



System Directions Ltd.

Saftronics EZ6 Series

**AA1037-1 EZ6 Up-To-Speed Card
Extended Overload
Shear Pin Card
Full Speed Detector
Manual P/N 027-1037**

System Directions Ltd.
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1. DESCRIPTION

AA1037 card has been designed to provide three functions:

- Shear pin protection
- Overload By-pass at starting
- Motor at full speed detector

This card must be used in conjunction with EZ6 controller card AA1021. The card is connected to the EZ6 starter via a 26 conductor flat ribbon to AA1021 controller card.

1.1 SHEAR PIN PROTECTION

This feature has been designed to provide motor jam protection after the motor has reached full speed.

LED "JAM", DS3, indicates status: LED "On" means healthy condition, that is no jam. Motor jam is detected by sensing the motor current. "P1" links allow selection of the trip level: 150% or 300% of motor full load amp.

When a fault is sensed, the starter is turned off, tripping fault relays on the AA1021 and AA1037 cards in a latched condition. Reset is manual by means of the "Reset" pushbutton on the AA1037 card.

Shear pin function is active when link "P3" is in the "Enable" position. In "Disable" position, this protection is by-passed.

1.2 EXTENDED OVERLOAD BY-PASS

This function is intended to be used in applications where long time acceleration is required.

The inverse time overload is by-passed for an adjustable time between 20 and 60 seconds by means of potentiometer RV1 during the starting period.

After the by-pass time has elapsed, the inverse time overload is active for the remaining time that the motor is running. The overload status is indicated by LED "O/L", "On" indicating a healthy condition. A fault, if it occurs, is manually reset by a push-button on the card.

WARNING: Motor overheating might occur when the extended acceleration function is used. This function should only be used if it is absolutely required. When used, adjust by-pass time to the lowest permissible setting.

1.3 MOTOR AT FULL SPEED DETECTOR

This card contains a circuit to sense when the motor reaches full speed.

LED "Full Speed", DS2, comes on and relay CR2 is energized when motor is at full speed.



2. SET-UP

2.1 AA1021 SET-UP

Set the EZ6 controller card, AA1021, as follows:

- Link "P1". All three pins must be shorted.
- Link "P2". Select "Ext" position if the extended O/L function on the AA1037 card is used.

2.2 AA1037 SET-UP

- Set links P1 to P3 as discussed above.
- RV1 setting. Set pot at 60 seconds for the very first motor start. Start motor and time the acceleration, then set the "O/L By-pass" pot at the time measured minus 20 seconds.
Example: Measured time to reach full speed= 50 seconds, set RV1 to $50 - 20 = 30$ seconds.

3. SPECIFICATIONS

3.1 POWER. All power required is supplied by the AA1021 controller card.

3.2 INPUT. No customer connections are required.

3.3 OUTPUT. Two sets of contacts are supplied for customer use.

- 1 Form C fault relay output
- 1 Form C full speed relay output

Contact rating: 5A, 220VAC, resistive load.

4. DIAGRAMS

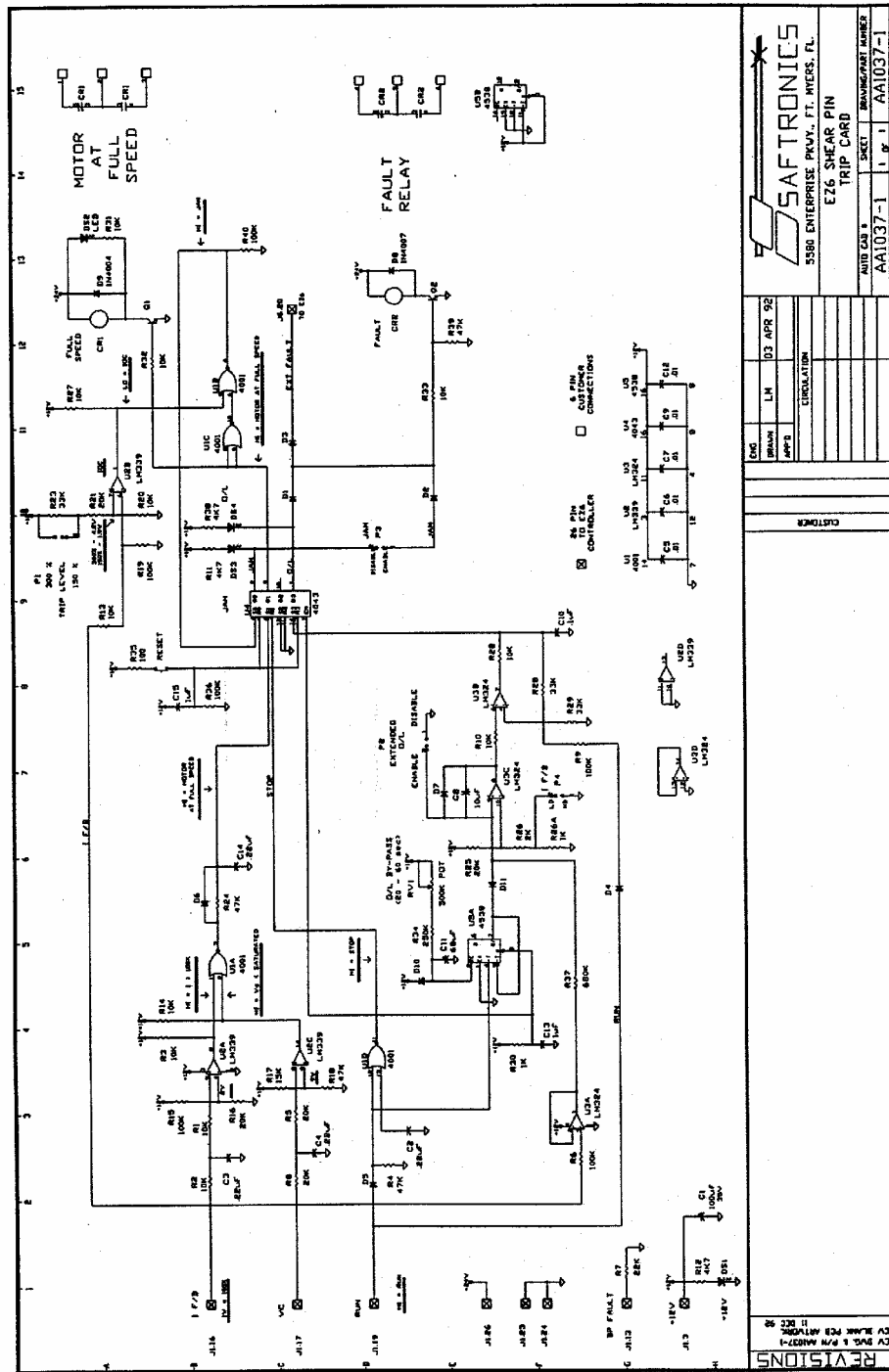
Drawing 027-1037 shows a block diagram of the AA1037 card as reference.
Refer to the specific job drawing for exact connection diagram.

NOTE: When using this card, in conjunction with the EZ6 starter set in the light duty mode, R26 should be changed from a 2K ohm 1/4w resistor to a 2K7 ohm 1/4w resistor. This modification must only be made when light duty operation has been selected on the EZ6 starter.



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SAFTRONICS
 5586 ENTERPRISE PKWY., FT. WERTS, FL.
 E26 SHEAR PIN TRIP CARD

REV B AND 1 P/W AND 2-1
 REV B AND P/W AND 2-1
 11 DEC 92

REVISIONS

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UNIT CAB 9
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