

Cable routing plan

Product name: KaCool W
Version number: 01



**Genau
mein
Klima.**

KAMPMAN

Information on cable laying:

The following information on cable types and cable laying must be observed in compliance with VDE 0100.

The installation, operation and maintenance of these devices must comply with the country-specific applicable laws, standards, regulations and directives.

Without *: NYM-J. The required number of cores incl. protective conductor is indicated on the cable. Cross sections are not indicated, as the cable length is included in the calculation of the cross section.

*) : Shielded cable, J-Y(ST)Y 0.8mm. Lay separately from power lines.

**) : Shielded cable stranded in pairs, e.g. UNITRONIC® BUS LD 2x2x0.22, UNITRONIC® BUS LD 3x2x0.22. Install separately from power lines.

- If other cable types are used, they must be at least equivalent.

- The connection terminals on the device are suitable for a maximum wire cross-section of 2.5 mm², the mains plug for max. 4.0 mm².

- When using residual current circuit breakers, these must be at least mixed frequency sensitive (type F). For the design of the rated residual current, the specifications from DIN VDE 0100 Parts 400 and 500 must be observed.

- For the design of the on-site mains supply and fuse protection (C16A, max. 10 devices), the electrical data in the table below must be observed.

- Lines for data or bus signals are shown with shield connected at one end. Lines for analog signals are shown with the shield not connected. Due to structural or local conditions and depending on the type and level of interference, which can be caused by magnetic and/or electric fields in high and/or low frequency ranges, among other things, a different connection of the shield (connected at both ends or not connected) may be necessary. This must be checked by the customer and, if necessary, carried out deviating from the specifications in the documentation!

Electromechanical:

- Cable length between speed controller and the last device: maximum 100 m, from 20 m connect shield on one side.

- Cable length between room thermostat and temperature sensor or switch contact: maximum 50 m.

- Cable length between speed controller and temperature sensor or switching contact: maximum 100 m.

KaControl:

- Cable length temperature sensor or switching contact: maximum 30m (maximum 100m with minimum wire cross-section of 1.0 mm²).

- Cable length BUS cable room control unit KaController to unit 1: maximum 30 m.

- Maximum number of devices in parallel: 6 pieces.

- BUS cable length from device 1 to device 6: maximum 30 m.

KaControl [®]	Projekt: KaCool W	General Information	Blatt-Nr.:	 Genau mein Klima.
	Erstelldatum: 08.01.2025		2 von 6	

Main supply 230V
Fuse protection on site. Observe the „Electrical data“ table.



Main supply 230V		
L	N	PE
1	2	gn/ge

KaCool W KaControl Device no. 1

Thermoelectric shut-off valve 24 V normally closed optional
2-pipe: heating/cooling V1 GND



Electrical connection box

Smartboard PCB
AI: Ri = 20 KΩ
AI1 GND AI2 GND AI3 GND
Factory fitted bridge inserted
Factory fitted bridge inserted
DI2 GND DI1 GND
2AT L' N'

Condensate pump 230V optional



W1 3
W2 3
W3 2*
W4 6

KaCool W KaControl Device no. 2

Thermoelectric shut-off valve 24 V normally closed optional
2-pipe: heating/cooling V1 GND



Electrical connection box

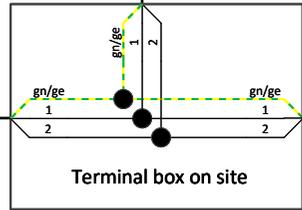
Smartboard PCB
AI: Ri = 20 KΩ
AI1 GND AI2 GND AI3 GND
Factory fitted bridge inserted
Factory fitted bridge inserted
DI2 GND DI1 GND
2AT L' N'

Condensate pump 230V optional



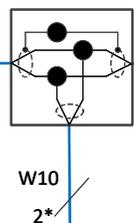
W5 3
W6 2*
W7 6

Terminal box on site

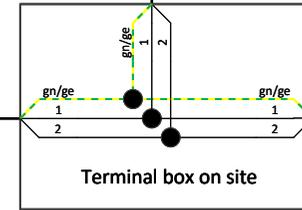


gn/ge 1 2
gn/ge 1 2

W10 2*

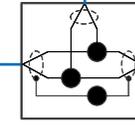


Terminal box on site



gn/ge 1 2
gn/ge 1 2

W8 2*
W9 2*



To additional devices
(Number depends on current consumption and maximum current analog output of the GA)

Control 0-10V DC
2-wire heating/cooling
Note: Internal resistance of device!

AA 0-10V	GND
1	2

Note:
0V to 4V = valve closed, speed 0
4V to 9V = valve open
4V to 9V = speed min to max



Building Automation (BA)

Main supply 230V
Fuse protection on site. Observe the „Electrical data“ table.

Main supply 230V		
L	N	PE

KaCool W
KaControl
Device no. 1

Thermoelectric shut-off valve 24 V normally closed optional

2-pipe: heating/cooling

V1 GND

Electrical connection box

Smartboard PCB

Factory fitted bridge inserted

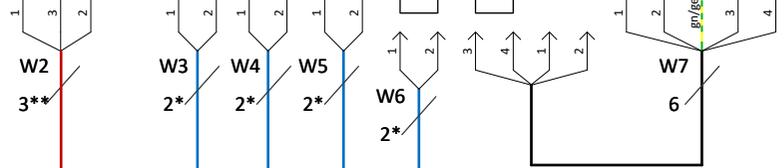
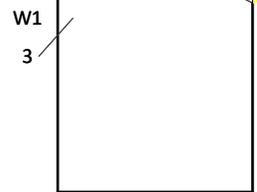
Factory fitted bridge inserted

Condensate pump 230V optional

AI: Ri = 20 KΩ

2AT

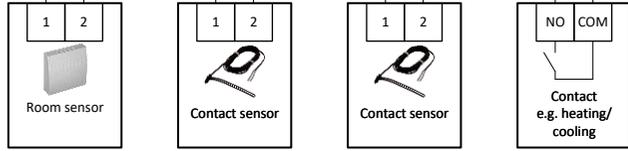
L	N	PE	Tx	V+	GND	Tx	AI1	GND	AI2	GND	AI3	GND	DI2	GND	DI1	GND	L'	N'	L	N	PE	DI1	GND
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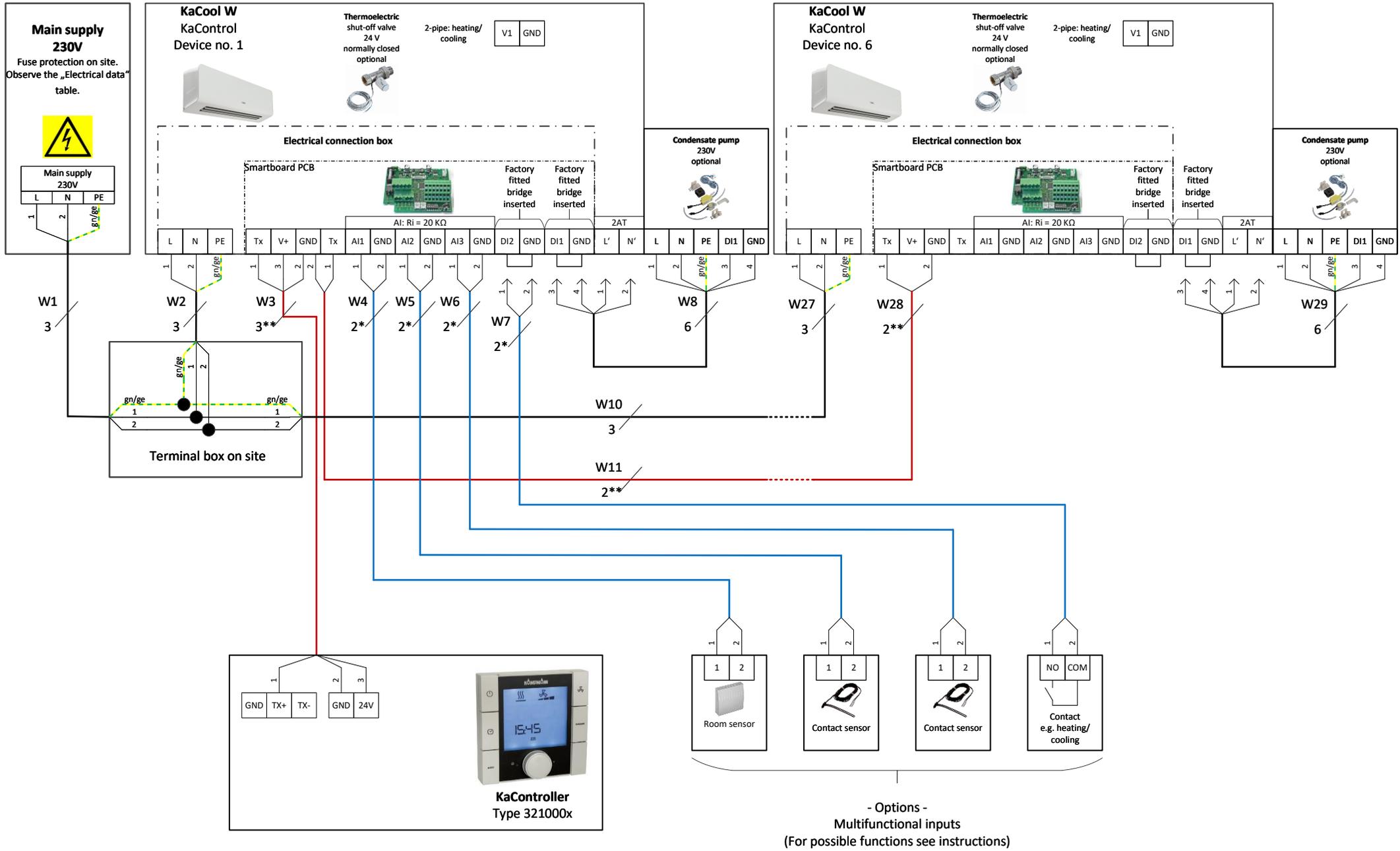
1	2	3
GND	TX+	TX-

1	2	3
GND	24V	

KaController
Type 321000x



- Options -
Multifunctional inputs
(For possible functions see instructions)





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