JDRF

ELECTROMAG

AUTONOMY WALL SWITCH DATASHEET

AUTONOMY WALL SWITCH DATASHEET

OVERVIEW

The Autonomy Wall Switch automatically pairs with co-located JDRF Electromag Autonomy Sensors to provide variable lighting control without programming or control boxes.

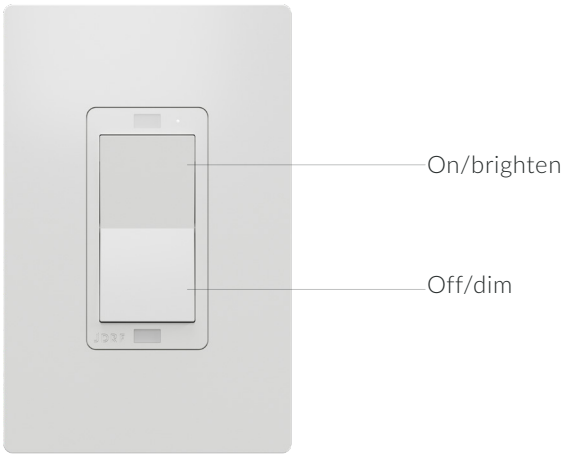
AUTONOMY WALL SWITCH DATASHEET

OVERVIEW

MANUAL CONTROL

Non-latching rocker provides on/off and brighten/dim using 'press-and-release' and 'press-and-hold' interactions, respectively. Default levels listed below can be configured by the JDRF Electromag mobile application.

1. Up button (press-and-release): set lights to 50%.
2. Up button (press-and-hold): brighten lights to maximum level.
3. Down button (press-and-release): set lights to 0%.
4. Down button (press-and-hold): dim lights to minimum level.



NETWORKING

Automatically builds and maintains a secure wireless network with other JDRF Electromag devices. Devices use multi-factor authentication without user involvement.

NFC PAIRING

Integrated NFC transceiver allows easy pairing to the JDRF Electromag mobile application to customize the behavior of the Autonomy Wall Switch.

ENERGY MEASUREMENT

Local data logging stores energy consumption data published by co-located Autonomy Sensors and Autonomy Switch Packs with no added hardware required.

AUTONOMY WALL SWITCH DATASHEET

SPECIFICATIONS

ELECTRICAL

1. Input voltage: 120-277 VAC or 120-347 VAC (50/60 Hz). See 'Ordering Info' section for model numbers.
2. Input power: 3 W maximum.
3. Impulse voltage: 4 kV.

GENERAL

1. Purpose of control: Electronic Lighting Control (non-safety related).
2. Type 1 Action.
3. Pollution Degree: 2.

WIRELESS

1. Communication Protocol: Wireless Mesh.
2. Frequency: 2.4 GHz.
3. Transmitter output +8 dBm (adjustable).
4. Communication Range: 10 m (33 ft) line-of-sight to nearest device.

SELF-DIAGNOSTIC

1. Pass: LED indicator flashes once every 30 seconds.
2. Fail: LED indicator flashes once every 1.5 seconds.

STANDARDS

1. cULus listed UL60730.
2. FCC Class A Part 15 Subpart C.

JDRF ELECTROMAG

AUTONOMY WALL SWITCH DATASHEET

SPECIFICATIONS

MECHANICAL

1. Material: Cycoloy PC/ABS blend.
2. Colour: White (RAL9003).
3. Mounting: Wall mount to junction box.

ENVIRONMENT

1. Operating Temperature: 0-45 °C (32-113 °F).
2. Storage Temperature: 0-75 °C (32-167 °F).
3. Relative Humidity: Operating range of 5-95% (non-condensing).
4. Environment: Dry indoor use only.

WARRANTY

1. Standard: 5-year limited manufacturers warranty.
2. Extended: contact sales representative for details.

AUTONOMY WALL SWITCH DATASHEET

CALENDAR

OVERVIEW

The Calendar is a scheduled set of events and actions that may repeat on daily, weekly, monthly, or yearly cycle. It runs locally on the Autonomy Wall Switch and can be applied on an individual device (Autonomy Sensor or Autonomy Switch Pack) with the Area. The Calendar can be created using 3rd party applications (iCal, Outlook, Google) and published to the Wall Switch using the JDRF Electromag Mobile Application.

EVENTS & ACTIONS

1. Maximum number of calendars per Wall Switch: 2.
2. Maximum number of recurring event series per Calendar: 75.
3. Event recurrence end-date: indefinite.
4. Holiday/exception programming supported: yes.
5. Minimum interval between events: 15 minutes.
6. Event resolution: 1 minute.
7. Maximum number of actions per event: 4.
8. Supported actions: set occupancy level, set vacancy level, change occupancy hold time, enable/disable daylight harvesting.

PRIORITY MANAGEMENT

1. Multiple recurring events: the event with the lowest frequency of recurrence takes priority.
2. Wall Switch: the local override takes priority over the scheduled event.
3. Daylight harvesting: reduces the scheduled level.

AUTONOMY WALL SWITCH DATASHEET

ANALYTICS

OVERVIEW

The Autonomy Wall Switch aggregates and stores the power and energy consumed by each luminaire in an Area. When the light level of a luminaire is changed, the Autonomy Sensor reads the power measured by the D4i-compliant LED driver and transmits it, along with a reason code, to the Autonomy Wall Switch. The reason code explains why the light level was changed (i.e. motion, daylight harvesting, local override, etc.) and is used to gain insight into the performance of the system.

LOCAL ENERGY LOGGING

The event-based energy consumption data is time-stamped and stored locally in the Autonomy Wall Switch. It can be downloaded directly by the mobile application where it can be viewed and exported to .csv/.xls format. The data can be viewed on an event-basis, in 15 minute intervals (for the last 60 days), and in the following time intervals:

1. The current day cumulative total.
2. Each day for last 31 days.
3. Each month for the last 24 months.
4. Each year for the last 2 years.
5. Lifetime cumulative total.

REMOTE DATA LOGGING

Where an Internet connected Autonomy Gateway is used, the energy consumption data and reason code can be published to the cloud for remote storage.

AUTONOMY WALL SWITCH DATASHEET

ORDERING INFO

ORDERING INFORMATION (WALL SWITCH)

PART NUMBER	DESCRIPTION	UPC/GTIN
JDRF-AWS-01-W-V01	Wall Switch with Single-Gang Switch-plate (120-277V).	628693852012
JDRF-AWS-02-W-V01	Wall Switch with Single-Gang Switch-plate (120-347V).	628693852166

PACKAGE INFORMATION (WALL SWITCH)

PART NUMBER	DIMENSIONS	WEIGHT
JDRF-AWS-01-W-V01	12 x 19 x 4.8 cm	0.2 kg
JDRF-AWS-02-W-V01	12 x 19 x 5.3 cm	0.2 kg

AUTONOMY WALL SWITCH DATASHEET

ORDERING INFO

ORDERING INFORMATION
(SWITCH-PLATE)

PART NUMBER	DESCRIPTION	UPC/GTIN
JDRF-SWPLT-1G-W	1-Gang Switch-Plate, White, 120-277V / 120-347V, 1-Pack. Works with JDRF-AWS-01-W-V01 and JDRF-AWS-02-W-V01.	628693852418
JDRF-SWPLT-2G-01-W	2-Gang Switch-Plate, White, 120-277V, 1-Pack. Works with JDRF-AWS-01-W-V01.	628693852425
JDRF-SWPLT-3G-01-W	3-Gang Switch-Plate, White, 120-277V, 1-Pack. Works with JDRF-AWS-01-W-V01.	628693852432
JDRF-SWPLT-4G-01-W	4-Gang Switch-Plate, White, 120-277V, 1-Pack. Works with JDRF-AWS-01-W-V01.	628693852449
JDRF-SWPLT-2G-02-W	2-Gang Switch-Plate, White, 120-347V, 1-Pack. Works with JDRF-AWS-02-W-V01.	628693852067
JDRF-SWPLT-3G-02-W	3-Gang Switch-Plate, White, 120-347V, 1-Pack. Works with JDRF-AWS-02-W-V01.	628693852937
JDRF-SWPLT-4G-02-W	4-Gang Switch-Plate, White,120-347V, 1-Pack. Works with JDRF-AWS-02-W-V01.	628693852913

ORDERING INFO

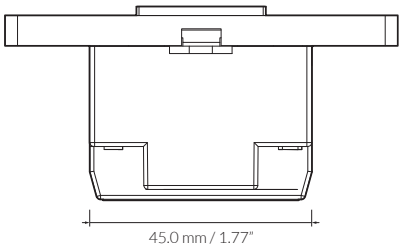
PACKAGE INFORMATION (SWITCH-PLATE)

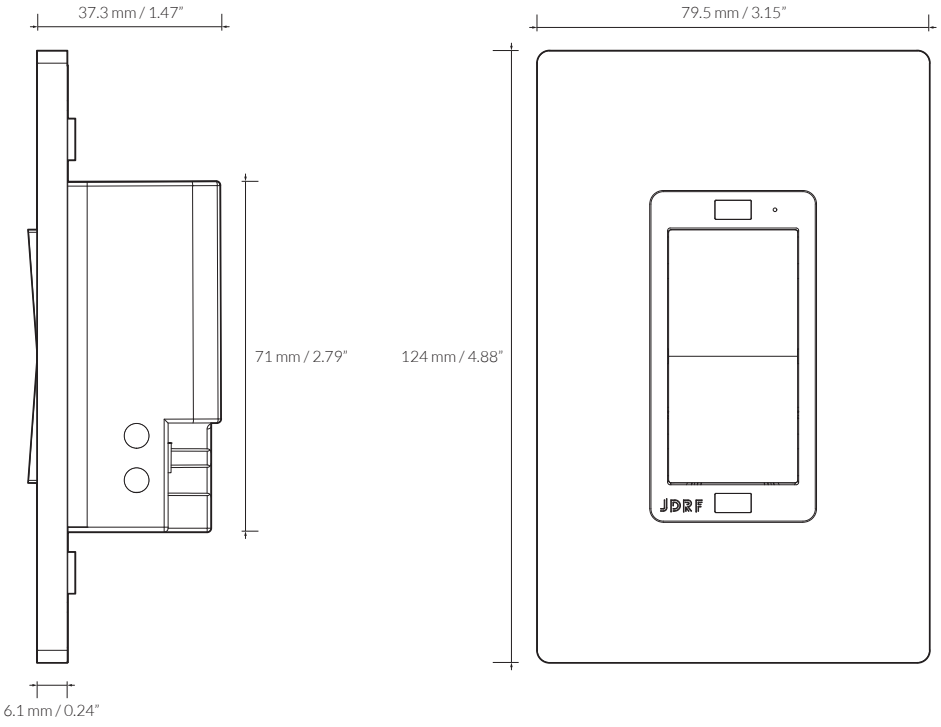
PART NUMBER	DIMENSIONS	WEIGHT
JDRF-SWPLT-1G-W	8 x 12.5 x 0.6 cm	0.028 kg
JDRF-SWPLT-2G-01-W	12.5 x 12.5 x 0.6 cm	0.039 kg
JDRF-SWPLT-3G-01-W	17.5 x 12.5 x 0.6 cm	0.049 kg
JDRF-SWPLT-4G-01-W	22 x 12.5 x 0.6 cm	0.062 kg
JDRF-SWPLT-2G-02-W	12.5 x 12.5 x 0.6 cm	0.039 kg
JDRF-SWPLT-3G-02-W	17.5 x 12.5 x 0.6 cm	0.049 kg
JDRF-SWPLT-4G-02-W	22 x 12.5 x 0.6 cm	0.062 kg

AUTONOMY WALL SWITCH DATASHEET

DIMENSIONS

WALL SWITCH
120-277V
(JDRF-AWS-01-W-V01)

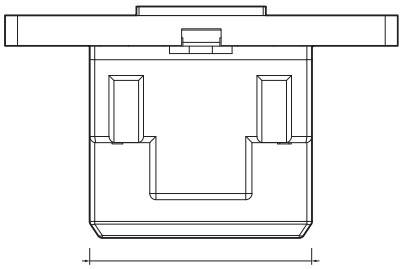


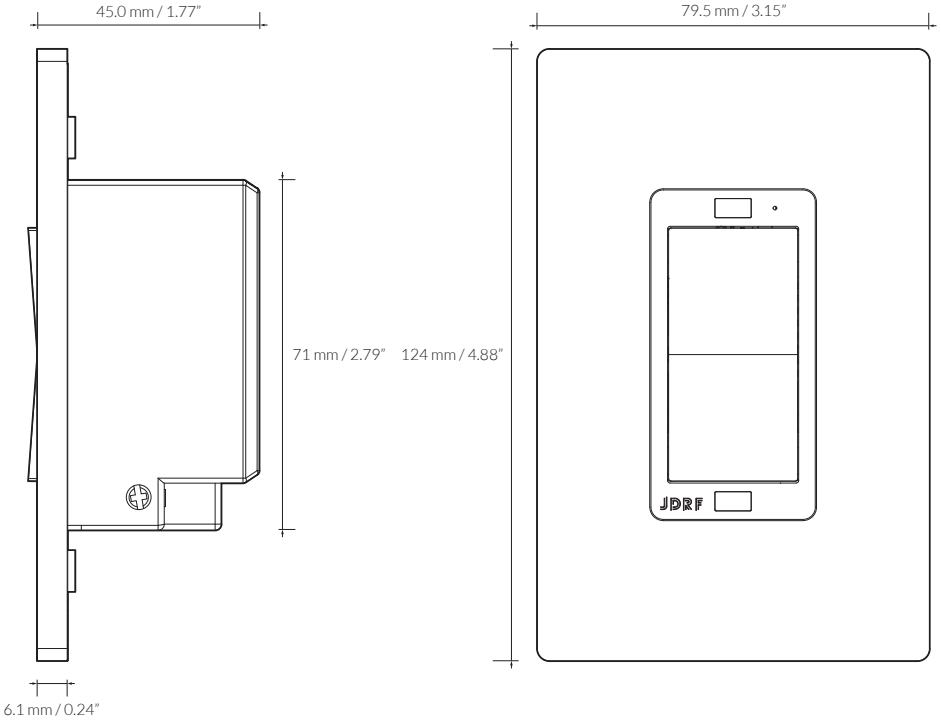


AUTONOMY WALL SWITCH DATASHEET

DIMENSIONS

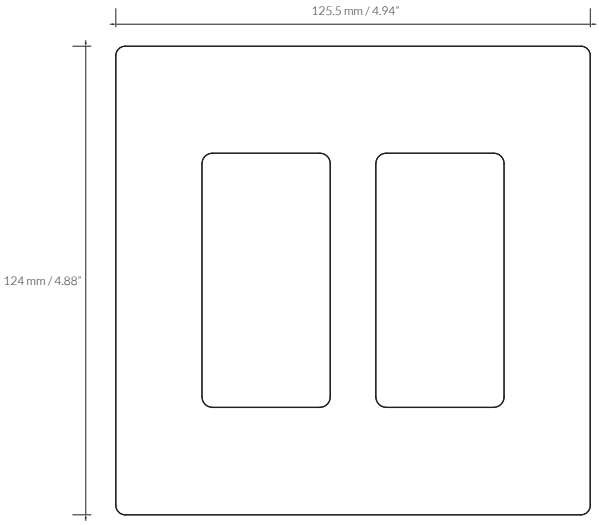
WALL SWITCH
120-347V
(JDRF-AWS-
02-W-V01)



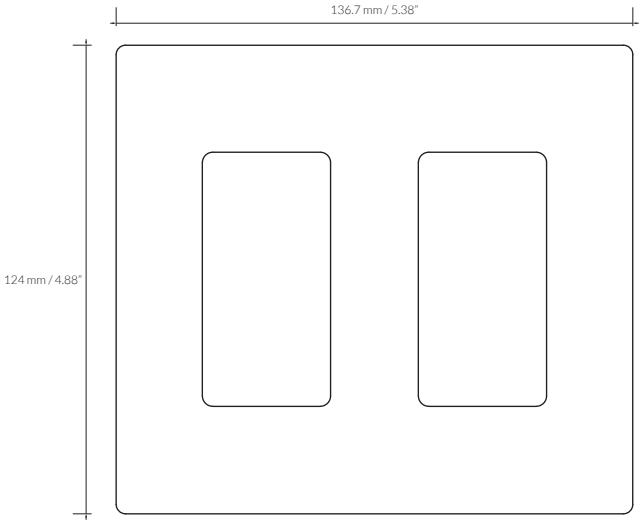


DIMENSIONS

WALL SWITCH-PLATES



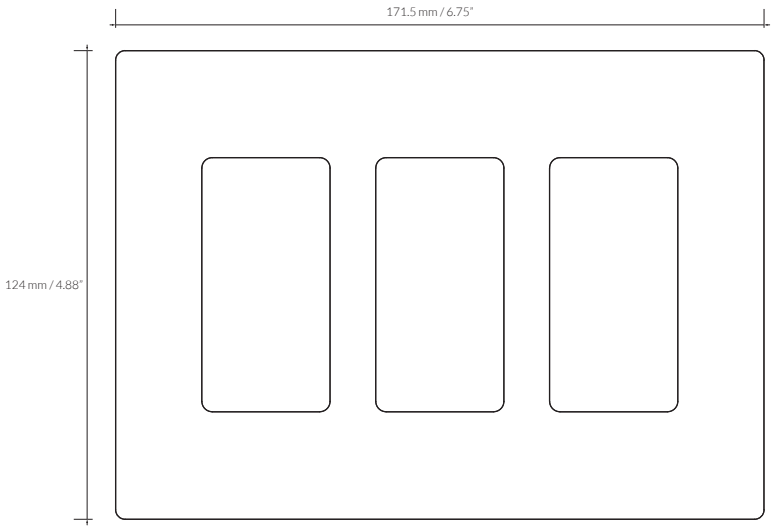
JDRF-SWPLT-2G-01-W



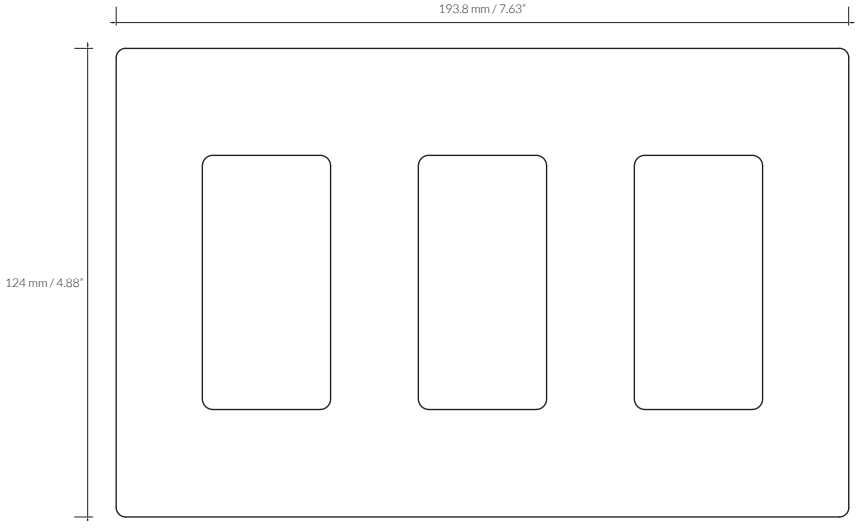
JDRF-SWPLT-2G-02-W

DIMENSIONS

WALL SWITCH-PLATES



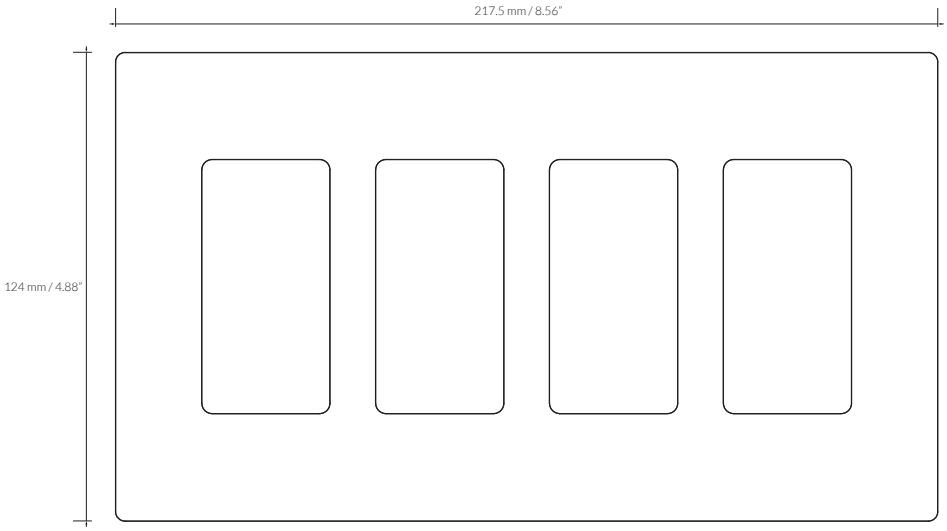
JDRF-SWPLT-3G-01-W



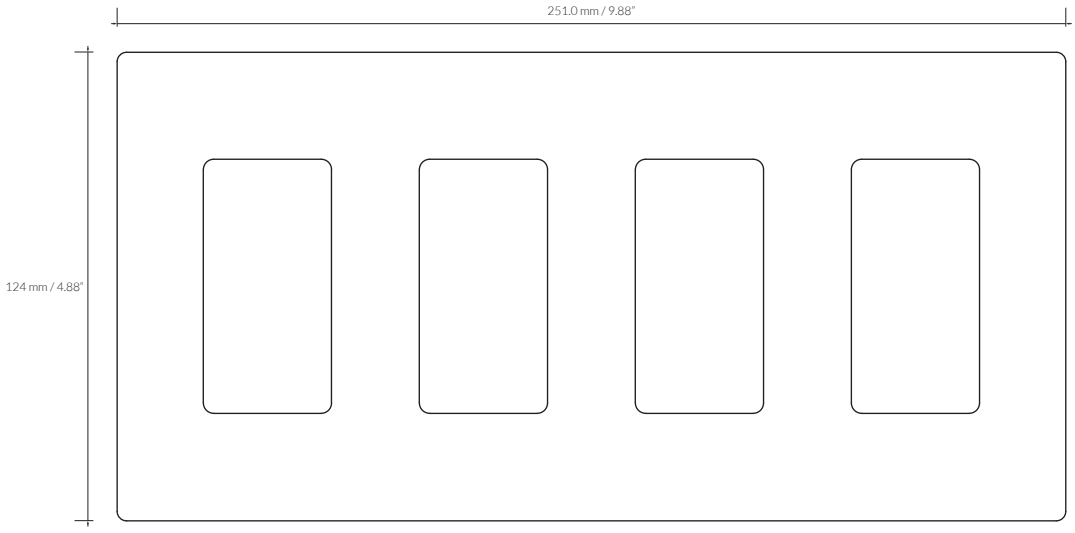
JDRF-SWPLT-3G-02-W

DIMENSIONS

WALL SWITCH-PLATES



JDRF-SWPLT-4G-01-W



JDRF-SWPLT-4G-02-W

INSTALLATION

WIRING

Risk of Fire, Electrical Shock, Cuts or other Casualty Hazards
Installation and maintenance of this product must be performed by a qualified electrician. This product must be installed in accordance with the applicable installation code by a person familiar with the construction and operation of the product and hazards involved.

Before installing or performing any service, the power MUST be turned OFF. All installations should be in compliance with the National Electric Code and all regional, state, and local codes. Due to sharp edges, handle with care.

Failure to comply with these instructions may result in death, serious bodily injury and property damage.

DISCLAIMER OF LIABILITY

JDRF Electromag Engineering Inc. assumes no liability for damages or losses of any kind that may arise from the improper, careless, or negligent installation, handling or use of this product.

NOTICE

Product may become damaged and/or unstable if not installed properly. Designed for indoor installation and use only. Specifications and dimensions subject to change without notice.

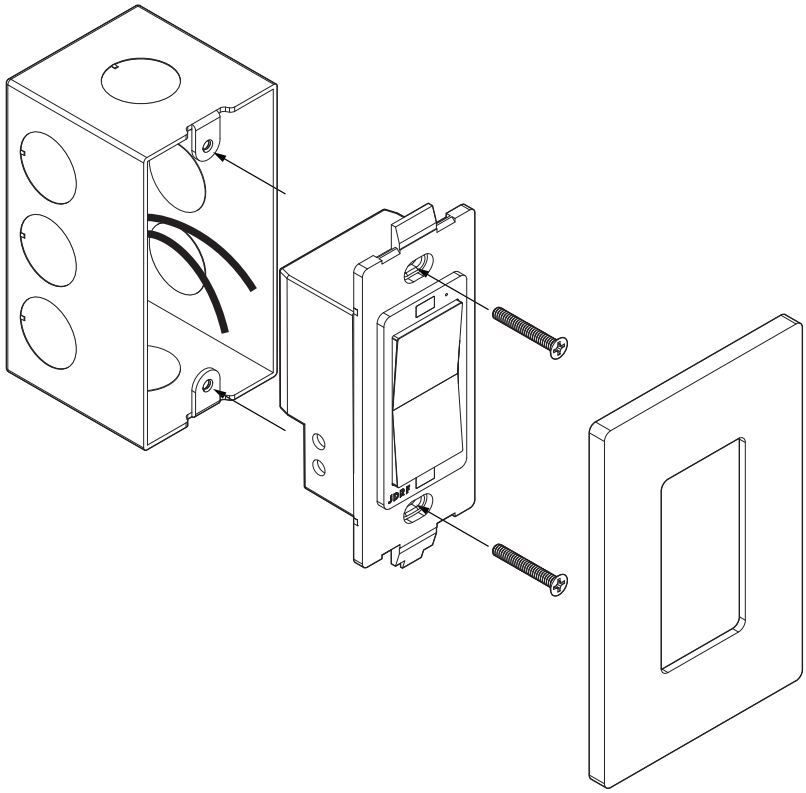
INSTALLATION

WIRING

The Autonomy Wall Switch package contains 1x Autonomy Wall Switch, 1x single-gang switch-plate, and 2x mounting screws. Switch-plates for 2-, 3-, and 4-gang wall-boxes are also available. See ordering information page for part numbers. Wall-box is not included.

Only use switch-plate provided by JDRF Electromag.

1. Turn off power at circuit breaker or fuse and test that the power is off before wiring.
2. NOTE: The Autonomy Wall Switch is powered by Neutral and Line/Hot wires.
3. Use 2 x 12 AWG or 14 AWG wires. Remove wiring insulation by approximately 2 cm (¾").

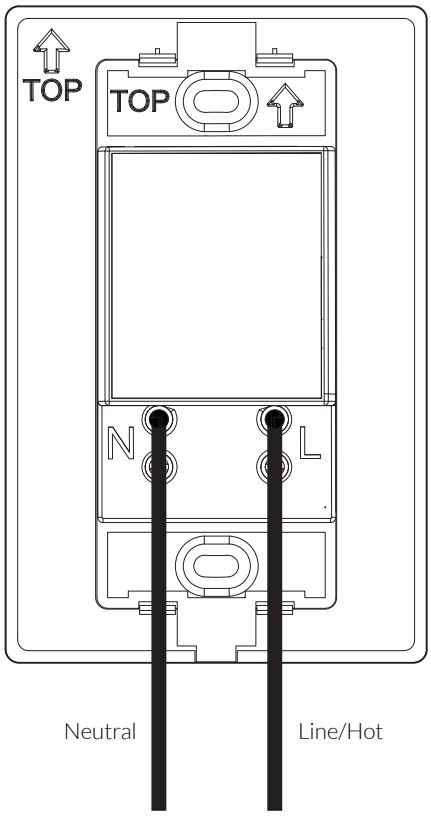


INSTALLATION

WIRING

The Autonomy Wall Switch has a pair of dual-port wire entry terminals. The wire entry terminal for the Neutral connection is marked with a capital letter “N”. The wire entry terminal for the Line/Hot connection is marked with a capital letter “L”. The two contacts in each dual-port terminal are short-circuited together to allow for a daisy-chain connection to other Autonomy Wall Switches.

Do not connect Neutral and Line/Hot wires to the same dual-port wire entry terminal.



INSTALLATION

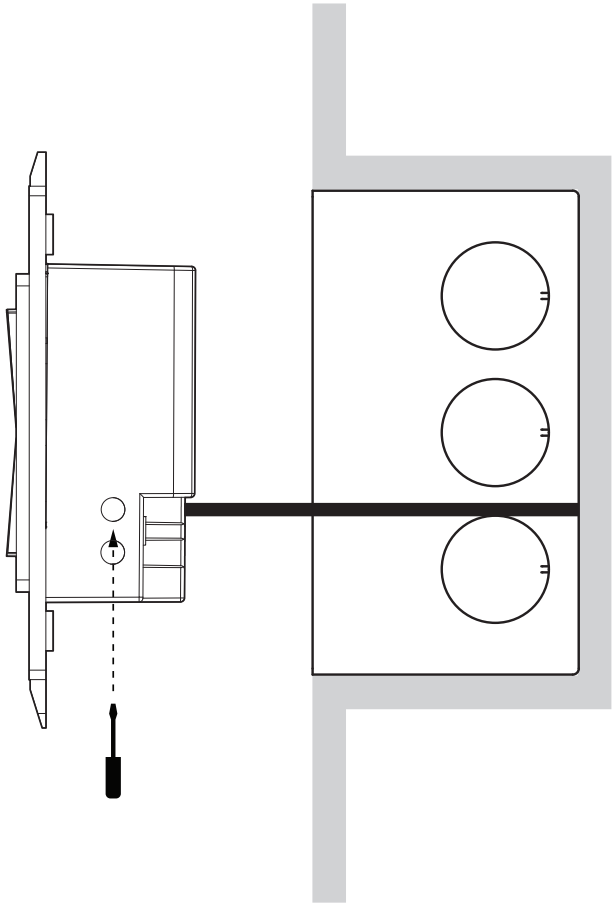
WIRING

The Autonomy Wall Switch has a pair of side-mounted fastening screws that are used to secure the power wires in place. Once the wire is inserted to the correct dual-port wire entry terminal, tighten the screw using a screw driver to hold the wire in place.

The screw-head is not electrically isolated. Make sure the supply is not energized before tightening or loosening the screw terminal.

4 Connect Line and Neutral wires into their respective wire entry terminal.

5 Firmly tighten screw over wires.

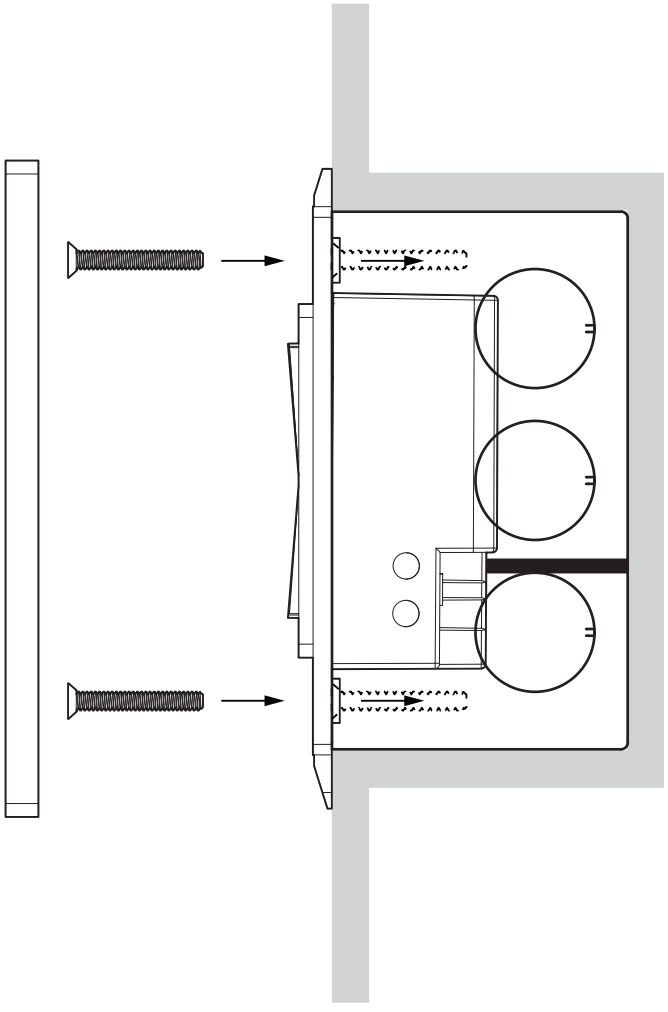


INSTALLATION

WIRING

The mounting holes on the Autonomy Wall Switch are designed to fit into a standard single-gang or multi-gang wall-box. Refer to the dimensions page for the depth of wall-box required for each model number of Autonomy Wall Switch.

6 Once the wires have been connected, secure the Autonomy Wall Switch into the junction box by screwing it with the screws provided.



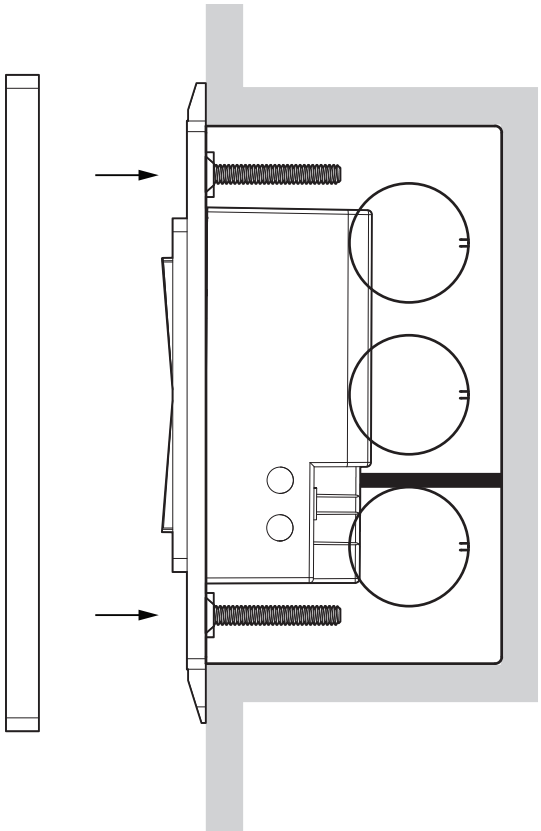
INSTALLATION

WIRING

The Autonomy Wall Switch is designed for use with switch-plate provided by JDRF Electromag only.

7 Once the Autonomy Wall Switch is screwed into place, fasten the switch-plate by snapping it into the body of the Autonomy Wall Switch.

8 NOTE: The switch-plate provides electrical isolation. No metallic surfaces shall be exposed to the user.

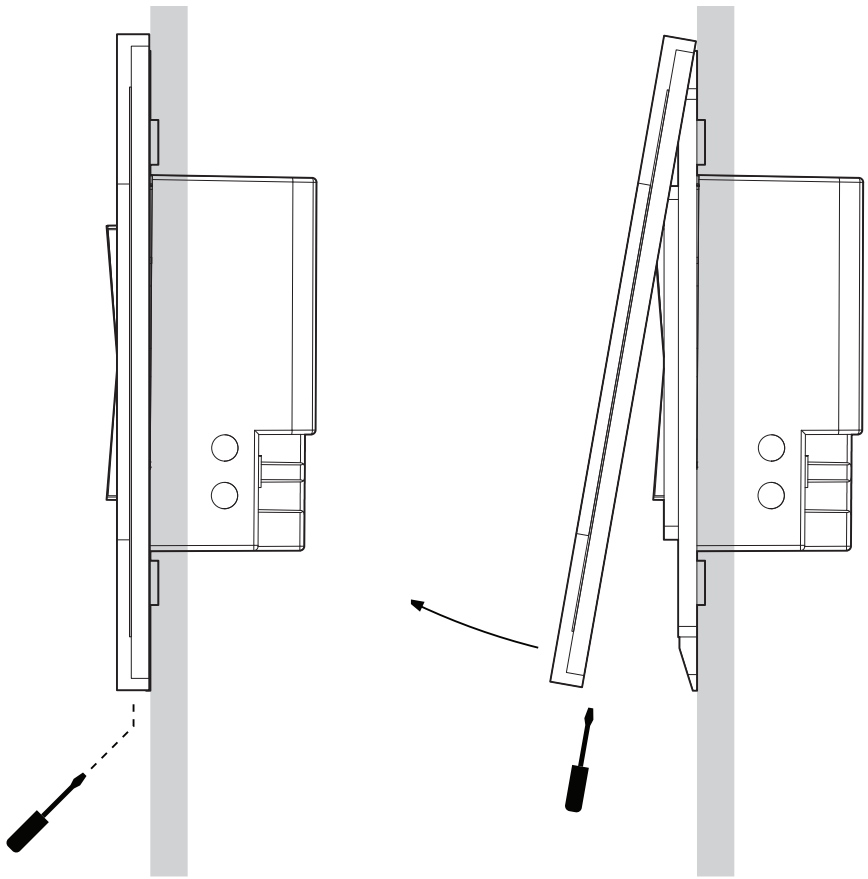


INSTALLATION

REMOVE THE SWITCH-PLATE

The switch-plate can be removed using a flathead screwdriver.

1. Press the screwdriver against the latching mechanism located on the bottom of the switch-plate.
2. Use a gentle force to lever the switch-plate away from the wall.
3. The switch-plate should easily disengage from the Autonomy Wall Switch.

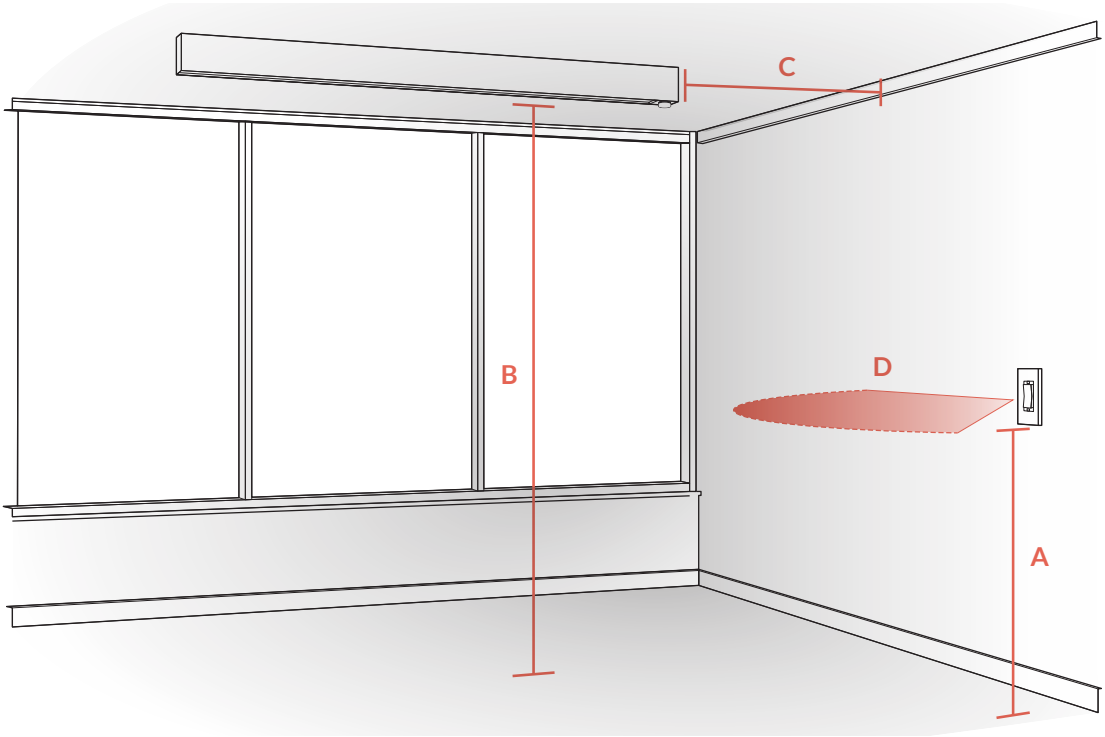


INSTALLATION

MOUNTING POSITION

The Autonomy Wall Switch pairs with co-located Autonomy Sensors by establishing a reciprocal Near Infrared Optical Link. Refer to the mounting instructions below to ensure that the Autonomy Wall Switch and at least one Autonomy Sensor are within detectable range of one another.

A - Autonomy Wall Switch Mounting Height: 0.9-1.4 m / 35-56”
B - Autonomy Sensor Mounting Height: 2.7-3.7 m / 9-12’
C - Autonomy Sensor Distance from Wall: 0.6 - 2.4 m / 2-8’ (to closest device).
D - Autonomy Sensor to Autonomy Wall Switch Azimuth: 90°.



ISED & FCC

ISED GENERAL STATEMENTS

ISED Non-Interference Disclaimer

This device contains licensed transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licensed RSS(s). Operation is subject to the following two conditions:
(1) This device may not cause interference.
(2) This device must accept any interference, including interference that may cause undesired operation of the device.
This device complies with the Canadian ICES-003 Class A specifications. CAN ICES-003(A) / NMB-003 (A).

L'émetteur/récepteur autorisée contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio autorisée. L'exploitation est autorisée aux deux conditions suivantes :
(1) L'appareil ne doit pas produire de brouillage;
(2) L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.
Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

ISED RF Exposure Statement

This equipment complies with ISED RSS-102 radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20 cm (7.9 inches) between the radiator and any part of your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Cet équipement est conforme aux limites d'exposition aux radiations ISED CNR-102 établies pour un environnement non contrôlé. Une distance de séparation d'au moins 20 cm doivent être maintenue entre l'antenne de cet appareil et toutes les personnes. Lanceurs ou ne peuvent pas coexister cette antenne ou capteurs avec d'autres.

ISED/FCC RF Exposure Statement

This equipment complies with FCC and ISED RSS-102 radiation exposure limits set forth for an uncontrolled environment. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. In order to avoid the possibility of exceeding the FCC and ISED RSS-102 radio frequency exposure limits, this equipment should be installed and operated with minimum distance 20 cm (7.9 inches) between the antenna and your body during normal operation. Users must follow the specific operating instructions for satisfying RF exposure compliance.

Cet équipement est conforme aux limites d'exposition aux rayonnements FCC et ISED CNR-102 établies pour un environnement non contrôlé. Cet émetteur ne doit pas être installé ou utilisé en conjonction avec une autre antenne ou un autre émetteur. Afin d'éviter la possibilité de dépasser les limites d'exposition aux radiofréquences FCC et ISED, cet équipement doit être installé et utilisé avec une distance minimale de 20 cm (7.9 pouces) entre l'antenne et votre corps pendant le fonctionnement normal. Les utilisateurs doivent suivre les instructions spécifiques d'utilisation pour respecter la conformité à l'exposition aux RF.

AUTONOMY WALL SWITCH DATASHEET

ISED & FCC

FCC STATEMENTS FOR CLASS A DIGITAL DEVICE

FCC Compliance Statement

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.
This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) this device may not cause harmful interference, and
(2) this device must accept any interference received, including interference that may cause undesired operation. Please note that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

FCC RF Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. In order to avoid the possibility of exceeding the FCC radio frequency exposure limits, this equipment should be installed and operated with minimum distance 20 cm (7.9 inches) between the antenna and your body during normal operation. Users must follow the specific operating instructions for satisfying RF exposure compliance.

ISED/FCC RF Exposure statement

This equipment complies with FCC and ISED RSS-102 radiation exposure limits set forth for an uncontrolled environment. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. In order to avoid the possibility of exceeding the FCC and ISED RSS-102 radio frequency exposure limits, this equipment should be installed and operated with minimum distance 20 cm (7.9 inches) between the antenna and your body during normal operation. Users must follow the specific operating instructions for satisfying RF exposure compliance.

Cet équipement est conforme aux limites d'exposition aux rayonnements FCC et ISED CNR-102 établies pour un environnement non contrôlé. Cet émetteur ne doit pas être installé ou utilisé en conjonction avec une autre antenne ou un autre émetteur. Afin d'éviter la possibilité de dépasser les limites d'exposition aux radiofréquences FCC et ISED, cet équipement doit être installé et utilisé avec une distance minimale de 20 cm (7.9 pouces) entre l'antenne et votre corps pendant le fonctionnement normal. Les utilisateurs doivent suivre les instructions spécifiques d'utilisation pour respecter la conformité à l'exposition aux RF.