

Inductances in Series

Q. Given two similar unshielded chokes, salvaged from a TV power supply, which I want to add in series followed by a shunt capacitor to a choke-input power supply, is there a possibility of not getting combined inductance value unless they are connected in a certain way? If so, is there a simple method of determining the proper terminal arrangements?

A. When connecting chokes in series, you will find that their inductances will be additive, regardless of polarity of wiring. The only things which will change when the connections of such inductances are reversed will be the polarities of the back voltages. Even though the chokes are unshielded, coupling between them will not be sufficient to cause cancellations or reinforcements, as would be the case were the inductances wound on the same form. 