

10-9. TEST POINT DIAGRAM

Outdoor controller circuit board

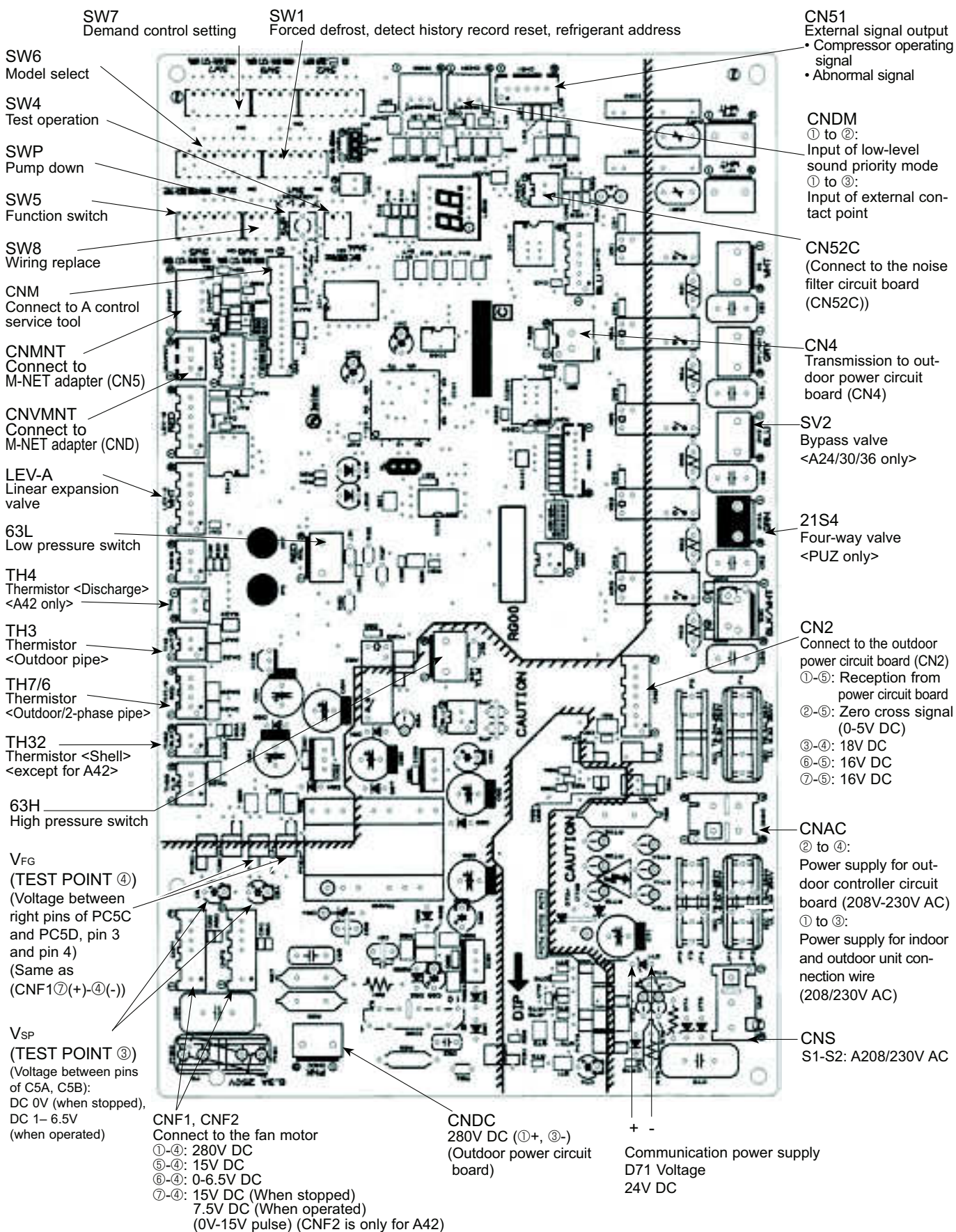
PUZ-A18/24/30/36/42NHA4

PUY-A12/18/24/30/36/42NHA4

PUZ-A18/24/30/36/42NHA4-BS

PUY-A12/18/24/30/36/42NHA4-BS

<CAUTION> TEST POINT① is high voltage.



Outdoor noise filter circuit board

PUZ-A18NHA4

PUZ-A18NHA4-BS

PUY-A12/18NHA4

PUY-A12/18NHA4-BS

LI, NI

Voltage of 208/230V AC is input.
(Connect to the terminal block (TB1))

E1

Connect to the earth

E2

Connect to the earth

E3

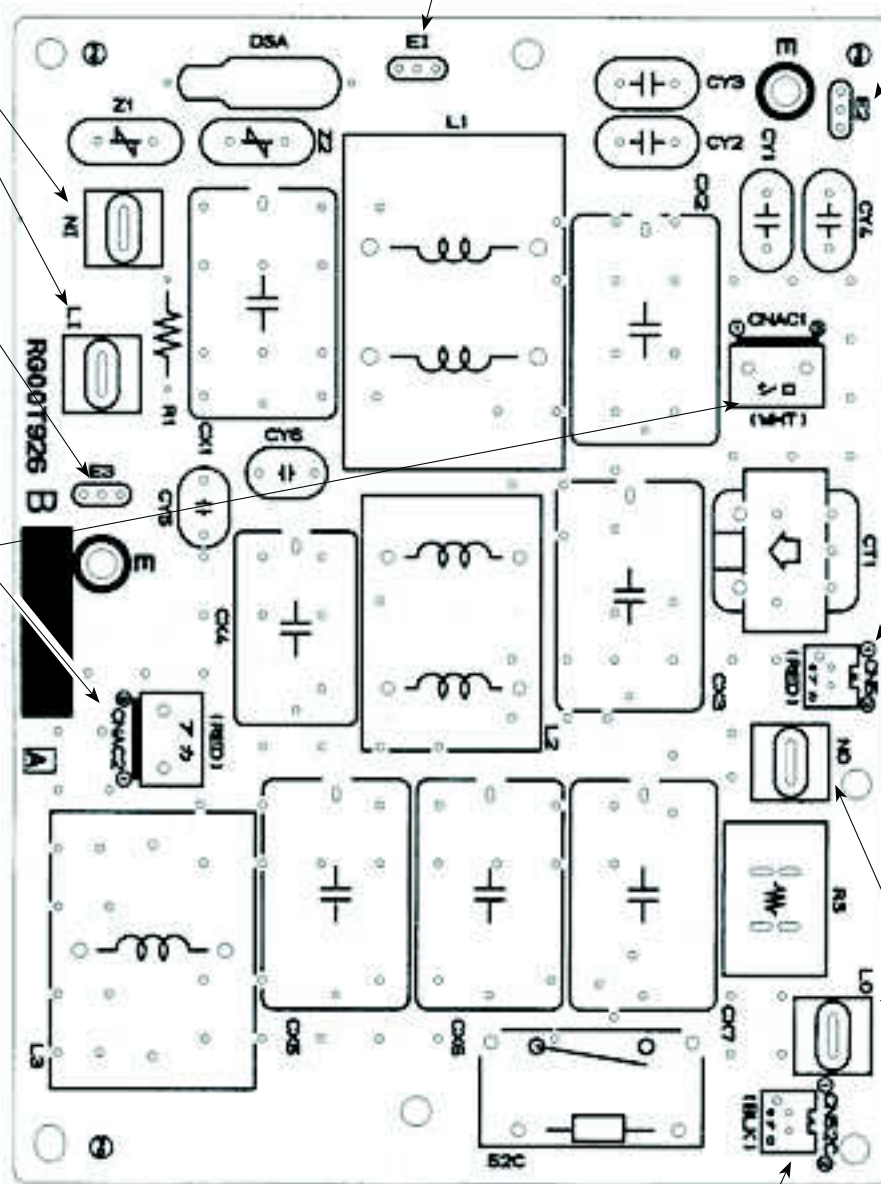
Connect to the earth

CNAC1, CNAC2
208/230V AC
(Connect to the
outdoor control-
ler circuit board
(CNAC))

CN5
Primary current
(Connect to the
outdoor power
circuit board
(CN5))

LO, NO
Voltage of
208/230V AC is
output.
(Connect to the ACL)

CN52C
52C relay signal
(Connect to the
outdoor controller
circuit board (CN52C))



Outdoor noise filter circuit board

PUZ-A24NHA4 PUZ-A24NHA4-BS

PUY-A24NHA4 PUY-A24NHA4-BS

E1, E2

Connect to the earth

CNAC1, CNAC2
208/230V AC
(Connect to the
outdoor control-
ler circuit board
(CNAC))

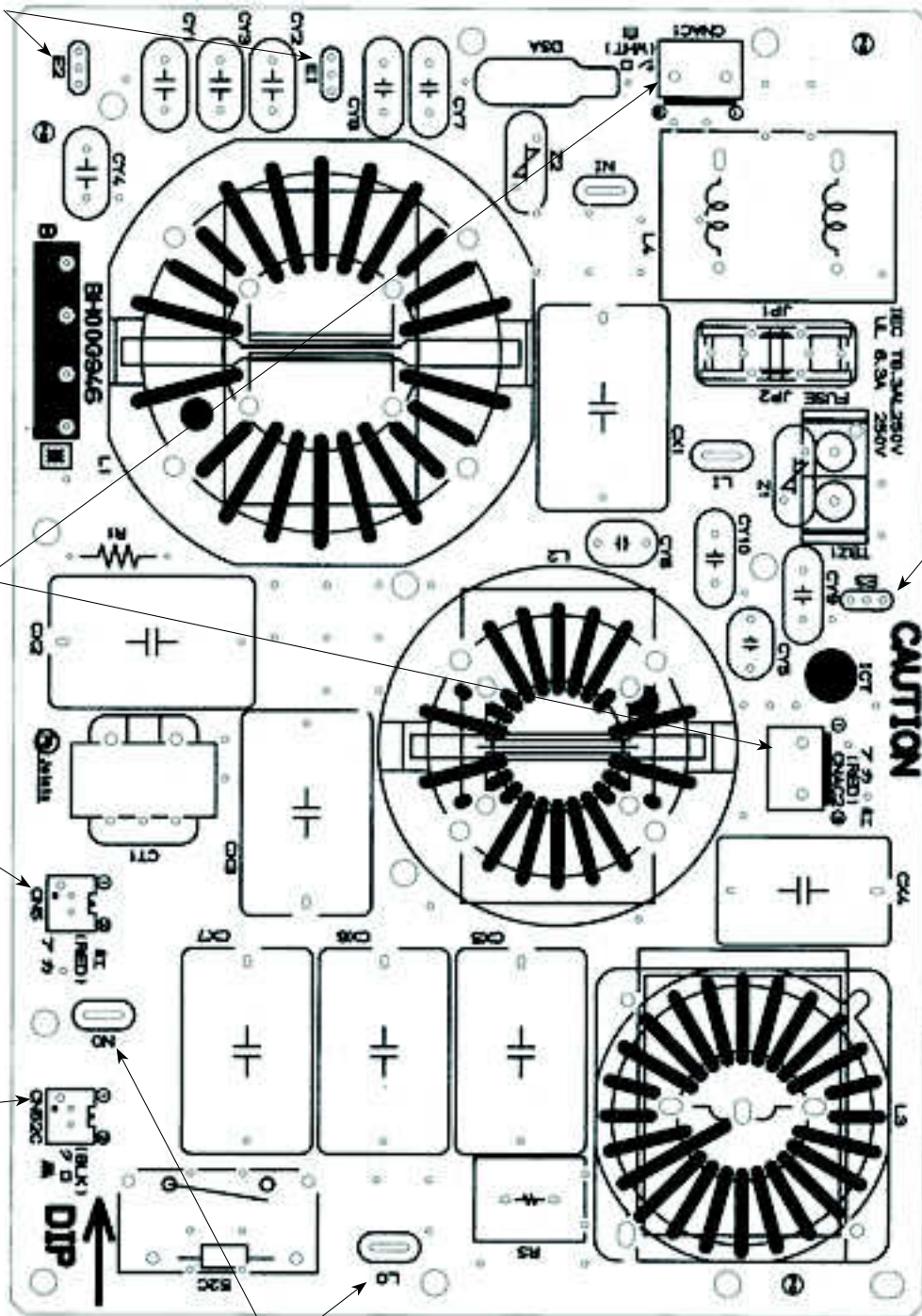
CN5
Primary current
(Connect to the
outdoor power
circuit board
(CN5))

CN52C
52C relay signal
(Connect to the
outdoor controller
circuit board
(CN52C))

LO, NO
Voltage of 208/230V AC is output.
(Connect ACL)

E3

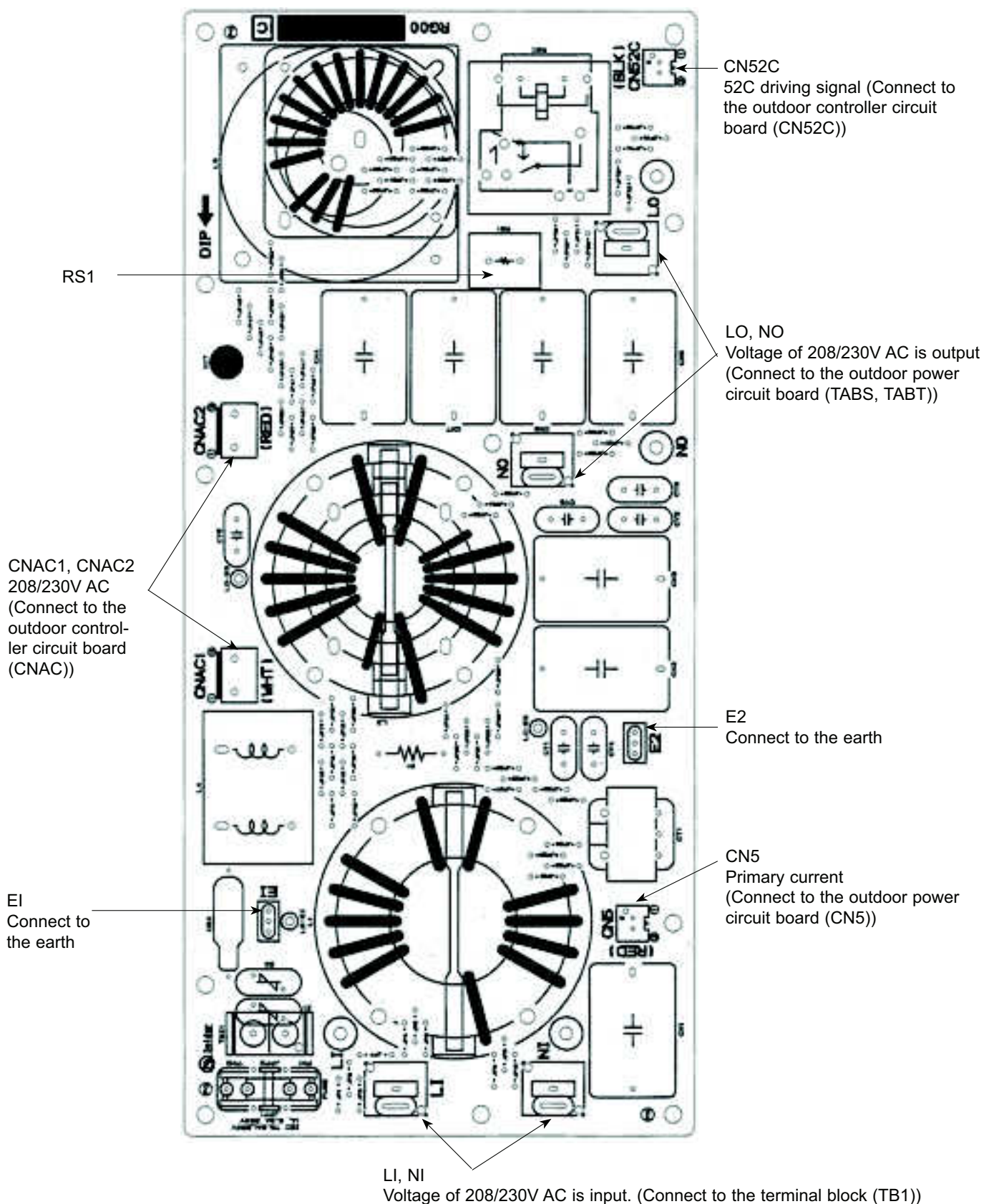
Connect to
the earth



Outdoor noise filter circuit board

PUZ-A30/36/42NHA4 PUZ-A30/36/42NHA4-BS

PUY-A30/36/42NHA4 PUY-A30/36/42NHA4-BS

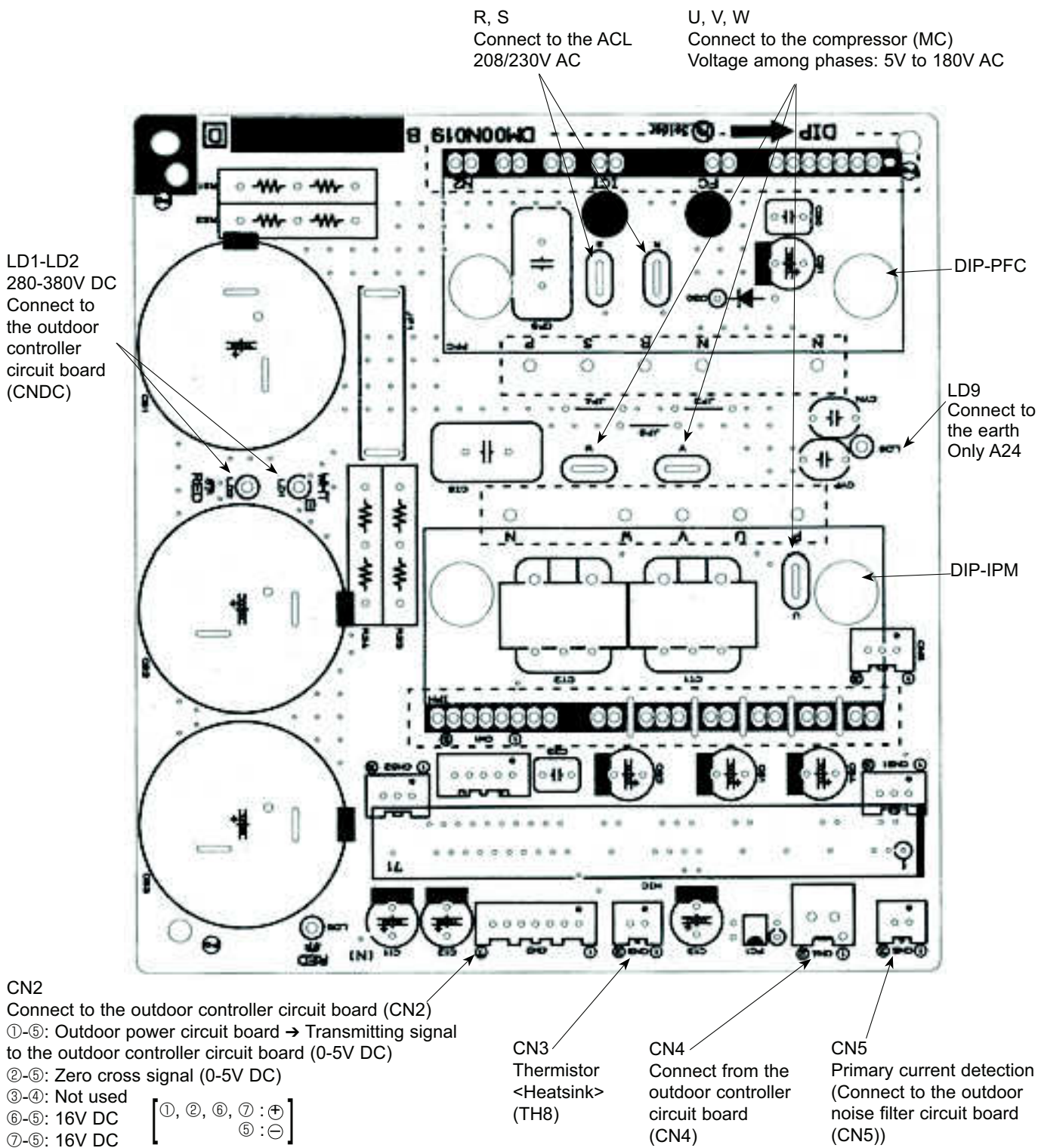


Outdoor power circuit board
PUZ-A18NHA4
PUZ-A18NHA4-BS
PUY-A12/18NHA4
PUY-A12/18NHA4-BS

Brief check of DIP-IPM and DIP-PFC

※ Usually, they are in a state of being short-circuited if they are broken. Measure the resistance in the following points (connectors, etc.). If they are short-circuited, it means that they are broken.

1. Check of DIP-IPM
P-U, P-V, P-W, N-U, N-V, N-W
2. Check of DIP-PFC
P-R, P-S, R-N, S-N



Outdoor power circuit board
PUZ-A30/36/42NHA4
PUZ-A30/36/42NHA4-BS
PUY-A30/36/42NHA4
PUY-A30/36/42NHA4-BS

Brief check of POWER MODULE

* Usually, they are in a state of being short-circuited if they are broken.
 Measure the resistance in the following points (connectors, etc.).
 If they are short-circuited, it means that they are broken.

1. Check of diode bridge
 TABP1-TABS, TABN1-TABS, TABP1-TABT, TABN1-TABT
2. Check of DIP-IPM
 P-U, P-V, P-W, N-U, N-V, N-W

CN2

Connect to the outdoor controller circuit board (CN2)

- ①-⑤: Transmitting signal to the outdoor controller circuit board (0~5V DC)
- ②-⑤: Zero cross signal (0~5V DC)
- ③-④: 18V DC
- ⑥-⑤: 16V DC
- ⑦-⑤: 16V DC

CNAF

Connect to ACTM

CN3

Thermistor (TH8)
 <Heatsink>

CN5

Detection of primary current
 Connect to the outdoor noise filter circuit board (CN5)

CN4

Connect to the outdoor controller circuit board (CN4)

TABP2/SC-P2

Connect to ACTM

TABN

Connect to the smoothing capacitor CB⊖ (A42N only)

TABP

Connect to the smoothing capacitor CB⊕ (A42N only)

TABU/V/W

Connect to the compressor (MC)
 Voltage among phases: 10V~180V AC

TABN2

Connect to ACTM

CNDC

280-380V DC (①+, ③-)
 Connect to the outdoor controller circuit board

DIP-IPM

TABS/TABT

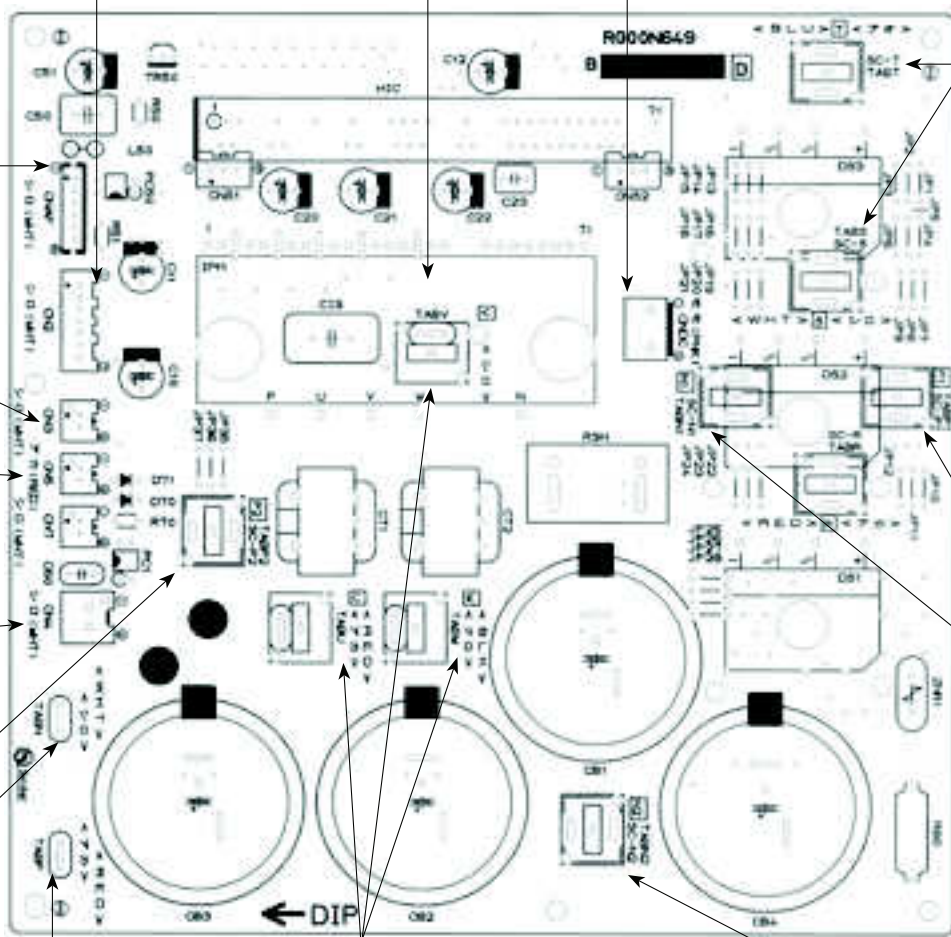
Connect to the outdoor noise filter circuit board
 Voltage among phases:
 208/230V AC

TABP1

Connect to 52C

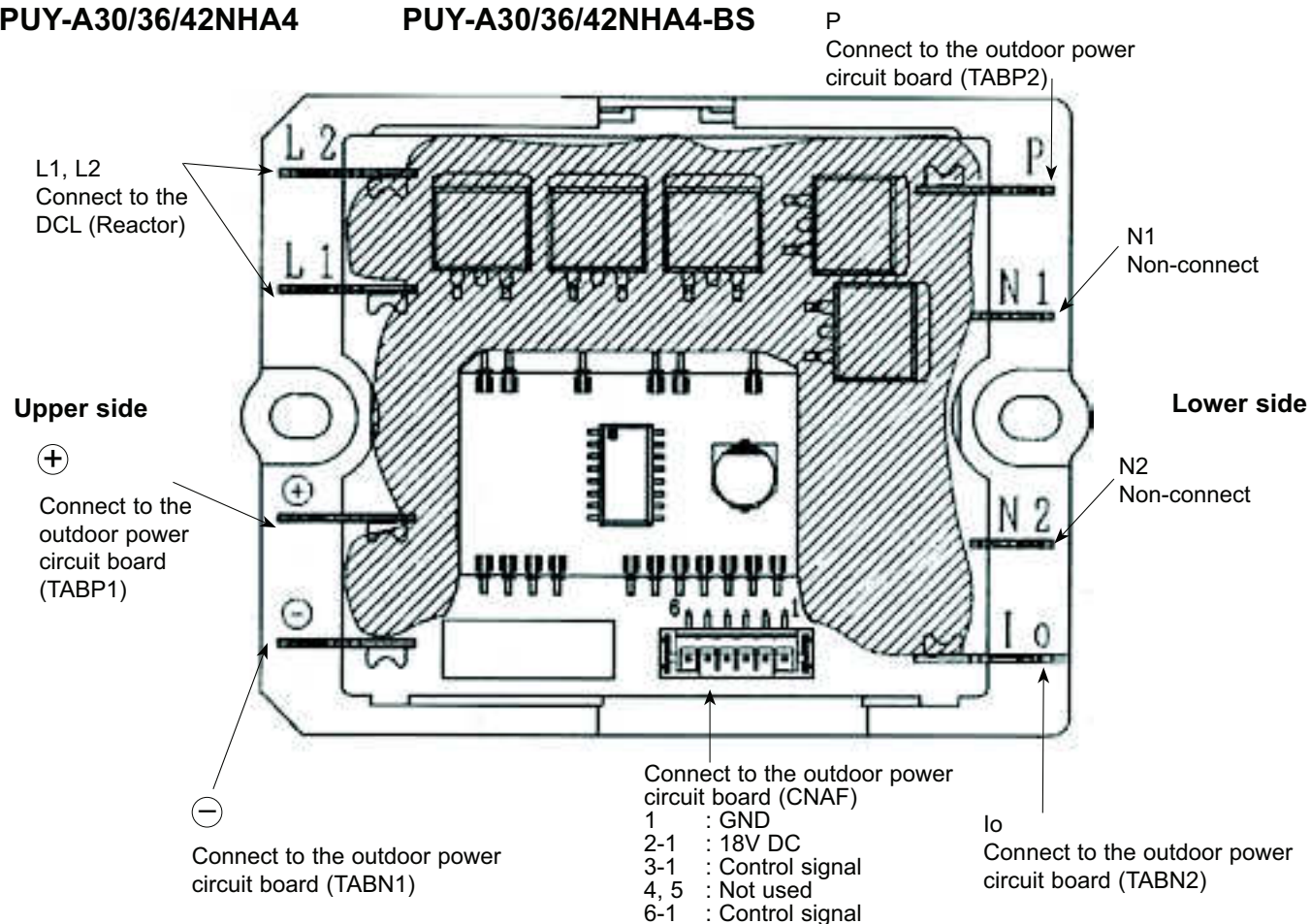
TABN1

Connect to ACTM

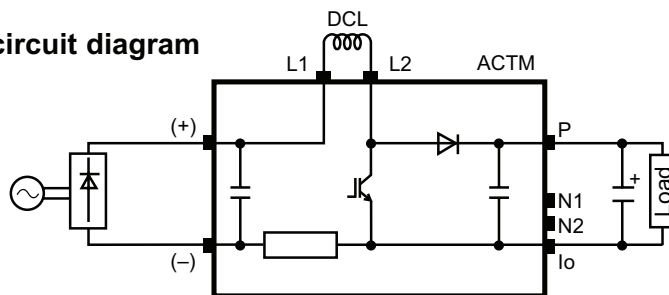


Active filter module
PUZ-A30/36/42NHA4
PUY-A30/36/42NHA4

PUZ-A30/36/42NHA4-BS
PUY-A30/36/42NHA4-BS



Connection and internal circuit diagram



Tester check points of Active filter module

	Error condition	Normal value (reference)	Symptom when the unit is in trouble
(-) and I/O	open	less than 1Ω	① The unit does not operate (can not be switched ON)
(-) and L2	short	100kΩ ~ 1MΩ	① The breaker operates
	open	※1	① The unit does not operate (can not be switched ON) ② U9 Abnormal stop (※2)
P and L2	short	100kΩ ~ 1MΩ	① The breaker operates
	open	※1	① The unit does not operate (can not be switched ON) ② U9 Abnormal stop (※2)
P and I/O	short	100kΩ ~ 1MΩ	① The breaker operates
	open	※1	① The unit does not operate (can not be switched ON) ② U9 Abnormal stop (※2)
L2 and I/O	short	100kΩ ~ 1MΩ	① The breaker operates
	open	※1	① The unit does not operate (can not be switched ON) ② U9 Abnormal stop (※2)

※1. The symptom when the unit is in open error condition is described to determine open error by tester check.

※2. SW2 setting ON : Code "20" display
OFF : Code "20" display