### Electrical Standards Used For Specification and Construction

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AAMI = Association for Advancement of Medical Instruments  
ABYC = American Boat & Yacht Council  
AHAM = Association of Home Appliance Manufacturers  
ANSI = American National Standards Institute (EE Stds being taken over by IEEE)  
ASTM = American Society for Testing and Materials  
CBEMA = Computer and Business Equipment Manufacturers Association  
CPSC = Consumer Products Safety Commission  
ECSA = Exchange Carriers Standards Association  
EIA = Electronics Industries Association (http://www.eia.org)  
FCC = Federal Communications Commission  
FDA = Federal Department of Agriculture  
IEEE = Institute of Electrical and Electronics Engineers  
IEC = International Electrotechnical Commission (Outside US)  
IPCEA = Insulated Power Cable Engineers Association  
ISA = Instrument Society of America  
ISO = International Standards Organization:  
    (9000=General, 9001=System, 9002=Component)  
    (14000 = Environmental Management & Auditing)  
JEDEC = Joint Electron Devices Engineering Council (“Jed-eck”, part of EIA)  
MSHA = Mining Safety & Health Administration  
NAB = National Association of Broadcasters  
NIST = National Institute of Standards and Technology (formerly NBS)  
NCTA = National Cable Television Association  
NEC = National Electrical Code (provided by NFPA)  
NEMA = National Electrical Manufacturers Association  
NERC = North American Electric Reliability Council  
NESC = National Electrical Safety Code (for high voltage, by IEEE/ANSI)  
NFPA = National Fire Protection Association  
NRC = Nuclear Regulatory Commission  
OSHA = Occupational Safety and Health Administration  
SMPTE = Society of Motion Picture and Television Engineers  
UL = Underwriters’ Laboratories. (CSA in Canada)
WHY ARE STANDARDS NEEDED?

- **STANDARDIZED COMPONENTS**
  - Standardized discrete sizes, values
  - Predictable Performance and Ratings
  - Parts will fit and work together, regardless of manufacturer

- Standardize Procedures
  - Manufacturing
  - Assembling
  - Testing

  - Reassurance of good design (standards are hopefully written by experts)

  - Avoid wasted time of wheel reinvention - use standard design approaches and procedures.

  - Designs can be built at any manufacturing facility.