



Replace ACE or ACE2 with ACE3

Service Bulletin

ALN180, Rev. C, 2019/06/25


**ADB
SAFEGATE**

A.0 Disclaimer / Standard Warranty

CE certification

The equipment listed as CE certified means that the product complies with the essential requirements concerning safety and hygiene. The directives that have been taken into consideration in the design are available on written request to ADB SAFEGATE.

ETL certification

The equipment listed as ETL certified means that the product complies with the essential requirements concerning safety and FAA Airfield regulations. The directives that have been taken into consideration in the design are available on written request to ADB SAFEGATE.

LED Product Guarantee

Where applicable, per FAA EB67 (applicable edition), ADB SAFEGATE L858(L) Airfield Guidance Signs are warranted against electrical defects in design or manufacture of the LED or LED specific circuitry for a period of 4 years. ADB SAFEGATE LED light fixtures (with the exception of obstruction lighting) are warranted against mechanical and physical defects in design or manufacture for a period of 12 months from date of installation; and are warranted against electrical defects in design or manufacture of the LED or LED specific circuitry for a period of 4 years per FAA EB67 (applicable edition).



Note

See your sales order contract for a complete warranty description. In some specific cases, deviations are (to be) accepted in the contract, which will supersede the standard warranty.

Standard Product Guarantee

Products of ADB SAFEGATE manufacture are guaranteed against mechanical, electrical, and physical defects (excluding lamps) which may occur during proper and normal use for a period of one year from the date of installation or 2 years from date of shipment and are guaranteed to be merchantable and fit for the ordinary purposes for which such products are made. ADB SAFEGATE L858 Airfield Guidance Signs are warranted against mechanical and physical defects in design or manufacture for a period of 2 years from date of installation per FAA AC 150/5345-44 (applicable edition).



Note

See your sales order contract for a complete warranty description.

All Products Guarantee

LED Products of ADB SAFEGATE, manufactured and sold by ADB SAFEGATE or its licensed representatives, meets the corresponding requirements of FAA, ICAO and IEC.

ADB SAFEGATE will correct by repair or replacement per the applicable guarantee above, at its option, equipment or parts which fail because of mechanical, electrical or physical defects, provided that the goods have been properly handled and stored prior to installation, properly installed and properly operated after installation, and provided further that Buyer gives ADB SAFEGATE written notice of such defects after delivery of the goods to Buyer. Refer to the Safety section for more information on Material Handling Precautions and Storage precautions that must be followed.

ADB SAFEGATE reserves the right to examine goods upon which a claim is made. Said goods must be presented in the same condition as when the defect therein was discovered. ADB SAFEGATE further reserves the right to require the return of such goods to establish any claim.

ADB SAFEGATE's obligation under this guarantee is limited to making repair or replacement within a reasonable time after receipt of such written notice and does not include any other costs such as the cost of removal of defective part, installation of repaired product, labor or consequential damages of any kind, the exclusive remedy being to require such new parts to be furnished.

ADB SAFEGATE's liability under no circumstances will exceed the contract price of goods claimed to be defective. Any returns under this guarantee are to be on a transportation charges prepaid basis. For products not manufactured by, but sold by ADB SAFEGATE, warranty is limited to that extended by the original manufacturer.

This is ADB SAFEGATE's sole guarantee and warranty with respect to the goods; there are no express warranties or warranties of fitness for any particular purpose or any implied warranties of fitness for any particular purpose or any implied warranties other than those made expressly herein. All such warranties being expressly disclaimed.

Liability



WARNING

Use of the equipment in ways other than described in the catalogue leaflet and the manual may result in personal injury, death, or property and equipment damage. Use this equipment only as described in the manual.

ADB SAFEGATE cannot be held responsible for injuries or damages resulting from non-standard, unintended uses of its equipment. The equipment is designed and intended only for the purpose described in the manual. Uses not described in the manual are considered unintended uses and may result in serious personal injury, death or property damage.

Unintended uses includes the following actions:

- Making changes to equipment that have not been recommended or described in this manual or using parts that are not genuine ADB SAFEGATE replacement parts or accessories.
- Failing to make sure that auxiliary equipment complies with approval agency requirements, local codes, and all applicable safety standards if not in contradiction with the general rules.
- Using materials or auxiliary equipment that are inappropriate or incompatible with your ADB SAFEGATE equipment.
- Allowing unskilled personnel to perform any task on or with the equipment.

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This manual could contain technical inaccuracies or typographical errors. ADB SAFEGATE BVBA reserves the right to revise this manual from time to time in the contents thereof without obligation of ADB SAFEGATE BVBA to notify any person of such revision or change. Details and values given in this manual are average values and have been compiled with care. They are not binding, however, and ADB SAFEGATE BVBA disclaims any liability for damages or detriments suffered as a result of reliance on the information given herein or the use of products, processes or equipment to which this manual refers. No warranty is made that the use of the information or of the products, processes or equipment to which this manual refers will not infringe any third party's patents or rights. The information given does not release the buyer from making their own experiments and tests

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1.0 Safety

Introduction to Safety

This section contains general safety instructions for installing and using ADB SAFEGATE equipment. Some safety instructions may not apply to the equipment in this manual. Task- and equipment-specific warnings are included in other sections of this manual where appropriate.

1.1 Safety Messages

HAZARD Icons used in the manual

For all HAZARD symbols in use, see the Safety section. All symbols must comply with ISO and ANSI standards.

Carefully read and observe all safety instructions in this manual, which alert you to safety hazards and conditions that may result in personal injury, death or property and equipment damage and are accompanied by the symbol shown below.



WARNING

Failure to observe a warning may result in personal injury, death or equipment damage.



DANGER - Risk of electrical shock or ARC FLASH

Disconnect equipment from line voltage. Failure to observe this warning may result in personal injury, death, or equipment damage. ARC Flash may cause blindness, severe burns or death.



WARNING - Wear personal protective equipment

Failure to observe may result in serious injury.



WARNING - Do not touch

Failure to observe this warning may result in personal injury, death, or equipment damage.



CAUTION

Failure to observe a caution may result in equipment damage.

Qualified Personnel



Important Information

The term **qualified personnel** is defined here as individuals who thoroughly understand the equipment and its safe operation, maintenance and repair. Qualified personnel are physically capable of performing the required tasks, familiar with all relevant safety rules and regulations and have been trained to safely install, operate, maintain and repair the equipment. It is the responsibility of the company operating this equipment to ensure that its personnel meet these requirements.

Always use required personal protective equipment (PPE) and follow safe electrical work practice.

1.1.1 Introduction to Safety



CAUTION

Unsafe Equipment Use

This equipment may contain electrostatic devices, hazardous voltages and sharp edges on components

- Read installation instructions in their entirety before starting installation.
- Become familiar with the general safety instructions in this section of the manual before installing, operating, maintaining or repairing this equipment.
- Read and carefully follow the instructions throughout this manual for performing specific tasks and working with specific equipment.
- Make this manual available to personnel installing, operating, maintaining or repairing this equipment.
- Follow all applicable safety procedures required by your company, industry standards and government or other regulatory agencies.
- Install all electrical connections to local code.
- Use only electrical wire of sufficient gauge and insulation to handle the rated current demand. All wiring must meet local codes.
- Route electrical wiring along a protected path. Make sure they will not be damaged by moving equipment.
- Protect components from damage, wear, and harsh environment conditions.
- Allow ample room for maintenance, panel accessibility, and cover removal.
- Protect equipment with safety devices as specified by applicable safety regulations
- If safety devices must be removed for installation, install them immediately after the work is completed and check them for proper functioning prior to returning power to the circuit.

Failure to follow this instruction can result in serious injury or equipment damage

Additional Reference Materials



Important Information

- IEC - International Standards and Conformity Assessment for all electrical, electronic and related technologies.
- IEC 60364 - Electrical Installations in Buildings.
- FAA Advisory: AC 150/5340-26 (current edition), chapter 45, section 4, Maintenance of Airport Visual Aid Facilities.
- Maintenance personnel must refer to the maintenance procedure described in the ICAO Airport Services Manual, Part 9.
- ANSI/NFPA 79, Electrical Standards for Metalworking Machine Tools.
- National and local electrical codes and standards.

1.1.2 Intended Use



CAUTION

Use this equipment as intended by the manufacturer

This equipment is designed to perform a specific function, do not use this equipment for other purposes

- Using this equipment in ways other than described in this manual may result in personal injury, death or property and equipment damage. Use this equipment only as described in this manual.

Failure to follow this instruction can result in serious injury or equipment damage

1.1.3 Material Handling Precautions, ESD



CAUTION

Electrostatic Sensitive Devices

This equipment may contain electrostatic devices

- Protect from electrostatic discharge.
- Electronic modules and components should be touched only when this is unavoidable e.g. soldering, replacement.
- Before touching any component of the cabinet you shall bring your body to the same potential as the cabinet by touching a conductive earthed part of the cabinet.
- Electronic modules or components must not be brought in contact with highly insulating materials such as plastic sheets, synthetic fiber clothing. They must be laid down on conductive surfaces.
- The tip of the soldering iron must be grounded.
- Electronic modules and components must be stored and transported in conductive packing.

Failure to follow this instruction can result in equipment damage

1.1.4 Material Handling Precautions, ESD



CAUTION

Electrostatic Sensitive Devices

This equipment may contain electrostatic devices

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- The tip of the soldering iron must be grounded.
- Electronic modules and components must be stored and transported in conductive packing.

Failure to follow this instruction can result in equipment damage

2.0 Replacing an ACE or ACE2 with an ACE3 Procedure

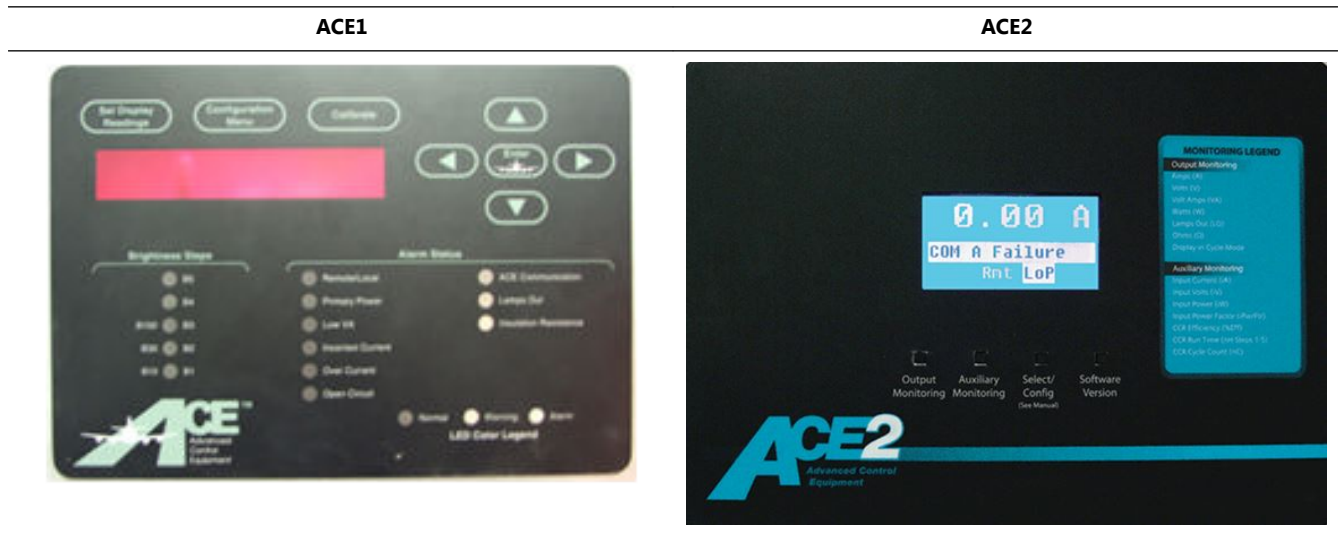
Replacing ACE1 or ACE2 with an ACE3.

Note This is not intended to convert a L-828 CCR to a L-829 or visa versa.

The ACE3 uses a microSD memory card, instead of the legacy Time-In-A-Can, for storage and transfer of CCR specific information. The Time-In-A-Can from an ACE1 or ACE2 cannot be moved to the ACE3. The CCR parameters will need to be updated on the ACE3 at time of install through the display HMI.

When changing an ACE1 / ACE2 Stand Alone CCR with an ACE3 Stand Alone CCR, follow the procedure below.

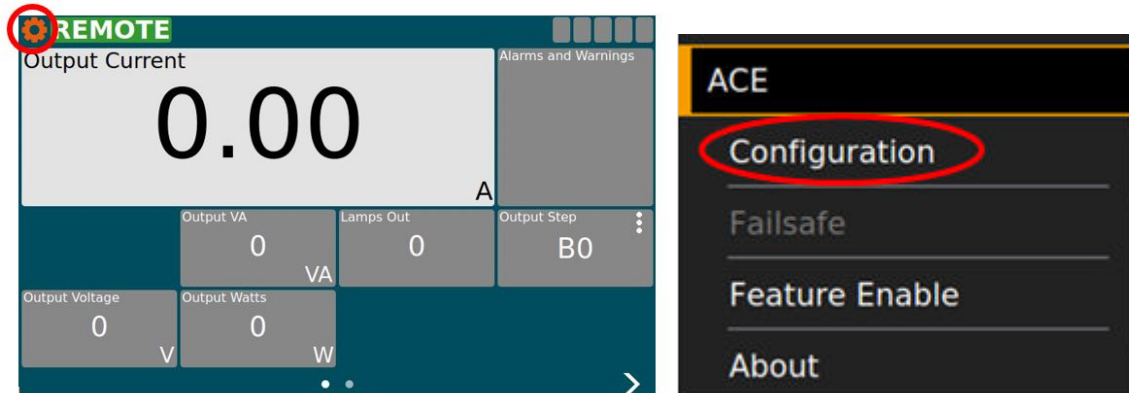
1. Determine the ACE address and baud rate of the unit being replaced. This can be accomplished by pressing either the ACE LOGO (bottom/left) button on an ACE1 (shown below) or the Software Version (far right) button on an ACE2. Typically, Com A addresses will start at 1000, ie. 1001, and Com B addresses will start at 2000, ie. 2001. The baud rate for the ACE will be displayed after each address. Record the address and baud rates in the table below.



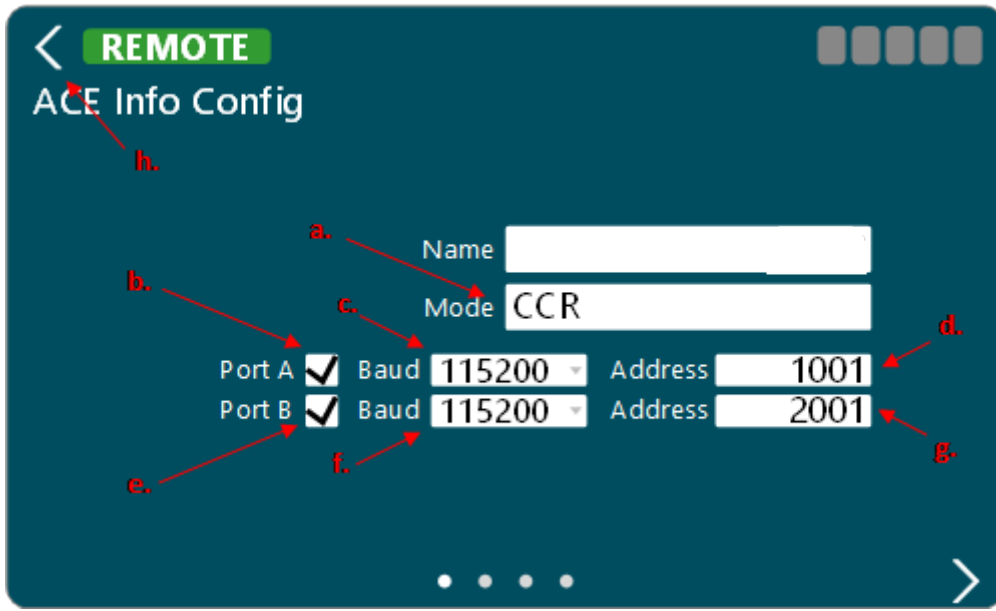
ADDRESS	BAUD RATE
COM A	
COM B	

2. Once the CCR has been installed, power up the ACE3. After the ACE3 has started up, select the icon.
3. Scroll down toward the bottom of the menu and select Configuration under the ACE section.

Figure 1: Main Screen - Menu Icon - Configuration

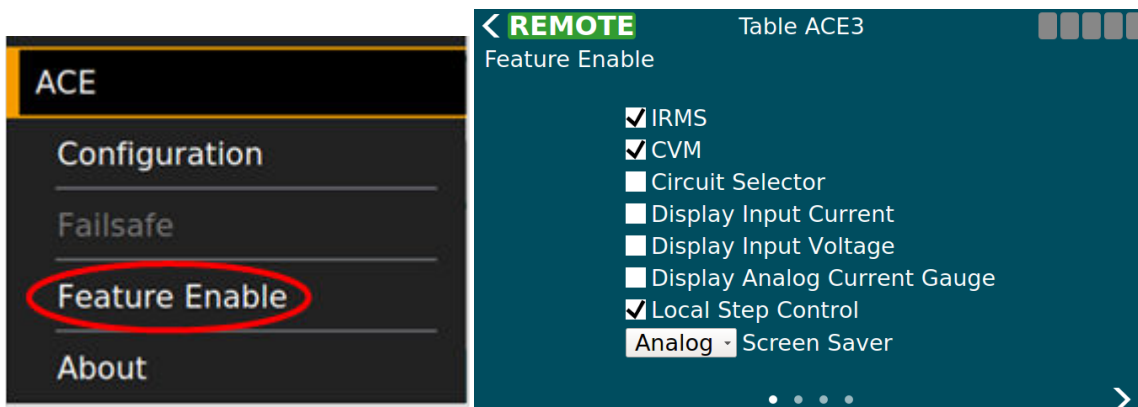


4. On the first page, make the following changes.



- a. Change *Mode* to CCR.
- b. Select box for Port A.
- c. Set Baud to COM A BAUD RATE recorded above.
- d. Set Address to COM A ADDRESS recorded above.
- e. Select box for Port B.
- f. Set Baud to COM B BAUD RATE recorded above.
- g. Set Address to COM B ADDRESS recorded above.
- h. Select the back arrow to return to the main screen.

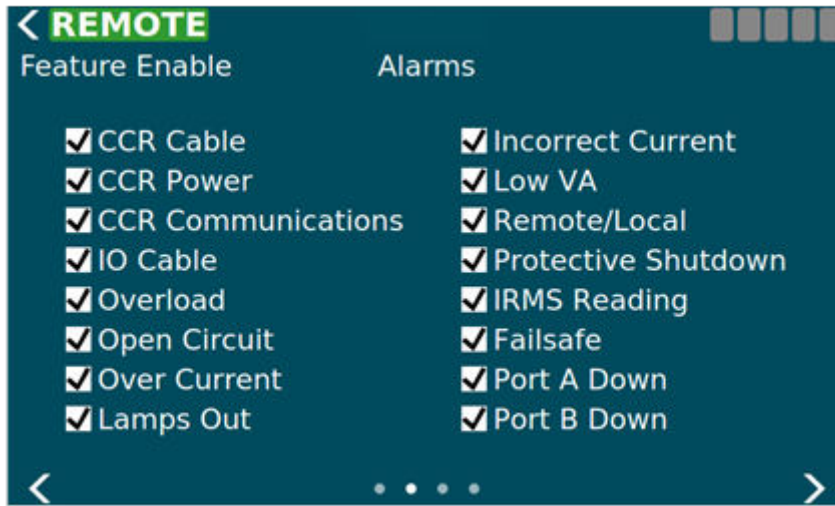
5. Select the  icon and select Feature Enable under the ACE section.



Note

Ensure if using IRMS and/or CVM, the appropriate boxes are checked.

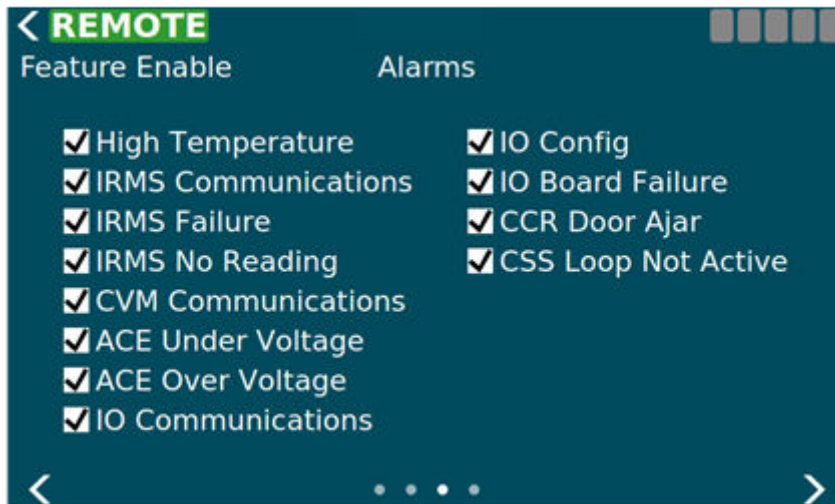
- Proceed to the second page by selecting the "right-arrow" button at the bottom-right corner of the display and de-select any Alarms that you do not want to be reported.



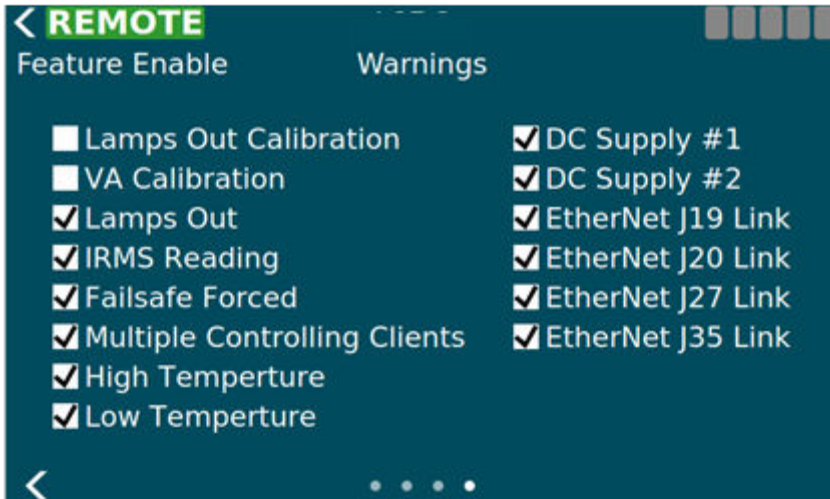
Note

The white indicator on the bottom center of the page, indicates which page you are on (example page 2 shown).

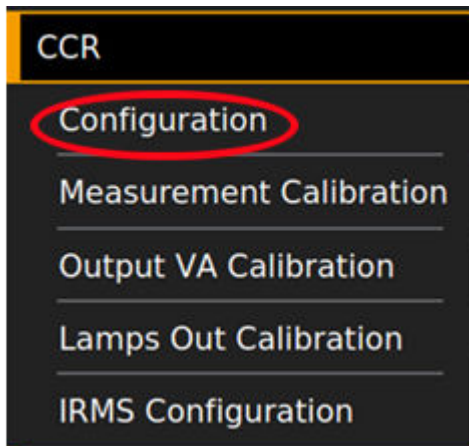
- Proceed to the 3rd page and de-select any Alarms that you don't want to be reported.



8. Proceed to the 4th page and de-select any Warnings that you don't want to be reported.

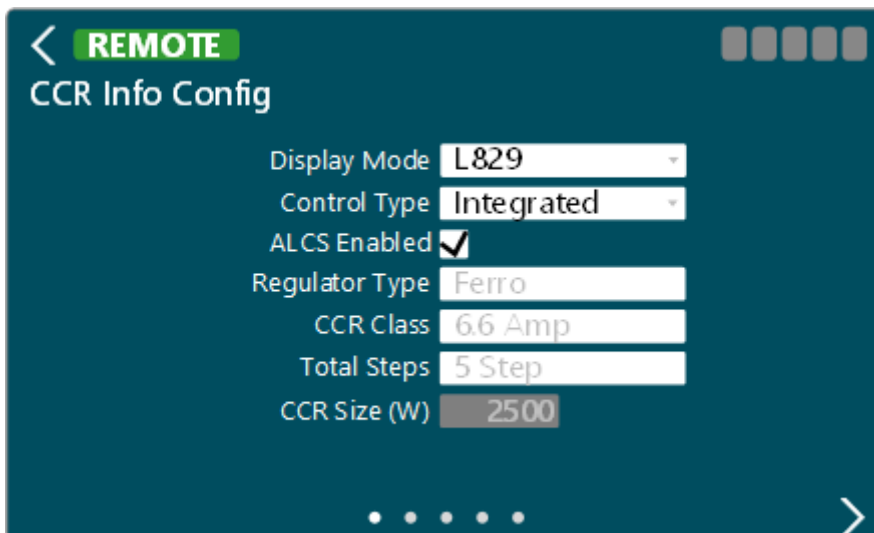


9. Return to the main screen  and select the  icon. Select Configuration under the CCR section



10. If connecting to an ALCS, make sure the ALCS Enable checkbox is selected on 1st page as shown below.

- a) Select "L-829" from the Display Mode drop-down.
- b) Select "Integrated" from the Control Type drop-down.



i Note
 Display Mode:
 L828 will show only the analog meter screen
 L829 shows all available screens

i Note
 Control Type:
 Normal is used for the Combo Box
 Integrated is used in integrated CCRs
 IO is used for IO ACE units

i Note
 ALCS checked if connected to an ALCS

Table 1: Troubleshooting

Problem	Possible cause	Corrective action
ACE3 does not connect to one or more COM PORTS	Port not set as active	Under "ACE - Configuration", verify the checkbox next to either Port A or Port B is checked
	Baud rate does not match ACE being replaced	Under "ACE - Configuration", select the correct baud rate from the drop down list that matches the ACE being replaced
	Under "ACE - Configuration", select the correct baud rate from the drop down list that matches the ACE being replaced	Under "ACE - Configuration", verify the address for both ports match the ACE being replaced
	Loose wire	Identify and correct loose wire
ACE3 does not control the CCR	CCR control type is incorrect	If the ACE3 is integrated into the CCR, under "CCR - Configuration", the Control Type should be set to Integrated
		If the ACE3 is a wall mounted Combo Box, under "CCR - Configuration", the Control Type should be set to Normal

Appendix A: SUPPORT

Our experienced engineers are available for support and service at all times, 24 hour/7 days a week. They are part of a dynamic organization making sure the entire ADB SAFEGATE is committed to minimal disturbance for airport operations.

Table 2: ADB SAFEGATE Support

Live Technical Support - Americas

If at any time you have a question or concern about your product, just contact ADB SAFEGATE's technical service department. Trained in all areas of system issues, troubleshooting, quality control and technical assistance, our highly experienced Technical support specialists are available 24 hours a day, seven days a week to provide assistance over the phone.

ADB SAFEGATE Americas Technical Service & Support (US & Canada): +1-800-545-4157

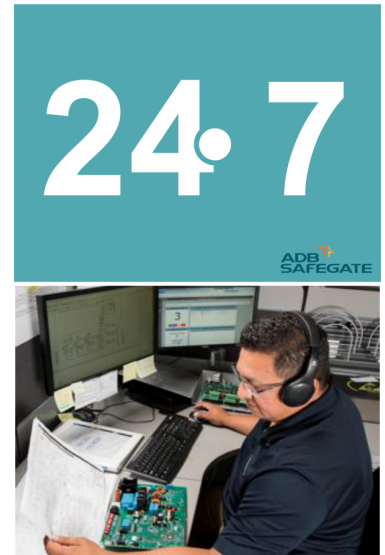
ADB SAFEGATE Americas Technical Service & Support (International): +1-614-861-1304

During regular business hours, you can also Chat with a Service Technician. We look forward to working with you!

Before You Call

When you have an airfield lighting or system control system problem it is our goal to support airfield maintenance staff as quickly as possible. To support this effort we ask that you have the following information ready before calling.

- The airport code
- If not with an airport, then company name (prefer customer id number)
- Contact phone number and email address
- Product with part number preferable or product number
- Have you reviewed the product's manual and troubleshooting guide
- Do you have a True RMS meter available (and any other necessary tools)
- Be located with the product ready to troubleshoot



Note

For more information, see www.adbsafegate.com, or contact ADB SAFEGATE Support via email at support@adbsafegate.com or

Brussels: +32 2 722 17 11

Rest of Europe: +46 (0) 40 699 17 40

Americas: +1 614 861 1304. Press 3 for technical service or press 4 for sales support.

China: +86 (10) 8476 0106

A.1 ADB SAFEGATE website

The ADB SAFEGATE website, www.adbsafegate.com, offers information regarding our airport solutions, products, company, news, links, downloads, references, contacts and more.

A.2 Recycling

A.2.1 Local authority recycling

The disposal of ADB SAFEGATE products is to be made at an applicable collection point for the recycling of electrical and electronic equipment. The correct disposal of equipment prevents any potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling. The recycling of materials helps to conserve natural resources. For more detailed information about recycling of products, contact your local authority city office.

A.2.2 ADB SAFEGATE recycling

ADB SAFEGATE is fully committed to environmentally-conscious manufacturing with strict monitoring of our own processes as well as supplier components and sub-contractor operations. ADB SAFEGATE offers a recycling program for our products to all customers worldwide, whether or not the products were sold within the EU.

ADB SAFEGATE products and/or specific electrical and electronic component parts which are fully removed/separated from any customer equipment and returned will be accepted for our recycling program.

All items returned must be clearly labelled as follows:

- **For ROHS/WEEE Recycling**
- Sender contact information (Name, Business Address, Phone number).
- Main Unit Serial Number.

ADB SAFEGATE will continue to monitor and update according for any future requirements for EU directives as and when EU member states implement new regulations and or amendments. It is our aim to maintain our compliance plan and assist our customers.

Company Addresses

<p>ADB SAFEGATE</p>	<p>ADB SAFEGATE, Belgium Address: Leuvensesteenweg 585, B-1930 Zaventem Belgium</p>
<p>Contact: Tel.: +32 2 722 17 11, Fax: +32 2 722 17 64</p>	<p>Email: marketing@adbsafegate.com Internet: www.adbsafegate.com</p>
<p>ADB SAFEGATE Americas LLC</p>	<p>ADB SAFEGATE, Americas Address: 977 Gahanna Parkway, Columbus, OH 43230 USA</p>
<p>Contact: Tel.: +1 (614) 861 1304, Fax: +1 (614) 864 2069</p>	<p>Email: sales.us@adbsafegate.com Internet: www.adbsafegate.com</p>
<p>ADB SAFEGATE Sweden AB</p>	<p>ADB SAFEGATE, Sweden Address: Djurhagegatan 19 SE-213 76 Malmö Sweden</p>
<p>Contact: Tel.: +46 (0)40 699 17 00, Fax: +46 (0)40 699 17 30</p>	<p>Email: marketing@adbsafegate.com Internet: www.adbsafegate.com</p>
<p>ADB SAFEGATE Airfield Technologies Ltd. China</p>	<p>ADB SAFEGATE, China Address: Unit 603, D Block, CAMIC International Convention Center, No 3, Hua Jia Di East road, ChaoYang district, Beijing 100102 P.R. China</p>
<p>Contact: Tel.: +86 (10) 8476 0106, Fax: +86 (10) 8476 0090</p>	<p>Email: china@safegate.com Internet: www.adbsafegate.com</p>
<p>ADB SAFEGATE Germany GmbH</p>	<p>ADB SAFEGATE Germany GmbH, Mannheim Address: Konrad-Zuse-Ring 6, D-68163 Mannheim Germany</p>
<p>Contact: Tel.: +49 (621) 87 55 76-0, Fax: +49 (621) 87 55 76-55</p>	<p>Email: marketing@adbsafegate.com Internet: www.adbsafegate.com</p>



Powering Your Airport Performance from Approach to Departure

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