

SPAN

SPAN Drive Installation Manual



Product Specifications

All specifications and descriptions contained in this document are accurate at the time of publication. In the interest of product improvement, SPAN reserves the right to make product modifications at any time without advance notice.

For the latest SPAN product and installation documents, visit:
www.SPAN.io/partner-portal

For errors or omissions, contact support@SPAN.io
For complete product specifications and information on product listing and certification, refer to the Product Datasheet at www.SPAN.io.

SPAN assumes no liability for injury or property damage due to installation or service attempted by unqualified individuals, or due to a failure of installers or service technicians to properly follow safety, installation and service instructions.
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SPAN, SPAN.IO, SPAN Panel, SPAN Drive

SPAN

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Electronic Device Waste Disposal

Proper disposal of electronic equipment is required. Refer to local codes for disposal requirements. To arrange for proper disposal of this product, contact your local authorities or dealer for proper disposal requirements.

Warranty

To secure the full product warranty, SPAN Drive must be registered by completing the commissioning process, which sends system information to SPAN. For complete warranty information, refer to the Product Warranty at www.span.io/warranty

Important Safety Instructions

SAVE THESE INSTRUCTIONS

Follow these instructions during installation, maintenance and operation of the equipment. This section contains safety information that must be observed at all times when working on or using the equipment.

In case of fire or other emergency:

If safe to do so, switch off the main or upstream breaker for the panel.
Contact the fire department or other required emergency response team.
Evacuate the area and alert others in the area.

In case of unusual noise, smell or smoke:

Ensure nothing is in contact with the SPAN Drive, SPAN Panel, or other equipment. Ventilate the space. Contact your installer or SPAN Customer Support.

Symbols Used

These symbols indicate important safety information in the documentation or on the equipment:

 **WARNING:** Indicates a situation where failure to follow instructions or use proper materials may be a safety hazard that may result in serious injury, loss of life, or destruction of equipment. Use caution and do not proceed until the indicated conditions or required procedures are fully understood and met.

 **CAUTION:** Indicates a situation where failure to follow instructions or use proper materials may be a safety hazard that may result in minor injury or damage to equipment. Do not proceed until the indicated conditions or required procedures are fully understood and met.

 **NOTE:** Indicates an important step or additional information that highlights best practices or procedures. Follow instructions carefully.

 **RISK OF ELECTRIC SHOCK:** Indicates components that present risk of electric shock.

 **PROTECTIVE CONDUCTOR TERMINAL:** Indicates location of grounding connection on the equipment.

 **REFER TO INSTRUCTIONS:** Indicates that user should refer to operating or installation instructions before proceeding.

ATTENTION: Read all instructions and cautionary markings in this document and on the equipment before installing SPAN Drive. Failure to do so may result in equipment damage, electric shock, serious injury, or loss of life. Failing to follow any of these instructions may also void the warranty. All installations must conform to the laws, regulations, codes and standards applicable in the jurisdiction of installation. Before starting an installation, consult a local building or electrical inspector for current requirements. Local codes may vary but are adopted and enforced to promote safe electrical installations. A permit may be needed to do electrical work, and some codes may require an inspection of the electrical work.

Jurisdiction:
United States

Code:
National Electrical Code (ANSI/NFPA 70)

General

 **WARNING:** Risk of electric shock. Risk of fire. Only qualified electrical personnel should install, troubleshoot, service, or replace the equipment.

WARNING: Risk of electric shock. Apply appropriate personal protective equipment (PPE) and follow safe electrical work practices during installation and service. Turn off all power supplying this equipment before working on or inside equipment. Always use a properly rated voltage sensing device to confirm power is off. Replace all devices, covers, and doors before turning on power to the equipment. **WARNING:** To protect the equipment and its components from damage when transporting, handle with care. To help prevent damage, leave all equipment in its shipping packaging until it is ready to be installed. Inspect the equipment for damage before installing. Do not install the equipment if it has been damaged in any way. **WARNING:** Do not insert foreign objects into any part of the equipment. Do not put fingers into the electric vehicle connector. Do not forcefully fold or apply pressure to SPAN Drive or damage it with sharp objects.

WARNING: Do not attempt to open, disassemble, repair, tamper with, or modify the equipment other than what is permitted in this manual. The equipment contains no user-serviceable parts. Contact the installer who installed the equipment for any repairs. Only qualified electrical personnel should open SPAN Drive.

 **CAUTION:** Do not use solvents to clean the equipment or expose the equipment to flammable or harsh chemicals or vapors. Do not allow petroleum-based paints, solvents, or sprays to contact nonmetallic parts of the equipment.

CAUTION: Do not use parts or accessories other than those specified for use with the equipment.

Installation and Use

 **WARNING:** Risk of electric shock. Risk of fire. Only use electrical system components approved for wet locations.

WARNING: Risk of electric shock. Risk of fire. Ensure that all wiring is correct and that none of the wires are pinched or damaged. Before making any connections verify that the circuit breaker(s) are in the off position. Double check all wiring before applying power.

WARNING: Risk of electric shock. Improper servicing of the equipment or its components may result in a risk of shock or fire. To reduce these risks, disconnect all wiring before attempting any maintenance or cleaning. While connectors are rated for disconnect under load, it is best practice to de-energize before disconnecting.

WARNING: Risk of electric shock. Do not use equipment in a manner not specified by the manufacturer. Doing so may cause injury or loss of life, or damage to equipment.

WARNING: Do not use if the EV charging cable is frayed, has broken insulation, or any other signs of damage. Do not use if the enclosure or the EV connector is broken, cracked, open, or shows any other indication of damage.

WARNING: Do not install or use SPAN Drive near flammable, explosive, harsh, or combustible materials, chemicals, or vapors. Install your charger in a sufficiently ventilated location and avoid areas with direct sunlight.

WARNING: SPAN Drive should be supervised when using around children. **WARNING:** SPAN Drive must be grounded through a permanent wiring system or an equipment-grounding conductor.

WARNING: Take appropriate precautions with electronic medical implants. Contact your medical device manufacturer to find out any potential effects.

WARNING: SPAN Drive is only to be used for fixed installations and cannot be used as a portable device. SPAN Drive should never be lifted or carried by the EV cable. Always lift and carry your charger by lifting up the charger's enclosure.

Environmental Conditions

 **WARNING:** This equipment is intended for operation in an environment having a minimum temperature of -30°C (-22°F) and a maximum temperature of 50°C (122°F). Do not operate SPAN Drive in temperatures outside of its range.

WARNING: Install the equipment in a location that prevents damage from flooding. Ensure that no water sources are above or near the equipment, including downspouts, sprinklers, or faucets. If SPAN Drive was submerged in water due to flooding, have an electrician inspect your charger prior to use.

Maintenance

There are no parts within SPAN Drive that the user has to maintain. Only a qualified electrician may open and modify SPAN Drive.

If you want to clean your SPAN Drive, we recommend that you use a soft, dry or damp cloth. Do not use a spray or direct water stream. Make sure that the power supply is turned off before you start cleaning the charger.

FCC Note

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna of the affected radio or television.
- Increase the separation between the charger and any affected devices.
- Connect the charger to an outlet on a circuit different from the one to which any affected devices are connected.
- Consult the dealer or an experienced radio/TV technician for help.

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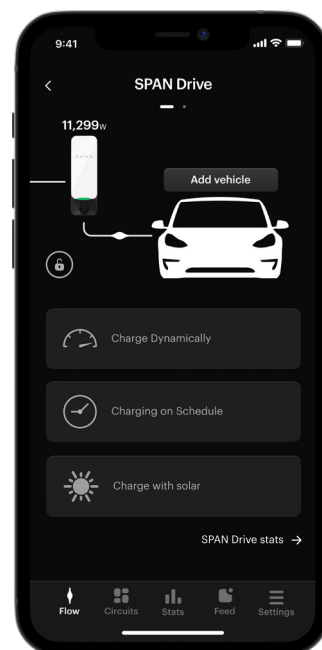
About your SPAN Drive

SPAN Drive is the first level 2 vehicle charger designed for real-time coordination with all home loads for max charging speeds and optimized energy usage without costly home electrical upgrades.

- **Pairs with your home** to dynamically use as much energy as is available, delivering up to 48 amps (11.5 kW) — 1.5x the rate of typical Level 2 chargers
- **Unlocks Level 2 charging for any home** without needing to make expensive electrical service upgrades
- **Looks as good as it performs** and blends effortlessly with indoor and outdoor spaces as a worthy companion to your sleek EV



NOTE: SPAN Drive is compatible with all SPAN Panels. 'Panels' mentioned in this document apply to all models unless otherwise specified.



SPAN Drive Datasheet

Performance Specifications

Max Power	11.52 kW (48 A)
AC Voltage (Nominal)	208 - 240 V single-phase
Grid Frequency	50 / 60 Hz
Output Current	6 - 48 A (configurable)
Max Continuous Current	48 A (60 A breaker)
AC Energy Metering	+/- 1%
Connectivity	RS485 Connection to SPAN Panel
User Interfaces	SPAN Home App (iOS, Android) ¹ , Onboard status illumination
Ground Fault Circuit Interrupter	Integrated (CCID20)

Warranty 3 years

1. When paired with a SPAN Panel

Mechanical Specifications

Connector Type	SAE J1772
Cable Length	20 ft (6.1 m)
Dimensions	17.9 x 5.9 x 3.1 in (455 x 150 x 80 mm)
Mounting Options	Wall mounted
Weight	16 lbs (7.2 kg)

Compliance Information

Certifications	UL 2594, UL 2231
Emissions	FCC Part 15 Class B
More	Meets NEC Art. 625 requirements



Environmental Specifications

Operating Temperature	-22 to 122°F (-30 to 50°C)
Operating Humidity (RH)	Up to 100% condensing
Environment	Indoor and Outdoor rated (NEMA 3R)

Additional Features

- Dynamic charge management for service upgrade avoidance
- Charge on schedule and charge on solar
- Lock Drive to prevent unwanted charging sessions

Compatibility

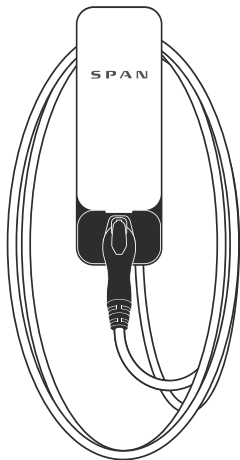
SPAN Drive is sold exclusively as an accessory to SPAN Panel and is not supported as a standalone charger. Drive can be used with any Battery or Plug-In Hybrid Electric Vehicle (BEV/PHEV) that is compliant with SAE J1772 (including Tesla).

Preparing to install

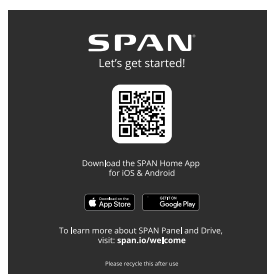
1. SPAN Drive package contents

Inspect the packaging and SPAN Drive for damage.

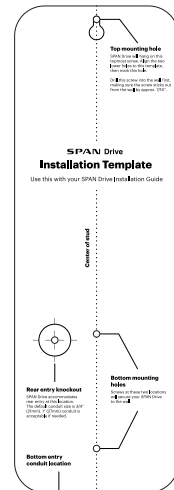
Ensure you have received the following components:



SPAN Drive
(with charging cable attached)

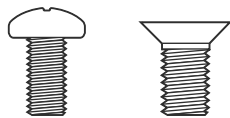


Getting Started Card

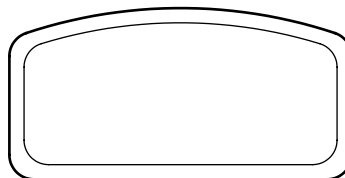


Installation template

Included mounting parts:



**1X Buttonhead screw
& 1X Flathead**
(extra for charger assembly)



Optional gasket
(for rear entry installation)



WARNING: If the unit is damaged in any way, do not proceed with the installation. Contact SPAN for further instructions.

WARNING: SPAN Drive must be installed by a licensed electrician. Before installing your charger, be sure to obtain any required permits and/or approvals in accordance with applicable codes, regulations, and ordinances for electrical installations.

2. Installation requirements

You will also need the following equipment and tools that are not included in the packaging:

Required equipment

- Copper conductors rated to a minimum of 75°C, such as THHN, THWN, NM-B, MC.
- 24–16 AWG, minimum 300V rated communication cable between SPAN Drive and the SPAN Panel. Recommended to use shielded, twisted-pair and to connect Drain wire between Drive and Panel RS485-G terminals for best signal integrity.
- Conduit, conduit fittings, bushings that are suited to the installation.
- Smartphone or tablet with SPAN Installer App for commissioning.
- Personal Protective Equipment (PPE) should be worn by all persons at the installation site and properly rated for residential applications.

Required tools

- #2 Phillips screwdriver or bit
- Electric drill
- Mini flathead screwdriver (if changing the current selector switch)
- Standard installation tools: wire cutters/strippers, multimeter, stud finder, measuring tape, pencil, tape, step bits (optional)



NOTE: Verify that the site mechanical, electrical, and clearance requirements outlined in this document and the product datasheet are compatible at the planned installation location.

NOTE: NEMA 3R rated conduit fittings are required for outdoor installations.

3. Planning the install location

Electrical, Mechanical, & Environmental Requirements

Before beginning work, check the site for appropriate mounting location and electrical capacity.

The environmental rating of Drive is identical to that of the Panel. The enclosure is NEMA 3R.

SPAN Drive is intended to be wall-mounted, ideally hitting a stud (2x4 or equivalent) with 2 screws.

Verify that the wall construction is adequate to support the weight and continuous use of SPAN Drive. The installation should conform to applicable building codes.

Element	Rating
Location	Indoor or Outdoor (NEMA 3R)
Ambient Temperature	-22°F to 122°F (-30°C to 50°C)
Enclosure Dimensions	17.9 x 5.9 x 3.1 in (455 x 150 x 80 mm)
Weight	7.2 kg / 16 lbs

Max charge rates

SPAN Drive can be configured for various max charge rates based on the branch breaker it is connected to. See the section Rated Current Adjustment under the Installation section for more details. Determine the desired charging amperage with the homeowner, as well as based on the availability of space or electrical capacity in the panel.

The max rated current of SPAN Drive is **48A** (60A breaker). SPAN recommends connecting Drive to a **60A 2-pole breaker**, if possible, to allow for the fastest charging functionalities and full range of features.

Circuit breaker rating	Max current, continuous
60 A	48 A
50 A	40 A
45 A	36 A
40 A	32 A
35 A	28 A
30 A	24 A
25 A	20 A
20 A	16 A



NOTE: SPAN Drive may throttle charging based on the power charging commands from the SPAN Panel. This setting is only meant to correspond to the branch breaker size.



CAUTION: Follow all local codes and standards when planning for and installing SPAN Drive.

Dimensions, clearances, & access

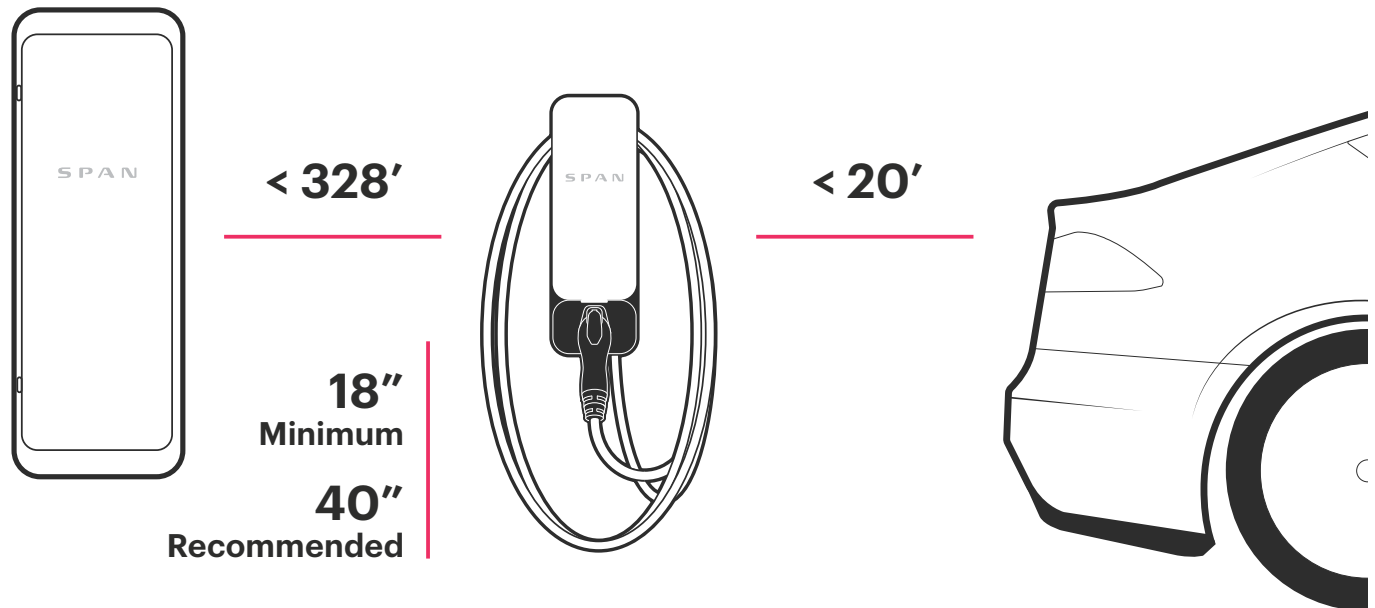
The maximum distance SPAN Drive can be installed from the SPAN Panel is **328 feet** (100 meters).

Pick a location where the **20-foot charging cable** will reach the car's charging port while still providing slack.

The minimum installation height must be at least **18"**, measured from the bottom of the charger.

SPAN recommends an installation height of at least **40"**.

SPAN Drive is designed for **hardwire installations**. The wiring may use either the rear or bottom access ports. The power supply wiring and conduit (if used) will need to be placed on the left side of the charger.



NOTE: Ensure that the charging cable is positioned in such a way so that it will not be stepped on, tripped over, or subjected to damage or stress. Do not close a garage door on the charging cable. There should always be slack in the charging cable so as not to apply tension to the cable or the cable connections.

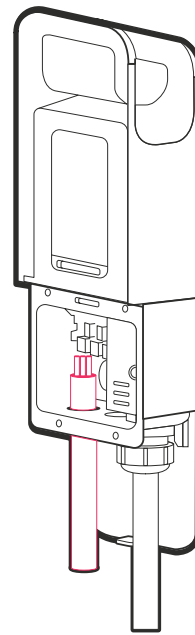
NOTE: SPAN Drive includes integrated GFCI protection – **do not install a GFCI circuit breaker or a NEMA 14-50 outlet to power SPAN Drive**. Two GFCIs on the same circuit can cause nuisance tripping.

Installation

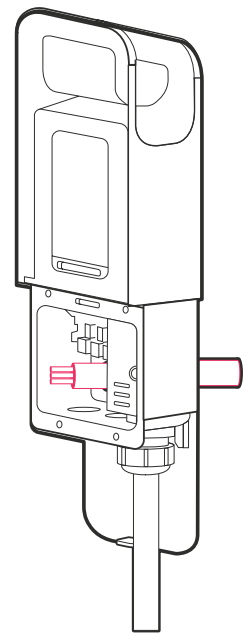
1. Determine wiring entry

Bottom or rear entry

SPAN Drive allows power supply wiring and conduit entry either through the bottom or rear section of the charger. Before proceeding with the hardwire installation, determine the most appropriate entry location based on the placement of wiring or conduit. Be sure to note that the bottom and rear entry locations are both on the left side of the charger.



Bottom entry



Rear entry

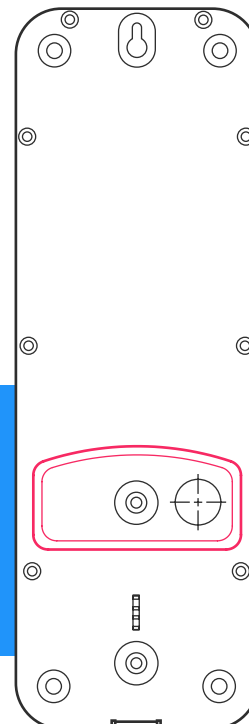


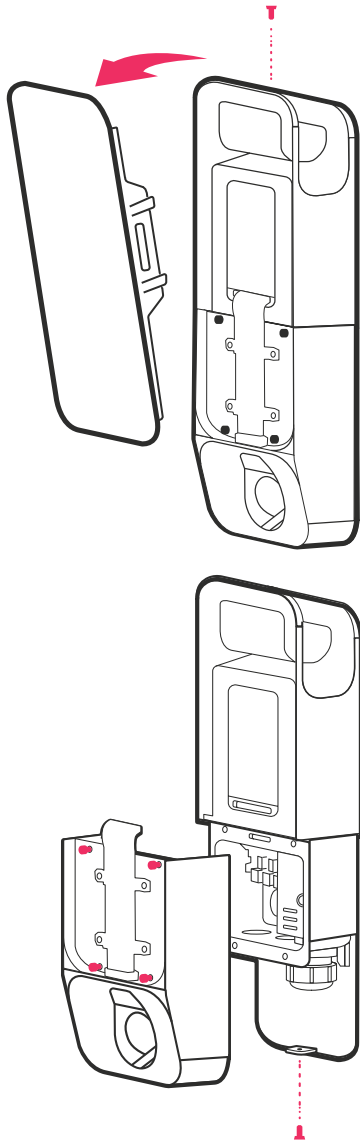
NOTE: When bringing conduit from the right side of the enclosure for a bottom entry installation, make sure there is appropriate clearance for the charging cable.



NOTE: For rear entry installation, adhere the optional gasket for sealing around the knockout.

NOTE: If mounting on an exterior wall and bringing power through the rear knockout, apply sealant around the rear knockout to prevent water ingress.



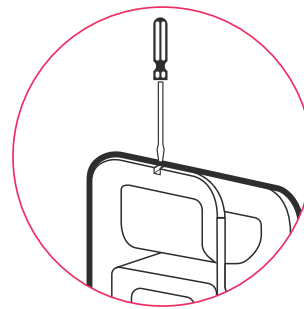


2. Placement & preparing

Remove the glass and lower plastic covers

1. Using a #2 Phillips screwdriver, remove the single fastener on the top surface of Drive (where the charging cable nests). Then, pull the top of the glass cover away from the charger to remove.

2. Using a #2 Phillips screwdriver again, remove the bottommost screw and loosen the 4 Phillips screws on the front face of SPAN Drive. Then, take off the lower plastic cover. Set the covers aside. Make sure to keep the fasteners in a safe place for reassembly.



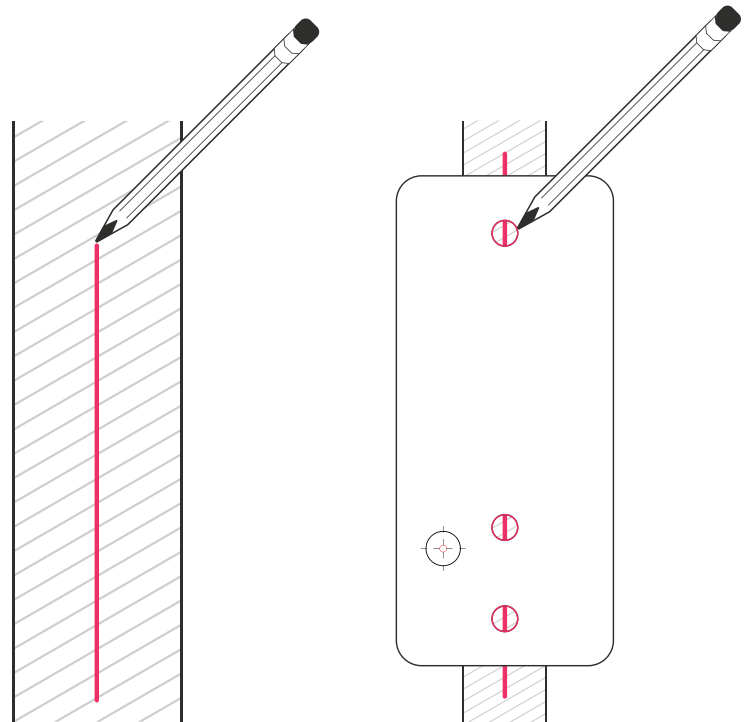
Using the Installation Template

Use a wall stud finder and mark the center of the stud by drawing a vertical line approximately 24" in length at the height of your mounting. You may also find a suitable location on a solid wall.

Place SPAN Drive against the wall at the desired installation location and mark the two lower mounting holes on the stud line.

Align the provided Installation Template to the two lower mounting holes and tape the template to the wall.

Mark the top mounting hole on the wall using the Installation Template. If needed, mark the rear entry knockout location. Remove the template from the wall.



Preparing conduit fittings & bushings

The default conduit size is $\frac{3}{4}$ " (21mm). 1" (27mm) conduit is acceptable if needed.

Based on fittings and conduit size, prepare SPAN Drive:

For bottom entry, manually remove the conduit plug(s). SPAN Drive will include either a set of rubber or Nylon sealing plugs.

For rear entry, remove the knockout on the backside of Drive. The knockout size is $\frac{3}{4}$ " trade size and can also accommodate 1" trade size.

3. Mounting SPAN Drive

Depending on the material of the mounting wall, use the appropriate hardware and drill pilot holes as needed. SPAN Drive weighs a total of 16 lbs.

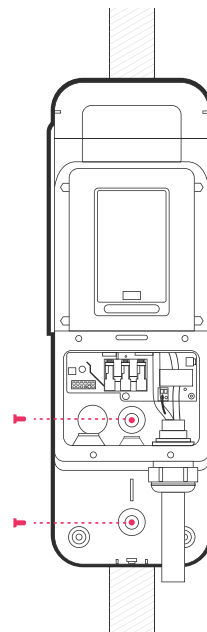
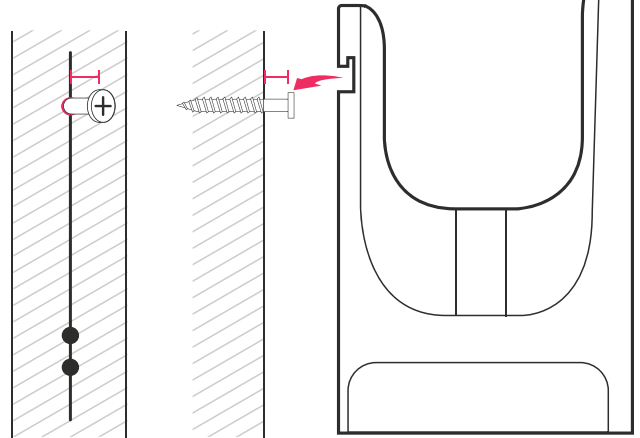
There are standoffs on the backside of Drive. Ensure that Drive rests evenly against the surface of the wall.

Drill in the topmost lag screw (**max #12 screw**) into the wall first. Leave approximately **1/2"** of the end of the screw exposed to hang the charger. Hang SPAN Drive on the lag screw using the notch on the back of the charger. For rear entry installation, draw the power supply wiring through the hole in the wall and through the rear port before securing the charger.

Drive the remaining two lag screws into the two bottom mounting holes to secure the charger. **Be careful not to damage the electrical wires.**

1/2"

Distance from wall



4. Electrical wiring

AC Power Wiring

Insert the AC power conductors either through the bottom or rear entry opening in SPAN Drive. Ensure there's enough length for a **6" service loop** in the enclosure, as well as to easily connect the wires into the lever lock terminal. If using a conduit connection, pull the wiring through before connecting the conduit.

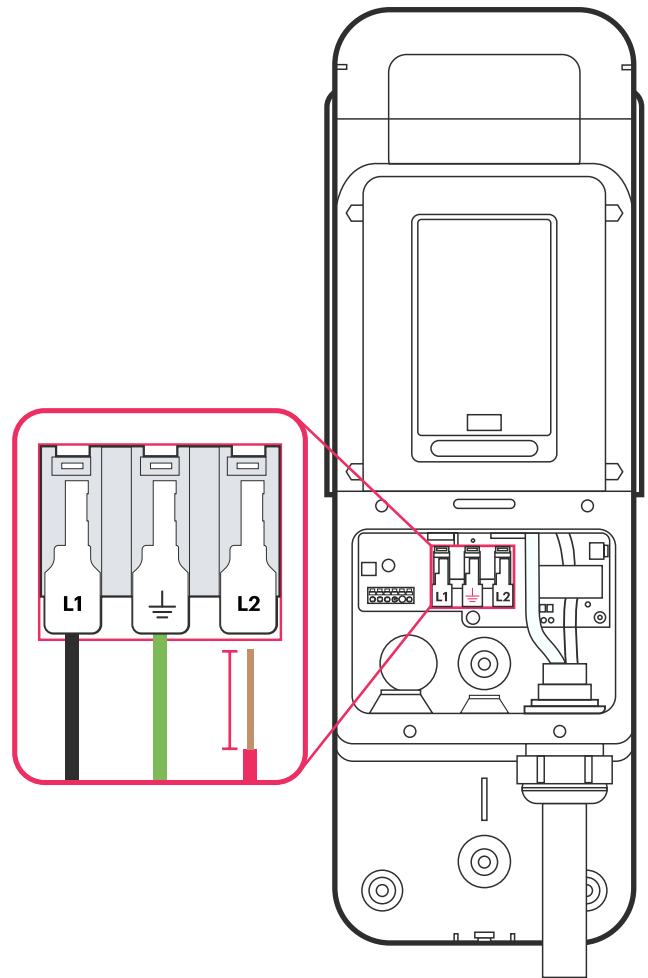
Use appropriate cable glands, bushings, or fittings to secure the wiring in place and protect from water and debris. Ensure that bushings are in place to avoid damage to conductors and ground wire when pulled into the enclosure.

Ensure the electrical panel supports a **120/240V dedicated circuit with a 2-pole circuit breaker**, rated for the selected amperage (see following section Rated Current Adjustment).

The voltage between the hot wires (L1 and L2) must be 208/240V. Only L1, L2, and GND conductors are connected, no Neutral conductor.

Connect the AC power conductors according to the adjacent diagram. **Use 75°C copper conductors only within the wire size range of 10-6 AWG.** Strip $\frac{1}{2}$ " (13mm) of insulation off each wire and fully insert into the lever lock terminal. Press the lever down until it snaps into place for each wire. **Be careful of fingers, as the white levers are a pinch point.**

Perform a tug test after inserting each wire and closing the lever lock to ensure the connection is solid.



NOTE: For bottom wire entry, if installing fittings with a set screw, ensure that the screw is positioned to avoid interference with the lower plastic cover.



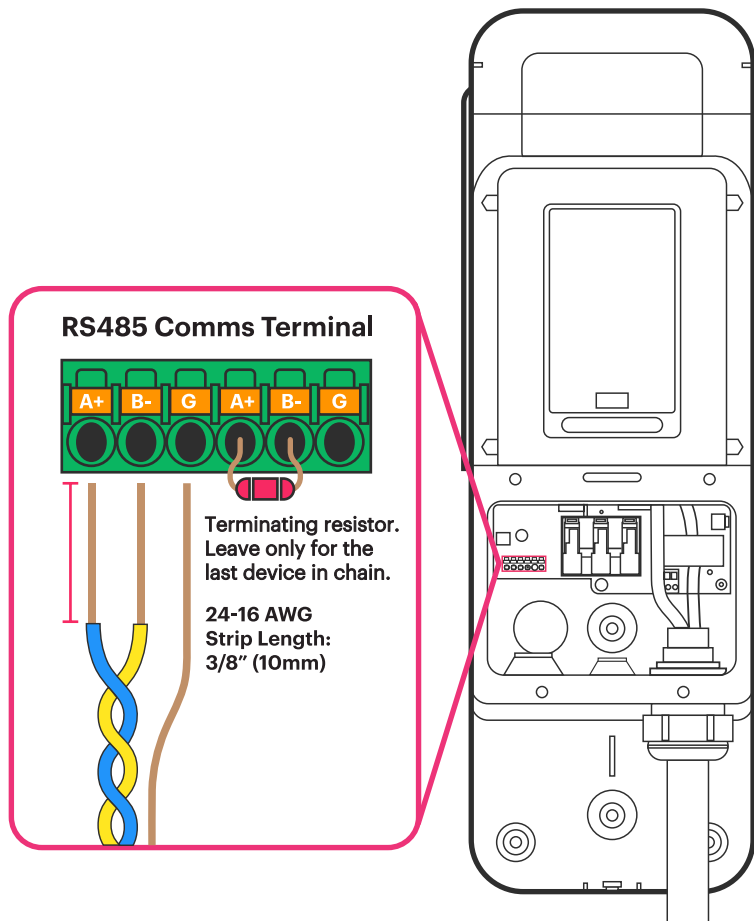
CAUTION: Follow guidance in NEC Chapter 3 and any local AHJ requirements for cable type selection. Consider exterior surface and flush mounted installations as wet/damp conditions and use conduit accordingly. When installed in wet/damp locations cable routed through the bottom face must be wet or damp-rated.

Communication wiring

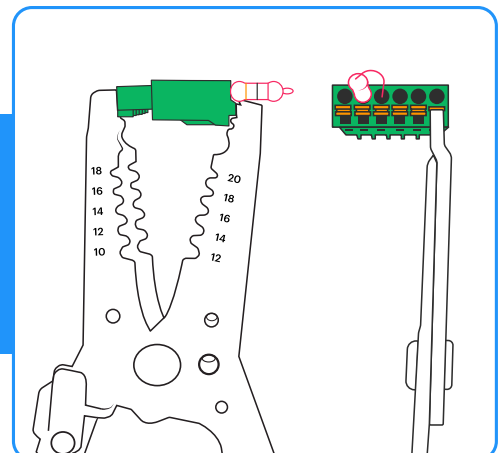
Connect the communication wires (**minimum 300V rated, 24-16 AWG**) according to the diagram below. Recommended to use shielded, twisted-pair and to connect Drain wire between Drive and Panel RS485-G terminals for best signal integrity. Strip **3/8"** (10mm) of insulation off each wire and fully insert into the terminal.



NOTE: When combining both power and communication wiring together in the same raceway, ensure that the applicable requirements in the NEC are met.



NOTE: To insert wiring into RS485 terminal on the SPAN Drive, first take out the mating connector. Then use wire strippers to depress the tab while inserting stripped wire.

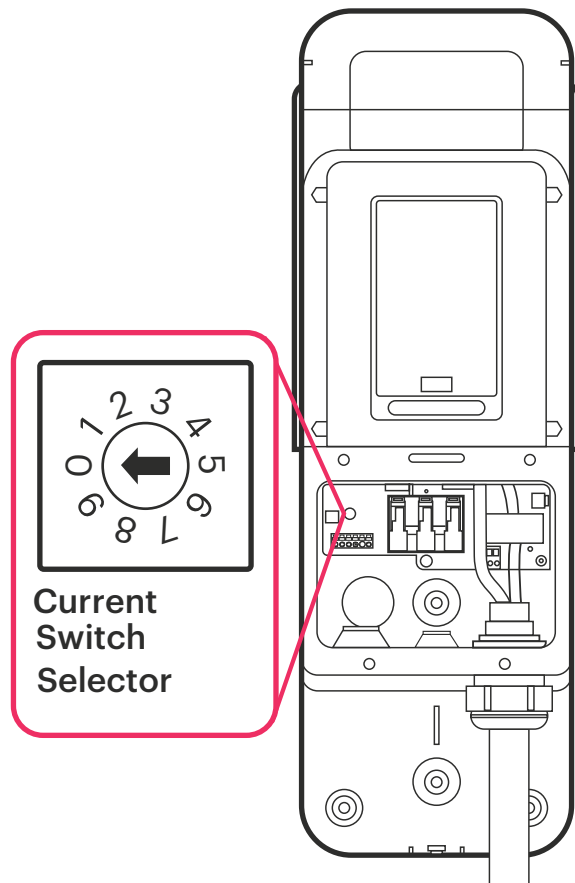


5. Rated current adjustment

On the left side of the circuit board, locate the current selector switch. The current selector switch should be set to "0", the Default setting, when Drive is connected to a SPAN Panel. Drive will use the breaker rating set in the SPAN Installer App during the commissioning process.

If setting the current selector switch to a position other than "0", SPAN Drive will display a blink code in Blue to confirm settings e.g. 2 blinks = current selector switch position of "2". Use a mini flathead screwdriver to change the setting on the current selector switch.

Current selector switch position	Max current, continuous	Circuit breaker rating
0	Default (with SPAN Panel)	
1	Reserved (not used)	
2	16 A	20 A
3	20 A	25 A
4	24 A	30 A
5	28 A	35 A
6	32 A	40 A
7	36 A	45 A
8	40 A	50 A
9	48 A	60 A



CAUTION: Be sure to select a switch position that does not exceed your circuit breaker rating. To reduce the risk of fire, **only connect your charger to a circuit with a branch circuit overcurrent protection of 125% of the selected max amperage setting** of the device in accordance with ANSI/NFPA 70 (US) C22.2 NO 280 13 (Canada).

6. Connection to SPAN Panel



WARNING: Risk of electric shock. Make sure power is turned off while connecting SPAN Drive to the SPAN Panel. Always make sure all electrical equipment is safely de-energized before beginning work.



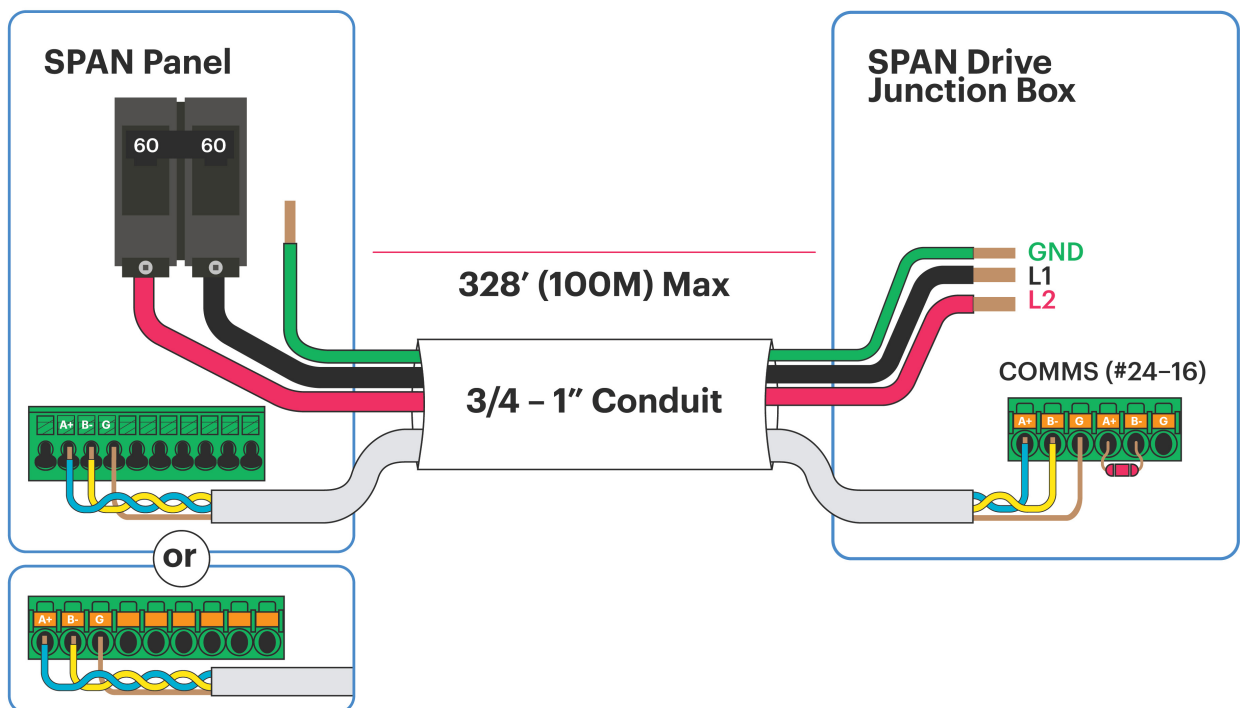
WARNING: Ensure all power and ground connections, especially those at the breaker and bus bar, are clean and tight. Remove all oxide from all conductors and terminals before connecting wiring.

The connection between the SPAN Panel and Drive differs based on the type of model. However, there are some common things to look out for:

- Ensure that the breaker in the SPAN Panel is turned off. Note that there is no particular location for the breaker in the SPAN Panel. Any location will work.
- Make the L1, L2, and GND connections from SPAN Drive to the 2-pole breaker and GND in the SPAN Panel.
- RS-485 wire must be 90°C CU and min 300V rated. Recommended to use shielded, twisted pair for comms wiring and to connect drain wire for best signal integrity

a. Connection to SPAN Panel MAIN 32

- Connect the communication wiring from SPAN Drive to the RS485-1 terminals in the SPAN Panel. There are **two variations of the RS485 terminal**, a 10-position fixed version and a 9-position pluggable version. See below for wiring details. **RS485-G optional.**
- To insert wiring into the fixed 10-position version of the RS485 terminal on the SPAN Panel, use a 2mm flat head driver to depress the tab while inserting stripped wire.

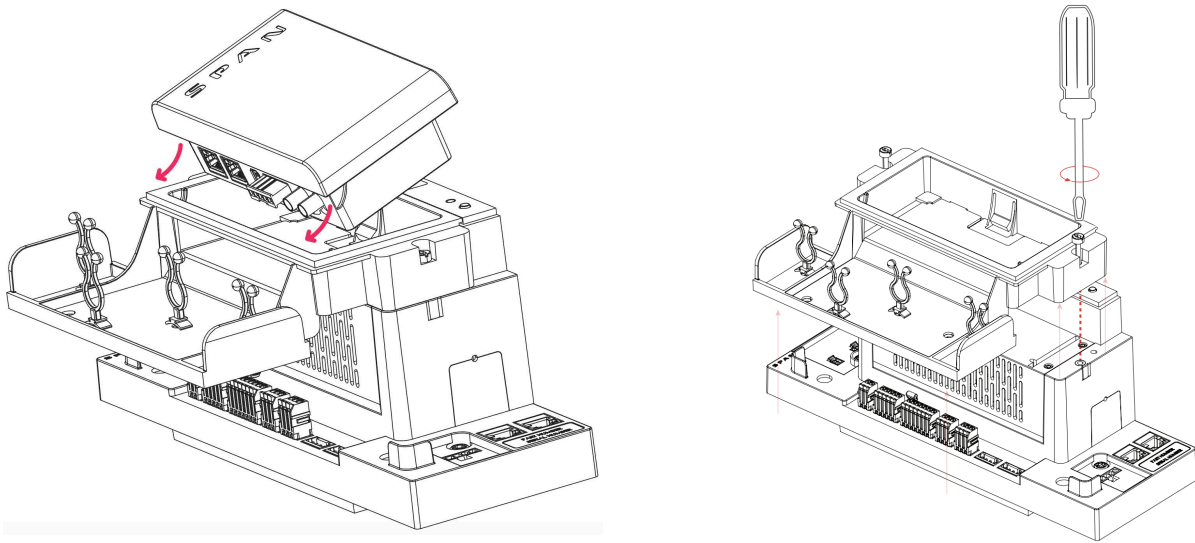


b. Connection to SPAN Panel MAIN 40 and SPAN Panel MLO 48

Every SPAN Panel has a Panel Controller that governs and enables smart features on the Panel. It is permanently fixed to the panelboard and it has two RS485 slots to connect a SPAN Drive. To access the Panel Controller RS-485 ports, remove the Gateway tray using the following instructions.

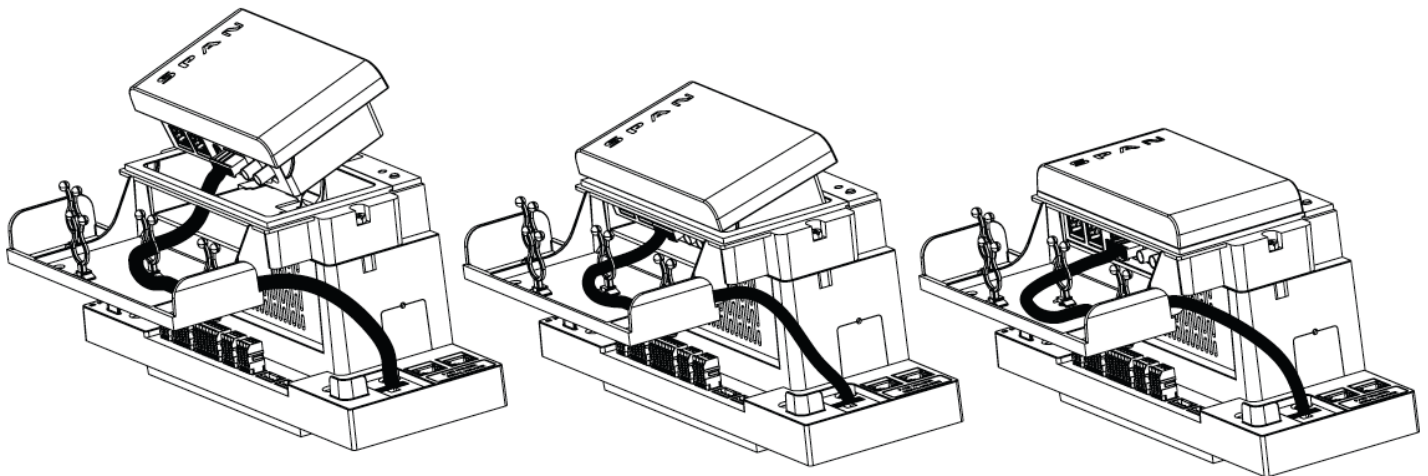
To remove Gateway tray:

1. Ensure the Gateway and any connected cables are out of the tray, stowed in a secure and accessible location.
2. Remove the two (2) Gateway tray screws using a slotted drive, and safekeep the Gateway tray in an accessible location.



To re-install Gateway tray:

1. Align Gateway tray over Panel Controller and fasten the two (2) slotted screws, torquing to 6.6 in-lbs (0.75 N-m).
2. Reconnect all applicable cables back to the Gateway and rock the Gateway back into place on the Gateway tray.



NOTE: Only re-install the Gateway and gateway tray after wiring SPAN Drive to Panel Controller.

Wiring the Panel Controller to SPAN Drive:

1. After removing the Gateway tray, connect the communication wiring from SPAN Drive to the RS485-1 terminals in the SPAN Panel. There are two slots of the RS485 terminals in the Panel Controller.
 - a. **NOTE:** Even with two RS-485 ports, only one Drive will have the capability to charge dynamically.
2. Unplug and remove low voltage terminal connector from Panel Controller.
3. Insert stripped wire into one of the two RS485 connectors by opening the orange retention latch. Close retention latch once wire is fully seated inside connector.
4. Insert low voltage terminal connector with wire back on Panel Controller.
5. Re-install Gateway tray.

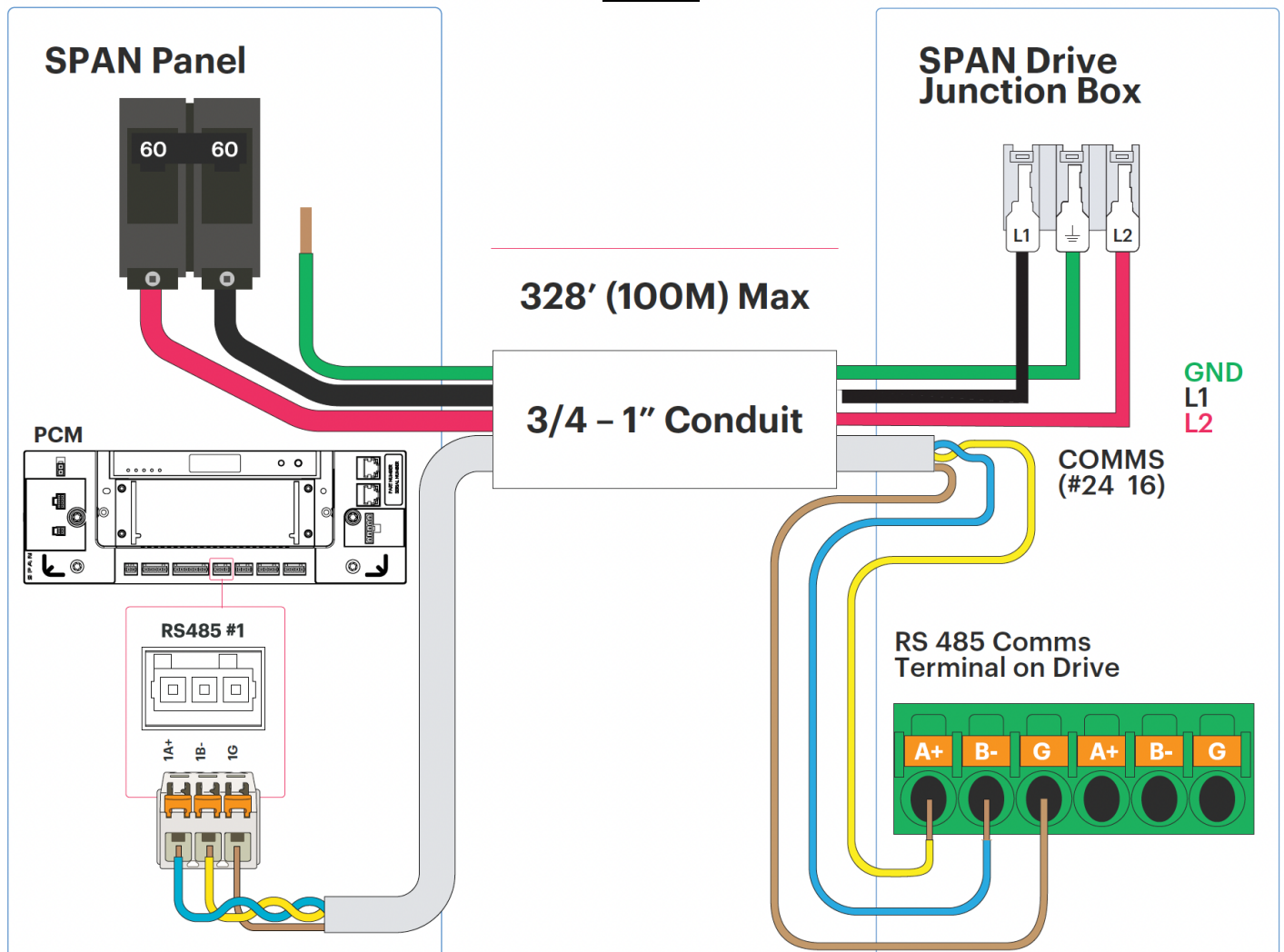


NOTE: The RS485 terminal wiring order on the SPAN Drive side depends on the SPAN Panel Controller hardware generation. Verify the hardware generation by checking the SPAN Panel Controller Part Number on the sticker with QR code, located on the Panel Gateway.

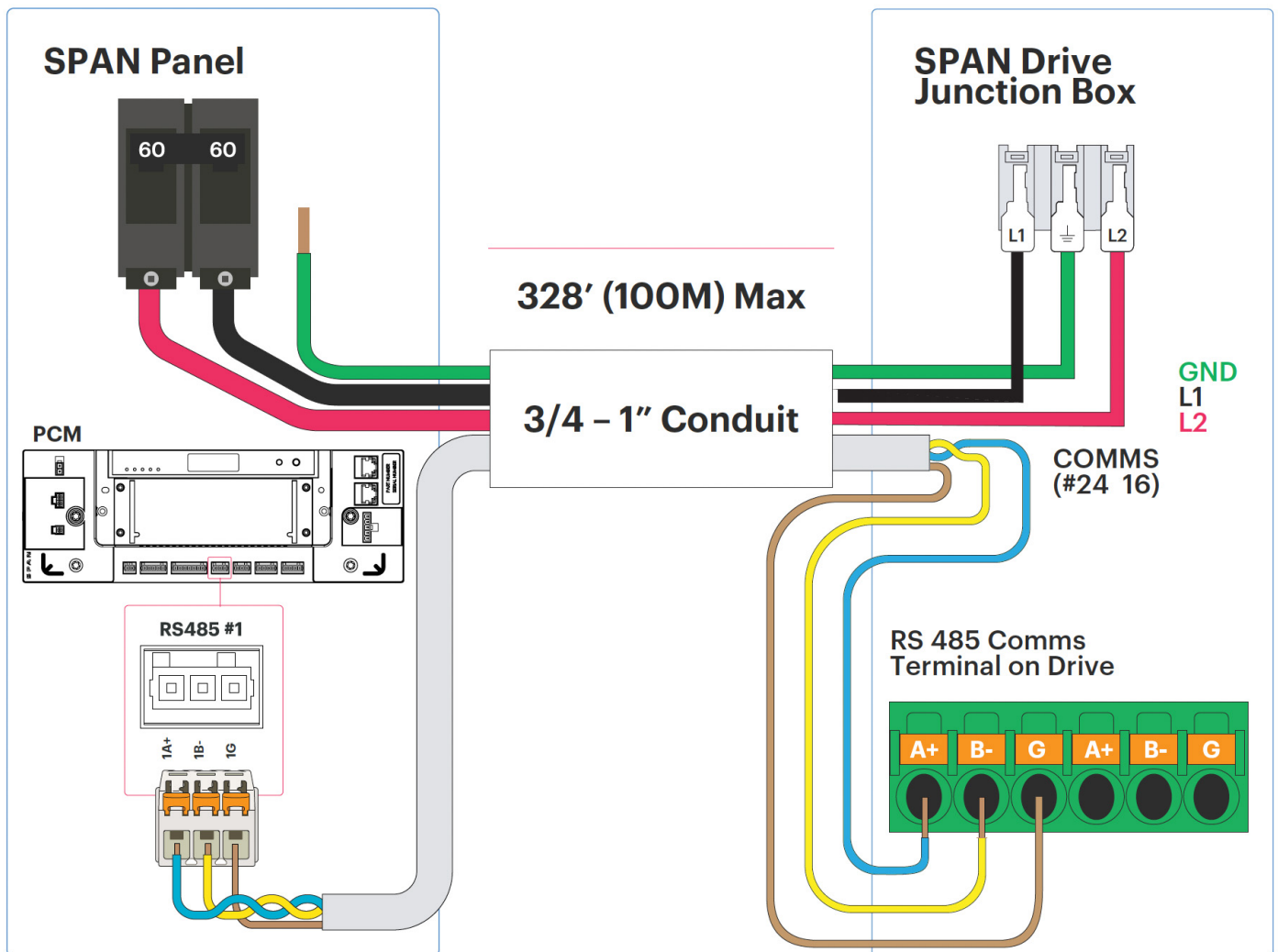
The part number is arranged as such: X-XXXXX-01, with the last two numbers being the generation.

- For hardware generations -04 and lower, Panel 1A+ should be connected to Drive B-, and Panel 1B- should be connected to Drive A+.
- For hardware generations -05 and higher, Panel 1A+ should be connected to Drive A+, and Panel 1B- should be connected to Drive B-.

Controller Hardware X-XXXXX-04 and Lower



Controller Hardware
X-XXXXX-05 and
Higher



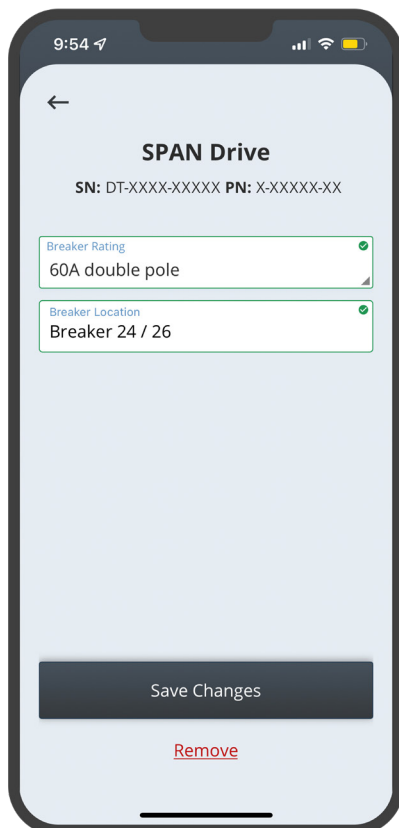
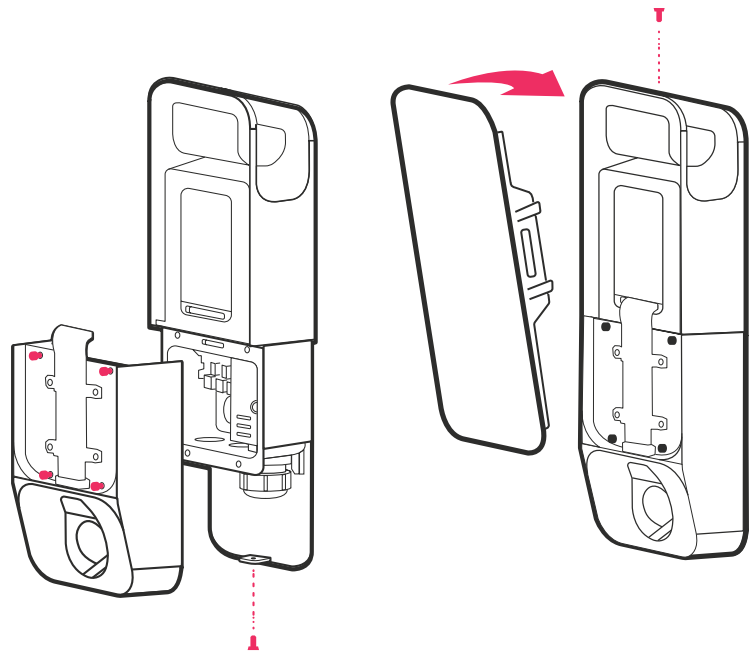
7. Final inspection & closing the unit

Confirm that all connections are correct, properly grounded, and secure.

Reassemble SPAN Drive by attaching the lower plastic cover and glass cover back onto the device using a #2 Phillips screwdriver. Do not over-tighten the screws.

Drape the charging cable around your charger and dock your EV connector in the holster.

Only after fully replacing the lower plastic cover and glass cover, restore power.



8. Commissioning

SPAN Drive must be configured with the SPAN Installer App prior to use. The serial number can be found on the exterior left side of the device.

Download the SPAN Installer App from:
span.io/span-apps



9. Enable SPAN PowerUp

Follow these steps if the Homeowner wants to enable PowerUp™.

The installation and commissioning of SPAN PowerUp™ is simple. PowerUp energy management is enabled via the “panel details” screen before proceeding to label circuits and appliances using SPAN’s latest breaker details workflow. Installers must complete labeling of each circuit and any items on the feed-through lugs in order to activate PowerUp.

IMPORTANT:

After enabling SPAN PowerUp™ or installing and commissioning SPAN Drive, fill in the required information on the PCS settings label and adhere it to the inside of the SPAN Panel door. This label can be found in a sleeve on the exterior of the SPAN Panel box or inside the SPAN Panel door. If the SPAN Panel did not come with a PCS settings label, contact support@span.io to request one.

Complete PowerUp installation instructions are contained within the SPAN Installer App. For more information on PowerUp, refer to the App note on SPAN Tech Portal or scan the QR code on the PCS Label.

This equipment has **SPAN PowerUp™** EMS enabled. The maximum operating current of this system is controlled electronically. All circuits within this equipment are current limited and prioritized by a power control system (PCS) providing overload control. Settings are password protected and only accessible to qualified personnel.



The current setpoints shall not be bypassed without authorization by SPAN. Refer to the SPAN Panel instructions for more information.

Mains PCS controlled current setting: _____ Amps

Continuous current rating of SPAN EMS is 80% of the PCS current setting

Installer: _____ **Date:** _____

Troubleshooting & servicing

For additional troubleshooting and support visit www.support.span.io or contact SPAN customer service at (415) 286-5252.



WARNING: Do not attempt to open, disassemble, repair, tamper with, or modify the equipment. The equipment contains no user-serviceable parts. Contact the installer who installed the equipment for any repairs. Only qualified electrical personnel should open SPAN Drive.

Status & Fault codes

Any red LED on SPAN Drive indicates that the device has encountered a fault state. All blink codes pause for one second before repeating. If there are multiple faults, only one fault will display on the hardware at a time.

LED Code What It Means

White	Idle
Green	Charging (pulsing), Plugged in (solid)
Blue	Setup / commissioning
Purple	Communications lost to SPAN Drive
Red	Fault state
Amber	Charging disabled (Software update in progress or Drive is locked)

LED code/ Symptom	What it means	How to fix
No LEDs visible	Power supply issue; charging is disabled	Check that the power supply is on. Have an electrician confirm voltage is present at the terminal block using a multimeter and take voltage readings for L1 to L2/N, L1 to GND, L2/N to GND.
One (1) red blink	Internal fault; charging is disabled	Turn the circuit breaker off, wait 10 seconds, and turn it back on. Have an electrician confirm voltage is as expected at the terminal block using a multimeter and take voltage readings for L1 to L2/N, L1 to GND, L2/N to GND.
Two (2) red blinks	Ground fault circuit interruption; charging is disabled	Remove the charger from the car, wait 15 seconds, and try plugging it back in. Check SPAN Drive (exterior housing, handle, and cable) for damage or signs of water ingress. Have an electrician check conductor wire connections.
Three (3) red blinks	Overvoltage or poor grid quality detected; charging is disabled	Check that the power supply is nominal 200-240 volts. Have an electrician confirm voltage is as expected at the terminal block using a multimeter and take voltage readings for L1 to L2/N, L1 to GND, L2/N to GND.
Four (4) red blinks	Ground integrity check failed; high ground resistance detected; charging is disabled	Probe ground on the J1772 connector to a known good ground reference. Ensure low-resistance ground continuity between J1772 ground port and ground in electrical panel. Check for +/- 12 V square wave signal on the Orange Pilot Wire.
Five (5) red blinks	Over temperature detected; charging is limited or disabled	Carefully check the exterior of SPAN Drive and cable handle for excessive warmth. Have an electrician check that the conductors are sized properly.
Purple	Communications lost to SPAN Drive	Follow the commissioning process via the SPAN Installer app for troubleshooting.

Revision Log

Version	Note
2022-09-20	First revision
2022-12-02	Update to include 9-position pluggable RS485 connector on page 16 New feature
2023-01-18	Added: Charge on Schedule
2023-03-15	New feature added: Lock Drive
2024-09-27	New feature added: Charge with solar
2025-01-17	Update to include SPAN Drive connection to SPAN 40 & SPAN MLO 48 Panels
2025-07-31	Updated multiple SPAN Drive wiring diagrams
2026-07-03	Updated comms wiring advice and diagrams, added troubleshooting advice, and removed references to non-supported features.