CD-500-S

Chain Disk Auxiliary Module

User's manual

890-00672 rev.00

PN895-00827

REV.00

Manufacturer
GSI Electronics
5200, Armand-Frappier
St-Hubert (Qc)
Canada J3Z 1G5

WARNINGS

The warranty can be void if this product is used in a manner not specified by the manufacturer.

Every effort has been made to ensure that this manual is complete, accurate and up-to-date. The information contained in it is however subject to change without notice due to further developments.

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1. INTRODUCTION

1.1. Terms of Use

Read and follow all installation, operation, and maintenance information carefully before using the product. If the product is used in a manner not specified, the protection provided by the product warranty is considered void.

1.2. Using the product according to your function

A responsible body is an individual or group responsible for the use and maintenance of equipment, for ensuring that the equipment is operated within its specifications and operating limits, and for ensuring that operators are adequately trained.

Operators use the product for its intended function.

Maintenance personnel perform routine procedures on the product to keep it operating properly.

Service personnel are trained to work on live circuits, perform safe installations, and repair products. Only properly trained service personnel can perform installation and service procedures.

1.3. General Safety Usage

The following guidelines must be followed to ensure safe usage of the product:

- Installation must only be performed by qualified service personnel.

- Installation must comply with local and national safety codes.

- Repairs must only be performed by qualified service personnel.

- When replacing the fuses, use the same type and same rating as specified. Make sure the unit is disconnected from AC power.

- Do not try to operate the system if it is damaged. Disconnect the power from the unit and call your local service representative.

- Do not operate when condensation is present.

- Use of the system in a manner not specified by these instructions can impair the safety protection provided by the system. Do not operate the system outside of its rated supply voltages or environmental ranges.

- Failure to read the installation and user manuals or to comply with the warnings and references contained herein can result in serious bodily injury or controller damage.

- Do not insert metal objects into the connectors.

- Use the system only as specified.

- Carefully read all instructions.

- Do not use the system if it does not operate correctly.

- The enclosures must be closed and locked before you operate the product.

- Use only specified replacement parts.

1.4. General Safety Precautions

⚠ ***WARNING: Read and save these instructions!***

Safety may be jeopardized if the equipment is used in a manner not specified by the manufacturer. Carefully read and keep the following instructions for future reference.

Although fuses at the input and outputs of the controller protect its circuits in case of an overload or over-voltage, we recommend installing an additional protection device on the controller's supply circuit.

The room temperature where the controller is located must always remain between 32°F and 104°F (0°C to 40°C). Indoor use only!

To avoid exposing the controller to harmful gases or excessive humidity, it is preferable to install it in a corridor.

If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

Do not spray water on the controller! In order to clean the control, wipe it with a damp cloth.

Before servicing or cleaning unit, switch power off at service panel and lock the switch disconnecting means to prevent power from being switched accidentally. When the service disconnecting means cannot be locked, securely fasten a prominent warning device, such as a tag, to the service panel.

1.5. Symbols of the Manual

Warning. Read the following text carefully; it contains important information which, if ignored, may cause the controller to operate improperly.

High Voltage. Hazard of electrical shock. Read the message and follow the instructions carefully.

Pay attention. The following text contains very useful information.

Both direct and alternating current (AC/DC).

Direct current (DC).

Alternating current (AC).

Functional Ground Terminal Primarily used for functional earth terminals which are generally associated with test and measurement circuits. These terminals are not for safety earthing purposes but provide an earth reference point.

For Customer Use: Enter below the serial number located on the side of the alarm system and keep this information for future reference.

Model:	CD-500-S
Serial number:	_____
Date installed:	_____

1.6. General Safety and Electrostatic Discharge Prevention

Electrostatic discharge (ESD) can damage equipment and impair electrical circuitry. ESD damage occurs when electrostatic components are incorrectly handled, and can result in complete or intermittent failures. Always follow ESD-prevention procedures when you remove and replace components. Wear an ESD-preventive wrist strap, ensuring that it makes good skin contact.

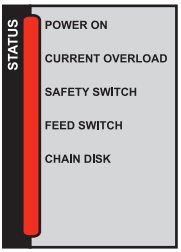
Connect the grounding clip to an unpainted surface of a metal chassis frame to safely ground unwanted ESD voltages.

To guard against ESD damage and shocks, the wrist strap and cord must operate correctly. If no wrist strap is available, ground yourself by touching the metal part that is grounded. For safety, periodically check the resistance value of the antistatic strap. It must be between 1 and 10 Mega ohms (Mohm).

2. TERMS & SYMBOLS

2.1. Status LEDs

The LEDs at the right of the control panel give the status of each output. The following table gives the meaning of each pilot light:



LED	MEANING
POWER ON	The CD-500-S is correctly powered.
CURRENT OVER-LOAD	Flashes when the amperage draw of the drive unit has exceeded the *Max Current* limit for the *Overload Delay*. Fix the problem then press and hold the RESET button to restart the system.
CHAIN DISK SAFETY SWITCH	Turns on when the drive unit has reached its safety switch. Fix the problem then press and hold the RESET button to restart the system.
FEED SWITCH	Turns on when the proximity sensor detects feed. Flashes during the *Feed Bypass Delay.*
CHAIN DISK OUTPUT	Turns on when the drive unit is running.

2.2. Internal Switches

The internal switches are located inside the box on the bottom board. When the controller is shipped from the factory, all the switches are set to OFF.

Internal switches 1-7 are used to set the ID number of each CD-500-S unit. Internal switch #8 is used to return to the previous

#	OFF	ON
1	Only lift the switch that corresponds to the id# of this slave Chain Disk System.	Id #1
2		Id #2
3		Id #3
4		Id #4
5		Id #5
6		Id #6
7		Id #7
8	Communication terminals are enabled.	Communication terminals are disabled. Do not turn this switch on unless your dealer tells you to do it.

Communication Mode
Internal switch #8 allows stepping back to the communication mode that was previously used by the CD-500 controller (without using COMM terminals). This option is used to ensure the compatibility between CD-500-S units and older versions of the CD-500. Do not turn this switch ON unless your dealer tells you to do it.

Note that turning internal switch #8 ON completely changes the way the CD-500-S works. If you turn it ON, refer to revision 01 of the CD-295-S manual and to revision 02 of the wiring diagram (contact your dealer).

3. INSTALLATION

3.1. Preparing the Enclosures for Installation

Preparing the equipment before mounting it to the wall facilitates manipulation and ensures all parts are ready to be installed.

Before You Begin:

1. Close and lock the CD enclosure by using the latch.

Perforating the punch holes while the enclosures are open may crack the enclosure.

2. Using a hole punch tool, perforate the punch holes needed for your installation at the bottom of the enclosure.

3. Using the latch at the bottom of the enclosure, open it and remove the punched out fragments.

4. Install the cable glands with your system to the bottom of the enclosure.

5. Close the CD enclosure.

IMPORTANT: Leave a clearance of at least 12 inches at the left side or at the top of the enclosures to allow the cover to be removed for maintenance according to the enclosure model.

Remember: If the enclosure can't be mounted to the supporting structure behind the drywall, mount the enclosures onto a wooden or metal frame. Do not mount the enclosures directly onto the drywall.

3.2. Mounting the Controller on the Wall

IMPORTANT: Leave a clearance of at least 12 inches at the left side or at the top of the enclosures to allow the cover to be removed for maintenance according to the enclosure model.

IMPORTANT: Mount the system into a wooden or metal frame. Do not mount the system directly into the drywall.

IMPORTANT: Do not make additional holes in the enclosure, particularly on the side of the enclosure when using a computer communications module.

1. Open the CD enclosure and remove the black screw caps covering the mounting holes of the CD enclosure.

2. Using the four remaining 4.76 millimeters (0.1875 inch) screws. Secure the CD enclosure.

3. Place the previously removed black screw caps on the screws used to mount the CD enclosure to make the enclosure water tight. Add silicone caulking to completely seal the screws.

4. Verify that the enclosure opens or closes easily.

All wiring must be done by an autho¬rized electrician and must comply with applicable codes, laws and regulations. Be sure power is off before doing any wiring to avoid electrical shocks and equipment damage.

3.3. Connections

To connect the controller, refer to the wiring diagram enclosed with this user's manual. Use the electrical knockouts provided at the bottom of the enclosure. Do not make additional holes in the enclosure, particularly on the side of the enclosure when using a computer communications module.

All wiring must be done by an authorized electrician and must comply with applicable codes, laws and regulations. Be sure power is off before doing any wiring to avoid electrical shocks and equipment damage.

If the plug-in terminal blocks are marking "CIF" and come from Sauro or the Stripping length wire is higher than 6mm, the use of stranded cables is not allowed except if you use ferrules on stranded wires. Otherwise, use no stranded wire with these terminal blocks.

Before You Begin:

1. Do not install rigid conduit into electrical knockouts. Only nylon cable glands are permitted for cable or wire fastening.

2. The controller has no power-on switch. An external switch or circuit breaker shall be included in the building installation to interrupt power to L and N electric power lines. It shall be in close proximity to the equipment and within easy reach of the operator. It shall be marked as the disconnecting device for the equipment.

3. The main supply circuit breaker for Chain Disk motor (L1/L2 POWER IN) shall be no larger than 20 A.

4. Wire gage used for mains supply (L1/L2 POWER IN) and Chain Disk motor shall be at least 12 AWG.

5. Separate circuit breaker shall be used for auger motor.

6. The mains supply breaker for auger motor shall be 15 A.

7. Wire gage used for Flex-Flo auger motor shall be at least 14 AWG.

Safety may be jeopardized if the equipment is used in a manner not specified by the manufacturer.

3.3.1. Correctly Supporting and Routing Cables

Properly supporting and routing the cables helps avoid electromagnetic interferences and wire damages.

Cable Support
Support the cables with clips or cable trays whenever possible to avoid damage at the connection points.

Cable Routing
When low voltage cables run parallel to high voltage cables (120/208/240/380VAC or 24 Vac), place them at a distance of at least 300 mm (12 inches) from each other to avoid electromagnetic interference.

If low voltage cables cross high voltage cables, ensure they cross at an angle of 90° to minimize electromagnetic interference.

Do not install rigid conduits. Only nylon cable glands are permitted for cable or wire fastening.

Always use watertight compression glands to seal cable entries into the controller.

Do not use metallic cable-holders.

Use watertight compression cable glands rated IP51 for each cable used.

Use silicone to seal the cable gland rated IP51 if more than one cable is use in the same cable gland.

If the product enclosures are not sealed correctly and the installation does not respect the manufacturer recommendations, the warranty is void.

Ensure all cables enter through the bottom of the controller. Do not make holes on the top or on the sides of the enclosures. Be careful not to damage the electronic cards located inside the enclosure when drilling or punching the knockouts at the bottom of the enclosure.

Note: It is acceptable to use cables in a flexible tube fastened by cable glands at the end of the flexible tube.

3.3.2. Connecting the CD Supply to a Power Source

Once the CD enclosure is mounted, the last step before configuration is to connect the equipment to a power source.

IMPORTANT:
An external or circuit breaker and a disconnecting switch must be installed to interrupt power to L1 and L2 electric power lines before connecting the system's main sector input on the CD power supply. It must be in close proximity to the equipment and within easy reach of the operator. It must be marked as the disconnecting device for the equipment. GSI Electronics recommends installing it to the left of the system or to the right of the system enclosure. GSI Electronics recommends using a DPST disconnecting switch in series with a breaker.

CAUTION: Disconnect supply before servicing.

Lock the enclosure when wiring is complete or when servicing. Use the nut and bolt included or a padlock (not included) to lock the enclosure.

If the disconnect switch or the circuit breaker is used as a sectioning device, the device must be correctly identified with which function of the controller opens the circuit. The Off or Stop and On position must be clearly identified on the sectioning device.

Wiring instruction:

1. Ensure that the breaker is opened before installing the wiring.

2. Plug the wires from the CD into a power source (AC main sector voltage).
   L1 from the source to the contact terminal "CL1"
   L2 from the source to the contact terminal "CL2"

The system works at nominal voltage of 208Vac and 240Vac for the main sector voltage. The system consumes a current of 12Amps at the minimum voltage on the main sector voltage input. Size your breaker circuit and the wires according with local and national safety codes. The recommendation current value is 20A for the breaker. A minimum voltage rating of 300V and a minimum temperature rating of 90°C are used for the wires at 208Vac and 240Vac. Wire gage used for mains supply (L1/L2 POWER IN) and Chain Disk motor shall be at least 12 AWG.

Refer to the wiring diagram included with this manual for more information.

Note: The terminals "CL1" and "CL2" are used to supply the Chain Disk motor, the power supply of the Chain Disk Controller, high voltage impedance inputs (Toggle Switch, Proximity sensor, Chain Disk Safety Sensor, Actuator security switch).

3.3.3. Connecting the Chain Disk Contactor and the current sensor

The current sensor opens the Chain Disk Contactor if the Chain Disk motor current draws a certain current value programmed onto the parameter controller.

There are two ways to use this output:

1.Using only the internal contactor

2.Using an external contactor (Three phases)
Wiring instruction using the internal contactor:

1. Ensure that the breaker is opened before installing the wiring.

2. Connect a wire from the CD contactor terminal "NO1" into the current sensor. Look at the page 2 of the wiring diagram according to the single phase configuration.

3. From the current sensor, go and connect to the Chain Disk motor terminal "L1."

4. Connect a wire from the Chain Disk motor terminal "L2" to the CD contactor terminal "NO2". Look at the page 2 of the wiring diagram according to the single phase configuration.

The system works at nominal voltage of 208Vac and 240Vac for the main sector voltage. The system consumes a current of 12Amps at the minimum voltage on the main sector voltage input. Size your breaker circuit and the wires according with local and national safety codes. The recommendation current value is 20A for the breaker. A minimum voltage rating of 300V and a minimum temperature rating of 90°C is used for the wires at 208Vac and 240Vac. Wire gage used for mains supply (L1/L2 POWER IN) and Chain Disk motor shall be at least 12 AWG.
Wiring instruction using an external contactor:

1. Ensure that the breaker is opened before installing the wiring.

2. Connect a wire from the CD contactor terminal "NO1" to one side of the coil contactor. Look at the page 2 of the wiring diagram according to the three phase configuration.

3. Connect a wire from the CD contactor terminal "NO2" to the last side of the coil contactor. Look at the page 2 of the wiring diagram according to the three phase configuration.

4. Use one phase to read the current. From one phase, connect a wire from the external contactor terminal "L1" into the current sensor by making two or three loops according the voltage value. Look at the page 2 of the wiring diagram according to the three phase configuration.

5. From the current sensor, go and connect to the Chain Disk motor terminal "L1".

6. From the external contactor, connect other Chain Disk motor terminals (L2, L3).

Size your breaker circuit and the wires according with local and national safety codes. The recommendation current value is 20A for the breaker. A minimum voltage rating of 600V and a minimum temperature rating of 90°C is used for the wires at 380Vac.

CAUTION: Disconnect supply before servicing.

Lock the enclosure when wiring is complete or when servicing. Use the nut and bolt included or a padlock (not included) to lock the enclosure.

3.3.4. Connecting the Auger Motor

IMPORTANT:
An external or circuit breaker and a disconnecting switch must be installed to interrupt power to L1 and L2/N electric power lines before connecting the system's main sector input on the Auger power supply. It must be in close proximity to the equipment and within easy reach of the operator. It must be marked as the disconnecting device for the equipment. GSI Electronics recommends installing it to the left of the system or to the right of the system enclosure. GSI Electronics recommends using a DPST disconnecting switch in series with a breaker.
CAUTION: Disconnect supply before servicing.

⚠ ***Lock the enclosure when wiring is complete or when servicing. Use the nut and bolt included or a padlock (not included) to lock the enclosure.***

If the disconnect switch or the circuit breaker is used as a sectioning device, the device must be correctly identified with which function of the controller opens the circuit. The Off or Stop and On position must be clearly identified on the sectioning device.

There are two ways to use this output:

1.Using the internal relay

2.Using an external contactor

Wiring instruction using the internal relay:

If the internal relay is used, the ratings are limited at 1HP under 240Vac, 3/4HP under 208Vac, 1/2HP under 120Vac.

1. Ensure that the breaker is opened before installing the wiring.

2. Connect a wire from the voltage source "L1" to the CD terminal "AUGER MOTOR-NO".

3. From the CD terminal "AUGER MOTOR-COM", Connect a wire to the Auger Motor terminal "L1".

4. From the Auger Motor terminal "L2/N", connect a wire to the terminal "L2/N" in the electrical panel.

A minimum voltage rating of 300V and a minimum temperature rating of 90°C is used for the wires at 120/208/240Vac Refer to the wiring diagram included with this manual for more information.
Wiring instruction using an external contactor:

1. Ensure that the breaker is opened before installing the wiring.

2. Connect a wire from the voltage source "L1" to the CD terminal "AUGER MOTOR-NO".

3. Connect a wire from the CD terminal "AUGER MOTOR-COM" to one side of the external coil contactor.

4. From another side of the coil contactor, connect to the voltage source "L2/N".

5. From another voltage source, connect "L1" to one side of the external contactor contact.

6. From another side of the external contactor contact, connect a wire to the Auger motor terminal.

7. From another Auger motor terminal, connect a wire to the voltage source "L2/N".

A minimum voltage rating of 300V and a minimum temperature rating of 90°C is used for the wires at 120/208/240Vac Refer to the wiring diagram included with this manual for more information. The mains supply breaker for auger motor shall be 15 A. Wire gage used shall be at least 14 AWG.

3.3.5. Connecting the Toggle Switch

According to the configuring installation, the installation of a toggle switch is optional.

Wiring instruction:

1. Ensure that the breaker is opened before installing the wiring.

2. Connect one wire at one side of the CD "Toggle Switch" terminal to an external fuse.

Note: GSI does not provide the external fuse.

3. From the external fuse, connect a wire to a side of the Toggle Switch terminal.

4. From another side of the CD "Toggle Switch" terminal, go and connect a wire to another side of the Toggle Switch terminal. Size the wires according with local and national safety codes. The maximum current value allowed is 4A to fuse it. A minimum voltage rating of 300V and a minimum temperature rating of 90°C is used for the wires. Wire gage used shall be at least 14 AWG.

Refer to the wiring diagram included with this manual for more information.

Note: If a toggle is not used, install a jumper in front of the CD "Toggle Switch" terminal

CAUTION: Disconnect supply before servicing.

3.3.6. Connecting the Prox. Switch

According to the configuring installation, the installation of a proximity switch is optional.

Wiring instruction:

1. Ensure that the breaker is opened before installing the wiring.

2. Connect one wire at one side of the CD "Prox. Switch" terminal to an external fuse.

Note: GSI does not provide the external fuse.

3. From the external fuse, connect a wire to a side of the proximity switch terminal.

4. From another side of the CD "Prox. Switch" terminal, go and connect a wire to another side of the proximity switch terminal.

Size the wires according with local and national safety codes. The maximum current value allowed is 4A to fuse it. A minimum voltage rating of 300V and a minimum temperature rating of 90°C is used for the wires. Wire gage used shall be at least 14 AWG. Refer to the wiring diagram included with this manual for more information.

CAUTION: Disconnect supply before servicing.

Lock the enclosure when wiring is complete or when servicing. Use the nut and bolt included or a padlock (not included) to lock the enclosure.

3.3.7. Connecting the Chain Disk Safety Switch

Wiring instruction:

1. Ensure that the breaker is opened before installing the wiring.

2. Connect one wire at one side of the CD "Chain Disk Safety Switch" terminal to an external fuse.

Note: GSI does not provide the external fuse.

3. From the external fuse, connect a wire to a side of the Chain Disk Safety Switch terminal.

4. From another side of the CD "Chain Disk Safety Switch", go and connect a wire to another side of the Chain Disk Safety Switch terminal.

Size the wires according with local and national safety codes. The maximum current value allowed is 2A to fuse it. A minimum voltage rating of 300V and a minimum temperature rating of 90°C is used for the wires. Wire gage used shall be at least 14 AWG. Refer to the wiring diagram included with this manual for more information.

CAUTION: Disconnect supply before servicing.

⚠ ***Lock the enclosure when wiring is complete or when servicing. Use the nut and bolt included or a padlock (not included) to lock the enclosure.***

3.3.8. Connecting the Master Chain Disk input

This input is not used today. This input was used in the past when the CD Master Controller did not have a communication port.

3.3.9. Connecting the Communication Cable with a CD Master

The communication bus enables communication between the CD Controller and a CD auxiliary.

Wiring Instruction:

1. Locate the terminals MODULE-1 and MODULE-2 on the CD Controller you want to connect to the CD auxiliary.

2. Connect a wire from CD MODULE-1 terminal to CD auxiliary COMM-1 terminal.

3. Connect a wire from CD MODULE-2 terminal to CD auxiliary COMM-2 terminal.

Important:
The communication cable must be a twisted pair shielded cable. The maximum length of the cable is 4000 feet (1200m) and the recommended wire diameter is 18AWG (1.0mm).

- When extending a wire, solder all connections.

- Never run low voltage cables parallel to high voltage wires to prevent interference.
- Cables must cross power cables at a 90° angle.

The communication network must be installed in a daisy chain topology.

⚠ ***Lock the enclosure when wiring is complete or when servicing. Use the nut and bolt included or a padlock (not included) to lock the enclosure.***

3.3.10. Earth Ground Connection

The Earth Ground wire must be a 2 mm diameter (12AWG) insulated or bare copper conductor connected to the Barn Earth.

If there is not a Barn Earth, the Earth Ground wire must be connected to a rod at least 16mm in diameter and at least 10ft (3m) long. The rod must have a clean metal surface free of paint, enamel or other nonconducting substances. Bury the rod at least 10ft (3m) into the ground. If the bedrock is more than 4 ft (1.2m) deep, bury the rod to the bedrock level. If the bedrock is less than 4ft (1.2m) deep, bury the rod horizontally at least 2ft (600mm) below ground level.

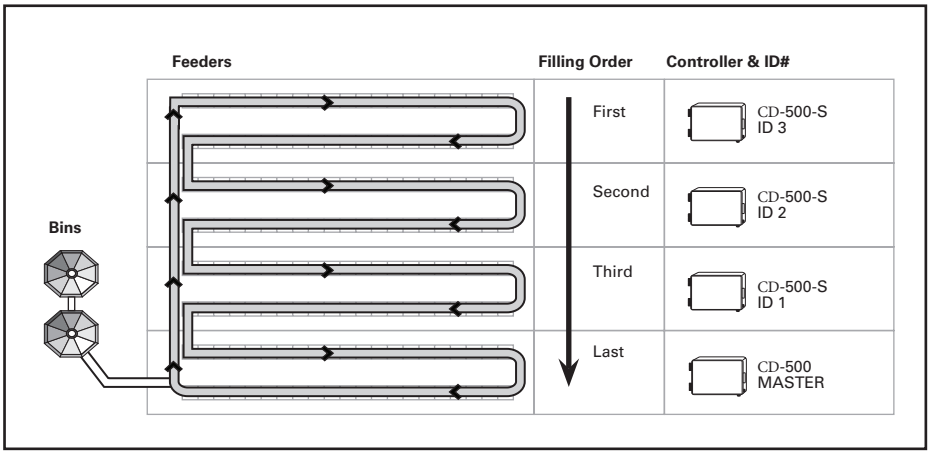
⚠ ***The ground wire must be connected properly. Failure to do so reduces efficiency of the lightning protection.***

Lock the enclosure when wiring is complete or when servicing. Use the nut and bolt included or a padlock (not included) to lock the enclosure.

4. OPERATION OF THE CONTROLLER

4.1. Description of the Controller

CD-500-S units allows adding up to 7 feeders to a Chain Disk system that is controlled by a CD-500 controller. The picture below shows how the system works. Refer to the CD-500 manual to see how the whole Chain Disk system works.



4.2. Operation of the Slave Chain Disk Systems

The feeders connected to CD-500-S units are controlled by the master CD-500 controller except if a current overload occurs or if the drive unit's safety switch is reached: when one of these situations occurs, the CD-500-S stops the drive unit and feed entry (bin auger).

Reset Button: This button is only used if your CD-500S unit operates according to the previous communication method (if internal switch #8 is set to ON). With the new communication mode (internal switch #8 to OFF), this reset must be performed from the master Chain Disk controller (CD-500 controller).

Toggle Switch: A toggle switch can be connected to the main board. This switch allows stopping the drive unit of the CD-500-S unit and stopping bin augers manually, whithout sounding the *Chain Disk is Not Running* alarm until the next feed cycle. Refer to the wiring diagram enclosed with this manual to connect the toggle switch.

The toggle switch DOES NOT cut the power lines to the chain disk motor. Disconnect the breaker For servicing and maintenance.

5. Maintenance

Inspecting and Cleaning the Controller

Inspecting the controller and its units and keeping them clean can help prolong the proper functioning of the controller.

Before You Begin

CAUTION: Disconnect supply before servicing or performing any maintenance operations.

Lock the enclosure once the wiring is completed or when servicing. Use the included nut and bolt or a padlock (not included) to lock the enclosure.

• Every few months, open and inspect the enclosures for moisture or dust build-up.

• Using a damp cloth, wipe clean the exterior of the enclosures.

Do not spray water on the controller

Replacing a Fuse

Only service personnel is authorized to replace a fuse.

CAUTION: Before servicing the system, disconnect the main sector voltage.

Wear appropriate grounding devices such as an anti-static wristband to service the system.

1. Open the circuit of the main sector voltage or disconnect the plug when a wall supply is used.

2. Isolate the source of the fault and correct it.

3. Replace the Fuse.

4. Close the circuit of the main sector voltage if the replacement is completed.

CAUTION: Disconnect supply before servicing or performing any maintenance operations.

Lock the enclosure once the wiring is completed or when servicing. Use the included nut and bolt or a padlock (not included) to lock the enclosure.

6. TECHNICAL SPECIFICATIONS

Type.....CD-500-S
Plastic casing Operating temperature.0 to 40°C
Storage temperature .....-15 to 50°C
Ambient relative humidity .....Max 95% (non-condensing)
Installation category.....Overvoltage category: II
Pollution degree.....2
Altitude.....Up to 2000m
Housing.....IP 51
Main Supply.....208/240Vac +/- 10%, 50/60Hz, 1 PHASE, 12A Max.
Chain Disk Motor.....208Vac 1.5HP (1120W), 240Vac 2HP (1492W), 12A Max.
Auger Motor.....120Vac 1/2HP (373W); 208Vac 3/4HP (560W); 240Vac 1HP (746W) (Max: internal)

Main supply fuse F1.....F1A, 250V, fast-blow (for earlier versions than PCB246-RP14)
Fuse-less (PCB246-RP14)

Running a motor with higher ratings could result in potential controller damages and/or fire.

The room temperature where the controller is located must always remain between 32 and 104°F (0 and 40°C). For indoor use only!