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SERCOMBE et al.(10) **Pub. No.: US 2022/0368187 A1**(43) **Pub. Date: Nov. 17, 2022**(54) **COOLING ARRANGEMENTS IN DEVICES
OR COMPONENTS WITH WINDINGS****Publication Classification**(71) Applicant: **MAGNIX TECHNOLOGIES PTY
LTD, Arundel (AU)**(51) **Int. Cl.****H02K 3/24** (2006.01)**H02K 1/14** (2006.01)**H02K 1/278** (2006.01)**H02K 21/16** (2006.01)(72) Inventors: **David Bruce Trowbridge**
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ABSTRACT

There is provided a winding system for use in an electrical, electronic or electromagnetic device or component including: one or more set of windings, each set of windings including an electrically-conductive element arranged in a winding pattern with multiple turns, at least one pair of adjacent turns of the multiple turns being spaced apart to provide at least one channel therebetween for coolant fluid to flow therethrough; and a housing for housing the set of windings, the housing including a fluid inlet and a fluid outlet each in fluid communication with the at least one channel, the housing facilitating coolant fluid to flow from the fluid inlet to the fluid outlet, via the at least one channel in direct contact with exposed surfaces of the set of windings, the exposed surfaces at least partially defining the at least one channel.

