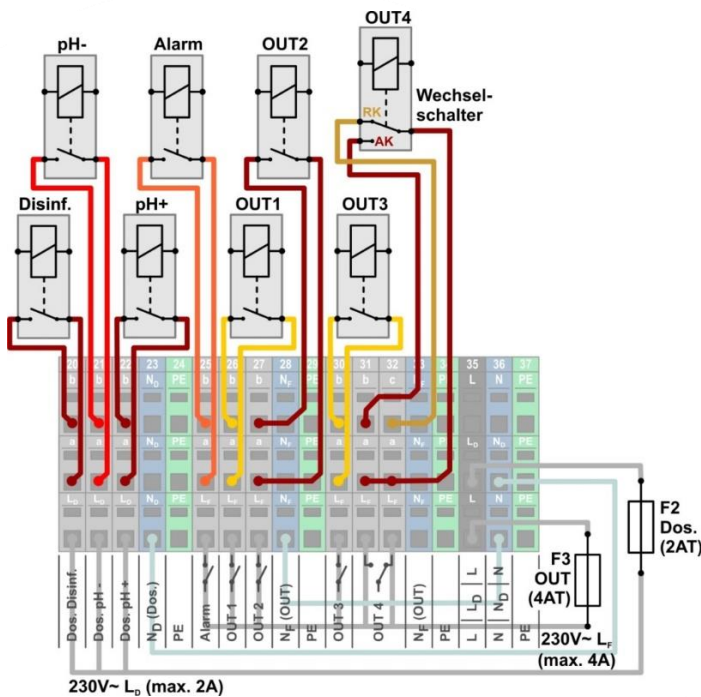


Connection tables & connection variants

Analyt / PoolManager® / PoolManager® PRO

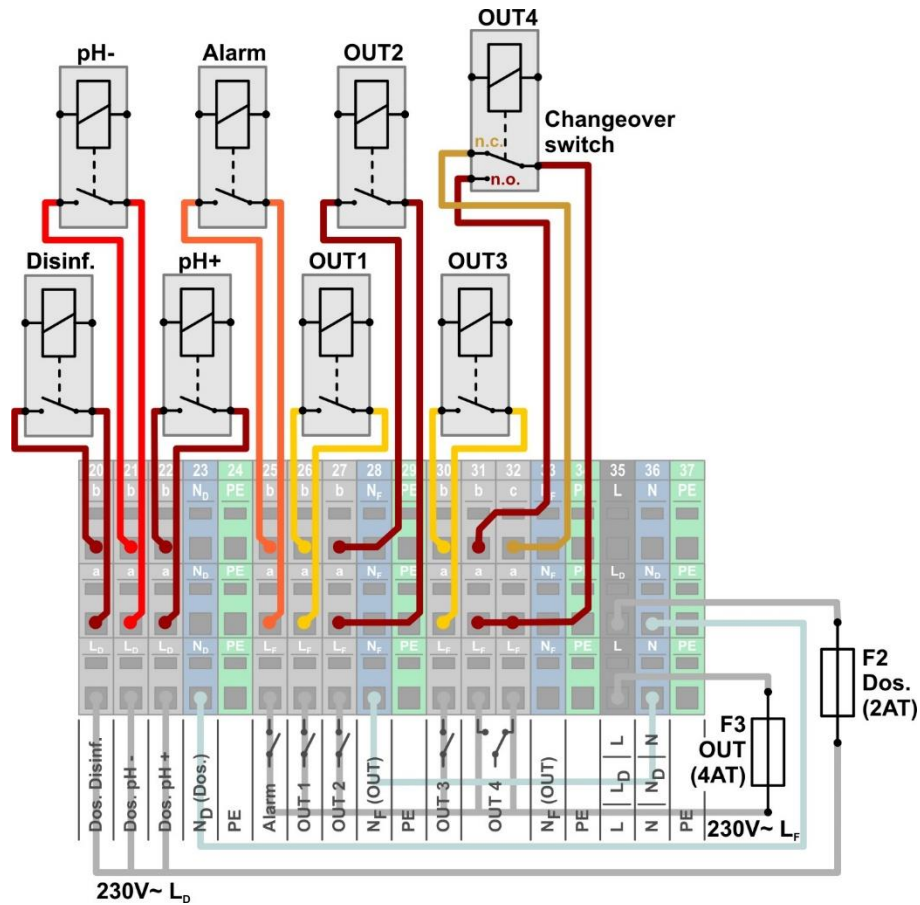
(5. generation „PoolManager 5“ / „PM5“)



Applicable for

Analyt
PoolManager®
PoolManager® PRO

Relay switch outputs in the PoolManager® basic unit



Name	Short name	Terminal	Function
Dosing Disinfection	Disinf.	[20]	
Dosing pH Minus	pH-	[21]	
Dosing pH Plus	pH+	[22]	
Alarm Relay ⁽¹⁾	Alarm	[25]	
OUT1	OUT1	[26]	
OUT2	OUT2	[27]	
OUT3	OUT3	[30]	
OUT4 - Working contact (n.o. normally open closes, if OUT4 switches ON)	OUT4- n.o.	[31]	
OUT4 – Break contact (n.c. normally closed opens, if OUT4 switches ON)	OUT4- n.c.	[32]	

⁽¹⁾ The alarm relay output can be released for alternative functions in the “Alarm settings” menu

Switch inputs in the PoolManager® basic unit

The PoolManager® has four universal switch inputs, to which external volts-free contacts or switches can be connected:



IMPORTANT NOTICE!

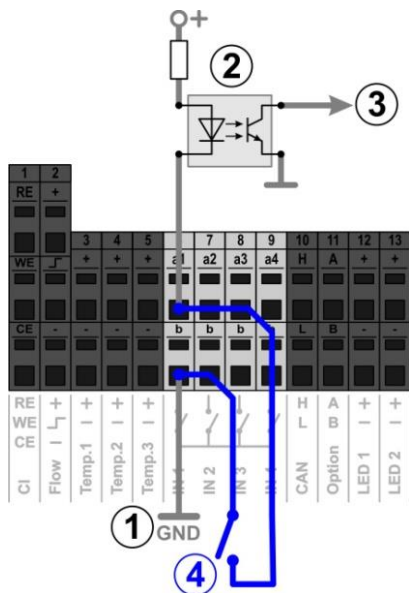
Volts-free contacts

The connected external contacts or switches must absolutely be volts-free (dry contacts).

In case of voltages on the external contact, the inputs of the PoolManager® or the external device may be destroyed.

Universal switch input	Description	Function
IN 1 [6]	Switch input IN 1 [terminal 6]	
IN 2 [7]	Switch input IN 2 [terminal 7]	
IN 3 [8]	Switch input IN 3 [terminal 8]	
IN 4 [9]	Switch input IN 4 [terminal 9]	

- The following diagram shows the internal circuit of the switch input IN1. The other inputs IN 2...IN 4 share the same circuit.



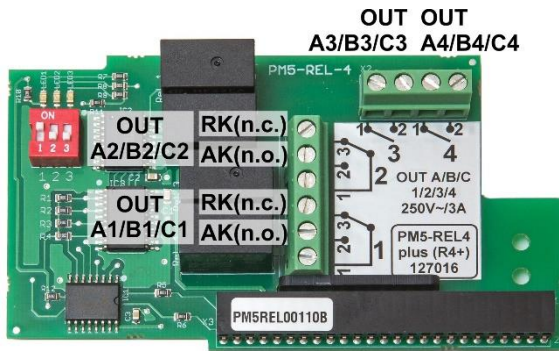
- Internal ground connection of the terminal b (the terminals b of all four switch inputs are internally connected to ground)
- Optocoupler for galvanic isolation (internal)
- Signal for further internal processing
- Connected external volts-free contact or switch

Temperature inputs in the PoolManager® basic unit

The PoolManager® has three temperature inputs for the connection of PT1000 type temperature sensors:

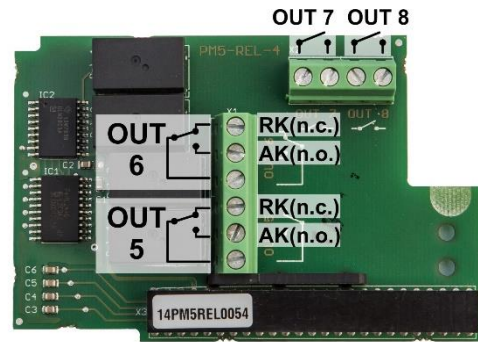
Temperature input	Description	Function
Temp.1 [3]	Temperature input 1 PT1000, 0-50°C	Pool temperature The standard PT1000 temperature sensor in the measuring chamber of the PoolManager® is connected here. For a better accuracy it may be replaced with a PT1000 sensor which is installed directly in the main circulation of the pool.
Temp.2 [4]	Temperature input 2 PT1000, 0-50°C	
Temp.3 [5]	Temperature input 3 PT1000, 0-75°C	

Additional relay switch outputs on the PM5-REL-4 plus (R4+) plug-in module Order No. 127016 (optional)



PM5-REL4 plus (R4+, new version)
Up to three modules per controller

RK(n.c.) = break contact (normally closed)
AK(n.o.) = working contact (normally open)



PM5-REL4 (previous version)

Only 1 module per controller
Can be combined with up to 2
PM5-REL4 plus (R4+) modules.

First relay plug-in module (module A, left socket, PM5-REL4 plus or PM5-REL4)

Name	Short name	Function
OUT A1 (OUT5) – working contact (closes, if OUT A1 switches ON)	OUT A1-AK (n.o.) OUT5-AK (n.o.)	
OUT A1 (OUT5) – break contact (opens, if OUT A1 switches ON)	OUT A1-RK (n.c.) OUT6-RK (n.c.)	
OUT A2 (OUT6) – working contact (closes, if OUT A2 switches ON)	OUT A2-AK (n.o.) OUT5-AK (n.o.)	
OUT A2 (OUT6) – break contact (opens, if OUT A2 switches ON)	OUT A2-RK (n.c.) OUT6-RK (n.c.)	
OUTA3 (OUT7)	OUT A3 OUT7	
OUTA4 (OUT8)	OUT A34 OUT8	

Second relay plug-in module (module B, middle socket, PM5-REL4 plus)

Name	Short name	Function
OUT B1 – working contact (closes, if OUT B1 switches ON)	OUT B1-AK (n.o.)	
OUT B1 – break contact (opens, if OUT B1 switches ON)	OUT B1-RK (n.c.)	
OUT B2 – working contact (closes, if OUT B2 switches ON)	OUT B2-AK (n.o.)	
OUT B2 – break contact (opens, if OUT B2 switches ON)	OUT B2-RK (n.c.)	
OUT B3	OUT B3	
OUT B4	OUT B4	

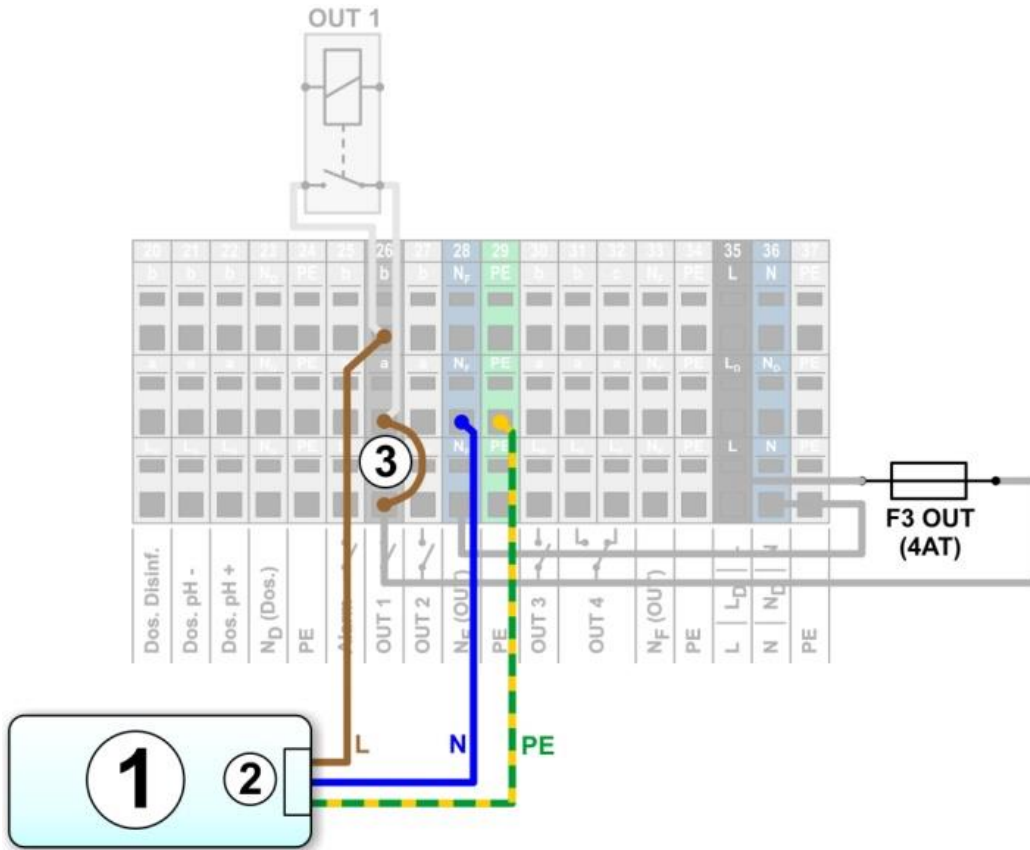
**All switch outputs are volts-free and can switch the following
max. voltages and currents: 3A / 230V~ or 3A / 30V DC**

Third relay plug-in module (module C, right socket, PM5-REL4 plus)

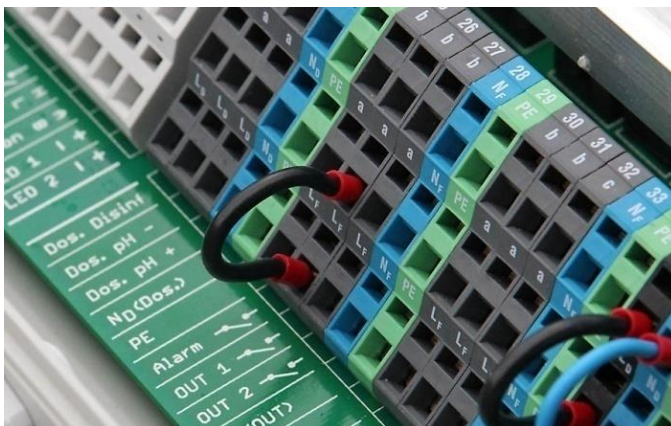
Name	Short name	Function
OUT C1 – working contact (closes, if OUT C1 switches ON)	OUT C1-AK (n.o.)	
OUT C1 – break contact (opens, if OUT C1 switches ON)	OUT C1-RK (n.c.)	
OUT C2 – working contact (closes, if OUT C2 switches ON)	OUT C2-AK (n.o.)	
OUT C2 – break contact (opens, if OUT C2 switches ON)	OUT C2-RK (n.c.)	
OUT C3	OUT C3	
OUT C4	OUT C4	

**All switch outputs are volts-free and can switch the following
max. voltages and currents: 3A / 230V~ or 3A / 30V DC**

Connection variant 1: Connection of the internal 230V~ power supply of the PoolManager®

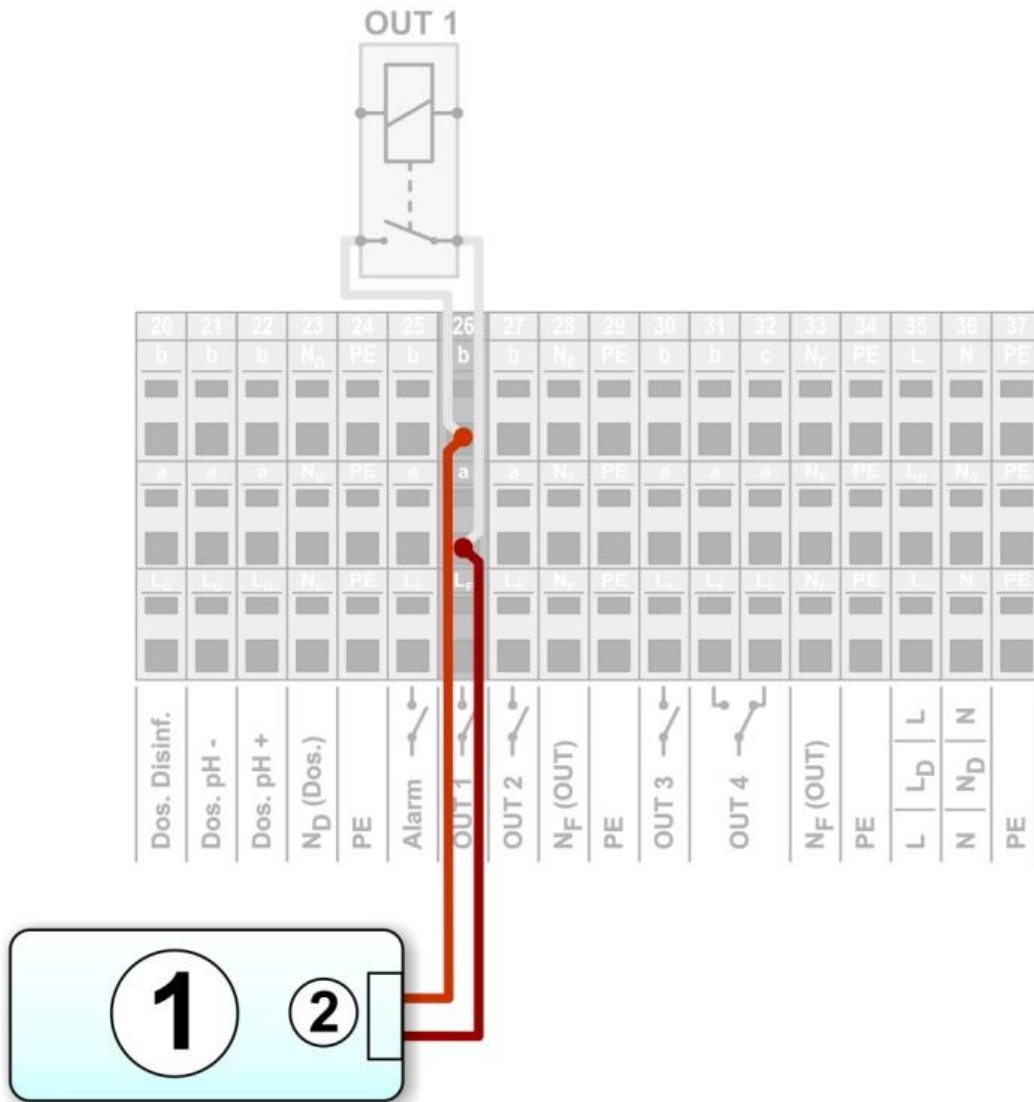


- 1 External system to be controlled (to be switched ON or OFF)
- 2 Power supply 230V~ of the external system
- 3 Jumper from the phase L_F (or L_D) on the lowest terminal to the relay contact a on the middle terminal



Max. 4A in SUM for all outputs using this connection variant

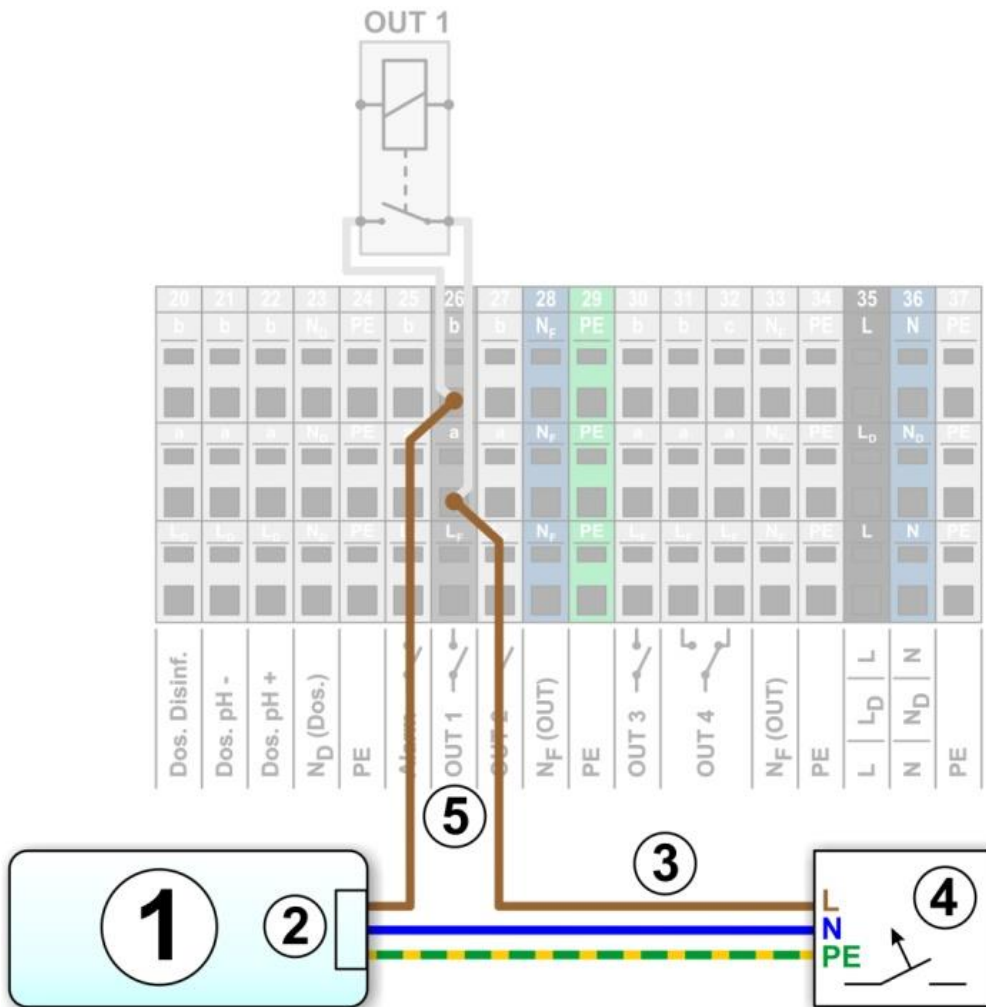
Connection variant 2: Volts-free control signal



- 1 External system to be controlled (to be switched ON or OFF)
- 2 Volts-free control input of the external system

Max. 5A PER OUTPUT

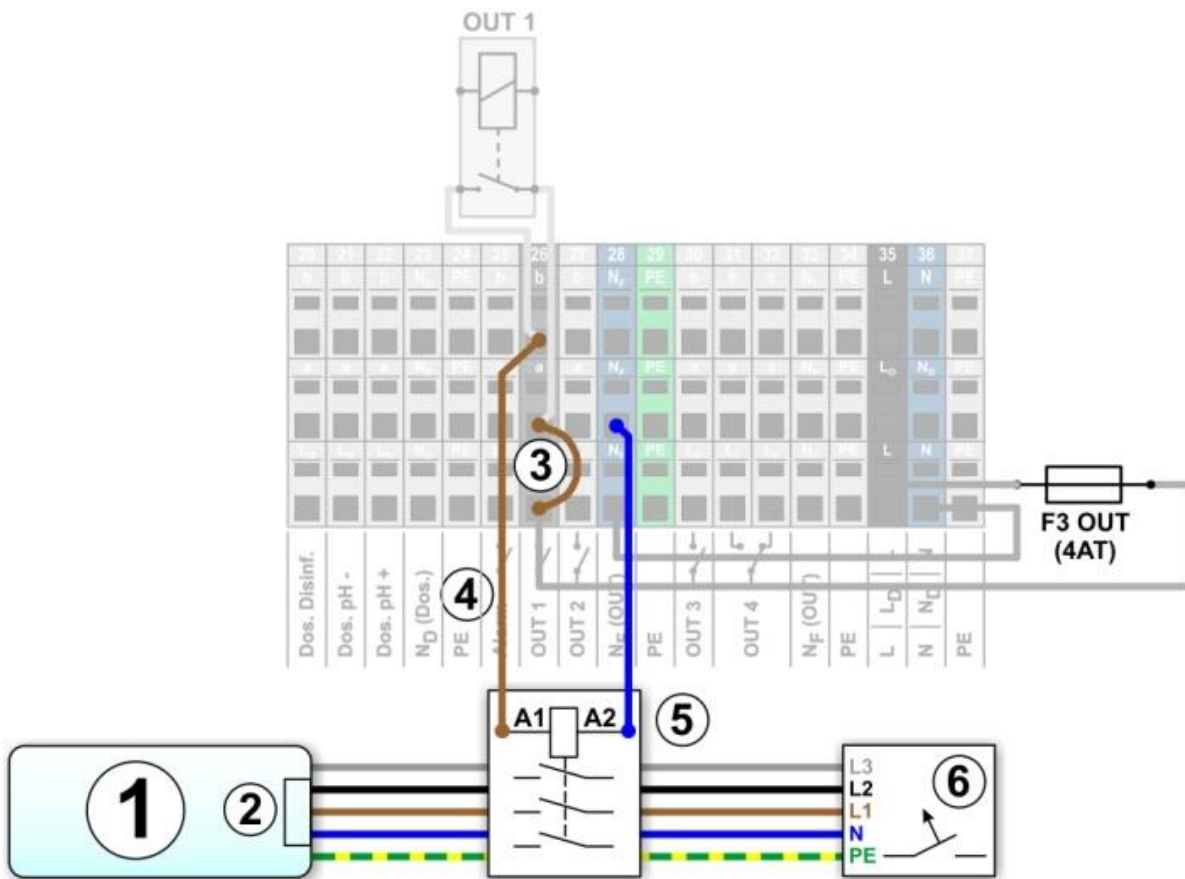
Connection variant 3: External 230V~ supply (from installation on site)



- 1 External system to be controlled (to be switched ON or OFF)
- 2 Power supply 230V~ of the external system
- 3 External 230V~ supply (from the installation on-site)
- 4 External electrical protection (e.g. fuse) according to the local regulations
- 5 Switched phase L of the external 230V~ supply

Max. 5A PER OUTPUT

Connection variant 4: External power switch (230V~ or 400V~ contactor)



- 1 External system to be controlled (to be switched ON or OFF)
- 2 Power supply 230V~ or 400V~ of the external system
- 3 Jumper from the phase L_F (or L_D) on the lowest terminal to the relay contact a on the middle terminal
- 4 Switched phase L_F (or L_D) for the contactor coil
- 5 External power switch (230V~ or 400V~ contactor)
- 6 External electrical protection (e.g. fuse) according to the local regulations

Max. switching power is only limited by the external power switch (contactor)