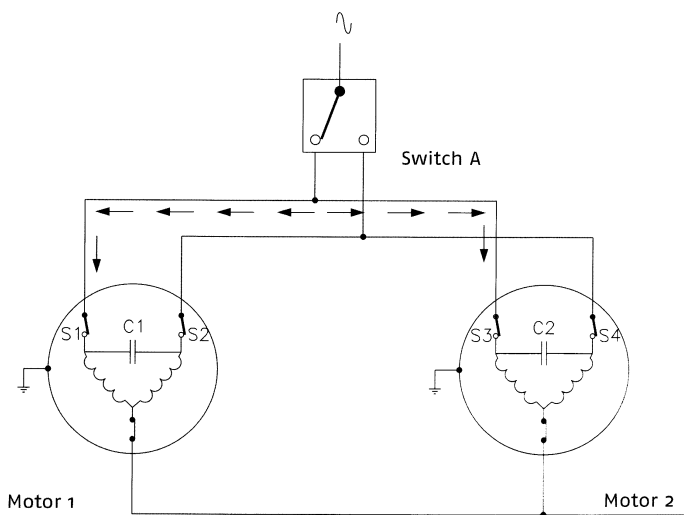


Why AC motors with mechanical limit switches must not be wired in parallel

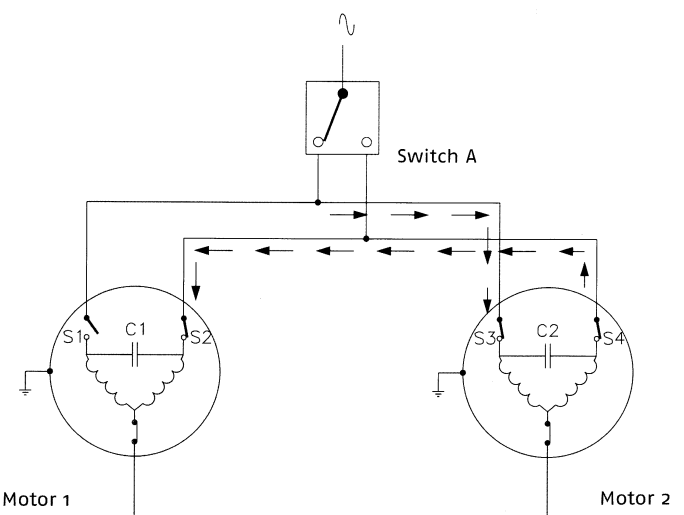
Parallel switching of two or more AC motors with mechanical limit switches is not permitted because:

Even two identical motors on identical blinds will never run for the same period of time as a result of differing motor speeds and/or as a result of slightly differing fabric lengths & thicknesses rolled onto the blind tube. The motor that reaches its limit position first receives feedback from the other motor(s) through the internal capacitor and micro-switches (the limit switches). This feedback continues while the circuit is powered.

Explanation:



The motor connection in the drawing is only theoretically possible if the micro-switches S1 and S3 are interrupted (reach their limit) at exactly the same time.



If two or more motors are operated simultaneously by switch A and motor 1 reaches its limit before motor 2 then micro-switch S1 will interrupt the power to motor 1. Because motor 2 has not yet reached its limit, motor 1 is now supplied with power on the other direction through S3, C2, S4 & S2.

The feedback will be evident when one blind jogs up and down while the other is still in motion. This is a nuisance to the customer, will also invalidate the warranty of the motor and also potentially cause damage to the blind itself.

The ideal solution to this problem is to switch all motors independently, in the end this gives the customer greatest flexibility because each blind can be independently controlled. If wiring has already been completed in a ring or daisy-chain fashion Isolation Relays can be added.