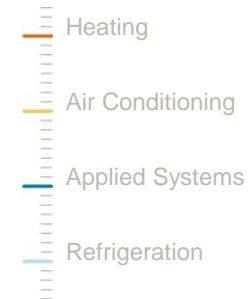




All Seasons
°CLIMATE COMFORT

3. SERVICE TOOLS

3.2. Inverter checker RSUK09-17



TOP SECRET
SECRET
INTERNAL USE ONLY

3.2. Inverter checker RSUK09-17: index

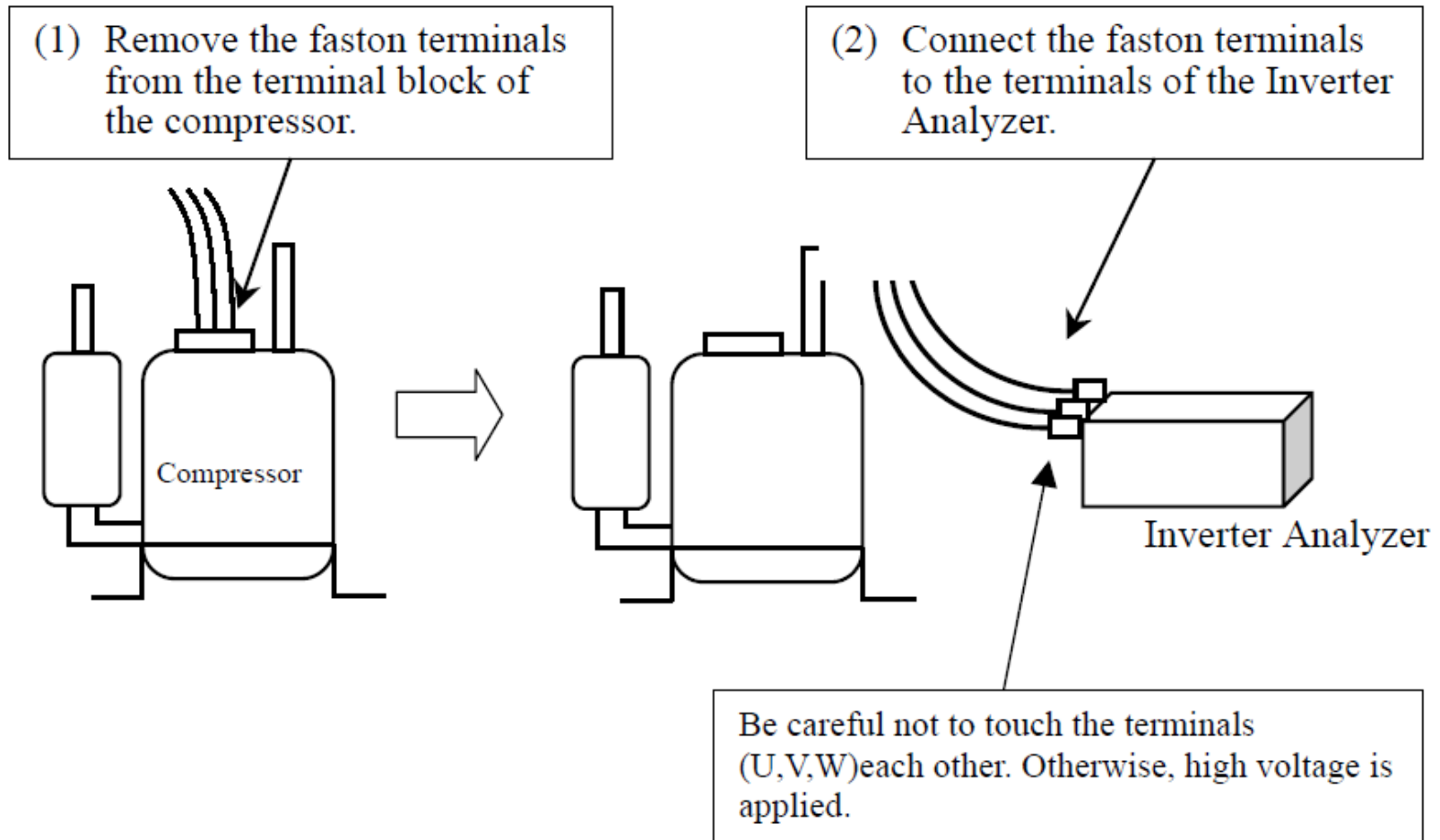
1. Outlook
2. How to connect?
3. How to use?
4. Diagnosis
5. Caution
6. How to disconnect?

3.2.1. Outlook



3.2.2. How to connect?

Turn the power off before connecting the inverter checker



3.2.3. How to use: Splits with service monitor PCB

1. Turn on the power of the unit.
2. Wait at least 3 minutes before starting the test (guard timer)
3. Press SW1 for approx. 5 seconds until you hear a click (relay).
4. About 5 seconds later the LED'S will start flashing.

3.2.3. How to use: Splits with NO service monitor PCB

1. Turn on the power of the unit.
2. Wait at least 3 minutes before starting the test (guard timer)
3. Press on the temperature up en down button together with the mode button.
4. Press twice on the mode button to select test mode.
5. Select fan only with the mode button.
6. Press the start button on the remocon.
7. About 3 minutes later the LED'S will start flashing.
8. You will have to perform a manual power reset if you want to do the test again.

3.2.3. How to use: sky-air 71~140 C/D

LED status

- : OFF
- : ON
- ◎: Blink

1) Press and hold BS1 for 5sec

Normal

H1P	H2P	H3P	H4P	H5P	H6P	H7P
●	●	●	●	●	●	●

1) LED status (entered monitor mode):

H1P	H2P	H3P	H4P	H5P	H6P	H7P
○	●	●	●	●	●	●

2) Press BS2 twice

2) LED status (after pressing BS2 twice)

H1P	H2P	H3P	H4P	H5P	H6P	H7P
○	●	●	●	●	○	●

3) Press BS3 once

3) LED status (after pressing BS3)

H1P	H2P	H3P	H4P	H5P	H6P	H7P
○	●	●	●	●	●	◎

4) Press BS2 once

4) LED status (after pressing BS2)

H1P	H2P	H3P	H4P	H5P	H6P	H7P
○	●	●	●	●	◎	●

5) Press BS3 once

5) LED status (after pressing BS3)

H1P	H2P	H3P	H4P	H5P	H6P	H7P
○	●	●	●	●	○	●

6) Press BS3 once

6) LED status (after pressing BS3)

H1P	H2P	H3P	H4P	H5P	H6P	H7P
○	●	●	●	●	●	●

At the status shown in 6) , outdoor unit will run in power transistor check mode after the remocon has been switched on

3.2.3. How to use: sky-air 200~250 C

LED status

- : OFF
- : ON
- ◎: Blink

1) Press and hold BS1 for 5sec

Normal : H1P H2P H3P H4P H5P H6P H7P
● ● ● ● ● ● ●

1) LED status (entered monitor mode) :

H1P H2P H3P H4P H5P H6P H7P
○ ● ● ● ● ● ●

2) Press BS2 **17 times**

2) LED status (after pressing BS2 twice)

H1P H2P H3P H4P H5P H6P H7P
○ ● ○ ● ● ● ○

3) Press BS3 once

3) LED status (after pressing BS3)

H1P H2P H3P H4P H5P H6P H7P
○ ● ● ● ● ● ◎

4) Press BS2 once

4) LED status (after pressing BS2)

H1P H2P H3P H4P H5P H6P H7P
○ ● ● ● ● ◎ ●

5) Press BS3 once

5) LED status (after pressing BS3)

H1P H2P H3P H4P H5P H6P H7P
○ ● ● ● ● ○ ●

6) Press BS3 once

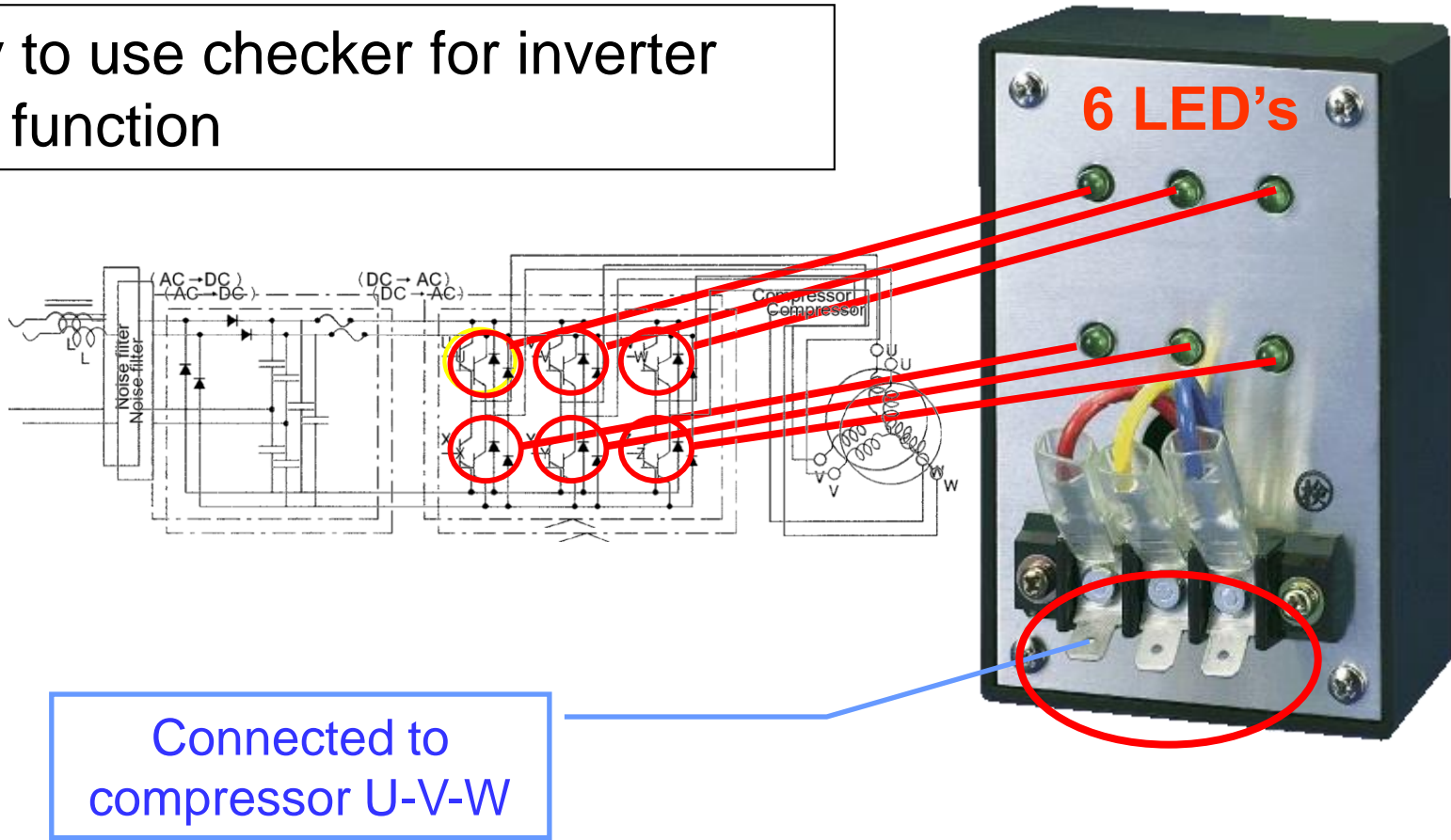
6) LED status (after pressing BS3)

H1P H2P H3P H4P H5P H6P H7P
○ ● ● ● ● ● ●

At the status shown in 6) , outdoor unit will run in power transistor check mode after the remocon has been switched on

3.2.4. Diagnosis

Easy to use checker for inverter PCB function



3.2.4. Diagnosis

(1) When all LEDs are lit uniformly, → Compressor malfunction (to be replaced)

(2) When some of LEDs are not lit (LEDs are not lit or go off, etc.):

Check the individual power transistor. (Refer to the service manual)

※ When the power transistor and control PC board are integrated: → Replace the control PC board.

※ When the power transistor can be checked individually:

↓ Check the resistance value. (Refer to the relevant service manual)

If NG: → The power transistor may have a failure. (Replace the power transistor).

If the power transistor is normal, check if there is any solder cracking on filter PC board.

※ If any solder cracking is found: → Replace the filter PC board (or repair the soldered section).

※ If filter PC board is normal: → Replace the control PC board.

3.2.5. Caution

1. When the output frequency is low, the LED flashes slowly. As the frequency increases, the LED flashes quickly. (It looks like the LED is lit)
2. If the operation is carried out with no load (the condition of the compressor is disconnected), some of the units may stop operation with “CT system error” (due to no electric current) or “startup failure” (because the compressor does not turn). In this case, check if the LED is flashing during “operation” to “malfunction stop”. (Refer to the service manual of each air conditioner for checking whether the alarm LED’s for CT system, startup failure, etc.. are provided or not.)

3.2.6. How to disconnect: Splits with service monitor PCB

1. Press SW1 once to stop the test.
2. All LED's will go out.
3. After 5 seconds 2 LED's will lit up again, this is for unloading the capacitors of the inverter (+/- 500 VDC).
4. For safe practice you better wait until the LED's are off (approx. 1 minit) and then turn the power off before you disconnect the inverter checker.
5. Reconnect the terminals

3.2.6. How to disconnect: Splits with NO service monitor

1. Press the on/off button on the remocon once to stop the test.
2. All LED's will go out.
3. After 5 seconds 2 LED's will lit up again, this is for unloading the capacitors of the inverter (+/- 500 VDC).
4. For safe practice you better wait until the LED's are off (approx. 1 minit) and then turn the power off before you disconnect the inverter checker.
5. Reconnect the terminals

3.2.6. How to disconnect: Sky-Air (71~140)

1. Press BS1 once and switch the unit off on the remocon.
2. The LED's of the inverter checker will keep on flashing.
3. Perform step 3.2.3. again.
4. The LED's will stop flashing.
5. Wait approx. 10 seconds and then 2 LED's will lit up, this is for unloading the capacitors of the inverter (+/- 500 VDC)



1. It is safe to disconnect the inverter checker once the LED's are off.
2. Press mode again to go to normal operation.

3.2.6. How to disconnect: Sky-Air (200~250)

1. Press BS1 once and switch the unit off on the remocon.
2. The LED's of the inverter checker will stop flashing.
3. After approximate 3 minits 2 LED's will lit up.
4. It is safe to disconnect the inverter checker once the LED's are off.