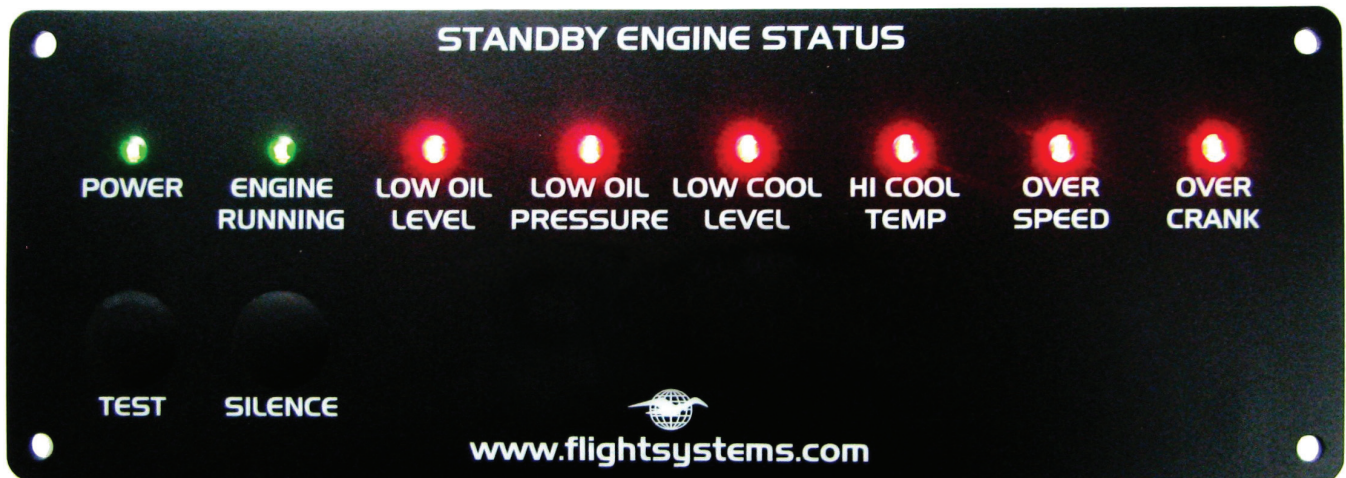


# Remote Annunciator Panel

## P/N: 56-A540-01

(For Use with Model 540 Controller)



### INSTALLATION - OPERATION MANUAL



## FLIGHT SYSTEMS

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## Description

The 56-A540-01 Remote Annunciator Panel provides remote indications of engine status that duplicate the corresponding local indications of the Model 540 Standby Engine Control (NFPA 110 compliant). In addition to the visual indications, a built-in audible alarm alerts nearby personnel of an alarm condition. When an alarm is first received, the appropriate red LED indicator lights and the audible alarm sounds. The audible alarm can be silenced at any time by pressing the SILENCE button, while the visual indication remains until the 540 is reset. The visual alarm indicators as well as the audible alarm can be tested at any time by pressing the TEST button. The green POWER LED indicator shows that the panel is receiving power and that the master switch has not been left in the OFF position. The green ENGINE RUNNING LED indicator shows when the standby engine is running. The remote panel is powered directly from the Model 540 and does not require a separate power source. For use on 12 volt or 24 volt systems.

## Installation

Select a suitable indoor location for the remote panel that is easily seen, accessible, and is protected from physical damage and excessive humidity or heat. The remote panel may be mounted on metal, plastic, wood, or drywall surfaces and secured with four #6 machine screws or sheet metal screws, as appropriate. Connection is made to the Model 540 by means of a ten-conductor (AWG #20 or #22) PVC jacketed cable (such as: Alpha 1180C, 1896/10C; Belden 8456; or Manhattan Wire Products 882210), which can be up to 500 feet long, if necessary. Carefully route the cable between the 540 and the remote location. Comply with all applicable electrical codes. Do not route control or low voltage wiring with power wiring. Connections are made using the screw terminal plugs provided on the Model 540 and the remote panel. Please refer to the wiring diagram. If you are retrofitting the remote panel to an existing older Model 540, please note that the ground connection from the remote panel (P1-2) is made on the 540 at the INPUT connector, pin 3 (Battery Negative) instead of at the OUTPUT connector, pin 14.

## Operation and Commissioning

After installation is complete, re-check all wiring. The green POWER LED on the remote panel should light when the master switch at the standby engine is placed in either the AUTO (REMOTE MODE) or MANUAL/RUN (LOCAL MODE) position. Pressing the TEST button will light the remaining seven indicators and cause the audible alarm to sound. The indicators will go off when the TEST button is released. The audible alarm will continue to sound until the SILENCE button is pressed or the master switch is returned to OFF. The audible alarm will not sound on additional alarms once it has been silenced. All alarms are cleared by momentarily placing the master switch in the OFF position. This resets the 540 and the remote panel. It is not necessary to run the engine to verify the integrity of the remote panel wiring. A simple method is to place the master switch in the AUTO position and successively ground each remote status/alarm circuit at the 540 OUTPUT connector and make sure that the correct indications appear on the remote panel. NOTE: The ground connection can be made at OUTPUT pin 14 or INPUT pin 3 (BATTERY NEGATIVE). CAUTION: DO NOT ground OUTPUT pins 1, 2, 3, 5, 6 or 13 for any reason. Test "Engine Running" by grounding OUTPUT pin 4. Test "Low Oil Level" by grounding OUTPUT pin 10. Test "Low Oil Pressure" by grounding OUTPUT pin 9. Test "Low Coolant Level" by grounding OUTPUT pin 12. Test "High Coolant Temp" by grounding OUTPUT pin 11. Test "Overspeed" by grounding OUTPUT pin 8. Test "Overcrank" by grounding OUTPUT pin 7. Test "Alarm" by connecting a jumper from OUTPUT pin 1 (12/24VDC power) to OUTPUT pin 13 (ALARM). The audible alarm should sound (no alarm LEDs light) and remain sounding. Pressing the SILENCE button should silence the alarm. Remove the jumper and reset the system by momentarily switching the master switch to OFF.

## Troubleshooting

If the POWER LED on the remote panel does not come on when the master switch is placed in either the LOCAL or REMOTE positions, check for 12/24VDC at OUTPUT pin 6 with respect to ground (BATTERY NEGATIVE), which is OUTPUT pin 14 on current production and INPUT pin 3 on older 540s. Make sure that the ground return from the remote panel (P1-2) is correctly connected to ground at the 540. If power is present, check the remote panel connector pin 1 with respect to pin 2. If no power is present, re-check wiring. Pressing the TEST button should light all LEDs and sound the audible alarm. Pressing the SILENCE button should silence the audible alarm. Each LED indicator

may also be checked by grounding its corresponding input pin on the remote panel connector. For example, to check the “Low Oil Pressure” LED, connect a jumper between pins 2 and 9. If the remote panel LED indications do not match the indications on the 540, re-check the wiring.

## **Specifications**

Power Requirements: No separate power source required. Powered directly from 540 at 12/24 VDC @ 0.1A max. (2.5 W max.)

### **Indicators: Eight high-intensity LED indicators embedded in panel graphics.**

POWER – green

ENGINE RUNNING – green

LOW OIL LEVEL – red

LOW OIL PRESSURE – red

LOW COOL LEVEL – red

HI COOL TEMP – red

OVERSPEED – red

OVERCRANK – red

### **Pushbuttons: Membrane switches with tactile feedback embedded in panel graphics.**

TEST – Tests all indicators and audible alarm

SILENCE – Silences audible alarm

Status and Alarm Indicator Inputs: Grounded = ON, Open = OFF

Audible Alarm Input: 12/24V = Activated. Latched until silenced or power is interrupted

Connections: 10-pin Phoenix plug with screw-type wire clamps (supplied)

Audible Alarm Volume: 72 dB at 10 feet (12V), 80 dB at 10 feet (24V)

Color: White markings on satin (non-reflecting) black background

Operating Temperature Range: 0° F (-18°C) to 140°F (60°C)

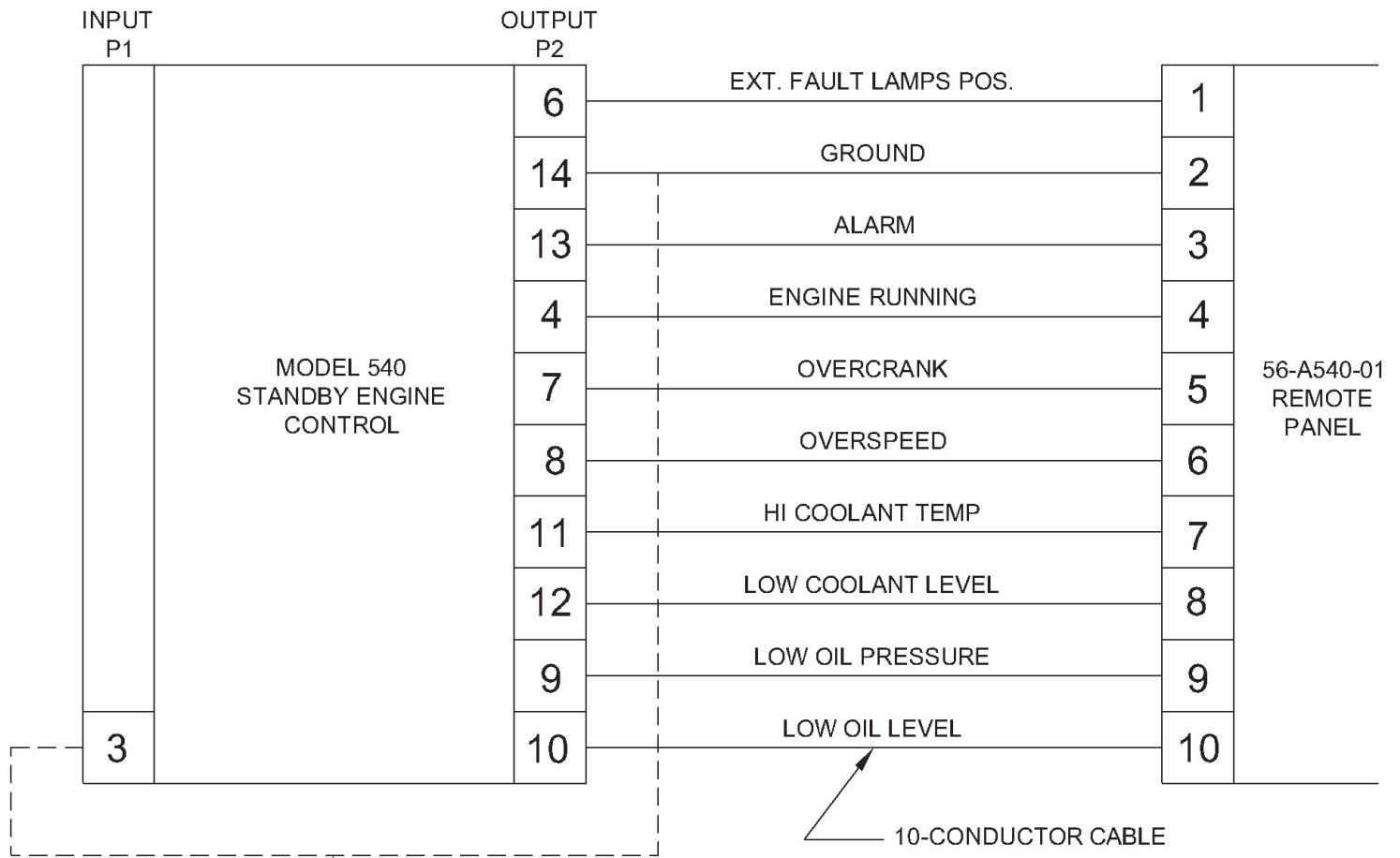
Humidity: 0 to 95% R.H., non-condensing

Size: 3.00” [76] H x 7.00” [178] L x 1.04” [26.4] D

Mounting (fixing) Centers: 2.125” [53.98] x 6.625” [168.3]

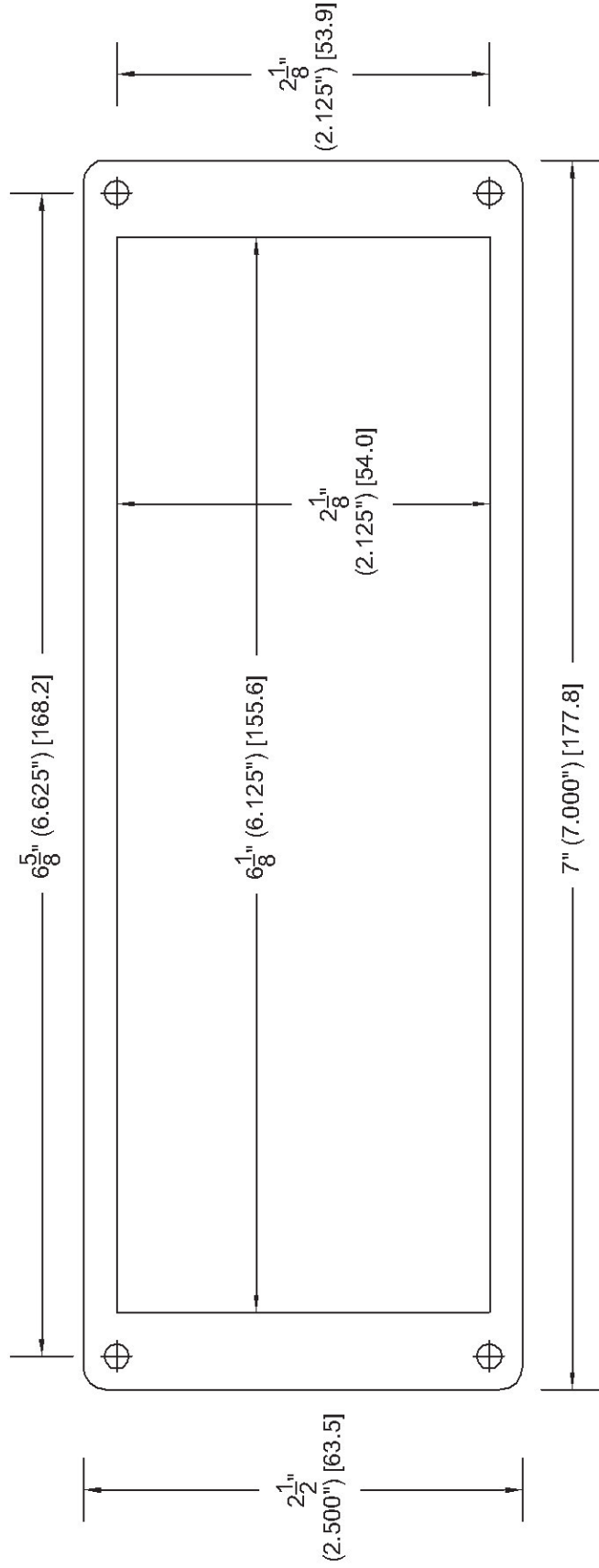
Required Clearance behind Panel: 1.50” [38.1]

• **Note: Wiring Diagram and Mounting Detail/Template appear on following pages**



NOTE:  
 IF OUTPUT TERMINAL 14 (MARKED "SPARE")  
 DOES NOT HAVE CONTINUITY TO INPUT  
 TERMINAL 3 (BATTERY NEGATIVE), THEN USE  
 INPUT TERMINAL 3 FOR THE REMOTE PANEL  
 GROUND.

## REMOTE PANEL WIRING DIAGRAM



**REMOTE PANEL  
MOUNTING DETAIL**

REQUIRED CLEARANCE  
BEHIND PANEL: 1.50" [38.1]