Mechanical life of reversing starter unit K2-16 (WSK2-16E_9827)

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Note: **Notes contain important information.**

Warning: **Warnings indicate special methods or handling procedures which, if not followed properly, may result in serious injury.**

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1 General

The reversing starter unit is used to control the motor (cage rotor) of actuators with a local control unit. The dependence of the switching cycles from the motor current is shown in figure 1 and 2. The following operation categories are applicated according to IEC 947-4-1:

AC3 is used for directly switching on a cage rotor motor and switching off after the starting process has been finished (starting current has already decayed). Normally the motor has started after approx. 0,5sec.

AC4 is used for directly switching on a cage rotor motor and the switching off still during the starting process (tipping, starting current has not already decayed).

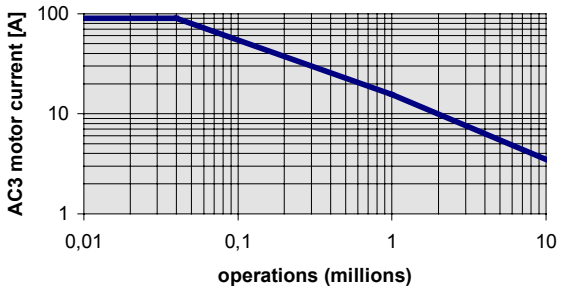

Fig.: 1 Mechanical life in AC3-operation

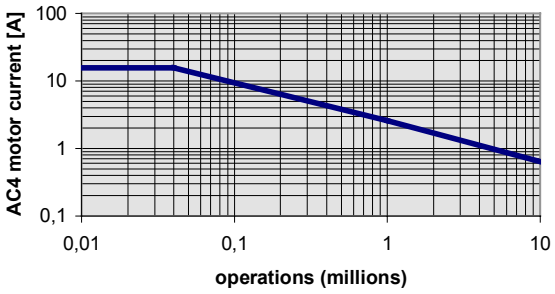

Fig.: 2 Mechanical life in AC4-operation

The mechanical life can be calculated approximately in case of the frequently use of AC3/AC4-mixed operation:

$$M = \frac{AC3}{1 + \frac{\%AC4}{100}\left(\frac{AC3}{AC4} - 1\right)}$$

with *M* = Switching cycles in AC3/AC4 mixed operation

AC3 = Switching cycles in AC3-operation (normal operation, breaking current = motor nominal current)

AC4 = Switching cycles in AC4-operation (tipping operation, breaking current = multiple of motor nominal current)

%AC4 = Part of AC4 switching cycles compared with total of switching cycles in per cent

2 Dimensions

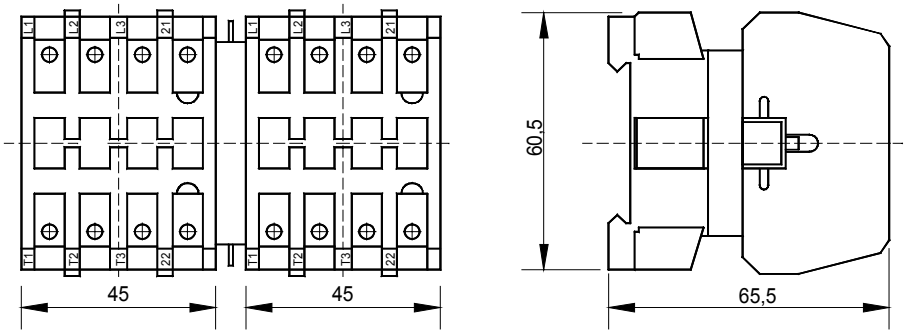

Fig.: 3 Reversing starter unit K2-16