



TECHNICAL BULLETIN

➤ *Recommend Earliest Possible Action* ◀

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Reference # 147 (REVISION 2)
Route to Modernization Managers/Service Managers
From MCE Application Support Engineering Department
Date March 1, 2023
Pages 2

Subject **AC Drive Fusing**

Equipment All 2022 controllers with an AC Drive.

Description It has been brought to MCE's attention that some installations do not have properly sized mainline disconnect fuses. Proper sizing of mainline disconnect fuses is essential in order to protect elevator control equipment downstream. Proper sizing of the main line disconnect fuses becomes even more critical when an Isolation Transformer is being used in conjunction with the elevator controller. When an Isolation Transformer is used, it provides additional impedance, which limits the available short circuit current due to a fault, which leads to the failure of the oversized fuses from opening and interrupting the fault current.

MCE does not provide any recommendation on the sizing of mainline disconnect fuses. However, MCE does provide the Full Load Amps (FLA) for the controller. It is the responsibility of the elevator contractor or electrical contractor to size the main line disconnect fuses based on the FLA provided by MCE.

Additionally, MCE is advising the use of High-Speed Class J secondary fuses inside all AC Drive traction controls. The secondary fuses are located inside the elevator controller and wired between the Mainline and the drive or the secondary of the Isolation Transformer and the drive.

Action

Elevator Contractor:

- Verify that the NEC and other locally applicable codes were followed when mainline disconnect fuses were sized.
- If an Isolation Transformer is being used, ensure that the mainline disconnect fuses are sized based on the KVA of the Isolation Transformer.
- Verify that the secondary fuse classification is High-Speed Class J. The sizing of the secondary fuses will be based on the actual motor

FLA and the closest available High-Speed Class J fuse size. Please contact MCE if you have questions about proper secondary fusing.

Action Item by MCE:

- MCE will review all drive replacement and modification orders for proper fusing. Where needed, MCE will add updated fuses to the quote on a separate line.

MCE Help

As always, should you require any additional technical assistance on this or any other issue:

- **Email: techsupport@nidec-mce.com**
- **Refer to the reference number above and put “AC fuses” in the subject line.**