nCM ADCX RJB & nCM PC RJB
FAMILY INSTRUCTIONS

PRODUCT OVERVIEW

The **nCM ADCX RJB** and **nCM PC RJB** photocell sensors are ceiling/surface mount devices that provide a range of daylight harvesting features for nLight Control System installations with finished ceilings (e.g. ceiling tiles, sheetrock, plaster). The **nCM PC RJB** version provides on/off photocell control by default, while the **nCM ADCX RJB** provides automatic dimming photocell control by default. Ideal for spaces with windows, such as vestibules, corridors, classrooms, or offices, these sensors work by first monitoring daylight conditions in a room. They then signal networked nLight control devices to adjust their dimming outputs (and/or turn lighting off) to obtain maximum energy savings while ensuring adequate lighting levels are maintained.

The **nCM ADCX RJB** sensor controls nLight enabled luminaires (e.g. **VTLED** Family from Lithonia), nLight dimming relay packs (e.g. **nPP16 D** or **nSP5 PCD**), or auxiliary dimming output devices (e.g. **nIO D**). The **nCM PC RJB** switches nLight enabled luminaires or any relay/dimming device in an nLight system (e.g. **nPP16).** Both sensors can also be used together with nLight occupancy sensors. Manual override or adjustment of the dimming level is possible via WallPod dimmers or through the SensorView software.

Both versions are powered via the nLight network bus and can communicate with one or more nLight enabled luminaires or nLight relay/dimming packs to enable control of fixtures individually or in groups. These configurations work standalone and do not require a connection to a larger nLight network.

DAYLIGHT HARVESTING & ON/OFF PHOTOCELL
CEILING / SURFACE MOUNT • REAR RJ-45 PORT

MODEL # OPTION SUFFIXES

PC = On/Off Photocell
ADCX = Automatic Dimming Control
DZ = Dual Zone On/Off Control
LT = Low Temp / High Humidity

FEATURES

- Automatic Dimming Photocell Control (**nCM ADCX RJB** model only)
- Full On/Off Photocell Switching Control (disabled by default on **nCM ADCX RJB**)
- Optional Inhibit mode: Photocell can prevent lights from turning on if adequate daylight is available, but does turn lights off (**nCM PC RJB** model only)
- LED status indicator
- Adustable settings (e.g. set-points) via push-button or SensorView software application
- Broadcasts photocell information over a local nLight channel
- Remotely upgradeable firmware

nLIGHT NETWORKED OPERATION

nCM ADCX RJB and **nCM PC RJB** sensors are native nLight devices meaning they are individually addressable and digitally communicate to other nLight devices such as WallPod switches, power packs, nLight-enabled digital luminaires, and other sensors. All devices are wired using CAT-5e cabling; creating a local nLight control zone. Once linked to an nLight Gateway, either directly or via an nLight network backbone, the zone becomes capable of remote status monitoring, configuration, and control with nLight SensorView software.

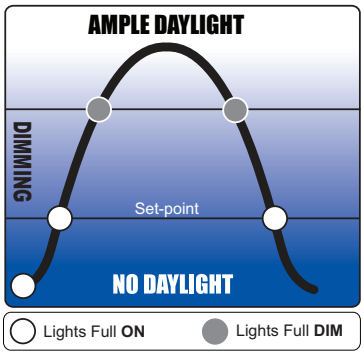
SPECIFICATIONS

PHYSICAL
SIZE: 4.55" Dia. (11.56 cm)
1.55" Deep (3.94 cm)
WEIGHT: 6 oz
MOUNTING:
Ceiling Tile / Sheetrock Surface
3.5" Octagon Box
Single Gang Handy Box
COLOR: Matte White
nLIGHT NETWORK CONNECTION:
2 RJ-45 Ports (via an included RJ45 splitter)
WIRES / CABLES:
(1) CAT5e patch cable, 1ft (factory installed)

ELECTRICAL
nLIGHT BUS POWER CONSUMPTION: ~3 mA
ENVIRONMENTAL & OTHER
OPERATING TEMP
Standard: 14º to 160º F (-10º to 71º C)
LT Option: -40º to 160º F (-40º to 71º C)
RELATIVE HUMIDITY
Standard: 20 to 75% non-condensing
LT Option: 20 to 90% non-condensing
SILICONE FREE, ROHS COMPLIANT
TITLE 24 SYSTEM COMPONENT
ASSEMBLED in U.S.A.

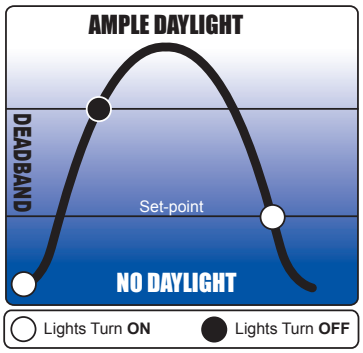
PHOTOCELL OPERATION

The **nCM ADCX RJB** sensor continuously adjusts a space's lighting to achieve maximum daylight harvesting while maintaining a minimum light level referred to as the set-point. When no daylight is available, the sensor allows the controlled dimmable lighting to operate at its full bright level. As daylight increases and begins to contribute to the overall light level of the room, the Automatic Dimming Control (ADC) feature starts dimming the room proportionally, eventually reaching the full dim level (or optionally switching off, see paragraph below). As the daylight levels fall, the ADC feature will again take control of the lights; reducing the dim level (increasing the brightness) in order to achieve the necessary total light level. At the point when all daylight contribution is gone, lighting will be back at its full bright level.



AUTOMATIC DIMMING (nCM ADCX RJB)

The **nCM PC RJB** sensor does not control dimming, but instead signals nLight devices located elsewhere within the sensor's zone to switch a controlled lighting load on when more light is needed. The lights are also signaled to turn off when light is above the set-point plus a 10% safety factor and deadband. The safety factor will prevent the system from cycling when the light level is very near the set-point. The deadband is the level of light contributed by the artificial lights being controlled. This level is tracked so if the lighting conditions change (for example a lamp burns out) the point at which the lights turn off is adapted accordingly. If the photocell can not view the lights being controlled (for example if it is looking up at skylights), there is no deadband and the sensor is said to be working open loop. There is also an adaptive cloud delay (optional) before the photocell turns the lights off to prevent the system from cycling on a cloudy day.



ON/OFF CONTROL (nCM PC RJB)

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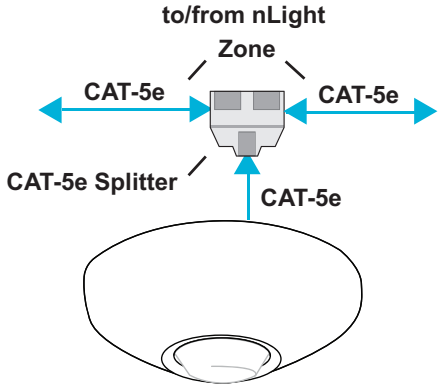
INSTALLATION / WIRING

The following instructions are for mounting sensor directly to a ceiling tile or sheetrock surface. Sensor's mounting holes also align with standard round fixture or single gang handy box (screws not provided).

1. Using template included with unit, mark spots on ceiling tile/sheetrock for cable hole and mounting anchors/screws
2. Drill 1/2" hole through ceiling surface at location indicated on template
3. Insert provided anchors into ceiling surface at locations indicated on template
4. Remove provided RJ-45 splitter from sensor's attached CAT5e cable and thread cable (and low voltage wires if **-AR** option included) through hole from underside
5. Mount sensor to anchors using two screws provided
6. Reattach RJ45 splitter device (model **CAT5 Y**) above ceiling to cable from sensor (see diagram on right)
7. Interconnect CAT-5e cables to/from rest of nLight zone to RJ45 splitter
8. Once power is received via CAT-5e connection, all devices in zone will automatically begin functioning together according to each device's defaults
9. Install decorative sensor lid by rotating clockwise
10. Refer to included instruction card for default settings and directions on push-button programming.



Note: T568B pin/pair assignment is recommended for all CAT-5e cables. Sensor power is provided via a CAT-5e connection to an nLight power pack/supply, nLight enabled digital luminaire, or nLight Bridge.

WARRANTY

5-year limited warranty. Full warranty terms located at:
www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx
Note: Specifications subject to change without notice. Actual performance may differ as a result of end-user environment and application.

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READ AND FOLLOW ALL SAFETY INSTRUCTIONS!
SAVE THESE INSTRUCTIONS AND DELIVER TO OWNER AFTER INSTALLATION

- To reduce the risk of death, personal injury or property damage from fire, electric shock, falling parts, cuts/abrasions, and other hazards please read all warnings and instructions included with and on the fixture box and all fixture labels.
- Before installing, servicing, or performing routine maintenance upon this equipment, follow these general precautions.
- Installation and service should be performed by a qualified licensed electrician.
- Maintenance should be performed by qualified person(s) familiar with the products' construction and operation and any hazards involved. Regular maintenance programs are recommended.
- **DO NOT INSTALL DAMAGED PRODUCT!** This product has been properly packed so that no parts should have been damaged during transit. Inspect to confirm. Any part damaged or broken during or after assembly should be replaced.

CAUTION: RISK OF PRODUCT DAMAGE

- √ **Electrostatic Discharge (ESD): ESD can damage product(s). Personal grounding equipment should be worn during all installation or servicing of the unit.**
- √ **Do not touch individual electrical components, as this can cause ESD and affect product performance.**
- √ **Do not stretch or use cable sets that are too short or are of insufficient length.**
- √ **Do not tamper with contacts.**
- √ **Do not modify the product.**
- √ **Do not change or alter internal wiring or installation circuitry.**
- √ **Do not use product for anything other than its intended use.**

WARNING - RISK OF ELECTRIC SHOCK

- √ **Disconnect or turn off power before installation or servicing.**
- √ **Verify that supply voltage is correct by comparing it with the product information.**
- √ **Make all electrical and grounded connections in accordance with the National Electrical Code (NEC) and any applicable local code requirements.**
- √ **All wiring connections should be capped with UL approved recognized wire connectors.**
- √ **All unused connector openings must be capped.**

CAUTION - RISK OF INJURY

- √ **Wear gloves and safety glasses at all times when installing, servicing or performing maintenance.**

WARNING - RISK OF BURN or FIRE

- √ **Do not exceed maximum wattage, ratings, or published operation conditions of product.**
- √ **Do not overload.**
- √ **Follow all manufacturer's warnings, recommendations and restrictions to ensure proper operation of product.**

