
How do I use Temperature / Carbon Deviation Alarms in a recipe?

Please review the following sample recipe with temperature and carbon deviation alarms.

BATCH PROGRAM 030 SAMPLE CARBON CYCLE

H	1652	SET TEMP TO 1652
L	00:05	LIMIT 5 MIN TO GET TO TEMP
C	0090	SET CARBON TO .90
L	00:05	LIMIT 5 MIN TO GET TO %C
G	0035	SET TEMP & CARB DEV ALARMS
S	02:45	SOAK 2 HOUR 45 MIN
G	0037	TURN OFF CARB & TEMP ALARM

BATCH PROGRAM 035 SUBROUTINE TO TURN ON DEV ALARMS

A	0081	TURN ON TEMP DEV
L	00:05	5 DEG BAND
A	0083	TURN ON CARB DEV
L	00:20	20% CARB BAND

BATCH PROGRAM 037 SUBROUTINE TO TURN ON DEV ALARMS

A	0080	TURN OFF TEMP DEV ALARM
A	0082	TURN OFF CARB DEV ALARM

In the main program (30) there is a limit statement following the temperature (H opcode) and the carbon (C opcode) setpoint statements. These limit times can be adjusted for the typical times it takes your furnace to get to setpoint. This makes sure that each process setpoint is achieved before the soak starts. It also allows the soak to start as soon as the process had reached setpoint. This saves time by starting the soak when the furnace is ready.

The temperature deviation alarm has a delay of 1 minute before it will go active if the temperature is out of band. The carbon deviation alarm will go active immediately if the carbon level exceeds the carbon band.

The subroutine program (35) sets the temperature band and carbon band for the individual deviation alarms for temperature and carbon.

Subroutine program (37) turns off the temperature and carbon deviation alarms.