

HOW TO SIZE A ISOLATION TRANSFORMER FOR A VFD

Description:

How do I size an isolation transformer for a VFD? Do I need to oversize the isolation transformer or is there overload built into the isolation transformer?

Answer:

The isolation transformer needs to be sized for continuous input amps of the VFD. The isolation transformer has current overload built in. There is no need to oversize the isolation transformer for the VFD overload. The isolation transformer is rated in KVA and not Amps. The 1st step is to convert amps to KVA.

$$KVA = \frac{1.732 \times \text{Line to Line Voltage} \times \text{VFD Input Amps}}{1000}$$

Example:

$$399.05 \text{ KVA} = \frac{1.732 \times 480v \times 480A}{1000}$$

In this example the drive is supplied with 480V AC and rated for 480 amps. Based upon the calculation a 400 KVA isolation transformer would be required for the example above.

Documents or other reference material:

None

Corrective Actions:

None

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