Motivated by recent developments on the topic of non-invertible generalized global symmetries [1, 2] in quantum field theories, in this article the authors study non-invertible properties of symmetries realized by topological lines in (2+1)-dimensional quantum field theories. The topological lines are characterized by the so-called topological spin $\theta = \pm 1$. The authors classify these non-invertible symmetries (or symmetry categories) and clarify how they are related to ordinary invertible symmetries (or symmetry groups). The authors also utilize these results to describe invariants of renormalization group flows in terms of the non-invertible symmetries and argue that the concept of 't Hooft anomaly matching can be extended to finite non-invertible global symmetries.

References

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