

CP1100 Indoor Alarm

Model AL101-3D-3R-TT-24VAC-2M Indoor Triple Alarm for Dampers

The Model AL101-3D-3R-TT-24VAC-2M is an indoor alarm that controls intake air, exhaust air & recirculation air dampers. The white pilot light indicates the 120 VAC power. A transformer provides 24VAC output to the dampers. The red pilot lights provide the visual alarm indication for each damper failure. When the generator starts it supplies a dry contact to the panel which activates the timer and turns on the green generator light. In 15 seconds if the intake air and the exhaust air dampers do not open or the recirculation air damper does not close an alarm will sound and a red pilot light will come on indicating which damper did not open or close. The MUTE push-button is a momentary switch that mutes the horn. The damper test button checks the damper contacts (If the alarm does not go off that means that the intake or exhaust dampers are open and the recirculation damper is closed). The exhaust & recirculation dampers are controlled by a thermostat and are modulated open and closed depending on what the temperature is. The exhaust & recirculation dampers only modulate when the generator is running. The HAND/AUTO switch is a generator test switch, turn to HAND and it simulates the generator has started and turns on the green generator light and the dampers move into position, switch to AUTO and it is waiting for the generator to send a signal. Each damper alarm has a corresponding relay output contact.

Electrical Specifications

- 120VAC, 60 Hz, 2.5A
- Generator Input at terminals **3&4**
- Output to dampers & fan at terminals **5&6, 7&8&9, 10&11&12**
- Input from dampers at terminals **13&14, 15&16, 17&18**
- Relay contact outputs at terminals, **19&20, 21&22, 23&24**
- Modulating Thermostat inputs at terminals **25&26&27**
- Horn -- 95 dB @ 1 ft.



ENCLOSED INDUSTRIAL CONTROL PANEL
UL508A

Ventilation Sequence of Operation:

GENERATORS NOT IN OPERATION AND COMMERCIAL POWER AVAILABLE

- INTAKE AIR DAMPER IS CLOSED; DAMPER ACTUATORS ARE ENERGIZED TO HOLD CLOSED.
- EXHAUST AIR DAMPER IS CLOSED; DAMPER ACTUATORS ARE ENERGIZED TO HOLD CLOSED (NO MODULATION).
- RE-CIRCULATION DAMPER IS OPEN (NO MODULATION).

GENERATORS NOT IN OPERATION AND COMMERCIAL POWER NOT AVAILABLE

- INTAKE DAMPER IS OPEN, DAMPER ACTUATORS IN FAILSAFE MODE (SPRING OPEN).
- EXHAUST AIR DAMPER IS OPEN, DAMPER ACTUATORS IN FAILSAFE MODE (SPRING OPEN) (NO MODULATION).
- RE-CIRCULATION DAMPER IS CLOSED (NO MODULATION).

GENERATORS RUNNING AND COMMERCIAL POWER NOT AVAILABLE

- INTAKE DAMPER IS OPEN, DAMPER ACTUATORS IN FAILSAFE MODE (SPRING OPEN).
- EXHAUST AIR DAMPER IS MODULATING FOR TEMPERATURE CONTROL.
- RE-CIRCULATION DAMPER IS MODULATING FOR TEMPERATURE CONTROL.

GENERATORS RUNNING AND COMMERCIAL POWER HAS RETURNED

- INTAKE AIR DAMPER IS OPEN, STATUS SIGNAL FROM THE GENERATOR DE-ENERGIZE THE DAMPER ACTUATORS THROUGH THE RELAY AND DAMPER ACTUATORS IN FAILSAFE MODE (SPRING OPEN).
- EXHAUST AIR DAMPER IS MODULATING FOR TEMPERATURE CONTROL.
- RE-CIRCULATION DAMPER IS MODULATING FOR TEMPERATURE CONTROL.

GENERATORS COOLED DOWN (SHUT DOWN) AND COMMERCIAL POWER HAS RETURNED

- INTAKE AIR DAMPER IS CLOSED; DAMPER ACTUATORS ARE ENERGIZED TO HOLD CLOSED.
- EXHAUST AIR DAMPER IS CLOSED; DAMPER ACTUATOR IS ENERGIZED TO HOLD CLOSED (NO MODULATION).
- RE-CIRCULATION DAMPER IS OPEN (NO MODULATION).

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