

Specifications applicable to relays

Following are most of the active government specifications (MIL and NASA) and two non-government specifications applicable to relay evaluation and qualification. They can help the relay user in specification writing (see article on p 52).

Specification & Agency	Remarks
I. General specifications applicable to relays	
MIL-Q-9858A Dept. of Defense Washington, D.C.	<ul style="list-style-type: none"> • Quality program requirements. • Covers all areas of contract performance, including design, development, fabrication, etc. • Devoted to quality assurance.
NPC-200-2 NASA Quality Publication NASA 1875 Connecticut Ave., N.W. Washington, D.C.	<ul style="list-style-type: none"> • Quality-control provisions for space-systems contractors. • More stringent than MIL-Q-9858A. • Contains common, general requirements requiring specific clarification for each contract. Should not be invoked in whole unless specified.
NPC-200-3 NASA Quality Publication (See above)	<ul style="list-style-type: none"> • Inspection-system provisions for suppliers of space materials, parts, components and services. • Contains common, general requirements requiring specific clarification for each contract. Should not be invoked in whole unless specified.
MIL-STD-105D U.S. Army Munitions Command Pentagon, Washington, D.C.	<ul style="list-style-type: none"> • Sampling procedures and tables for inspection by attributes. • Applicable to end items, components and raw materials, operations, materials in process, supplies in storage, maintenance operations, data or records, administrative procedures, among others. • A statistical rather than a general document.
MIL-STD-202C Defense Supply Agency, Cameron Station, Alexandria, Va.	<ul style="list-style-type: none"> • Standard test methods for electronic and electrical component parts. • Establishes uniform testing methods. • Devoted to environmental tests (100 class), physical-characteristics tests (200 class) and electrical-characteristics tests (300 class).
MIL-STD-810 Air Force Aeronautical Systems Div. Wright-Patterson AFB Dayton, Ohio	<ul style="list-style-type: none"> • Standard environmental test methods for aerospace and ground equipment. • For determining the resistance of aerospace and ground equipment to the deleterious effects of natural and induced military environments. • Intended for new engineering and design. Should not be applied in retrospect. • Established in 1962, it contains more exotic tests than MIL-STD-202.
MIL-E-5272 Aeronautical Standards Group Dept. of Defense Washington, D.C.	<ul style="list-style-type: none"> • General specification for environmental testing of aeronautical and associated equipment. • Relatively old (1960) document containing tests procedures (many of which have been discontinued). • Covers climatic and environmental conditions for any global locality.

Specification & Agency	Remarks
MIL-I-45208A U.S. Army Munitions Command (See above)	<ul style="list-style-type: none"> • Specification for inspection-system requirements. • Sets up requirements for contractors' inspection systems. • Part of MIL-Q-9558A. • To be used concurrently with MIL-C-45662.
MIL-C-45662A Army Ordnance Corps. Rock Island, Ill.	<ul style="list-style-type: none"> • Specification for calibration-system requirements. • For the control of accuracy in measuring and test equipment.
II. Specific relay specifications	
MIL-R-5757D, Amendment 3, April 1964 Navy Bureau of Ships (Project 5945-0089) Washington, D.C.	<ul style="list-style-type: none"> • General specification for electrical relays (excluding thermal types) that are used in electronic and communication equipment. • Covers general requirements for relays with contact ratings up to and including 10 amperes. • DOD-approved for use by Army, Navy and Air Force.
MIL-R-6106E Air Force (85) Pentagon, Washington, D.C.	<ul style="list-style-type: none"> • General specification for electric aerospace relays. • Covers more relay types than any other relay specification. • Applicable to relays with up to 400-ampere contact load. • Companion specification QPL-6106-15 is QPL list for MIL-R-6106.
MIL-R-19648 Navy Bureau of Ships Washington, D.C.	<ul style="list-style-type: none"> • General specification for thermal, time-delay, hermetically sealed relays. • For relays with contact ratings up to and including 6 amperes. • Fills voids in MIL-R-5757D.
MIL-R-19523 Navy Bureau of Ships Washington, D.C.	<ul style="list-style-type: none"> • Specification for auxiliary relays used on Navy ships. • Covers high-impact (class H1) shock-proof auxiliary relays. • Use includes submarine and nuclear-propulsion-plant environments.
MIL-R-39016 Navy-Ships (Project 5945-0049) Washington, D.C.	<ul style="list-style-type: none"> • General specification for establishing reliability in electromagnetic relays. • For hermetically sealed types (excluding thermal). • For relays with contact ratings up to 10 amperes. • Relatively new (1964) and applicable to relays not used in plug-in-socket applications.
SMFC-SPEC-339 George C. Marshall Space Flight Center Greenbelt, Md.	<ul style="list-style-type: none"> • General NASA specification for hermetically sealed dc relays in space vehicles and ground-support equipment • For general-purpose switching, using contact ratings up to and including 10 amp.
III. Non-government documents applicable to relays	
NAS-728 National Aerospace Standard, National Aerospace Service Association, 1725 De Sales St., N.W. Washington, D.C.	<ul style="list-style-type: none"> • Test methods for electromagnetic relays. • For relays that must qualify for use in military equipment. • Application does not preclude its use for relays intended for use in commercial equipment.
AIR-875 Aeronautical Information Report, Society of Automotive Engineers, Subcommittee A-2R, 485 Lexington Ave., New York	<ul style="list-style-type: none"> • Government relay-specification comparison. • Compares various military relay specifications in detail.