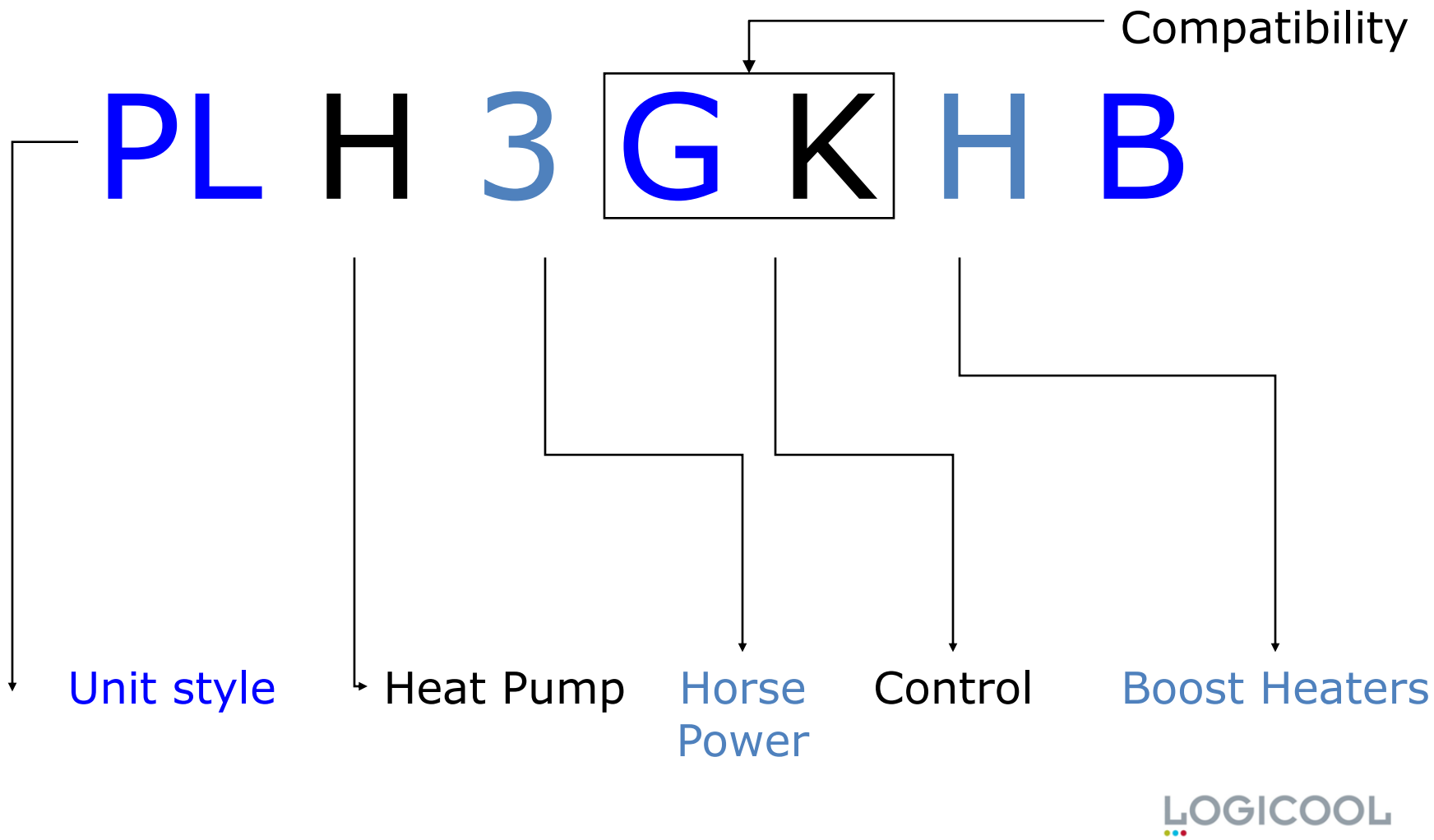
# R22. K Control. Indoor Unit. Nomenclature.

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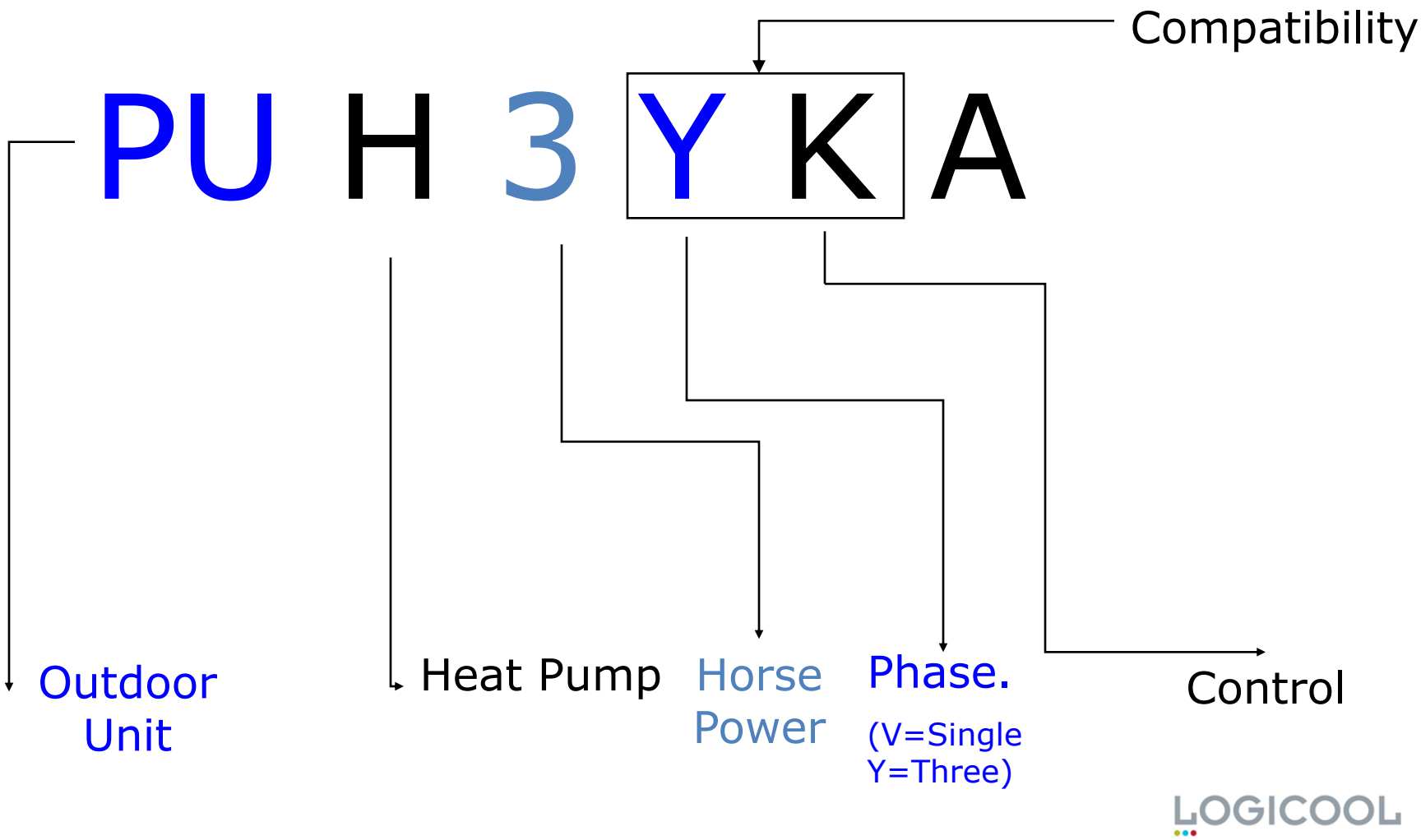
# R22. K Control. Outdoor Unit. Nomenclature.



# Compatibility notes.

- There are three kinds of control. These are as follows.
  - G (eg: PLH 3 AGH)
  - K (eg: PLH 3 KKHB)
  - A (eg: PLA P 3 KAH)
  - These are not compatible with each other.

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# Compatibility notes.

- There are numerous styles of unit. These are as follows

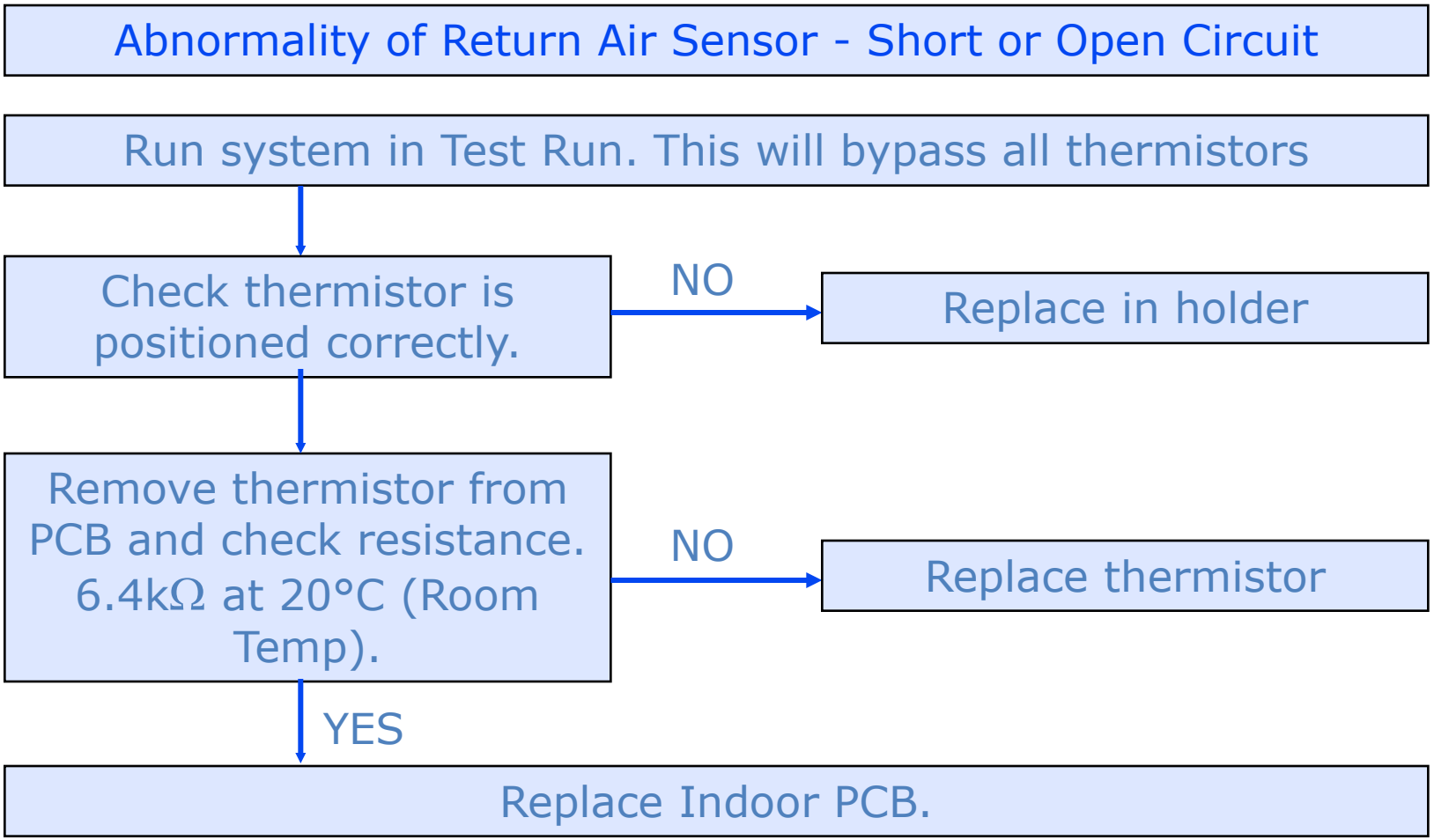
  - PC – Under Ceiling
  - PE – Ducted
  - PK – Wall Mounted
  - PL – Four Way BlowCassette
  - PM – Corner (One Way Blow) Cassette
  - PS – Floor Standing Console

# Compatibility notes.

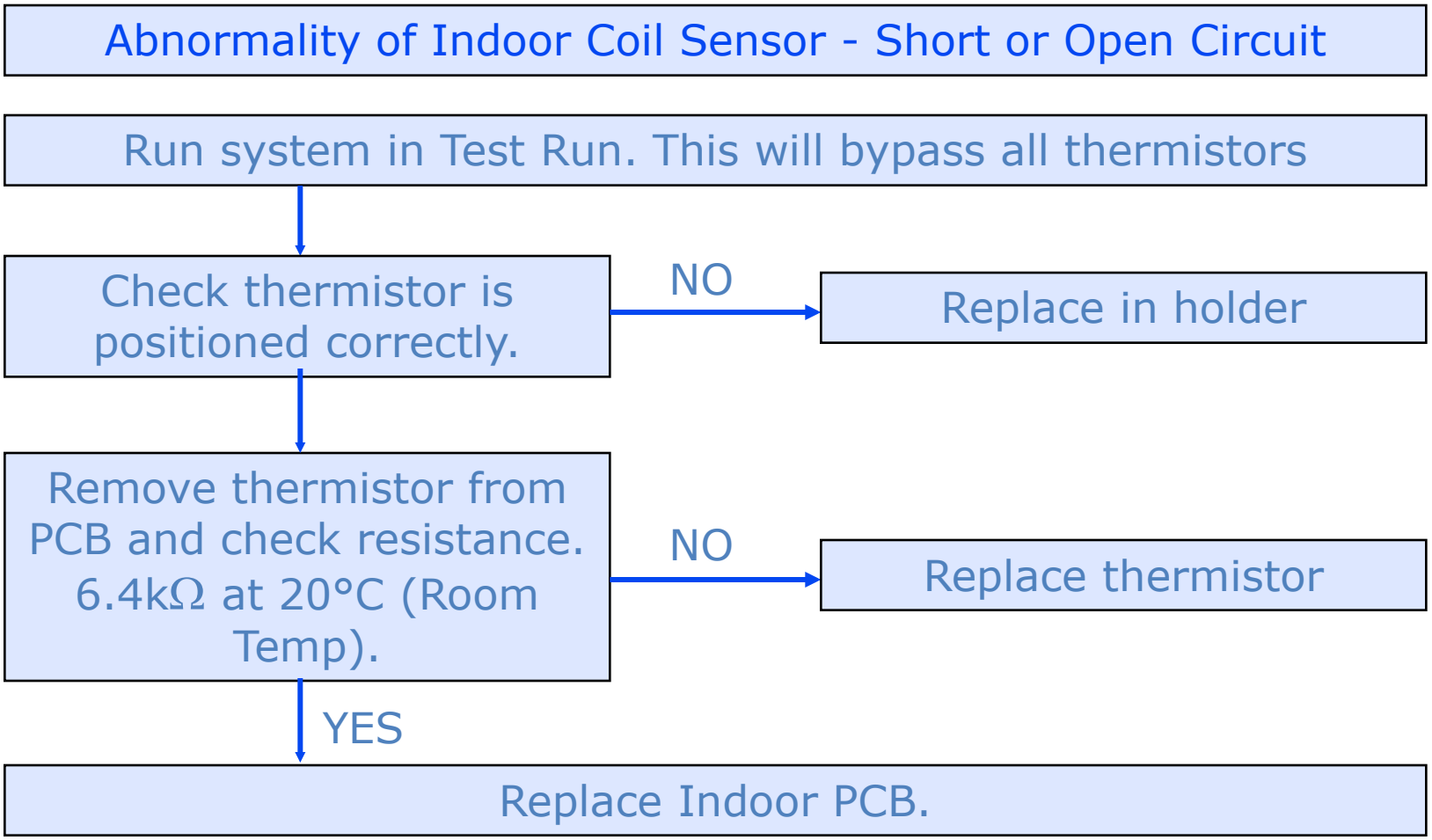
- Horsepower indicates the duty of the unit. This is a basic guideline

  - 1.6 HP = 4.5Kw
  - 2 HP = 5.5Kw
  - 2.5HP = 6.3Kw
  - 3HP = 7.7Kw
  - 4HP = 9.5Kw
  - 5HP = 12.4Kw
  - 6HP = 14.5Kw
  - 8HP = 22.2Kw
  - 10HP = 27.3Kw

# K Control Fault Code Diagnostics / Flow Charts



# K Control Fault Code Diagnostics / Flow Charts



# Component Part Testing

Room temperature thermistor (RT1)

Pipe temperature thermistor (RT2)

Disconnect the connector then measure the resistance using a tester.

(Surrounding temperature 10 – 30°C)

(Refer to the thermistor graph)

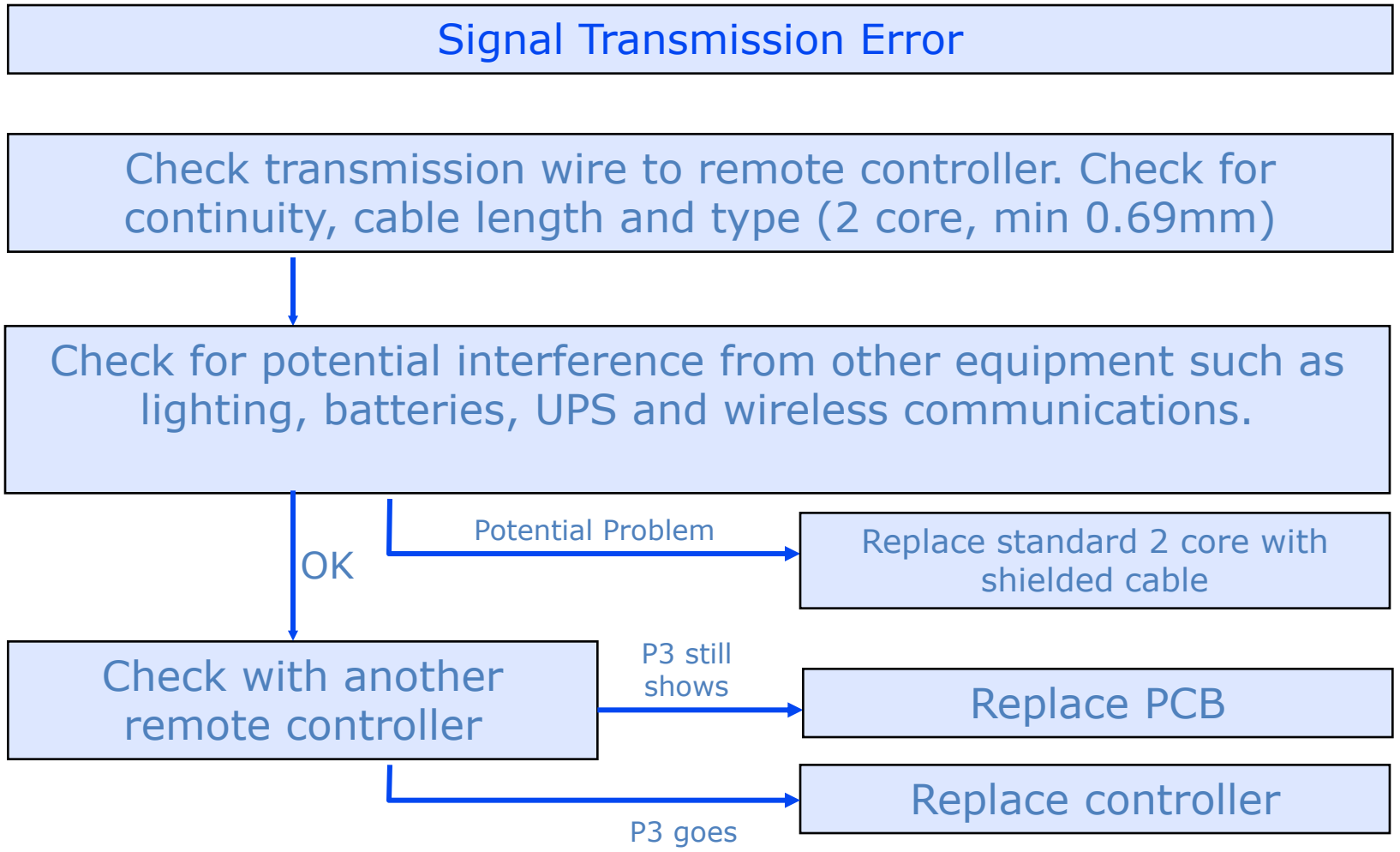
Normal

4.3kohm~9.6kohm

Abnormal

Open or short

# K Control Fault Code Diagnostics / Flow Charts




P3 Fault Code Diagnostics

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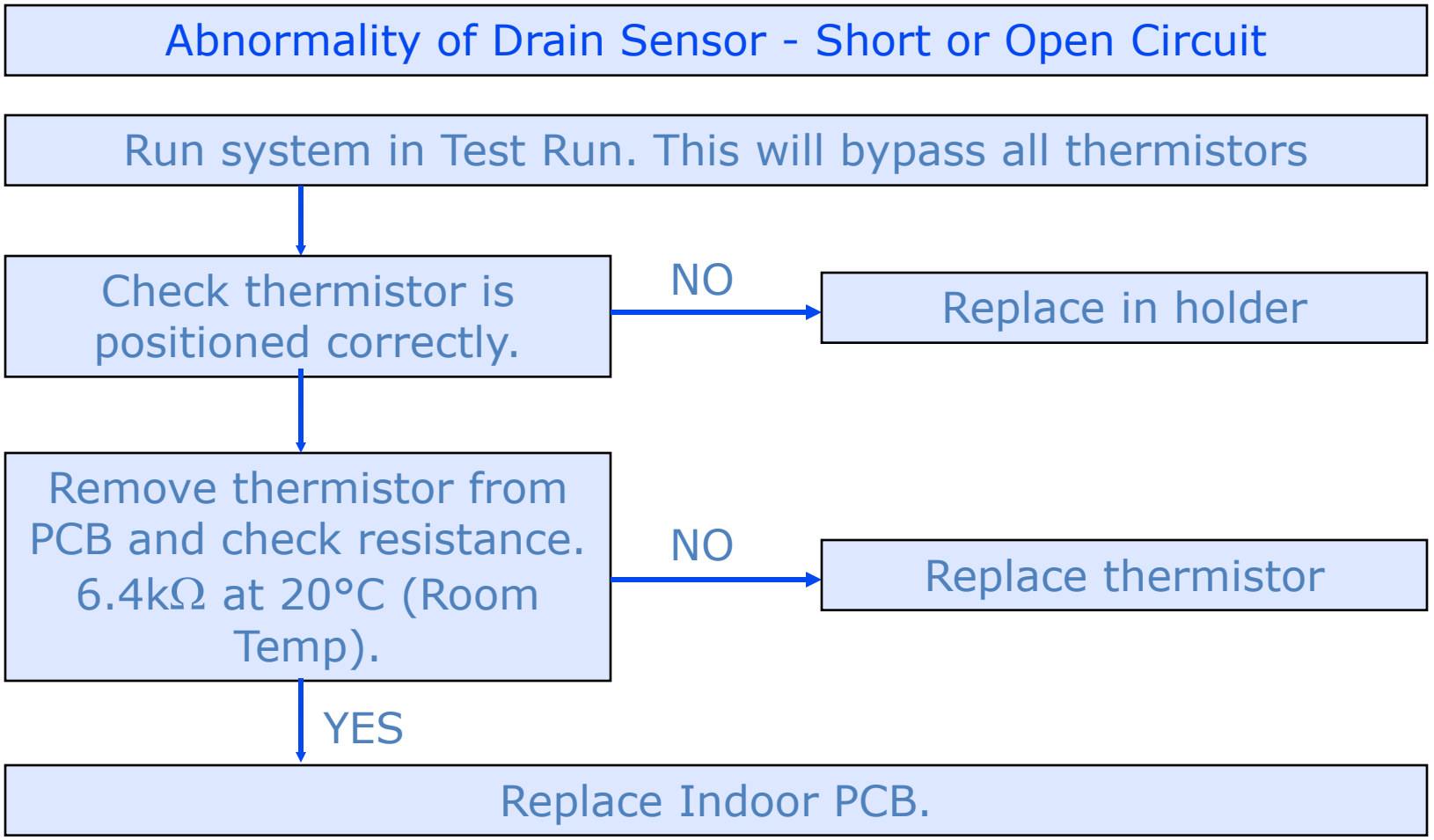
# K Control Fault Code Diagnostics / Flow Charts



# Component Part Testing

Drain sensor

Measure the resistance between the terminals using a tester.

Measure the resistance after 3 minutes have passed since the power supply was intercepted.

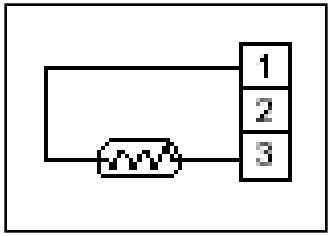
(Surrounding temperature 0°C – 60°C)

Normal

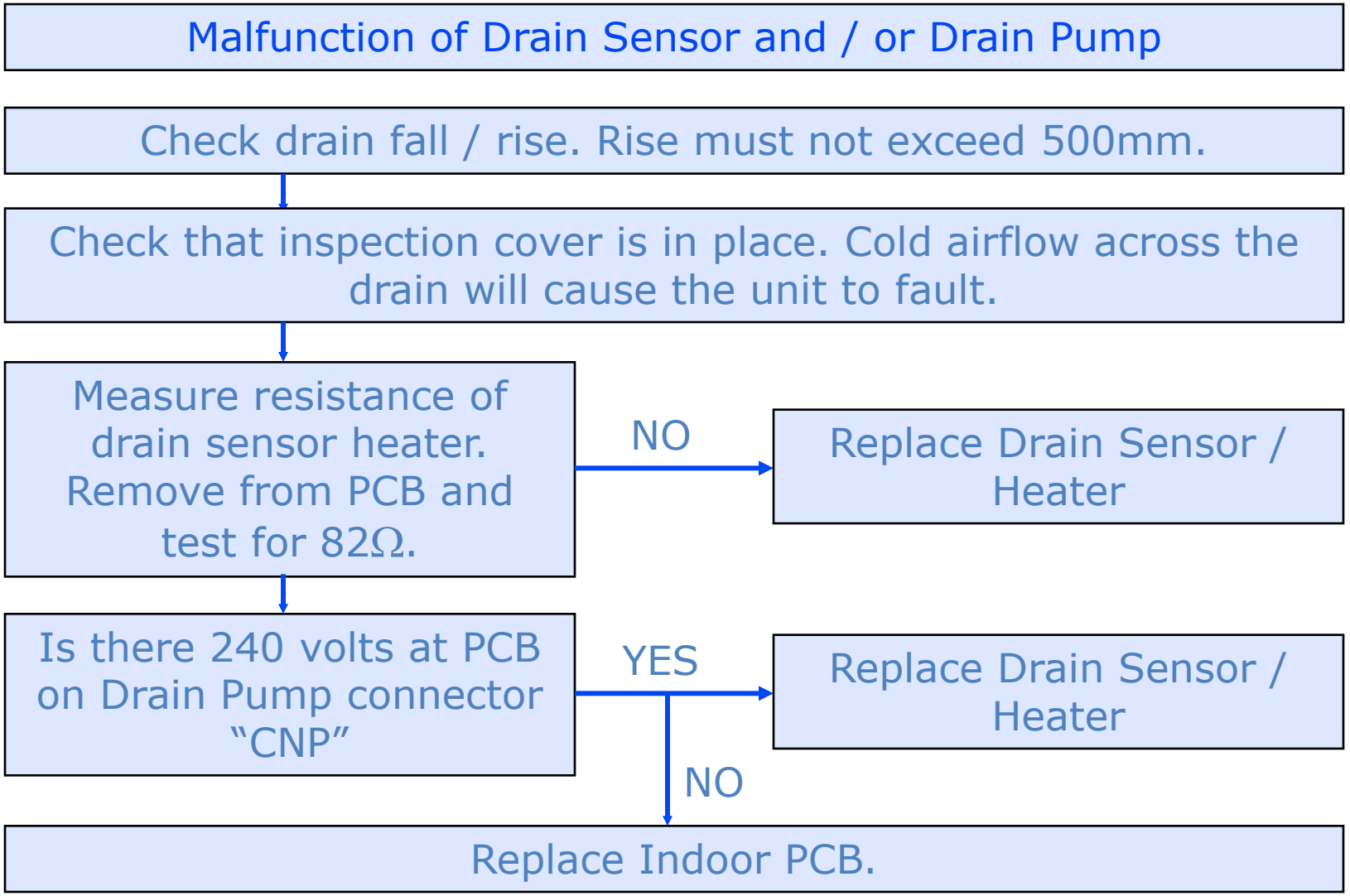
0.6 - 6.0 kohms (Refer to the thermistor graph)

Abnormal

Open or short



# K Control Fault Code Diagnostics / Flow Charts




P5 Fault Code Diagnostics

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# K Control. Drain Pump Operation.

Drain pump control

The drain pump works in COOL or DRY operation. When operation stops or changes to HEAT mode, the drain pump continues to operate for 3 more minutes.

The drain pump does not work in check mode.

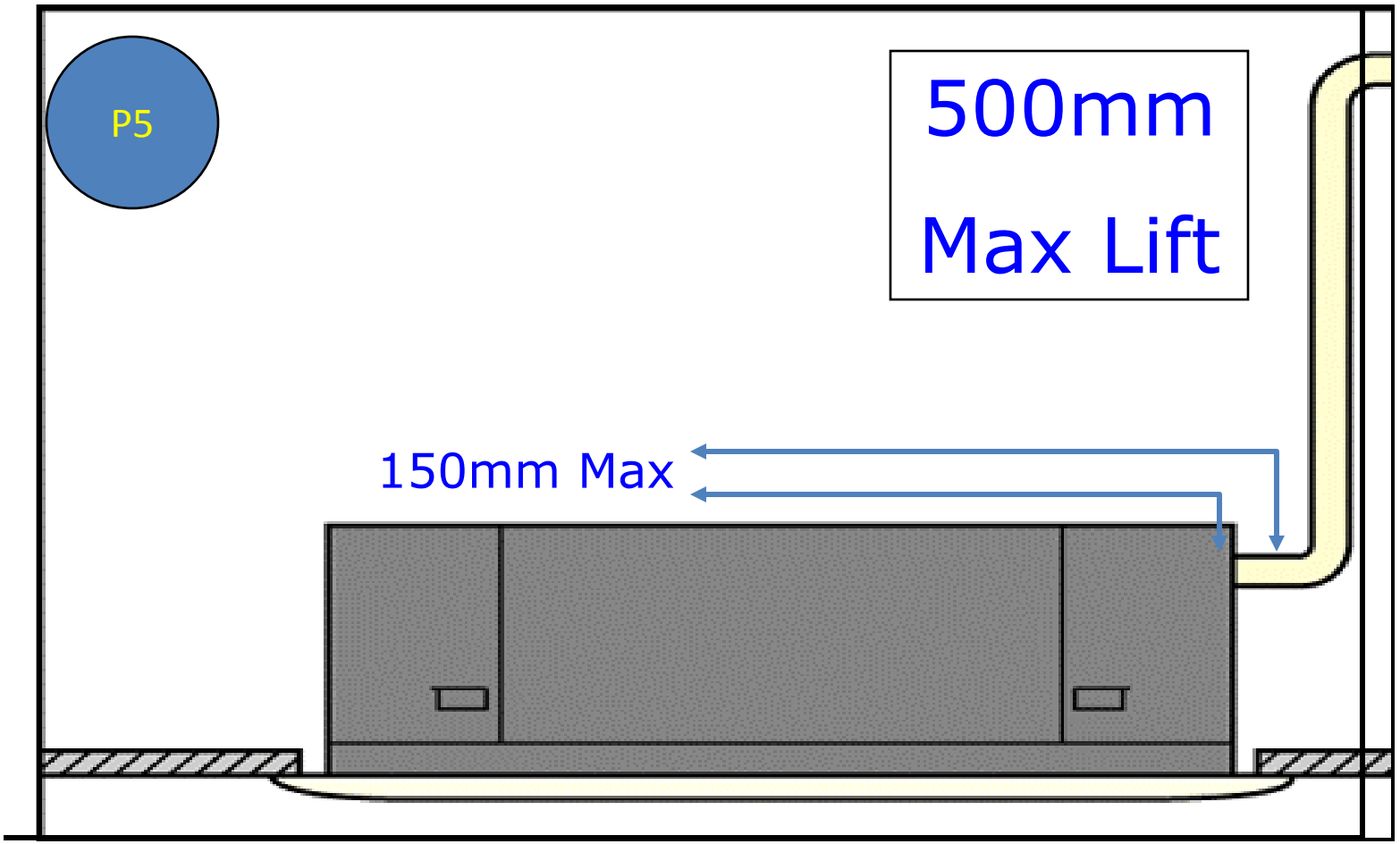
<Drain sensor>

When both the drain pump and unit are operating, the drain sensor detects the temperature.

This temperature tells whether the drain water level is above or under the drain sensor. If the drain water level rises above the drain sensor due to a drain pump malfunction, the unit will stop operating in order to prevent drain from overflowing.

The check code “P5” on the remote controller will display this occurrence.

# K Control. Service Notes.



# Component Part Testing

Drain pump

Measure the resistance between the terminals using a tester.

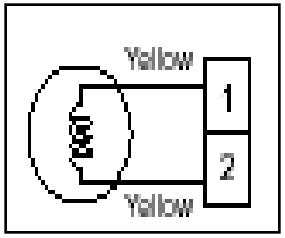
(Surrounding temperature 20°C)

Normal

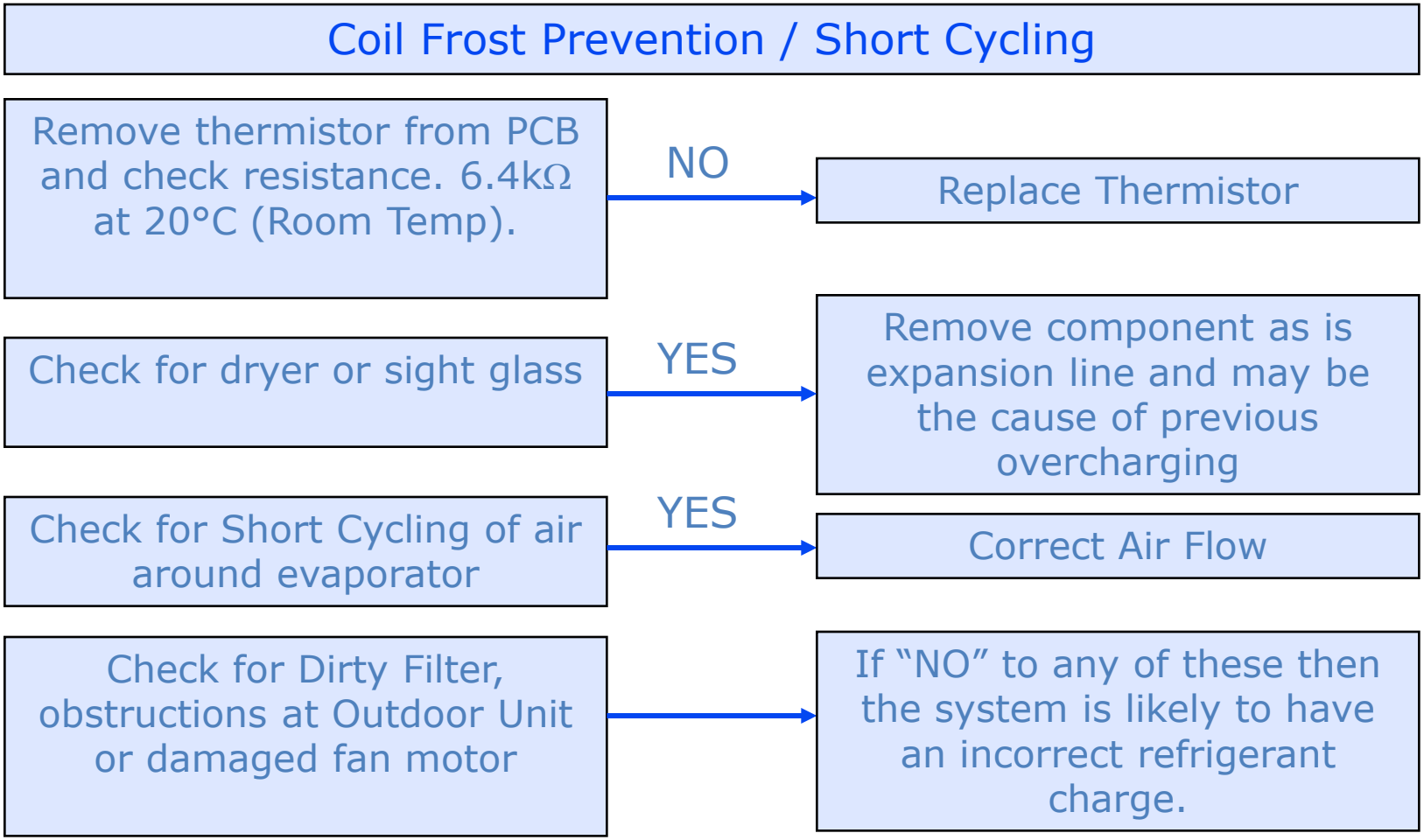
290 ohms

Abnormal

Open or short



# K Control Fault Code Diagnostics / Flow Charts



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# K Control. Coil Frost Prevention.

Coil frost prevention

To prevent indoor coil frost, the compressor will stop when the pipe thermistor (RT2) reads 1°C or below after the compressor has been continuously operated for at least 16 minutes or more.

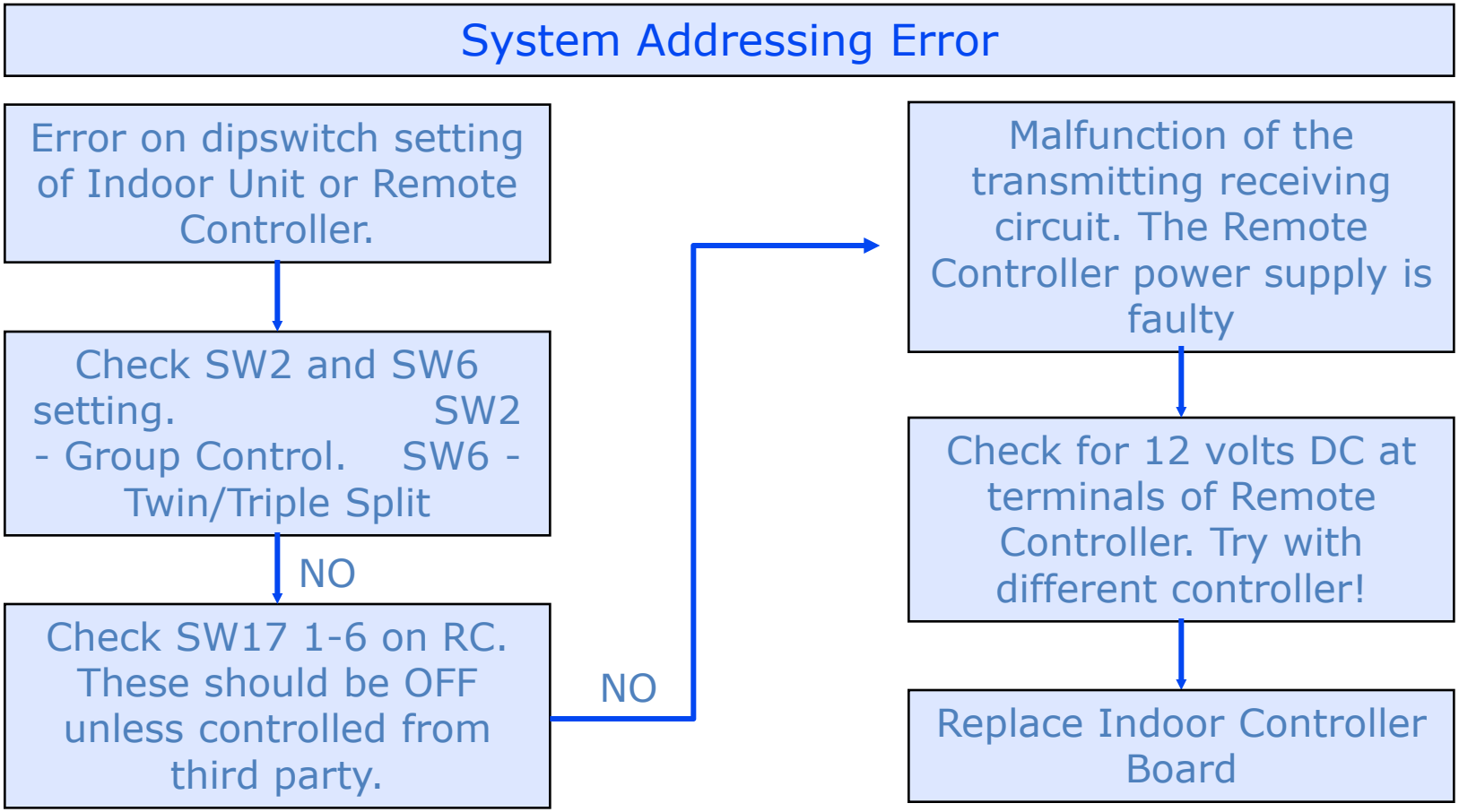
When the pipe temperature rises to 10°C or above, the compressor will start in a 3-minute(w2) time delay.

When the pipe temperature is -1°C or less, the compressor starts in 6 minutes.

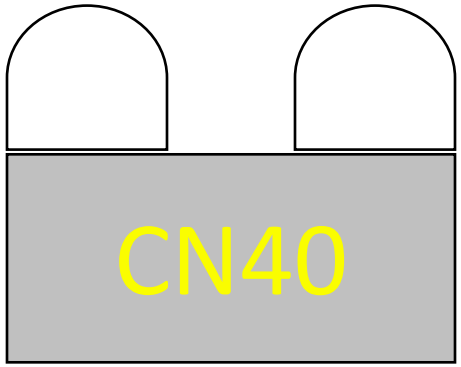
NOTE : By turning OFF the dip switch SW1-3 on indoor controller board, the start temperature of coil frost prevention changes

from 1°C to -3°C.

# K Control Fault Code Diagnostics / Flow Charts



# K Control. Dip Switch Configuration (CN40 Plug).



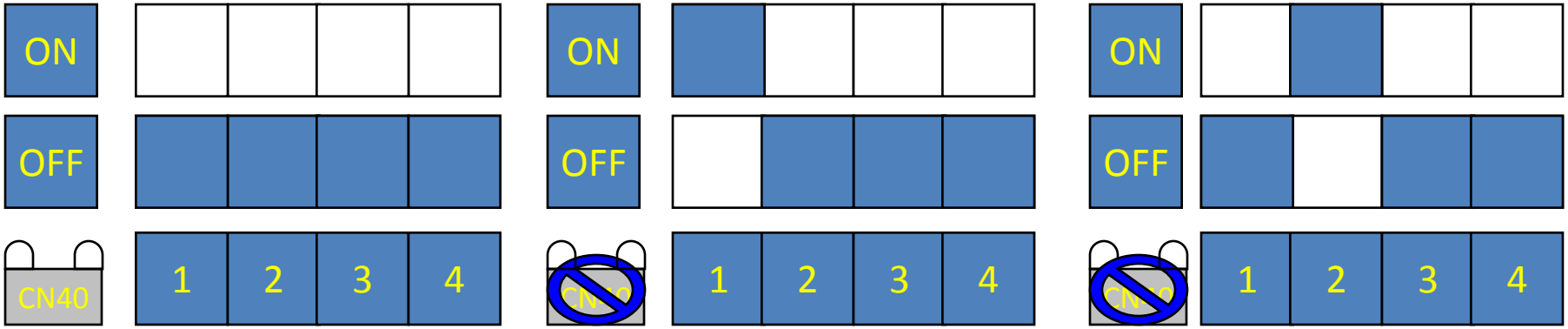

The CN40 plug is found on the Indoor Control Board of a "P" series split system.

Its use is to provide power to the Remote Controller. If the plug is removed, the Remote Controller will not receive a signal from the Indoor Unit.

This plug is often removed in Group Control and Multi-Split operation.

# K Control. Dip Switch Configuration

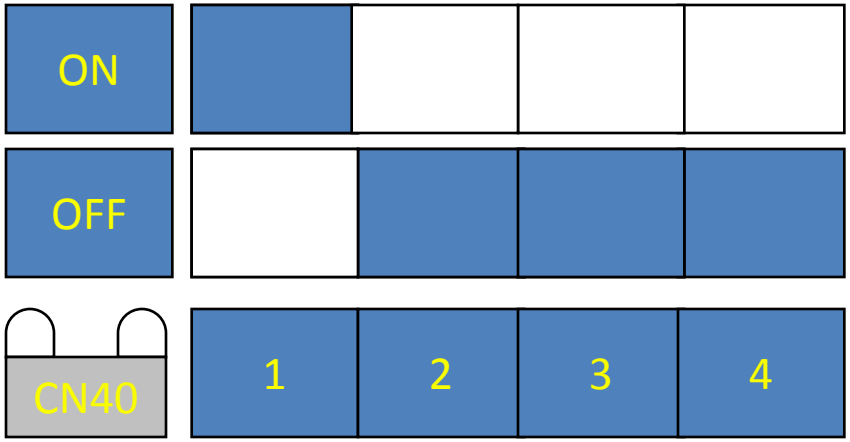
## Indoor Unit - SW2



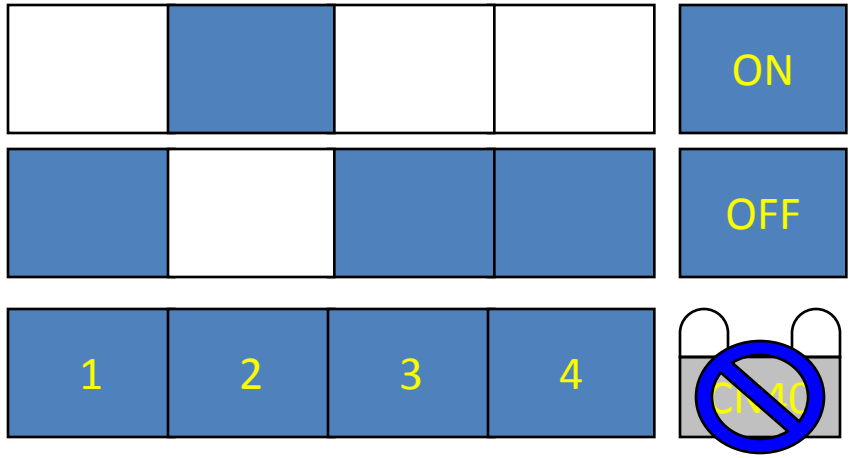

Master Unit  Unit 1  Unit 2

# K Control. Dip Switch Configuration

## Indoor Unit - SW6



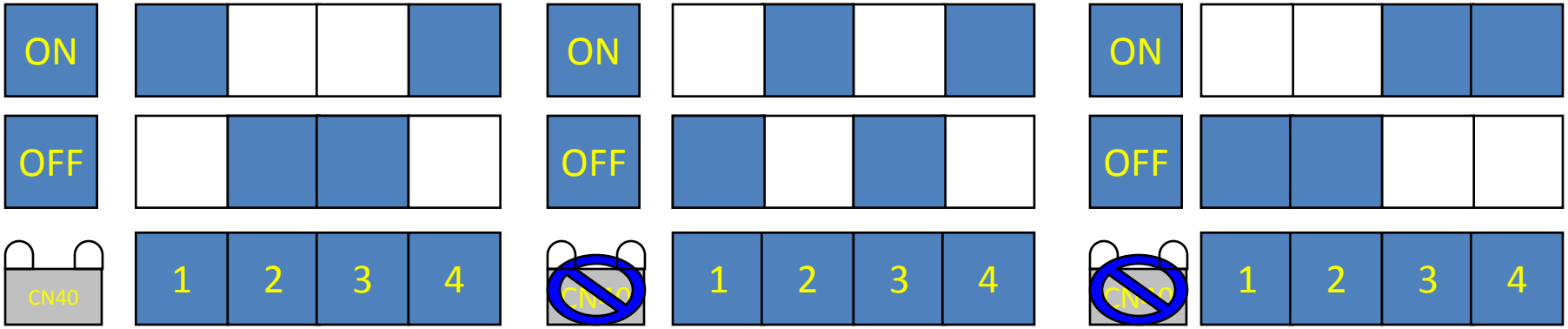

Master Unit




Slave Unit

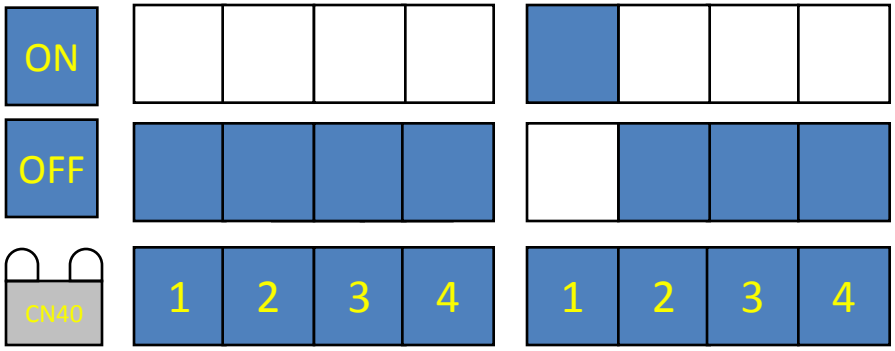
# K Control. Dip Switch Configuration

## Indoor Unit - SW6

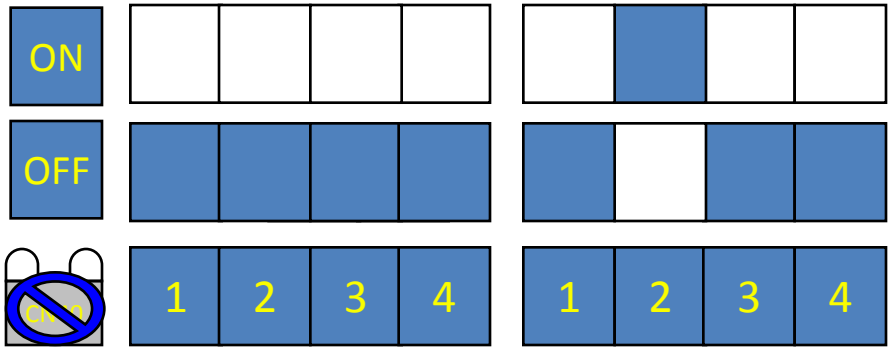



Master Unit Slave 1 Slave 2

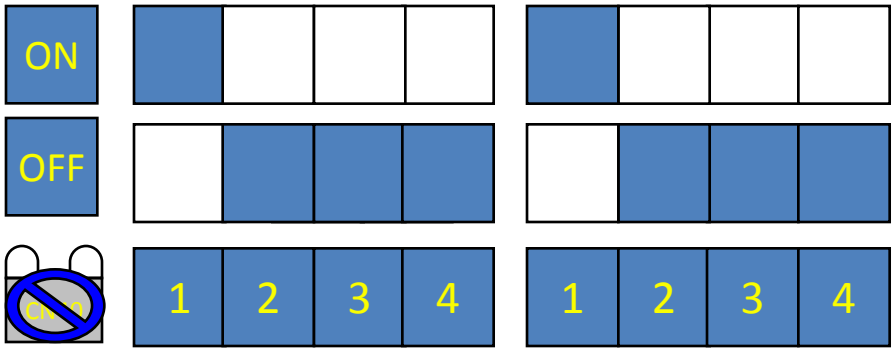
# K Control. Dip Switch Configuration



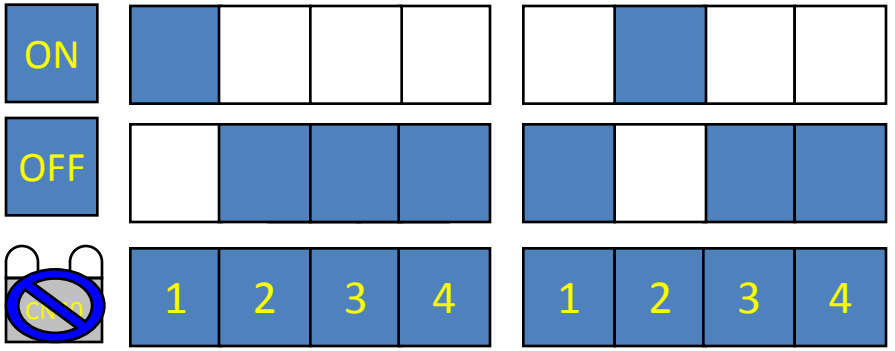

SW2 System One, Master SW6




SW2 System One, Slave SW6




SW2 System Two, Master SW6




SW2 System Two, Slave SW6

# K Control. Detecting abnormalities in the Outdoor Unit.

## Detecting abnormalities in the outdoor unit

After the compressor has been continuously operated for 3 minutes, if the difference between the pipe temperature and room temperature is out of RANGE C for 1 minute, the indoor fan speed will turn to LOW.

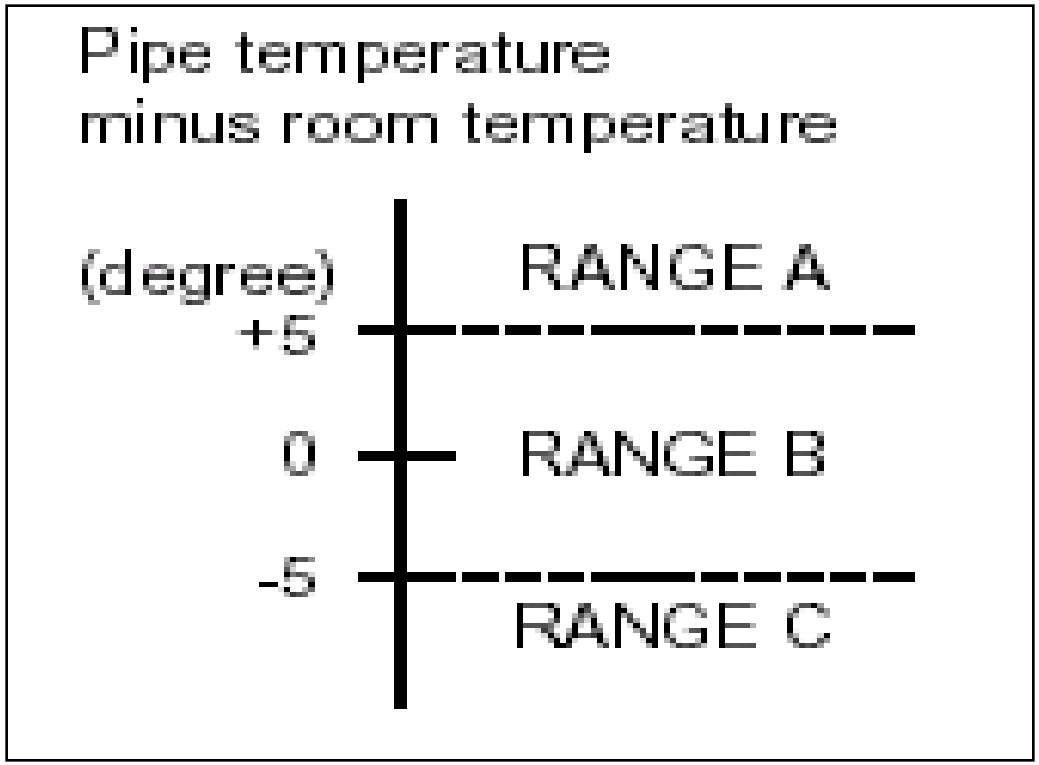
Five minutes later, if the difference is still out of RANGE C,the outdoor unit is functioning abnormally. Thus, the compressor stops and check code “P8” appears on remote controller.

RANGE A : Pipe temperature is more than 5 degrees above the room temperature.

RANGE B : Pipe temperature is within 5 degrees either way of the room temperature.

RANGE C : Pipe temperature is more than 5 degrees below the room temperature.

# K Control. Detecting abnormalities in the Outdoor Unit.



# K Control Fault Code Diagnostics / Flow Charts

## P8 Fault Codes

### Explanation of system logic

The Indoor Unit will detect an abnormality in the Outdoor Unit when the difference in temperature between the coil sensor and the return air sensor does not exceed 5°C after a running period of eight minutes.

### Further interrogation of the Outdoor Unit

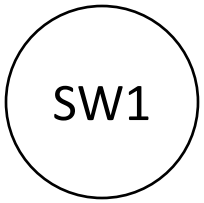
When The Indoor Unit detects a fault at the Outdoor Unit “P8” will flash on the Remote Controller.

The Outdoor Unit LED diagnostics need to be interrogated.

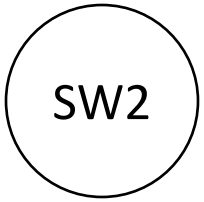
Blinking LED - Fault

Static LED - Output state

# K Control Fault Code Diagnostics / Flow Charts




Erase past check code contents




Display existing / last reported check code contents

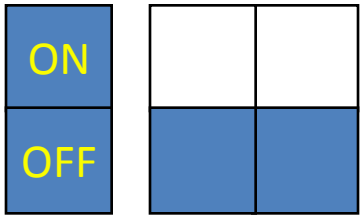
# K Control Fault Code Diagnostics / Flow Charts

SW2

With SW3 - 1+2 off will alternate between fault and operation status output

SW2

With SW3 - 1 off +2 on will initiate compulsory defrost




SW3



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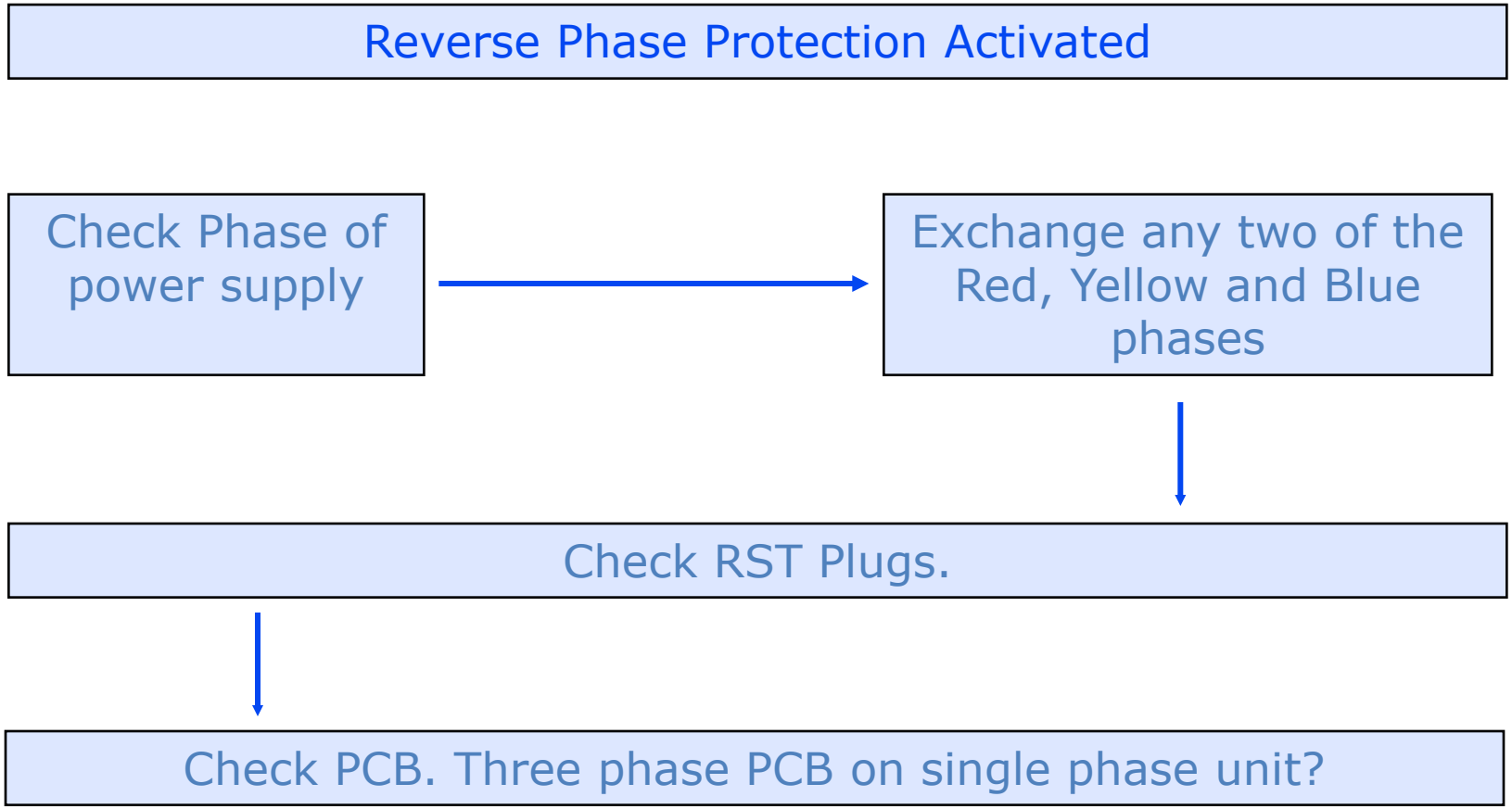
# K Control Fault Code Diagnostics / Flow Charts



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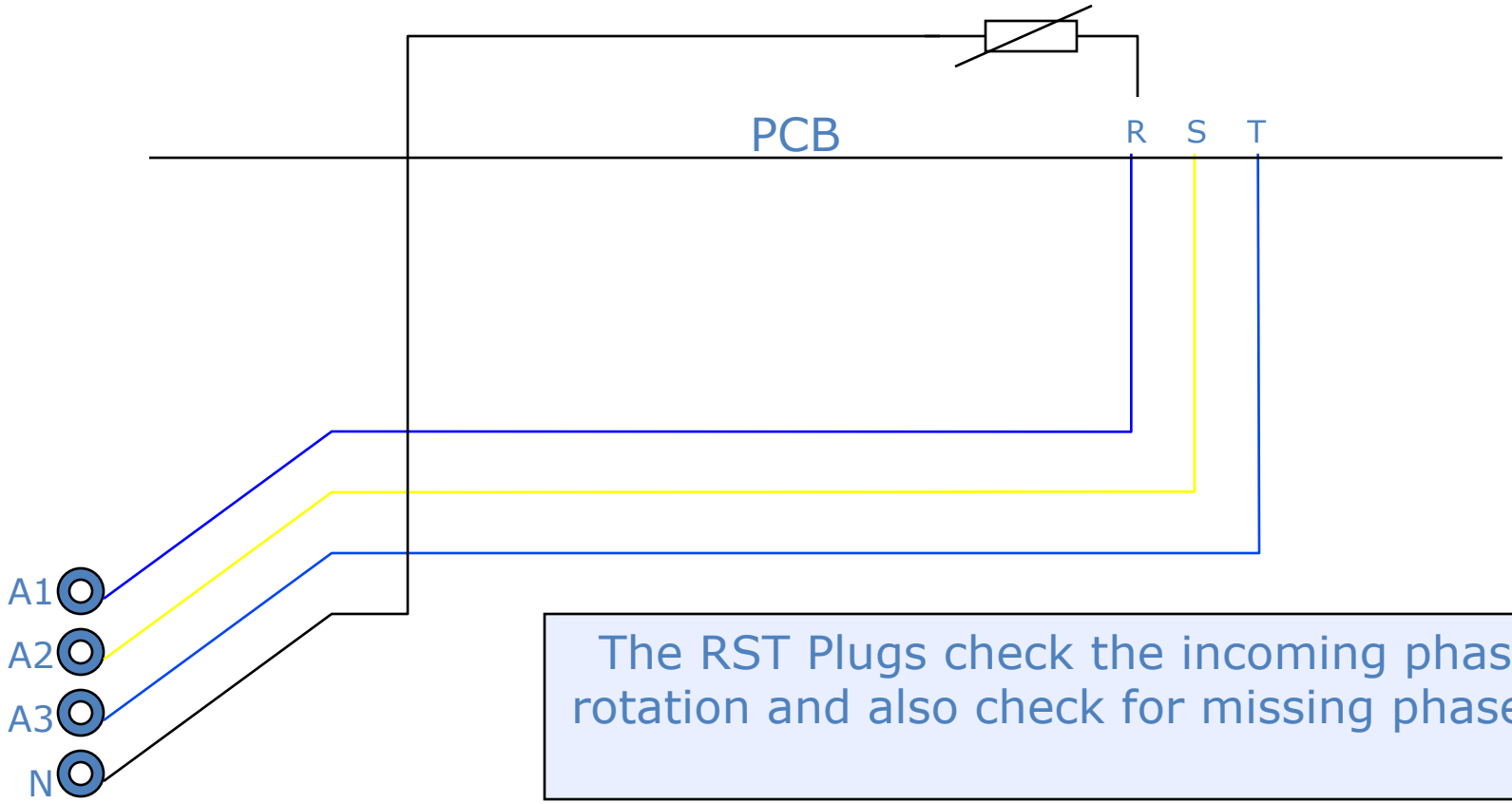
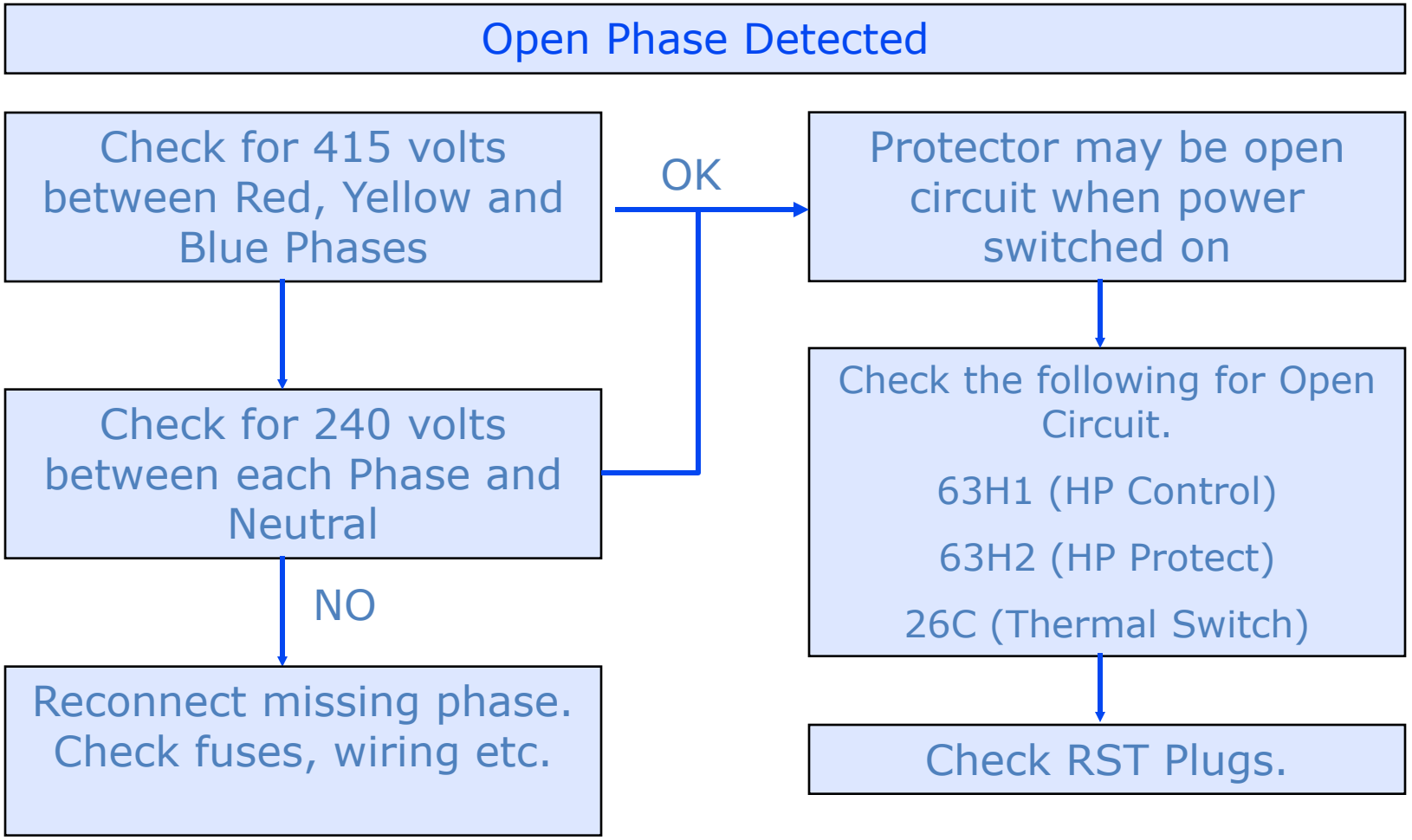
# K Control Fault Code Diagnostics / Flow Charts




The RST Plugs check the incoming phase rotation and also check for missing phases.

# K Control Fault Code Diagnostics / Flow Charts




LED 2 Fault Code Diagnostics

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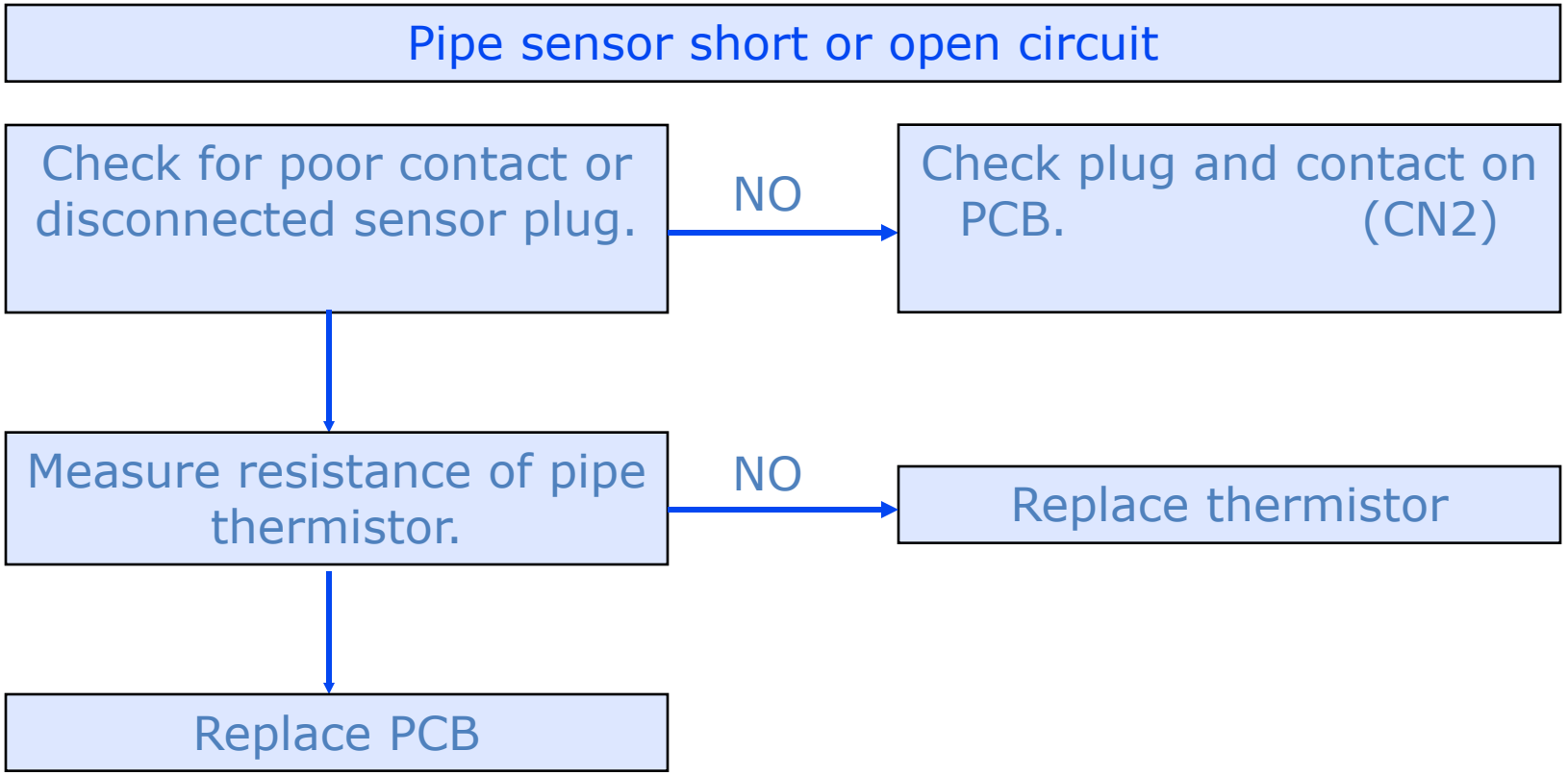
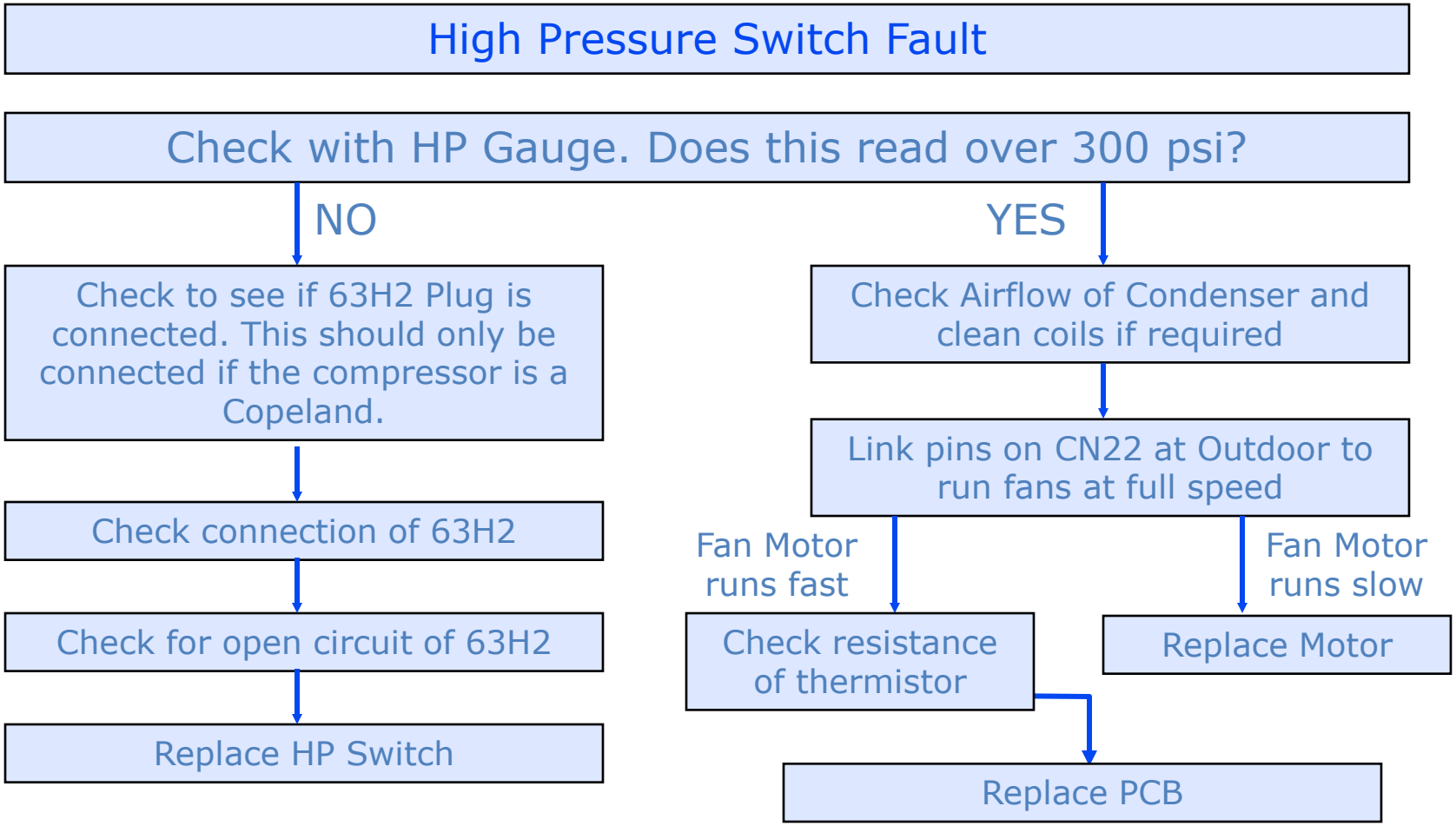
# K Control Fault Code Diagnostics / Flow Charts



# K Control Fault Code Diagnostics / Flow Charts



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# K Control Fault Code Diagnostics (Thermistor Readings).

| Actual temp | Resistance |
|---|---|
| 1 | 14.32 |
| 2 | 13.67 |
| 3 | 13.06 |
| 4 | 12.48 |
| 5 | 11.93 |
| 6 | 11.40 |
| 7 | 10.91 |
| 8 | 10.43 |
| 9 | 9.99 |
| 10 | 9.56 |
| 11 | 9.16 |
| 12 | 8.77 |
| 13 | 8.40 |
| 14 | 8.05 |
| 15 | 7.72 |

| Actual temp | Resistance |
|---|---|
| 16 | 7.41 |
| 17 | 7.10 |
| 18 | 6.82 |
| 19 | 6.54 |
| 20 | 6.28 |
| 21 | 6.03 |
| 22 | 5.80 |
| 23 | 5.57 |
| 24 | 5.35 |
| 25 | 5.15 |
| 26 | 4.95 |
| 27 | 4.76 |
| 28 | 4.58 |
| 29 | 4.41 |
| 30 | 4.25 |

| Actual temp | Resistance |
|---|---|
| 31 | 4.09 |
| 32 | 3.94 |
| 33 | 3.79 |
| 34 | 3.66 |
| 35 | 3.52 |
| 36 | 3.40 |
| 37 | 3.28 |
| 38 | 3.16 |
| 39 | 3.05 |
| 40 | 2.94 |
| 41 | 2.84 |
| 42 | 2.74 |
| 43 | 2.65 |
| 44 | 2.56 |
| 45 | 2.47 |