GE Industrial Systems

AC Line Snubber Board IS200ALSAGA__

Safety Symbol Legend

Warning

Indicates a procedure or condition that, if not strictly observed, could result in personal injury or death.

Caution

Indicates a procedure or condition that, if not strictly observed, could result in damage to or destruction of equipment.

Note Indicates an essential or important procedure or statement.

These instructions do not purport to cover all details or variations in equipment, nor to provide every possible contingency to be met during installation, operation, and maintenance. If further information is desired or if particular problems arise that are not covered sufficiently for the purchaser's purpose, the matter should be referred to GE Industrial Systems.

Section **Page**

Functional Description

The IS200ALSA AC Line Snubber Board (ALSA) is a wye connected, resistor/capacitor snubber connected on the ac input to the source bridge. It is located in the external reactor assembly, which connects between the input power transformer and the bridge of a regerative source.

Caution

The ALSA snubber board must not be connected on the drive side of the reactor. Doing so may cause it to catch on fire.

The ALSA board reduces the rise time of the pulse width module (PWM) square wave (noise). It is limited by its power dissipation/current carrying capabilities.

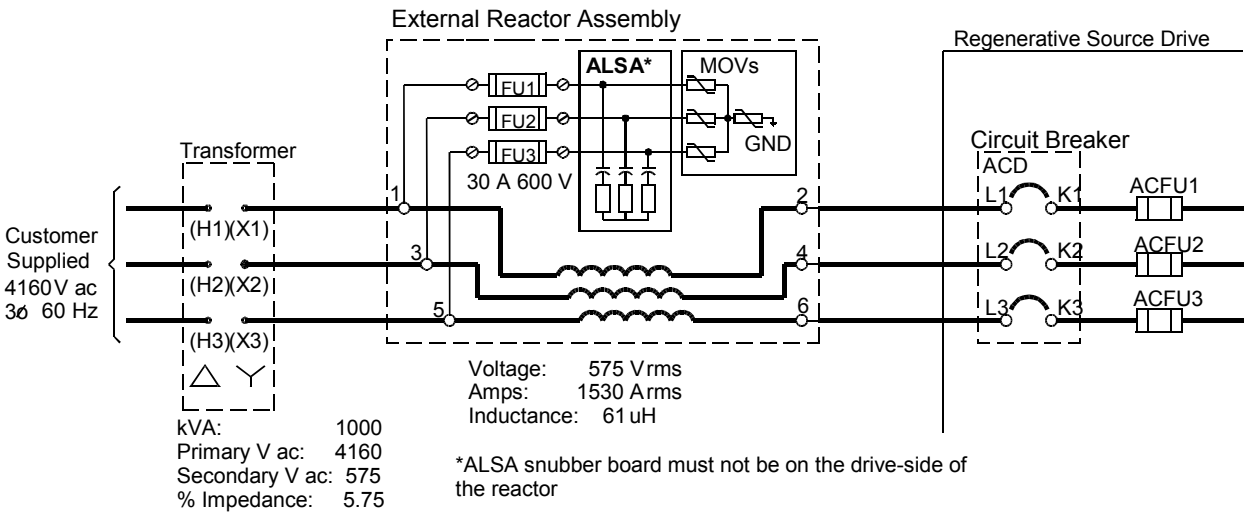


Figure 1. ALSA Connected within Reactor Assembly

Application Data

Caution

To ensure that the temperature of the ALSA board stays below 100 °C, input should not exceed 25 W per phase in a 50 °C ambient or 50 W per phase in a 25° C ambient when convection cooled. Higher wattage ratings may be obtained with forced air cooling.

Regenerative Source Bridge Application Specifications

Power System

- Line voltage up to 575 V ac rms (+10%)
- Line impedance is less than or equal to the source bridge line inductor and is less than or equal to the impedance of a transformer with a short circuit current rating up to 100 kA at the appropriate line voltage.

Bridge

- PMW swiching frequency up to 6 kHz
- DC bus voltage up to 900 V

The ALSA board has four pairs of stab-on connectors for line inputs (see Table 1 and Figure 2). There are no fuses, testpoints, or LED indicators on the board.

Caution

To prevent possible damage to the drive bridge, be certain reactor lines are connected correctly, per the source elementary sheet.

Table 1. I/O Description

Pin	Name	Description
E1-E2	L1	Line 1 input connection
E3-E4	L2	Line 2 input connection
E5-E6	L3	Line 3 input connection
E7-E8	N	Neutral connection

Figure 2. ASLA Board Layout Diagram

Renewal/Warranty Replacement

How to Order a Board

When ordering a replacement board for a GE drive, you need to know:

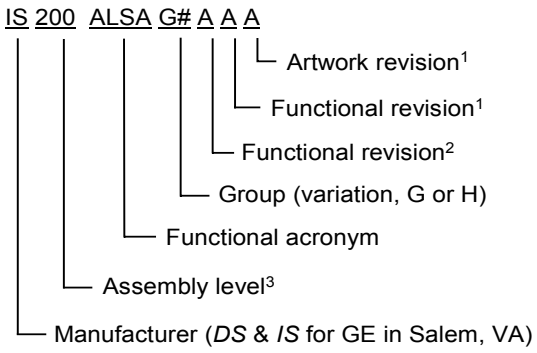
- How to accurately identify the part
- If the part is under warranty
- How to place the order

This information helps ensure that GE can process the order accurately and as soon as possible.

Board Identification

A printed wiring board is identified by an alphanumeric **part (catalog) number** located near its edge. Figure 3 explains the structure of the part number.

The board's functional acronym is normally based on the **board description**, or name. For example, the ALSA board is described as the AC Line Snubber Board.



[1]Backward compatible
[2]Not backward compatible
[3]*200* indicates a base-level board; *215* indicates a higher-level assembly or added components (such as PROM)

Figure 3. Board Part Number Conventions

Warranty Terms

The GE *Terms and Conditions* brochure details product warranty information, including **warranty period** and **parts and service coverage**. The brochure is included with customer documentation. It may be obtained separately from the nearest GE Sales Office or authorized GE Sales Representative.

Placing the Order

Parts still under **warranty** may be obtained directly from the factory:

GE Industrial Systems
Product Service Engineering
1501 Roanoke Blvd.
Salem, VA 24153-6492 USA
Phone: + 1 540 387 7595
Fax: + 1 540 387 8606

("+" *indicates the international access code required when calling from outside of the USA*.)

Renewals (spares or those not under warranty) should be ordered by contacting the nearest GE Sales or Service Office. Be sure to include:

- Complete part number and description
- Drive serial number
- Drive Material List (ML) number

Note All digits are important when ordering or replacing any board.The factory may substitute later versions of boards based on availability and design enhancements. However, GE Industrial Systems ensures backward compatibility of replacement boards.

Handling Precautions

To prevent component damage caused by static electricity, treat all boards with static sensitive handling techniques. Wear a wrist grounding strap when handling boards or components, but only after boards or components have been removed from potentially energized equipment and are at a normally grounded workstation.

Printed wiring boards may contain static-sensitive components. Therefore, GE ships all replacement boards in antistatic bags.

Use the following guidelines when handling boards:

- Store boards in antistatic bags or boxes.
- Use a grounding strap when handling boards or board components (per previous *Caution* criteria).

Replacement Procedures

Bridge cabinet doors should not be opened when drive power is ON. To prevent electric shock, turn off power to the board, then test to verify that no power exists in the board before touching it or any connected circuits.

To prevent equipment damage, do not remove, insert, or adjust board connections while power is applied to the equipment.

➢ **To replace an ALSA board**

1. Make sure the drive that the board is in has been de-energized and follow all local safety practices of Lock-Out/Tag-Out.
2. Open the bridge cabinet doors and, using equipment designed for high voltages, test any electrical circuits **before touching them** to ensure that power is OFF and has dissipated.
3. Cut and remove any wire ties that secure wires to the holes located at the corners of the board.
4. Remove the two screws that secure the ALSA board to the plastic mounting bracket.

Avoid dropping mounting hardware into the unit, which could cause damage.

1. Remove the old ALSA board from the mounting bracket.

2. Orient the new ALSA board in the same position as the one removed, install it to the mounting bracket:
   - Secure the new ALSA board to the mounting bracket with the two screws removed in step 4 and tightened them.
   - Resecure any wires that were cut loose from the board's corner holes in step 3 with new wire ties.
3. Close the bridge cabinet doors

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