Arm type ATC noise problem - quencharc

This documentation describes the possible causes and the solutions for arm type ATC failures in the field. The most common error messages are:

9018 ARM HOME/CLAMP NO STOP
9022 ARM HOME/CLAMP NO STOP
9027 ARM HOME/CLAMP NO STOP

There are two possible causes:

1) Electrical noise generated by carousel or arm brake motors is causing arm sensors to have false trips that are long enough for the PLC to react and output failure messages.
2) These errors can also be caused by swing arm position drum misalignment. This subject is described in TB207

Adding quencharc (Arc suppressor snubber network)

Electrical noise can be suppressed by adding a quencharc (figure 1) on the carousel and swing arm motor. Brake circuits on these motors are using two legs of the incoming 3 phases. A technician can add a quencharc across the two phases that the brake circuit uses, see figure 2, 3, 4, and 5.

Figure 1, Pakron quencharc suppressor.

Figure 2, Connection diagram for carousel / arm motor
Figure 3, Overview of swing arm and carousel motor

Figure 4, Swing arm motor

Figure 5, Carousel motor