Blink Codes

FCT0 Trip (Voltage) – Main PCB LED Blink 1x (Linear and BLDC Compressors)

- Trip Logic: Abnormal IPM sensing voltage.
- Reaction Linear and BLDC : Main PCB will apply power to the compressor after 30 seconds.
- Purpose : Main PCB circuit protection.
- Most Likely Cause : Main PCB Failure.

Stroke Trip – Main PCB LED Blinks 2x (Linear Compressors)

- Trip Logic: Main PCB detects the compressor piston over stroke.
- Reaction Linear : Compressor is switched off. Main PCB applies power to the compressor after 60 seconds.
- Purpose : Circuit protection for piston crash by abnormally large piston stroke.
- Most Likely Cause : Internal compressor valve failure (can be intermittent)
- Least Likely Cause : Compressor harness connection failure between the PCB and compressor or capacitor.
- Other Possible Cause : Evaporator fan fault, defrost issue

Over Voltage Trip – Main PCB LED Blinks 2x (BLDC Compressors)

- Trip Logic : Detection of over voltage to the Main PCB DC link (above 450vDC)
- Reaction BLDC : Compressor is switched off. Main PCB applies power to the compressor after 4 minutes.
- Purpose : Protect the PCB from over voltage output.
- Most Likely Cause : Full or partial restriction close to the compressor outlet. Liquid forming in the outlet of the compressor. Internal compressor failure.

No Connection Trip – Main PCB LED Blinks 3x (Linear and BLDC Compressors)

- Trip Logic : Main PCB Detects open circuit to the compressor.
- Reaction Linear : Compressor is switched off. Main PCB applies power to the compressor after 40 seconds.
- Reaction BLDC : Compressor is switched off. Main PCB applies power to the compressor after 4.5 minutes.
- Purpose : Protection for the main PCB (Over-Voltage and Over-Current)
- Most Likely Cause : Open compressor winding. Open harness between PCB and compressor and or capacitor.
- Least Likely Cause : Main PCB

Over Voltage Trip – Main PCB LED Blinks 4x (Linear Compressors)

- Trip Logic : Detection of over voltage to the Main PCB DC link (above 450vDC)
- Reaction Linear : Compressor is switched off. Main PCB applies power to the compressor after 90 seconds.
- Purpose : Protect the PCB from over voltage output.
- Most Likely Cause : Full or partial restriction close to the compressor outlet. Liquid forming in the outlet of the compressor.

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Blink Codes

Locked Piston Trip – Main PCB LED Blinks 5x (Linear and BLDC Compressors)

- Trip Logic : Main PCB fails to detect piston movement.
- Reaction Linear : Compressor is switched off. Main PCB applies power to the compressor after 150 seconds.
- Reaction BLDC : Compressor is switched off. Main PCB applies power to the compressor after 6.5 minutes.
- Purpose : Main PCB and Sealed System protection.
- Most Likely Cause : Seized compressor piston, cylinder damage, internal debris, or high side restriction close to the compressor.
- Least Likely Cause : Failed Main PCB.

Over Current Trip – Main PCB LED Blinks 6x (Linear and BLDC Compressors)

- Trip Logic : Main PCB detects over current condition on the compressor circuit.
- Reaction Linear and BLDC : Compressor is switched off. The Main PCB applies power to the compressor after 6 minutes
- Purpose : Main PCB and Sealed System protection
- Most Likely Cause : Sealed System - Low side leak, internal compressor issue (piston damage, cylinder damage or internal debris), partial high side restriction close to the compressor, Open winding on BLDC Compressor
- Least Likely Cause : Long door openings, high heat load, high ambient temperatures (over 109F), poor air flow through the condenser, installation (to close to the wall), Condenser Fan Failure, or Main PCB Failure (IPM Breakdown)

IPM Fault Trip - Main PCB LED Blinks 7x (Linear and BLDC Compressors)

- Trip Logic : Main PCB Detects IPM Short
- Reaction Linear : Compressor is switched off. The Main PCB applies power to the compressor every 20 seconds.
- Reaction BLDC : Compressor is switched off. The Main PCB applies power to the compressor every 300 seconds.
- Purpose : Main PCB and Sealed System protection.
- Most Likely Cause : Main PCB IPM Failure.
- Least Likely Cause : Shorted compressor, compressor harness or possible sealed system problem.

Main PCB Tx Error Trip and Main PCB LED Blinks 8x (Linear and BLDC Compressors)

- Trip Logic : 12vDC Communication error detected
- Reaction Linear and BLDC : Only LED blinking while compressor is running. (Compressor will continue the last order from main micom.)
- Purpose : Main PCB protection from a shorted 12vDC component.
- Most Likely Cause : Shorted or failed DC component. Examples : fan motor, flow meter, sub-PCB, ice maker, water tubing heater, shorted harness, ETC
- Least Likely Cause : Main PBC
- Not A Cause : The compressor will not cause an 8x blink code.

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Blink Codes

Overload Trip (Overpower) and Main PCB Blinks 9x (Linear and BLDC Compressors)

- Trip Logic : Main PCB Detected an overload condition.
- Reaction Linear and BLDC : Compressor is switched off. Main PCB applies power to the compressor after 360 seconds.
- Purpose : Main PCB protection from overload
- Most Likely Cause : High temperature, environmental condition, condenser fan error, poor air flow, dirty condenser, internal compressor problem, IPM failure
- Least Likely Cause : Main PCB

Compressor Machine Room too Hot over 43C (Overload) and Main PCB Blinks 10x (Linear Compressors)

- Trip Logic : Main PCB Detected an overload condition.
- Reaction : Compressor is switched off. Main PCB applies power to the compressor after 10 Minutes, Main PCB disables detection logic for 6 hours.
- Purpose : Compressor protection from overload.
- Most Likely Cause : High temperature, environmental condition, condenser fan error, poor air flow, dirty condenser, internal compressor problem, sealed system problem
- Least Likely Cause : Main PCB

Main PCB Defect / Failure and Main PCB Stays Lit No Flashing

- Trip Logic : Main PCB has failed
- Reaction Linear and BLDC : Compressor is switched off.
- Purpose : Main PCB protection from overload
- Most Likely Cause : Main PCB

12vDC Short and Main PCB Flashes Rapidly (Linear and BLDC Compressors)

- Trip Logic: Short on 12vDC Circuit is Detected.
- Reaction Linear and BLDC : All power to the unit is turned off.
- Purpose : Main PCB circuit protection.
- Most Likely Cause : Short on the 12vDC circuit, evaporator fan, condenser fan, ice room fan, ice maker, etc

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