

## This iVAC Pro Switch S11515 has Software MRT Rev 4.1

### High Power Dust Collectors Minimum Run Time.

PN 10873-0000 15 Oct 2014

When a dust collector is initially powered up, there is a heavy surge current to the motor that can typically be up to six times higher than the normal running current. This surge current can last for several seconds and is a function of the size of the motor and also the configuration of the ducting connected to the dust collector. As a result, there is significantly more power dissipated into the motor during those few seconds. As an example, if the surge current is six times higher than the normal running current, then the power generated in the motor is thirty six times higher. Power is proportional to the square of the current ratio.

This increase in power can cause damage to the motor windings or in some cases the start up capacitor. In order to reduce the risk of damage to the motor, the manufacturer recommends that the number of times a motor is started in a period of time is kept within a limit. This means that if the motor runs under normal conditions for a given period it will cool itself down to a normal running temperature. This mainly applies to dust collectors of 3HP and higher. As an example manufacturers of a 7 HP machine recommend that the dust collector runs for a minimum of eight minutes.

In the event that a high power dust collector is being controlled from an iVAC Pro System, then an iVAC Contactor will be used. In turn, the iVAC Contactor will be controlled by an iVAC Pro Switch S11515NA.

In order to accommodate the extended Minimum Run Time, BCTINT iVAC has optional software (MRT Rev 4) that will provide the following Minimum Run Time and Turn Off Time which can be set on the program switch of the iVAC Pro Switch S11515NA.

Minimum Run Time	Turn Off Time	S5	S6
5 Seconds	5 Seconds	Off	Off
1 Minute	1 Minute	On	Off
3 Minutes	1 Minute	Off	On
7 Minutes	1 Minute	On	On

If we assume that the Minimum Run Time is set to 7 minutes then the following sequences will take place.

- 1 If the power tool runs for 3 minutes and then turns off, the dust collector will run for a further 4 minutes of Minimum Run Time and then one more minute of Turn Off Time.
- 2 If the power tool runs for 10 minutes and then turns off, it has already met the Minimum Run Time requirement and it will run for 1 more minute to clear the debris from the ducting.

When ordering an iVAC Contactor, BCTINT iVAC will ask if the Minimum Run Time variant is required in the iVAC Pro Switch S11515NA.



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