Model 326 Power Failure Detector - Description of Operation

Power interruptions at remote industrial sites and other unattended locations, such as second homes, can be potentially damaging to property. A means of warning the property owner/manager of any prolonged power outage is needed. The Model 326 Power Failure Detector meets this need by constantly monitoring the status of the power at a property, with or without a standby power system. An alarm results from either a loss of utility power or a failure of the standby power system to start and transfer the load. The alarm can be local, or remote by means of an automatic telephone dialer. The dialer will dial your phone, cell, or pager and play pre-recorded messages identifying the location and nature of the problem.

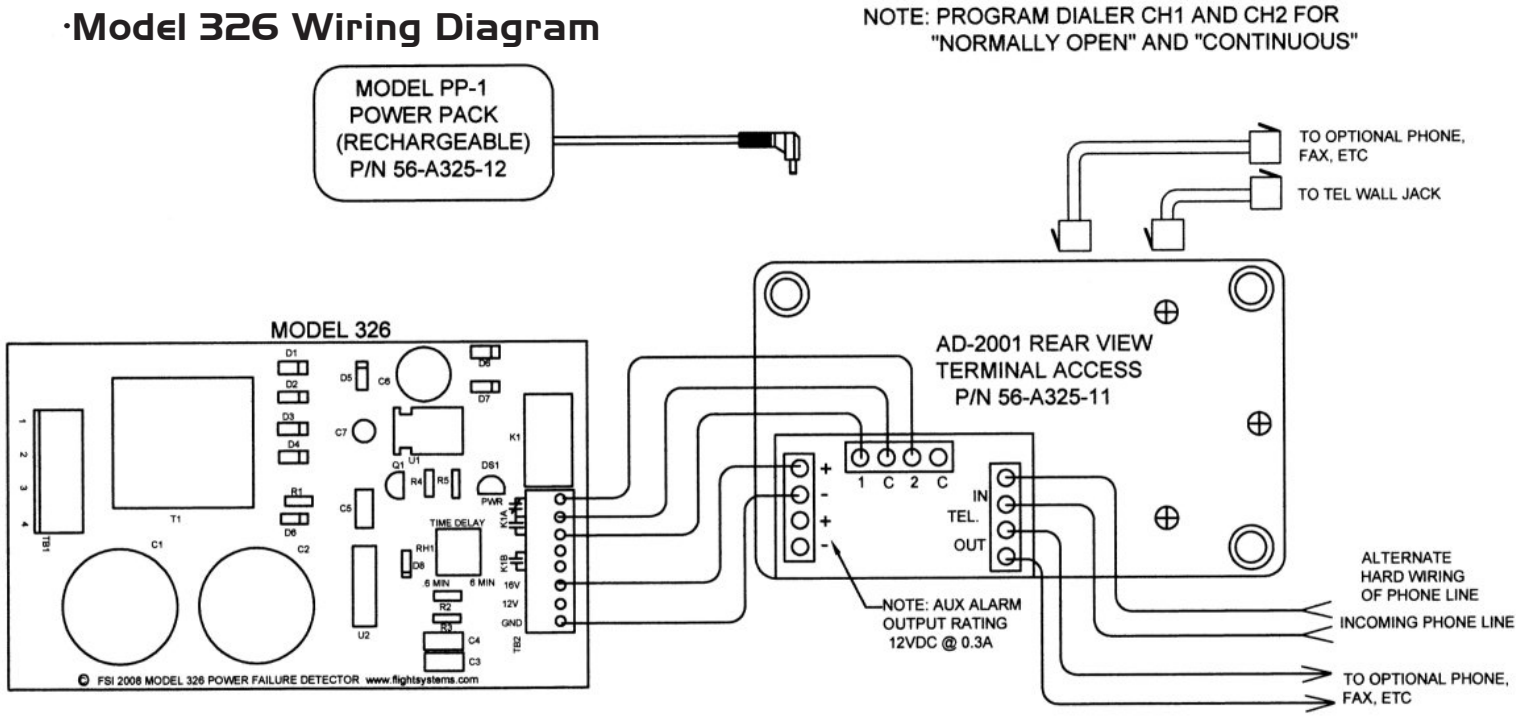
The Model 326 Power Failure Detector is connected to the LOAD side of the transfer switch in a standby power system, or any convenient 120/240 V circuit, and continuously monitors the power to your critical loads. In the event of a power loss, the Model 326 begins timing. If the power has not returned from either the utility or the standby generator within the set time delay, a latching relay operates to its "alarm" position. The unit resets automatically when power returns, either from the generator or the utility. The alarm time delay is adjustable from 0.6 minutes to 6 minutes. The AD-2001 automatic telephone dialer (sold separately, P/N 56-A325-11) can be programmed to provide an additional 3 minutes of delay before the first number is dialed. Two sets of isolated alarm contacts are provided (one form A and one form C). A green LED on the 326 indicates when AC power is present.

To avoid nuisance alarms, the Model 326 Power Failure Detector ignores momentary power losses, voltage dips and brown-out conditions. An alarm is generated only after the power has been off for the full preset alarm delay period. If the power returns during the alarm delay period and then goes off again, a new delay period is started.

The Model 326 can supply both operating power and battery-charging power to the automatic dialer without the need for a separate AC plug-in adapter. This feature saves on installation cost. Note: The Model 326 does *not* require batteries or a battery backup. However, the *dialer* must have the battery backup accessory (56-A325-12) installed to enable dialing during a power failure.

The AD-2001 automatic dialer (sold separately, P/N 56-A325-11) has two channels which can accommodate *both* the Model 325 Generator Exercise Monitor *and* the Model 326 Power Failure Detector. This combination is capable of dialing out with separate messages when there is a power failure or a failed weekly exercise. If it is desired to also get a call when the power returns, a four-channel dialer version is available.

·Model 326 Wiring Diagram



WIRING DIAGRAM TO CONNECT MODEL 326 POWER FAILURE DETECTOR TO AD-2001 AUTODIALER FOR NOTIFICATION WHEN POWER FAILS AND WHEN POWER RETURNS.

·See Reverse for Installation Instructions

FLIGHT SYSTEMS
505 Fishing Creek Road • Lewisberry, PA 17339
www.flightsystems.com

Technical Support:
717-932-9900 (8:00-4:30 ET, M-F)
Fax: 717-932-9925

Flight Systems Model 326 Power Failure Detector Installation Instructions

1. Location
Select a location where there is convenient access to the 120/240 VAC circuit being monitored and where the unit will be adequately protected in an enclosure.

2. Mounting
Mount the unit securely using #6 screws through the stand-offs provided in the four corners of the circuit board assembly.

3. Wiring TB1
Refer to the markings on the circuit board assembly when connecting the AC power to TB1 using connections for 120V or 240V, as appropriate. If the unit is located within the transfer switch enclosure, make sure it is connected to the LOAD side of the transfer switch. Make sure that the installation complies with all applicable local and NEC electrical codes.

4. Wiring TB2
Refer to the wiring diagram provided (on other side of this page) and markings on the circuit board assembly when making connections between TB2 and the AD-2001 dialer. Two sets of isolated 1 amp relay contacts are provided, one form "A" and one form "C." Contacts are shown in their *normal reset* position when AC power is present. The normally-open contacts will close and the normally-closed contact will open when the alarm time delay has elapsed. When connecting the Model 326 to other telephone dialers or to an existing "battery backed" alarm system, use the connection instructions for that system. NOTE: If the system to which the Model 326 is being connected requires a voltage instead of a contact closure, connect the regulated 12 V output on TB2 through one of the relay contacts, as appropriate. In this case, it is also necessary to run a ground wire from the GND terminal on TB2 to the GND on the other system. All connections to TB2 are "low voltage" and the wire length is not critical. **DO NOT** connect an external power source to **TB2 12V** or **16V** terminals. Make sure that the installation complies with all applicable local and NEC electrical codes. CAUTION: Low voltage control wiring cannot occupy the same conduit as line voltage wiring.

5. Alarm Delay Adjustment
When AC power is lost, the Model 326 begins timing. Momentary power losses, flickers and voltage dips are ignored. If the power has not returned from either the utility or the standby generator within the set time delay, an alarm is generated and the output latching relay operates. If power returns during the alarm delay period and then goes off again, a new delay period is started. The alarm time delay is adjustable from 0.6 minutes to 6 minutes by means of the potentiometer RH1 marked TIME DELAY. Adjust the time delay according to your needs (CW to increase). The choice of delay is, of course, a tradeoff between earlier notification of a power loss and avoiding the nuisance of alarms when the power outage lasts for only a minute or so. The unit resets automatically when power returns, either from the generator or from the utility. A green LED on the 326 indicates when AC power is present.

6. Additional Delay
The AD-2001 automatic telephone dialer (sold separately, P/N 56-A325-11) can be programmed to provide an additional 3 minutes of delay before the first number is dialed. Follow the instructions included with the dialer.

7. Dialer Power
The 326 can supply both operating power and backup-battery-charging power to the automatic dialer without the need for a separate AC plug-in adapter. This feature is supported by the 16 V output of the Model 326. Refer to the wiring diagram. This feature saves on installation cost. Note: The 326 does *not* require batteries or a battery backup. However, the *dialer* must have the battery backup accessory (sold separately, P/N 56-A325-12) installed to enable dialing during a total power failure.

8. Testing the Model 326 Operation
Operation can be verified and the time delay setting checked easily. First, power the unit for at least 30 seconds, then interrupt the AC power by disconnecting one of the wires at TB1. CAUTION: Take suitable precautions to avoid shorts and shock hazard when handling live circuits! The green LED should go off when the power is disconnected and the relay should operate after the set time delay has elapsed. When the power is restored, the green LED should come on and the relay should reset.

9. Operation with the Model 325
The Model 326 Power Failure detector is a natural companion to the Model 325 Generator Exercise Monitor (GEM) in any remote or unattended standby generator installation. When using the two-channel version of the AD-2001 dialer, a channel can be assigned to each function. With this configuration, notification is given when the power fails, or when a weekly exercise has failed. If it is also desired to have notification when the power returns after an outage, the four-channel version of the dialer must be used. In every case, a separate message can be recorded identifying the location and describing the trouble.

·See Reverse for Wiring Diagram & Description of Operation

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