



## EDGE Remote Display

**Models:**  
890-00608

Installation and user manual

**895-00698**

**Version 00**

**Date: 01-01-16**



895-00698

---

**All information, illustrations, photos, and specifications in this manual are based on the latest information available at the time of publication. The right is reserved to make changes at any time without notice.**

---

# Contents

<b>Chapter 1</b>	<b>Introduction.....</b>	<b>5</b>
	Contact information .....	5
	General safety precautions and usage .....	6
	Terms of use .....	7
	What to look for when you receive your system.....	8
	System overview .....	9
	Guidelines on the ideal location for installation .....	9
	Correctly supporting and routing cables .....	10
	Grounding recommendations for the system .....	11
<b>Chapter 2</b>	<b>Basic connections.....</b>	<b>13</b>
	Preparing the enclosures for installation.....	13
	Mounting the enclosure.....	13
	Connecting the power supply .....	14
	Connecting the EDGE Remote Display to the communication network .....	15
	Grounding .....	15
<b>Chapter 3</b>	<b>Maintenance.....</b>	<b>17</b>
	Inspecting and cleaning the enclosure .....	17
	Tightening the connections .....	17
<b>Chapter 4</b>	<b>Troubleshooting.....</b>	<b>19</b>
<b>Appendix A</b>	<b>LED meaning.....</b>	<b>21</b>
<b>Appendix B</b>	<b>Terminal identification.....</b>	<b>23</b>
<b>Appendix C</b>	<b>Technical Specifications .....</b>	<b>25</b>
<b>Appendix D</b>	<b>Safety Characteristics and Certification.....</b>	<b>27</b>
<b>Appendix E</b>	<b>EC Declaration of Conformity (In accordance with EN ISO 17050-1 2004).....</b>	<b>31</b>
<b>Appendix F</b>	<b>Industry Canada Statement .....</b>	<b>35</b>
<b>Appendix G</b>	<b>FCC part 15 statement.....</b>	<b>37</b>
<b>Appendix H</b>	<b>FDA declaration.....</b>	<b>39</b>
<b>Appendix I</b>	<b>Reduction of Hazardous Substances .....</b>	<b>41</b>
<b>Appendix J</b>	<b>Disposal and Recycling Information.....</b>	<b>43</b>
<b>Appendix K</b>	<b>Product material composition .....</b>	<b>45</b>
<b>Appendix L</b>	<b>Packaging characteristics .....</b>	<b>47</b>
<b>Appendix M</b>	<b>EDGE Power Module - Product End-of-Life Disassembly Instructions .....</b>	<b>49</b>
	<b>GSI Group, LLC Limited Warranty .....</b>	<b>55</b>

---

# NOTES

# 1 Introduction

## Topics Covered in this Chapter

- Contact information
- General safety precautions and usage
- Terms of use
- What to look for when you receive your system
- System overview
- Guidelines on the ideal location for installation
- Correctly supporting and routing cables
- Grounding recommendations for the system

## Contact information

### Vendor

Automated Production Systems (AP/Cumberland)

1004 East Illinois St.

Assumption, IL 62510 USA

Technical support: 712-239-1011

Phone: 217-226-4449

Fax: 217-226-3540

International phone: 217-226-4401

International fax: 217-226-4420

E-mail: [apsales@automatedproduction.com](mailto:apsales@automatedproduction.com)

### Manufacturer

GSI Electronics

5200 Armand Frappier

Saint-Hubert, Qc

Canada

J3Z 1G5



**Warranty is 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 this manual is subject to change without notice.**

## General safety precautions and usage

### Safety symbols

	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
	Direct current (DC)
	Alternating current (AC)
	Protective Earth Ground Terminal, Primarily used for protective earth terminals.  Terminal connected to conductive parts of a device for the purpose of safety and is intended to be connected to an external system for protective grounding
	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.
<b>NOTE:</b>	To emphasize points or remind readers of something, or to indicate minor problems in the outcome of what they are doing
	Failure to follow the instructions can result in damaged equipment or loss of data or potential problems
	Failure to follow the instructions carefully can result in serious or fatal injury
<b>IMPORTANT:</b>	The following information is of great significance and must be read carefully
	Read the following text carefully; it contains important information which, if ignored, may cause the controller to operate improperly
<b>Tip</b>	Shortcut or a faster way of getting to an end result

## Safety messages



**Turn off the main electrical disconnect switch prior to servicing any of the boxes. Failure to do so might lead to serious injury or death.**

**Always use extreme caution when measuring voltage or performing procedures that require a module to be powered on.**

## Electrostatic discharge prevention when manipulating a printed circuit board (PCB)

Electrostatic discharge (ESD) can damage equipment and impair electrical circuitry. ESD damage occurs when electronic components are improperly handled and can result in complete or intermittent failures.

Always follow ESD on a PCB-prevention procedures when you remove and replace components. Ensure that the chassis is electrically connected to earth ground. Wear an ESD-preventive wrist strap, ensuring that it makes good skin contact. Connect the grounding clip to an unpainted surface of the chassis frame to safely ground unwanted ESD voltages. To guard against ESD damage and shocks, the wrist strap and cord must operate properly. If no wrist strap is available, ground yourself by touching the metal part of the chassis.

For safety, periodically check the resistance value of the antistatic strap, which should be between 1 and 10 megohm (Mohm).

## Terms of use

Read and follow all installation, operation, and maintenance information carefully before using the product. Refer to the user documentation for complete product specifications. If the product is used in a manner not specified, the protection provided by the product warranty will be void.

## 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 may perform installation and service procedures.

## General safety usage

Follow the guidelines given below for safe usage of the product:

- Installation must only be performed by qualified service personnel
- Carefully read all instructions
- Comply with local and national safety codes
- Repairs must only be performed by qualified service personnel
- When replacing the fuses, use only the same type and same rating as specified
- Make sure the unit is disconnected from AC Power when servicing

## Chapter 1: Introduction

- Do not try to operate the system if it is damaged. Disconnect the Power from the units and call your local service representative
- Do not operate while condensation is present
- Use of the system in a manner not specified by these instructions may impair the safety protection provided by the system. Do not operate the system outside its rated supply voltages or environmental range
- Omission to read the installation and user manuals or to comply with the warnings and references contained herein can result in serious bodily injury or damages to the controllers
- Do not insert metal objects into the connectors
- Use the system only as specified, or the protection supplied by the product can be compromised
- Follow all installation and maintenance recommendations and consider all provided information regarding product specifications and limitations
- Do not use the system if it does not operate correctly
- The enclosures must be closed and locked at all times, particularly when operating the system
- Use only specified replacement parts

### What to look for when you receive your system

Inspecting your system and making sure you have received all expected parts helps avoid many hassles.

### Shipment contents

Table 1-1 Complete enclosure without modules

EDGE Remote Display	1x EDGE Remote Display 1x Quick guide
---------------------	--

### Damage inspection

Your system and its components were carefully inspected both electrically and mechanically before shipment. After unpacking all items, check for any obvious signs of physical damage that may have occurred during transit. Report any damage to the shipping agent immediately. Save the original box for possible future shipment.

### Returning the unit for repair

If you must return the system for repair, carefully package the system in its original box or an equivalent, and follow these instructions:

1. Call the customer service department to get a Return Material Authorization (RMA) number. Have on hand the system's serial number and date code found on the system's main board.
2. Indicate clearly that the box is to be given to the repair department and attach a copy of the RMA number on the shipping label.

### Contact information

If you experience trouble with your system, or to get repair or warranty information, please contact one of the following :

GSI Electronics Inc.

Phone: 1-877-926-2777

E-mail: [mtl\\_techsupport@agcocorp.com](mailto:mtl_techsupport@agcocorp.com).

**Or**

Automated Production Systems (AP/Cumberland)

Technical Support: 712-239-1011

Phone: 217-226-4449

Fax: 217-226-3540

International Phone: 217-226-4401

International Fax: 217-226-4420

E-mail : [apsales@automatedproduction.com](mailto:apsales@automatedproduction.com)

## System overview

**EDGE Remote Display** — Displays data from the main system by Ethernet ports

## Guidelines on the ideal location for installation

Consider the environment, mounting recommendations, and clearance space to choose the ideal location for your system.

### Operating environment

- To avoid exposing the system to harmful gases or excessive humidity, install the EDGE Remote Display in a corridor or a room dedicated to electronic controllers.
- The ideal ambient temperature is between 20 °C and 25 °C (68 °F - 77 °F). The temperature should not go lower than 0 °C (32 °F) and should not exceed 40 °C (104 °F).
- Ensure there is sufficient ventilation around the unit.
- Install the EDGE Remote display far from sources of vibrations and where they are not likely to get bumped.

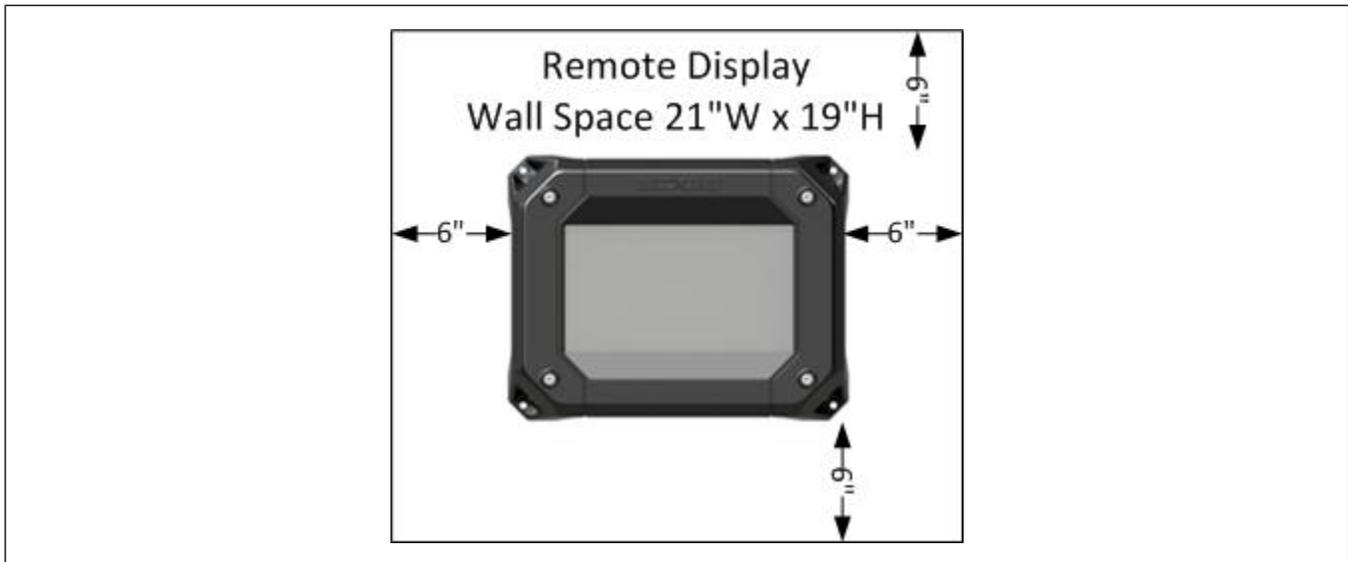
**IMPORTANT:** *If you are not planning on installing the system immediately, store the units in a cool dry place.*

### Requirements for the mounting structure

Fix the enclosures into the supporting structure behind a drywall. If this is not possible, consider the addition of a wood frame on which the enclosure could be screwed.

### Clearance around the system modules

The following minimum clearances must be respected around the EDGE Remote Display.



### Correctly supporting and routing cables

Properly supporting and routing the cables helps avoid electromagnetic interference and wire damage. Rigid conduits of up to 1 inch (25.4mm) can be used for connection to the EDGE Remote Display.

**NOTE:** Nylon cable glands are permitted for cable or wire fastening.



**Use watertight compression cable glands rated IP54 for each cable used.**



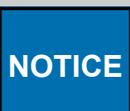
**Use silicone to seal the cable gland rated IP54 if more than one cable is used in the same cable gland.**



**The warranty is void if the product enclosures are not sealed correctly and the installation does not respect the manufacturer recommendations.**



**Ensure all cables enter through the bottom of the plastic enclosure. 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 at the bottom of the enclosure.**



**The use of flexible tube with water and dust tight connectors at both ends is acceptable.**

### Cable support

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

## Cable routing

### NOTICE

**Never run low voltage (24V and less) wires like communication wires, inputs or sensor wires in the same conduit as a high voltage (Power) wires.**

When low voltage cables run parallel to high voltage cables (120/230/380 VAC or 24 VDC), 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 a 90° angle to minimize electromagnetic interference.



**Do not use rigid conduits over 1 inch (25.4mm) for the EDGE Remote Display.**

## Grounding recommendations for the system

A correctly grounded system protects your equipment from electrical surges and spikes.



**Each module must have its own ground connection from a common junction box. Do not run the earth ground cable between the modules.**

### NOTICE

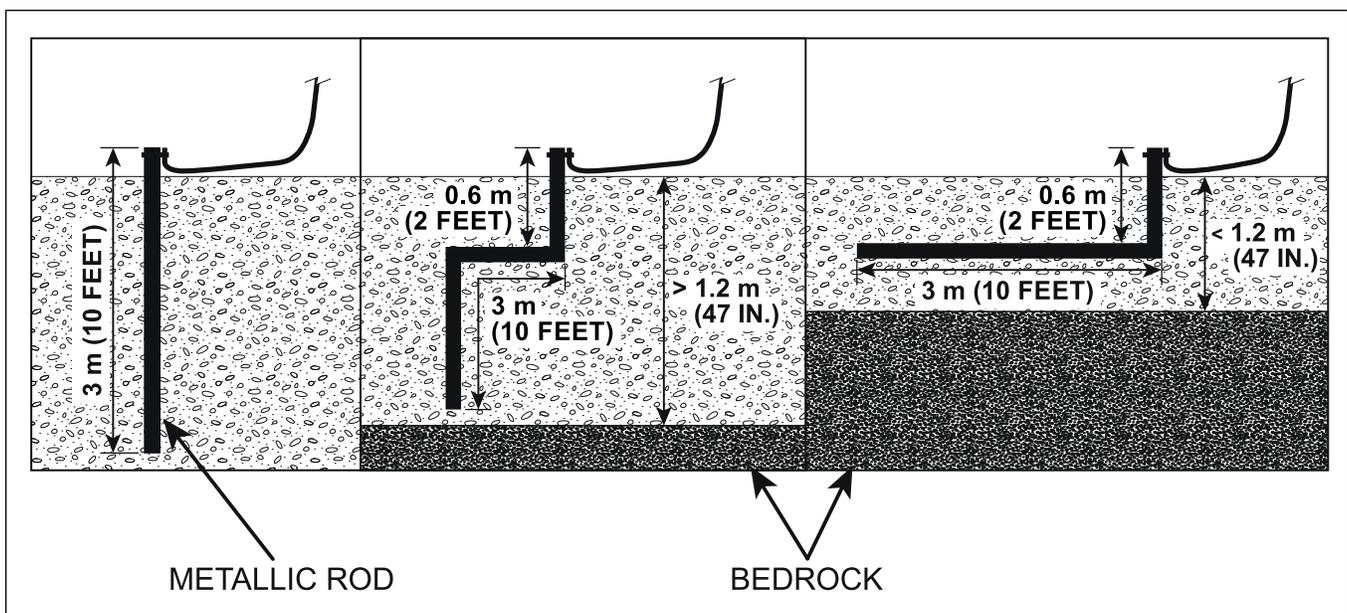
**The ground resistance levels must comply with local and national electrical codes.**

**IMPORTANT:** If outdoor connections are used, mount the enclosure as close as possible to the entry point of the outdoor wiring.

**IMPORTANT:** An improper ground connection voids the system's warranty.

Insert the rod into the ground until a few inches of the tip is left above ground level. Attach the cable to the rod tip with an appropriate connector. Attach the other end of the cable to a breaker box or a junction box near the main enclosure.

**Figure 1-1** Grounding installation depending on bedrock depth



## Chapter 1: Introduction

- If the bedrock is more than 3 meters (10 feet) below ground level, drive the grounding rod vertically 3 meters (10 feet) into the ground.
- If the bedrock is more than 1.2 meters (47 inches) below ground level, drive the rod into the ground to bedrock level and bury the remainder horizontally at least 0.6 meters (2 feet) below ground level.
- If the bedrock is less than 1.2 meters (47 inches) deep, bury the rod horizontally at least 0.6 meters (2 feet) below ground level.

**NOTE:** Refer to your local regulations and practices if an adequate grounding installation isn't possible.

### Rod specifications for grounding

The rod specifications are guidelines only. Refer to your national and local regulations for compliance criteria.

**Table 1-2** Grounding rod specifications

Item	Description
Material	Metallic, normally steel core.
Rod surface	The surface must be clean. It cannot be coated with paint, varnish or any non-conducting substance.
Minimum diameter	16 mm (5/8 inches)
Minimum length	2440 mm (8 feet)

### Cable specifications for grounding

The cable specifications are guidelines only. Refer to your national and local regulations for compliance criteria.

**Table 1-3** Grounding cable specifications

Item	Description
Certification and type	CSA, TEW type.
	UL, 1015 type, 12 AWG, 600 V, 105 °C (221 °F), green/yellow insulated wire.
Maximum length	15 meters (50 feet)
Suggested cable	Beldon # 9912, color code 189, or equivalent

# 2 Basic connections

## Topics Covered in this Chapter

- Preparing the enclosures for installation
- Mounting the enclosure
- Connecting the power supply
- Connecting the EDGE Remote Display to the communication network
- Grounding

## 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

Wires are separated into two groups: low voltage and high voltage in the plastic enclosure and the conduits.

**NOTE:** *The use of rigid conduits up to 1 inch (25.4 mm) is allowed for the EDGE Remote display.*

1. With the enclosure closed, drill a hole the size of the your cable connectors or your rigid conduits at the bottom of the enclosure.
2. Open the enclosure by unscrewing the top, and remove the plastic fragments.
3. Install the cable connectors or rigid conduit adaptors to the bottom of each enclosure.
4. Close the enclosure using the screws.

**IMPORTANT:** *Leave the rated clearance to allow the cover to be removed for maintenance*

### Remember

Do not mount the enclosures directly onto the drywall. If the supporting structure behind the drywall cannot support the enclosure, solidify it by adding a wooden or metal frame.

## Mounting the enclosure

Securely mounting the enclosures to the wall in the ideal location allows for an optimal use of the system when navigating the menus.

### Before You Begin

**IMPORTANT:** *The enclosures must be mounted near an AC Power with a disconnecting switch*

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

**NOTE:** *Install the enclosure with the widest side of the screen placed horizontally. Consult the wiring diagram concerning wire length restrictions between the enclosures.*

**NOTE:** *Ap/Cumberland recommends the Deck Screw for wood*

## Chapter 2: Basic connections

1. Place the enclosure at a height at which you can properly see the screen.
2. Screw in the top left hand corner screw first.
3. Using a level, make sure the enclosure is straight, and then screw in the second screw on the lower right hand corner.
4. Screw in the last two screws.

**IMPORTANT:** *Leave a clearance as stated in **Clearance around the system** to allow the cover to be removed for maintenance.*

### Connecting the power supply

#### Before You Begin

**IMPORTANT:** *Install a disconnect switch to interrupt power to L1 and N/L2 electric power lines before connecting the system's main input on the 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.*



**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.**

AP/Cumberland recommends using a DPST disconnecting switch in series with a breaker. In the case of the use of a SPST disconnecting switch, connect the SPST disconnecting switch to cut the hot line with a neutral circuit case.



**Disconnect supply before servicing**

1. From the power source, follow the wiring diagram to connect the main voltage supply to the system's main inputs on the EDGE Remote Display.
2. Open the disconnecting switch or breaker before wiring.
3. Plug the wires (L1 to L1, L2/N to L2/N, Earth to Earth) from the power supply into a power source (main voltage supply).
4. Correctly ground the system by using a Functional Earth configuration.
5. power on the system and make sure it is receiving power from the power source.

**NOTE:** *The working voltage range is between 90 Vac and 264 Vac. The system consumes a Power of 6W and the wires in accordance with local and national safety codes. A minimum voltage rating of 300V and a minimum temperature rating of 90°C is used for the wires.*

**NOTICE**

*For the terminal blocks, use a tightening torque from 0.9N\*m (7.9lbf\*in) to 1.0 N\*m (8.9lbf\*in) to fasten a wire.*

## Connecting the EDGE Remote Display to the communication network

The Ethernet port enables communication between the Main Controller and the EDGE Remote Display.

1. Locate terminal **Ethernet 1** or **Ethernet 2** on the EDGE Remote Display you want to connect.
2. Connect the Ethernet wire from the EDGE Remote Display to the router.

**IMPORTANT:** *The recommended installation of the Ethernet wires is a length of 100 meters (328 feet)*



*Must not use an Ethernet cable outside of the building directly on the EDGE Remote Display. The Ethernet ports are certified for an inside use only.*

## Grounding

The EDGE Remote Display only needs a functional Earth. .

The functional Earth connector is located at J2.



*If metal rigid tubes are used, ensure they are correctly grounded.*

**NOTICE**

*For the terminal blocks, use a tightening torque from 0.9N\*m (7.9lbf\*in) to 1.0 N\*m (8.9lbf\*in) to fasten a wire.*

---

# NOTES

# 3 Maintenance

## Topics Covered in this Chapter

- Inspecting and cleaning the enclosure
- Tightening the connections

## Inspecting and cleaning the enclosure

Inspecting the enclosure and keeping them clean can help prolong the proper functioning of the module.

### Before You Begin



***Disconnect the voltage supply before servicing or performing any maintenance operations.***



***Secure the screws on the enclosure once the wiring is completed or when servicing.***

- Every few months, open and inspect the enclosure for moisture or dust build-up.
- Using a damp cloth, wipe clean the exterior of the enclosure.

**NOTE:** *Do not spray water on the controller.*

## Tightening the connections

At some point, the tightening connections must be verified to ensure the connections are not loose and the installation is always safe. The inspection ensures that no overheating occurs on the tightening connections.

GSI Electronics recommends the tightening connections on power and control terminals shall be verified every 3-12 Months. Look at the different paragraphs inside the manual to know what it is the tightening torque required according to the specific terminal.

---

# NOTES

# 4 Troubleshooting

Problem	Solution
The EDGE Remote Display does not communicate	Verify if the controller is powered up
	Verify if there are activities on the bus communication by looking at the activities of the LED: ETHERNET - LINK/ACTIVITY
	Verify if the network link is installed correctly
	Verify if a DHCP router is used with the Remote Display
	Verify if the network link length is below 328 feet (100m)
	If the problem persists, contact your dealer or GSI Electronics
The EDGE Remote Display does not power up	Verify if the LED "3.3V" or "5V" is activated
	Verify if the wires are installed correctly
	If the problem persists, contact your dealer or GSI Electronics

---

# NOTES

# A LED meaning

## EDGE Remote Display

LED identification	Description
12V	Led active when the 12Vdc is present
5V	Led active when the 5Vdc is present
SYS5V	Led active when the 5Vdc system is present
3.3Va	Led active when the 3.3Vdc bus 1 is present
3.3V2	Led active when the 3.3Vdc bus 2 is present
ETHERNET - SPEED	Led active when 100 Base-Tx is used
ETHERNET - LINK/ACTIVITY	Led active when the link is present. Led blinks off during activity
USB0 ON	Led active when USB0 port is available
USB1 ON	Led active when USB1 port is available
DBG1	Debug LEDs
DBG2	
DBG3	
DBG4	

---

# NOTES

# B Terminal identification

## EDGE Remote Display

Terminal name	Description
L1	High voltage Input of the power supply
L2/N	High voltage Input of the power supply
Functional earth	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.
Ethernet 1 on PCB-432	Ethernet port 1
Ethernet 2 on PCB-432	Ethernet port 2

---

# NOTES

# C Technical Specifications

## EDGE Remote Display ratings

INPUTS : Supply Input : 100Vac-240Vac, ±10%,50-60Hz, 1 phase, 6W

Operating Temperature: 0 to 40°C (32 to 104°F)

Storage Temperature: -20 to 50°C (-4 to 122°F)

Pollution Degree: 2

Installation Category: 2

Altitude: 2000 Meters Max. (6561 Ft. Max)

Humidity (maximum relative) operating:

- 0 to 10 °C (32 to 50 °F) Non condensing
- 10 to 30 °C (50 to 86 °F) 95 % (± 3 %) Non condensing
- 30 to 40 °C (86 to 104 °F) 95 % (± 3 %) Non condensing

IP rating (IEC 60529): 54

Nema Rating (Nema 250): 12

Flame rating (UL94): 5VA V-0

Flame rating (IEC 60695 or IEC 60707): FV-0

IK rating (degree of mechanical protection - impact, IEC 62262): 08

**Table C-1** EDGE Remote Display ratings

Enclosure Dimensions	Height	178 mm (7 inches)
	Width	229 mm (9 inches)
	Depth	76.2 mm (3 inches)
Clearance around the enclosure	Top	152mm (6 inches)
	Bottom	152mm (6 inches)
	Sides	152mm (6 inches)
Weight	1270 Grams (2.8 lbs)	
Display	Size	17.8 cm (7 inches)
	Type	TFT color LCD, Touchscreen
	Resolution	WVGA (800 × 480 pixels)
Ethernet ports		
10/100 Ethernet transceiver	EEE802.3/802.3u (Fast Ethernet) ISO 802-3/IEEE 802.3 (10BASE-T)	

---

# NOTES

# D Safety Characteristics and Certification

## Safety characteristics

The EDGE Remote Display is Safety Class I according to IEC classification and has been designed to meet the requirements of UL 61010-1 third edition, CAN/CSA-C22.2 n° 61010-1 third edition, EN 61010-1: 2010 (Safety Requirements for Electrical Equipment for Measurement, Control and Laboratory Use). It is an Installation Category II intended for operation from a normal single phase supply.

The EDGE Remote Display has been tested in accordance with IEC61010-1 and has been supplied in a safe condition. This instruction manual contains some information and warnings which have to be followed by the user to ensure safe operation and to retain the instrument in a safe condition.

The following safety EU directives were followed:

2014/35/EU	The low voltage directive (LVD)
2014/30/EU	The Electromagnetic compatibility directive (EMC)

**NOTE:** *EDGE Remote Display plastic enclosure is certified to use rigid tubing up to 1 inch*

## EMC characteristics — emission standards

The EDGE Remote Display has been designed to meet the requirements of the EMC Directive 2014/30/EU, FCC directives, Industry Canada directives. The compliance was demonstrated by meeting the test limits of the following standards:

EN 61000-6-4 (2007/A1:2011)	Emission tests levels for industrial environment
EN61326-1 (2013)	EMC product standard for Electrical Equipment for Measurement, Control and Laboratory Use
IEC EN 60730-1 (2010):	Automatic electrical controls for household and similar use - Part 1: General requirements - EMC requirements
FCC part 15 Subpart B	Class A
EMC certification: ICES-001	Industrial, Scientific and Medical (ISM) Radio Frequency Generators – class A

Test number	Test name	Standard	Standard level
1	Conducted emissions	CISPR 11 : 2009 A1 (2010) FCC part 15, sub-part B : 2012	Group 1, class A Class A
2	Radiated emissions	CISPR 11 : 2009 A1 (2010) FCC part 15, sub-part B : 2012	Group 1, class A Class A

## Appendix D: Safety Characteristics and Certification

3	Harmonic current emissions	IEC61000-3-2: 2006 A1 (2009) A2 (2009)	Class A
4	Flickers limitation	IEC61000-3-3: 2008	≤4% on the main voltage supply envelope

### EMC characteristics — immunity standards

The EDGE Remote Display has been designed to meet the requirements of the EMC Directive 2014/30/EU, FCC directives, Industry Canada directives. The compliance was demonstrated by meeting the test limits of the following standards:

EN61326-1 (2013)	EMC product standard for Electrical Equipment for Measurement, Control and Laboratory Use
EN 61000-6-2 (2006):	Immunity tests levels for industrial environment
IEC EN 60730-1 (2010):	Automatic electrical controls for household and similar use - Part 1: General requirements - EMC requirements
FCC part 15 Subpart B	Class A

Test number	Test name	Standard	Standard level
5	Radiated, radio-frequency, electromagnetic field immunity test	EN61000-4-3 : 2006 A1 : 2007 A2 : 2010	Modulation: 80% AM at 1kHz, 80MHz - 1GHz: 10V/m 1.4GHz-2 GHz: 3 V/m 2GHz-2.7GHz: 1 V/m Performance: A (A)
6	Immunity to conducted disturbances, induced by radio-frequency fields	EN61000-4-6 : 2008	Frequency test range : 150KHz and 80Mhz at 10Vrms Pause time: 0,5s (AC line, Earth, I/O connections >3m) Performance A (A)
7	Electrostatic discharge immunity test	EN61000-4-2 : 2008	± 8 kV air ± 6kV contact Performance A (B)
8	Electrical fast transient/ burst immunity test	EN 61000-4-4 : 2012	±2kV/5kHz on the main voltage supply ±1kV/5kHz on the I/O >3m Performance A (B)
9	Surge immunity test	EN61000-4-5 : 2005	On the main voltage supply: L-PE : ±2kV L-L : ±1kV I/O : L-PE : ±1kV L-L : ±1kV
10	Power frequency magnetic field immunity test	EN 61000-4-8 : 2009	30 A/m, Performance A (B)
11	Voltage dips, short interruptions and voltage variations immunity tests	EN61000-4-11 : 2004	0%, 1, 1 cycle: Performance A (B) 40%, 1,10 cycles: Performance A (C) 70%, 1, 25 cycles: Performance A (C) 0%, 1, 250 cycles: Performance A (C)
12	Supply frequency variations	IEC 61000-4-28: 1999 AMD1:2001 AMD2:2009	±5% Performance A (C)
13	Harmonics and interharmonics including mains signalling at a.c. Power port, low frequency immunity tests	IEC 61000-4-13 : 2002 AMD1:2009	Test level class 2 Performance A (C)

The definitions of performance criteria are as follows:

- Performance criterion A — During test normal performance within the specification limits
- Performance criterion B — During test, temporary degradation, or loss of function or performance which is self-recovering
- Performance criterion C — During test, temporary degradation, or loss of function or performance which requires operator intervention or system reset occurs.

The performance level A may be replaced by a permissible loss of performance. Following parameters define the permissible loss of performance during immunity test. These parameters will not affect or degrade the functional performance of the product.

EDGE Remote Display element	Normal operation	Allowable loss of performance
LCD Display	No visual degradation	Maximum of 10% of total pixel not displayed correctly
Ethernet	No ping missing	No ping missing

### Environment characteristics

Parameter	Condition	Value
Environment Location	Inside only	
Operating Temperature	Operating	0 to 40 °C (32 to 104 °F)
	Storage	-20 to +50 °C (-4 to +122 °F)
Humidity (Maximum Relative) Operating	0 to 10 °C (32 to 50 °F)	Non condensing
	10 to 30 °C (50 to 86 °F)	95 % (± 3%) Non condensing
	30 to 40 °C (86 to 104 °F)	95 % (± 3%) Non condensing
	Storage	Non condensing
Altitude		2000 Meters Max. (6561 Ft. Max)
Electromagnetic Environment		EN/IEC61326-1 IEC EN 60730-1 EN 61000-6-4 EN 61000-6-2
Enclosure Protection		Nema 250 : type 12 IP : 54, ref : IEC60529
Impact rating (IK)		08

The Remote display was tested under IEC60068-1 (Environmental testing - Part 1: General and guidance)

### Environmental characteristics

The following environmental EU directives were followed:

2011/65/EU	The RoHS 2 Directive
2012/19/EU	The WEEE 2 Directive
1907/2006/EU	The REACH regulation
2006/66/EC	The Battery Directive
94/62/EC	Packaging and packaging waste Directive
97/129/EC	Packaging material identification Directive

---

# NOTES

# E EC Declaration of Conformity (In accordance with EN ISO 17050-1 2004)

**We:** GSI Electronics Inc.

**Of:** 5200, Armand-Frappier, Saint-Hubert (Québec), Canada, J3Z 1G5

**In accordance with the following directives:**

2014/35/EU The Low Voltage Directive (LVD)

2014/30/EU The Electromagnetic Compatibility Directive (EMC)

2011/65/EU The RoHS 2 Directive

2012/19/Eu The WEEE 2 Directive

2006/66/EC The Battery Directive

1907/2006/EC The REACH regulation

97/129/EC Packaging material identification directive

**Hereby declare that:**

**Equipment:** The EDGE Remote Display is used in an Edge system. The Remote Display is used in a farm system network designed to monitor and to control of a farm environment. The main functions of monitoring or controlling are: ventilation control, heating control, lighting control, animal feeding control, scale control, quality air control.

**Model numbers:**

EDGE Remote Display

**is in conformity with the applicable requirements of the following documents:**

Directive	Ref. No	Title	Edition/date
LVD	EN 61010-1	Safety requirements for electrical equipment for measurement, control, and laboratory use  Part 1: General requirements	2010
EMC	EN 61326-1	Electrical equipment for measurement, control and laboratory use - EMC requirements	2013
EMC	EN 61000-6-2	Immunity tests levels for industrial environment  EN 61000-4-2	2006  2009

		EN 61000-4-3 EN 61000-4-4 EN 61000-4-5 EN 61000-4-6 EN 61000-4-8 EN 61000-4-11	2006 A1 (2007) A2 (2010) 2012 2014 2008 2010 2004
EMC	EN 61000-6-4	Emission tests levels for industrial environment EN61000-3-2 EN61000-3-3 CISPR11 /EN 55011	2007/A1:2011 2006 +A1 (2009)+ A2 (2009) 2008 (2009)+A1 (2010)
EMC	IEC EN 60730-1	Automatic electrical controls for household and similar use - Part 1: General requirements- EMC requirements Immunity and emission part EN61000-3-2 EN61000-3-3 CISPR11 /EN 55011 EN 61000-4-2 IEC EN 61000-4-3 EN 61000-4-4 IEC EN 61000-4-5 IEC EN 61000-4-6 EN 61000-4-8 EN 61000-4-11 IEC 61000-4-28 IEC 61000-4-13	2010 2006 +A1 (2009)+ A2 (2009) 2008 (2009)+A1 (2010) 2009 2006 A1 (2007) A2 (2010) 2012 2014 2008 2010 2004 1999 AMD1:2001 AMD2:2009 2002 AMD1:2009
RoHS	EN 50581	Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances	2012

**GSI Electronic Inc. hereby declares that the equipment named above has been designed to comply with the relevant sections of the above referenced specifications. The unit complies with all applicable Essential Requirements of the Directives.**



---

# NOTES

# F Industry Canada Statement

This device complies with ICES-001 of the Industry Canada Rules. Operation of this device is subject to the following two conditions:

- This device may not cause harmful interference, and
- this device must accept any interference received, including interference that may cause undesired operation.

Ce dispositif est conforme à la norme ICES-001 d'Industrie Canada. Son fonctionnement est sujet aux deux conditions suivantes:

- le dispositif ne doit pas produire de brouillage préjudiciable, et
- ce dispositif doit accepter tout brouillage reçu, y compris un brouillage susceptible de provoquer un fonctionnement indésirable.

---

# NOTES

# **G** FCC part 15 statement

Statement regarding the importation of radio frequency devices capable of causing harmful interference

GSI Electronics Inc. develops, manufactures and distributes innovative technological products for the agricultural industry. Our unique expertise allows us to offer accurate, simple and diverse electronic, data processing and mechanical solutions for improving agricultural production.

Electronic controllers are classed as unintentional radiators (FCC 47-part 15-Subpart B). Electronic controllers are used in a production context and in an industrial context (FCC 47-part 15-Subpart B-Class A).

GSI Electronic Inc. hereby declares that the equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

---

# NOTES

# H FDA declaration

Statement regarding the importation of devices and public health hazard directives from FDA (U.S. Food and Drug Administration)

GSI Electronics Inc. develops, manufactures and distributes innovative technological products for the agricultural industry. Our unique expertise allows us to offer accurate, simple and diverse electronic, data processing and mechanical solutions for improving agricultural production.

GSI Electronics' controllers are shipping under 9032.89.60.30 Canada (Automatic Regulating or Controlling Instruments & Apparatus). Electronic controllers are used to monitor and to control animal environment in a barn: ventilation function; heating function; lightning function; alert system function. Electronic controllers can be used to control the food distribution and to scale animals.

Electronic controllers do not use radiation technologies or laser technologies. Electronic controllers use liquid crystal display (LCD) or Light-emitting diodes (LED). Electronic controllers do not use telecommunication wireless technologies. Electronic controllers are classed as unintentional radiators (FCC 47-part 15-Subpart B). Electronic controllers are used in a production context and in an industrial context (FCC 47-part 15-Subpart B-Class A). GSI Electronics devices are not used in contact with animal food. Electronic controllers do not manipulate vaccines or drugs.

It is important to note also that electronic controller incorporating Liquid Crystal Displays (LCD) or Light-emitting diodes (LED) are not capable of emitting x-radiation. As such these products are not subject to the FDA standard and do not pose a public health hazard.

---

# NOTES

# Reduction of Hazardous Substances

## REACH directive

The REACH directive addresses the production and use of chemical substances, and their potential impacts on both human health and the environment. On June 1, 2007, the European Commission promulgated new legislation that covers the registration, evaluation, authorization and restriction of chemical within the European Union community. This new regulation is commonly known as REACH, an acronym for **R**egistration, **E**valuation and **A**uthorization of **C**hemicals (EC Regulation 1907/2006).

GSI Electronics supports the underlying goals of REACH, which are consistent with our own commitment to promote the responsible manufacturing, use and handling of chemicals. GSI Electronics uses and promotes components suppliers or components manufacturers who will meet the pre-registration deadline for all chemical substances in quantities greater than one metric ton. The information provided here is accurate to the best of our knowledge at the present time.

## RoHS directive

The **R**estriction of **H**azardous **S**ubstances Directive 2002/95/EC, RoHS, Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment, was adopted in February 2003 by the European Union. The RoHS directive took effect on 1 July 2006, and is required to be enforced and become law in each member state. This directive restricts (with exceptions) the use of six hazardous materials in the manufacture of various types of electronic and electrical equipment: Lead (Pb), Mercury (Hg), Cadmium (Cd), Hexavalent chromium (Cr6+), Polybrominated biphenyls (PBB), Polybrominated diphenyl ether (PBDE). The RoHS 2 directive (2011/65/EU) is an evolution of the original directive and became law on 21 July 2011 and took effect 2 January 2013. It addresses the same substances as the original directive while improving regulatory conditions and legal clarity.

GSI Electronics hereby certifies that all components are RoHS Compliant and fulfills the definition and restrictions defined under Directive 2011/65/EU of the European Parliament and of the Council of June 8, 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment (EEE). The information provided here is accurate to the best of our knowledge at the present time.

The RoHS declaration is available, contact GSI Electronics or the European representative.

## Battery directive

The Battery Directive, Directive 2006/66/EC (Previous Directive, Directive 91/157/EEC), of the European Parliament regulates the manufacture, the disposal, the recycling of batteries and accumulators in the European Union.

GSI Electronics uses Lithium cell button in a light industrial context or industrial context. GSI Electronics encourages the batteries and accumulators recycling.

---

# NOTES

# J Disposal and Recycling Information

## North America : Canada

As the concern for the volume of electronic waste grows, a number of Provinces in Canada have passed regulations since 2006 to divert electronics waste from the landfills and to protect the environment. These waste diversion regulations require manufacturers of covered electronic devices to participate in approved electronic product stewardship programs. The programs allow consumers and businesses to drop off eligible electronic devices for recycling, free of charge at numerous depots throughout the Province.

For more detailed information about the recycling of the device or batteries, contact your local city office, the household waste disposal service, or the retail store where you purchased this device. These collection points are accessible free of charge.

## North America : United States

For more detailed information about the recycling of the device or batteries, contact your local city office, the household waste disposal service, or the retail store where you purchased this device. These collection points are accessible free of charge.

## European markets – WEEE Directive

The **Waste Electrical and Electronic Equipment Directive** (WEEE Directive) is the European directive on waste electrical and electronic equipment (Directive 2002/96/EC) which, together with the RoHS Directive 2002/95/EC, became European Law in February 2003. The WEEE Directive set collection, recycling and recovery targets for all types of electrical products. And later the WEEE Recast Directive 2012/19/EU requiring producers of electronic equipment to manage and finance the collection, reuse, recycling and appropriately treat WEEE that the producer places on the EU market after 13th August 2005.

As required by the legislation, products sold in the EU are marked with the "crossed out wheelie bin" symbol. GSI Electronics uses the symbol based on the EN 50419:2005 CENELEC standard. The bottom bar certifies the product concerned was placed on the market after 13th August 2005. Cables or components and sub-assemblies contained within the in the product will not be marked.

## Instructions for disposal of waste equipment by users

The "crossed out wheelie bin" symbol on the device (and any included batteries) indicates that they should not be disposed of as normal household garbage. Do not dispose of your device or batteries as unsorted municipal waste. The device (and any batteries) should be handed over to a certified collection point for recycling or proper disposal at the end of their life.



## Appendix J: Disposal and Recycling Information

---

For more detailed information about the recycling of the device or batteries, contact your local city office, the household waste disposal service, or the retail store where you purchased this device. These collection points are accessible free of charge. All products with this sign must be brought to these collection points.

The disposal of this device is subject to the Waste from Electrical and Electronic Equipment (WEEE) directive of the European Union. The reason for separating WEEE and batteries from other waste is to minimize the potential environmental impacts on human health of any hazardous substances that may be present.

There are two ways available to dispose of waste:

- Public system— contact your municipality or the nearest collection site to dispose of Electrical and electronic Equipment waste
- Private system— For a Return Material Authorization for Disposal of Waste Equipment, contact customer support at 1-877-926-2777 or by e-mail at [mtl\\_techsupport@agcocorp.com](mailto:mtl_techsupport@agcocorp.com)

# K Product material composition

## EDGE Remote Display

Material	Weight		Weight ratio (%)
	Lbs	Grams	
Packaging material	0,5	226,80	15,15
Plastic material	1,15	521,63	34,85
Electronic Circuits	1,6	725,75	48,48
Cable	0,1	45,36	3,03
Metal	0,3	136,08	9,09

---

# NOTES

# L Packaging characteristics

The following directives were followed during the packaging process

2011/65/EU	The RoHS 2 directive
2012/19/EU	The WEEE 2 directive
1907/2006/EU	The REACH regulation
2006/66/EC	The battery directive
94/62/EC	Packaging and packaging waste directive
97/129/EC	Packaging material identification directive

Packaging is only in cardboard to respect international standards about environment standards:

EN 13428	Packaging - Requirements specific to manufacturing and composition - Prevention by source reduction
EN 13429	Packaging - Reuse
EN 13430	Packaging - Requirements for packaging recoverable by material recycling
EN 13431	13431 Packaging - Requirements for packaging recoverable in the form of energy recovery, including specification of minimum inferior calorific value
EN 13432	Packaging - Requirements for packaging recoverable through composting and biodegradation - Test scheme and evaluation criteria for the final acceptance of packaging

Packaging was tested under ISTA 3A (Packaged Products for Parcel Delivery System Shipment weighing 150 lbs or less – is a test used for simulating courier companies shipping environments).

Shipping, packaging and Lithium battery: packaging shall be capable of withstanding a 1.2 m drop test in any orientation without damage to cells or batteries contained therein according to the International Civil Aviation Organization (ICAO), the International Air Transport Association (IATA), the International Maritime Organization (IMO) requirements.

Handling symbols on packaging: the standard is ISO R/780 (Packaging - Pictorial marking for handling of goods).

---

# NOTES

# M EDGE Power Module - Product End-of-Life Disassembly Instructions

This disassembly and recycling guidance provides general guidance for the disassembly of the referenced product to remove components and materials requiring selective treatment, as defined by EU directive 2002/96/EC and, Waste Electrical and Electronic Equipment (WEEE).

## Models and description

This document provides disassembly instructions for the product listed in the following table :

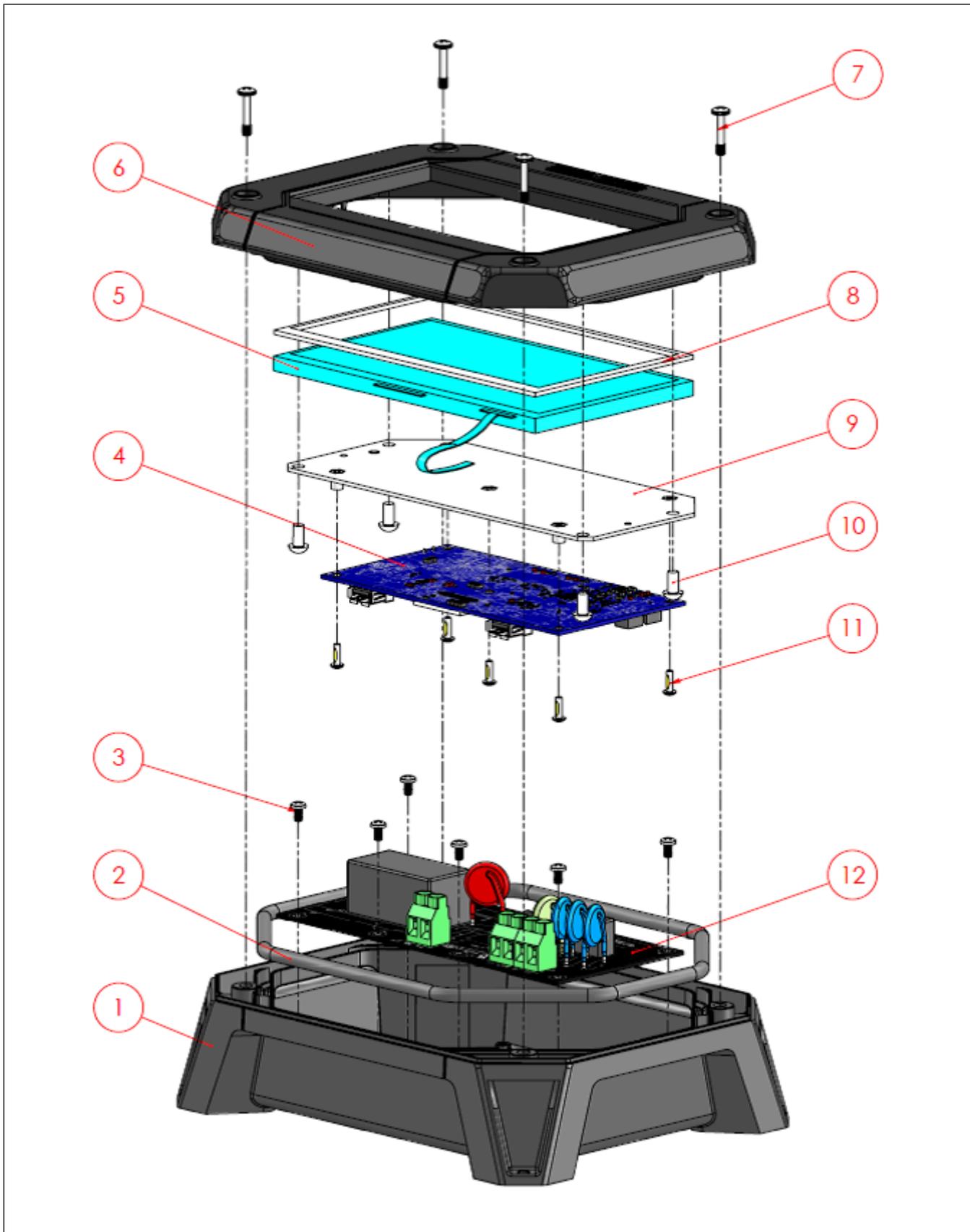
Marketing name (GSI Electronics Part number)	Description
EDGE Remote display	Auxiliary module

## Required Tools

The following table lists the type and size of the tools that would typically be used to disassemble the product to a point where components and materials requiring selective treatment can be removed.

Tool description	Tool size
Phillips screw driver	#1
Phillips screw driver	#2
Flat-head screw driver	Small
Flat-head screw driver	Large
Side cutters	—

Disassembly of EDGE Remote display



## Appendix M: EDGE Power Module - Product End-of-Life Disassembly Instructions

Item number	Description	Item number	Description
1	Enclosure Bottom	7	Screw M4-0.7, 16mm
2	Gasket	8	LCD gasket
3	Screw,#6-19	9	Metal plate
4	PCB-432	10	Screw,#10-14,3/8in
5	LCD screen	11	Screw,#4-40,1/4in
6	Enclosure cover	12	PCB-442

### Items Requiring Selective Treatment

Items in the product that are classified as requiring selective treatment are provided in the following table.

EDGE Power module			
Item Description	Notes	Qty. of Items Included in the product	Location
Printed Circuit Boards (PCB) or Printed Circuit Assemblies (PCA)	With a surface greater than 10 square cm	2	PCB-442 (item 12) PCB-432 (item 4)
Batteries	All types including standard alkaline and lithium coin or button style batteries.	none	
Mercury containing components	For example, mercury in lamps, display backlights, scanner lamps, lamps, lighting application, switches, batteries.	none	
Liquid Crystal Displays (LCD)	With a surface greater than 100 square cm and all those back-lighted with gas discharge lamps.	1	LCD screen (item 5)
Cathode Ray Tubes (CRT)		none	
Capacitors / condensers	Containing polychlorinated biphenyls PCB / polychlorinated terphenyls PCT.	none	
Electrolytic Capacitors / Condensers	Measuring greater than 2.5cm in diameter or height.	none	
External electrical cables and cords		none <sup>1</sup>	
Gas Discharge Lamps		none	
Plastics containing Brominated Flame Retardants		none <sup>2</sup>	
Components and parts containing toner and ink, including liquids, semi-liquids (gel/paste) and toner		none	
Components and waste containing asbestos		none	

## Appendix M: EDGE Power Module - Product End-of-Life Disassembly Instructions

Components, parts and materials containing refractory ceramic fibres		none	
Components, parts and materials containing radioactive substances		none	
Components, parts and materials containing chlorofluorocarbons (CFC), hydrochlorofluorocarbons (HCFC), hydrofluorocarbons (HFC), hydrocarbons (HC)		none	

12

### Product Disassembly Process

The next session lists the basic steps that you should follow to remove components for recycling and materials requiring selective treatment.

Step	Process
Remove External Electrical cables and internal Electrical cables	<ol style="list-style-type: none"> <li>1. Unscrew and remove the enclosure cover (item 6).</li> <li>2. Remove the wires from the enclosure bottom (item 1), by unscrewing terminal blocks with a small flat-head screwdriver and a large flat-head screwdriver.</li> <li>3. Remove the cable between the PCB-442 (item 12) and the PCB-432 (item 4).</li> </ol>
Remove Printed Circuits Assembly	<ol style="list-style-type: none"> <li>1. Unscrew and remove the enclosure cover (item 6).</li> <li>2. Locate PCB's 432 (item 4) and 442 (item 12).</li> <li>3. Unscrew with a Philips screwdriver #1 and remove the screws (item 3) from the PCB-442.</li> <li>4. Unscrew with a Philips screwdriver #1 and remove the screws (item 11) from the PCB-432.</li> <li>5. Remove the PCBs from the Remote Display.</li> </ol>
Remove LCD	<p>Cables are unplugged</p> <ol style="list-style-type: none"> <li>1. Unscrew and remove the enclosure cover (item 6)</li> <li>2. Unscrew and remove the metal plate (item 9) from the enclosure cover (item 6)</li> <li>3. Keep only plastic parts</li> <li>4. Recycle the plastic enclosure and the plastic parts.</li> </ol>

1. GSI Electronics does not provide the external electrical cable
2. All plastics used in this product are RoHS compliant and do not contain PBBs or PBDEs

## Appendix M: EDGE Power Module - Product End-of-Life Disassembly Instructions

Recycle plastic	<ol style="list-style-type: none"><li>1. Unscrew and remove the enclosure cover (item 6)</li><li>2. From the enclosure bottom, remove the gasket (item 2)</li><li>3. Recycle the plastic enclosure and the plastic parts</li></ol>
Recycle Metal part	<ol style="list-style-type: none"><li>1. Unscrew and remove the enclosure cover (item 6)</li><li>2. Unscrew and remove the metal plate from the enclosure cover (item 5)</li><li>3. Keep only the metal parts</li><li>4. Recycle the metal parts.</li></ol>

---

# NOTES

## GSI Group, LLC Limited Warranty

The GSI Group, LLC (“GSI”) warrants products which it manufactures to be free of defects in materials and workmanship under normal usage and conditions for a period of 12 months after sale to the original end-user or if a foreign sale, 14 months from arrival at port of discharge, whichever is earlier. The end-user’s sole remedy (and GSI’s only obligation) is to repair or replace, at GSI’s option and expense, products that in GSI’s judgment, contain a material defect in materials or workmanship. Expenses incurred by or on behalf of the end-user without prior written authorization from the GSI Warranty Group shall be the sole responsibility of the end-user.

**Warranty Extensions:** The Limited Warranty period is extended for the following products:

	<b>Product</b>	<b>Warranty Period</b>
<b>AP Fans and Flooring</b>	Performer Series Direct Drive Fan Motor	3 Years
	All Fiberglass Housings	Lifetime
	All Fiberglass Propellers	Lifetime
<b>AP/Cumberland</b>	Flex-Flo/Pan Feeding System Motors	2 Years
<b>Cumberland Feeding/Watering Systems</b>	Feeder System Pan Assemblies	5 Years **
	Feed Tubes (1-3/4" and 2.00")	10 Years *
	Centerless Augers	10 Years *
	Watering Nipples	10 Years *
<b>Grain Systems</b>	Grain Bin Structural Design	5 Years
<b>Grain Systems Farm Fans Zimmerman</b>	Portable and Tower Dryers	2 Years
	Portable and Tower Dryer Frames and Internal Infrastructure †	5 Years

\* Warranty prorated from list price:  
 0 to 3 years - no cost to end-user  
 3 to 5 years - end-user pays 25%  
 5 to 7 years - end-user pays 50%  
 7 to 10 years - end-user pays 75%

\*\* Warranty prorated from list price:  
 0 to 3 years - no cost to end-user  
 3 to 5 years - end-user pays 50%

† Motors, burner components and moving parts not included.  
 Portable dryer screens included.  
 Tower dryer screens not included.

GSI further warrants that the portable and tower dryer frame and basket, excluding all auger and auger drive components, shall be free from defects in materials for a period of time beginning on the twelfth (12<sup>th</sup>) month from the date of purchase and continuing until the sixtieth (60<sup>th</sup>) month from the date of purchase (extended warranty period). During the extended warranty period, GSI will replace the frame or basket components that prove to be defective under normal conditions of use without charge, excluding the labor, transportation, and/or shipping costs incurred in the performance of this extended warranty.

### Conditions and Limitations:

THERE ARE NO WARRANTIES THAT EXTEND BEYOND THE LIMITED WARRANTY DESCRIPTION SET FORTH ABOVE. SPECIFICALLY, GSI MAKES NO FURTHER WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE IN CONNECTION WITH: (I) PRODUCT MANUFACTURED OR SOLD BY GSI OR (II) ANY ADVICE, INSTRUCTION, RECOMMENDATION OR SUGGESTION PROVIDED BY AN AGENT, REPRESENTATIVE OR EMPLOYEE OF GSI REGARDING OR RELATED TO THE CONFIGURATION, INSTALLATION, LAYOUT, SUITABILITY FOR A PARTICULAR PURPOSE, OR DESIGN OF SUCH PRODUCTS.

GSI shall not be liable for any direct, indirect, incidental or consequential damages, including, without limitation, loss of anticipated profits or benefits. The sole and exclusive remedy is set forth in the Limited Warranty, which shall not exceed the amount paid for the product purchased. This warranty is not transferable and applies only to the original end-user. GSI shall have no obligation or responsibility for any representations or warranties made by or on behalf of any dealer, agent or distributor.

GSI assumes no responsibility for claims resulting from construction defects or unauthorized modifications to products which it manufactured. Modifications to products not specifically delineated in the manual accompanying the equipment at initial sale will void the Limited Warranty.

This Limited Warranty shall not extend to products or parts which have been damaged by negligent use, misuse, alteration, accident or which have been improperly/inadequately maintained. This Limited Warranty extends solely to products manufactured by GSI.

Prior to installation, the end-user has the responsibility to comply with federal, state and local codes which apply to the location and installation of products manufactured or sold by GSI.

9101239\_1\_CR\_rev8.xml (revised January 2014)

**This equipment shall be installed in accordance with the current installation codes and applicable regulations which should be carefully followed in all cases. Authorities having jurisdiction should be consulted before installations are made.**



1004 E. Illinois St.  
Assumption, IL 62510-0020  
Phone: 1-217-226-4421  
Fax: 1-217-226-4420  
[www.gsiag.com](http://www.gsiag.com)



AP and Cumberland are a part of GSI, a worldwide brand of AGCO Corporation.