



## DIODE ORing AND ALARM PANEL

### MODEL 3059

### ONE CIRCUIT -48VDC / -24VDC

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Current Ratings:	20 Amp max (each input) 20 Amp max (total output)
Alarm Contacts:	3 sets of Form C contacts (SPDT) 500 mA @ 125 VAC 500 mA @ 110 VDC 1 A @ 30 VDC

#### FIGURES

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#### 4.02 Terminal Block Connections

Power Input/Output:  
Block TB1:  
7 Position Eurostrip, 22-10 AWG,  
30 A, 300 V  
Cage clamp for bare wire or ferrule

terminal 1: A Input (-48/-24 VDC)  
terminal 2: A Return (GND)  
terminal 3: B Input (-48/-24 VDC)  
terminal 4: B Return (GND)  
terminal 5: C Output (-48/-24 VDC)  
terminal 6: C Return (GND)  
terminal 7: Frame Ground (FG)

Alarm Contacts:  
Block TB2:  
9 Position Angled Wire Entry,  
28-12 AWG, 10 A, 300 V  
Cage clamp for bare wire or ferrule  
termination (4/40 slotted MS)

terminal 1: A Input Normally Open (NO)  
terminal 2: A Input Common (COM)  
terminal 3: A Input Normally Closed (NC)  
terminal 4: B Input Normally Open (NO)  
terminal 5: B Input Common (COM)  
terminal 6: B Input Normally Closed (NC)  
terminal 7: C Output Normally Open (NO)  
terminal 8: C Output Common (COM)  
terminal 9: C Output Normally Closed (NC)

### 1. GENERAL

**1.01** This practice provides application, specification, circuit and mechanical description, maintenance, installation, and warranty information relating to Accurate Electronics' Diode ORing and Alarm Panel Model 3059.

**1.02** The Diode ORing and Alarm Panel provides -48VDC (switchable to -24VDC) office battery power distribution from two independent feeds A and B to one diode combined output C. The panel total load maximum is twenty (20) ampere.

**1.03** Power switch has reversible locking cover to prevent inadvertent switch operation.

**1.04** LED indicator lamps (green) include two input power monitors A and B and one output power monitor C.

**1.05** Three sets of SPDT (Form C) alarm relay contacts are available for each A and B input and C output. Loss of Power will cause the indicator lamp to extinguish and the associated alarm relay circuit to operate.

**1.06** The panel fits into a 6.555"W x 3.312"H x 4.0"D slot on a rack with flush depth mounting.

### 2. APPLICATION

**2.01** Provides one (1) circuit for distribution of either -48 VDC or -24 VDC office battery power.

### 3. FEATURES AND BENEFITS

- -48 or -24 VDC operation.
- Independent feeds for A and B inputs.
- Form C alarm contacts for A and B inputs and C output.

### 4. SPECIFICATIONS

#### 4.01 Electrical

Circuits per Panel: One  
Voltage: -48 VDC/-24 VDC (switch selectable)

#### 4.03 Front Panel Indicators

A Input: LED (green)  
B Input: LED (green)  
C Output: LED (green)

#### 4.04 Environmental

Operating Temperature: 0 - 55° C  
Humidity: up to 95% R.H.  
non-condensing

#### 4.05 Physical

Dimensions: 6.555"W x 3.312"H x 4.0"D  
16.65 cmW x 8.41 cmH x 10.16cmD  
Mounting (one side only): Vertical: 3 holes centered: 1.75"  
Horizontal: 3 holes offset: 1.55", 1.80"  
Mounting Depth: flush

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Mounting Hardware (Ship With Kit):

- 3 ea. 6/32 x 1/2 pan phillips plated machine screws
- 3 ea. #6 lockwashers external star plated
- 3 ea. #6 round plated washers
- 4 ea. Tyewraps

Finish: black anodized / white lettering  
Weight: 1.0 lbs. / 0.45 kg.

## 5. CIRCUIT DESCRIPTION

5.01 See Figure 1.

## 6. MECHANICAL OUTLINE

6.01 See Figure 2.

## 7. INSTALLATION

7.01 If mounting horizontally, use screw holes on right side of panel (when viewed from front i.e. you are looking at the LEDs). If mounting vertically, use screw holes on the left side of panel. Mount the unit firmly to the mounting bar with the enclosed hardware: Three (3) 6/32 x 1/2 pan phillips screws, Three (3) #6 lockwashers, Three (3) #6 flat washers.

7.02 Remove front cover (silkscreened) by unscrewing six (6) 4/40 x 1/4 phillips flat machining screws.

7.03 Select proper operating voltage. The actuator of S1 (located on the PCB) is positioned towards the front of the panel for -48 VDC operation and towards the rear of the panel for -24 VDC operation. The switch locking tab must be removed prior to moving the actuator by unscrewing two 4/40 phillips machine screws. Please reinstall the locking tab after selecting the proper operating voltage.

7.04 Wire the Input/Output Power and Alarm Relay connections at TB1 and TB2. See figures 2 and 3 for terminal assignments.

7.05 Replace front cover.

## 8. MAINTENANCE

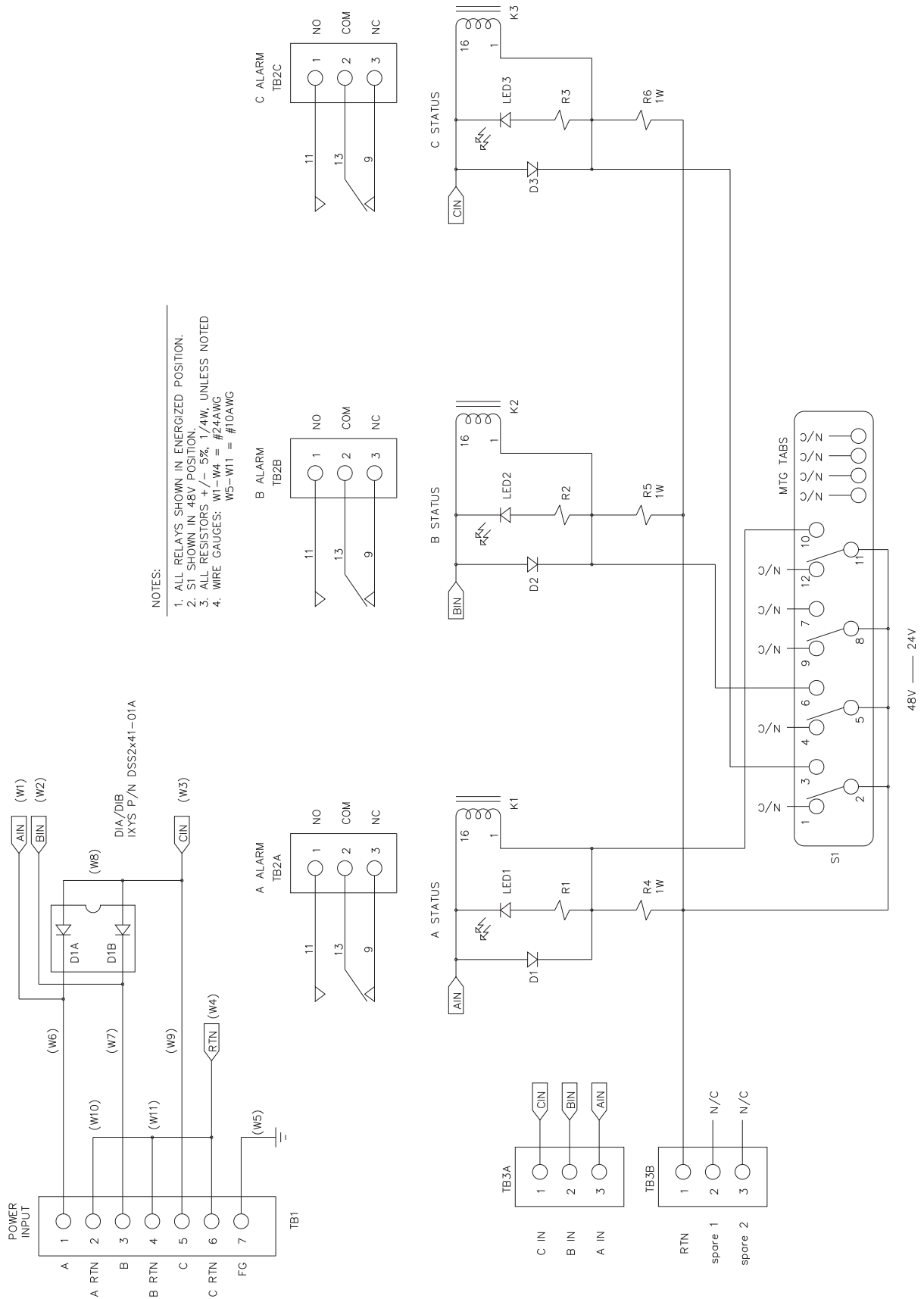
8.01 No preventive maintenance is necessary. General care is recommended.

## 9. WARRANTY

9.01 See WARRANTY in front of catalog.

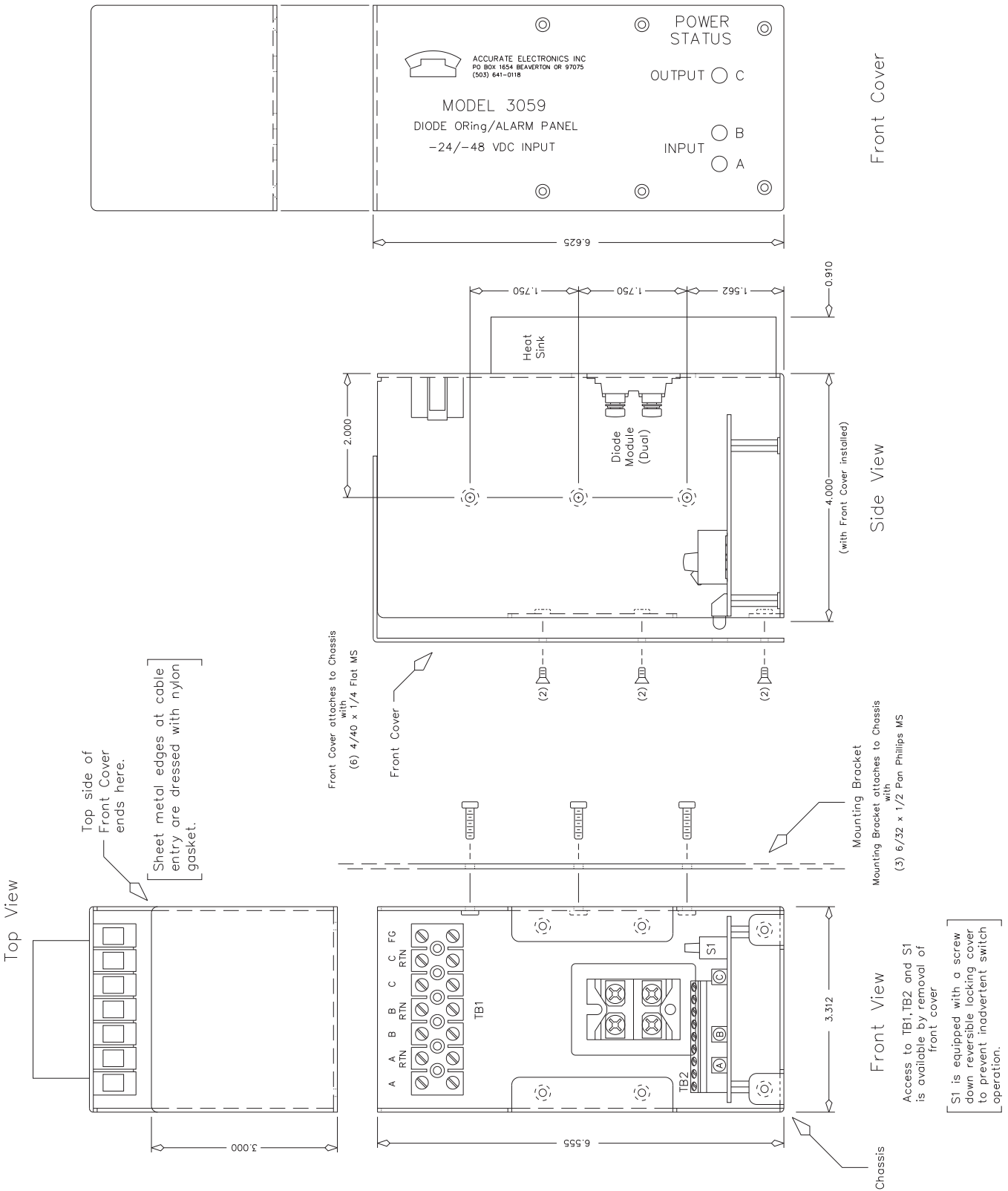
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FIGURE 1. CIRCUIT DESCRIPTION



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FIGURE 2. MECHANICAL OUTLINE



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FIGURE 3. MECHANICAL OUTLINE - PCB

