

**Abstract™**  
Assembly Instructions  
instructions d'installation

**SONNEMAN®**  
A WAY OF LIGHT

# Abstract™ - LED Product Information and Warnings

## Important

- **Always disconnect the power before installing or replacing parts and before cleaning or other maintenance.**
- **Consult a qualified, licensed electrician to ensure correct branch circuit conductor.**  
*Consulter un électricien qualifié pour vous assurer que les conducteurs de la dérivation sont adéquats.*
- Please read all included assembly instructions and warnings carefully before installation. Contact Customer Service if you have any questions or concerns. Before installation, please confirm that the fixture is compatible with your supply voltage and dimming system, if present.
- LEDs are highly sensitive electronic devices, and must be treated with care. Do not open any factory sealed compartments, and avoid touching the LEDs with your hands or any object.
- Although all our fixtures are equipped with protective devices, LED fixtures are vulnerable to power surges and supply variations. Do not install LED fixtures on the same circuit as any motors, appliances, or HVAC systems.
- Do not remove or bypass any LED Driver or Transformer that is provided with the fixture, and do not replace or substitute with another power supply.
- Remote LED Driver or Transformer installation must be done by a licensed electrician and in accordance with local codes. Remote installations should be in an accessible location, as close to the fixture as possible.
- All factory-made splices and connections must remain intact. LED circuits are carefully designed and built, and improper connections may damage the fixture.
- Any mounting hardware is provided for your convenience and should be used with discretion. Always use the appropriate hardware for the mounting surface.
- Do not load the provided LED driver above the rated wattage.

# Abstract™ - Assembly Instructions

2181

## INSTRUCTIONS D'INSTALLATION

Abstract Series - Small LED Surface Mount, Medium LED Surface Mount, Large LED Surface Mount

### Important

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*Consulter un électricien qualifié pour vous assurer que les conducteurs de la dérivation sont adéquats.*

1. Shut off power to the branch circuit conductors.
2. Tape the included fixture templates to the installation surface according to the desired configuration.
3. Layout where the remote LED driver will be installed and how the power will be run to each fixture. **Note:** All three fixture arms are wired with a pair of low voltage red and black wires. Any arm can be used as the power input and the other two may be used as power outputs to connect other Abstract fixtures, up to a maximum eight per driver. **CAUTION:** Do not exceed the maximum wattage of the included LED driver.
4. Using the guides as indicated on the templates, drill all anchor points (3 per fixture) and drill power points as required. For the power wire hole, do not drill larger than ½", to stay within the footprint of the mounting bracket.
5. Install the LED driver in a remote and accessible location in accordance with local electrical codes. Make appropriate electrical connections between branch circuit conductors and the LED driver (B) using the provided wire nuts or equivalent:
  - a. Connect the LED driver's live wire (L) to the live supply wire.
  - b. Connect the LED driver's neutral wire (N) to the neutral supply wire.
  - c. Connect the LED driver's positive (+) output wire to the necessary length of red wire (not included) and run to the fixture input wire location(s).
  - d. Connect the LED driver's negative (-) output wire to the necessary length of black wire (not included) and run to the fixture input wire location(s).

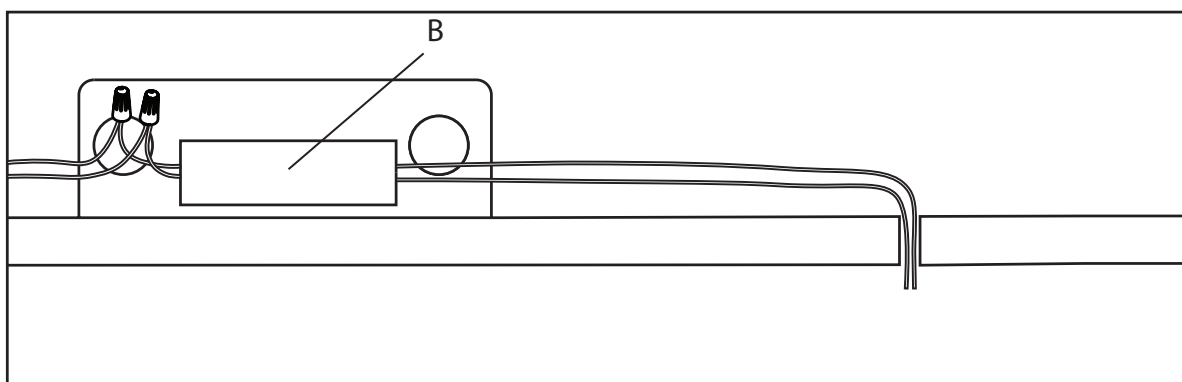


Fig. 1

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6. If the wiring plan involves jumping between fixtures, run appropriate lengths red and black wires (not included) between fixture wire points.
7. Fixture Assembly:
  - a. Install all pre-wired arms that will be used for power input/output by inserting each arm (F) into the fixture body (A) and tightening the set screws (G) with the provided allen key (H). **Note:** Each of the three arms are different lengths so it is important not to rearrange their position relative to the fixture body.

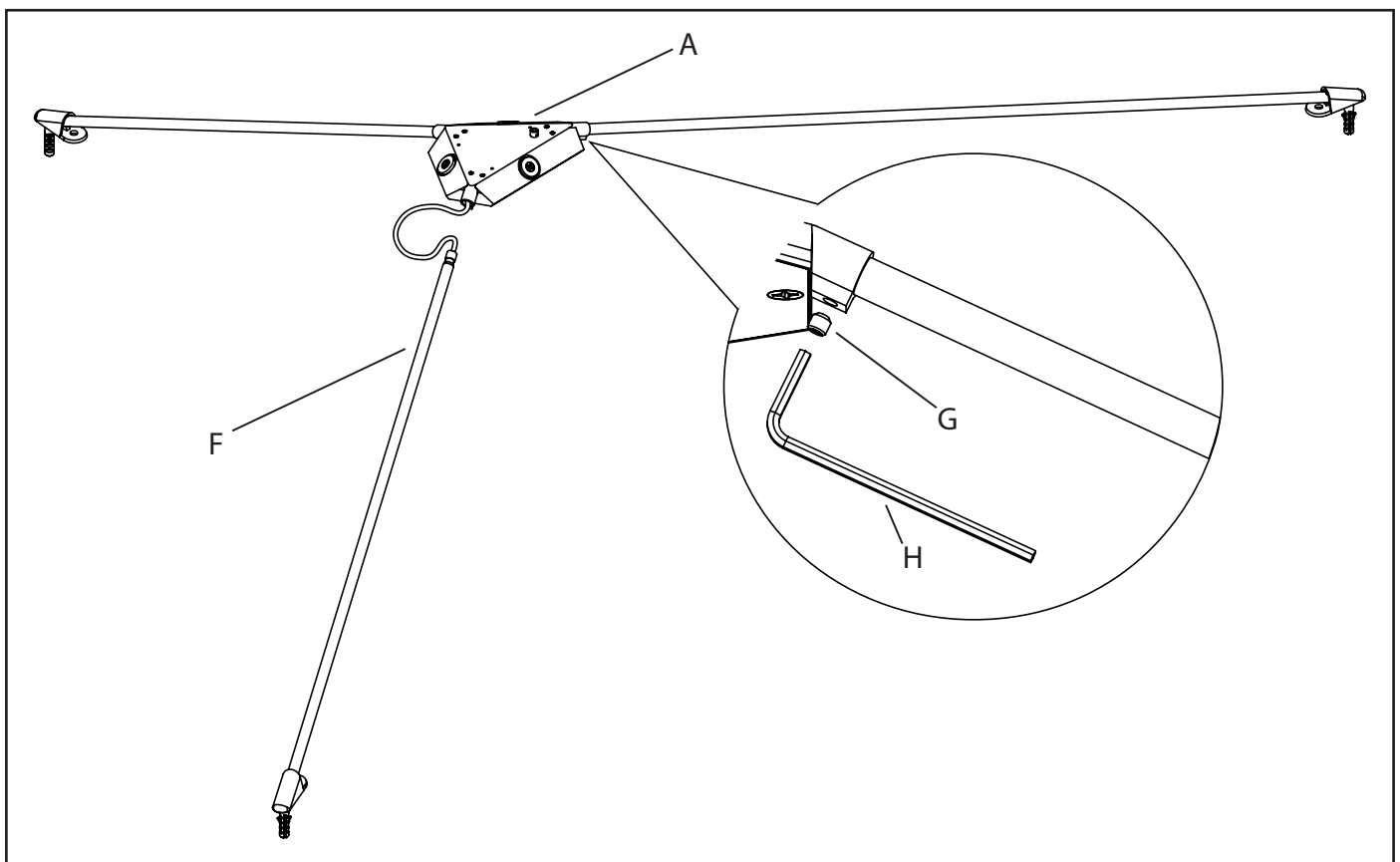


Fig. 2

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- b. Route the length of wire sticking out of the bottom of each installed arm through the wire hole (L) on the mounting bracket (J).

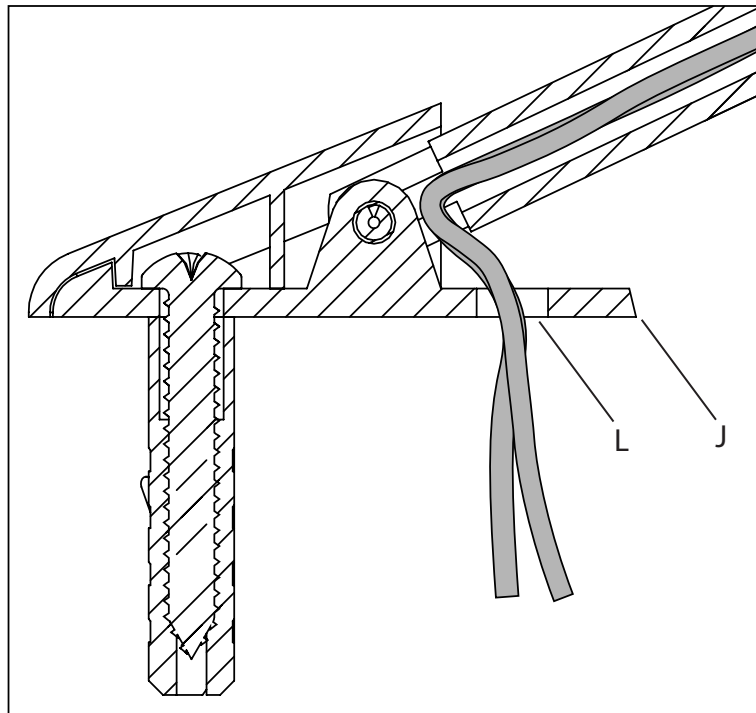


Fig. 3

- c. Trim all remaining wires that will not be used for power input/output, 1" from the fixture body (A).
- d. Install the arm(s) (F) with trimmed wires (E) by guiding the wires into the arm(s), inserting each arm into the fixture body (A), and tighten the set screws with the provided allen key.

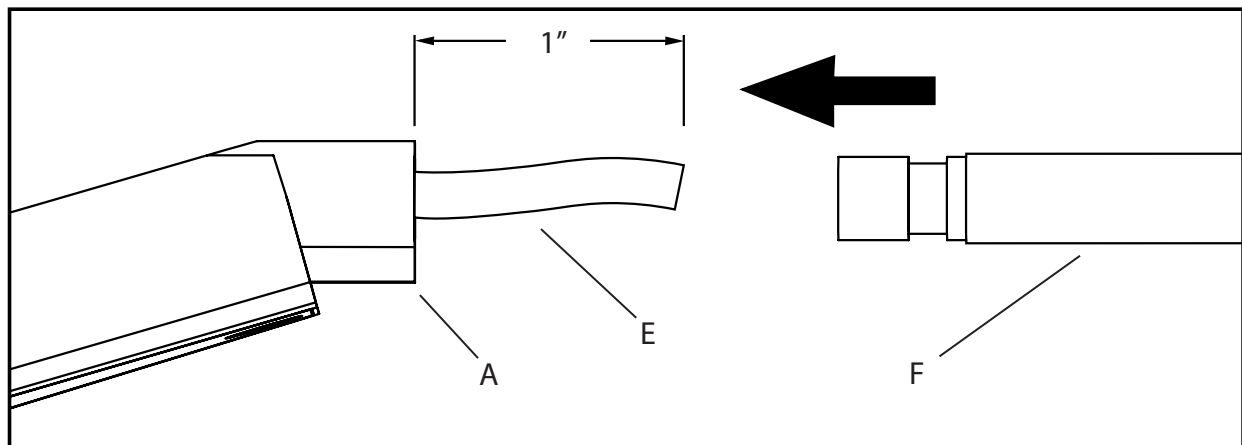


Fig. 4

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8. Remove the taped templates, wire, and install the fixtures. **Note:** We recommend completing all splices for power input/output, following steps 9 and 10, before installing each fixture to the wall.
9. Make appropriate electrical connections between the remote LED driver (B) and fixture(s) using included wire nuts or equivalent:
  - a. Connect the positive (red) low voltage driver output wire to the positive (red) fixture input wire.
  - b. Connect the negative (black) low voltage driver output wire to the negative (black) fixture input wire.
  - c. Push wires and connections back into the wire hole.
10. For stringing multiple fixtures (if applicable), make appropriate electrical connections between each fixture using included wire nuts or equivalent:
  - a. Run red and black jumper wires (not included) behind the wall connecting the output location(s) of the first fixture to the input location of the next fixture(s).
  - b. Using the jumper(s), connect the positive (red) low voltage output wire(s) from the first fixture to the positive (red) input wire of the next fixture(s).
  - c. Using the jumper(s), connect the negative (black) low voltage output wire(s) from the first fixture to the negative (black) input wire of the next fixture(s).
  - d. Push wires and connections back into the wire hole.

Example:

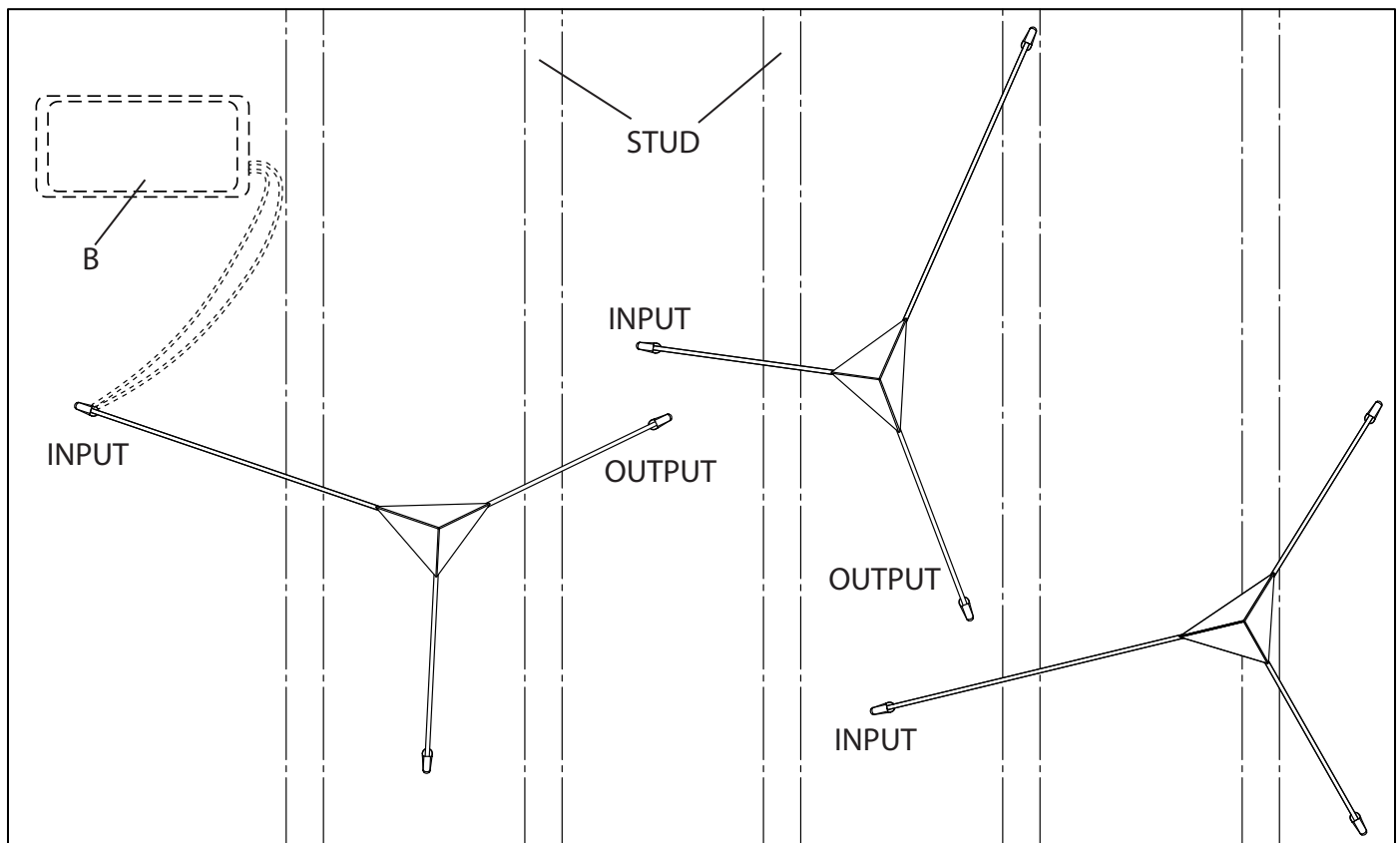


Fig. 5

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11. Install the fixture(s) to the wall/ceiling by using bracket mounting screws (K) and optional drywall anchors (M), then snap mounting bracket cover (N) onto each mounting bracket (J).

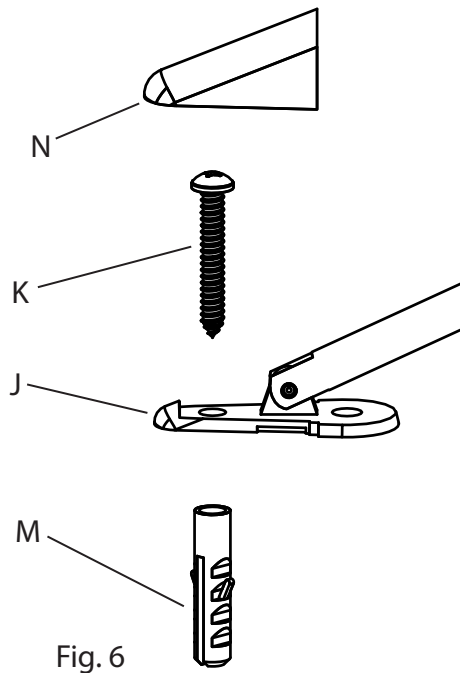


Fig. 6

12. Repeat steps 9-11 for all fixtures. We recommend installing each fully wired fixture before moving to the next fixture. **Remember:** No more than 8 fixtures can be connected to a single LED driver.
13. Install triangle reflectors (Fig. 7) onto all fixtures (A). The reflectors are oriented to the legs and will only fit fully in one position (with the shortest peak aligned with the shortest leg). **Note:** The reflector is held in place by magnets and requires no tools.

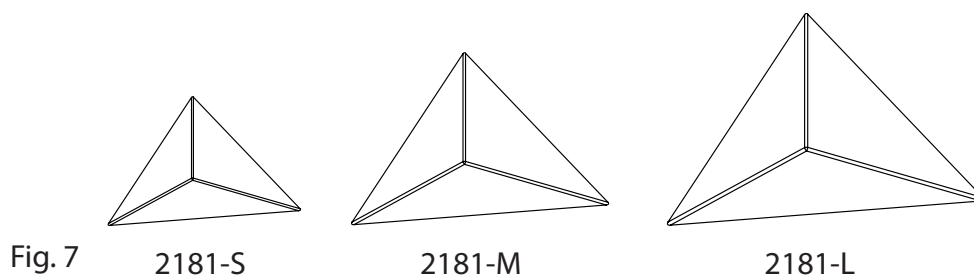


Fig. 7

2181-S

2181-M

2181-L

14. Restore power to the branch circuit after the entire system is fully assembled.

### Note

- This fixture is dimmable with Electronic Low Voltage (Trailing-Edge) and Incandescent (Leading-Edge) dimmers. Also dimmable with 0-10 V type dimmers for systems consisting of 4 or more fixtures.

### Care Instructions

- **Dusting:** Use a clean, dry cloth.
- **Cleaning:** To protect the finish, avoid any harsh abrasives or chemicals.