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ANSI/NEMA HP 8-2021

*Electrical and Electronic Cross-Linked, Modified Low-Smoke Polyolefin (XLPO)
Insulated Hook-Up Wire, Types LS (Rated 105°C; 600 V), ZHDM (Rated 90°C; 600 V),
ZHDH (Rated 90°C; 600 V), ZH (Rated 125°C; 600 V), and ZHX (Rated 125°C; 1000 V)*

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Foreword

ANSI/NEMA HP 8-2021 (hereinafter referred to as ANSI/NEMA HP 8) was developed by the NEMA High Performance Wire and Cable Section to define hook-up cables using low-smoke and low- or zero-halogen insulation materials that might be used as an alternative to PVC-insulated cables for applications requiring these types of characteristics.

In the preparation of ANSI/NEMA HP 8, input of users and other interested parties has been considered. Proposed revisions, comments, and suggestions for the improvement of this document are encouraged. They should be sent to:

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This Standards publication was developed by the NEMA High Performance Wire and Cable Section Aerospace Committee. Section approval of the Standard does not necessarily imply that all section Members voted for its approval or participated in its development. At the time it was approved, the section was composed of the following Members:

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Section 1 General

1.1 Scope

ANSI/NEMA HP 8 covers specific requirements for cross-linked, modified polyolefin insulated solid and stranded wire designed for the internal wiring of high-reliability electrical and electronic equipment. ANSI/NEMA HP 8 addresses 600 V (Types LS, ZHDM, ZHDH, and ZH) and 1000 V (Type ZHX) wire and permits continuous conductor temperature ratings of -40°C to 90°C , 105°C , or 125°C with either tin- or silver-coated conductors. These types of hook-up wire are used when the following requirements are called for:

- a. Moderate temperature resistance
- b. Low temperature resistance
- c. Good dielectric constant (Types ZHDM and ZHDH)
- d. Moderate dielectric constant (Type LS)
- e. Good flexibility and flex life when stranded conductors are used
- f. Solder iron resistance for easier solder terminations without potential damage
- g. Low smoke (Types LS, ZHDM, ZHDH, ZH, ZHX)
- h. Zero halogen (Types ZHDM, ZHDH, ZH, ZHX)
- i. Low toxicity (Types LS, ZHDM, ZHDH, ZH, ZHX)
- j. Low acid gas generation (Types LS, ZHDM, ZHDH, ZH, ZHX)