

How to Troubleshoot my contactor if it does not close ?

I- Type of publication

<input type="checkbox"/> Typical application	<input type="checkbox"/> Level 2 use
<input type="checkbox"/> Best know Method (BKM)	<input type="checkbox"/> Internal use
<input checked="" type="checkbox"/> Troubleshooting guide	<input checked="" type="checkbox"/> Customer

II- Product

- Product range :

- Product family :

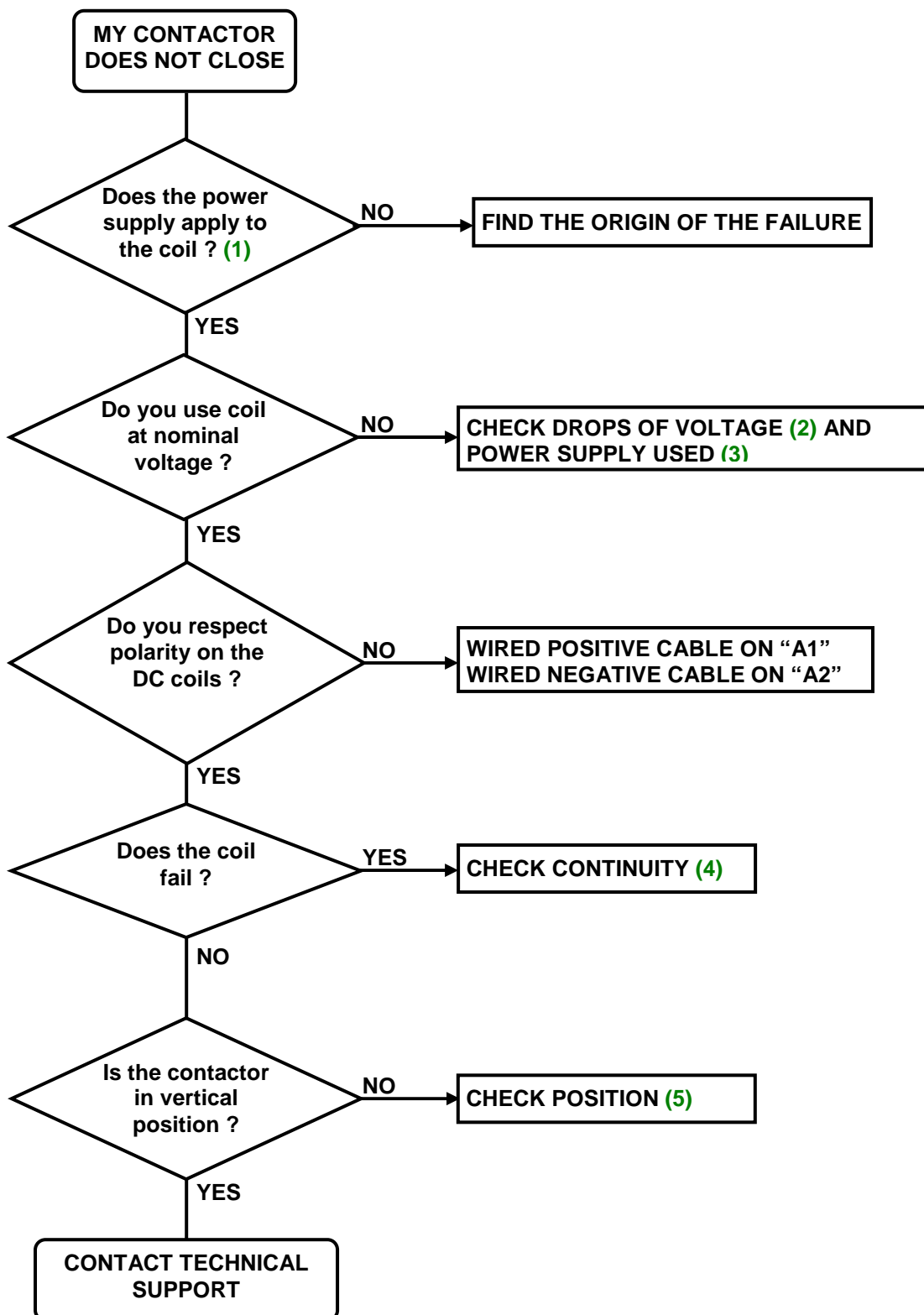
III- Introduction

Use this troubleshooting guide if your power is not applied on your load after supplying your contactor's coil.

Tools required :

- A controller to check voltage and resistance
- A screw driver

IV- Description



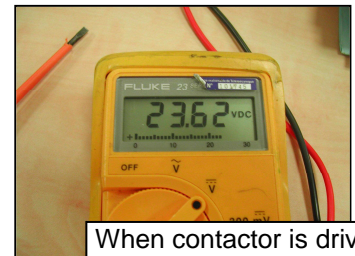
(1) The power supply applies to the Coil

Check coil voltage:

a) Look after your coil range:



c) Measure:

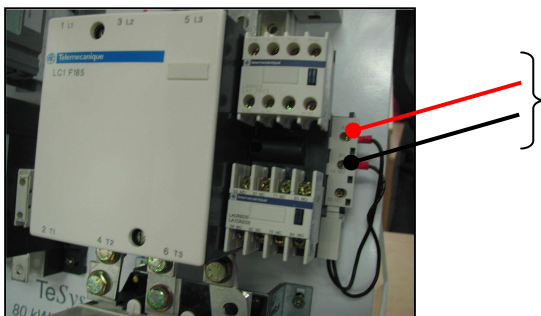


When contactor is driven the coils voltage should be different than "0 Volts"

b) Put your probe on coil terminal A1 A2:



Note: you can make the same job for a TeSysF but the multi meter is not connected on the same points:



(2) Drop of voltage

On power up sequence check if the voltage is stable. We can have different root cause for this issue:

- a) You drive simultaneously more than one contactor and your power supply is not correctly sized -see point (3)-
- b) You have a too long distance between supply and coil terminal. You will have to verify that your cable is correctly sized regarding the distance between the power supply and the contactor.

(3) Power supply used

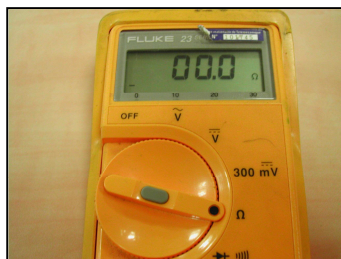
Your power supply should be able to support the sums of all contactors inrush current. Please, for the inrush current level of each individual contactor, you will have to refer to the technical data for each contactor you drive

(4) Continuity

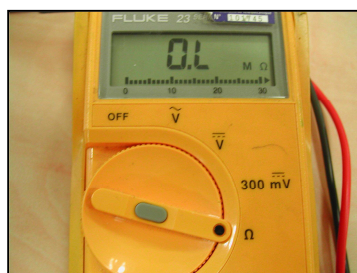
For this point you will need to use a multi-meter to verify coils resistance.

This resistance value should be between some Ohms to kOhms this depends of coils voltage and contactor models

- a) If you found a value close less than 0.1 ohms you are facing a coil short circuit:



- b) If you have an infinite value you are facing an open coils circuit



For both situations, you have to replace coil or the full contactor if you have no other possibility.

(5) Contactor Position

Operating positions (3)	Without derating in the following positions	
Positions that are not permissible		For --- contactors LC1 D09 to LC1 D65A.