

# Seekirk

## *Model A2100 Series Annunciator*

### Applications:

For usage within transformers, switchgear, breakers and/or within any processing equipment or control room applications either attended or unattended for the monitoring of alarm conditions. Industries include electric generation, transmission distribution, gas and water utilities.

### Features:

The Seekirk model A2100 is a 12 point MODBUS/DNP/stand alone annunciator offering a wide range of configurations presented to the user.

- ▶ Supports both Modbus and DNP3.0 (IEEE Std™1815-2012) protocols.
- ▶ Modbus/DNP EIA-485/EIA-232 communication port is auto-selected upon initial reception of data from the master.
- ▶ Accepts alarm inputs from either the serial input as MODBUS/DNP (CROB) commands or from hardwired alarm inputs via the rear panel terminals. In the event of loss of communications, the unit can function as a stand alone annunciator.
- ▶ The A2100 DNP alarm sequence event buffer is capable of storing up to 512 time-stamped alarm events. In the event of a loss of power, the DNP time-stamped alarm events are stored in EEPROM to allow for later retrieval.
- ▶ To provide a contiguous DNP point index range, virtual device addressing is employed. Separate addresses are assigned to the alarm in, alarm return to normal, alarm acknowledged and alarm reset events.
- ▶ Can be configured for the reporting of unsolicited (DNP) alarm events on a per point basis.
- ▶ Grouping of alarms by assigning of class (DNP Assign Class) 1, 2, or 3 to each alarm point.
- ▶ Configuration settings can be modified either by manual entry at the HMI control panel or by serial connection to a laptop utilizing Seekirk's Java based GUI or on a per factory request, the configuration settings can be setup at the factory for the customer.
- ▶ Cutout dimensions are the same as the Seekirk A/B/E1000 series 12 point annunciator allowing for device upgrade where Modbus or DNP3.0 protocol is required.
- ▶ Enclosure is configured for either rear or flush panel mounting.
- ▶ Optional feed-through rear terminal blocks to allow for external wiring hookup.



## Specifications

### AC Power:

**Voltage input range-** 120 or 240 VAC.

### DC Power:

**Voltage input range-** 24, 48, 125 or 250 VDC.

**Power Rating -** Max. 13.0 watts @ input voltage.

### Field Contact Input:

**Input voltage range-** 24 to 125VDC or 110VAC.

**Optocoupler rating-** Minimum of 2500 VAC Withstand Test Insulation.

**Input protection-** Metal Oxide Varistor. Max. clamping voltage 360 Volts @ 2.0 Amps during a current pulse of 8/20 uSec.

### **Programmable Configuration per Point:**

- 1) N.O. or N.C. field contact input.
- 2) Enable or disable input.
- 3) Input delay – 10ms to 150ms.
- 4) Block or unblock alarm/common relay.

### Alarm Sequences (ISA Standard):

#### **Programmable Configuration:**

D (A), K (M), N (F2A), P (F2M), S (F3A), T (F3M), R and FTC (Follow The field input Contact).

For non-standard alarm sequences, contact Seekirk for inclusion of customer specific alarm sequences.

### Display:

Standard – 24PSB red LED lamps.

Optional – amber, green, blue and white LED lamps.

Legends – 12 plates included. Nominal charge for engraving.

### Auxiliary Relay Ratings:

**Max. switching voltage-** 300 VDC.

**Max. switching current-** 8.0Amps. @ 30VDC/277VAC

**Max. power rating-** 2000 VA.

**Relay type-** DPDT.

#### **Programmable Configuration per Point:**

- 1) N.O. or N.C. contacts.
- 2) Follow the field contact or alarm sequence.

### Alarm/Common Relay Ratings:

**Max. switching voltage-** 300 VDC.

**Max. switching current-** 8.0Amps.

**Max. power rating-** 2000 VA.

**Relay type-** DPDT.

### **Programmable Configuration:**

- 1) N.O. or N.C. contact.
- 2) Enable or disable.
- 3) Reflash.
- 4) Pulse 1-15 seconds.

### Audible – Internal:

**Sound level-** 75dB @ 2ft (61cm)

#### **Programmable Configuration:**

- 1) Enable or disable.

### Serial Communication:

**Baud rate selection -** 1200, 2400, 4800, 9600, 19200, 38400, or 57600.

**Parity selection-** no, odd, or even parity.

**EIA (RS)-485-** Half duplex.

**EIA (RS)-232 Handshaking signals-** Full duplex with CTS, RTS, and XON/XOFF (modbus only).

#### **EIA (RS)-232-DB9 style female connector pin out:**

Pin 2 - Serial data in.

Pin 3 - Serial data out.

Pin 5 - Signal ground.

Pin 7 - Request to send (RTS).

Pin 8 – Clear to send (CTS).

### Mechanical:

#### **Mounting and Enclosures –**

Dimensions (H x W x D) - 17-7/8 in. x 6-3/8 in. x 5.1/8 in.

(45.4 x 16.2 x 13.0 cm)

Panel Cutout – 17-1/2 x 5-1/2 (44.4 x 14 cm)

Weight – 10lb (4.5 kg)

Enclosure – 16 gauge steel

Finish – Satin black, baked enamel.

Conduit Access – Knock-outs, top and bottom for 1” conduit fitting.

#### **Connections – Input/Output/Power**

P.C. board mounted feed through barrier terminal block, with #6-32 screws suitable for #12-22 AWG wires.

#### **Connections – Modbus/DNP Communication**

EIA-232 - 9 pin female D type connector.

EIA-485 – P.C. board mounted 3 – position terminal block.

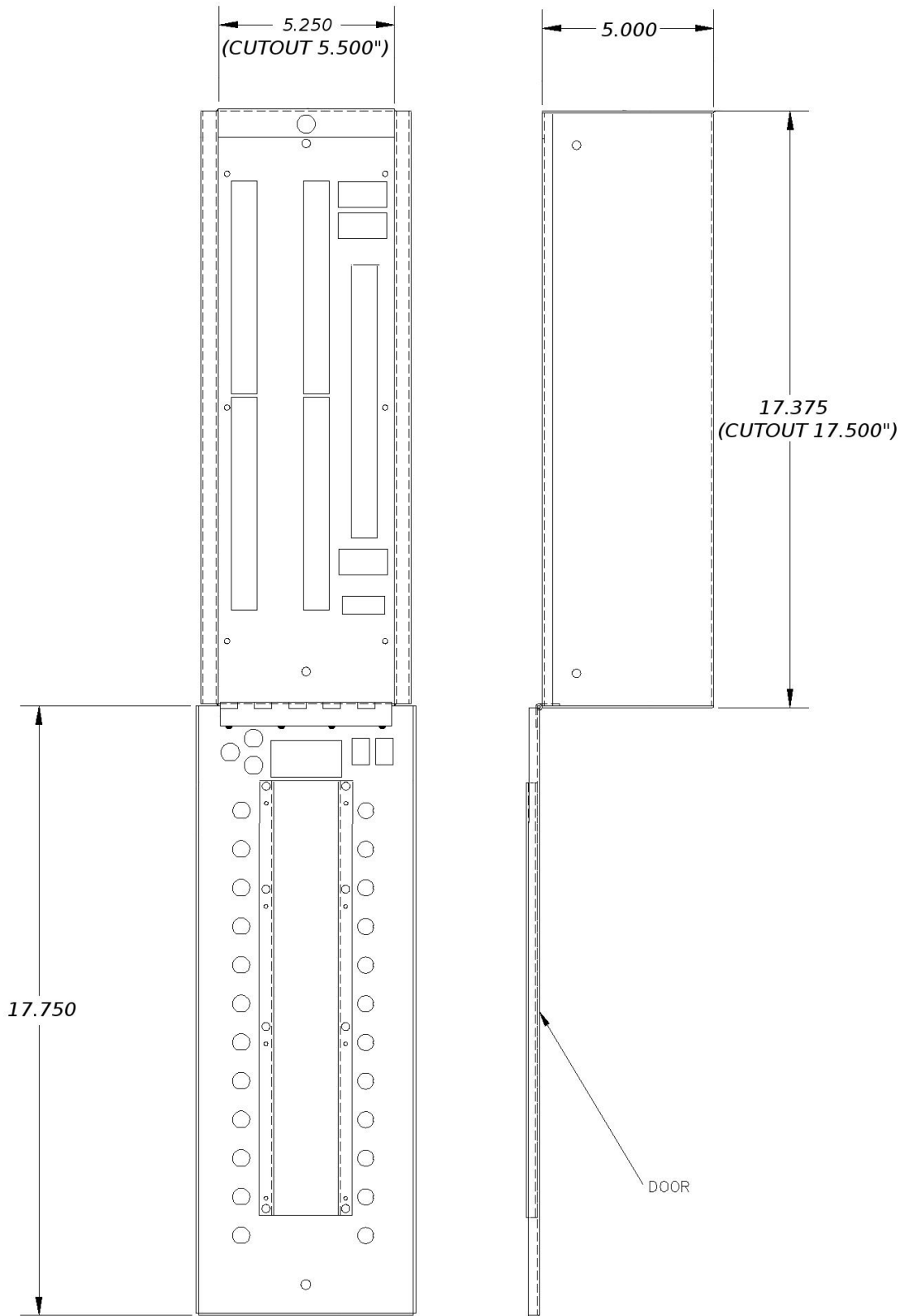
Accept #12-22 AWG wires.

### Operating Temperature and Humidity Range:

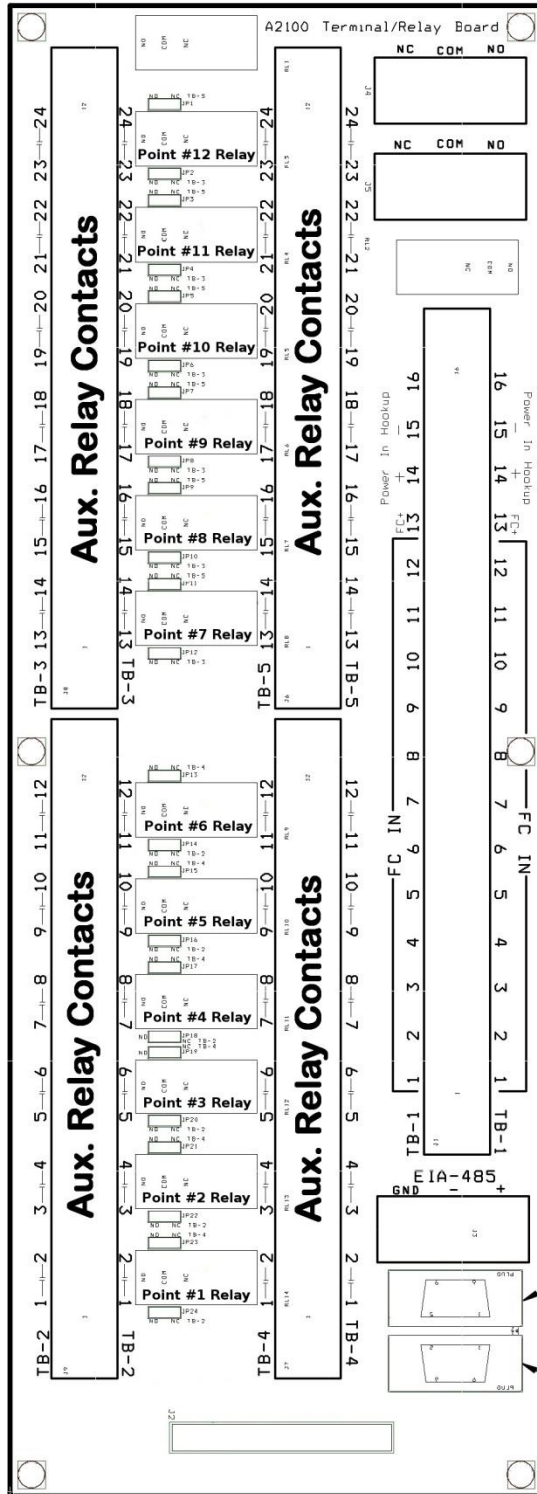
**Standard Range:** 32 to 158 degrees F. (0 to 70 degrees C).  
0-90% RH, non-condensing.

**Optional Range:** -40 to 185 degrees F (-40 to 85 degrees C).  
0-90% RH, non-condensing.

## Dimensional Information



# Terminal Wiring Hookup Layout Information



**Main (Common) Alarm Relay Terminal**

**Power Input Connection Terminals 14(+) 15(-)**

**FC Source Voltage Terminal 13**

**Field Contact Inputs Terminals 1-12**

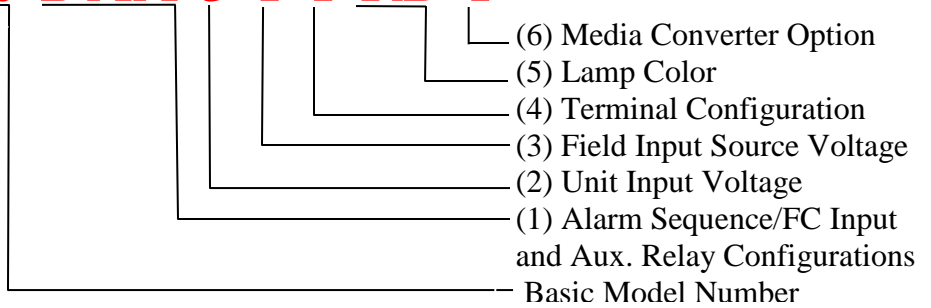
**EIA-485 Terminal**

**For Internally Accessed Terminals  
RS-232 9-Pin D-Sub Female**

**For Externally Accessed Terminals**

## Ordering and Specifying Information:

# A2100-DAA-3-1-1-RD-F



### 1) Point Card Details:

#### Sequence (Standard) (Note 1)

- D – ISA A
- K – ISA M
- N – ISA F2A
- P – ISA F2M
- S – ISA F3A
- T – ISA F3M
- R – ISA R
- F – Follow The Contact

#### Field Input Contacts: (Note 2)

- A – N.O. contacts (Standard Configuration).
- B – N.C. contacts.
- C – Mixed per chart supplied with order.

#### Auxiliary Relay Options: (Note 3)

- A – One set of contacts per point – N.O. (TB-2/TB-3)
- B – One set of contacts per point – N.C. (TB-2/TB-3)
- C – Two set of contacts per point –  
N.O. (TB-2/TB-3) - N.C. (TB-4/TB-5)
- D – None Required
- E – Two set of contacts per point –  
N.O. (TB-2/TB-3) - N.O. (TB-4/TB-5)
- F – Two set of contacts per point –  
N.C. (TB-2/TB-3) - N.C. (TB-4/TB-5)
- G – Mixed per chart supplied with order.

DAA

### (2) Unit Input Voltage:

- 1 – 24 VDC
- 2 – 48VDC
- 3 – 125VDC
- 4 - 250VDC
- 5 – 120VAC (50/60Hz)
- 6 - 240VAC (50/60Hz)

### (3) Field Contact Input Source Voltage:

- 1 - 24VDC (Standard Configuration).
- 2 - Input Voltage (Restricted to 24VDC, 48VDC, 125VDC and 120VAC Unit Input Voltages Only).

### (4) Terminal Configuration:

- 1 – Internal terminals (Standard Configuration).
- 2 – Feed-through terminals.

### (5) Lamp Color:

- AM – LED - Amber
- RD – LED – Red - Standard
- GN – LED - Green
- WT – LED - White
- MX – LED - Mixed, Specify Placement.

### (6) Media Converter Option:

- Blank – None.
- E – Serial to Ethernet Gateway.
- F – Serial to Fiber-Optic Gateway.

### Notes:

- 1) For additional or special sequences contact Seekirk.
- 2) All field contacts N.O./N.C. selections are configurable via the HMI control panel or Seekirk supplied GUI.
- 3) All auxiliary relay contacts N.O./N.C. selections are configurable via the HMI control panel or Seekirk supplied GUI.
- 4) An “\*” at the end will indicate special requirements not included in the standard model. Specify details.

**Seekirk Inc.**

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