

Lighting & HVAC Control System

DOC#
ALUXQ10

Controllers:	AluxM1	Slave relays:	AluxS1
	AluxM4		AluxS2
	AluxM5		AluxS3
			AluxS4

Function:

Switching off of lighting and HVAC units in un-occupied rooms or areas.

Configuration:

An ALUX control system consists of a controller unit and up to 8 slave relays controlled or switched by the controller.

The switching or control signal is low voltage and is done via a "daisy-chain" configuration connecting the slave relays to the controller.

The controller receives input from one or more occupancy sensors and switches the slave relays according to its internal logic and customer specified settings.

Movement or occupancy detection can be done utilizing occupancy sensors supplied by Deman or any other 3rd party 12 or 24V sensors.

Slave relays available:

- inline unit
- plug-socket unit
- voltage free output unit
- high current unit.

The inline and plug-socket slave relays switches power from overhead power ducts to light fittings while the voltage free output slave and high current slave relays are usually used for HVAC or other environmental control purposes.

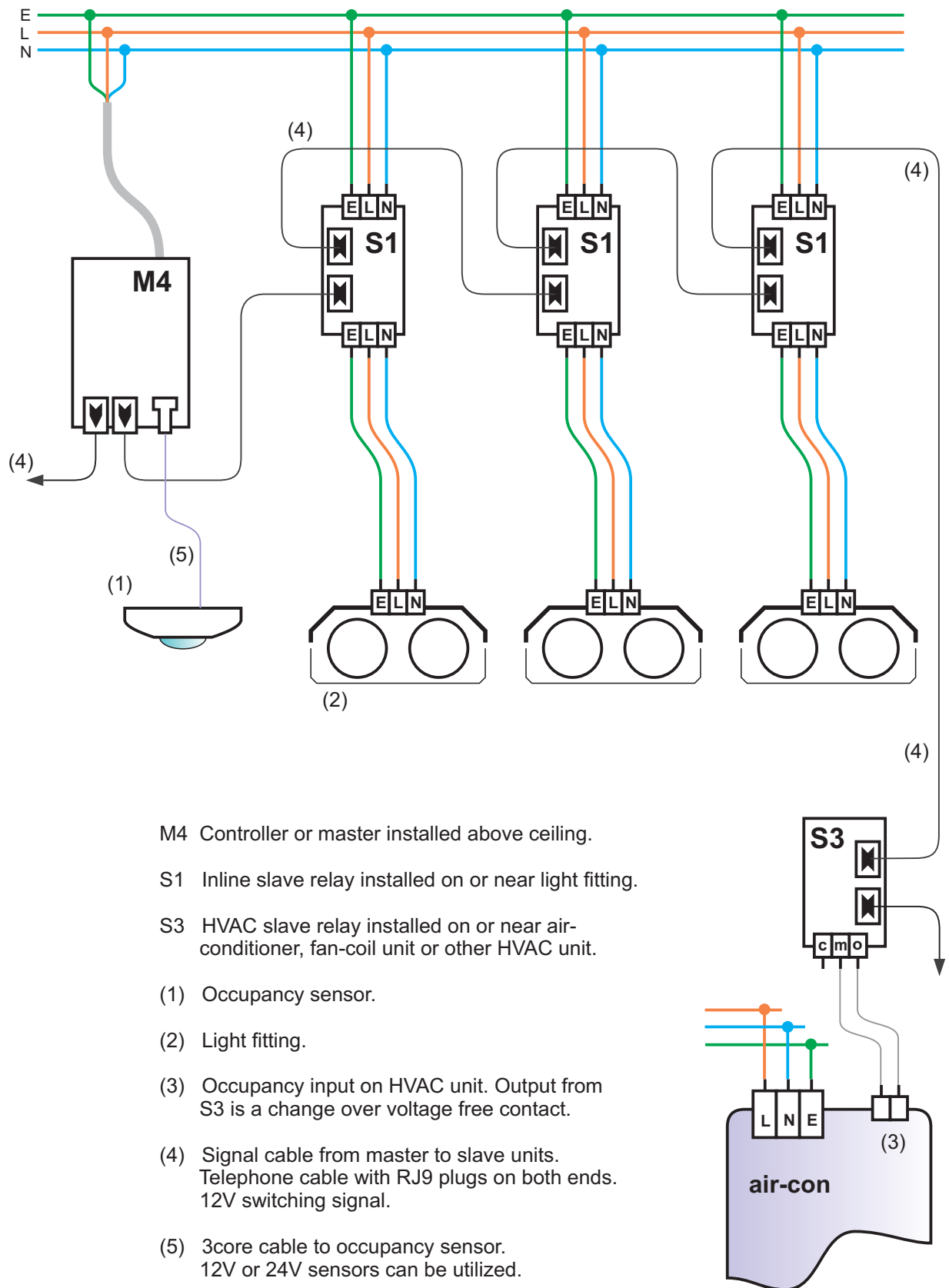
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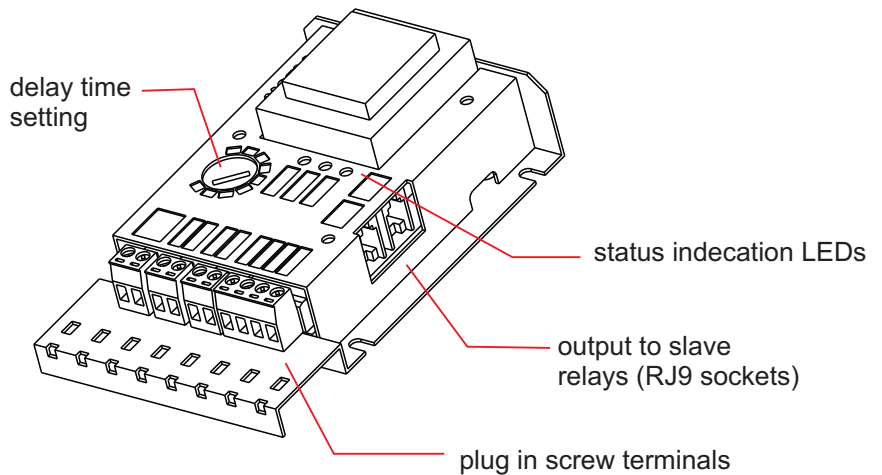
Related documents

ALUXQ20 Wiring examples

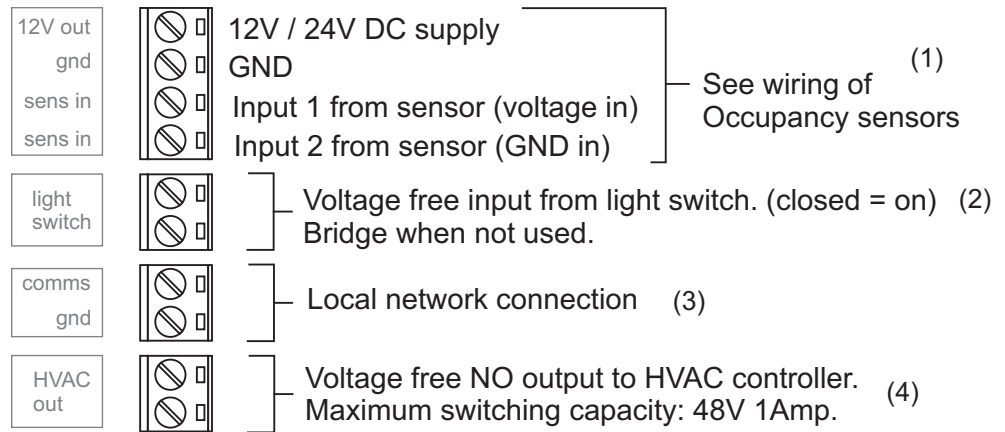
Wiring example



Design:



Screw terminals:



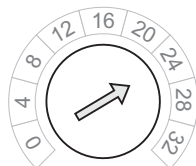
Functioning:

- (1) Input from occupancy sensor restarts internal timer. Slave relays are switched on when timer is running. Output to slave relays on side of unit.
- (2) Light switch open causes slave relays to be switched off.
- (3) Each M1 controller on a local net transmits its sensor input onto the net. All the M1 controllers on the net reacts to these inputs. At least one controller must have a sensor plugged in.
- (4) Contact is closed when timer is running. Even with light switch open.

Status indecation:

- power 230V power to the unit is on. (green)
- sensor Occupancy sensor input on. (yellow)
- lights 12V output to slave relays is on. Flashes if wiring to slave units shorted. (red)

Delay time setting:



By turning the timer "POT" with a screw driver the minimum on time period can be set from 0 to 32 minutes. Internal logic can lengthen this time if the need arises.

AluxM1 master (continues)

Output to slave relays:

Two RJ9 sockets are available for wiring to the slave relays. (A maximum of 9 slave relays)

Signal cable from master to slave units is a 4way telephone cable with RJ9 plugs on both ends.

Switching signal to the slave relays is 12V.

NOTE: The "daisy chain" wiring to the slave units must not loop back.



Electrical specification:

Power in: 230V +/- 15% 5VA

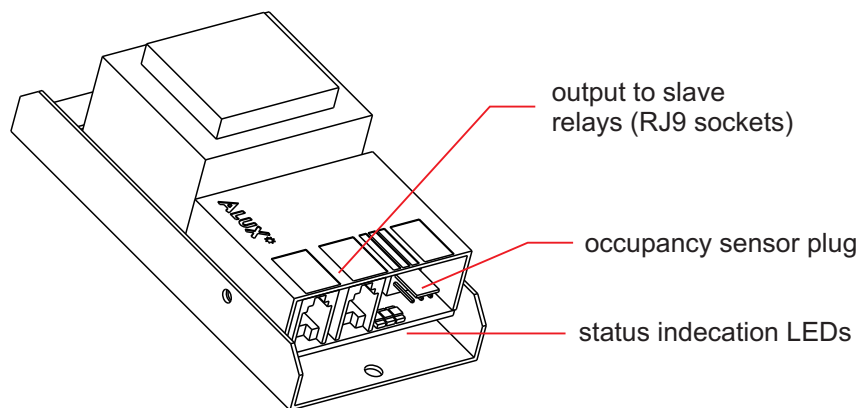
Sensor supply: 12V or 24V 700mW max.

Signal to slave relays: 9 relays max.

HVAC out: Voltage free contact. Cotact rating 48V 1A.

AluxM4 mini master

Design:



Functioning:

Input from occupancy sensor restarts internal timer.

Slave relays are switched on when timer is running.

A self learning program adapts the timer setting to the environment.

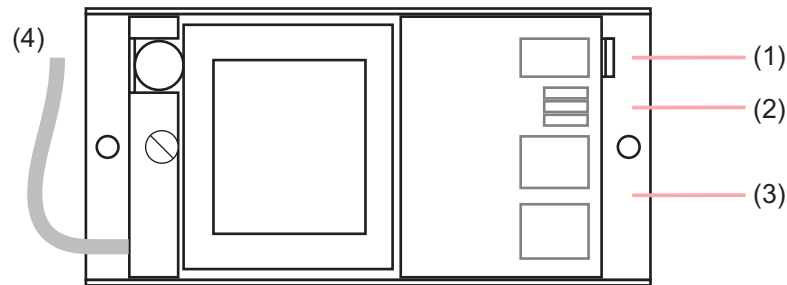
Electrical specification:

Power input:230V (+ 15% -15%) 5VA

Switching capacity: 8 slave units.

Sensor supply: 12 or 24V DC 700mW max.

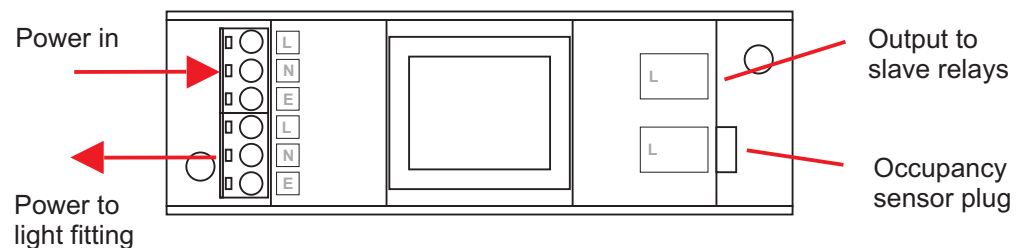
AluxM4 mini master (continues)



- (1) Occupancy sensor socket (See wiring of occupancy sensors.)
- (2) Indication LEDs
 - power 230V power to the unit is on. (green)
 - sensor Occupancy sensor input on. (yellow)
 - lights 12V output to slave relays is on. Flashes if wiring to slave units shorted. (red)
- (3) Output to slave relays. RJ9 sockets.
- (4) Power cord with 5A plug.

AluxM5 micro master

Design:



Functioning:

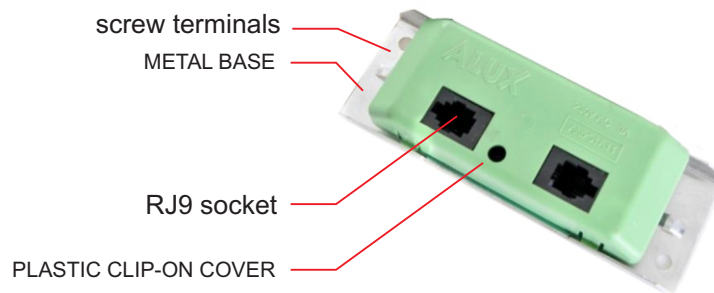
- Input from occupancy sensor restarts internal timer.
- Slave relays are switched on when timer is running.
- Internal relay switches with slave relays.
- A self learning program adapts the timer setting to the occupancy environment.

Electrical specification:

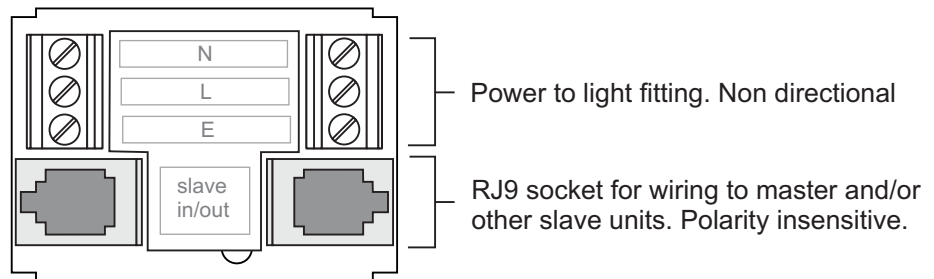
- Power input: 230V (+ 15% -15%) 3,5VA
- Switching capacity: 3 slave units.
- Sensor supply: 12V DC 700mW max.

AluxS1 inline slave relay

Design:



Wiring:

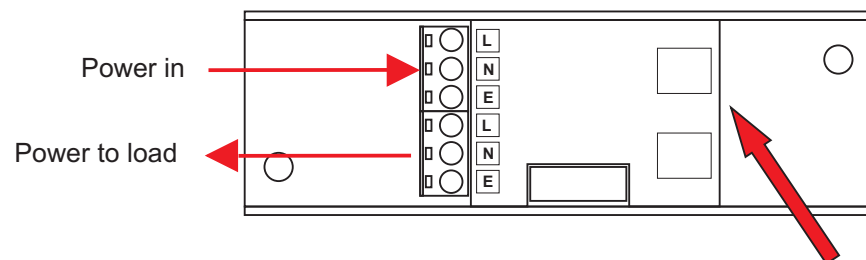


Electrical specification:

Switching : 230V AC 1A free hanging (2 off ECG each with 2x 85W lamps)
2A if fixed to a metal surface.

AluxS2 high current slave relay

Wiring:

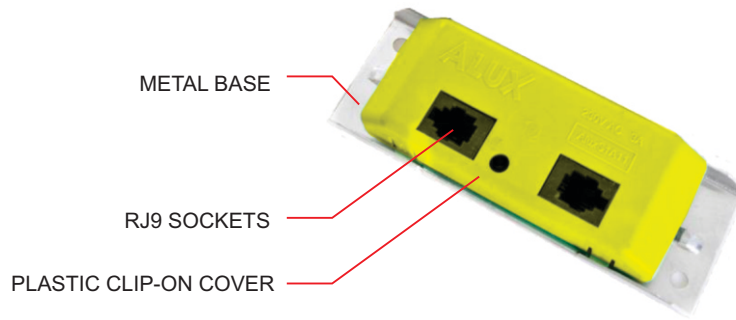


RJ9 sockets for wiring to master and/or other slave units.

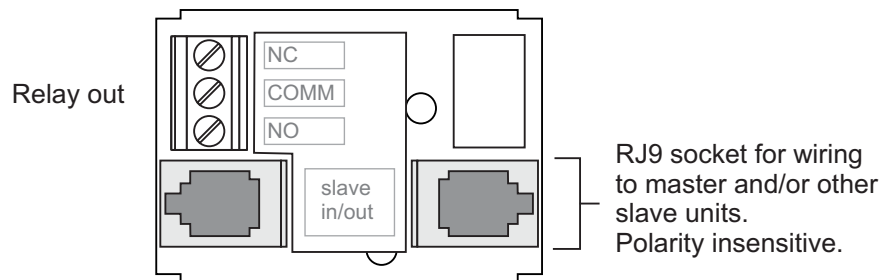
Electrical specification:

Switching : 230V AC 15A

AluxS3 voltage free output slave relay



Slave wiring:

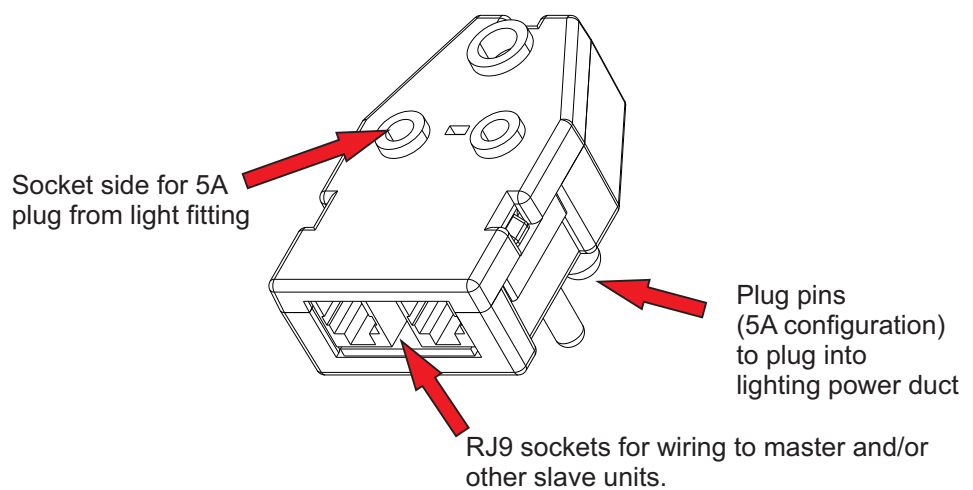


Electrical specification:

Switching : 48V 1A max.

AluxS4 plug socket slave relay

Slave wiring:



Electrical specification:

Switching : 230V AC 3A

Product Listing

M1	ALuxM1A21	Controller. 24V DC out to occupancy sensor
	ALuxM1A31	Controller. 12V DC out to occupancy sensor
M4	ALuxM4A11	Mini Controller. 12V DC out to occupancy sensor
	ALuxM4A41	Mini Controller. 24V DC out to occupancy sensor
M5	ALuxM5A10	Micro Controller 12V DC out to occupancy sensor

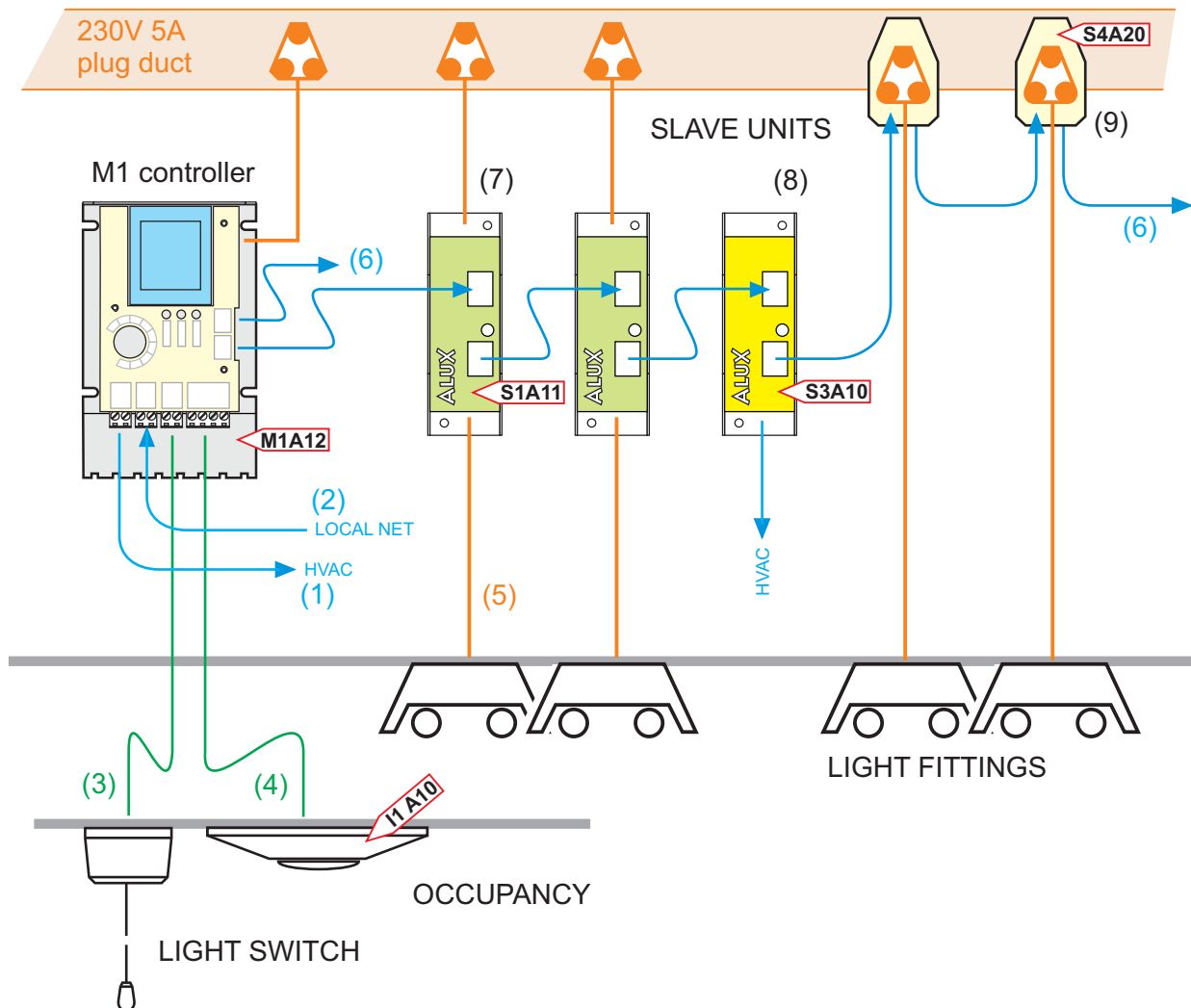
S1	ALuxS1A11	Inline slave relay
S2	ALuxS2A10	High current slave relay
S3	ALuxS3A10	Voltage free output slave relay
S4	ALuxS4A20	Plug-socket slave relay

	CLI-1806A10	Ceiling mount occupancy sensor 7m diameter sensing area
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H	ALuxH10	M1/M4 to slave relay & slave relay to slave relay 3m cable
	ALuxH20	M1/M4 to slave relay & slave relay to slave relay 5m cable
	ALuxH30	M1/M4 to slave relay & slave relay to slave relay 8m cable
	ALux2KH10	ALuxS3 to HVAC controller 2m cable
	ALux3KH20	M1 to Suren sensor 2m cable
	ALux3KH30	M1 to Hubbel sensor 2m cable
	ALux3KH51	M4 to Suren sensor 2m cable
	ALux3KH70	M4 to Hubbel sensor 2m cable
	ALux3KH90	M4 to Leviton sensor 2m cable

AluxM1 system example

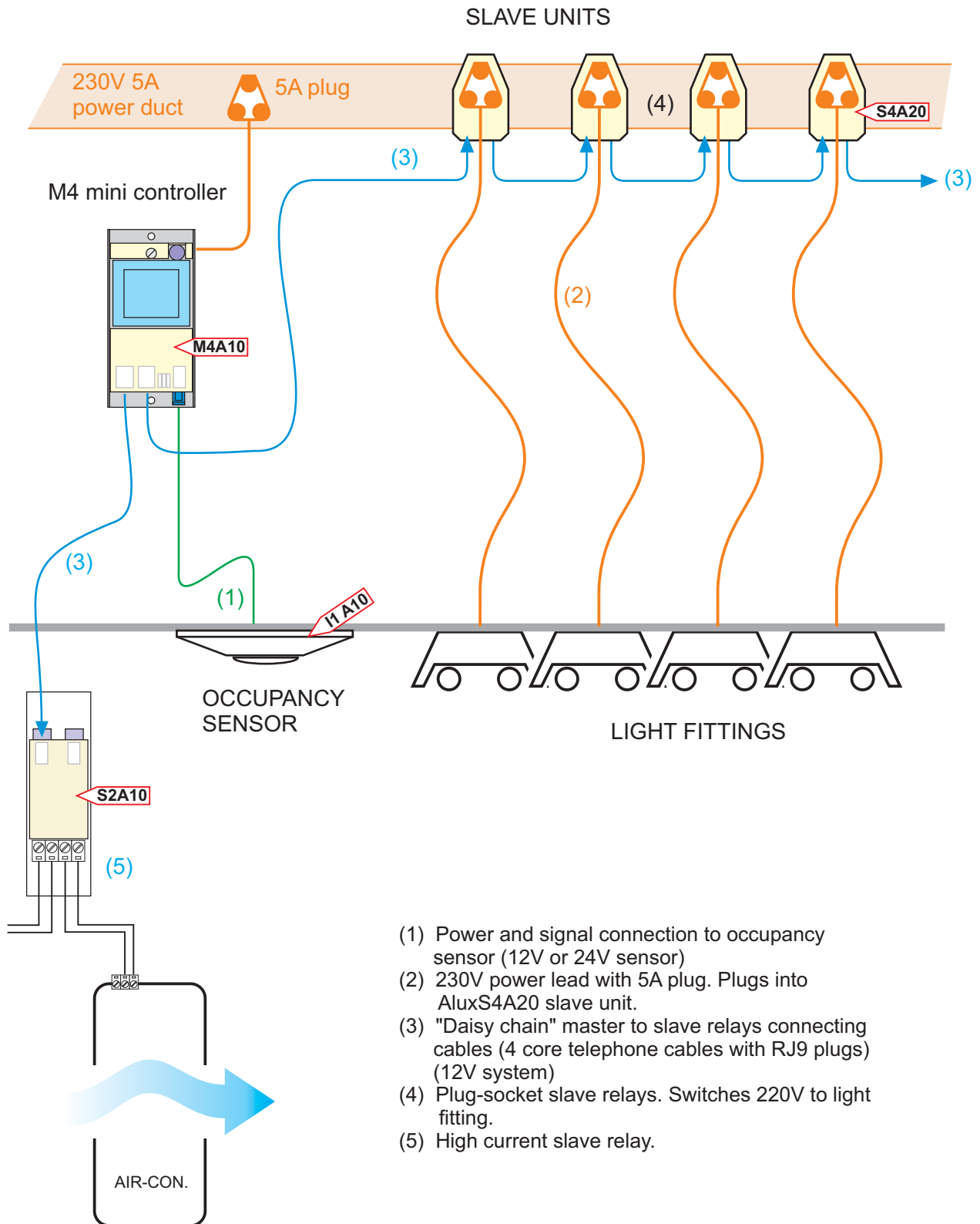
Controller with various slave relays



- (1) Voltage free output to air conditioning system (48V max.)
- (2) Multi masters area network.
- (3) External on/off switch (voltage free input).
- (4) Power and signal connection to occupancy sensor. (12V or 24V sensors)
- (5) 230V power lead.
- (6) "Daisy chain" master to slave relays connecting cables (4 core telephone cables with RJ9 plugs) (12V system)
- (7) Inline slave relays. Switches 230V from power duct to light fittings.
- (8) Voltage free output slave relay. General purpose change over contact out. (48V max.)
- (9) Plug-socket slave relays. Switches 230V from power duct to light fittings.

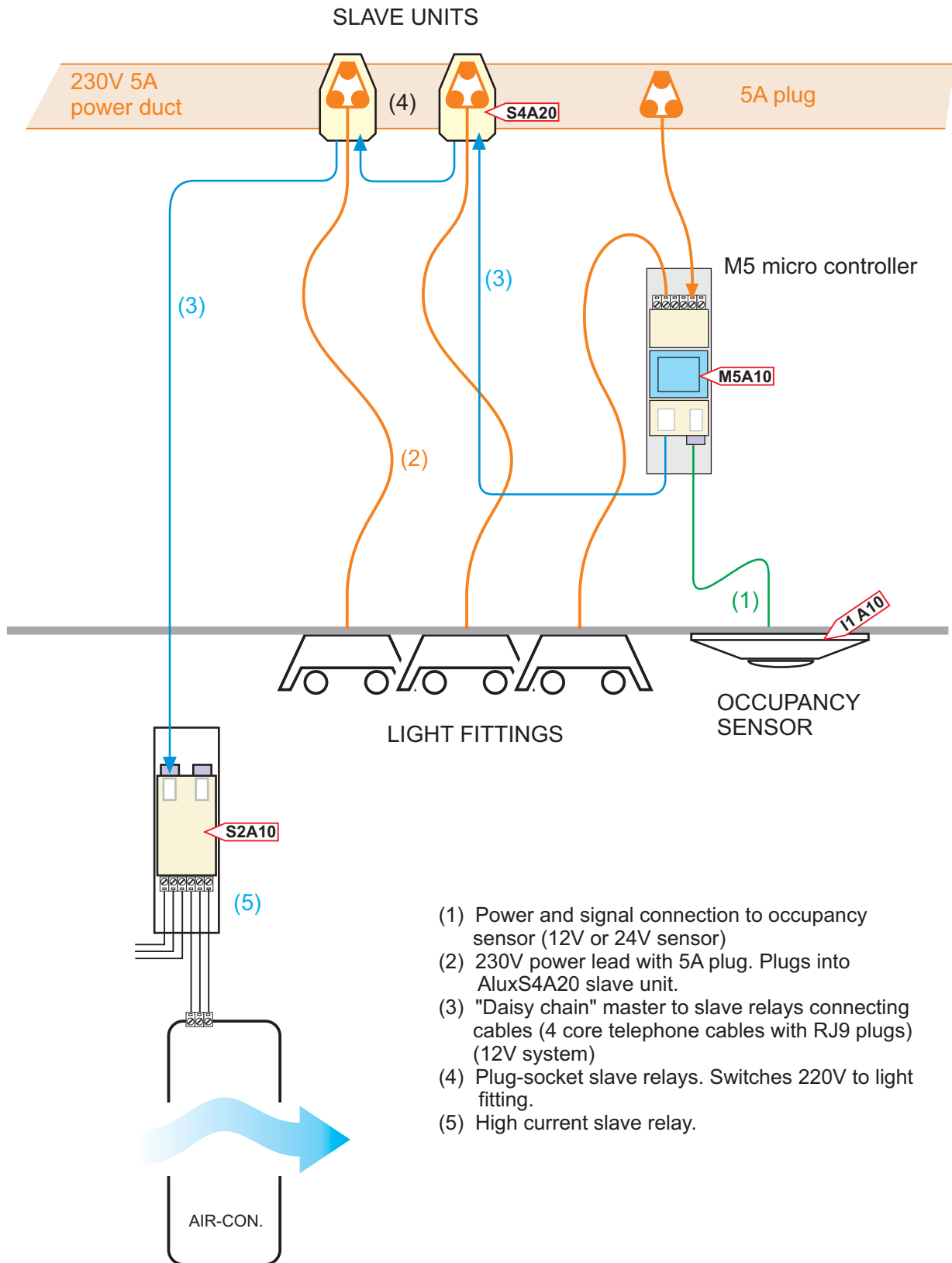
AluxM4 system example

Mini controller with plug-socket slave relays



AluxM5 system example

Micro controller with plug-socket slave relays



www.deman.co.za

Deman Manufacturing (Pty)Ltd



10 Steenbok street
Koedoespoort
0186
Pretoria
South Africa

PO BOX 26208
Gezina
0031
Pretoria
South Africa

tel +27 12 403 8000
fax +27 12 333 3371
www.deman.co.za