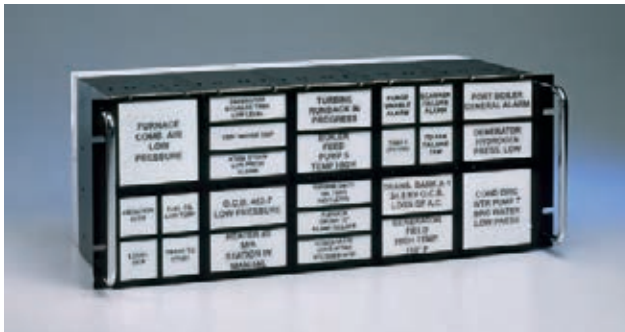
MODELS X11CA-1000, -2000, -3000, -4000



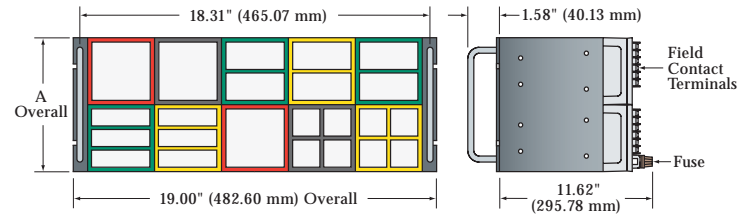
This Panel-mounted Series of computer annunciators is used for control panels. Various colors of bezels are available with four different configurations housed within the mechanical cabinet modules.



MODELS X11CA-RR-1000, -2000, -3000, -4000



The Relay Rack-mounted Series of computer annunciators has a standard length of 19.00" (482.60 mm). An optional 24.00" (609.60 mm) length is also available.



MODELS X11CA/X11CA-RR-1000, -2000, -3000, -4000



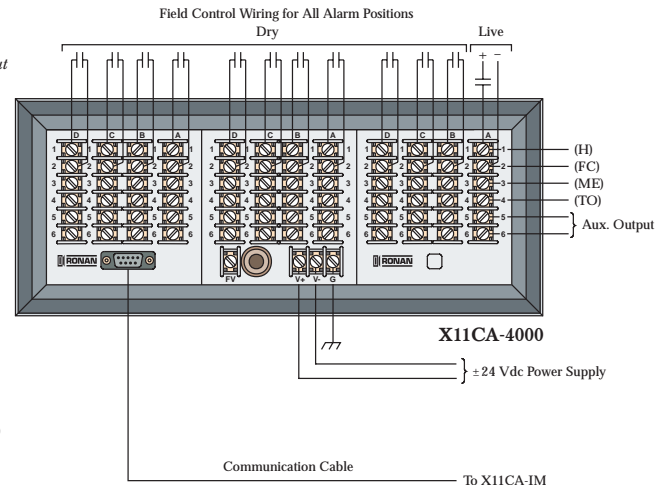
Rear Terminal Arrangement for Wiring

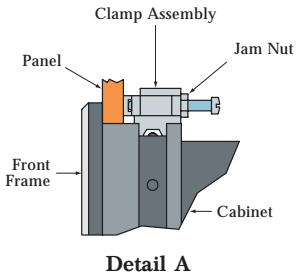
Notes for X11CA/X11CA-RR:

- (H) Field Contact Voltage for Dry Contact or Live Input
- (FC) Field Contact Return
- (ME) Connect All First Out Windows in a Group
- (TO) Transistor Output Driver
- Auxiliary Output NO/NC Selectable

Notes for X11CA-IM:

- TO: A1, A2, CIA, RFL RUN for Transistor Driver\*
- A1, A2, CIA, RFL, RUN for Relay Output\*\*
- NO: Normally Open
- COM: Common
- NC: Normally Closed
- A1: Horn 1
- A2: Horn 2
- CIA: Common Trouble Alarm
- RFL: Re-flash
- RUN: System Diagnostic
- GP1, GP2: Programmable Function (Special Function)





X11CA-1000 Number of Windows		X11CA-2000 Number of Windows		X11CA-3000 Number of Windows		X11CA-4000 Number of Windows		A Overall		B Cutout	
High	Wide	High	Wide	High	Wide	High	Wide	Inches	mm	Inches	mm
1	1	2	2	3	1	2	2	4.90	124.46	4.25	107.95
2	2	4	2	6	2	4	4	8.40	213.36	7.75	196.85
3	3	6	3	9	3	6	6	11.90	302.26	11.25	285.75
4	4	8	4	12	4	8	8	15.40	391.16	14.75	374.65
5	5	10	5	15	5	10	10	18.90	480.06	18.25	463.55
6	6	12	6	18	6	12	12	22.40	568.96	21.75	552.45
7	7	14	7	21	7	14	14	25.90	657.86	25.25	641.35
8	8	16	8	24	8	16	16	29.40	746.76	28.75	730.25
9	9	18	9	27	9	18	18	32.90	835.66	32.25	819.15
10	10	20	10	30	10	20	20	36.40	924.56	35.75	908.05
11	11	22	11	33	11	22	22	39.90	1013.46	39.25	996.95
12	12	24	12	36	12	24	24	43.40	1102.36	42.75	1085.85

Specifications subject to change without notice.

**Nameplate Sizes:**

Monalarm - 3.00 inches (76.20 mm)  
x 3.00 inches (76.20 mm)

Dualarm - 1.44 inches (36.58 mm)  
x 3.00 inches (76.20 mm)

Trialarm - 0.86 inches (21.84 mm)  
x 3.00 inches (76.20 mm)

Quadalarm - 1.40 inches (35.56 mm)  
x 1.40 inches (35.56 mm)

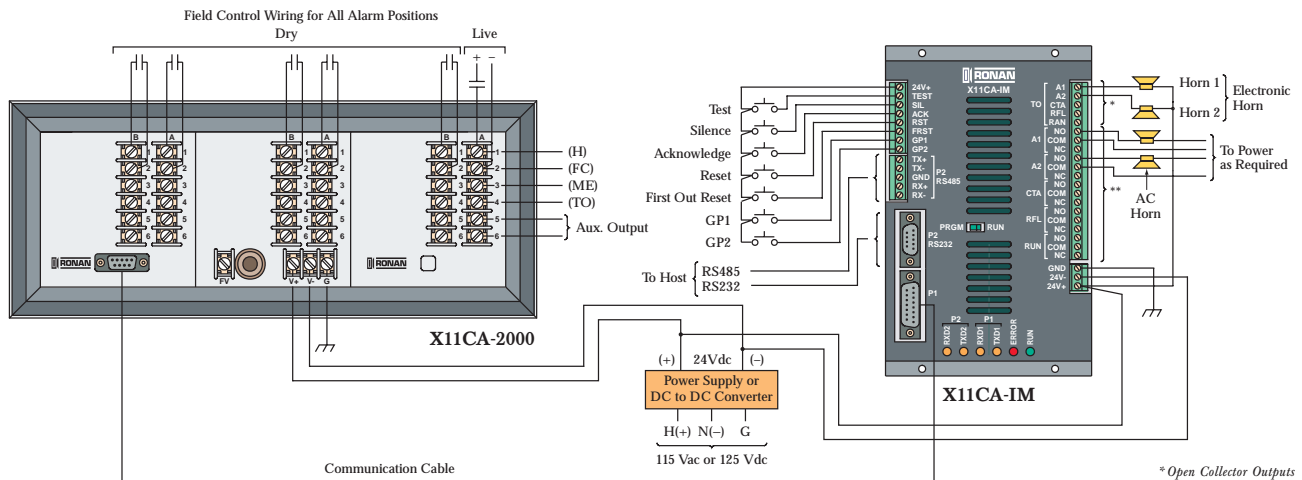
X11CA-RR-1000 Number of Windows		X11CA-RR-2000 Number of Windows		X11CA-RR-3000 Number of Windows		X11CA-RR-4000 Number of Windows		A Overall	
High	Wide	High	Wide	High	Wide	High	Wide	Inches	mm
1	5**	2	5**	3	5**	2	10**	3.50	88.90
2	5	4	5	6	5	4	10	7.00	177.80
3	5	6	5	9	5	6	10	10.50	266.70
4*	5	8*	5	12*	5	8*	10	14.00	355.60

\*Not limited to 4 high.  
\*\*Limited to 5 wide only.  
19.00" (482.60 mm) rack.  
Also available 6 wide  
24.00" (609.60 mm) rack.

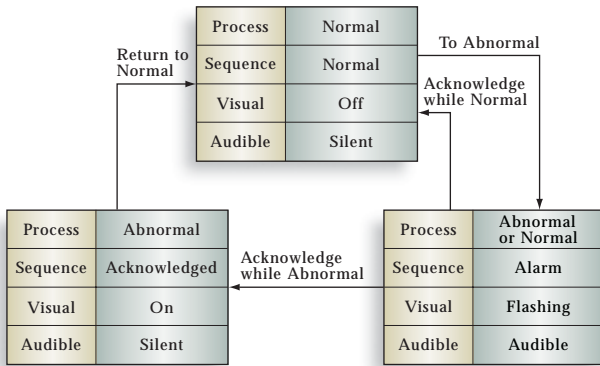
\*Not limited to 8 high.  
\*\*Limited to 5 wide only.  
19.00" (482.60 mm) rack.  
Also available 6 wide  
24.00" (609.60 mm) rack.

\*Not limited to 12 high.  
\*\*Limited to 5 wide only.  
19.00" (482.60 mm) rack.  
Also available 6 wide  
24.00" (609.60 mm) rack.

\*Not limited to 8 high.  
\*\*Limited to 10 wide only.  
19.00" (482.60 mm) rack.  
Also available 6 wide  
24.00" (609.60 mm) rack.



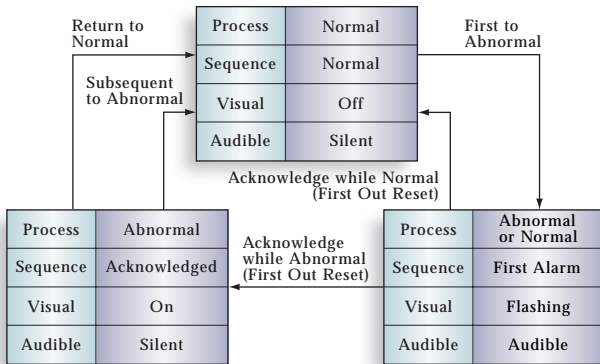
\* Open Collector Outputs  
\*\* Relay Contact Outputs



**SEQUENCE A**

**Automatic Reset**

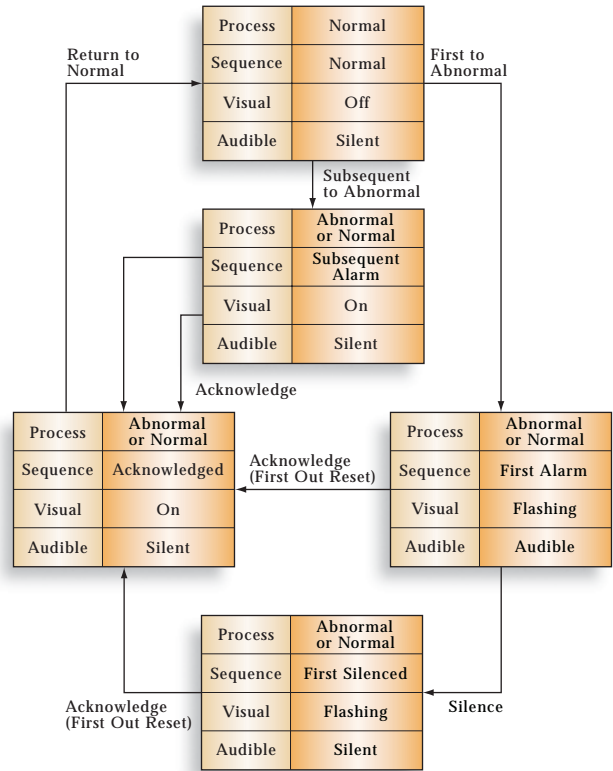
- Acknowledge and Test Push Buttons
  - Alarm Audible Device
- Lock-in of Momentary Alarms until Acknowledged
- The Audible Device is Silenced and Flashing Stops when Acknowledged
- Automatic Reset of Acknowledged Alarm Indications when Process Conditions Return to Normal
  - Operational Test



**SEQUENCE F2A**

**Automatic Reset First Out with No Subsequent Alarm State**

- Acknowledge and Test Push Buttons
  - Alarm Audible Device
- Lock-in Momentary First Alarm until Acknowledged
- No Lock-in of Momentary Subsequent Alarms
- Flashing and Audible Indications for First Alarm Only
- New Subsequent Alarms Go to the Acknowledged State
- First Out Indication is Reset and the Audible Device is Silenced when Acknowledged
- Automatic Reset of Acknowledged Alarm Indications when Process Conditions Return to Normal
  - Operational Test



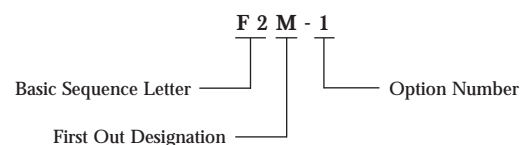
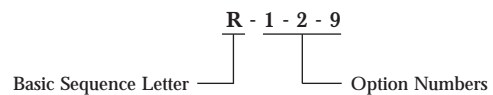
**SEQUENCE F2M-1**

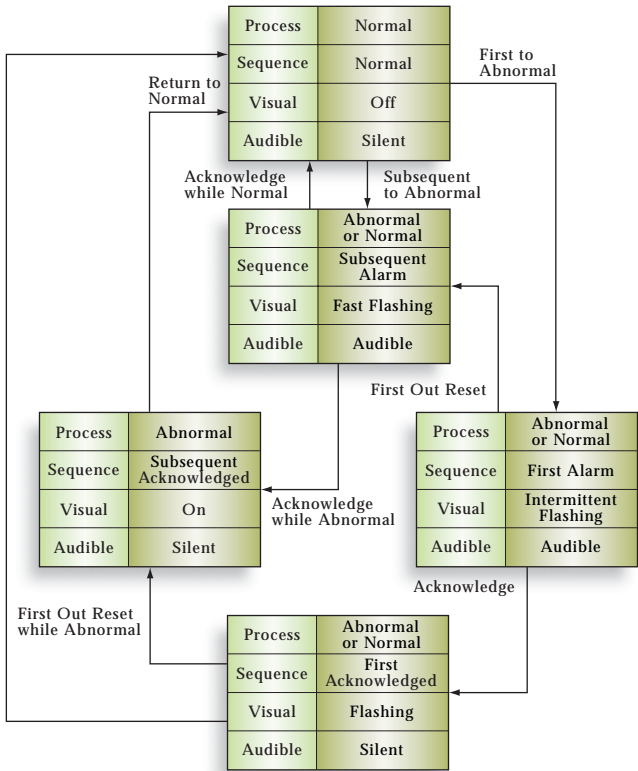
**Manual Reset - First Out with No Subsequent Alarm Flashing and Silence Push Button**

- Silence, Acknowledge, Reset and Test Push Buttons
- Sequence F2A, Automatic Reset First Out
- Alarm Audible Device with No Subsequent Alarm State Acknowledged
- Option 1: Silence Push Button to Silence the Alarm Audible Device while Retaining First Out Flashing Indication
  - Flashing Indication for First Alarm Only
- New Subsequent Alarms have the Same Visual Indication as Acknowledged Alarms
- First Out Indication is Reset when Acknowledged
- Manual Reset of Acknowledged Alarm Indications, Process Conditions Return to Normal
  - Operational Test

**ORDERING**

**Typical Method of Specifying Alarm Sequences with Options Using ISA Standard Nomenclature**



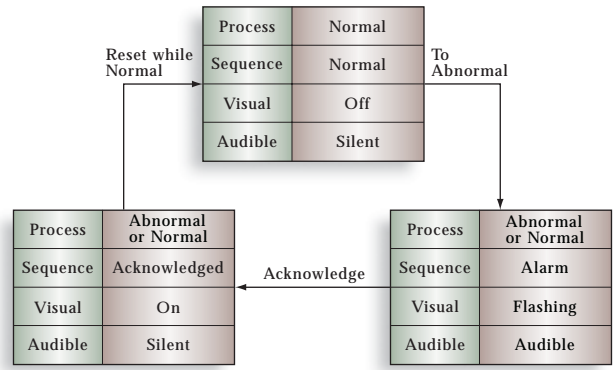


**SEQUENCE F3A**

Automatic Reset First Out Reset with First Out Flashing and Reset Push Button

- Acknowledge First Out Reset and Test Push Buttons
  - Alarm Audible Device
- Lock-in of Momentary Alarms until Acknowledged
- First Out Flashing Different from Subsequent Flashing
- First Out Reset Push Button to Change the First Out Visual Indication to be the Same as Subsequent Visual Indications
- Automatic Reset of Acknowledged Alarm Indications when Process Conditions Return to Normal
  - Operational Test

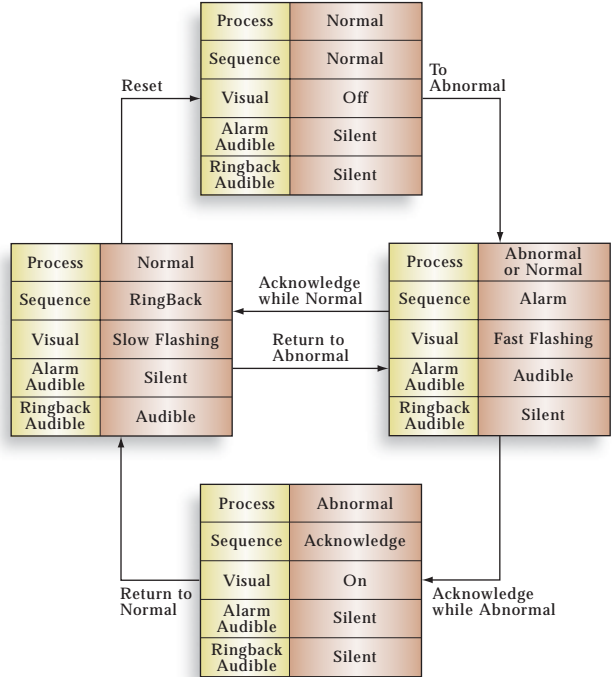
Basic Sequence Letter	Key Words	Option Number	Key Words
A	Automatic Reset	1	Silence Push Button
M	Manual Reset	2	Silence Interlock
R	Ringback	3	First Out Reset Interlock
		4	No Lock-in
		5	No Flashing
		6	No Audible
		7	Automatic Alarm Silence
		8	Common Ringback Audible
		9	Automatic Ringback Silence
First Out Designation	Key Words	Option Number	Key Words
F1	No Subsequent Alarm State	10	No Ringback Audible
F2	No Subsequent Alarm Flashing	11	Common Ringback Visual
F3	First Out Flashing and Reset Push Button	12	Automatic Momentary Ringback
		13	Dim Lamp Monitor
		14	Lamp Test



**SEQUENCE M**

Manual Reset

- Acknowledge, Reset and Test Push Buttons
  - Alarm Audible Device
- Lock-in Momentary Alarms Until Acknowledged
- The Audible Device is Silenced and Flashing Stops when Acknowledged
- Manual Reset of Acknowledged Alarm Indications after Process Conditions Return to Normal
  - Operational Test



**SEQUENCE R**

Ringback

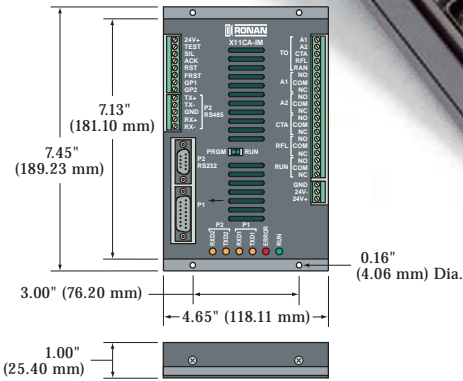
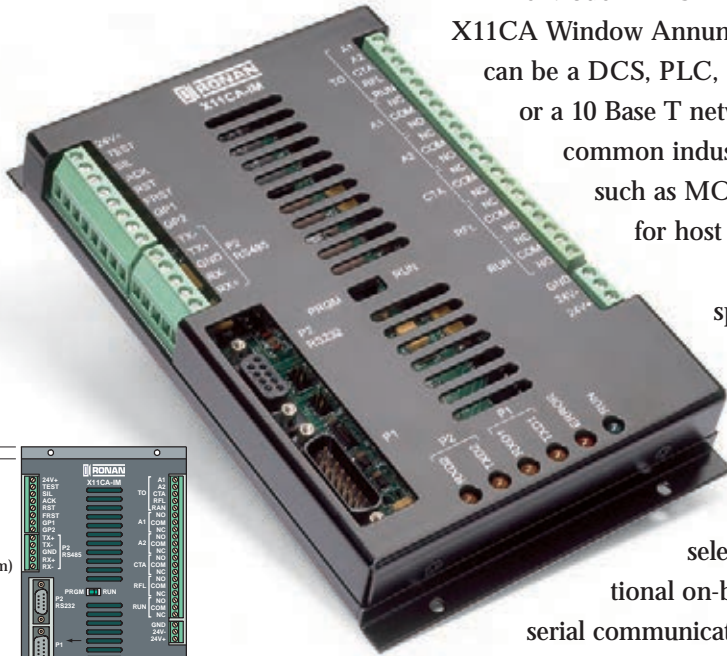
- Acknowledge, Reset and Test Push Buttons
  - Alarm and Ringback Audible Devices
- Lock-in of Momentary Alarms until Acknowledged
- The Audible Device is Silenced and Fast Flashing Stops when Acknowledged
- Ringback Visual and Audible Indications when Process Conditions Return to Normal
  - Manual Reset of Ringback Indications
    - Operational Test

HOST INTERFACE MODULE

The Model X11CA-IM Interface Module connects the X11CA Window Annunciator with external host devices. Hosts can be a DCS, PLC, or plant computer. An isolated RS485 or a 10 Base T network connection is used with the most common industry accepted communication standards such as MODBUS, DF1, and TCP/IP protocols for host communication.

The Module provides a number of special features such as time-stamped event archive, common trouble alarm, dual horn output, reflash output, and system diagnostic output. All outputs are provided in the forms of an open collector transistor and selectable Form C relay dry contact. Additional on-board LEDs are designed to indicate serial communication and system status.

The X11CA-IM Interface Module is used to interface via a laptop or PC with the Ronan X11CA configuration software for programming sequences, input/output assignment, and all other selectable features.



ALARM SEQUENCE/DISPLAY MODULE

The Ronan Model X11CA Annunciator module is designed with all common sequences and options available internal to the module, allowing for field programmable selections of all commonly used ISA sequences through a computer or laptop. Selection of field contact polarity is allowed through the on-board jumpers per channel. Each combination of alarm/display module contains a single, dual, triple, or quad alarm channel with associated lamp or LED displays. The modules are removable from the front without interfering with the system.

The X11CA Window Annunciator display lens area is a back-lit window with standard colored bezels. The single or sandwich lens allows multi-line legend.





### **MONALARM**

The Monalarm plug-in Module features single channel alarm logic with two 2-watt incandescent or optional LED type indicators illuminating a 3.00 inch (76.20 mm) high by 3.00 inch wide (76.20 mm) window.



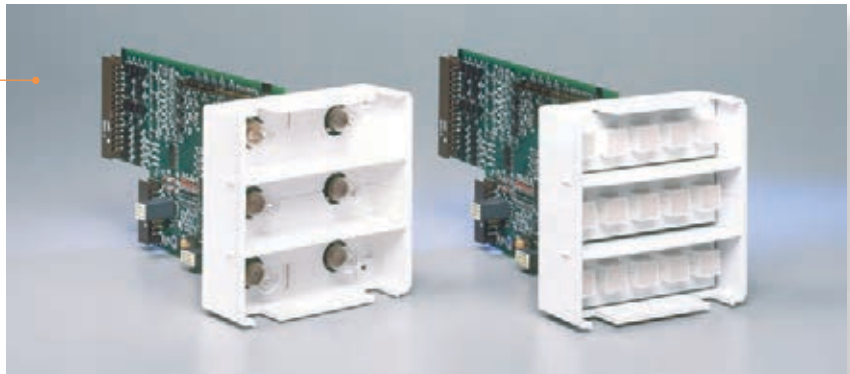
### **DUALARM**

The double window Dualarm Module contains two channels of alarm logic to display alarm conditions on two windows sized for 1.44 inch (36.58 mm) high and 3.00 inch (76.20 mm) wide lenses.



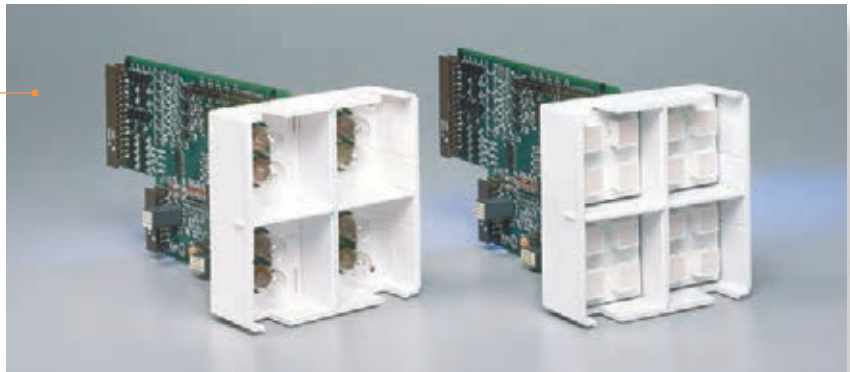
### **TRIALARM**

The three window Trialarm Module provides three 0.86 inch (21.84 mm) high by 3.00 inch (76.20 mm) wide nameplates and is illuminated by three sets of two 2-watt lamps or LED type indicators. Each set is driven by one channel of the three-channel alarm logic.



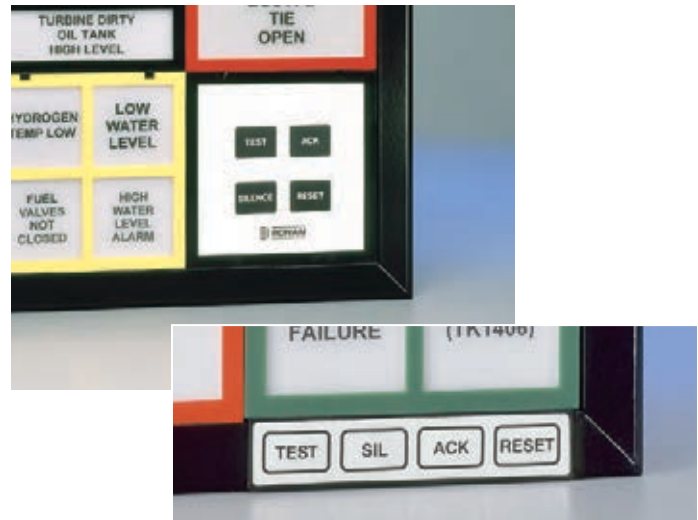
### **QUADALARM**

The four window Quadalarm Module represents the highest density of annunciation in the X11CA series. The 1.40 inch (35.56 mm) high by 1.40 inch (35.56 mm) wide window is illuminated by two 2-watt lamps or LED indicators.

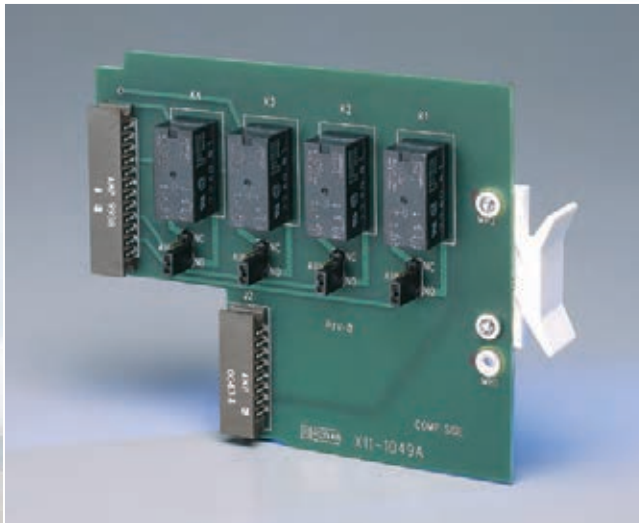


## PUSH-BUTTON CONTROL

The X11CA system provides for an integral membrane push-button interface module or, as an option, a membrane switch overlaid on the rim of the system frame. The latter design allows full use of all module position input channels in each system. All external push buttons are interfaced through the interface module. The system alarm input modules provide self-generating flash signals that operate the flash sequence on indicators independently. All module flash generators are synchronized by the interface module.



## AUXILIARY CONTACT MODULES

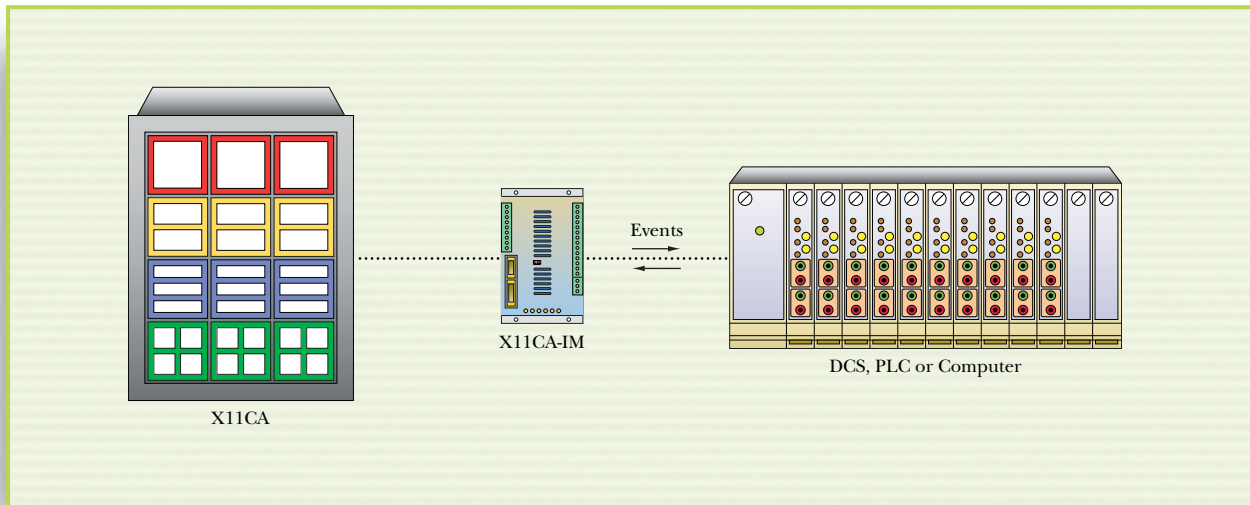


The Auxiliary Contact Modules are available for the X11CA Window Annunciator with a separate relay circuit for each window. The modules plug in from the front of the system. They may be purchased initially, or added later in the field without any additional system components. Each relay provides for a form A or B type contact, normally open or normally closed, and normally energized or normally not energized, and is selectable by a jumper switch.

The Ronan X11CA Window Annunciators have comprehensive serial alarm communication facilities to interface to Host machines and transfer field input status to, or receive alarm data from PLCs, DCSs, Network Alarm Servers and Computers.

**MODBUS RTU SLAVE**

The MODBUS RTU Slave protocol allows users of PLCs and DCSs that are operating as MODBUS Masters to periodically acquire the status of annunciator inputs or transmit alarms to the annunciator for process monitoring. Status of the annunciator is continuously updated in a pre-defined Memory Register Map which complies to the MODBUS protocol. The Host (MODBUS Master) periodically reads or writes to the Memory Register Map serially using pre-defined MODBUS command sets. The data is then used for process monitoring.



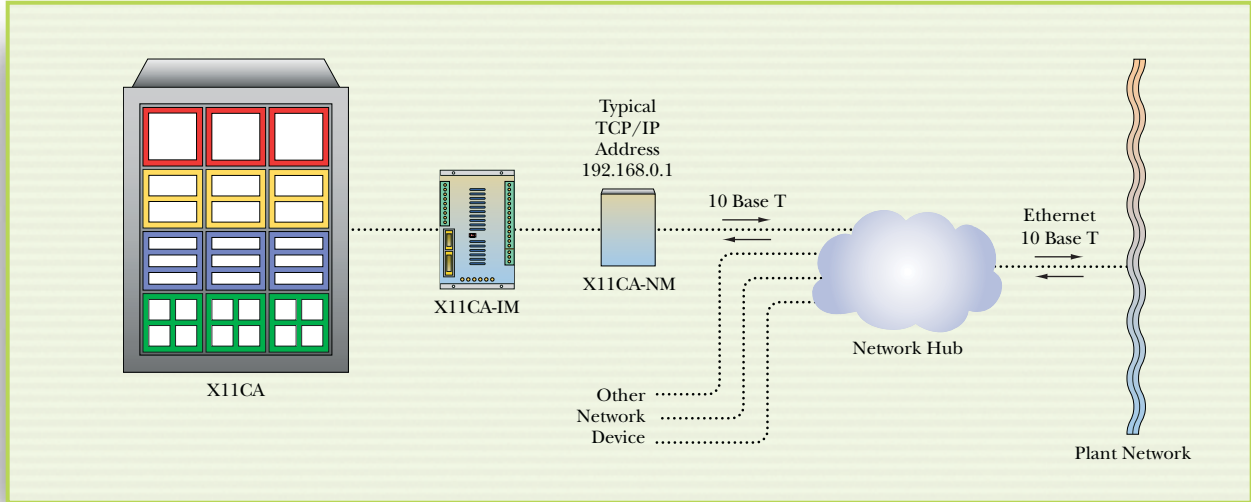
**ALLEN BRADLEY DF1 INTERFACE**

The Allen Bradley DF1 protocol allows users of AB PLCs to periodically acquire or transmit alarm data to or from the annunciator for monitoring and control. The input status is periodically transmitted as a bitmap complying to the DF1 protocol. The PLC provides an open serial port to send or receive the bitmap status.

NETWORK TCP/IP

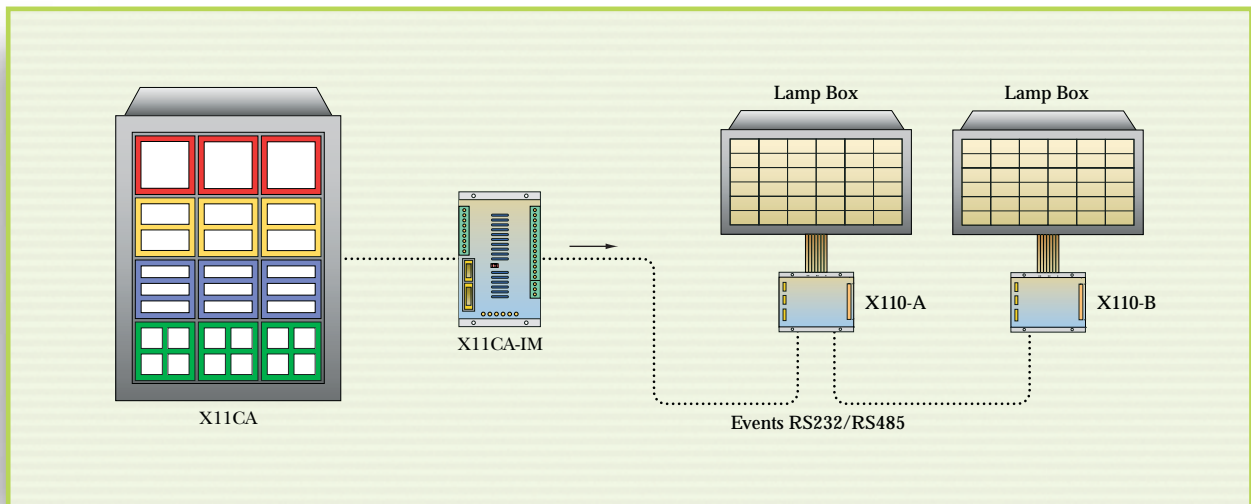
Transport Control Protocol/Internet Protocol (TCP/IP)

The Ronan X11CA provides as an optional connection to a local or plant network using the X11CA-IM interface module and X11CA-NM network converter module. The input alarm status is transmitted or received via TCP/IP at speeds of up to 10 MB all across the network.



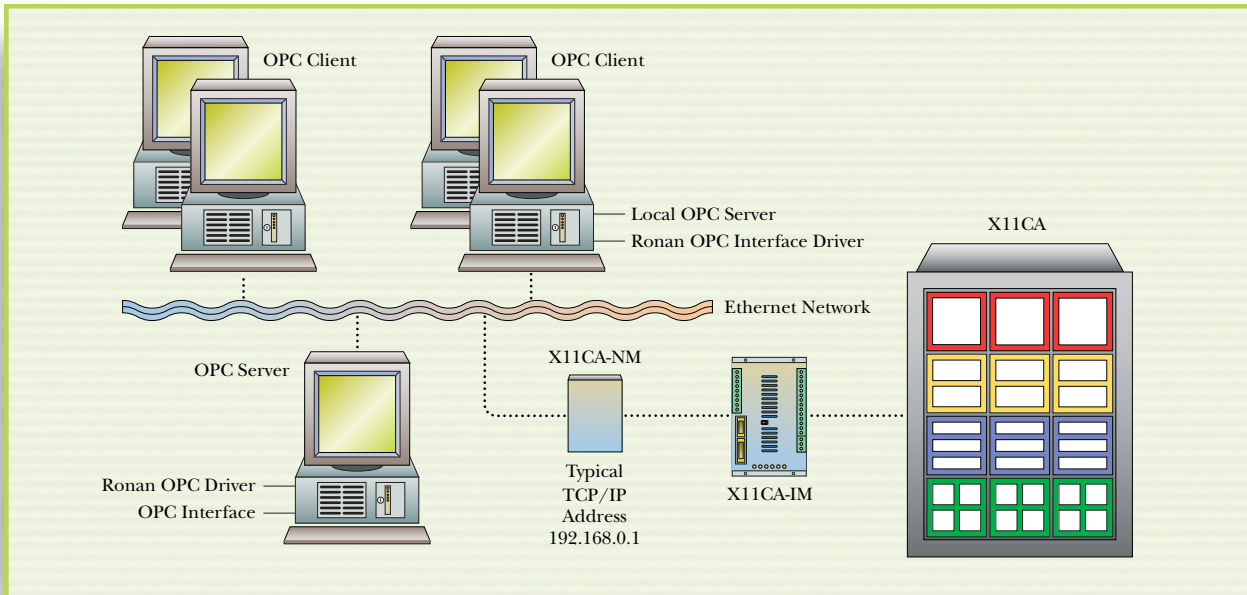
RONAN PROPRIETARY (Alarm/Normal)

The X11CA provides features to serially transmit input alarm status to external host devices through X11CA-IM. This feature can be used to transfer input alarm status serially to Ronan's X110 Serial Annunciator for remote visual annunciation display.



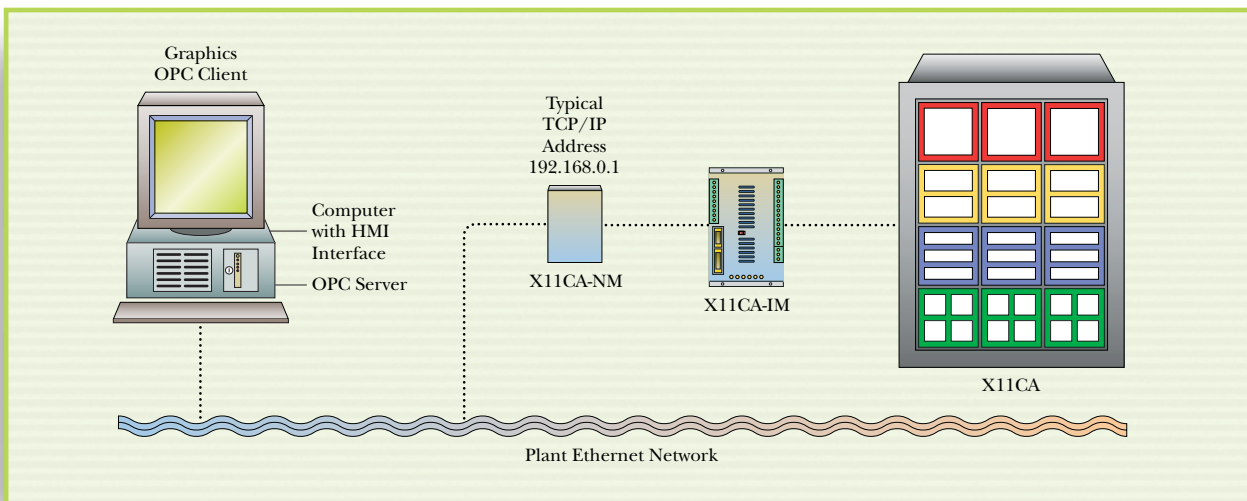
## OPC INTERFACE (Object Linking & Embedding for Process Control)

OPC is designed to allow client applications access to alarm input status of a system in a consistent manner. With wide industry acceptance, OPC provides easy integration into the common Human Machine Interface (HMI) applications widely used in the process industry.



## TYPICAL APPLICATION

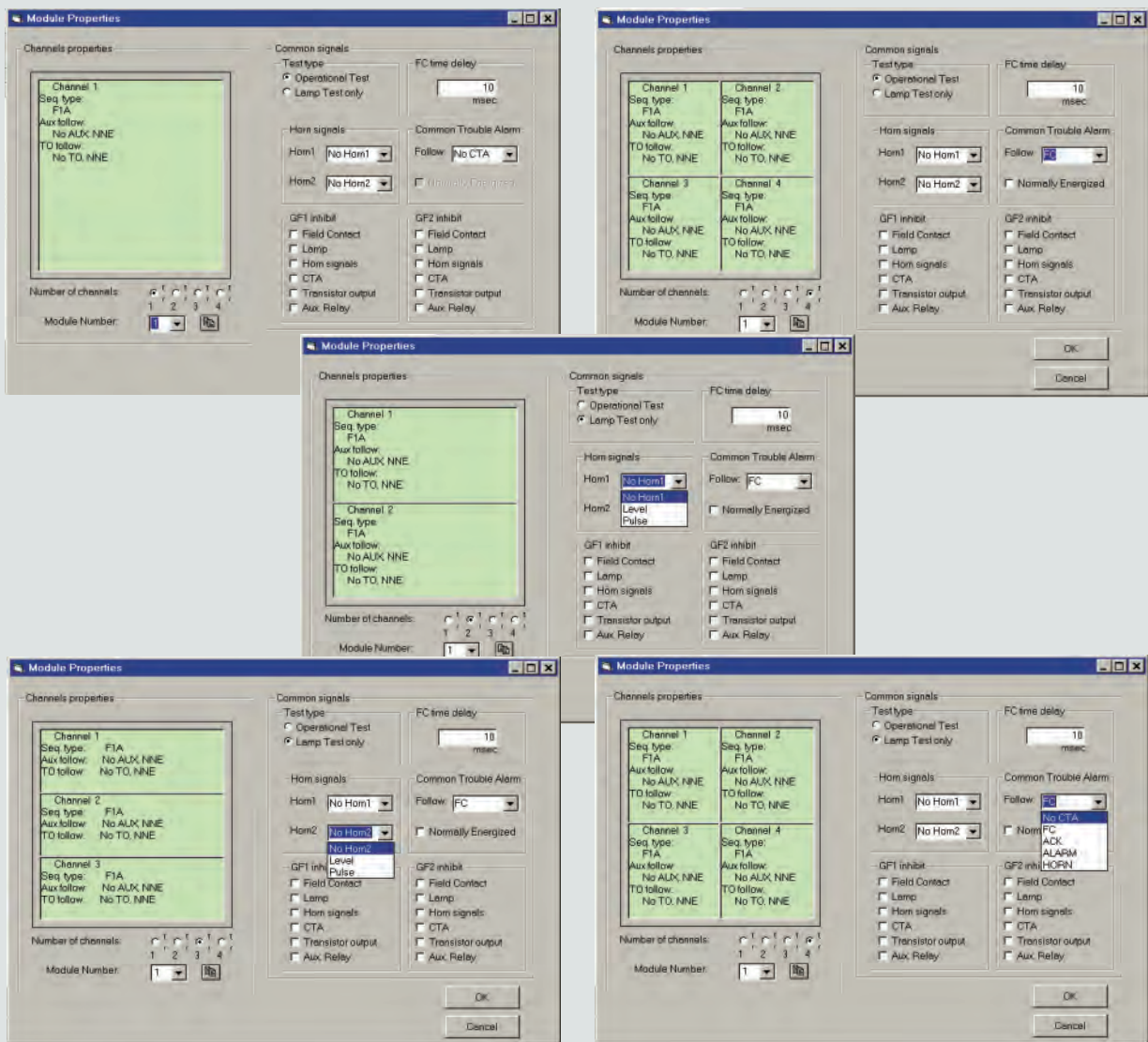
The X11CA Serial Annunciators features an optional 32 bit Windows NT driver and mechanisms for OPC clients to be notified of the occurrences of specified events and alarm conditions. They also provide services which allow OPC clients to determine the events and conditions supported by an OPC server, and to obtain their current status.



The Ronan X11CA Window Annunciators are configured fully with the use of a Windows graphical user interface application operating in a Windows environment on a PC or Laptop through an RS232 serial connection to the X11CA-IM interface module.

The application allows factory or field programmability of all features for each window. Configuration data is saved in non-volatile memory on-board each module.

Selections such as alarm sequence, first out grouping, operational or lamp test, output signals follow alarm or field contact, time delay and special functions are all set through the configuration application software.



The X11CA Window Annunciator can be supplied with engraved letters (top two examples) for all different models of bezels, or customized with laser printed lettering (bottom two examples) on heat resistant, translucent thin film material.



Monalarm Series 1000 – Model WB1-( )\*



Dualarm Series 2000 – Model WB2-( )\*



Trialarm Series 3000 – Model WB3-( )\*



Quadalarm Series 4000 – Model WB4-( )\*

\*Color code typical bezel ordering information: WB3-(0) = Black bezel for Trialarm Series

BEZEL COLORING

Ronan's X11CA Window Annunciator may be color coded by plant or process function with colored bezels and solid color or sandwich type nameplates.

The Bezels are available in eight (8) colors as standard, allowing very distinct differentiation between a system's function, e.g., same sequence, first out groups, common alarm groups, etc., or plant and process groups of similar functions.

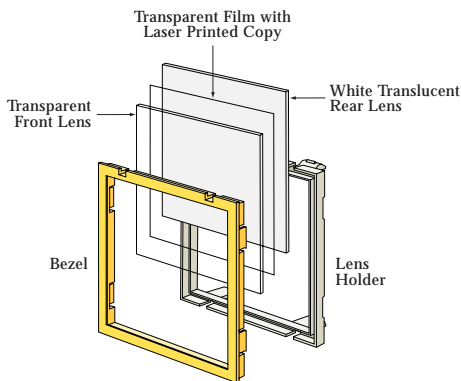
Chassis Type	Bezel Color	Lens Holder*	(0) Black	(5) Green
X11CA-1000	WB1 - ( )	LH1	(1) Brown	(6) Blue
X11CA-2000	WB2 - ( )	LH2	(2) Red	(8) Grey
X11CA-3000	WB3 - ( )	LH3	(4) Yellow	(9) White
X11CA-4000	WB4 - ( )	LH4		

\* All lens holders are white

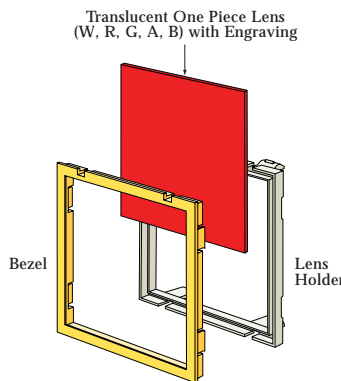
DISPLAYS AND NAMEPLATES

The Colored Nameplates may be supplied in five distinct standard colors to identify functions such as fire alarm, shutdown, etc.

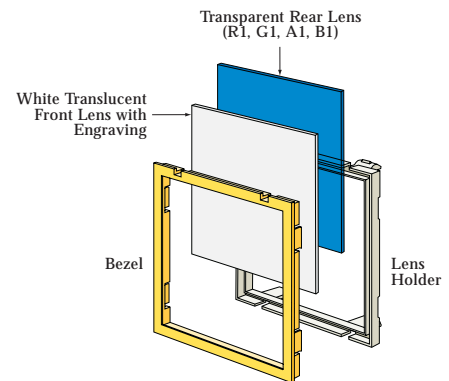
The Sandwich Nameplates, an option exclusive to the Ronan Visual Annunciator, are generally supplied with white front lenses and colored back lenses. This lens combination displays all windows white in non-lit status, changing to the selected color in OFF-normal condition.



No. 1 Use with LEDs  
No. 2 Use with Lamps



No. 3 Use with Lamps



No. 4 Use with Lamps  
Sandwich Type

Engraving Colors:  
**Black** for (W) White Translucent  
**White** for (R) Red Translucent  
**White** for (G) Green Translucent  
**Black** for (A) Amber Translucent  
**White** for (B) Blue Translucent

Chassis Type	LEDs Only		Lamps Only				
	No. 1		No. 2		No. 3	No. 4	
	Front Lens	Rear Lens	Front Lens	Rear Lens	One Piece Lens	Front Lens	Rear Lens
X11CA-1000	WL1-C	WL1-W1	WL1-C	WL1-W1	WL1-( )	WL1-W1	WL1-( )
X11CA-2000	WL2-C	WL2-W1	WL2-C	WL2-W1	WL2-( )	WL2-W1	WL2-( )
X11CA-3000	WL3-C	WL3-W1	WL4-C	WL3-W1	WL3-( )	WL3-W1	WL3-( )
X11CA-4000	WL4-C	WL4-W1	WL4-C	WL4-W1	WL4-( )	WL4-W1	WL4-( )

(R1) Red Transparent  
 (G1) Green Transparent  
 (A1) Amber Transparent  
 (B1) Blue Transparent



**System Voltage:**

- Lamps, Logic – 24 Vdc ± 20%
- Field Contacts – 24 Vdc, 48 Vdc, 125 Vdc, 115 Vac, or 240 Vac

**Power Source (System External):**

- Power Supply – 115 Vac 50/60 Hz; 240 Vac 50/60 Hz
- Converter – 24 Vdc, 48 Vdc, or 125 Vdc

**Temperature Range:**

- Operating – 0° to 60° C (32° to 140° F)
- Storage – -40° to +85° C (-40° to +185° F)

**Inputs:**

- Contact – Dry or Live; Normally Open / Normally Closed
- Field Selectable
- Interrogation Voltage – 24 Vdc, 48 Vdc, 125 Vdc, 115 Vac, or 240 Vac

**Response Time:** 15 Milliseconds

**EMI/RFI Capability:** CE Compliant

**Outputs:**

- Visual – Fast Flash, Slow Flash, Steady ON, Intermittent Fast Flash
- Audible – Dual, Selectable by Cabinet Module
- Auxiliary Relays – Form C, Selectable Form A or B; Normally Not Energized or Normally Energized
- Contact Rating – General Purpose: 1 Amp @ 28 Vdc; 0.65 Amp @ 115 Vac
- Common System Trouble: Form C, 2 Amps @ 28 Vdc; 0.65 Amp @ 115 Vac – Open Collector Transistor Output 200 mA @ 28 Vdc
- Common System Reflash: Form C, 2 Amps @ 28 Vdc; 0.65 Amp @ 115 Vac – Open Collector Transistor Output 200 mA @ 28 Vdc

**Controls:**

- Momentary Push Button: Integral or Remote; Single Pole
- Normally Open; +V Switched; Silence; Acknowledge;
- Reset, Test, GP1, GP2

**Diagnostic:**

- System Trouble Alarm (RUN) – Form C, 2 Amps @ 28 Vdc; 0.65 Amp @ 115 Vac
- System Trouble Alarm (RUN) – Indicating LED Green
- Communication Diagnostic (ERROR) – Indicating LED Red
- Transmit/Receiver LED Pair

**Communications:**

- Serial – RS485 (P1) to External Host
- Network – RJ45 (TCP/IP) to External Host

**Serial Protocols:**

- MODBUS RTU, Allen Bradley, DF1, DNP 3.0, Ronan Proprietary

**Network Protocols:** TCP/IP (OPC)

**Serial:**

- RS232 (P2) – System Sequence and Option Programming via Laptop or Computer
- Software – Ronan X11CA Configuration

**Special Feature:**

- Alarm Time Stamping
- Alarm Storage – 500 Alarms
- GP1, GP2 – Special Function Push-button Interface

**System Size:**

- Basic Cabinet Module – 3.50 inch (88.90 mm) x 3.50 inch (88.90 mm)

**System Weight:**

- Per Cabinet Module – 1.75 pounds (0.79 kg), Not Including Power Supply

To specify the correct power supply, count the number of alarm modules you need to power from the supply. Calculate the total requirement as follows:

$$\text{Total Watts} = \text{Number of Modules} \times \text{Factor F} + (\text{F Aux.}) + \text{P(IM)}$$

Model	F Lamps	F LEDs	F Aux. Relay Adder	P(IM)
X11CA (1000 Series)	6.5 W	8.5 W	1 W	10 W
X11CA (2000 Series)	10.5 W	7.0 W	2 W	10 W
X11CA (3000 Series)	14.5 W	6.5 W	3 W	10 W
X11CA (4000 Series)	10.5 W	7.0 W	4 W	10 W

Match the total wattage with the next higher power rating of the Power Supply or Converter listed.

DC/DC Converters	AC/DC Power Supplies
<i>Model - Power Failure, Circuit Breaker, Power ON Light, Diode Gated</i>	115 - 24 - 125
	115 - 24 - 250
	115 - 24 - 375
125 - 24/125 - 150 SCP	116 - 24 - 500
125 - 24/125 - 300 SCP	115 - 24 - 750
125 - 24/125 - 600 SCP	220 - 24 - 125
48 - 24/125 - 150 SCP	220 - 24 - 250
48 - 24/125 - 300 SCP	220 - 24 - 375
48 - 24/125 - 600 SCP	220 - 24 - 500
	220 - 24 - 750
	115 - 24/125 - 125
	115 - 24/125 - 250
	115 - 24/125 - 375
	115 - 24/125 - 500
	115 - 24/125 - 750
	115 - 24 - 250DA
	115 - 24 - 375DA
	115 - 24 - 500DA
	115 - 24 - 750DA

Power Output Watts	┌───┐
DC Voltage Out	└───┘
DC Voltage In	└───┘

AC Voltage In	┌───┐
DC Voltage Out	└───┘
Power Output Watts	└───┘
Diode Gated Output	└───┘

Specifications subject to change without notice.



X11CA WINDOW ANNUNCIATORS

Cabinet Modules/Universal Chassis ( ) - ( ) - X11CA - ( ) - 1000, - 2000, - 3000 or - 4000

Number of Windows High  
Number of Windows Wide

- PM = Panel-mounting
- RR = Relay Rack-mounting
- PMIPB = Panel-mounting with Integral Push Buttons
- RRIPB = Relay Rack-mounting with Integral Push Buttons
- SM-2 = Surface-mounting 2000 Series
- SM-4 = Surface-mounting 4000 Series

Alarm Modules X11CA - ( ) - ( ) - ( ) - ( ) - ( )



**A. Designation:**

- 1 = Single Point Alarm Module
- 2 = Dual Point Alarm Module
- 3 = Tri Point Alarm Module
- 4 = Quad Point Alarm Module

**B. Sequence Type:** (Other sequences available)

- M = ISA M-1
- F3 = ISA F3A-1
- ASL = ISA A-4, 5, 6

**C. Field Contact Voltage:**

- \*0 = 24 Vdc, 24 Vac, Opto-isolated
- 1 = 115 Vac or 125 Vdc, Opto-isolated
- 2 = 48 Vac or 48 Vdc, Opto-isolated
- 3 = 240 Vac or 250 Vdc, Opto-isolated
- 4 = 24 Vdc, Open Collector

**D. Special Options and CTA\*\*:**

- \*00 = Operational Test, NNE CTA follows FC
- 04 = Operational Test, NNE CTA follows Alarm
- 09 = Lamp Test, NO CTA, Lamp Inhibit Input on F4, Dual Horn Selectable
- 10 = Lamp Test, NNE CTA follows FC
- 11 = Lamp Test, NNE CTA follows FC, Lamp Inhibit on F4, Dual Horn Selectable
- 12 = Operational Test, NNE CTA follows FC, Lamp Inhibit Input on F4, Dual Horn Selectable
- 13 = Option 09 and Four Point Lamp Holder on Non-4000 System
- 16 = Lamp and Operational Test PB, NNE CTA follows FC, First Out Reset and Reset PB
- 17 = Operational Test, NNE CTA follows FC, Dual Horn Selectable

- 18 = Operational Test, NNE CTA follows FC
- 19 = Operational Test, NNE CTA follows FC, FC Time Delay
- 20 = Lamp Test, NNE CTA follows FC, FC Time Delay
- 21 = Operational Test, NNE CTA follows FC, FC Time Delay, Lamp Inhibit Input on F4, Dual Horn Selectable
- 22 = Lamp Test, NNE CTA follows FC, FC Time Delay, Lamp Inhibit on F4, Dual Horn Selectable
- 23 = Operational Test, NNE CTA follows FC, Lamp Mimic Output on TOA-TOD

**E. Auxiliary Relay Behavior:**

- 1 = NE Aux follows FC
- \*2 = NNE Aux follows FC
- 3 = NE Aux follows Alarm
- 4 = NNE Aux follows Alarm
- 5 = NE Aux follows Acknowledge
- 6 = NNE Aux follows Acknowledge
- 7 = NE Dual Aux follows FC
- 8 = NNE Dual Aux follows FC

**F. Visual Display:**

- \* No Label = Standard Lamps
- D = Dual Lamps on 4000 System
- For LEDs Assign Color for Each Window:
- R = Red LED
- Y = Yellow LED
- G = Green LED
- L = Multicolored LEDs
- W = White LED
- B = Blue LED

\* Standard options  
\*\* CTA = Common Trouble Alarm

Auxiliary Contact Modules X11CA - ( ) - AUX - ( )

Notes: Modules contain relays only. Universal Chassis allow addition of Auxiliary Contact Modules in the field.

- 1 = Monalarm
- 2 = Dualarm
- 3 = Trialarm
- 4 = Quadalarm

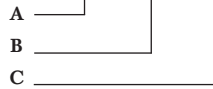
**Relay Type:**

- GP = General Purpose Relay, 1 Amp @ 24 Vdc, 0.50 Amp @ 115 Vac
- HS = Hermetically Sealed Relay, 1 Amp @ 24 Vdc, 0.50 Amp @ 115 Vac

## INTERFACE MODULES / COMMUNICATION

### Interface Modules

X11CA-IM - ( ) - ( ) - ( )



#### A. Voltage

0 = 24 Vdc

#### B. Communication Protocol

1 = Serial MODBUS RTU Slave

2 = Serial Allen Bradley DF1

3 = Serial Ronan Proprietary (X110)

4 = Network TCP/IP (Requires X11CA-NM, X11CA-SC-4 and X11CA-SC-5)

5 = Network TCP/IP (OLE for Process Control OPC)

(Requires X11CA-NM, X11CA-SC-4 and X11CA-SC-5)

6 = Consult Factory for Special Protocols

#### C. Physical Communication Layer to Host

1 = RS232

2 = RS485

3 = Network 802.11 (RJ45)

X11CA-NM: RS232 to TCP/IP Network Converter Module



## COMMUNICATION CABLES

X11CA-SC - 1 - ( ) - ( ) X11CA Annunciator to X11CA-IM, 25.00 Feet (7.62 Meters)

X11CA-SC - 2 - ( ) - ( ) X11CA-IM to Host RS232,  
25.00 Feet (7.62 Meters)

X11CA-SC - 3 - ( ) - ( ) X11CA-IM to Host RS485,  
25.00 Feet (7.62 Meters)

X11CA-SC - 4 - ( ) - ( ) X11CA-IM to X11CA-NM,  
6.00 Feet (1.83 Meters)

X11CA-SC - 5 - ( ) - ( ) X11CA-NM to Host (Category 5),  
25.00 Feet (7.62 Meters)

X11CA-SC - 6 - ( ) - ( ) X11CA Annunciator to X11CA  
Annunciator, 25.00 Feet (7.62 Meters)

X11CA-SC - 7 - ( ) - ( ) X11CA-IM to Computer/Laptop  
(For Programming and Configuration),  
6.00 Feet (1.83 Meters)

Length (Feet)

Cable Type: 0 = PVC

1 = Fire Retardant

Note: Standard lengths shown.



## W A R R A N T Y

Ronan warrants equipment of its own manufacture to be free from defects in material and workmanship, under normal conditions of use and service, and will repair or replace any component found to be defective, on its return, transportation charges prepaid, within three (3) years of its original purchase.

This warranty carries no liability, either expressed or implied, beyond our obligations to replace the unit which carries the warranty.



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