REA-AP USER GUIDE **DIL-0100-0015_A**

The REA-AP controller is used for the adjustment of settings on R11, R14, R18, R24, and R44 sensors:

ON - Turns the controller on
^ - Sends selected settings to the sensor
CURSORS - Navigate the menus
OK - Selects chosen menu option
***** - Return to previous menu option
- Provides assistance on the selected menu option

Sensor selection: Before commissioning your sensor select the correct sensor type using “Sensor Model” in Customisation.

Main menu:
Programmer off: Turns the controller off.
Settings: Adjust your sensor settings.
Dim & Set: Override the sensor for manual operation of luminaires and commission daylight regulation.
Profiles: Save and load settings and transmit all settings simultaneously to sensor.
Customisation: Adjusts the controller settings.

Settings menu:
Transmitting settings in this menu will only send the selected value, not all of the settings collectively. In order to transmit all settings simultaneously please refer to the Profiles section of this manual.

PIR (R14, R18, R24, R44): Turns motion detection on / off.

Bright out mode (R14, R18, R24, R44): Turns the luminaire off if the measured light level exceeds 150% of the set daylight level.

Daylight Dim (R14, R18, R24, R44): Turns daylight regulation on and off.

Daylight Level (R14, R18, R24, R44): Please see Calibrating Daylight Regulation section.

High time delay (R11, R14, R18, R24, R44): The amount of time that the luminaire remains at full output after the last motion.

Low light level (R14, R18, R24, R44): Determines the level of output to which the luminaire will dim when the sensor has not detected motion for the high time delay.

Low time delay (R11, R14, R18, R24, R44): Once the set low time has expired at the low dimmed level with no seen motion the luminaire will switch off.

Fade down rate (R11, R24): Sets the time period over which the luminaire will dim from full output to the low light level.

Fade up rate (R11): Sets the time period over which the luminaire will rise from the low light level to maximum output.

Power up state (R14, R18, R24, R44): Determines if the luminaires come on when first powered or remain off when first powered until motion is first detected.

New lamp ageing (R14, R24, R44): Runs at full output continuously for the first 50 or 100 hours operation to stabilise the lamps. Only recommended for fluorescent luminaires.

Lux calibration (R18, R24, R44): Please see Calibrating daylight regulation section.

12hr Auto reset (R18, R24, R44): Will revert the luminaire to sensor control after 12 hours of a dim and set command being sent.

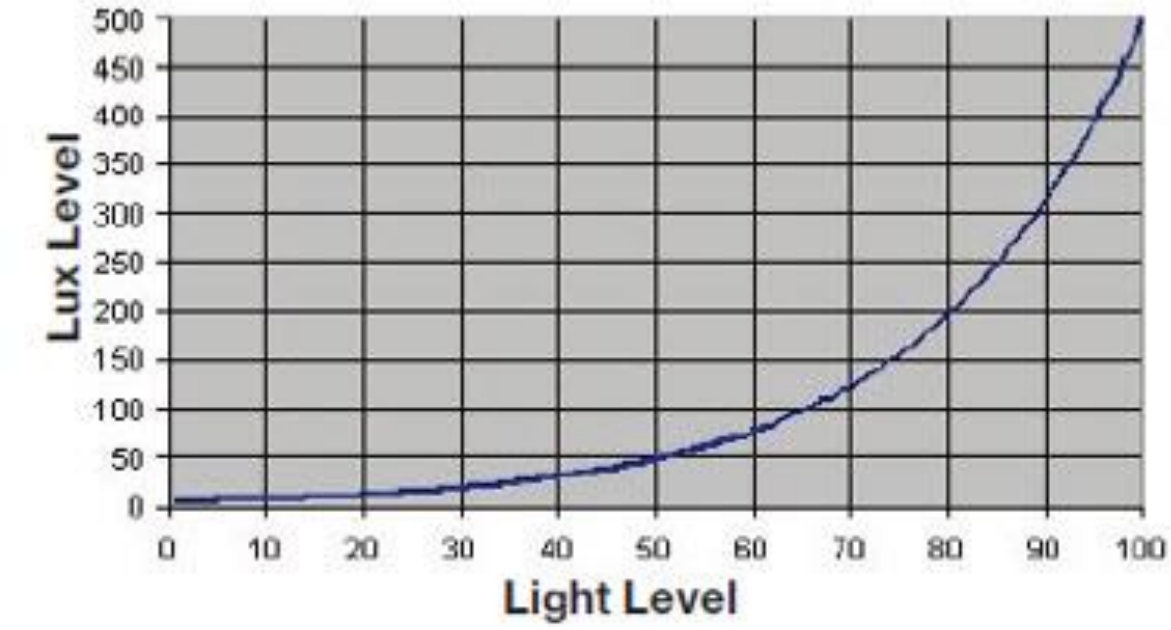
High light level (R11, R18, R24, R44): Sets the maximum output that the luminaires can provide.

Go to scene (R24H): Sets all settings as follows:
Scene 1: High time 1 min, Low time delay 1 min, Low light level 10%, Daylight level 50 lux.
Scene 2: High time 3 min, Low time delay 5 min, Low light level 20%, Daylight level 75 lux.
Scene 3: High time 10 min, Low time delay 30 min, Low light level 30%, Daylight level 100 lux.
Scene 4: High time 10 min, Low time 1 hour, Low light level 30%, Daylight level 200 lux.
Scene 5: High time 20 min, Low time delay 1 hour, Low light level 30%, Daylight level 200 lux.
Scene 6: High time 30 min, Low time continuous, Low light level 50%, Daylight level 400 lux.

Daylight regulation calibration: There are a range of methods to calibrate daylight regulation using the REA-AP controller, this will also effect the level at which Bright out mode activates.

Dim and Set method (R14, R18, R24, R44): This is the recommended method for accurate daylight regulation. Using a calibrated light meter on the measurement plane dim the luminaire up and down using the Dim and Set menu until the required lux level is measured. Send a Set command to the sensor to programme it to regulate to this lux level constantly.

Daylight Level method (R14): Using the table opposite the daylight level can be set to a percentage value that equates to an estimated lux level however this can vary significantly dependent on mounting heights of luminaires and surface reflectances. We therefore recommend using the Dim and Set method.



Lux calibration method (R24, R18, R44): This method provides accurate daylight regulation and also enables calibration of sensors during daylight hours where lux levels may exceed the required level.

Measure the lux level on the measurement plane using a calibrated light meter and enter the measured value into Lux calibration. Transmit this to the sensor. Set Daylight level to the required lux level to be regulated to, this can be transmitted to the sensor individually or bulk transmitted as described in Bulk transmit.

Dim and set: Once an instruction has been received in this mode the luminaire will remain in this mode of operation until it is returned to “Auto”. Dim and set is also used to calibrate daylight regulation as outlined in the Daylight regulation calibration section. Please note

that switching off power to a luminaire will return it to automatic operation when next turned on.

On: Switches the selected luminaire on
Off: Switches the selected luminaire off
Up: Increases the output of the selected luminaire
Down: Decreases the output of the selected luminaire.
Set: Instructs the selected luminaire to maintain the light level that is currently present within the area
Auto: Returns the luminaire to sensor control mode

Profiles:
Saving and loading settings: In order to save or load the settings on your controller select the profile of your choice (1-4) and select save or read. Press OK to save or load the settings to in the chosen profile. Profiles can be renamed with Edit.

Bulk Transmit: Transmit all settings simultaneously using the Bulk Xmit. This may take several seconds during which the controller must be pointed continuously at the sensor. Excludes R24H.

Customisation: Allows the REA-AP controller to be modified to the preference of the user including functions such as screen contrast and key repeats. Also contains factory reset and REA-AP version information.

Help function: Press the “#” key for guidance on the selected function.

LED indication: Indicator LEDs indicate the status of the sensor as follows:
Green: Flashes to indicate that brightout mode is active.
Red: Flashes to indicate that motion has been detected.
Amber: Three flashes indicates that a signal has been received from the controller. Please note the R24H sensor flashes blue to indicate a signal has been received.

Controller communication with the sensor: The maximum operating range for the REA-AP is twenty meters at an angle no greater than 45 degrees.

Sensor limitations: Avoid environmental factors that can cause your sensor to incorrectly detect presence. The luminaire and the sensor must be rigidly mounted. Strong air currents and heat changes from heaters and air conditioning for example may cause false triggering.

Trouble shooting:
My luminaires will not dim even though there is no one in the area: Check PIR is turned on. Check that the sensor has not been overridden in Dim & Set mode.

Check that there is no motion in the area that could be falsely activating the sensor.

My luminaires will not turn on with motion beneath them: Daylight levels may be sufficient to prevent the luminaire to turn on. Adjust the daylight level if needed. Check that the sensor has not been overridden in Dim & Set mode. The luminaires may be operating in bright out mode indicated by a green LED flash.

My luminaires stay at full output for an insufficient / excessive amount of time: Adjust High time delay as required. Check that there is no motion in the area that could be falsely activating the sensor.
My luminaires power up without anyone in the area: Check that there is no motion in the area that could be falsely activating the sensor.

All luminaires are operating at different output: This is to be expected as Daylight dim allows each luminaire to operate at the minimum level required to provide the correct lux level in its detection area.

My controller will not programme the sensor: Ensure you are within 45 degrees and 20M of the sensor. Check the battery, and that the controller lens is not obscured.

Your REA-AP controller requires a 9V 6F22 battery. Software upgrades may be released for your controller periodically, please contact us for further information. Dextra Group PLC. strive to provide the best possible product and as such our products are in constant development. We reserve the right to change our sensor and sensor control systems at any time and without prior notice.

R18RF Wireless Sensor

The R18RF Wireless sensor enables sensors to be grouped so that activation of any one sensor will trigger others in the same group.

Accessing R18RF controls

Highlight “Configure Radio” in the settings menu.
Scroll Right to “Menu”.
Press “OK”

Aisle Grouping

When luminaires are grouped for aisle operation the luminaire that detects motion will activate to 100% output, the next luminaire will activate to 50% output and the third luminaire will activate to 30% output. In order for this to operate correctly each luminaire must be assigned an aisle number, and its sequential number within that aisle.

Starting at the first luminaire in the first aisle ensure that Aisle number is set to 1 and Sensor number is set to 1 on the controller. With the Sensor number highlighted use the send command ^ to programme the first luminaire in the aisle to number 1. Press OK to increase the Sensor number to 2 and programme the second luminaire to 2. Continue along the aisle numbering each luminaire sequentially using the same method.

Once the first aisle has been completed move to the second aisle. Ensure that the Aisle number is set to 2 and the Sensor number is set to 1 and repeat the same process numbering each luminaire sequentially. Repeat this process until all aisles and luminaires have been correctly numbered.

Testing

To ensure that each luminaire has been correctly numbered these can be tested using the RF Network test function. Set RF Network test to Incr (Increment) and send this command to the first luminaire in the aisle. The luminaires in this aisle will flash in sequence of their numbering from lowest to highest, should a luminaire flash out of order these will need to be reprogrammed with the correct sequential number. The same process can be carried out from the end of

the aisle using RF Network test set to Decr (Decrement) which will cause the luminaires to flash in sequence from highest to lowest number.

Simultaneous Triggering

Should you wish all luminaires in an aisle to trigger to 100% output when any one sensor in that aisle is activated simply set all Sensor numbers in that aisle to number 1.

Removing Luminaire from Group

Should you wish to remove a luminaire from a group simply highlight the menu option Remove from Network and send this command to the required sensor.

Open Area Grouping

When luminaires in an open area are grouped the activated luminaire will trigger to 100% output, the surrounding luminaires will trigger to 50% output and the luminaires surrounding those will trigger to 30% output. To group sensors within open areas highlight the Sensor layout option on the controller and scroll left / right to select the layout required.

A range of grid configurations can be selected as follows:

64 X 64
32 X 128
16 X 256
8 X 512
4 X 1024

Choose the configuration which most closely matches the layout of luminaires in the group you wish to programme. Up to 200 separate open area groups can be defined within your installation.

To programme the first group highlight Grid number and ensure that this is set to 1. Ensure that Col (Column) is set to 1 and Row is set to 1 and using send ^ transmit this command to the first luminaire in the first row. Move to the second luminaire in the column, using left and right increase the Col number to 2 and send this command to the second luminaire. Repeat this process until each luminaire in the column has been numbered sequentially. Once each luminaire in the column has been numbered move to the second row, return the column number to 1 and increase the Row number to 2.

Programme each luminaire in the second row to ensure they are sequentially numbered. Repeat this process until all rows and columns in the group have been numbered correctly. To programme a different

open area group ensure that the Grid number is increased to 2 before repeating the process above.

Testing

Groups can be tested incrementally or decrementally in the same method as aisle groups. With RF Network Test highlighted use send ^ to transmit either an Incr (Incremental) test to the first luminaire in the first Row, or a Decr (Decremental) test to the last luminaire in the last Row. Each luminaire should flash in turn through the group from lowest to highest or vice versa depending on which test method is used. If a luminaire flashes out of turn it has been numbered incorrectly and will need to be reprogrammed.

Simultaneous Triggering

Should you wish all luminaires in an open area group to trigger to 100% output when any one sensor in that group is activated simply set all Row and Column numbers in that group to 1.

Removing Luminaire from Group

Should you wish to remove a luminaire from a group simply highlight the menu option Remove from Network and send this command to the required sensor. Additional instructions are available, please contact Dextra Group for support.