

OPERATOR OWNER'S MANUAL

APEX® CORE SMARTCONTROLLER™ OPERATOR

**CORNELLCOOKSON TECHNICAL
SUPPORT DEPARTMENT**
("CC TECHNICAL SUPPORT")
800-233-8366



Section 1 - Introduction

Section – 1 Introduction	4
Section – 2 Safety Check List	5
How to Use This Manual	5
Required Tools and Equipment	7
Labor and Site Requirements	7
Section – 3 Freight Receiving	8
Verify that all components have arrived	8
Section – 4 System Overview	9
Drive Unit Specifications	10
Control Panel Specifications	10
Control Panel Amperage Rating Table	10
Drive Unit	11
APEX® CORE SMARTCONTROLLER™	11
Control Panel	12
Section – 5 Installation	13
Motor Operator	13
Control Panel	13
Section – 6 Initial Setup	14
Control Panel Structure	15
Motor VFD Power Connections Connect the Motor Power	15
Optional Light Curtain Drive and Idler Side Sensor Cables	16
Connect the Drive and Idler Side Sensor Cables, Photo Eyes, and Light Curtains	16
Power Supply	17
Connect Incoming Power	17
Final Steps	17
Section – 7 System Start-Up and Operation	18
Wiring Schematic for Optional Control Accessories	18
Connect Standard FRABA Photoeyes	19
Connect Optional Telco Light Curtains and Photoeyes	20
Connect a Sensing Edge Wireless Edge Kit	21
Connect Wireless Remote Receiver	22
Connect Inertia Brake	23
System Start-Up and Operation Commissioning	24
Basic Menu Setting Items	25
Section – 8 Maintenance	27

Maintenance Schedule	27
Motor Operator Maintenance	27
Section – 9 Cabling Parts, Sensors, Junction Boxes	28
Section – 10 Serial Numbers	28
Section – 11 Substitute Parts	28

List of Figures and Tables

List of Figures

Figure 4.1 Drive Unit.....	10
Figure 4.2. APEX Core SmartController	10
Figure 6.1. Standard APEX Core SmartController Door Layout	13
Figure 6.2. Standard Control Panel Configuration	14
Figure 6.3. Drive and Tension Side Sensor Cables	15
Figure 6.4. Motor VFD Power Connection	16
Figure 7.1. APEX Core SmartController Wiring Schematic	17
Figure 7.2. FRABA Photoeyes.....	18
Figure 7.3. Telco Light Curtains and Photoeyes	19
Figure 7.4. Sensing Edge Wireless Edge Kit.....	20
Figure 7.5. Remote Receiver	21
Figure 7.6. Inertia Brake	22

List of Tables

Table 3.1. Potential Hazards and Preventative Measures	5
Table 4.1. Specifications	8
Table 4.2. Control Panel Amperage Rating Table	9

Section 1 - Introduction

Section – 1 Introduction

About This Manual

This Operator Owner's manual is intended for use with the APEX CORE® SMARTCONTROLLER™ only. Installation and operation information specific to your TRUCYCLE™ door or grille is detailed in the Installation and Owner's manuals that were shipped with the door.

About Your Warranty

The APEX CORE SMARTCONTROLLER has been designed for ease of installation and operation. While every effort has been made to simplify and speed up installation, it is important that you follow the procedures outlined in this manual to ensure proper installation, operation, and functionality. As stated in your warranty, failure to follow these procedures, or steps as outlined, will automatically void the warranty. Do not alter the working parts, assemblies, or specifications as written; doing so, without prior authorization by CornellCookson, will void the warranty.

IMPORTANT:

Read and understand the instructions in this manual BEFORE you attempt to install, operate, or perform maintenance on this motor operator and control system.

If you have any questions, locate and refer to the APEX Serial # and Item # of the door that you're working on and contact your CornellCookson representative or call the CC Technical Support Department (800)-233-8366.

The wiring connections and schematics in this manual should cover most basic access control and entrapment equipment connections. Please refer to this manual and the wiring details that are shipped with these components.

For any questions or clarification, CC Technical Support may be reached at (800)-233-8366.

Section 2 – Safety Check List

Section – 2 Safety Check List

Rolling doors are large objects that move with the help of electric motors or manual operators (such as chain, crank, push-up, etc.), most with springs that are under very high tension. If not operated, maintained, and/or repaired correctly and regularly, injury may result. **IN ORDER TO AVOID INJURY TO YOURSELF OR OTHERS, YOU MUST FOLLOW ALL WARNINGS AND INSTRUCTIONS IN THIS MANUAL.**

⚠ DANGER

INSTALLATION OF THIS PRODUCT REQUIRES SUBSTANTIAL KNOWLEDGE AND EXPERIENCE WITH THE INSTALLATION OF ROLLING DOORS, THEIR PARTS AND SYSTEMS, AND THE RISKS ASSOCIATED WITH THEM. IF YOU DO NOT HAVE THIS KNOWLEDGE OR EXPERIENCE, YOU MUST WORK WITH SOMEONE WHO DOES.

IF ANY PART OF THIS MANUAL IS UNCLEAR OR IF ADDITIONAL INFORMATION IS NEEDED, THE INSTALLER MUST CONTACT CORNELLCOOKSON'S TECHNICAL SUPPORT DEPARTMENT.

- **Before you start any installation of this product, you must review the following potential warnings, hazards, and preventative measures listed below:**

How to Use This Manual

Throughout this manual, the following key words are used to alert the reader of potentially hazardous situations, or situations where additional information to successfully perform the procedure is presented:

⚠ DANGER

DANGER is used to indicate a hazardous situation, which, if not avoided, will result in death or serious injury.

⚠ WARNING

WARNING is used to indicate a hazardous situation, which, if no avoided, could result in death or serious injury.

⚠ CAUTION

CAUTION is used to indicate a hazardous situation, which, if not avoided, could result in minor or moderate injury.

NOTICE

NOTICE is used to indicate actions that do not relate to physical injury, but may result in damage to the product or other objects.

IMPORTANT:

IMPORTANT is used to relay information CRITICAL to the successful completion of the procedure.

NOTE: “NOTE” is used to provide additional information to aid in the performance of the procedure or operation of the door, but not necessarily safety related.

Safety Check List

Rolling doors are large, movable objects. They move with the help of electric motors or manual operators (chain, crank, push up, etc), and most have springs under high tension. These items and their components can cause injury. In order to avoid injury to yourself and others, please

Section 2 – Safety Check List

follow the instructions in this manual.

Review the potential hazards and preventative measures listed below:





Potential Hazard	Preventative Measure
	<p>⚠ DANGER Pinned or crushing by closing door</p> <ul style="list-style-type: none"> • Keep yourself and others clear of opening while door is in motion. • Do not allow children to play near or operate door. • Do not operate if door becomes jammed or broken, or does not operate smoothly. Immediately stop use and contact an experienced installer for repair. • Watch the door at all times while in operation to ensure people and things are clear of its path and that there are no operational issues with the door.
	<p>⚠ WARNING Struck by adjusting wheel bar while applying spring turns</p> <ul style="list-style-type: none"> • Be sure bar is adequate in strength and long enough to allow installer to apply the necessary torque. • Make sure bar is fully seated into the adjusting wheel slot before applying pressure. • Use two bars while applying turns to the adjusting wheel.
	<p>⚠ WARNING Electrical shock.</p> <ul style="list-style-type: none"> • Make sure electrical operator is properly grounded. • Turn off source power completely prior to servicing the motor. • Make sure wires are clear of any moving or potentially moving parts. • Avoid pinching wires when installing the motor cover.
	<p>⚠ WARNING Pinching by moving components.</p> <ul style="list-style-type: none"> • Make sure the motor is turned off and unplugged before working with moving parts, such as roller chain and sprockets, drop-out mechanisms, adjusting wheels, etc. • Locate the possible pinch-points of the unit (including – but not limited to – the drive chain, coil area, bottom bar, etc.) Do not operate the door while someone is near these areas.

Table 3.1. Potential Hazards and Preventative Measures

Check the following during installation and before leaving the job site:

- a. If the unit has tension springs, be sure the proper amount of tension is applied to the torsion springs in order to properly counterbalance the weight of the curtain.
- b. Securely fasten the tension adjusting wheel in place with the appropriate hardware provided.
- c. Check that the keys and/or cotter pins have been set in place and fit properly at all sprockets or gears.
- d. Check that the setscrews in each sprocket or gear (one over the key and one offset from the key) have been tightened properly.
- e. Ensure all fasteners holding the unit to the building structures are the correct type, have been installed, and are properly installed per manufacturer specifications.
- f. Ensure all fasteners used to assemble the components of the unit together are the correct type, have been installed, and are properly installed per manufacturer specifications.
- g. Instruct owner or their representative in the proper method of operating and maintaining the door, review all warnings on the door, in this manual, and leave a copy of this manual.

Section 2 – Safety Check List

Required Tools and Equipment

- Level (carpenter's or water)
- Hammer drill with masonry bit sized for installing wall anchors into concrete
- Standard hand tools (screwdrivers, hand saw, wire stripper)
- ¾-inch rigid conduit and fittings
- Reducing washers
- Electrical connectors and junction boxes
- Circuit breaker and fuses
- All other code-required materials

Labor and Site Requirements

The advanced control system and motor supplied with your door has been partially pre-wired at the factory to make the installation quick and easy, while remaining adaptable to the varying conditions of installation sites.

An electrician should mount and wire the local disconnect and terminate power to the APEX Core Operator and SmartController™. (See “Electrician’s Responsibilities” below.) Depending on your jurisdiction, an electrician may be required for all electrical connections, or the installing dealer may be able to complete the connection of motor to control panel, and sensors.

IMPORTANT: All electrical work must be performed in accordance with local and state building codes, and only by persons properly trained and certified (if required) to do such work.

NOTE: Do not allow any traffic to pass through the door opening during the installation procedure.

Electrician’s Responsibilities: Electrical work and ability is required to install the APEX Core SmartController, including the ability to:

1. Furnish and install fused disconnect(s).
NOTE: These disconnects are required but are not included in the door or controller package; and should be installed by the electrician.
2. Install any additional conduits as required.
NOTE: The operator is supplied with a flexible conduit. High- and low-voltage cables must be routed in separate metallic or metal-lined flexible conduits.
3. Run electrical power lines to the fused disconnect.
4. Run included power lines from motor VFD to disconnect.
5. Run control cable from control panel to motor VFD assembly.
6. Install conduit as necessary to route wires from sensors and activation devices to the control panel when/if used.
7. Cutting all cables to length for proper routing and termination. Do not leave excess high- or low-voltage wiring inside the control panel. Keep wiring organized and route high- and low-voltage cables separately whenever possible to reduce electrical interference.

Section 3 – Freight Damage, Missing Items, and Reporting

Section – 3 Freight Receiving

IMPORTANT:

Upon delivery, check the condition of all components for damage.
If damage occurred in transit, do not proceed with the installation without authorization.

Verify that all components have arrived

Look for the following:

- Motor crate with motor, hardware, vent plug, and flexible conduit included.
 - Control panel box with control cable installed.
 - Photoeyes and other sensors ordered.
 - User manual.
- **If the delivery is incomplete, do the following:**
 1. Make note on delivery receipt.
 2. If inspection is completed while driver is present, obtain driver's signature on note identifying missing component(s).
 3. Immediately notify both carrier and CC Technical Support Department (800) 233-8366.
 - **If damage to any component has occurred in transit, do not proceed with the installation without first receiving authorization from the manufacturer.**

NOTICE

If the installation proceeds with damaged components but without manufacturer authorization, neither the carrier nor the manufacturer shall be responsible for replacing damaged material, any operational issues with the door, or any resulting property damage to the door or the facility or injury to persons.

INSPECT FOR DAMAGE PRIOR TO REMOVING PACKAGING

- **If the installation is stopped due to damaged components, do the following:**
 1. Take pictures of the damage.
 2. Do not move material from point of delivery to other premises once the damaged components are discovered.
 3. Do not unpack product if the damage is visible prior to removing packaging until an inspection [by the carrier] has been completed.
 4. If the damage is found while removing contents from packaging, the packaging material must be saved until inspection is made.
 5. Container and packaging should be retained by consignee until inspection is made.
 6. Have components inspected by carrier's representative within 15 days from date of delivery.
 7. Consignee must obtain a copy of the inspection report from the carrier.
- **Returning damaged components:**
 1. Obtain permission from carrier to return.
 2. Route the return shipment via the identical carrier(s) involved in the original shipment.
 3. Notify the manufacturer when shipment is returned to manufacture plant.

Section 4 –System Overview

Section – 4 System Overview

The APEX® CORE SMARTCONTROLLER™ shipped with your door is specifically designed for reliability and longevity when used with a TRUCYCLE™ rolling steel door or grille operator. The hollow shaft operator unit features a direct drive gear reducer, emergency hand chain and a high efficiency motor and solenoid brake.

The control system is a solid state, microprocessor-based control system. It represents current rolling steel door and grille drive technology and has been factory-configured and parameterized for the specific door and operator combination. It includes soft stop and soft start technology. Menu items can be accessed through the [OPEN] [STOP] and [CLOSE] buttons on the control face.

⚠ CAUTION

The control system is configured at the factory for the voltage specified in your order. It is available in voltages from 208VAC to 480 VAC and may be used with single-phase or three-phase power supplies.

The supply voltage must match the voltage and phase specified on the electrical schematic included with the control panel. Using an incorrect voltage or phase may damage the controller and will void the product warranty.

If voltage and phase do not match supply, contact the CC Technical Support Department at (800)-233-8366.

Specifications:

Drive System	Hollow shaft worm gear with integral anti-fallback device, emergency manual operation, integrated absolute encoder, and electric motor with variable frequency drive.
Operation	Soft Stop and Soft Start for minimal ramp up and ramp down times
Control	Advanced logic PCB control
Voltage	120/1/60** 208-230/1/60 208-230/3/60 460/3/60
Solenoid Brake Resistance	50Ω
NEMA Rating	IP54 controller (optional IP68 / NEMA 4X external enclosure available)
Cycle Rating	500,000 cycles or 2 Years, whichever comes first
Obstruction Detection	FRABA NEMA 1 or NEMA 4X photoeyes***
24 VDC Outputs	There is 24VDC, 0.5A output allotted for connection to the standard accessories. This output is available through several output terminals on the board, but the total current draw of all the devices connected should not exceed 0.5A.
**Requires step-up transformer	
*** Other sensors are available.	

Table 4.1. Specifications

Section 4 –System Overview

Drive Unit Specifications

- 230 Volt or 460 Volt 1/3 phase 1100 RPM motor
- 1 and 2 HP as required to safely and reliably operate the door
- 24 VDC solenoid brake
- High torque worm gear drive gearbox
- Electrical schematics supplied with each unit
- Manual operation via emergency hand chain
- NEMA 4 flexible conduit provided with “plug & play” electrical connectors for operator and control panel interconnection

Control Panel Specifications

- IP54 control panel with 7” X 3.75” X 1.75” enclosure
- Integrated membrane switch for simple door access and menu controls
- Integrated 1.8” X 1.36” color LCD Display indicates door status and lifecycle count.

Control Panel Amperage Rating Table

Volt	Phase	1HP	2HP
120	1	15.45	21.95
208-230	1	8.07	11.47
208-230	3	4.66	6.62
460	3	2.33	3.31

*120 VAC step up transformer is used in conjunction with a 230VAC, 1 PH Controller

Table 4.2. Control Panel Amperage Rating Table

Approximate Control Panel Weight is 2 lbs

Section 4 –System Overview

Drive Unit

H.P.	Weight (lbs)	MOTOR DIMENSION (Inches)			
		DIM. A	DIM B	DIM C	DIM D
1	140	8.27	22.25	6.93	9.67
2	180	10.03	23.78	7.72	10.97

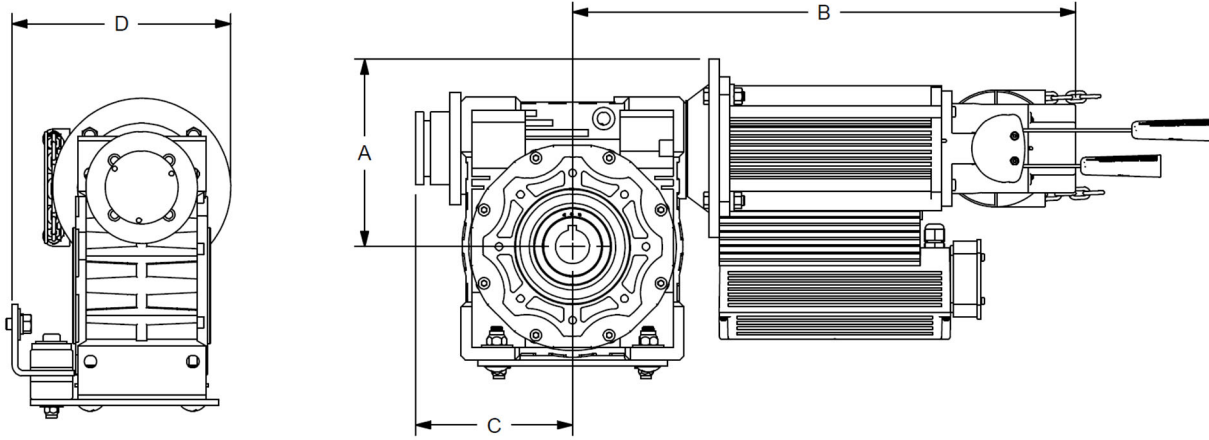


Figure 4.1 Drive Unit

APEX® CORE SMARTCONTROLLER™

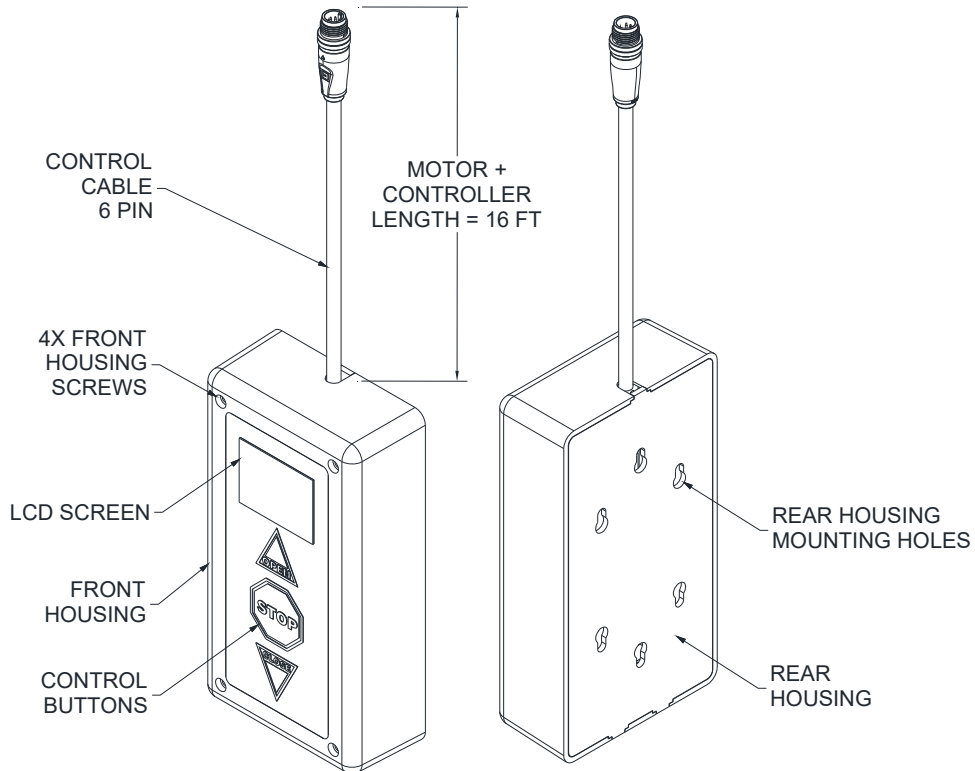


Figure 4.2. APEX SmartController

Section 4 –System Overview

Control Panel

The APEX® CORE SMARTCONTROLLER is a complete control box used to operate and commission the door. The controls are on the front housing, which features buttons to open, close, and stop the door.

About the Control Panel

The control panel is housed in a plastic enclosure. The control panel contains the PC boards, switches and other electronics that operate the door.

⚠️WARNING

When using the control panel, make sure the control cable is correctly connected and the ground wire is secured. Failure to do so may result in electrical shock or create a fire hazard.

Navigating the Menu: Using the Control Screen

From the factory, the LCD screen will display “Commission” and is ready to program door travel limit.

The control screen will guide you through commissioning your door. See Section 7 for the commissioning sequence.

Control Buttons on Front Panel

The controller features three clearly labeled buttons arranged for intuitive operation: OPEN, STOP, and CLOSE. Press OPEN to move the door open, CLOSE to move it closed, and STOP at any time to immediately halt door movement.

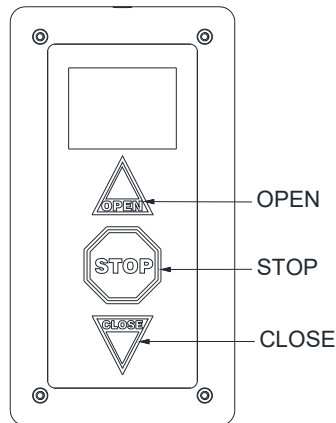


Figure 4.3. APEX CORE SmartController

Using the Menu Screen

The “Main Menu” screen has three pieces of information displayed.

1. The door cycle count on the top.
2. The bottom right window indicates door position and opening status from 0-100%.
3. The bottom left indicates the time (in seconds) before the door closes.

Section 5 – Installation

Section – 5 Installation

Motor Operator

Operators are shipped with the motor mounting bracket pre-installed for right-hand (RH) mounted doors. If you require a left-hand (LH) installation, you will need to rotate the bracket.

For more information, you can find detailed instructions in the installation manual provided with your door or on the mounting bracket's label.

⚠ CAUTION

Ensure that the door has been properly aligned, opening, and closing smoothly by using the hand chain before connecting the motor to any power source. Failure to do so may result in misalignment of the operator, excessive load on the motor, equipment failure, or potential injury to personnel.

Control Panel

Mount the control panel with its buttons on the cover at a minimum height of 5 feet from the floor and in a location with a clear, unobstructed view of the door. The wire connecting the operator and control panel should not exceed 16 feet in length.

⚠ CAUTION

For control panel wiring, runs exceeding 16 feet in length require prior approval from the Manufacturer before you place your order. If approved, you must use special cabling supplied or specified by the factory.

Choose a mounting location that provides a solid, stable surface capable of supporting the weight of the control panel. Use mounting screws (not supplied) appropriate for the wall construction to ensure a secure and reliable installation. If you are unsure which mounting screws to use, contact CC Technical Support.

The controller includes six slotted mounting holes. For proper mounting, use either the two center holes or the four corner holes—do not combine mounting configurations, as this can cause uneven loading and reduce controller stability. A minimum of two screws is required to secure the controller.

⚠ CAUTION

Ensure the fasteners do not interfere with plumbing, conduit or power lines.

Cable Routing Best Practices:

- **Maintain Separation:** Keep all low-voltage cables at least 6 inches away from high-voltage wiring along the entire cable run. This is crucial to avoid electrical interference.
- **Confirm Cable Length:** Before final mounting, lay out your cables along the intended path to ensure they are long enough to reach their connection points without being stretched or strained.

Section 6 – Initial Setup

Section – 6 Initial Setup

Please see Section 7 Wiring Schematic for Optional Control Accessories if you need greater detail or clarification on items contained in the initial setup.

The initial setup outlines the basic connections for your system: the motor to the control panel, the control panel to the standard sensor package, and the incoming power to the door. All high-voltage wiring must be routed a minimum of 6 inches away from low-voltage control wiring to prevent electrical interference and ensure safe operation.

IMPORTANT:

For help with connections, or questions about compatibility on accessories not covered in this manual, call CC Technical Support (800) 233-8366.

Note: All electrical work must be performed according to local and state building codes.

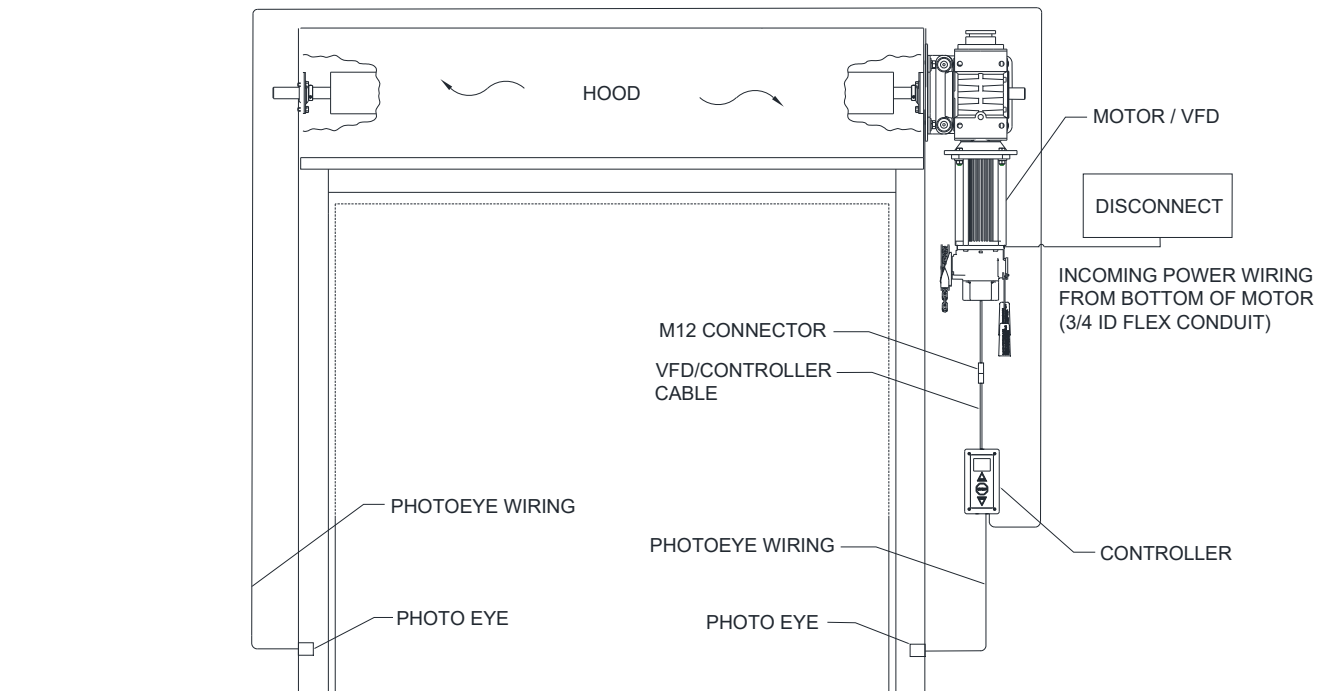


Figure 6.1. Standard APEX Core Door Layout

Section 6 – Initial Setup

Control Panel Structure

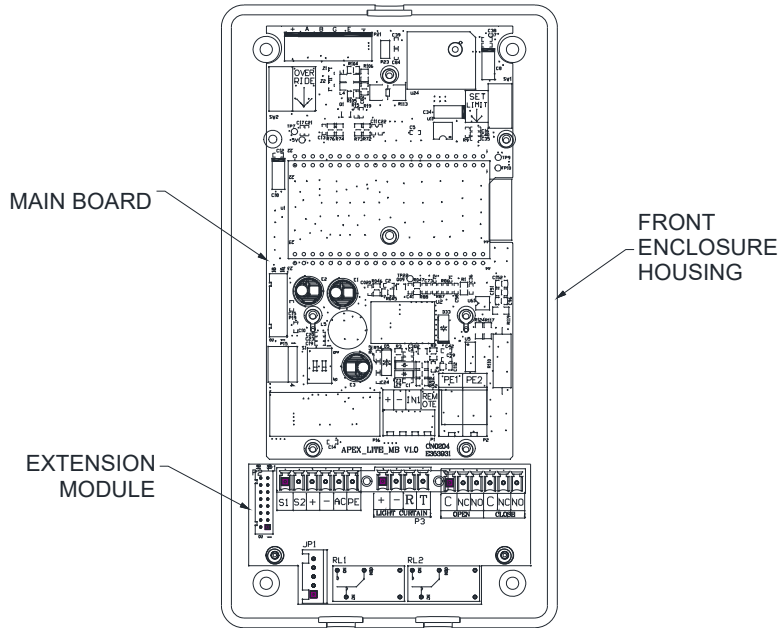


Figure 6.2. Standard Control Panel Configuration

Motor VFD Power Connections Connect the Motor Power

Install the power disconnect near the motor and VFD, for easy flexible conduit connection to the motor power terminals. The motor mounted VFD will provide power/communications to the control panel with a single cable.

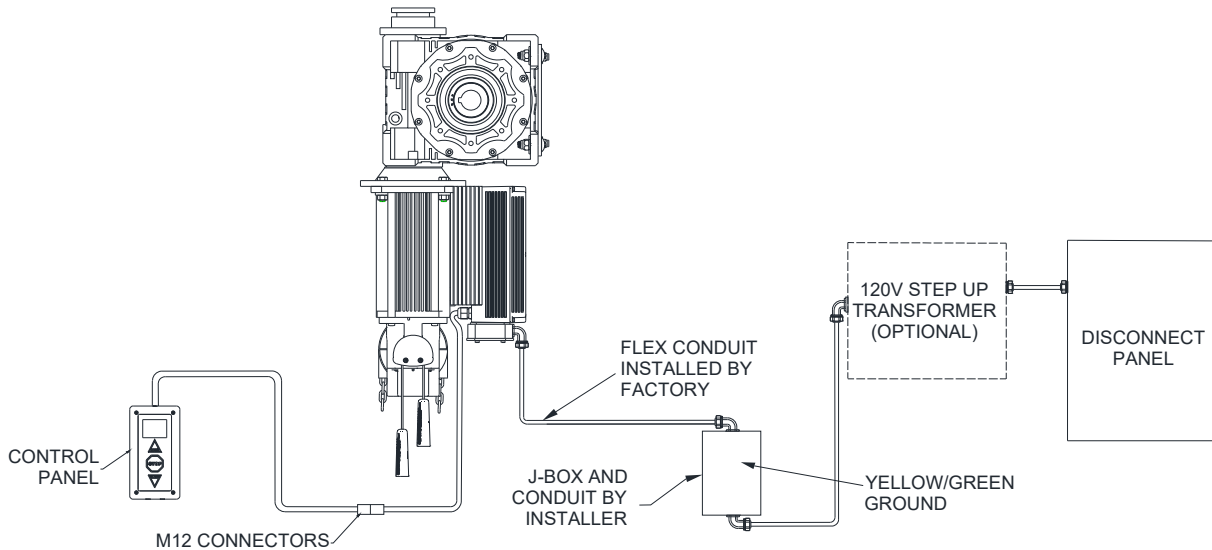


Figure 6.3. Standard APEX Core VFD Connections

Section 6 – Initial Setup

Optional Light Curtain Drive and Idler Side Sensor Cables

Connect the Drive and Idler Side Sensor Cables, Photo Eyes, and Light Curtains

If light curtains are selected, your door shipped with two specialized quick disconnect cables with connectors pre-wired to the APEX® CORE SMARTCONTROLLER™ panel. Both are fitted with the mated connectors for easy connection to the light curtain and photoeye sensors. Both light curtain and photoeye connectors are color coded as follows. For both photoeyes and light curtains, red cable labels indicate Transmitter connections while yellow cable labels indicate Receiver connections.

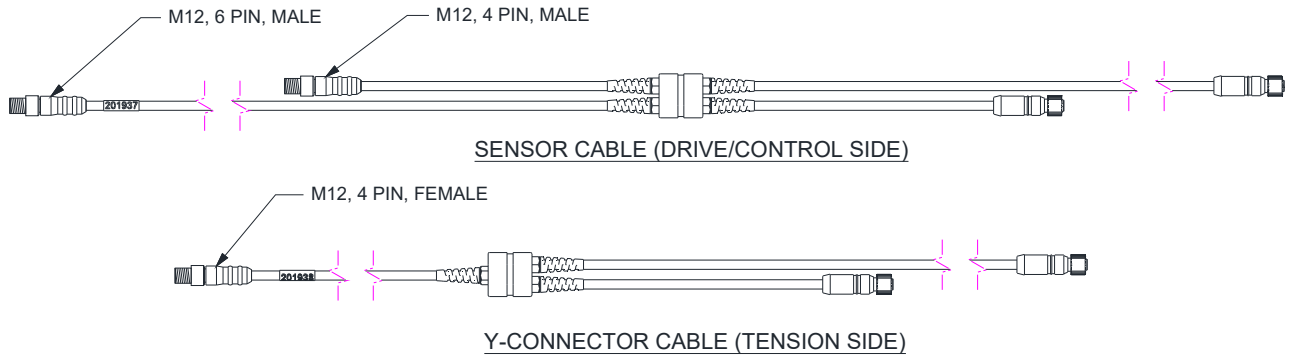


Figure 6.3. Drive and Tension Side Sensor Cables

Section 6 – Initial Setup

Power Supply

Connect Incoming Power

This motor/VFD is factory-wired for 3-phase power. For 1-phase installations, do not use the blue conductor (L2). Remove the factory-installed flexible conduit to access the motor junction box, disconnect the blue (L2) conductor, and cap or insulate it per applicable electrical codes. Connect only the required conductors for 1-phase operation and the model-specific single-phase diagram. Before reattaching the conduit and energizing the unit, ensure the unused conductor is fully insulated and no exposed wiring remains.

⚠ WARNING

Incorrect wiring may cause electric shock, equipment damage, personal injury, or void the product warranty.

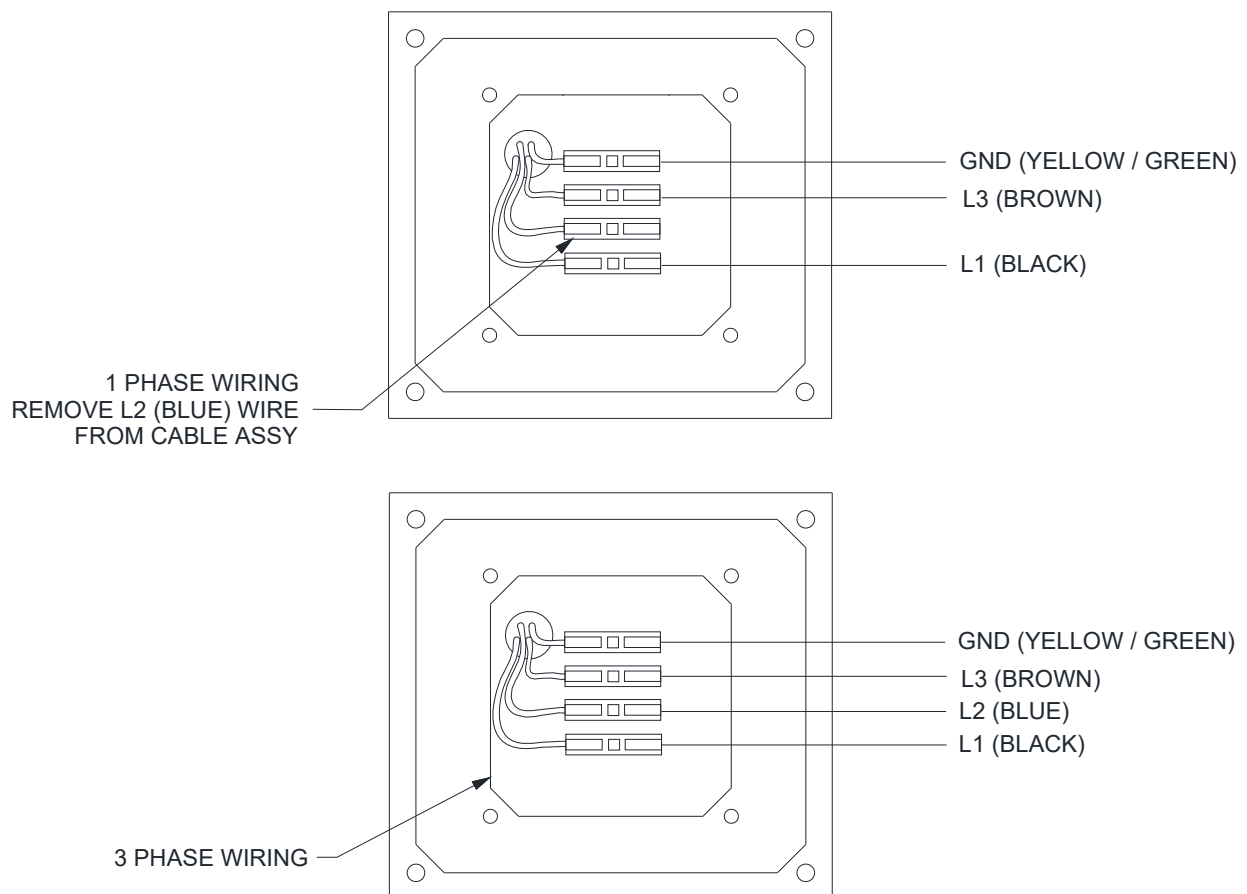


Figure 6.4. Motor VFD Power Connection

Final Steps

1. Review your wiring, double check all connections (including the factory wiring), and verify that there are no loose or broken wires.
2. Make sure all mechanical connections are completed and sealed.
3. Make sure the door installation is complete, with the door positioned at least 24" from each end of door travel.
4. Turn on the incoming power and follow the commissioning steps on the LCD display.

Section 7 – System Start-Up and Operation

Section – 7 System Start-Up and Operation

Wiring Schematic for Optional Control Accessories

Photoelectric sensors are the standard detection devices for the APEX® CORE SMARTCONTROLLER™. For alternative sensor configurations—such as light curtains, sensing edges, or other compatible safety devices—refer to the appropriate wiring schematic for installation and integration guidelines.

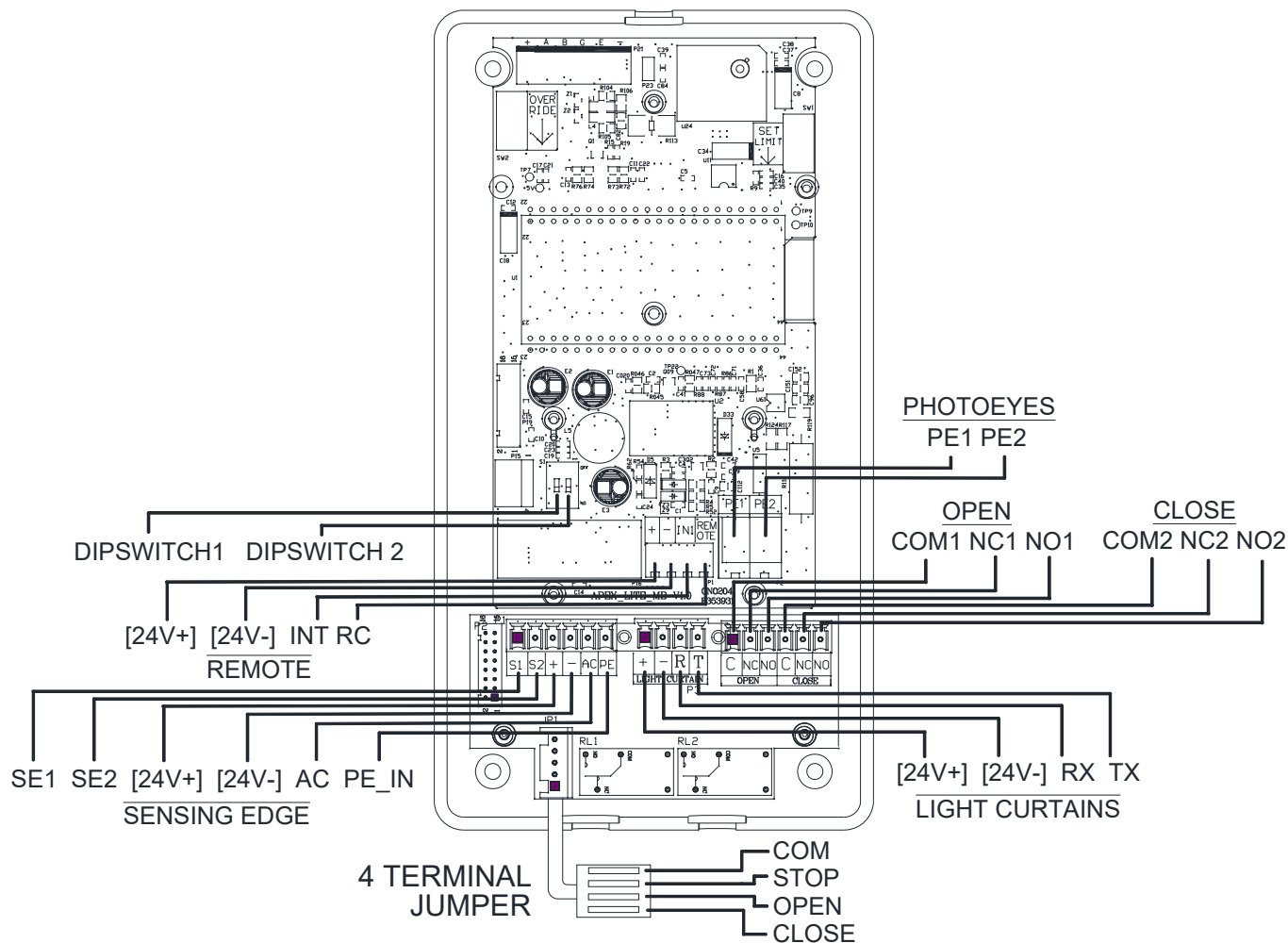


Figure 7.1. APEX CORE SMARTCONTROLLER Wiring Schematic

Section 7 – System Start-Up and Operation

Connect Standard FRABA Photoeyes

Each FRABA photoeye includes two wires: one solid black and one black with a dotted gray stripe. To ensure proper operation, connect both solid black wires—one from each photoeye—to the PE1 terminal on the control board. Then, connect both black-with-dotted-gray wires—again, one from each photoeye—to the PE2 terminal. Polarity does not matter, but it is critical that wires of the same color from each photoeye are connected to the same terminal. Connecting both wires from a single photoeye to the same terminal will result in improper system function.

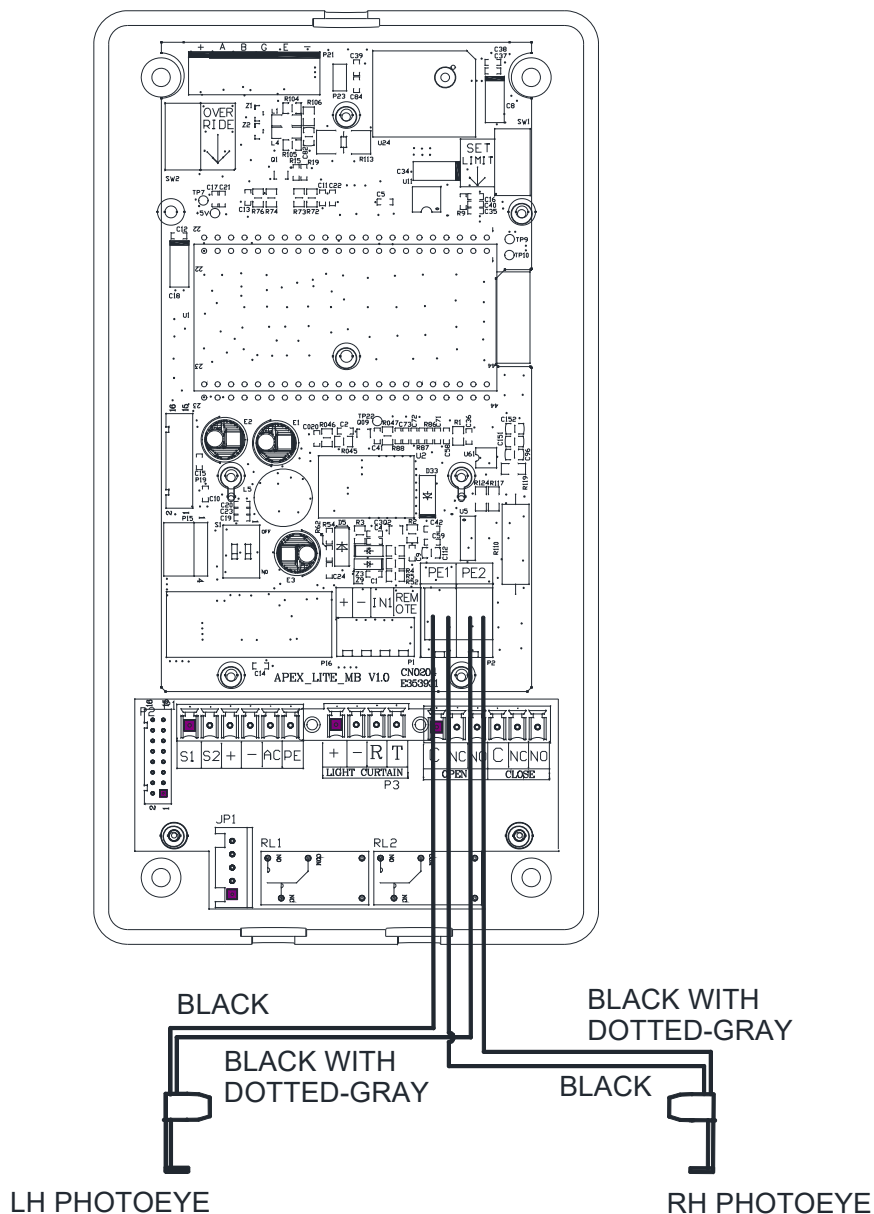


Figure 7.1 FRABA Photoeyes

Section 7 – System Start-Up and Operation

Connect Optional Telco Light Curtains and Photoeyes

Telco light curtains and photoeyes are connected to the control board using a single 6-wire cable from the sensors. For the sensors to operate correctly, ensure that DIP switches 1 and 2 are both set to ON (down position). Incorrect DIP switch settings may prevent the sensors from functioning as intended.

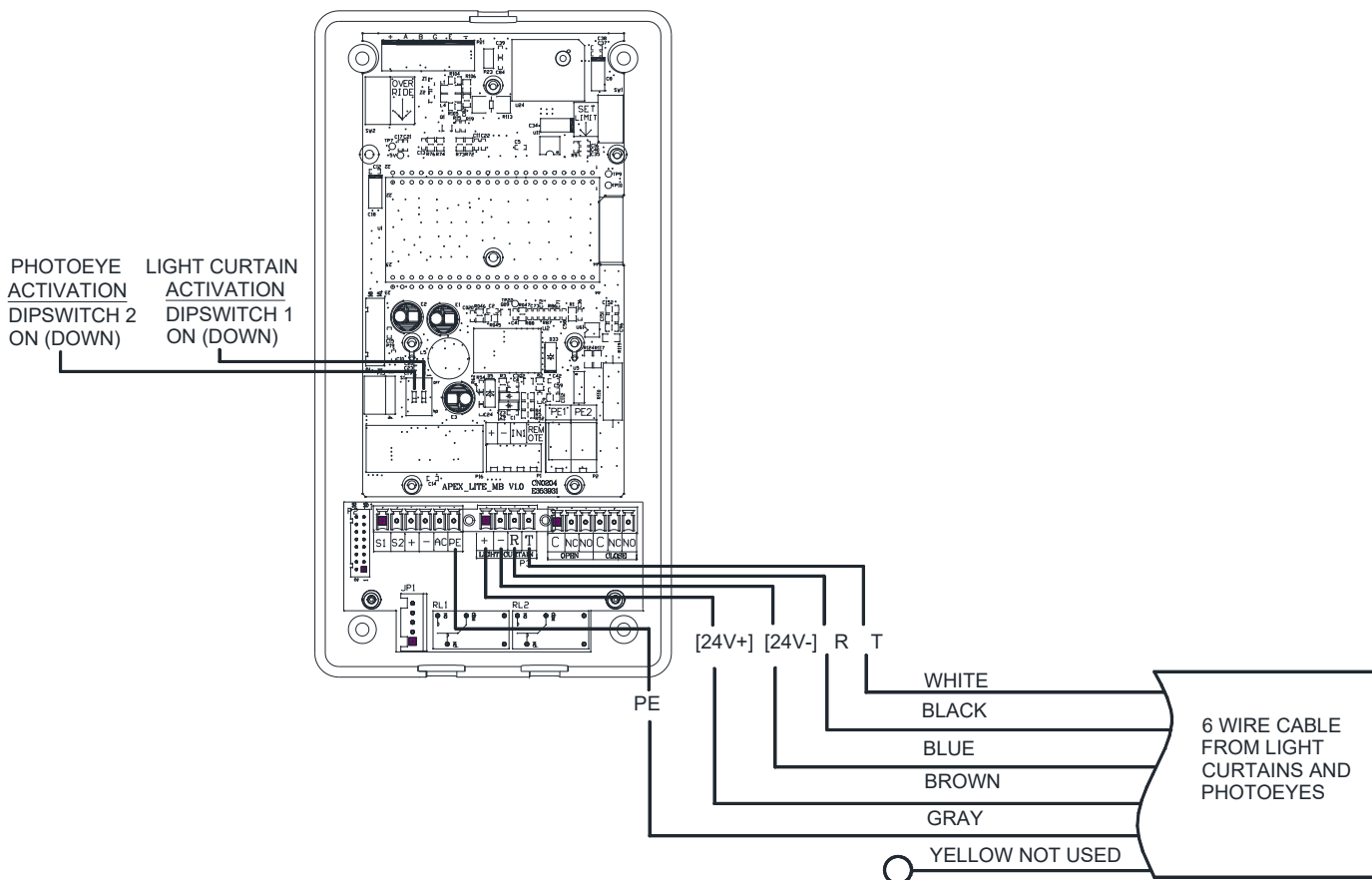


Figure 7.2 Telco Light Curtains and Photoeyes

Section 7 – System Start-Up and Operation

Connect a Sensing Edge Wireless Edge Kit

The sensing edge includes two wires—blue and red—within the sensor cable. Connect the blue wire to the S1 terminal and the red wire to the S2 terminal on the control board. Polarity does not matter, so the wires can be connected to either terminal without affecting functionality.

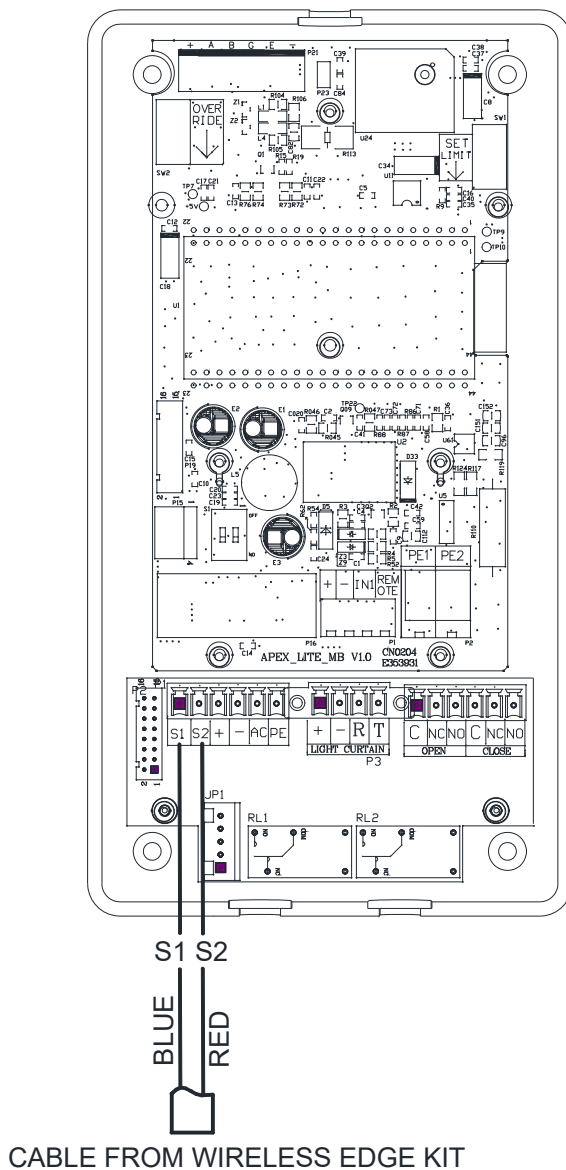


Figure 7.3 Sensing Edge Wireless Edge Kit

Section 7 – System Start-Up and Operation

Connect Wireless Remote Receiver

The one-button remote connects to the main board using the [24V+] [24V-] and [Remote] terminals.

If using a relay output from the remote receiver, connect the Normally Open (NO) relay contact between the [24V-] and [Remote] terminals.

During operation, the [Remote] terminal must momentarily close to [24V-] to trigger the system.

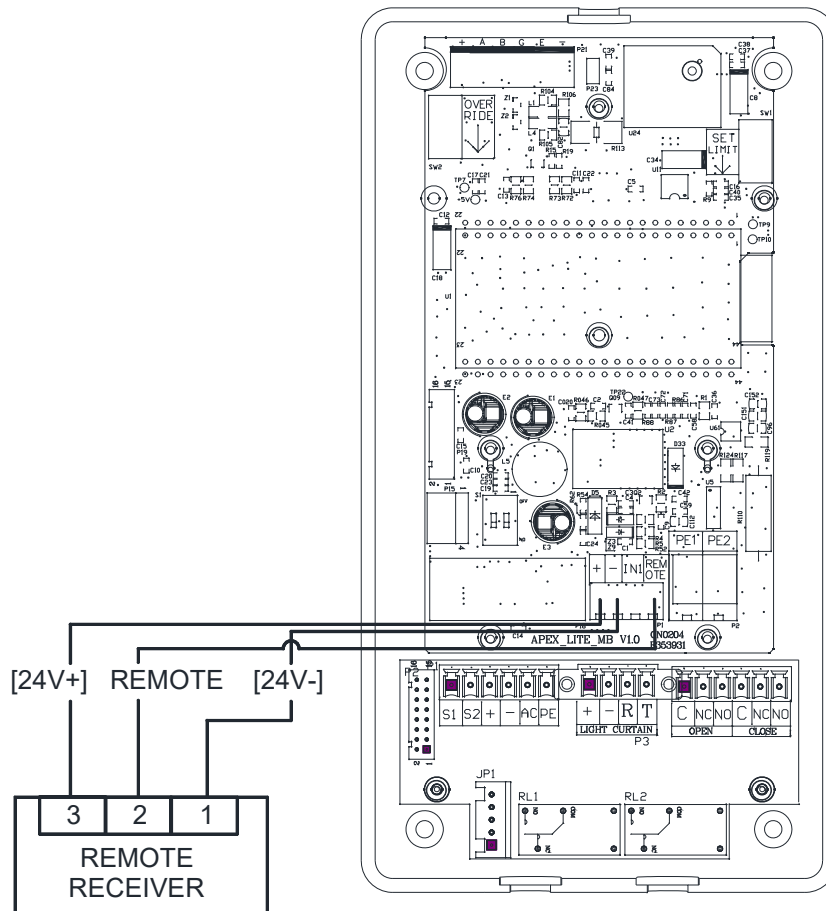


Figure 7.4 Remote Receiver

CAUTION

Incorrect wiring—especially connecting the [Remote] terminal to 24V - can cause permanent damage to the control board.

Section 7 – System Start-Up and Operation

Connect Inertia Brake

The inertia brake includes two wires within the sensor cable. Connect one wire to the [24V+] terminal and the other wire to the [IN1] terminal on the control board. Polarity does not matter, so the wires can be connected to either terminal without affecting functionality.

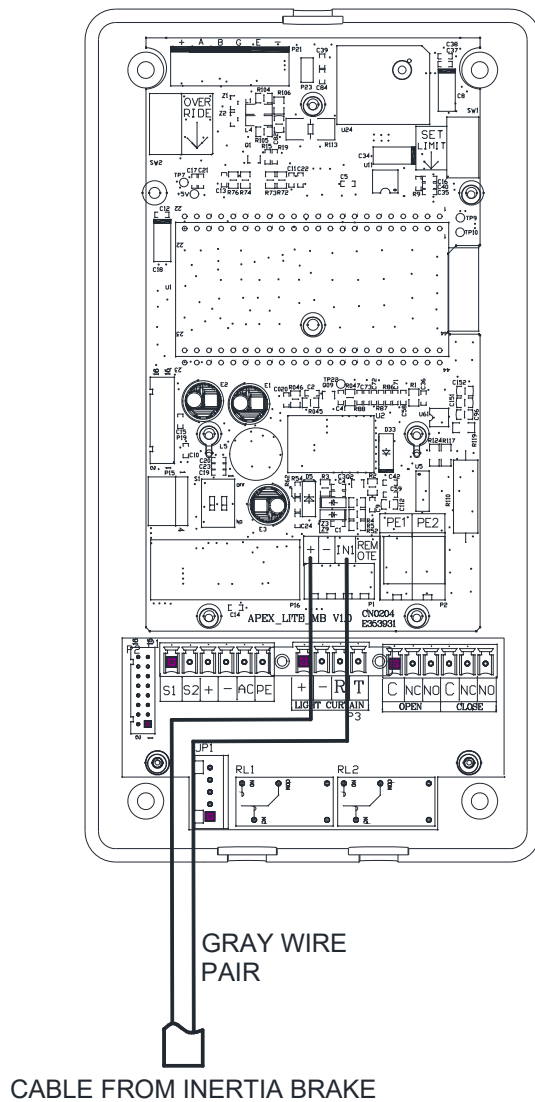


Figure 7.6 Inertia Brake

Section 7 – System Start-Up and Operation

System Start-Up and Operation Commissioning

This section describes the commissioning procedure for preparing the door for startup and normal operation, including setting the door limits. Begin by using the hand chain or the override switch to carefully position the door at a starting point, either 24 inches below the open limit or 24 inches above the closed limit. Once the door is positioned, follow the steps below to commission the door.

1. Press **[Open] + [Close]** simultaneously to initiate the commissioning process. The commissioning process begins, and the display advances to the next screen.

**PRESS
[OPEN+CLOSE]
TO START
COMMISSION**
PRESS STOP TO START OVER

2. Press and hold **[Open]** to drive the door upward toward the top limit, and release once the top limit is reached.

**PRESS & HOLD
[OPEN] TO JOG
TO OPEN LIMIT**
PRESS STOP TO START OVER

3. Next, press **[Open] + [Close]** to confirm the top limit position. This action sets the open limit and advances the display to the next screen.

**PRESS
[OPEN+CLOSE]
AT OPEN LIMIT**
PRESS STOP TO START OVER

4. Press and hold **[Close]** to drive the door downward toward the bottom limit, and release once the bottom limit is set.

**PRESS & HOLD
[CLOSE] TO JOG
TO CLOSE LIMIT**
PRESS STOP TO START OVER

Section 7 – System Start-Up and Operation

5. Next, press **[Open] + [Close]** to confirm the bottom limit and complete commissioning. This action finalizes commissioning, and the door is ready for normal operation.



6. To restart commissioning or reset the door limits, navigate to **Settings**, locate the **Clear Limits Setting**, and select **Enable**.

Basic Menu Setting Items

1. To access the main menu items from the operation screen, press the **[STOP] + [OPEN]** buttons simultaneously.
2. Use the **[OPEN]** and **[CLOSE]** buttons to cycle between menu items and press the **[STOP]** button to enter.
3. Press the **[OPEN] + [CLOSE]** buttons simultaneously to return to main page.

Menu Name	Menu Number	Display Indicates	Remarks	To Adjust Settings:
Stop Ramp	1	10 (%) (Default)	The stop ramp is adjustable from 0% to 30%. For smaller doors, start with a larger percentage settings and decrease gradually as needed.	Use [OPEN] and [CLOSE] to adjust ramp value (%), press [STOP] to select setting.
Timer To Close	2	The current setting for the time delay interval for the timer to close.	The timer is adjustable from 1 to 999 seconds	Use [OPEN] and [CLOSE] to time (seconds) to delay closing, press [STOP] to select setting.
Clear Limit	3	Disable (Default) Enable	Select between enable or disable.	Use [OPEN] and [CLOSE] to cycle between enable or disable, press [STOP] to select setting. Selecting enable clears the limits.
Timer Enable	4	Disable (Default) Enable	A setting of DISABLE means that you selected the No Timer to Close Function A setting of ENABLE means that you wish to set a value to automatically	Use [OPEN] and [CLOSE] to cycle between enable or disable, press [STOP] to select setting.
Open Adjust	5	0 (Default)	Adjustment range: -200 to +200 Negative (-) values decrease the open position (closing direction). Positive (+) values increase the open position (opening direction). Recommended adjustment step: 10 units	Use [OPEN] and [CLOSE] to adjust open limit adjustment value, press [STOP] to select setting.

Section 7 – System Start-Up and Operation

Close Adjust	6	0 (Default)	<p align="center">Adjustment range: -200 to +200</p> <p>Negative (-) values increase the close position (opening direction). Positive (+) values decrease the close position (closing direction). Recommended adjustment step: 10 units</p>	Use [OPEN] and [CLOSE] to adjust close limit adjustment value, press [STOP] to select setting.
Firmware Version	7	FW1393 (Example)	Displays current loaded firmware version.	No adjustment.

Table 7.1. Main Menu Items

Section 8 –Maintenance

Section – 8 Maintenance

Maintenance Schedule

COORDINATE OPERATOR MAINTENANCE SCHEDULE WITH THE MANUFACTURER'S MAINTENANCE SCHEDULE FOR YOUR TRUCYCLE™ SERVICE DOOR, INSULATED DOOR, OR SECURITY GRILLE

Gearbox – The gearbox on the motor operator is factory sealed, and should not require service for the life of the operator.

Brake Friction Material - The electromagnetic brake on the motor operator is factory adjusted, and should not require service for the life of the operator.

⚠ CAUTION

Before servicing, always disconnect the Operator from the Power Supply.

Use Schaeffer's #227 Moly Roller Chain Lube or DuPont Teflon Chain Saver Lubricant on roller chains (*when present*)

- Do not lubricate motor. Motor bearings are lubricated at the factory.
- Inspect and service whenever a malfunction is observed or suspected.

For CC Technical Support please call (800)-233-8366.

Motor Operator Maintenance

Door operators require practically no special maintenance other than periodic checking to see that mechanical parts where necessary are lubricated and the electrical components are free of dirt and other possibly conductive or corrosive materials.

Service technicians should familiarize themselves with the proper sequence of operation and all related controls. **Power to the operator must be disconnected when removing or replacing covers on electrical components, making adjustments, or performing maintenance.**

⚠ WARNING

Before servicing, always disconnect the Operator from the Power Supply. Failure to do so may result in electric shock.

1. Check wire connections for tightness and wire insulation for defects or abrasions.
2. Check to see that all conduit connections are secure and have no exposed wires.
3. Inspect the wiring to all installed sensing devices to ensure proper connection.
4. Inspect gearbox for leaks.
5. Inspect operation of brake.
6. Tighten any set screws.
7. Generally inspect the motor mounting and tighten the fasteners and bracing.
8. Inspect the electrical enclosure for debris, signs of arcing, and moisture. Check for loose wiring connections and tighten as necessary.
9. Test motor operation through all control stations.

Check motor amperage draw for one full open and one full close cycle. Compare readings to those listed on the motor nameplate.

Section 9 – Parts

Section – 9 Cabling Parts, Sensors, Junction Boxes

Section – 10 Serial Numbers

Please reference the unit serial number when ordering parts as it will allow us to reference revisions and manufacturing dates to ensure that replacement equipment is compatible with your product

Section – 11 Substitute Parts

The use of replacement parts not provided by the door manufacturer is not authorized and could void the product warranty.

Electrical Warranty Conditions and Exceptions: Incoming line voltages are required to fall within ranges established by ANSI C84.1 (ANSI Standard for Electrical Power Systems and Equipment) and wiring must be connected in accordance with applicable standards established by the current edition of NFPA-70 (NEC) for commercial rolling door operators. Unauthorized modifications or damage as a result of improper wiring or line voltage fluctuations will void all electrical warranties.