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Ampacities of Cables Installed in Cable Trays

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Foreword

This Standards publication for *Ampacities of Cables Installed in Cable Trays* (ICEA P-54-440, NEMA WC 51-2019) was developed by the Insulated Cable Engineers Association, Inc. (ICEA) and approved by the National Electrical Manufacturers Association (NEMA). It supersedes WC 51-2014.

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Requests for interpretation of this Standard must be submitted in writing to:

Insulated Cable Engineers Association, Inc.,
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An official written interpretation will be provided. ICEA will welcome any suggestions on ways to improve this Standard.

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Scope

This Standards Publication covers the ampacity ratings for 600-15,000 volt solid dielectric cables installed in cable trays. Ampacity ratings are tabulated for single conductor cables, triplexed assemblies of single conductor cables, and three-conductor cables incorporating an overall jacket.

Ampacities have been tabulated for the cable constructions and the operating conditions normally encountered for tray applications. Correction factors to adjust the tabulated values to better reflect specific conditions are provided. These include adjustments to account for ambient and operating temperatures, cable construction, tray covers, and diversification of the cable loading.

This Standard is intended primarily for use by the utility industry. It is not intended for use where compliance with the *National Electrical Code*[®] or other regulations is mandatory.

¹ IEEE Transaction Paper 70 TP 557 PWR, *Ampacity for Cables in Randomly Filled Trays*, J. Stolpe, 1970

² IEEE Transaction Paper 71 TP 543 PWR, *Ampacity for Multiconductor Cables in Trays*, R. Lee, 1971

³ IEEE Transactions on Power Delivery Vol. 9 No. 4, Oct. 1994, *Ampacity of Cables in Single Open-Top Cable Trays*, B. Harche & W. Black

⁴ IEEE Transactions on Power Delivery Vol. 12 No. 1, Jan. 1997, *Ampacity of Cables in Single Covered Trays*, B. Harche & W. Black