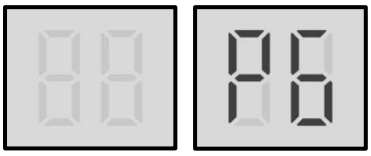
P6 Troubleshooting

1 Digital display output



2 Description

- P6 indicates compressor inverter module protection.
- When P6 error occurs, a manual system restart is required before the system can resume operation. The cause of P6 error should be addressed promptly in order to avoid system damage.
- All units stop running.
- Error code is displayed on the main PCB and user interface.

3 Possible causes

- Inverter module protection.
- DC bus low or high voltage protection.
- MCE error.
- Zero speed protection.
- Phase sequence error.
- Excessive compressor frequency variation.
- Actual compressor frequency differs from target frequency.

4.13.4 Specific error codes for P6 inverter module protection

If a P6 error code is displayed, press button SW3 until one of the following specific error codes is displayed on the digital display: xL0, xL1, xL2, xL4, xL5, xL7, xL8, xL9. Refer to Figure 1 and Table 1.

Figure 1 : Button SW3 on main PCB

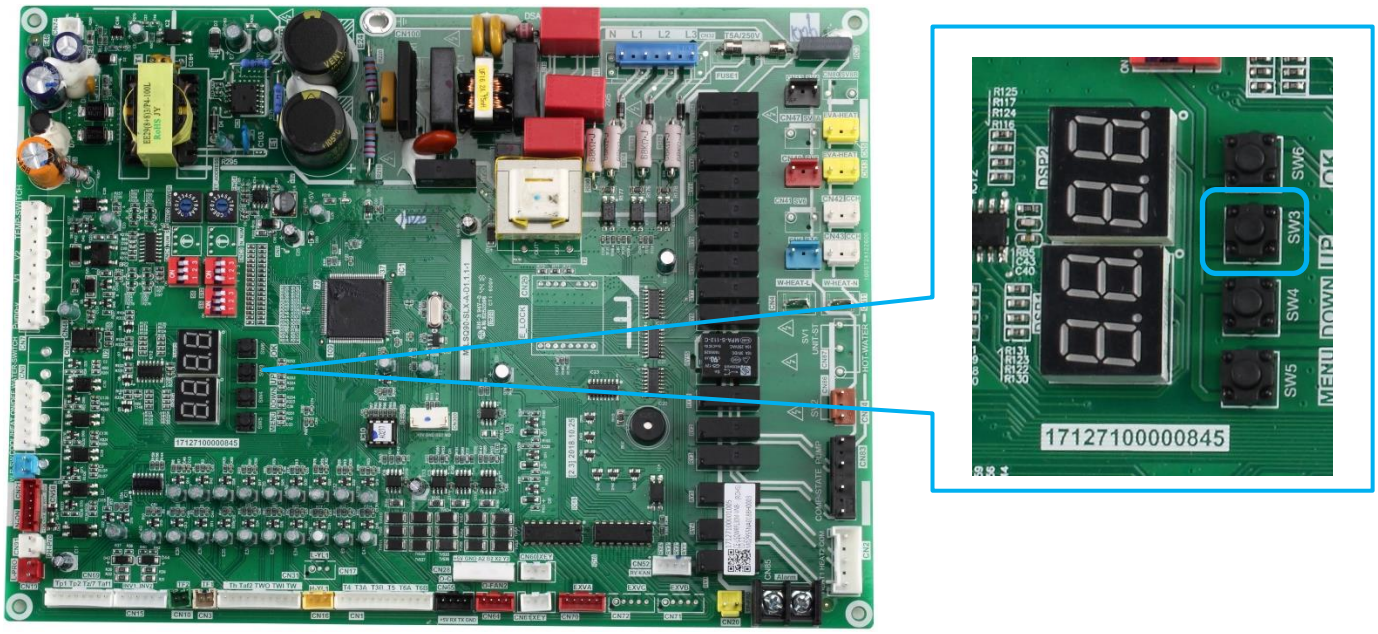


Table 1 : Specific error codes for error xH4

Specific error code[1]	Content
xL0	Inverter module protection
xL1	DC bus low voltage protection
xL2	DC bus high voltage protection
xL4	MCE error
xL5	Zero speed protection
xL7	Phase sequence error
xL8	Compressor frequency variation greater than 15Hz within one second protection
xL9	Actual compressor frequency differs from target frequency by more than 15Hz protection

Notes:

1. 'x' is a placeholder for the compressor system (compressor and related electrical components), with 1 representing compressor system A and 2 representing compressor system B.

The specific error codes xL0, xL1, xL2, xL4, xL5 and xL7 can also be obtained from the inverter module LED indicators. If an inverter module error has occurred, LED1 flashes. Refer to Figure 2 and Table 2.

Figure 2: LED indicators LED1 on main PCB

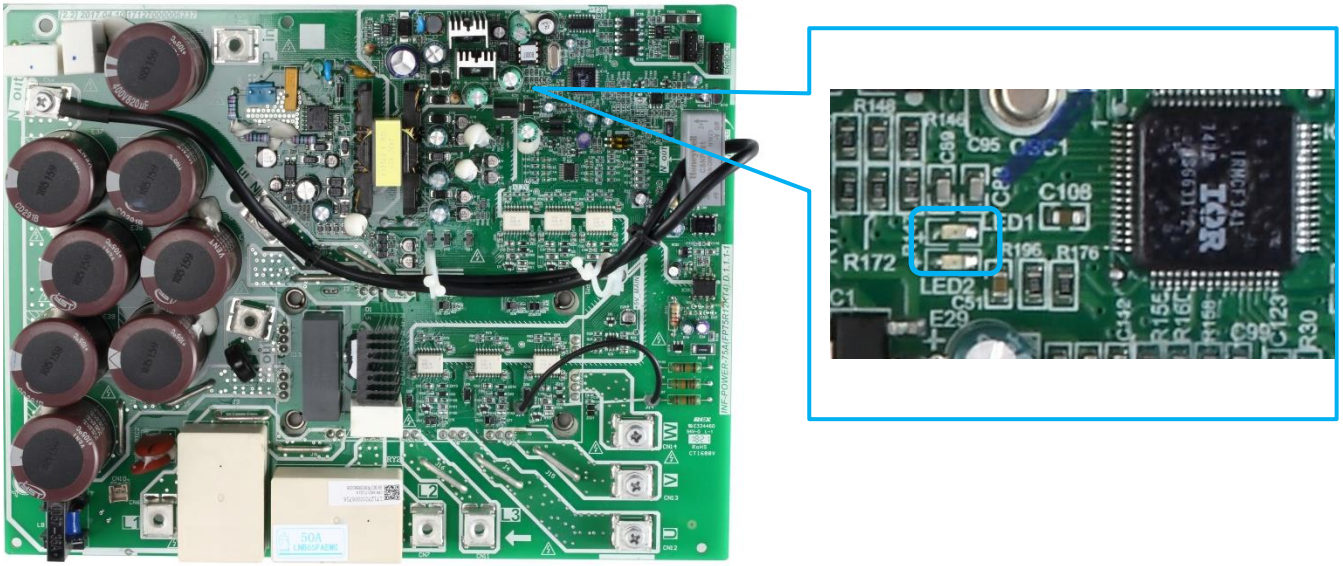


Table 2: Errors indicated on LED1

LED4/6 flashing pattern	Corresponding error
Flashes 8 times and stops for 1 second, then repeats	xL0 - Inverter module protection
Flashes 9 times and stops for 1 second, then repeats	xL1 - DC bus low voltage protection
Flashes 10 times and stops for 1 second, then repeats	xL2 - DC bus high voltage protection
Flashes 12 times and stops for 1 second, then repeats	xL4 - MCE error
Flashes 13 times and stops for 1 second, then repeats	xL5 - Zero speed protection
Flashes 15 times and stops for 1 second, then repeats	xL7 - Phase sequence error

5 First troubleshooting step

To troubleshoot XP6 errors, first ensure that the DC bus wire is connected correctly. The DC bus wire should run from the N terminal on the inverter module, through the current sensor (in the direction indicated by the arrow on the current sensor), and end at the N terminal on the DC filter board.

Figure : DC detection wire connection method