

SVX/SPX Internal Watts Loss

Application Summary

The internal cabinet heat dissipation of Eaton's SVX/SPX VFD when using the factory standard flange kit in a Nema 1, Nema 12, or Nema 3R enclosure is typically dependent on two factors. These include the control module and the power module. The radiant transferable heat from the external heat sink and IGBT's is considered negligible since it is factored into the power module loss.

The heat dissipation components are generally assumed as the following. The control module contributes approximately 5 Watts or less into the cabinet. The majority of the power module is mounted outside the cabinet when using the flange kit. This includes the entire heat sink and all the IGBT's being mounted external to the cabinet. With that being said it should be assumed that the internal transferrable heat loss into the cabinet for the power module is between 5-10% of the total power module heat dissipation based on HP.

The calculations governing internal Watts loss are as follows:

$$5 + [746 \times \text{HP} \times 0.03 \times (5\% \rightarrow 10\%)] = \text{Internal Watts Loss/VFD}$$



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Additional Help

In the US or Canada: please contact the Technical Resource Center at 1-877-ETN-CARE or 1-877-386-2273 option 2, option 6.

All other supporting documentation is located on the Eaton web site at www.eaton.com/Drives

