



INSTALLATION MANUAL

2-way valve kit/3-way valve kit for fan coil units

EKMV2C09B7
EKMV3C09B7



Read this manual attentively before installation. Do not throw it away. Keep it in your files for future reference.

Improper installation or attachment of equipment or accessories could result in electric shock, short-circuit, leaks, fire or other damage to the equipment. Be sure only to use accessories made by Daikin that are specifically designed for the use with the equipment and have them installed by a professional.

If unsure of installation procedures or use, always contact your dealer for advice and information.



Danger: electric shock

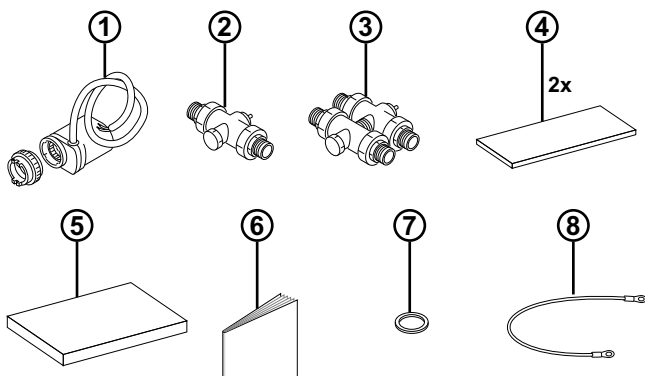
Switch off all power supply before removing the control box cover or before making any connections or touching electrical parts.

The English text is the original instruction. Other languages are translations of the original instruction.

This option kit needs to be used in combination with an EKR1C11 kit and a FWF or FWC fan coil unit.

The units are equipped with a water inlet and water outlet for connection to a water circuit. This circuit must be provided by a licensed technician and must comply with all relevant European and national regulations.

ACCESSORIES SUPPLIED WITH THE KIT



- 1 Actuator with toothed ring
- 2 2-way valve (only for EKMV2C09B7)
- 3 3-way valve (only for EKMV3C09B7)
- 4 Insulation tape
- 5 Insulation for valve
- 6 Installation manual
- 7 O-ring (1x for EKMV2C09B7) (2x for EKMV3C09B7)
- 8 Wire (in case 2 valves are connected on same fan coil unit)



- KRP1B101 box and EKR1C11 PCB are needed for combination with the FWF units.
- KRP1H98 box and EKR1C11 PCB are needed for combination with the FWC units.

CONNECTION OF THE FAN COIL UNIT TO FIELD PIPING BY USE OF THE 2-WAY/3-WAY VALVE

Refer to the installation manual of the fan coil unit for details on installing the fan coil unit.



Be careful not to deform the unit piping by using excessive force when connecting the piping. Deformation of the piping can cause malfunction of the unit.

If air, moisture or dust gets in the water circuit, problems may occur. Therefore, always take into account the following when connecting the water circuit:

- Use clean pipes only.
- Hold the pipe end downwards when removing burrs.
- Cover the pipe end when inserting it through a wall so that no dust and dirt enter.
- Use a good thread sealant for the sealing of the connections. The sealing must be able to withstand the pressures and temperatures of the system.
- When using non-brass metallic piping, make sure to insulate both materials from each other to prevent galvanic corrosion.
- Because brass is a soft material, use appropriate tooling for connecting the water circuit. Inappropriate tooling will cause damage to the pipes.

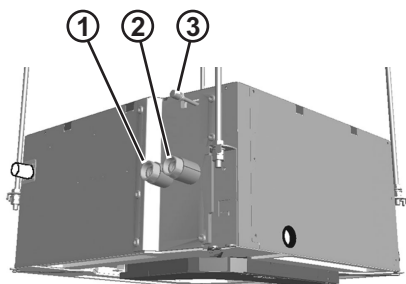


- The unit is only to be used in a closed water system. Application in an open water circuit can lead to excessive corrosion of the water piping.
- Never use Zn-coated parts in the water circuit. Excessive corrosion of these parts may occur as copper piping is used in the unit's internal water circuit.
- The equipment is not intended for use in a potentially explosive atmosphere.

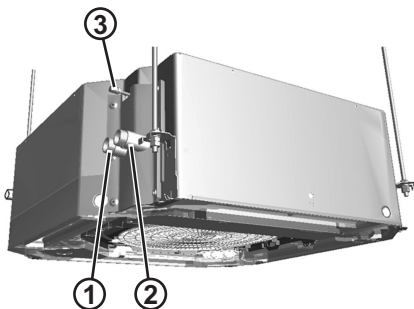
Water piping connections

2 pipe models

FWF



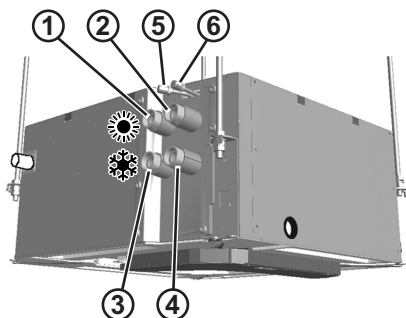
FWC



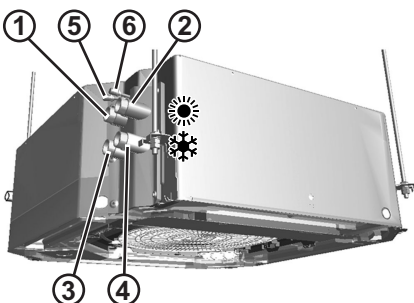
- 1 Water out
- 2 Water in
- 3 Air purge

4 pipe models

FWF



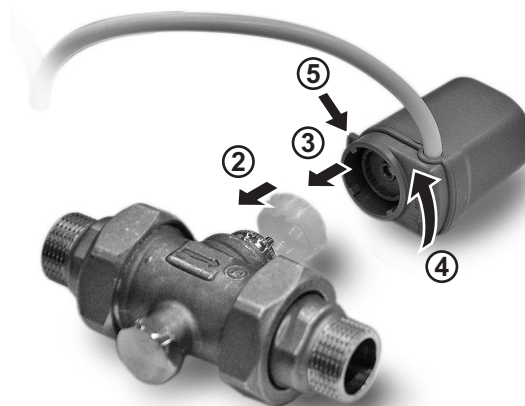
FWC



- 1 Water out heating coil
- 2 Water in heating coil
- 3 Water out cooling coil
- 4 Water in cooling coil
- 5 Air purge heating coil
- 6 Air purge cooling coil

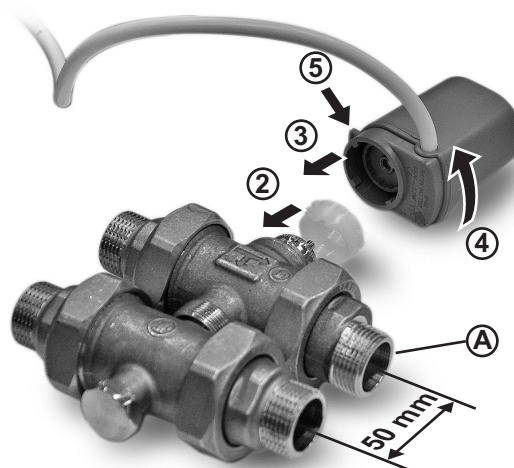
- 1 Mount the actuator on the valve body.
 - 1 Remove the blue and red cap from the valve.
 - 2 Push the toothed ring firmly onto the valve.
 - 3 Mount the actuator on the ring.
 - 4 Rotate the actuator 15° clockwise until you hear a "click". In order to unfasten the actuator, rotate it 15° counterclockwise.
 - 5 Push the red button inwards.

2-way valve



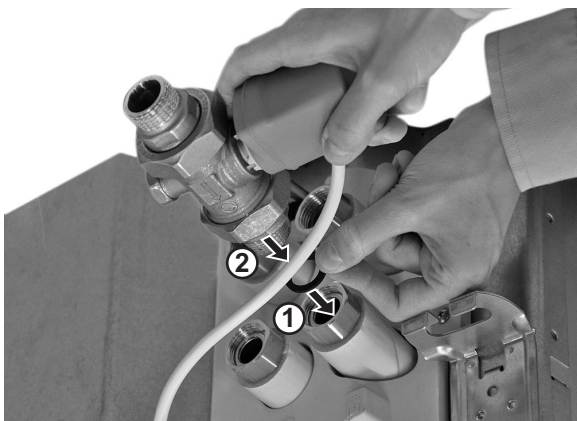
3-way valve

Modify the inlet side (A) so that the distance between the connection points is equal to 50 mm.



- 2 Mount the valve on the water piping.
 - 1 Install the o-ring in the water piping connection. In case of a 3-way valve, install the second o-ring in the second water piping.
 - 2 Install the valve on the inlet water piping

2-way valve

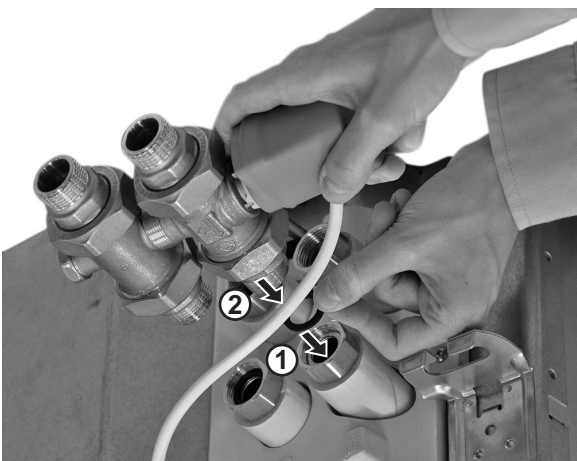


Pay attention to the  mark on the 2-way valve body.

The arrow must point inside the inlet water piping of the fan coil unit.

Make sure the actuator is **not** installed upside down.

3-way valve



Pay attention to the  mark on the 3-way valve body.

The long arrow must point inside the inlet water piping of the fan coil unit.



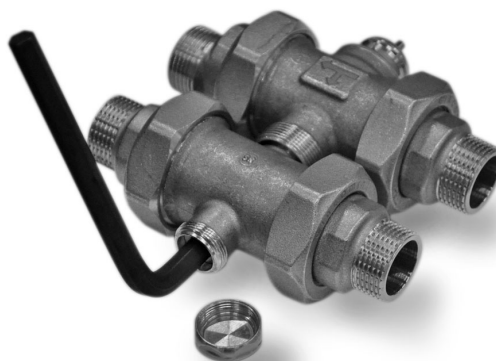
In case 2 valves are installed on the same fan coil unit (4 pipe model), use the same method described above to install the second valve.

- 3 Connect the field piping.

Required thread type on the field piping side				
		No valves installed	2-way valve(s) installed	3-way valve(s) installed
2 pipe unit	Water in	3/4" male BSP	3/4" female BSP	3/4" female BSP
	Water out	3/4" male BSP	3/4" male BSP	3/4" female BSP
4 pipe unit	Water in Heating	3/4" male BSP	3/4" female BSP	3/4" female BSP
	Water out Heating	3/4" male BSP	3/4" male BSP	3/4" female BSP
	Water in Cooling	3/4" male BSP	3/4" female BSP	3/4" female BSP
	Water out cooling	3/4" male BSP	3/4" male BSP	3/4" female BSP



In case a 3-way valve is used, adjust the bypass opening to regulate the pressure drop. See databook for more information.

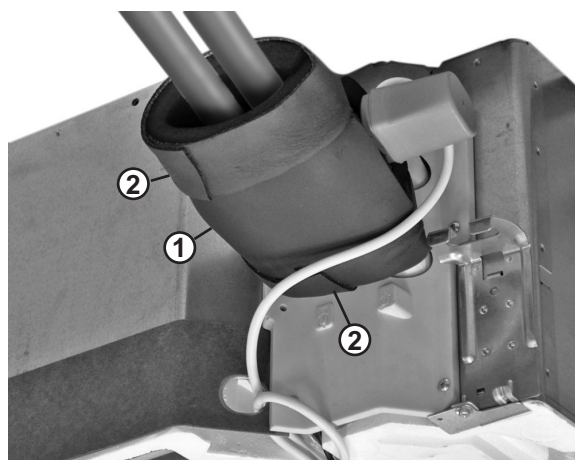


The complete water circuit, inclusive all piping, must be insulated to prevent condensation and reduction of the capacity (minimum thickness: 10 mm).

If the temperature is higher than 30° and the relative humidity is higher than 80%, the thickness of the sealing materials should be at least 20 mm in order to avoid condensation on the surface of the sealing.

- 4 Seal the valve and piping connections.
 - 1 Add the "insulation for valve" (1) around the valve and the sealing of the unit piping and the field piping.
 - 2 Close the sealing off with the insulation tape (2).

Example: 3-way valve



- 1 Insulation for valve
- 2 Insulation tape

Electrical connections



Do not drill any holes in the casing of the unit to install the option.

Only use the accessories provided by Daikin to install the option.

For the FWF

- 1 Install the KRP1B101 box and the EKR1C11 PCB according to the installation manual provided with the KRP1B101 kit.

For wiring of the EKR1C11 PCB: see below.

For the FWC

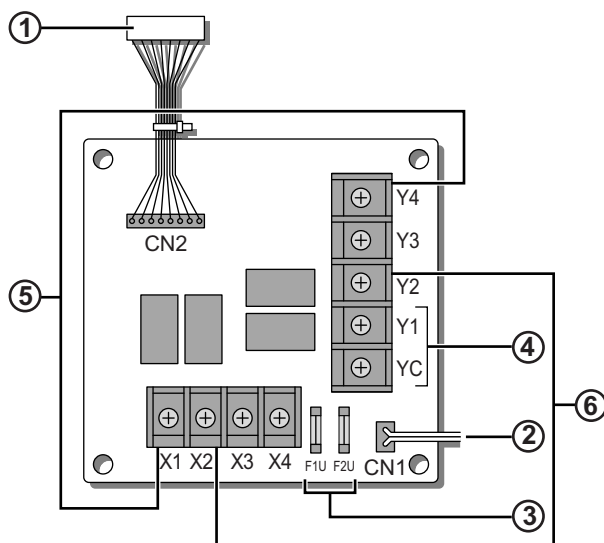
- 1 Install the KRP1H98 box and the EKR1C11 PCB according to the installation manual provided with the KRP1H98 kit.

For wiring of the EKR1C11 PCB: see below.



The EKR1C11 can only be used to connect the valves. The functions mentioned in the installation manual of the EKR1C11 can not be used.

2 Wiring of the EKR1C11

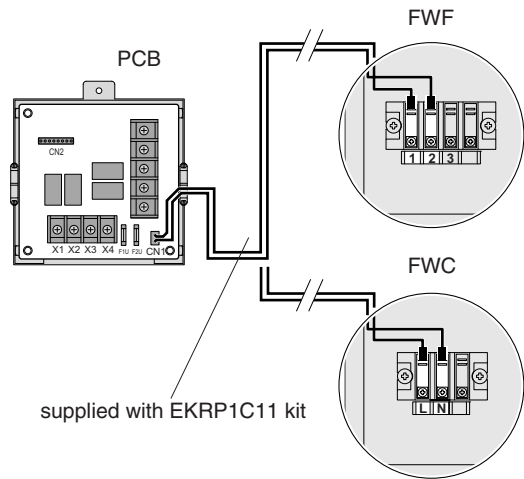


- 1 Communication to fan coil PCB
- 2 Power supply wire (to fan coil unit)
- 3 Fuses 5 A - 250 V
- 4 YC-Y1: connection of first valve
- 5 X1-Y4: wire to enable the use of the second valve (supplied with valve kit)
- 6 X2-Y2: connection of second valve

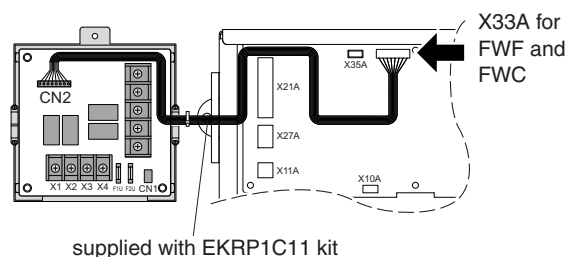


Do not bundle low and high voltage wires together. Bundle all wires with the included clamps in order to avoid contact with fan coil PCB's or sharp edges.

■ Power supply

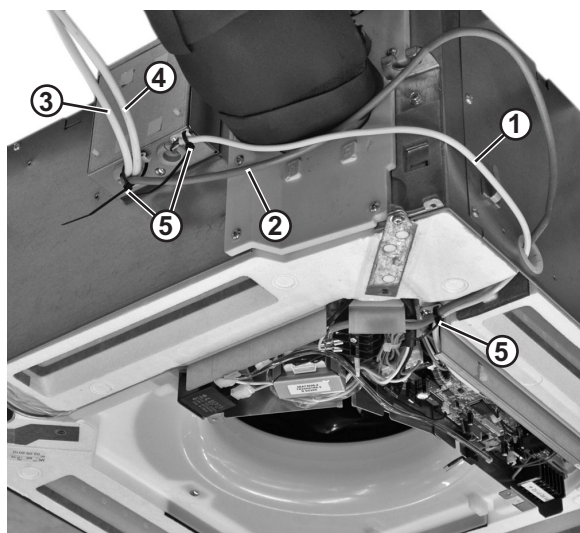


■ Communication wire

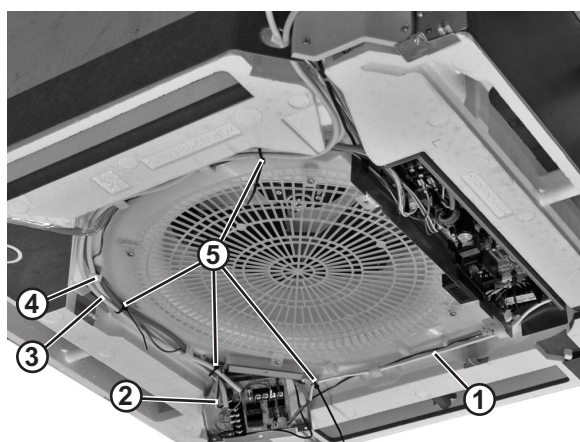


■ Wiring method

FWF



FWC



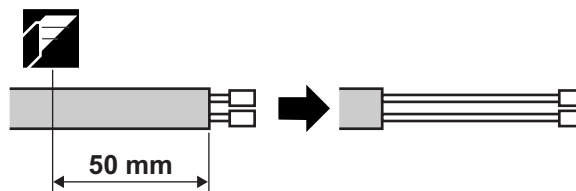
- 1 Communication wire
- 2 Power supply wire
- 3 First valve wire
- 4 Second valve wire
- 5 Tie wrap

Never squeeze bundled cables and be sure that the cables do not come in contact with sharp edges.

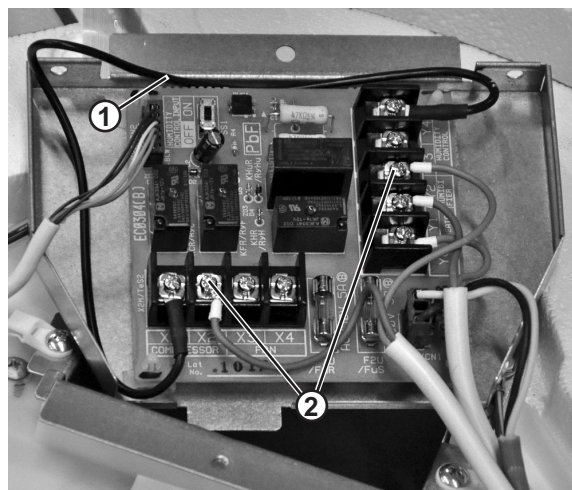
Cut off the redundant ends of the tie wraps.

■ In case 2 valves are used:

Strip the wire of the valve motor of the second actuator for an additional length of 50 mm.



Connect X1 and Y4 with the wire supplied with the kit (see "Accessories supplied with the kit", item 8).

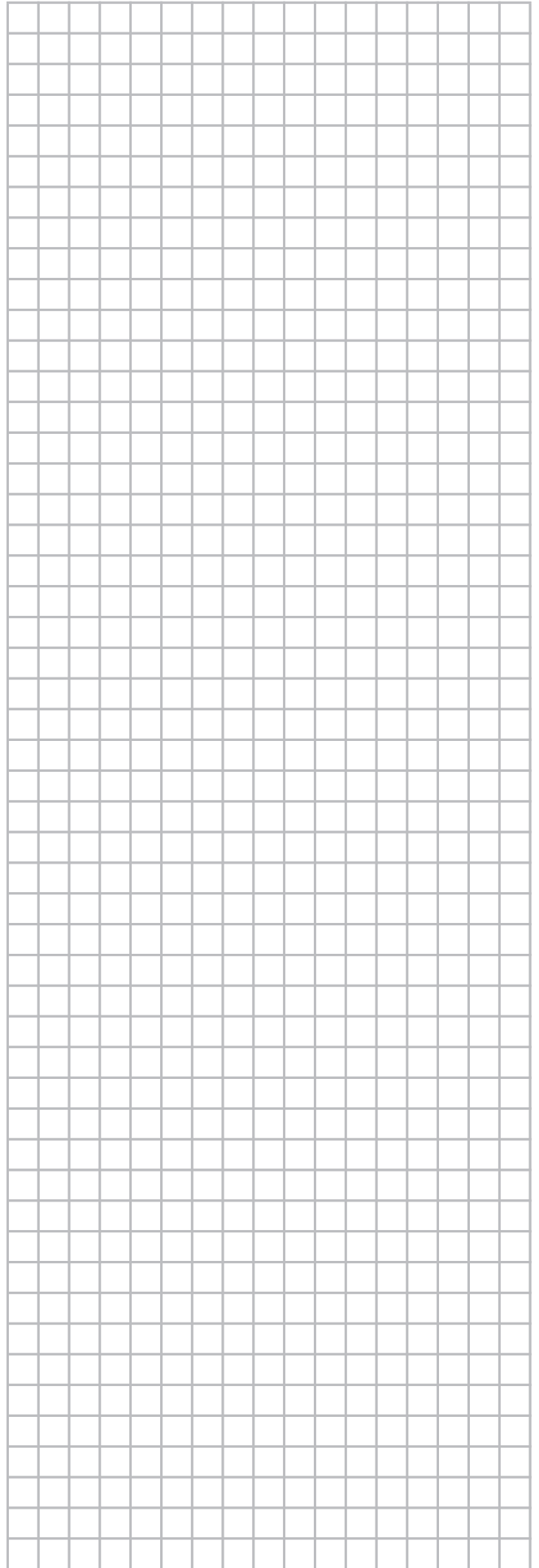
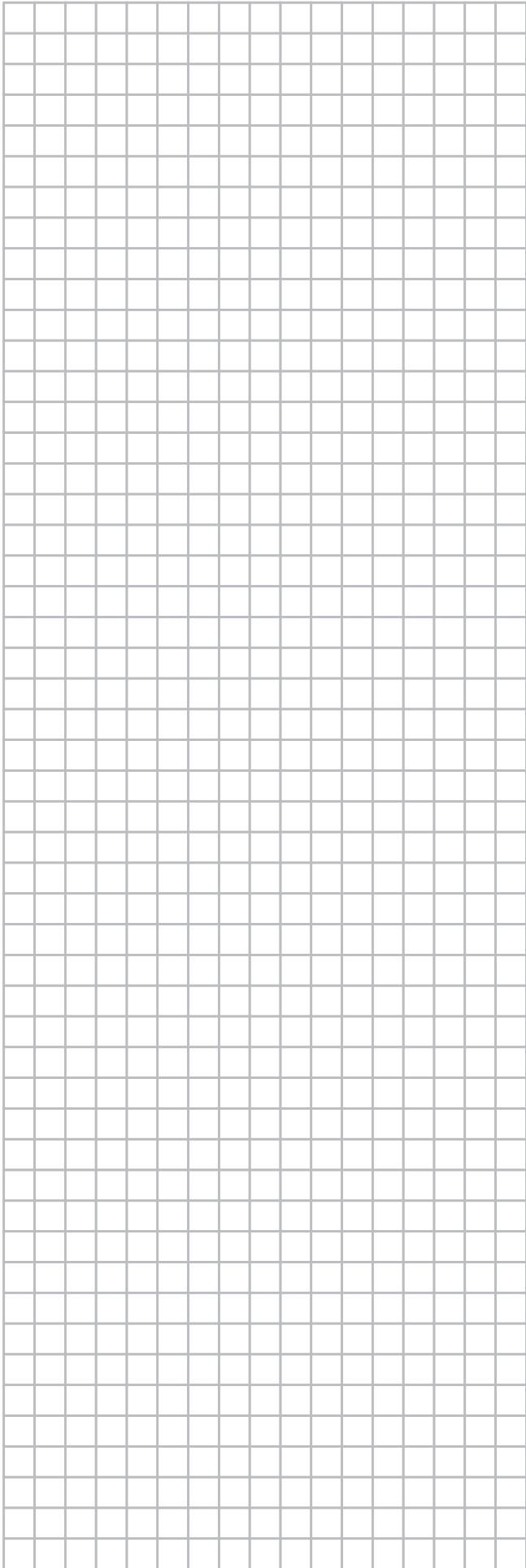


- 1 X1-Y4 wire
- 2 X2-Y2: connection of the second valve



For further installation of the fan coil units: refer to the fan coil unit installation manual.

NOTES





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