

Might electronic starters cause breakers to trip?

If a lamp has a running current of X, the current drawn by the same lamp in its preheat (starting) mode is always greater than X. . . . normally 1.3 to 1.5 times X.

So, if a 30 lamp bed has a running current of 1 amp per lamp, the operating current of the bed will be 30 x 1 amp or about 30 amps.

When this bed is equipped with glo-bottle starters (old technology), starting of the lamps is a very random event that occurs over a time period that might be as long as 4 to 6 seconds. This means that the bed rarely sees anything close to 30 x 1.5 (45 amps) inrush during starting. . . but on rare occasions it may! For a bed equipped with a fast acting (magnetic) breaker, this might cause the breaker serving the bed to trip. This is an infrequent condition - but it does happen.

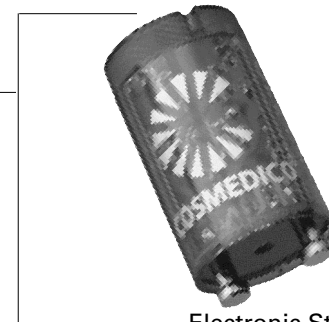
If this same bed were equipped with electronic starters (new technology), all preheat contacts are closed immediately upon start-up for a period of about 1 second. This means that for about 1 second, there would usually be a current inrush of +/- 45 amps. This bed, when equipped with electronic starters, is much more likely to trip a fast acting breaker.

Thus, if the bed is equipped with or served by fast acting, magnetic breakers, *these breakers must be carefully sized to consider the sizeable momentary inrush.*

On the other hand, thermal breakers can be sized to be much closer to the full load running current of the circuit. A thermal breaker needs time to heat and react, by which time the momentary inrush will have come and gone.



Glo-Bottle Starter



Electronic Starter

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