

<b>ABB</b>	<b>Technical Note</b>		DOCTNACS60019	
	<b>RFI filter B84143-A600-S9 (10025451)</b>			
	Issued by	Date	Language	Revision
ABB Oy, Product Support	17.12.2009	en	B	1 (2)
Creator name	Ari Niskanen	Distribution	Public	

**PLEASE READ THIS NOTE CAREFULLY, CORRECTIVE ACTIONS MAY BE NEEDED IN ORDER TO AVOID PERSONAL INJURIES!**

**Where used:**

An RFI filter is used at the input of SAMI STAR and ACS 600 frequency converters to fulfill the requirements to limit conducted emissions. The filter contains chokes and capacitors. The capacitors are connected between the phases and virtual star point and also between star point and ground.

This RFI filter has been used as an optional component in SAMI STAR 200F380 - 400F380, SAMI STAR 250F500 - 500F500, SAMI STAR 200F690 - 630F690 and in certain ACS600 frequency converters (ACS607-0210-3 - ACS607-0610-6).

**Problem description:**

It has been detected problems with installations that use the **RFI FILTER B84143-A600-S9 (10025451)** manufactured between 1996 and 2000. These failures have their origin by combination of external technical facts. As harmful effect a defected filter capacitor can cause deformation to the RFI filter. In the worst case the RFI filter can explode as there are no safety vents to release the pressure in a controlled way.

**THIS MAY LEAD TO PERSONAL INJURIES!**



*Picture1. Heavy deformation of RFI filter*

**Corrective action:**

1. If during visual inspection the filter is found to be deformed by internal pressures, it is strongly advised to remove the RFI filter immediately.

Note: A temporary solution is to run the system without RFI filter.

Running the frequency converter without an RFI filter is not harmful to the frequency converter.

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## 2. Create a plan to replace the existing filter with new type of Epcos RFI filter

The root cause of harmful external technical facts is strongly advised to clarify by measurements before installation the new RFI filter.

Note1: The network needs to fulfil the requirements of the specification of the new RFI filter.

Note2: The new Epcos RFI filter is smaller and the exact type of the filter must be checked case by case. Replacement cannot be done without mechanical engineering.