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Compact groups without endomorphisms with infinite entropy

Let E denote the class of compact groups that admit no continuous endomorphism with infinite topological entropy.

- (1) There exist connected infinite-dimensional groups in E , but all abelian groups in E are finite-dimensional.
- (2) An abelian compact connected K group belongs to E iff K is finite-dimensional.

The non-connected groups in E are hard to describe even in the abelian case. In particular, we do not know the answer to the following question: does there exist an abelian totally disconnected group in E that has endomorphisms with positive entropy?