AT-SL-R & AT-SL-R-SA

RF relay controller

Overview

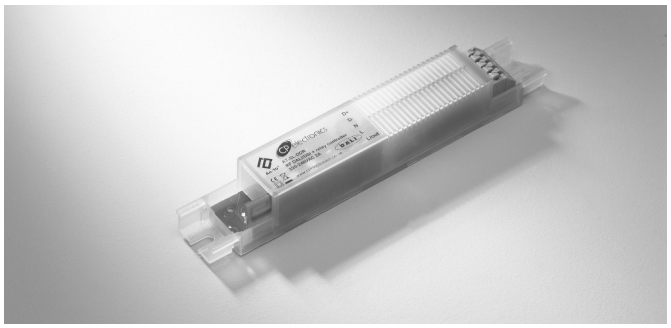


Fig 1: AT-SL-R

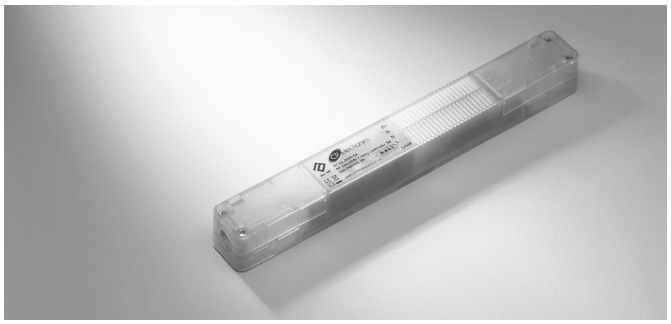


Fig 2: AT-SL-R-SA

The AT-SL-R and AT-SL-R-SA are wireless controllers with a relay output capable of switching incandescent, fluorescent and compact fluorescent lighting.

Two versions are available. The AT-SL-R is designed for fitting inside a luminaire. The AT-SL-R-SA is suitable for mounting remotely.

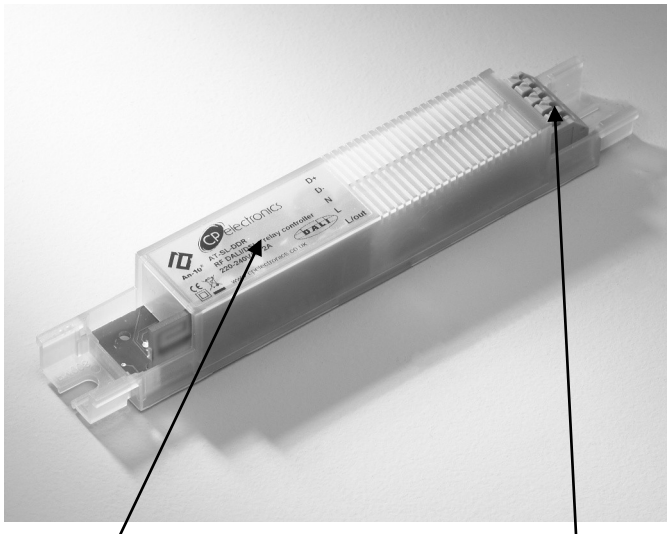
The output comprises a mains voltage relay capable of simple on/off switching.

These devices are integrated with other devices as part of an **An-10**® lighting control system. The built-in RF transceiver allows wireless communication with all other **An-10**® compatible products, e.g. the AT-BB-IN Input Unit, useful for push-button scene selection and absence detection.

All functionality is fully programmable.

Features

Fig 3: Front features (AT-SL-R shown)



Clear casing
which covers.....
IR Receiver
Status LEDs

Power input
& switched output
Connector
(Channel 1)

IR Receiver
Receives control and programming commands from an IR (infrared) handset (Fig.3).

Status LEDs
These flash **R**ed and/or **G**reen to indicate the following:

Valid setting received	G
Invalid setting received	R R R R R R
Software reset received	G G G G G G
Factory reset received	R G R G R G

Power Input & Switched Output Connector (Channel 1)
Used to connect mains power to the unit and to connect a switched load.

Installation

AT-SL-R mounting

Mount and wire the unit in the following method.

- Affix the AT-SL-R to the inside of a luminaire using M4 screws as shown in the diagram below (Fig. 4).
- Use a flat-bladed screwdriver to depress the spring actuators. Insert cable when the actuator is fully depressed. Release of the sprung actuator clamps the conductor. The sprung terminals are only suitable for solid core cable up to 1.5mm^2.

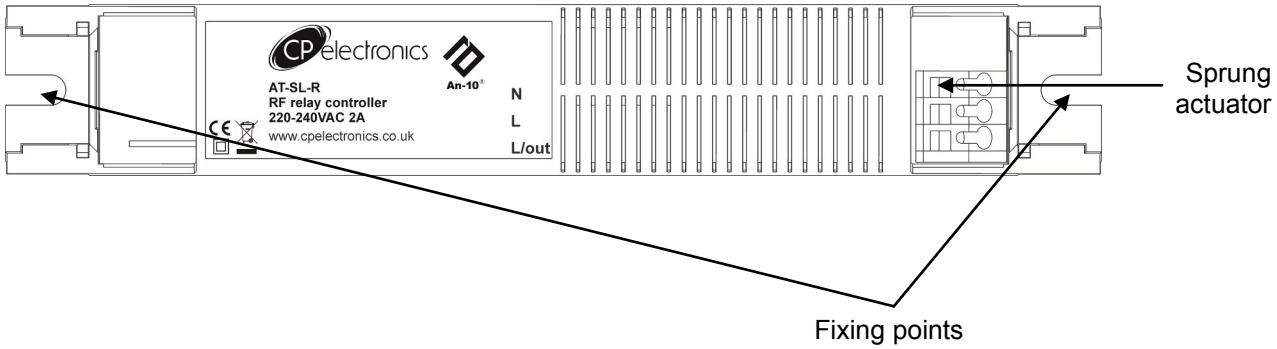


Fig 4: AT-SL-R mounting

AT-SL-R-SA mounting

Mount and wire the unit in the following method.

- Remove terminal covers by unscrewing the clamp screws and inserting a small flat-bladed screwdriver into the slots shown in the diagram below (Fig. 5).
- Affix the AT-SL-R-SA using the fixing slots shown in the diagram below (Fig. 7). The fixing slots are suitable for M4 screws.
- Wire unit using the screw terminals. The screw terminals are suitable for solid core or stranded cable up to 2.5mm^2. Maximum cable OD 10mm.
- Ensure that the main cable sheathing is over the cable clamp area (Fig. 7).
- Clip on the terminal covers.
- Insert the clamp screws and screw up until the cable is firmly clamped.

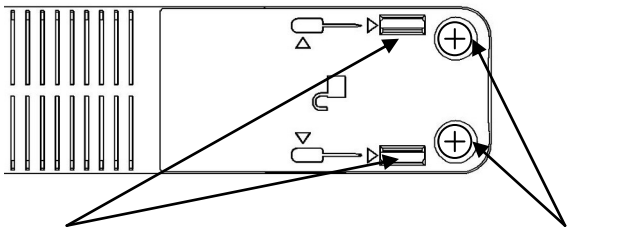


Fig 5: AT-SL-R-SA terminal cover

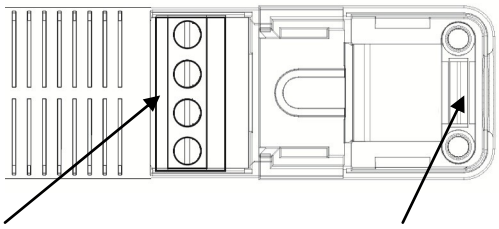


Fig 6: AT-SL-R-SA terminal cover

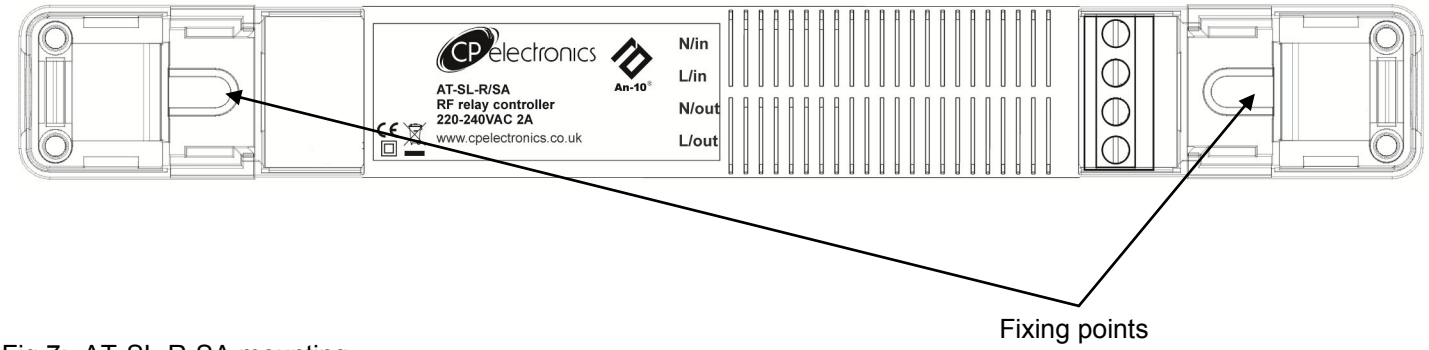


Fig 7: AT-SL-R-SA mounting

IMPORTANT NOTICE!
This device should be installed by a qualified electrician in accordance with the latest edition of the IEE Wiring Regulations and any applicable Building Regulations.

Wiring

The switched output of the AT-SL-R can either be used to switch a single channel of standard, non-dimming luminaires.

Multiple luminaires may be connected in parallel to the **N** and **L/out** terminals as long as the maximum total load is not exceeded.

AT-SL-R wiring

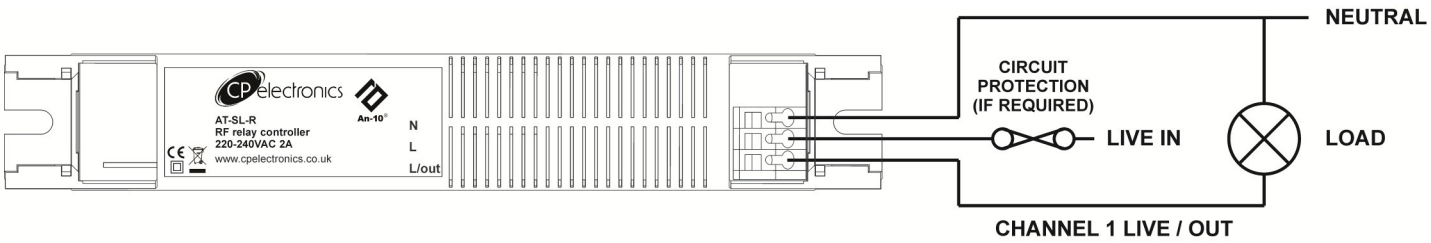


Fig 8: AT-SL-R wiring

AT-SL-R-SA wiring

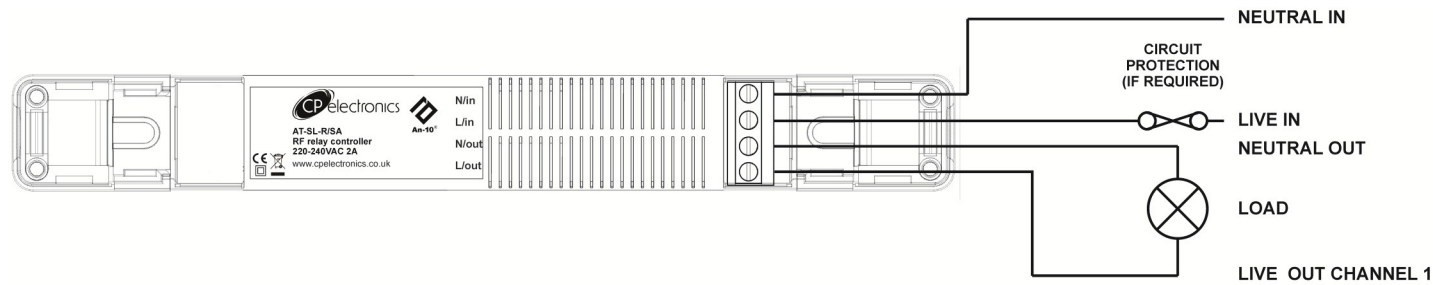


Fig 9: AT-SL-R-SA wiring

Fault finding

What if the load does not turn ON?

- Check that the live supply to the circuit is good.
- Check that the load is functioning by bypassing the Controller (e.g. link terminals **L/in** and **L/out**).
- Check that the unit is correctly addressed, see 'Step 1: Set channel addresses and channel load type' on page 4.

Basic programming

The functionality of the AT-SL-R is controlled by a number of parameters which can be changed or programmed by any of the following devices:

- **UHS4** Infrared Handset
- **UN-LCDHS** Infrared Handset (with LCD)

For most basic programming operations the UHS4 handset is recommended and the following procedures are based on using this device.

Point the handset at the Controller and send the required programming commands to the unit as shown in Steps 1, 2 and 3.

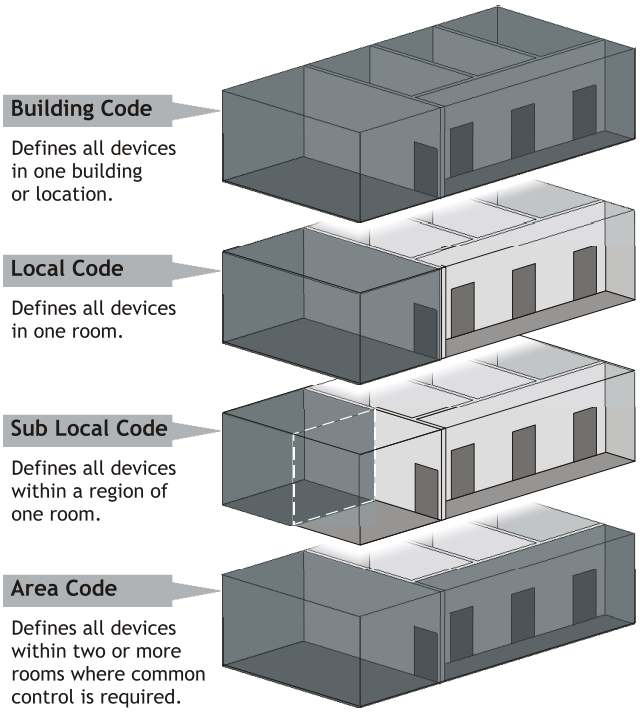
Valid commands will be indicated by a green LED flash. See page 1 for details of other LED responses.

Step 1: Set channel addresses and channel load type

The Controller has one switched output channel.

To relate the function of different channels it is necessary to set the addresses correctly. For example, a scene select message sent from a device with a Local Code of 1 will only be actioned by devices that also have a Local Code of 1.

The output channel also has a Circuit number. This allows different physical channels to be linked and controlled as a single Circuit.



Using the UHS4 handset...

Activate Configuration Mode F + 7 (CONFIG)

Set Building Code — B — enter code from **1** to **999**

Set Local Code — L — enter code from **1** to **999**

Set Sub-local Code — S — enter code from **1** to **99**

Set Area Code — A — enter code from **1** to **999**, or **0** to clear all area codes from selected channel(s)

Change Circuit Number — F + B — Circuit Number from **1** to **999** — Channel Number from **1** or **2**

Add another Channel to same Circuit

Send the new setting (SENSING)

HINT: Press again to send the same setting to another device

Return to User Mode F + 7 (CONFIG)

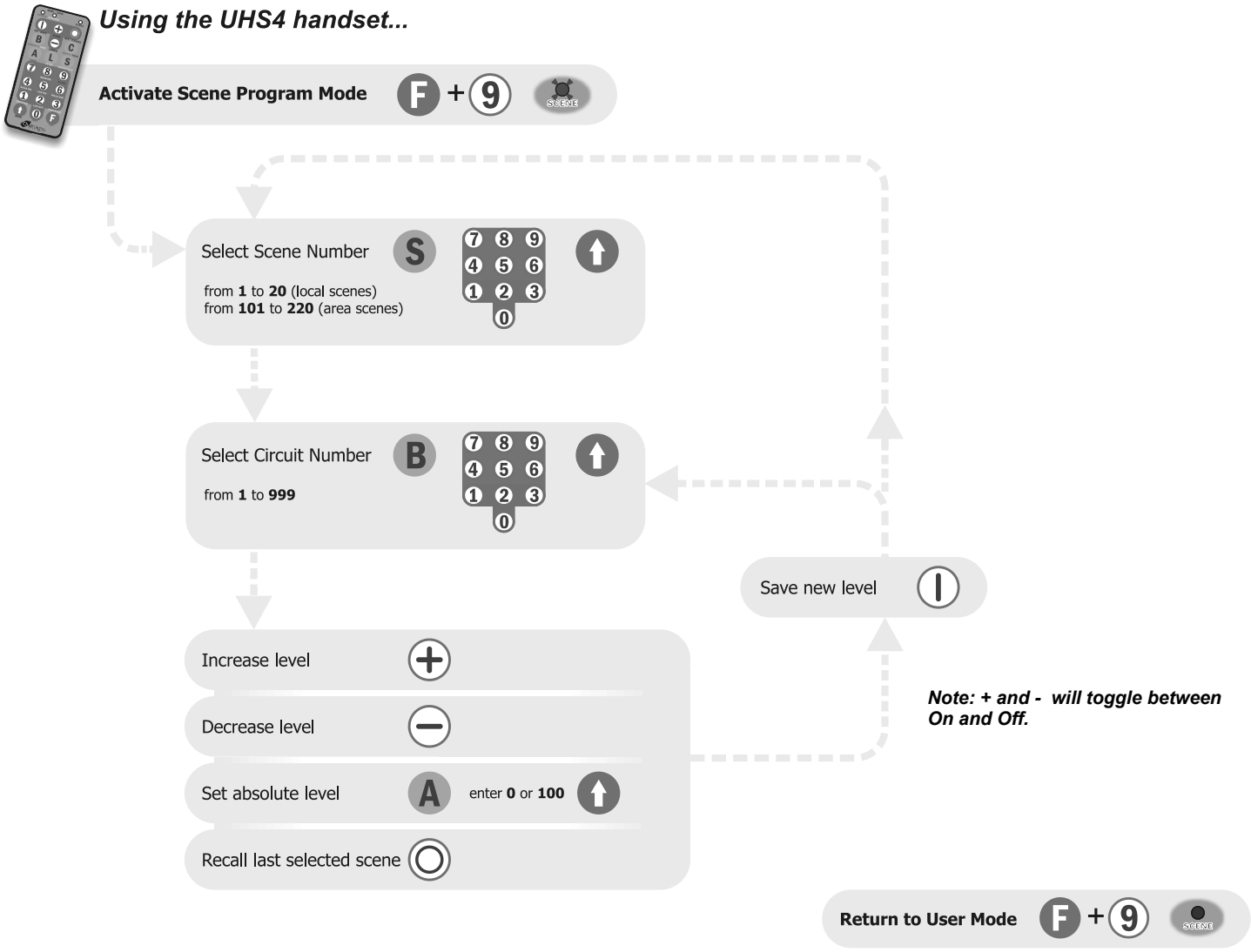
Step 3: Re-program scenes

The AT-SL-R has capacity to store 20 Local Scenes and 120 Area Scenes. By default all Scenes are pre-programmed with the following channel levels, but these can be changed as required:

	Local Scenes								
	1	2	3	4	5	6	...	19	20
Ch1	on	on	on	on	on	on	...	on	off
	Area Scenes								
	101	102	103	104	105	106	...	119	220
Ch1	on	on	on	on	on	on	...	on	off

NOTE: *Local Scene 20 and Area Scene 120 are designated 'off' scenes within a system and should normally be programmed with all channels off or at zero.*

Scenes can be recalled by using an IR Handset or by a switch/button plate via an AT-BB-IN Input Unit.



Advanced programming

The tables on pages 6 and 7 give a summary of all programmable parameters for the AT-SL-R Controller.

Parameter Name	Default Value	Range / Options	Description	Programming Devices	
				UHS4	UN-LCDHS
For Device					
Product ID	*Automatically assigned by the device*	1 to 999	A number used to uniquely identify each device within a range of devices that are set to the same Local Code.	✘	✓
Building Code	1	1 to 999	A number shared by all devices that belong to the same building or system.	✓	✓
Lock	0	Enable (1) or disable (0)	Lock the An-10 network. Prevents more devices joining the network.	✘	✓
*For **Channel 1** (Switched Output)*					
Local Code	1	1 to 999	A number corresponding to the Local Code of all devices to be controlled by an associated input channel.	✓	✓
Sub Local Code(s)	*Not set*	1 to 99 0 to clear	A number corresponding to the Sub Local Code of all devices to be controlled by an associated input channel. Up to 20 Sub Local Codes can be set for Channel 1 and 2, e.g. 15 on Ch.1 and 5 on Ch.2, etc.	✓	✓
Area Code(s)	*999*	1 to 999 0 to clear	A number corresponding to the Area Code of all devices to be controlled by an associated input channel. Up to 32 Area Codes can be set for Channel 1 and 2, e.g. up to 16 per channel, or 20 on Ch.1 and 12 on Ch.2, etc.	✓	✓
Circuit Number	1	1 to 999	Sets the circuit number for this channel.	✓	✓
Output State	*Set by Scene*	0-100% 0=off	The current output state of the channel, for example as set by a Scene Select command.	✓	✓
Raise from off	1	Enable (1) or disable (0)	Enables raise from off feature.	✘	✓
Lower from off	1	Enable (1) or disable (0)	Enables lower from off feature.	✘	✓
Emergency output	0	Enable (1) or disable (0)	Enabling this sets the output to a ‘switched permanent live’ mode for emergency ballasts.	✘	✓

Parameter Name	Default Value	Range / Options	Description	Programming Devices	
				UHS4	UN-LCDHS
Local On Scene	1	1 to 20	The local scene request sent to all devices with the Local Code specified .	✘	✓
Area On Scene	101	101 to 220	The area scene request sent to all devices with the Area Code(s) specified. NOTE: *The Area On Scene is ignored unless one or more Area Codes are set for the corresponding input channel and they match the Area Codes set in any output channel.*	✘	✓
Local Off Scene	20	1 to 20		✘	✓
Area Off Scene	220	1 to 20		✘	✓

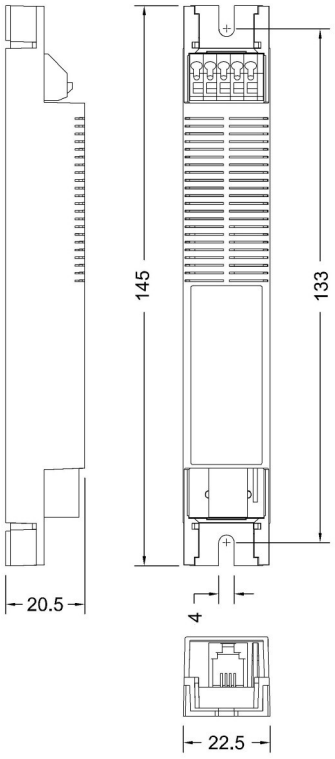
Technical data

Dimensions	See diagrams opposite
Weight	0.1kg
Supply Voltage	230VAC +/- 10%
Frequency	50Hz
Maximum Load	*Channel 1 (switching):* 2A of lighting and/or ventilation including incandescent, fluorescent, compact fluorescent, low voltage (by switching the primary of transformer).
Terminal Capacity	AT-SL-R 1.5mm^2 Solid only AT-SL-R-SA 2.5mm^2 Solid and stranded. Maximum cable OD 10mm.
Receiver Class	2
Transmitter Duty Cycle	<10% on g3 band (default band)

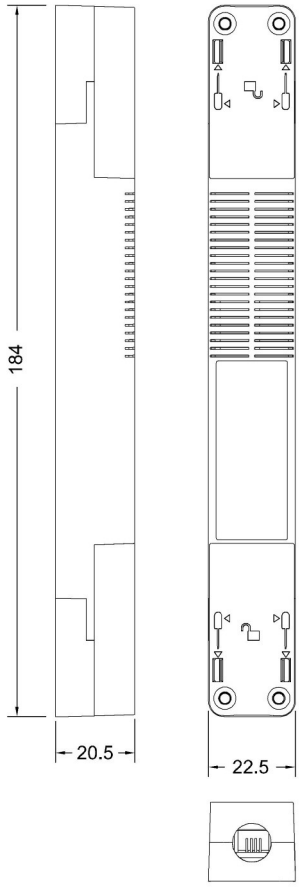
Order code	Region	Radio frequency	Compliance
blank	European Union	868MHz	EN300 220-2 V2.1.2 EN301 489-1 V1.8.1 EN301 489-3 V1.2.1 LVD-2006/95/EC
-A2	Australia & New Zealand	915MHz	AS/NZS 4268:2008

	<0.1% on g2 band <1% on g1 band
Range	The maximum RF range between An-10 devices is 100m in free air and up to 30m indoors. However the materials used within a building will vary and this will impact upon the RF range. In reality the nature of how the An-10's hybrid-mesh works means that in most scenarios the individual range of an An-10 product will not be important.
Temperature	0ºC to 35ºC
Humidity	5 to 95% non-condensing
Material (casing)	Flame retardant polycarbonate
Classifications	Insulation Class II Purpose Automatic control Construction Independently mounted control for surface mounting. Type of action Type 1.B action (micro disconnection). Pollution Degree 2 Software Class A Rated impulse voltage, 4000V

AT-SL-R



AT-SL-R-SA



Hereby, CP Electronics Ltd, declares that this AT-SL-R is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC. The declaration of conformity may be obtained for CP Electronics Ltd Brent Crescent, London, NW10 7XR, UK.

Part numbers

EBDSPIR-AT-PRM	RF Ceiling PIR presence detector – switched
EBDSPIR-AT-AD	RF Ceiling PIR presence detector – 1-10V dimming
EBDSPIR-AT-DD	RF Ceiling PIR presence detector – DALI/DSI dimming
AT-BB-IN	RF Input unit
AT-SL-R	RF relay controller
AT-SL-R-SA	RF relay controller (standalone)
AT-SL-DDR	RF DALI/DSI + relay controller
AT-SL-DDR-SA	RF DALI/DSI + relay controller (standalone)
AT-SL-ADR	RF 1-10V + relay controller
AT-SL-ADR-SA	RF 1-10V + relay controller (standalone)
VITM4-ATMOD	RF Switching module
VITM6-ATMOD-AD	RF VITM6 1-10V module
VITM6-ATMOD-DD	RF VITM6 DALI/DSI module
UHS4	Programming IR handset
UNLCDHS	Universal LCD IR handset

CP electronics
intelligent energy control

bsi. ISO 9001 Quality Management ISO 14001 Environmental Management
FM 45789 EMS 534520

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Ref: #WD385 Issue 2