NOTICE AND DISCLAIMER

The information in this publication was considered technically sound by the consensus of persons engaged in the development and approval of the document at the time it was developed. Consensus does not necessarily mean that there is unanimous agreement among every person participating in the development of this document.

The National Electrical Manufacturers Association (NEMA) standards and guideline publications, of which the document contained herein is one, are developed through a voluntary consensus standards development process. This process brings together volunteers and/or seeks out the views of persons who have an interest in the topic covered by this publication. While NEMA administers the process and establishes rules to promote fairness in the development of consensus, it does not write the document and it does not independently test, evaluate, or verify the accuracy or completeness of any information or the soundness of any judgments contained in its standards and guideline publications.

NEMA disclaims liability for any personal injury, property, or other damages of any nature whatsoever, whether special, indirect, consequential, or compensatory, directly or indirectly resulting from the publication, use of, application, or reliance on this document. NEMA disclaims and makes no guaranty or warranty, express or implied, as to the accuracy or completeness of any information published herein, and disclaims and makes no warranty that the information in this document will fulfill any of your particular purposes or needs. NEMA does not undertake to guarantee the performance of any individual manufacturer or seller’s products or services by virtue of this standard or guide.

In publishing and making this document available, NEMA is not undertaking to render professional or other services for or on behalf of any person or entity, nor is NEMA undertaking to perform any duty owed by any person or entity to someone else. Anyone using this document should rely on his or her own independent judgment or, as appropriate, seek the advice of a competent professional in determining the exercise of reasonable care in any given circumstances. Information and other standards on the topic covered by this publication may be available from other sources, which the user may wish to consult for additional views or information not covered by this publication.

NEMA has no power, nor does it undertake to police or enforce compliance with the contents of this document. NEMA does not certify, test, or inspect products, designs, or installations for safety or health purposes. Any certification or other statement of compliance with any health or safety–related information in this document shall not be attributable to NEMA and is solely the responsibility of the certifier or maker of the statement.
FOREWORD

This NEMA Standards Publication, TS 1-1989 (R1994, R2000, R2005, R2020) Traffic Control Systems (Not Recommended for New Designs), was developed to define traffic signaling equipment that can be safely installed to render the intended functions.

Within this document, any reference to a specific manufacturer is strictly for the purpose of defining interchangeability where there exists no nationally recognized standard covering all the requirements. The manufacturer references do not constitute a preference. This standard is intended to reduce hazards to persons and property when traffic signaling equipment are properly selected and installed in conformance with the requirements herein.

Inquiries, comments, and proposed or recommended revisions should be submitted to the concerned NEMA product subdivision by contacting the:

NEMA Technical Operations Department
National Electrical Manufacturers Association
1300 North 17th Street, Suite 900
Rosslyn, Virginia 22209-3801


The section approval of this document does not necessarily imply that all Section members voted for its approval or participated in its development. When this document was approved, the Transportation Management Systems and Associated Control Devices Section was composed of the following members:

- 360 Network Solutions, LLC. www.360ns.net
- Applied Information, Inc. www.appinfoinc.com
- Daktronics, Inc. www.daktronics.com
- Eberle Design, Inc. www.editraffic.com/
- Horizon Signal Technologies www.horizonsignal.com
- Intelight Inc. www.intelight-its.com
- John Thomas, Inc. www.jtitraffic.com
- McCain Inc. www.mccain-inc.com
- Parsons Corporation www.delcantechnologies.com
- Qualcomm www.qualcomm.com
- Siemens Industry, Inc. www.siemens.com
- Skyline Products, Inc. www.skylineproducts.com
- Sunrise SESA Technologies, Inc. www.sesamerica.com
- Temple, Inc. www.temple-inc.com
- Ver-Mac Inc. www.ver-mac.com

© 2020 National Electrical Manufacturers Association
Scope

This Standards Publication covers widely used traffic signalling systems that are used to facilitate and expedite the safe flow of pedestrian and vehicular traffic. The standards reflect study of inputs from traffic engineers and installers of traffic signalling equipment and professional organizations in the field of traffic control.