

Selection

ABL 6TS and **ABT 7** transformers are characterized by the apparent nominal power they can supply continuously. However, they are also designed to supply, when necessary, significantly higher powers, such as contactor inrush peaks.

Contactor inrush peaks can reach 10 to 20 times the required holding current. This leads to the transformer being oversized in relation to the continuous power it has to supply. The transformer must be sized so that the voltage drop at its terminals, caused by the inrush, remains within the permissible limits for the contactor to close properly.

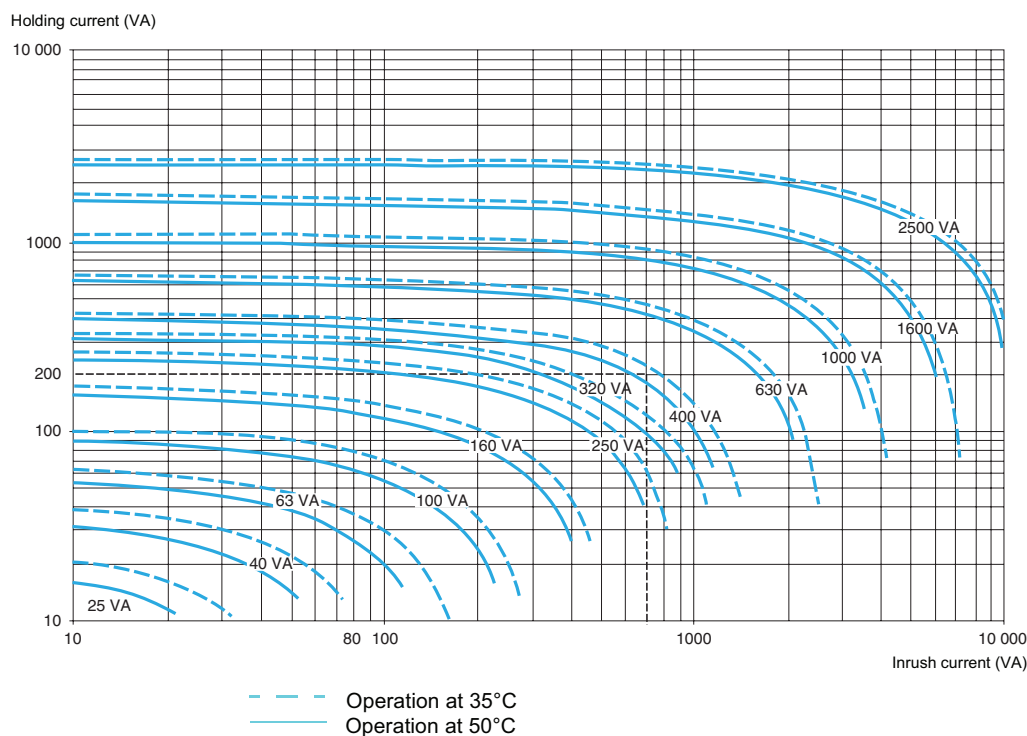
The two power values that need to be taken into account to determine which transformer rating to use are therefore:

- The continuous power the transformer has to supply
- The maximum inrush power it has to provide

In practice, only the sum of the holding currents and the largest contactor inrush current need to be considered.

For **ABL 6TS** transformers, the graph below can be used to select the appropriate rating according to these two currents. This ensures a maximum voltage drop of 5% at the moment of inrush, compatible with correct operation of the entire installation. However, these transformers have been designed for continuous operation at nominal load and at an ambient temperature of 50°C. A reduction in the ambient temperature may uprate the transformer, which, in some cases, allows a lower rating to be used. The graph below has therefore been drawn up for ambient temperatures of 35...50°C.

The inrush values of the contactor coils are given on the contactor control circuit characteristics pages.



Example: A device with a total holding current of 200 VA and inrush current of the largest contactor of 700 VA can be supplied by a 630 VA transformer if it is used at an ambient temperature of 50°C. A 400 VA transformer is sufficient if the ambient temperature is 35°C.