

**IMPORTANT**

- For factory pre-set option, customer to select pattern and provide distance of longest pendant. Signoff on Blackjack-generated configuration drawing or designer-supplied submittal drawing required. Pendants are pre-installed and pre-configured by Blackjack per signed submittal drawing. Customized installation instructions are supplied as necessary.
- For customer-set (DIY) option, pendants are installed in canopies with approximately 6' cable exposed. Customer to connect canopies and make adjustments to cable length in-field as desired.
- Standard 8' total of field-adjustable cable is included with each pendant (unless otherwise specified); no cutting or splicing required should adjustments need to be made in the field.
- Appropriate number of joiners and spacers included to complete configuration installation.
- Individual canopies with pendants can weigh as much as 50 pounds. Canopies and system must be mounted to rigid ceiling material (e.g., sheet rock, fire-rated plywood or similar) that can support system weight and accept drywall anchors, expandable fasteners or similar structural fasteners.

Solo Modular System – Stem Mounted

MS-24xx, MS-48xx (5/11 Port)

CAUTION

TURN OFF THE MAIN POWER AT THE CIRCUIT BREAKER BEFORE INSTALLING THE FIXTURE IN ORDER TO PREVENT POSSIBLE SHOCK

IF YOU ARE UNFAMILIAR WITH PROPER ELECTRICAL WIRING CONNECTIONS OBTAIN THE SERVICES OF A QUALIFIED ELECTRICIAN

GENERAL

- Read all instructions carefully for safe operation and installation.
- All electrical connections must be in accordance with local and national electrical code (N.E.C) standards.
- Remove the fixture and any additional package from the box and make sure that no parts are missing by referencing the illustrations on the installation instructions. Please contact Blackjack Lighting if any parts are missing or damaged.
- This product is suitable for damp locations.

INSTALLATION

1- PREPARATION

- Remove the fixture from its box. Unpack the bundled wire packages, be careful not to bend or kink wires when unpacking. Remove additional packaging for light guides (2).
- Remove the channel (5) from the fixture pan (3) by loosening the two decorative finials (4).

2- STEM MOUNTING - (Remote/ Canopy Mounted Driver)

- A 47" or 23" length of channel (5) will require at least two stems (7) on the first channel (where power enters). A 47" length of channel will require two stems (7) for each additional channel connected in a row, and a 23" length of channel will require a minimum of one stem (7) when used as an additional channel in a row.
- Mount first stem:**
Thread the first stem (8) into channel (5) with 24V electrical cable (24) running through the stem, and tighten it firmly.
- Mount additional stems:**
Thread the non-powered stem(s) (7) into channel (5) and tighten them firmly with the threaded hex fasteners (21).

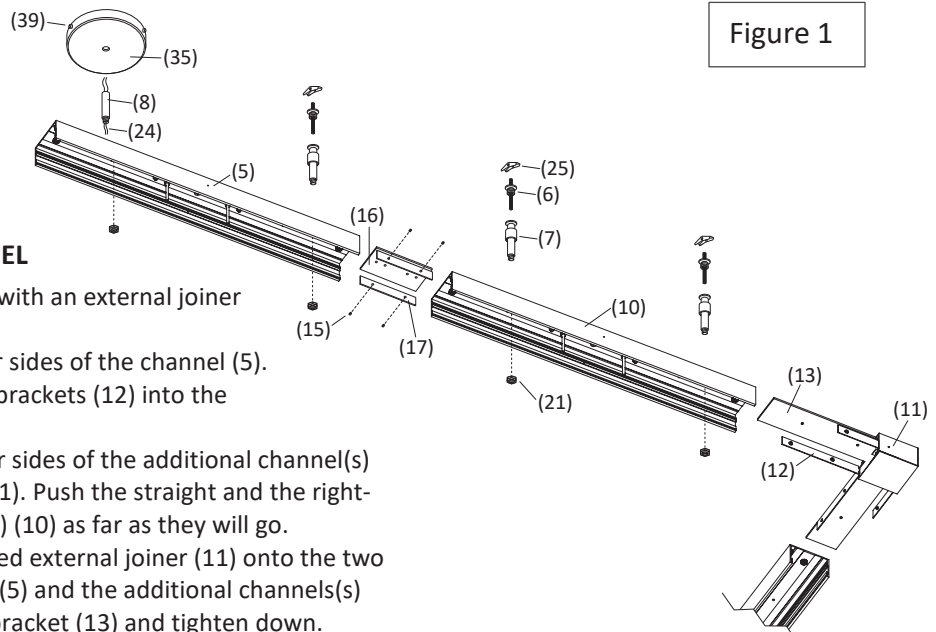


Figure 1

3A- ADD EXTERNAL JOINER AT END OF CHANNEL

- For connection to additional channel sections with an external joiner (11) either ("L" / "I" / "T" / "X" Joiner).
- Insert side support brackets (12) into the inner sides of the channel (5). Push the straight and the right-angle support brackets (12) into the channel (5) as far as it will go.
- Insert side support brackets (12) into the inner sides of the additional channel(s) (10) on the other side of the external joiner (11). Push the straight and the right-angle support brackets (12) into the channel(s) (10) as far as they will go.
- Attach back support bracket (13) of the selected external joiner (11) onto the two threaded studs at the end of the first channel (5) and the additional channel(s) (10). Install two nuts on each end of support bracket (13) and tighten down.

- e. Slide back the straight support bracket (12) into the external joiner (11) until the support bracket (12) is spaced half way into the channel (5) with the other portion inside the joiner (11)
- f. Lock both side support brackets in place in the channel(s) by tightening set screw (15). Tighten the set screws (15) inside the selected external joiner (11) so it meets tightly with the end of channel(s).

3B- ADD INTERNAL JOINER AT END OF CHANNEL

- a. For connection to additional channel sections (10) with an internal joiner (16)
- b. Attach one end of internal joiner (16) onto the two threaded studs at the end of the channel (5). Install two nuts and tighten.
- c. Insert side support brackets (17) into the inner sides of the first channel (5). Push them all the way into the channel (5)
- d. Mount the internal joiner (16) onto the two threaded studs on the additional channel (10). Install two nuts and tighten.
- e. Slide back the side support bracket (17) until they are spaced half way into the channel (5) with the other portion inside the additional channel (10). Tighten the remaining set screws (15) until fully tight.

4. INSTALL CANOPY BACKPLATE TO JUNCTION BOX

- a. Install the backplate (30,36 or 41) to the junction box (1).
- b. **For the junction box cover plate (29)** (for remote mounted drivers): pull the two electrical low voltage wires (28) from remote driver (22) through backplate. Install cover plate (29) so that side mounted screw hole is facing the same direction as the channel (5).
- c. **For the round canopies (35 or 40)** (for canopy mounted drivers): pull the line voltage supply wires (19) from junction box (1) through the backplate. Align the mounting screw holes in the backplate with the holes in the junction box (1). Insert and tighten the mounting screws (14) to attach them together. Attach the line voltage supply wires (19) from the junction box (1) to the input wires from the integral driver (33) using quick connector (27).

5. INSTALL STEM / ELECTRICAL WIRE ASSEMBLY TO CANOPY COVER

- a. Attach the top side of the stem (8) to the canopy (29,35 or 40) with the excess wire exiting into the canopy. Shorten electrical wire as required.
- b. Insert the low voltage wire (24) from the channel (5) through the ceiling canopy (29,35 or 40).

6. INSTALL STEM CEILING SUPPORTS

- a. Measure the distance between the first stem (8) (underneath the center of the canopy) and the next mounted stem (8). Then measure the distance between each of the remaining stems (8) along the channel (5). Mark the distance between the canopy center and the first stem on the ceiling. Then mark the rest of the measured stem locations in a straight line on the ceiling.
- b. Align the threaded stem top (6) with the marks made on the ceiling and mark the center hole location on the ceiling.
- c. Insert a ceiling anchor (25) rated to support at least 40 pounds to the ceiling mount location (anchor and fastener not included). It is recommended to use a No. 10 (3/16" dia.) toggle bolt ceiling anchor (in sheetrock applications) or a No. 10 round head screw (3/16" dia.) into a solid surface. Tighten the threaded stem top (6) until it rests firmly against the ceiling.

7. CONNECT ELECTRICITY

Attach the low voltage fixture wires (26) coming from the back of channel (5) through ceiling canopy (35 or 40) to the low voltage wire (18) coming from integrally mounted driver (20) in canopy using quick connector (27). Low voltage fixture wires can also be attached to the low voltage wires coming through the junction box (1) from remote mounted driver (22) (junction box cover plate (29)).

[NOTE: DO NOT CONNECT THE LOW VOLTAGE (24v) ELECTRICAL WIRING (24) COMING FROM THE CHANNEL (5) TO A LINE VOLTAGE (120-277v) INPUT FROM THE JUNCTION BOX (1)]

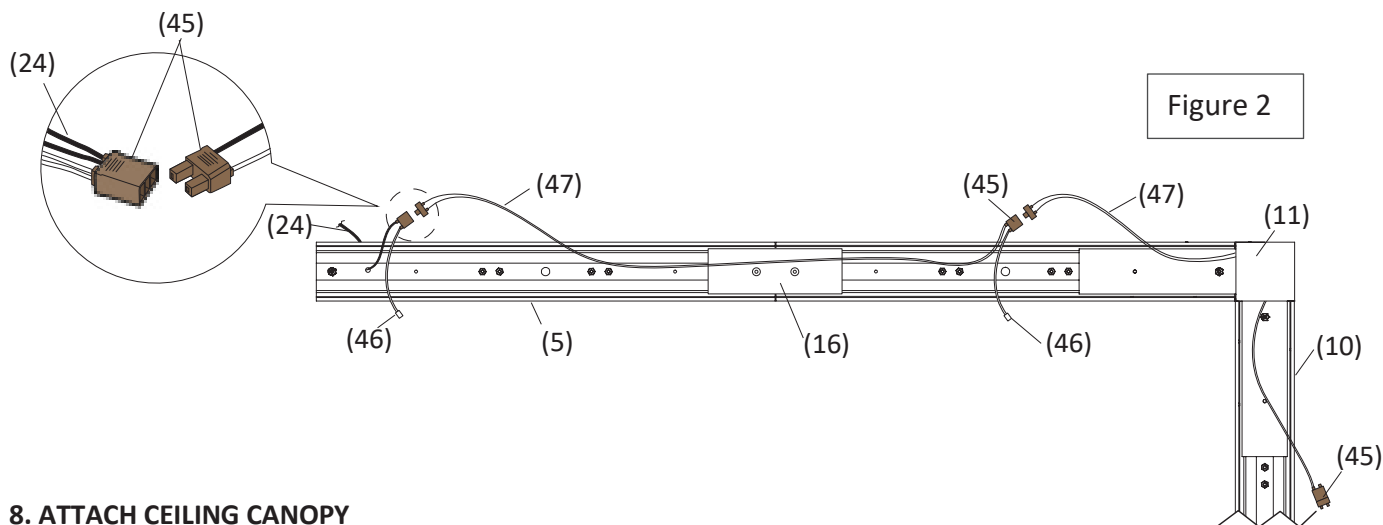


Figure 2

8. ATTACH CEILING CANOPY

- For junction box cover plate;** align cover (29) to the threaded studs in backplate (30) Lock the front cover (29) to the backplate (30) by inserting and tightening the finials (31) to the backplate studs.
- For shallow canopy;** Attach driver (20) and its rear disk (34) to the support bracket (37) with two screws (38). Push the front canopy (35) up to the canopy backplate (36) until the canopy is firmly positioned against the ceiling, and then lock into position with three side finials (39)
- For deep canopy;** Secure the internal support bracket (42) to the canopy backplate (41) with the two finials (43) on either side. Then Install the two finials (44) holding the deep round cover plate (40) to the mounting bracket (42).

9. ATTACH STEM TO CEILING SUPPORTS

Mount each non powered stem (7) to the ceiling mount anchor (25) and hand fasten them together.

10. CONNECT THE INTERNAL CHANNEL WIRING CONNECTIONS

The low voltage wiring attached to the back of the channel (24) is attached to the male side of the brown low voltage connectors (45) Also attached is a white quick disconnect (46) used to transfer power to the pendant wire assembly. The female side of the brown connectors is located inside the channel (5) of the fixture and is attached to the 48" jumper wires (47) which carry low voltage power from one fixture to the next. Tighten the zip tie restraint on the jumper cable and attach to the brown connectors in the next channel. Once all the low voltage connections are made you can then suspend the fixture pan (3) from the internal suspension wires (hook and loop) (32) (located inside the fixture).

11. DETERMINE THE APPROPRIATE LENGTH OF EACH PENDANT

(if pendant is pre-configured; pendants will only require minor adjustments). Push the excess wire up into the canopy by pressing the small barrel of the gripper (23) upward. This will release the wire tension and allow the suspended wire to be pulled through gripper. Roll excess wire into a small loop inside the canopy. Wrap the supplied Velcro strap around this loop to keep the excess wire from falling outside the fixture pan (3).

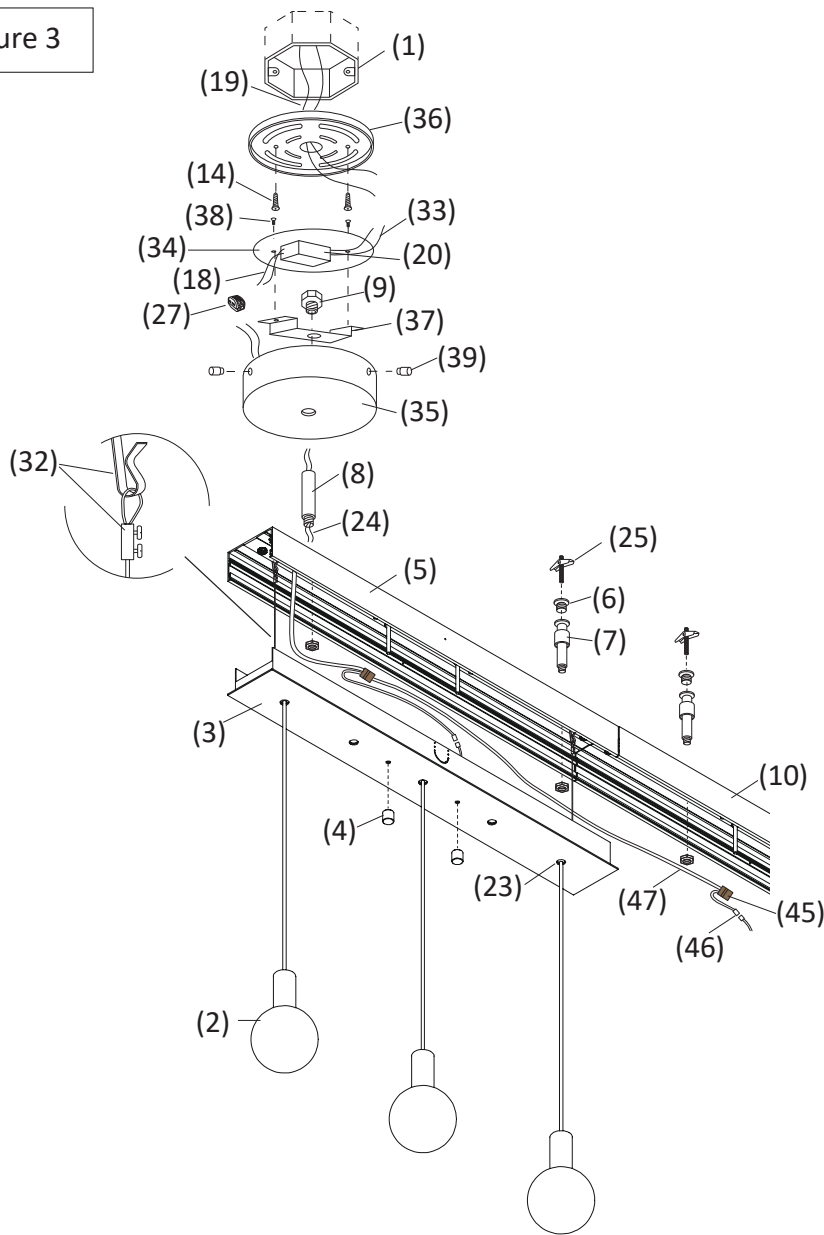
12. CONNECT THE CANOPY COVER TO THE BACKPLATE

Make sure all wires are carefully placed inside fixture pan (3). Secure the fixture pan (3) to the channel (5) by tightening the two decorative finials (4).

13. FINE TUNE CABLES

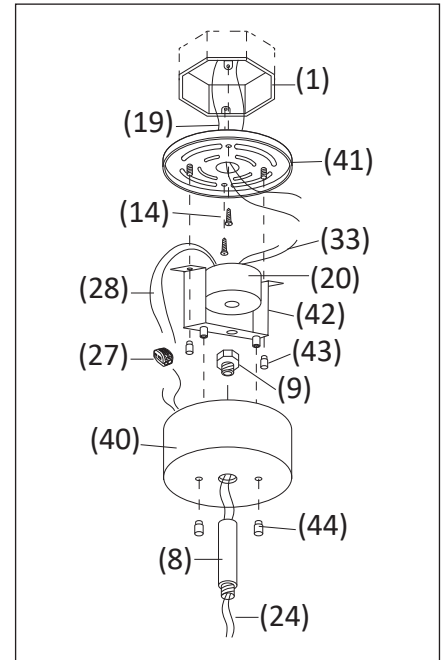
- Once the canopy is in place, fine tune the wire lengths longer or shorter to get each pendant adjusted to its preferred length by adjusting the gripper (23). If pendants are prearranged by Blackjack, minor adjustments may be required. Each pendant has a screw in light guide (2) (shipped separately). Gently screw into place.
- Once the length of each wire has been established, any remaining bends or kinks in the wire can be straightened by bending out the kinks by hand while heating the cord up with the warm air from a hair dryer or heat gun. A handheld wire straightening kit can be provided by Blackjack (reference instructions provided with kit).

Figure 3

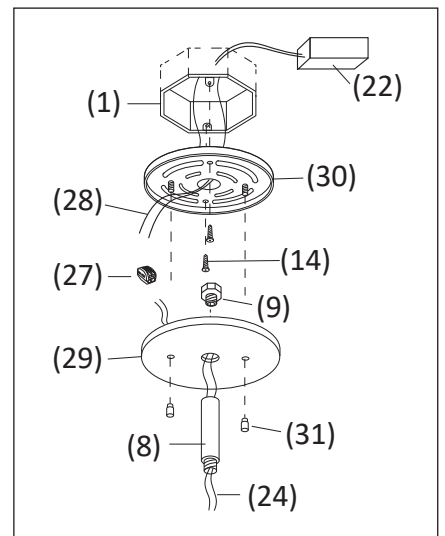


(MS-24xx Solo Module Shown)

Deep Round



Junction Box Cover Plate



- | | | |
|--|--|---|
| 1. JUNCTION BOX (by others) | 17. INTERNAL JOINER SIDE SUPPORT BRACKET | 33. LINE VOLTAGE WIRES FROM INTEGRAL DRIVER |
| 2. LIGHT GUIDES | 18. 24V LOW VOLTAGE WIRES FROM INTEGRAL DRIVER | 34. SHALLOW CANOPY DRIVER PLATE |
| 3. FIXTURE PAN | 19. LINE VOLTAGE SUPPLY WIRES FROM J-BOX | 35. SHALLOW CANOPY COVER PLATE |
| 4. DECORATIVE FINIALS | 20. INTEGRAL DRIVER | 36. SHALLOW CANOPY BACKPLATE |
| 5. CHANNEL | 21. STEM THREADED HEX FASTENER | 37. SHALLOW CANOPY DRIVER SUPPORT BRACKET |
| 6. THREADED STEM TOP | 22. REMOTE DRIVER | 38. SUPPORT BRACKET SCREWS |
| 7. NON POWERED STEM | 23. PENDANT GRIPPER | 39. CANOPY SIDE FINIALS |
| 8. ELECTRICAL STEM | 24. 24V LOW VOLTAGE WIRES FROM CHANNEL | 40. DEEP CANOPY COVER PLATE |
| 9. ELECTRICAL STEM THREADED-CONNECTOR | 25. CEILING ANCHOR (by others) | 41. DEEP CANOPY BACKPLATE |
| 10. ADDITIONAL CHANNEL SECTIONS | 27. QUICK CONNECTOR | 42. DEEP CANOPY INTERNAL SUPPORT BRACKET |
| 11. EXTERNAL JOINER | 28. 24V LOW VOLTAGE WIRES FROM REMOTE DRIVER | 43. DEEP CANOPY INTERNAL FINIALS |
| 12. EXTERNAL JOINER SIDE SUPPORT BRACKET | 29. JUNCTION BOX COVER PLATE | 44. DEEP CANOPY DECORATIVE FINIALS |
| 13. EXTERNAL JOINER BACK SUPPORT BRACKET | 30. JUNCTION BOX COVER PLATE BACK PLATE | 45. BROWN LOW VOLTAGE CONNECTORS |
| 14. MOUNTING SCREWS | 31. JUNCTION BOX DECORATIVE FINIALS | 46. WHITE QUICK DISCONNECT |
| 15. SUPPORT BRACKET SET SCREW | 32. INTERNAL SUSPENSION WIRES/LOOP & HOOK | 47. 24V LOW VOLTAGE JUMPER WIRES |
| 16. INTERNAL JOINER | | |

**IMPORTANT**

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- For customer-set (DIY) option, pendants are installed in canopies with approximately 6' cable exposed. Customer to connect canopies and make adjustments to cable length in-field as desired.
- Standard 8' total of field-adjustable cable is included with each pendant (unless otherwise specified); no cutting or splicing required should adjustments need to be made in the field.
- Appropriate number of joiners and spacers included to complete configuration installation.
- Individual canopies with pendants can weigh as much as 50 pounds. Canopies and system must be mounted to rigid ceiling material (e.g., sheet rock, fire-rated plywood or similar) that can support system weight and accept drywall anchors, expandable fasteners or similar structural fasteners.

CAUTION

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GENERAL

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- Remove the fixture and any additional package from the box and make sure that no parts are missing by referencing the illustrations on the installation instructions. Please contact Blackjack Lighting if any parts are missing or damaged.
- This product is suitable for damp locations.

INSTALLATION

1- PREPARATION

- Remove the fixture from its box. Unpack the bundled wire packages, be careful not to bend or kink wires when unpacking. Remove additional packaging for light guides (2).
- Remove the channel (5) from the fixture pan (3) by loosening the two decorative finials (4).

2- SURFACE MOUNTING - (Remote/ Canopy Mounted Driver)

- A 47" or 23" length of channel (5) will require at least two fasteners to mount surface mount the first canopy to a ceiling. A 47" length of channel will require two fasteners for each additional channel connected in a row, and a 23" length of channel will require a minimum of one fastener when used as an additional channel in a row.

b. Center Feed Surface Mounting:

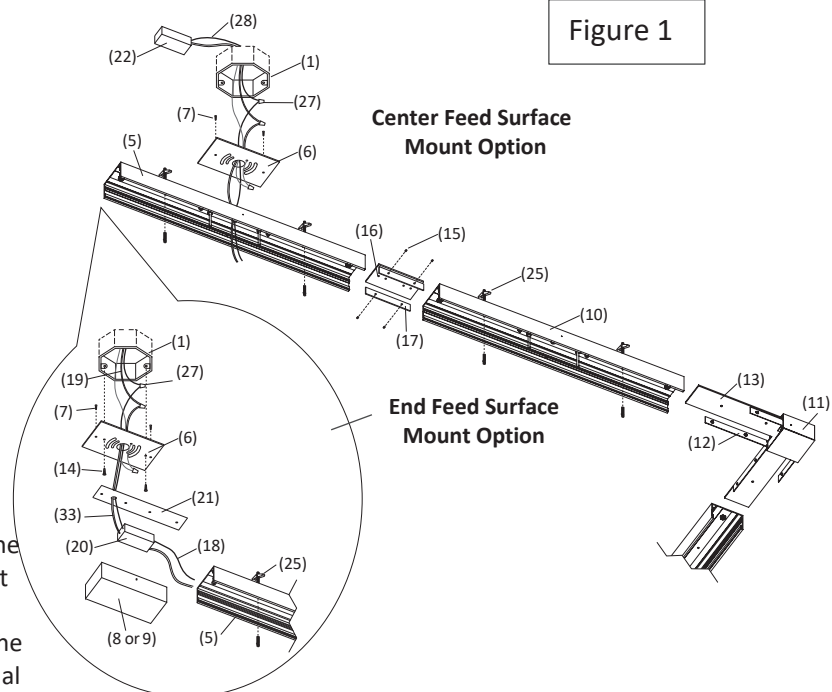
Mount Ceiling Plate (6) onto Junction box (1). Mount Ceiling plate (6) to Channel (5) by inserting the two threaded mounting studs (7) into the rear of Channel (5) and tighten it firmly from the inside.

c. End Feed Surface Mounting:

-Mount Ceiling Plate (6) onto Junction box (1).
 -Attach joiner bracket (21) to the two threaded studs that are at the end of Channel (5)
 -While the channel (5) is being mounted to the ceiling, make sure to attach the joiner bracket (21) to the two studs that are coming from Mounting Plate (6).

3A- ADD EXTERNAL JOINER AT END OF CHANNEL

- For connection to additional channel sections with an external joiner (11) either ("L"/ "I"/ "T"/ "X" Joiner).
- Insert side support brackets (12) into the inner sides of the channel (5). Push the straight and the right-angle support brackets (12) into the channel (5) as far as it will go.
- Insert side support brackets (12) into the inner sides of the additional channel(s) (10) on the other side of the external joiner (11). Push the straight and the right-angle support brackets (12) into the channel(s) (10) as far as they will go.



- d. Attach back support bracket (13) of the selected external joiner (11) onto the two threaded studs at the end of the first channel (5) and the additional channel(s) (10). Install two nuts on each end of support bracket (13) and tighten down.
- e. Slide back the straight support bracket (12) into the external joiner (11) until the support bracket (12) is spaced half way into the channel (5) with the other portion inside the joiner (11)
- f. Lock both side support brackets in place in the channel(s) by tightening set screw (15). Tighten the set screws (15) inside the selected external joiner (11) so it meets tightly with the end of channel(s).

3B- ADD INTERNAL JOINER AT END OF CHANNEL

- a. For connection to additional channel sections (10) with an internal joiner (16)
- b. Attach one end of internal joiner (16) onto the two threaded studs at the end of the channel (5). Install two nuts and tighten.
- c. Insert side support brackets (17) into the inner sides of the first channel (5). Push them all the way into the channel (5)
- d. Mount the internal joiner (16) onto the two threaded studs on the additional channel (10). Install two nuts and tighten.
- e. Slide back the side support bracket (17) until they are spaced half way into the channel (5) with the other portion inside the additional channel (10). Tighten the remaining set screws (15) until fully tight

4A. CONNECT ELECTRICITY (End Feed)

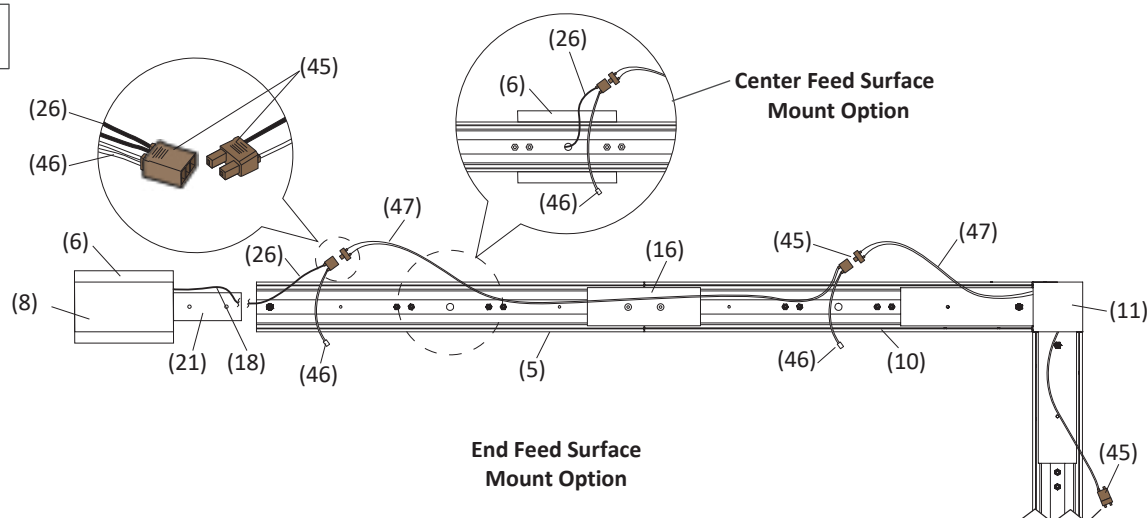
- a. Attach the low voltage fixture wires (26) coming from the back of channel (5) to the low voltage wire (18) coming from integrally mounted driver (20) in end feed (8 or 9) and splice the wires together in the end feed using quick connector (27).
- b. Connect the Line voltage input wire coming from the driver (33) to the Line voltage Input (19) from the junction box (1)
- c. Attach End feed cover (8 or 9) over the end feed backplate (21) and secure with supplied screws.

4B. CONNECT ELECTRICITY (Center Feed)

- a. Attach Low voltage fixture wires (26) coming from the back of channel (5) to the low voltage wires coming through the junction box (1) from remote mounted driver (22). Splice the wires using supplied wire connectors (27).

[NOTE: DO NOT CONNECT THE LOW VOLTAGE (24v) ELECTRICAL WIRING (26) COMING FROM THE CHANNEL (5) TO A LINE VOLTAGE (120-277v) INPUT FROM THE JUNCTION BOX (1)]

Figure 2



5. CONNECT THE INTERNAL CHANNEL WIRING CONNECTIONS

The low voltage wiring (26) coming from the back of the channel (5) is attached to the female side of the brown low voltage connectors (45). Also attached is the wire harness with the white quick disconnects (46) used to transfer power to the pendant wire assembly. The male side of the brown connectors is located inside the channel (5) of the fixture and is attached to the 48" jumper wires (47) which carry low voltage power from one fixture to the next. Tighten the zip tie restraint on the jumper cable and attach to the brown connectors in the next channel. Once all the low voltage connections are made you can then suspend the fixture pan (3) from the internal suspension wires (hook and loop) (32) (located inside the fixture).

6. DETERMINE THE APPROPRIATE LENGTH OF EACH PENDANT

(if pendant is pre-configured; pendants will only require minor adjustments). Push the excess wire up into the canopy by pressing the small barrel of the gripper (23) upward. This will release the wire tension and allow the suspended wire to be pulled through gripper. Roll excess wire into a small loop inside the canopy. Wrap the supplied Velcro strap around this loop to keep the excess wire from falling outside the fixture pan (3).

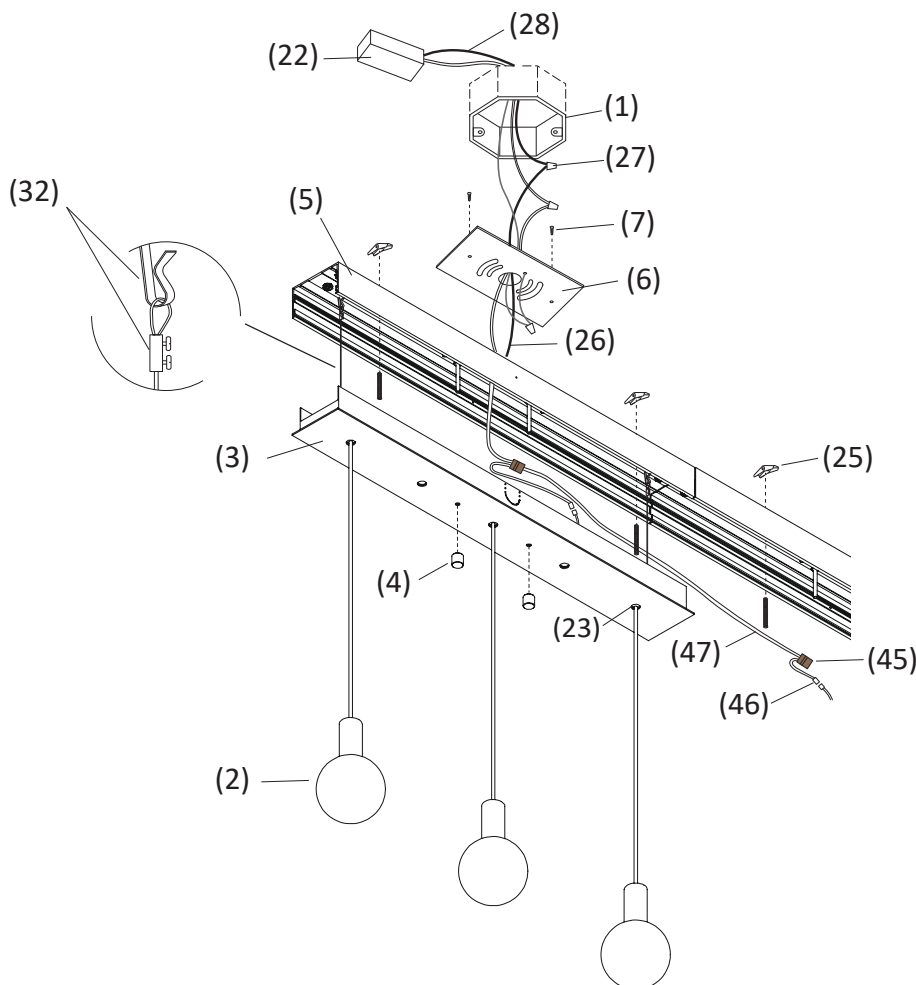
7. CONNECT THE CANOPY COVER TO THE BACKPLATE

Make sure all wires are carefully placed inside fixture pan (3). Secure the fixture pan (3) to the channel (5) by tightening the two decorative finials (4).

8. FINE TUNE CABLES

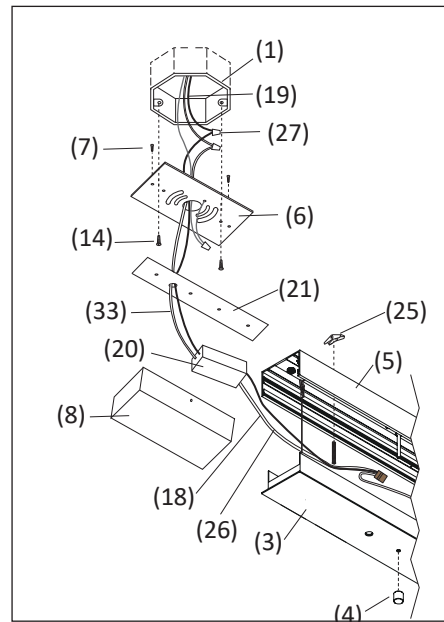
- a. Once the canopy is in place, fine tune the wire lengths longer or shorter to get each pendant adjusted to its preferred length by adjusting the gripper (23). For pendants that are prearranged by Blackjack; minor adjustments may be required. Each pendant has a screw in light guide (2) (shipped separately). Gently screw into place.
- b. Once the length of each wire has been established, any remaining bends or kinks in the wire can be straightened by bending out the kinks by hand while heating the cord up with the warm air from a hair dryer or heat gun. A handheld wire straightening kit can be provided by Blackjack (reference instructions provided with kit).

Figure 3

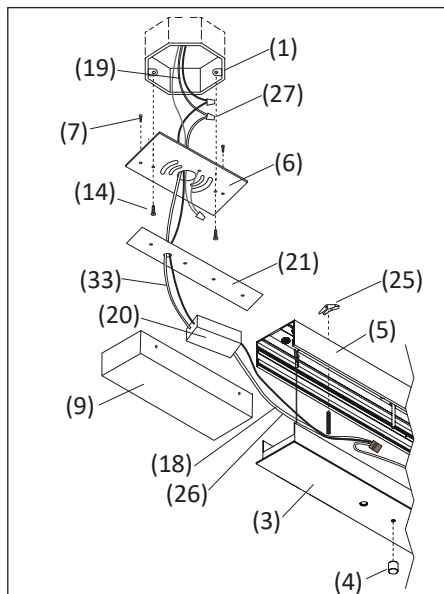


(MS-24xx Solo Module Shown)

Surface Mount End Feed



Surface Mount Long End Feed



- | | | |
|---------------------------------|--|---|
| 1. JUNCTION BOX (by others) | 12. EXTERNAL JOINER SIDE SUPPORT BRACKET | 23. PENDANT GRIPPER |
| 2. LIGHT GUIDES | 13. EXTERNAL JOINER BACK SUPPORT BRACKET | 25. CEILING ANCHOR (by others) |
| 3. FIXTURE PAN | 14. MOUNTING SCREWS | 26. 24V LOW VOLTAGE FIXTURE WIRES FROM CHANNEL |
| 4. DECORATIVE FINIALS | 15. SUPPORT BRACKET SET SCREW | 27. WIRE CONNECTOR |
| 5. CHANNEL | 16. INTERNAL JOINER | 28. 24V LOW VOLTAGE WIRES FROM REMOTE DRIVER |
| 6. CEILING PLATE | 17. INTERNAL JOINER SIDE SUPPORT BRACKET | 32. INTERNAL SUSPENSION WIRES/LOOP & HOOK |
| 7. CEILING PLATE SCREWS | 18. 24V LOW VOLTAGE WIRES FROM INTEGRAL DRIVER | 33. LINE VOLTAGE INPUT WIRES FROM INTEGRAL DRIVER |
| 8. END DRIVER FEED HOUSING | 19. LINE VOLTAGE SUPPLY WIRES FROM J-BOX | 45. BROWN LOW VOLTAGE CONNECTORS |
| 9. LONG END DRIVER FEED HOUSING | 20. INTEGRAL DRIVER | 46. WHITE QUICK DISCONNECT |
| 10. ADDITIONAL CHANNEL SECTIONS | 21. JOINER BRACKET | 47. 24V LOW VOLTAGE JUMPER WIRES |
| 11. EXTERNAL JOINER | 22. REMOTE DRIVER | |

**IMPORTANT**

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- For customer-set (DIY) option, pendants are installed in canopies with approximately 6' cable exposed. Customer to connect canopies and make adjustments to cable length in-field as desired.
- Standard 8' total of field-adjustable cable is included with each pendant (unless otherwise specified); no cutting or splicing required should adjustments need to be made in the field.
- Appropriate number of joiners and spacers included to complete configuration installation.
- Individual canopies with pendants can weigh as much as 50 pounds. Canopies and system must be mounted to rigid ceiling material (e.g., sheet rock, fire-rated plywood or similar) that can support system weight and accept drywall anchors, expandable fasteners or similar structural fasteners.

Solo Modular System – Suspended

MS-24xx, MS-48xx (5/11 Port)

CAUTION

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- This product is suitable for damp locations.

INSTALLATION

1- PREPARATION

- Remove the fixture from its box. Unpack the bundled wire packages, be careful not to bend or kink wires when unpacking. Remove additional packaging for light guides (2).
- Remove the channel (5) from the fixture pan (3) by loosening the two decorative finials (4).

2- SUSPENSION MOUNTING- (Remote/ Canopy Mounted Driver)

- A 47" or 23" length of channel (5) will require at least two cable grippers (6) on the first channel (where power enters). A 47" length of channel will require two cable grippers (6) for each additional channel connected in a row, and a 23" length of channel will require a minimum of one gripper when used as an additional channel in a row.

b. Mount first cable gripper for aircraft cable:

Thread the first cable gripper (6) into channel (5) Next to electrical cable (24) exiting from the back of channel (5) and tighten it firmly. Attach aircraft cable assembly; pull the aircraft cable (7) through the ball end support collar (8) until the ball end rests inside the collar. Insert aircraft cable (7) into aircraft cable gripper (6), and adjust to approximate length of cable required.

c. Mount additional cable grippers for aircraft cable:

Thread the additional cable gripper(s) (6) into channel (5) and tighten them firmly. Attach aircraft cable assembly; pull the aircraft cable (7) through the ball end support collar (8) until the ball end rests inside the collar. Insert aircraft cable (7) into aircraft cable gripper (6), and adjust to approximate length of cable required.

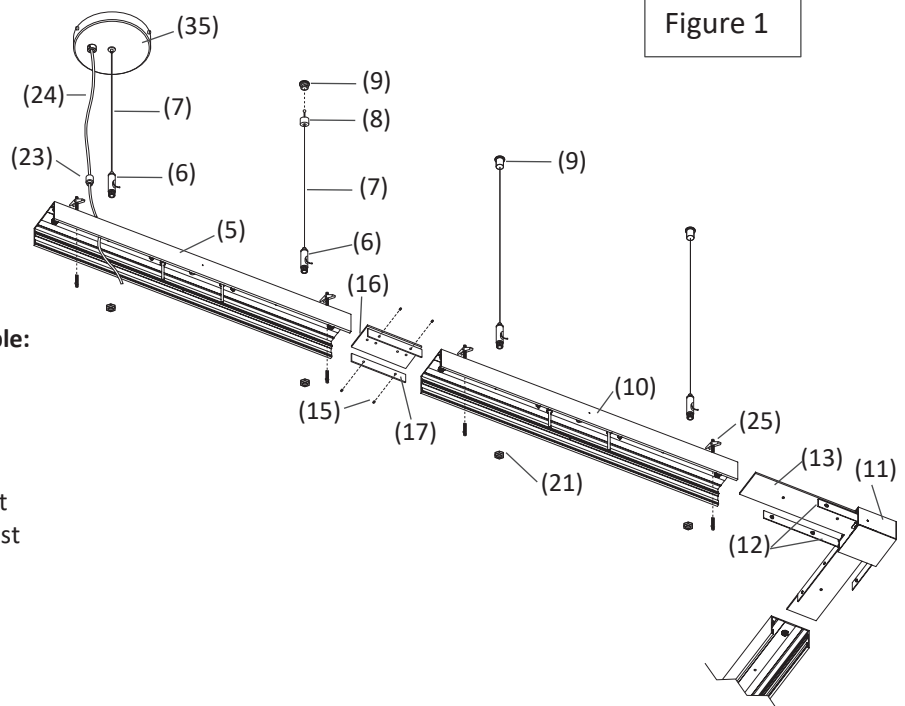


Figure 1

3A- ADD EXTERNAL JOINER AT END OF CHANNEL

- a. For connection to additional channel sections with an external joiner (11) either ("L" / "I" / "T" / "X" Joiner).
- b. Insert side support brackets (12) into the inner sides of the channel (5). Push the straight and the right-angle support brackets (12) into the channel (5) as far as it will go.
- c. Insert side support brackets (12) into the inner sides of the additional channel(s) (10) on the other side of the external joiner (11). Push the straight and the right-angle support brackets (12) into the channel(s) (10) as far as they will go.
- d. Attach back support bracket (13) of the selected external joiner (11) onto the two threaded studs at the end of the first channel (5) and the additional channels(s) (10). Install two nuts on each end of support bracket (13) and tighten down.
- e. Slide back the straight support bracket (12) into the external joiner (11) until the support bracket (12) is spaced half way into the channel (5) with the other portion inside the joiner (11)
- f. Lock both side support brackets in place in the channel(s) by tightening set screw (15). Tighten the set screws (15) inside the selected external joiner (11) so it meets tightly with the end of channel(s).

3B- ADD INTERNAL JOINER AT END OF CHANNEL

- a. For connection to additional channel sections (10) with an internal joiner (16)
- b. Attach one end of internal joiner (16) onto the two threaded studs at the end of the channel (5). Install two nuts and tighten.
- c. Insert side support brackets (17) into the inner sides of the first channel (5). Push them all the way into the channel (5)
- d. Mount the internal joiner (16) onto the two threaded studs on the additional channel (10). Install two nuts and tighten.
- e. Slide back the side support bracket (17) until they are spaced half way into the channel (5) with the other portion inside the additional channel (10). Tighten the remaining set screws (15) until fully tight.

4. INSTALL CANOPY BACKPLATE TO JUNCTION BOX

- a. Install the backplate (30,36 or 41) to the junction box (1).
- b. **For the junction box cover plate (29)** (for remote mounted drivers): pull the two electrical low voltage wires (28) from remote driver (22) through backplate. Install cover plate (29) so that side mounted screw hole is facing the same direction as the channel (5)
- c. **For the round canopies (35 or 40)** (for canopy mounted drivers): pull the line voltage supply wires (19) from junction box (1) through the backplate. Align the mounting screw holes in the backplate with the holes in the junction box (1). Insert and tighten the mounting screws (14) to attach them together. Attach the line voltage supply wires (19) from the junction box (1) to the input wires from the integral driver (33) using quick connector (27).

5. INSTALL AIRCRAFT CABLE / ELECTRICAL WIRE ASSEMBLY TO CANOPY COVER

- a. Pull the aircraft cable (7) through the ball end support collar (8) until the ball end rests inside the collar. Attach it to the center of the channel, secure it with the threaded hex fastener (21) from the inside of the ceiling canopy.
- b. Pull the length of the aircraft cable (7) through the gripper (6) until the approximate channel mounting height is achieved. Final cable length to be determined once the track is mounted to the ceiling.
- c. Insert the low voltage wire (24) from the channel (5) through the strain relief collar (23) and into the ceiling canopy (29,35 or 40)
- d. Determine the approximate length of electrical cable (24) (it is recommended to allow the electrical cable to have some slack once installed). Temporarily tighten the set screw on the strain relief collar (23) attached to the canopy.
- e. Cut the excess aircraft cable (7) at the gripper (6) mounted to channel (5).

6. INSTALL AIRCRAFT CABLE CEILING SUPPORTS

- a. Measure the distance between the first mounted gripper (6) (underneath the center of the canopy) and the next mounted gripper (6). Then measure the distance between each of the remaining grippers (6) along the channel (5). Mark the distance between the canopy center and the first gripper on the ceiling. Then mark the rest of the measured gripper locations in a straight line on the ceiling.
- b. Unscrew the aircraft cable ball end support (8) attached to the ceiling mount bracket (9). Align the ceiling mount bracket with the marks made on the ceiling and mark the center hole location on the ceiling.
- c. Insert a ceiling anchor (25) rated to support at least 40 pounds to the ceiling mount location (anchor and fastener not included). It is recommended to use a No. 10 (3/16" dia.) toggle bolt ceiling anchor (in sheetrock applications) or a No. 10 round head screw (3/16" dia.) into a solid surface. Tighten the ceiling mount bracket (9) until it rests firmly against the ceiling.

7. CONNECT ELECTRICITY

Attach the low voltage fixture wires (24) coming from the back of channel (5) through ceiling canopy (29,35 or 40) to the low voltage wire (18) coming from integrally mounted driver (20) in canopy using quick connector (27). Low voltage fixture wires can also be attached to the low voltage wires (28) coming through the junction box (1) from remote mounted driver (22).

[NOTE: DO NOT CONNECT THE LOW VOLTAGE (24v) ELECTRICAL WIRING (24) COMING FROM THE CHANNEL (5) TO A LINE VOLTAGE (120-277v) INPUT FROM THE JUNCTION BOX (1)]

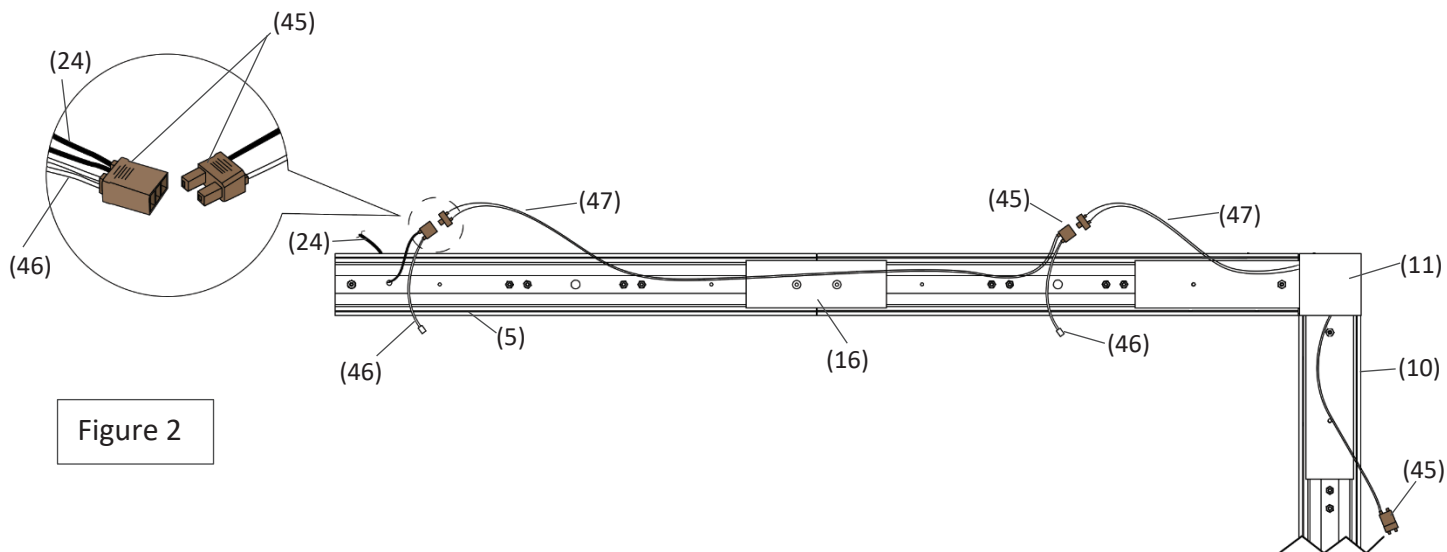


Figure 2

8. ATTACH CEILING CANOPY

- For junction box cover plate;** align cover (29) to side openings in backplate (30) Attach with a quarter turn motion. Lock the front cover (29) to the backplate (30) by inserting and tightening the side mounted backplate screw (31)
- For shallow canopy;** Attach driver (20) and its rear disk (34) to the support bracket (37) with two screws (38). Push the front canopy (35) up to the canopy backplate (36) until the canopy is firmly positioned against the ceiling, and then lock into position with three side finials (39)
- For deep canopy;** Secure the internal support bracket (42) to the canopy backplate (41) with the two finials (43) on either side. Then Install the two finials (44) holding the deep round cover plate (40) to the mounting bracket (42).

9. ATTACH AIRCRAFT CABLE TO CEILING SUPPORTS

- Mount each aircraft cable ball end support (8) to the ceiling mount bracket (9) and hand fasten them together.
- Adjust the length of each aircraft cable (7) to achieve a horizontally mounted channel (5). To raise the channel, pull the cable (7) through the gripper (6), or push down the top of the gripper to release more cable to lower the channel.
- Once all the aircraft cable wires are adjusted to the proper length take a cable cutting pliers and cut the excess aircraft cable (7) coming out the side of the gripper (6).

10. CONNECT THE INTERNAL CHANNEL WIRING CONNECTIONS

The low voltage wiring attached to the back of the channel (24) is attached to the male side of the brown low voltage connectors (45) Also attached is a white quick disconnect (46) used to transfer power to the pendant wire assembly. The female side of the brown connectors is located inside the channel (5) of the fixture and is attached to the 48" jumper wires (47) which carry low voltage power from one fixture to the next. Tighten the zip tie restraint on the jumper cable and attach to the brown connectors in the next channel. Once all the low voltage connections are made you can then suspend the fixture pan (3) from the internal suspension wires (hook and loop) (32) (located inside the fixture).

11. DETERMINE THE APPROPRIATE LENGTH OF EACH PENDANT

(if pendant is pre-configured; pendants will only require minor adjustments). Push the excess wire up into the canopy by pressing the small barrel of the gripper (6) upward. This will release the wire tension and allow the suspended wire to be pulled through gripper. Roll excess wire into a small loop inside the canopy. Wrap the supplied Velcro strap around this loop to keep the excess wire from falling outside the fixture pan (3).

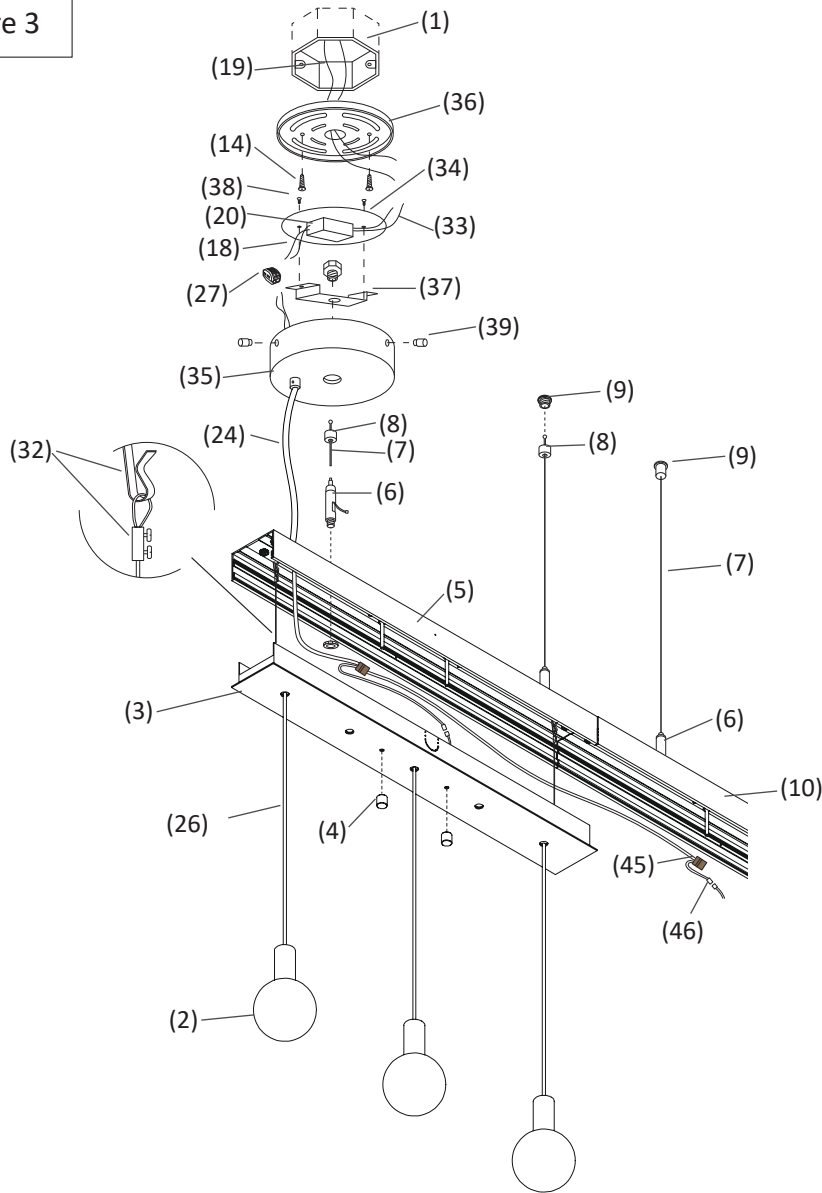
12. CONNECT THE CANOPY COVER TO THE BACKPLATE

Make sure all wires are carefully placed inside fixture pan (3). Secure the fixture pan (3) to the channel (5) by tightening the two decorative finials (4).

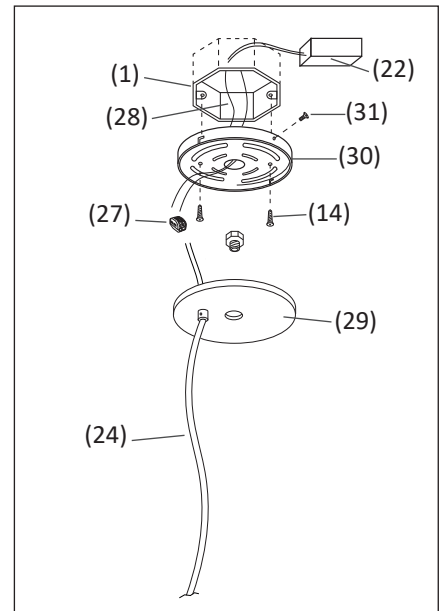
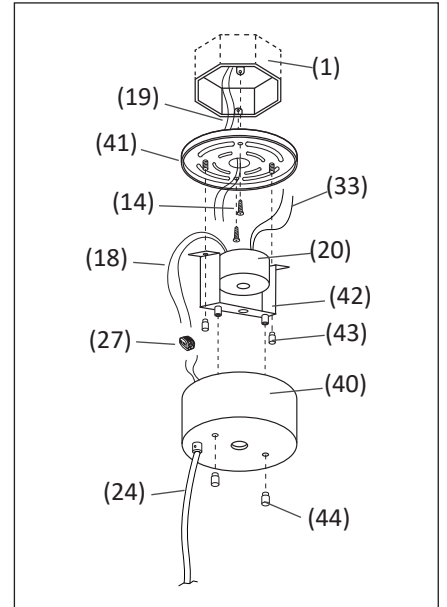
13. FINE TUNE CABLES

- Once the canopy is in place, fine tune the wire lengths longer or shorter to get each pendant adjusted to its preferred length by adjusting the gripper (6). If pendants are prearranged by Blackjack, minor adjustments may be required. Each pendant has a screw in light guide (2) (shipped separately). Gently screw into place.
- Once the length of each wire has been established, any remaining bends or kinks in the wire can be straightened by bending out the kinks by hand while heating the cord up with the warm air from a hair dryer or heat gun. A handheld wire straightening kit can be provided by Blackjack (reference instructions provided with kit).

Figure 3



(MS-24xx Solo Module Shown)



- | | | |
|---|---|---|
| 1. JUNCTION BOX (by others) | 17. INTERNAL JOINER SIDE SUPPORT BRACKET | 33. INPUT WIRES FROM INTEGRAL DRIVER |
| 2. LIGHT GUIDES | 18. LOW VOLTAGE WIRES FROM INTEGRAL DRIVER | 34. SHALLOW CANOPY DRIVER PLATE |
| 3. FIXTURE PAN | 19. LINE VOLTAGE SUPPLY WIRES FROM J-BOX | 35. SHALLOW CANOPY COVER PLATE |
| 4. DECORATIVE FINIALS | 20. INTEGRAL DRIVER | 36. SHALLOW CANOPY BACKPLATE |
| 5. CHANNEL | 21. THREADED HEX FASTENER | 37. SHALLOW CANOPY DRIVER SUPPORT BRACKET |
| 6. CABLE GRIPPER | 22. REMOTE DRIVER | 38. SUPPORT BRACKET SCREWS |
| 7. AIRCRAFT CABLE | 23. STRAIN RELIEF COLLAR ATTACHED TO CANOPY | 39. CANOPY SIDE FINIALS |
| 8. BALL END SUPPORT COLLAR | 24. ELECTRICAL CABLE | 40. DEEP CANOPY COVER PLATE |
| 9. BALL END SUPPORT CEILING MOUNT BRACKET | 25. CEILING ANCHOR (by others) | 41. DEEP CANOPY BACKPLATE |
| 10. ADDITIONAL CHANNEL SECTIONS | 26. PENDANT CABLE FROM CHANNEL | 42. DEEP CANOPY INTERNAL SUPPORT BRACKET |
| 11. EXTERNAL JOINER | 27. QUICK CONNECTOR | 43. DEEP CANOPY INTERNAL FINIALS |
| 12. EXTERNAL JOINER SIDE SUPPORT BRACKET | 28. LOW VOLTAGE WIRES FROM REMOTE DRIVER | 44. DEEP CANOPY DECORATIVE FINIALS |
| 13. EXTERNAL JOINER BACK SUPPORT BRACKET | 29. JUNCTION BOX COVER PLATE | 45. BROWN LOW VOLTAGE CONNECTORS |
| 14. MOUNTING SCREWS | 30. JUNCTION BOX COVER PLATE BACK PLATE | 46. WHITE QUICK DISCONNECT |
| 15. SUPPORT BRACKET SET SCREW | 31. SIDE MOUNTED BACKPLATE SCREW | 47. LOW VOLTAGE JUMPER WIRES |
| 16. INTERNAL JOINER | 32. INTERNAL SUSPENSION WIRES/LOOP & HOOK | |