

PRODUCT SAFETY ALERT

2090-UCSR-A300, 1398-SR3AF, Active Shunt Module, Series B

Ref: ACIG 2007-11-001

Date: November, 2007

Dear Rockwell Automation Customer,

The purpose of this Product Safety Alert is to inform you of a potential safety issue that exists with:

- **2090-UCSR-A300, 1398-SR3AF, Active Shunt Module, Series B**

This Alert explains the potential safety issue and the steps being taken to rectify the situation.

- Issue Description -

With the **2090-UCSR-A300, 1398-SR3AF, Active Shunt Module, Series B**, hereafter referred to as Ultra Shunt Module, the following potential safety issue exists:

Safety Issue – Overheating of the shunt resistor

- An anomaly has been experienced by a limited number of customers due to unpredictable operation on some applications. The anomaly is characterized by the internal device controlling current flow through the shunt resistor turning on indefinitely, exposing the shunt resistor to current flow greater than its rated capacity. As a result of the increased current, the temperature of the shunt resistor may increase to a level outside of the shunt module rated performance. Misapplication by the customer has been dismissed as a root cause. It has been determined that the cause of failure in these cases is the level of the shunt turn-on point, set during final functional test at product manufacture. Due to complaints from the field of drive over-voltage faults due to the set point being too high out of the box, the Final Test procedure was changed to set the potentiometer at a minimum level after testing at high line. The result of this change is that the shunt IGBT begins conducting as soon as DC Bus power is applied to the shunt during the commissioning process. This is because the Turn-on set point is lower than the nominal DC bus voltage. If this condition goes unrecognized, after approximately 30 seconds, the shunt resistor begins to overheat. Existing applications might experience the same functional problem if the potentiometer was adjusted at a minimum level.
- Avoidance of Hazard

!!!Warning!!!
To avoid product damage, the Series B Active shunt must be configured with the Adjust potentiometer such that the ACTIVE LED indicator is OFF when connected to a disabled servo drive.



- **If the anomaly occurs, the resulting current flow can raise the temperature of the shunt resistor to levels in excess of the manufacturer’s operating range, which can increase the ambient temperature around the shunt module beyond acceptable specified levels. This temperature may cause flammable material to ignite when in close proximity.**

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- Temporary Workarounds -

There are no temporary workarounds for this issue.

- Product Identification -

Product **affected** by this Product Safety Alert includes 2090-UCSR-A300 and 1398-SR3AF Shunt modules with the following series revision:

- Series B
- All products from date range February 15, 2006 until June 21, 2007 are affected by this anomaly.



**2090-USCR-A300 and
1398 SR3AF**

**Date Range
February 15, 2006
until June 21, 2007**

Series B

*The manufacturing date code is found on the product data label located on the side of the Shunt Module, and on the original shipping carton label.

- Issue Correction –

Install an updated shunt module, designated 2090-UCSR-A300 series C and 1398-SR3AF series C. The series C active shunt will be available in October 2007. These modules are drop-in replacements for the series A and B active shunt modules. Please contact your local Rockwell Automation representative for availability and details.

The potential safety issue described above has been **corrected** in the following versions of the Ultra Shunt Module:

- **2090-UCSR-A300, Active Shunt Module, Series C**
- **1398-SR3AF, Active Shunt Module, Series C**
- Immediately review the shunt module installation ensuring no flammable products that can burn with a potential increase of temperature (papers, plastic, etc), are in the vicinity of the shunt module, and all recommended spacing recommendations have been followed.
- As soon as possible install an updated shunt module, designated by series C. The new Series C shunt module is scheduled for shipment in October 2007. The series C active shunt modules are drop-in replacements for the currently installed module.
- If you have questions concerning the steps to replace your active shunt module or need to discuss another solution, call Rockwell Automation Technical Support (952) 914-3990 or email your request to RAEPTechSupport@ra.rockwell.com. They will be able to analyze the customer application and recommend the most appropriate action.

PRODUCT SAFETY ALERT**- Requested Customer Action -**

Each notified customer should take the following actions:

- Confirm that they have the affected products.
- Immediately contact their local Rockwell Automation Sales and Support office to determine the appropriate course of action. Together, the local office and customer will determine the correction for their situation.

If customers require any further technical assistance, they should contact Rockwell Automation Technical Support **(952) 914-3990** or their local Rockwell Automation Sales and Support office.

We appreciate your immediate cooperation in this matter. If you have any questions, please contact us.

Sincerely,

Marcio Donnangelo
Product Marketing Manager
Rockwell Automation - Kinetix Motion Control
Tel. +1 952 942-3780
Fax. +1 952 914-3984