



Annex of Standards

1. PURPOSE AND SCOPE: This Annex of Standards is the amalgamation of minimum requirements for many product categories and/or applications where individual standards would not be practical.

1.1 Mandatory and Preferred Items:

1.1.1 Mandatory requirements of this Standard are characterized by the use of the word shall".

1.1.2 Preferred items are characterized by the use of the word "should".

1.2 Product Categories Covered:

- [3. TERMINAL, DISTRIBUTION, AND SPLITTER BLOCKS](#)
- [4. FUSE BLOCKS AND FUSE HOLDERS](#)
- [5. STARTERS AND CONTACTORS](#)
- [6. LIMIT SWITCHES](#)
- [7. PROXIMITY SWITCHES](#)
- [8. PUSHBUTTONS, PILOT LIGHTS, SELECTOR SWITCHES](#)
- [9. EXTENSION CORDS](#)
- [10. HARD SERVICE CORD](#)
- [11. MULTICONDUCTOR CONTROL CABLE](#)
- [12. TYPE "G" AND BUS DROP CABLE](#)
- [13. PORTABLE LIGHTING](#)
- [14. PLUGS AND RECEPTACLES](#)
- [15. POWER PLUGS AND RECEPTACLES](#)
- [16. CONTROL AND TIMING RELAYS](#)
- [17. POWER FACTOR CORRECTION](#)
- [18. CONDUIT FITTINGS AND BODIES](#)
- [30. WIRING PRACTICES FOR SOLENOID VALVES](#)
- [31. POWER DISTRIBUTION FROM BUS DUCT](#)
- [REVISION HISTORY](#)

NOTE: Sections 18 through 29 are intentionally left blank.

1.3 This Standard (w-EX0) replaces numerous outdated Ford Standards that no longer have enough relevant content to justify maintaining them as independent standards. The following Ford Standards have therefore been obsoleted, their significant technical requirements, relevant updates, and global requirements collected into this w-EX0 "Annex of Standards":

- EA1 - Pushbuttons and Accessories
- EC1 - NEMA AC Motor Starters, Electro-Mechanical Type, Requirements and Tests
- EC2 - NEMA Control Relays - AC Machine Tools Electro-Mechanical Types
- EC2-1 - NEMA Solid State Time Delay Relays
- EE1 - Conduit Fittings
- EFX - Power Factor Correction
- EP1 - Plugs and Receptacles
- ES2 - Proximity Sensors
- ES4 - Limit Switches
- ET1 - Terminal Blocks
- ET2 - Fuse Blocks
- EW1 - Power Distribution From Bus Duct Systems
- EW2 - Extension Cords and Lamps



EW2-1 - Hard Service Cord and Type "G" Power Cable
EX5 - Wiring Practices for Solenoid Operated Valves

2. NORMATIVE REFERENCES: The product categories and applications listed in this Standard shall conform to those Standards listed below each product category or application.

3. TERMINAL, DISTRIBUTION, AND SPLITTER BLOCKS

Terminal Blocks are defined as modular type pressure wire connectors that establish a connection between two or more conductors, or between one or more conductors and a termination point, 600 VAC rated, mounted on a track, strip, channel, or 35mm DIN 3 rail for use on control panels, subassemblies, and in terminal boxes on industrial equipment. Distribution and Splitter Blocks are defined as pressure wire connectors that establish the connection between two or more conductors, modular type, and 600 VAC rated for use on control panels, subassemblies, and in terminal boxes on industrial equipment.

- 3.1 All Terminal, Splitter, and Distribution Blocks shall be Underwriters Recognized (), CSA C22.2.158 Certified (), and CE Marked () per EN 60947-7-1 and EN 60947-7-2 to ensure that their construction is in compliance with the appropriate UL, CSA, and EN Standards. All Terminal Blocks shall bear the appropriate marks of the above agencies.
- 3.2 Conductors shall be retained with a captive saddle clamp on a screw-type terminal or with a screw-less cage clamp.
- 3.3 Terminal, Splitter, and Distribution Block insulation shall have a flammability rating of UL 94V-1 or better.
- 3.4 Terminal, Splitter, and Distribution Block and Conductor Pull Out Test shall conform to Table 12.1 and Table 14.1 of UL 486E.
- 3.5 Test results for ampacity, temperature rise, dielectric strength, etc., shall conform to UL 486A, 486E and UL 1059.
- 3.6 All Terminal, Splitter, and Distribution Block terminals shall be 600 VAC rated terminal-to-terminal and terminal-to-ground per UL 1059.

4. FUSE BLOCKS AND FUSE HOLDERS

Fuse Blocks are defined as devices that hold a specified dual element power or control fuse between two clips. Fuse Holders are defined as devices that hold a specified dual element power or control fuse in a finger safe enclosure. This does not apply to devices used to hold miniature or glass type fuses.

- 4.1 All Fuse Blocks and Fuse Holders shall be Underwriters 512 Listed, (), CSA C22.2.39 Certified (), and CE Marked () per EN 60269 to ensure that their construction is in compliance with the appropriate UL, CSA, and EN Standards. All Fuse Blocks and Fuse Holders shall bear the appropriate marks of the above agencies.
- 4.2 Current carrying parts shall be copper compatible and conform to UL 486A or UL 486E.
- 4.3 Ferrule type clips shall be one-piece construction. Reinforcing springs shall not carry current in either the ferrule or blade type assembly.
- 4.4 Base material shall withstand temperatures of a least 120 degrees C (250 degrees F) and shall have a flammability rating of UL 94V-1 or better.
- 4.5 Fuse Block bases shall be single piece construction for one, two, and three pole designs. All fuse block bases through 100 Amps shall have insulating barriers between the poles.



- 4.6 Fuse Holders shall be designed to open using a finger safe "fuse door" that pivots so the line side opens first. Fuses shall be easily removable from the top of the "fuse door".
- 4.7 Fuse Holders shall have recessed termination screws for IP20 Rated protection.
- 4.8 Blown fuse indication on the fuse holder shall be available as an option.

5. STARTERS AND CONTACTORS

Starters and Contactors include all sizes of NEMA and IEC products, including overloads, motor circuit protectors, and integral starters.

- 5.1 All Contactors shall be Underwriters 508 Listed (UL), CSA C22.2.14 Certified (CS), and CE Marked (CE) per IEC 60947-4-1 to ensure that their construction is in compliance with the appropriate UL, CSA, and EN Standards.
- 5.2 All Contactors shall conform to NEMA ICS2.
- 5.3 All IEC Starters and Overloads shall be Underwriters 508 Type E Listed (UL), Underwriters 508 Type F Listed (UL), CSA C22.2.14 Certified (CS) for Type E Protection, and CE Marked (CE) per IEC 60947-4-5 to ensure that their construction is in compliance with the appropriate UL, CSA, and EN Standards.
- 5.4 All NEMA Starters and Overloads shall be Underwriters 508 Listed (UL), Underwriters 508 Type E Listed (UL), Underwriters 508 Type F Listed (UL), and CSA C22.2.14 Certified (CS) for Type E Protection to ensure that their construction is in compliance with the appropriate UL and CSA Standards.
- 5.5 All NEMA Starters and Overloads shall conform to NEMA ICS2.
- 5.6 All IEC Starters shall be rated as a Motor Disconnect and for Tap Conductor Protection.
- 5.7 All Motor Circuit Protectors shall be Underwriters 508 Listed (UL), Underwriters 508 Type E Listed (UL) for Self-Protection, Underwriters 508 Type F Listed (UL) for combination products, CSA C22.2.14 Certified (CS) for Type E Protection, and CE Marked (CE) per IEC 60947-2 to ensure that their construction is in compliance with the appropriate UL, CSA, and EN Standards.
- 5.8 All Motor Circuit Protectors shall be rated as a Motor Disconnect and for Tap Conductor Protection.
- 5.9 All Starters, Contactors, and Motor Circuit Protectors shall be rated at 65kA minimum withstand at 480/277 VAC per UL 508 Type E.

6. LIMIT SWITCHES

Limit Switches include all styles and sizes for use in non-hazardous locations.

- 6.1 All Limit Switches shall be Underwriters 508 Listed (UL), CSA C22.2.14 Certified (CS), and CE Marked (CE) per EN 60947 to ensure that their construction is in compliance with the appropriate UL, CSA, and EN Standards.
- 6.2 All Limit Switches shall be IP66 Rated, or better.

7. PROXIMITY SWITCHES

Proximity Switches include inductive, capacitive, and weld field immune styles in tubular, square, and rectangular bodies.

- 7.1 All Proximity Switches shall be Underwriters 508 Listed (UL), Underwriters NRKH Listed (UL), CSA C22.2.14 Certified (CS), and CE Marked (CE) per EN 60947 to ensure that their construction is in compliance with the appropriate UL, CSA, and EN Standards.
- 7.2 All Proximity Switch outputs shall be +24VDC PNP Outputs.

Printed copies are uncontrolled