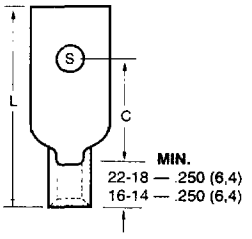
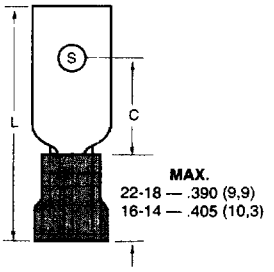
RECTANGULAR TONGUE TERMINALS/MIL-T-7928

Molex-ETC™ Military Specifications

MS-21004 (SHIPS) covers noninsulated, brazed-barrel, rectangular tongue terminals. Insulated versions of these terminals are covered by MS-17143 (SHIPS). Since Navy and AWG sizes, tongue width, clearance and stud size are the same for both specifications, these common basic dimensions are in the center section of the chart below. The left and right sections of the chart list the individual military specification, the Molex-ETC order number, length and the maximum wire insulation diameter (for MS-17143).





Common Basic Dimensions															
Military Type P/N	(Mil-E-16366) Tongue Shape	Molex-ETC Order No.	Navy Military Wire Range AWG	(SHIPS) Wire Range	Stud No.	Navy Wire Size	Wire Range AWG (mm²)	Stud Size S	Maximum Width W	Minimum Clearance C	Maximum Length L	Maximum Wire Insulation Diameter	Molex-ETC Order No.	MS-17143 Dash No.	Class
MS-21004-1	L-86	A-L86-04	18-22	1-2	4	1-2	18-22 (0.25-1.30)	8 (4)	10.00 (.395)	15.90 (.625)	33.90 (1.359)	3.60 (.140)	AA-880-1	-1	1 and 2
MS-21004-2	L-83	A-L83-05			5	1-2	18-22 (0.25-1.30)	6 (3-3.5)	7.80 (.307)	11.90 (.468)	28.20 (1.109)	3.60 (.140)	AA-881-1	-4	1 and 2
MS-21004-3	L-82	A-L82-08			8	1-2	18-22 (0.25-1.30)	8 (4)	7.80 (.307)	11.90 (.468)	28.20 (1.109)	3.60 (.140)	AA-882-1	-7	1 and 2
MS-21004-4	L-81	A-L81-06			6	1-2	18-22 (0.25-1.30)	5 (3-3.5)	7.20 (.282)	7.10 (.281)	21.70 (.855)	3.60 (.140)	AA-883-1	-10	1 and 2
MS-21004-5	L-85	A-L85-04			4	1-2	18-22 (0.25-1.30)	6 (3-3.5)	6.10 (.242)	10.30 (.406)	25.80 (1.015)	3.60 (.140)	AA-884-1	-13	1 and 2
MS-21004-6	L-84	A-L84-06			6	1-2	18-22 (0.25-1.30)	4 (2.6)	6.10 (.242)	10.30 (.406)	25.80 (1.015)	3.60 (.140)	AA-885-1	-16	1 and 2
MS-21004-7	L-80	A-L80-08			8	1-2	18-22 (0.25-1.30)	4 (2.6)	6.10 (.242)	6.30 (.250)	20.20 (.796)	3.60 (.140)	AA-886-1	-19	1 and 2
MS-21004-8	L-86	B-L86-04	14-16	2-1/2-4	4	2-1/2-4	14-16 (1.00-2.60)	8 (4)	10.00 (.395)	15.90 (.625)	33.90 (1.359)	4.30 (.170)	BB-880-2	-2	1 and 2
MS-21004-9	L-83	B-L83-05			5	2-1/2-4	14-16 (1.00-2.60)	6 (3-3.5)	7.80 (.307)	11.90 (.468)	28.20 (1.109)	4.30 (.170)	BB-881-2	-5	1 and 2
MS-21004-10	L-82	B-L82-08			8	1-1/2-4	14-16 (1.00-2.60)	8 (4)	7.80 (.307)	11.90 (.468)	28.20 (1.109)	4.30 (.170)	BB-882-2	-8	1 and 2
MS-21004-11	L-81	B-L81-06			6	2-1/2-4	14-16 (1.00-2.60)	5 (3-3.5)	7.20 (.282)	7.10 (.281)	21.70 (.855)	4.30 (.170)	BB-883-2	-11	1 and 2
MS-21004-12	L-85	B-L85-04			4	2-1/2-4	14-16 (1.00-2.60)	6 (3-3.5)	6.10 (.242)	10.30 (.406)	25.80 (1.105)	4.30 (.170)	BB-884-2	-14	1 and 2
MS-21004-13	L-84	B-L84-06			6	1-1/2-4	14-16 (1.00-2.60)	4 (2.6)	6.10 (.242)	10.30 (.406)	25.80 (1.105)	4.30 (.170)	BB-885-2	-17	1 and 2
MS-21004-14	L-80	B-L80-08			8	2-1/2-4	14-16 (1.00-2.60)	4 (2.6)	6.10 (.242)	6.30 (.250)	20.20 (.796)	4.30 (.170)	BB-886-2	-20	1 and 2

Note: All actual insulated parts are color-coded red, blue or yellow to military standard

MIL-T-7928

Molex-ETC solderless terminals and splices have long contributed to our nation's defense as high quality components in a wide variety of weapons systems and defense equipment.

MIL-T-7928 is the specification most commonly used by the various government agencies, military prime and ordinance contractors and many original-equipment-manufacturers (OEM) as well as the aircraft and aerospace industries. This specification encompasses and governs several military standards: MS-20659, Uninsulated Ring Terminals; MS-25036, Insulated Ring Terminals; MS-21004, Uninsulated Rectangular Terminals; and MS-17143, Insulated Rectangular Terminals. The following quick-reference charts indicate some of the more popular Molex-ETC military terminals and splices that are manufactured to meet or exceed military specifications and performance standards.

QUALIFIED PRODUCTS LIST (QPL) APPROVALS

Class 1 approved terminals and splices conform to all dimensional requirements and meet all performance standards of the military specification when crimped with QPL-approved crimping tools.

Class 2 approved terminals and splices meet all performance standards of the military specifications when crimped with the manufacturer's QPL-recognized crimping tools.

Types I and II further classify military terminals and splices as noninsulated and insulated. Type I indicates "uninsulated" while Type II refers to "insulated" terminals and splices. Contact your Molex-ETC customer service representative for additional information and military cross-references, as well as details on all Molex-ETC crimping tools.

Molex-ETC™ Military Specifications

MS-20659 Type I Noninsulated		
MS-20659 Dash No.	Molex-ETC Order No.	Class
-101	AA-420-06	2
-102	AA-421-10	2
-103	BB-437-06	2
-104	BB-437-10	2
-105	C-328-10	1 and 2
-106	C-330-56	1 and 2
-107	D-356-10	2
-108	D-351-56	2
-109	E-360-14	2
-110	E-357-38	2
-111	F-367-14	2
-112	F-366-38	2
-113	G-375-14	2
-114	G-375-38	2
-115	H-381-14	2
-116	H-381-38	2
-117	H-381-14	2
-118	H-381-38	2
-119	J-385-56	2
-120	J-385-38	2
-121	K-390-38	2
-122	K-390-12	2
-123ASG	L-395-38	2
-124	L-395-12	2
-125	AA-426-38	2
-126	BB-423-06	2
-127	BB-418-38	2
-128	C-340-38	1 and 2
-129	D-351-38	2
-130	E-360-10	2
-131	E-357-56	2
-132	F-366-56	2

MS-20659 Type I Noninsulated		
MS-20659 Dash No.	Molex-ETC Order No.	Class
-133	G-374-12	2
-134	H-380-12	2
-135	H-380-12	2
-136	J-385-12	2
-137	L-398-78	2
-138	AA-420-04	2
-139	BB-423-04	2
-140	D-356-08	2
-141	D-350-14	2
-142	D-352-12	2
-143	E-358-12	2
-144	F-367-10	2
-145	F-369-12	2
-146ASG	G-375-10	2
-147	G-375-56	2
-148	G-374-76	2
-149	H-381-56	2
-150	H-380-76	2
-151	H-381-56	2
-152	H-380-76	2
-153	J-385-14	2
-154	J-385-76	2
-155ASG	K-390-56	2
-156		2
-158		2
-159	L-395-58	2
-160		2
-161	AA-426-56	2
-163	BB-418-56	2
-165	C-336-06	2
-166	C-301-12	2

MS-25036 Type II Insulated		
MS-25036 Dash No.	Molex-ETC Order No.	Class
-101	AA-820-06	1 and 2
-102	AA-832-06	1 and 2
-103	AA-821-10	1 and 2
-104	AA-822-56	1 and 2
-105	AA-826-38	1 and 2
-106	BB-823-06	1 and 2
-107	BB-837-06	1 and 2
-108	BB-837-10	1 and 2
-109	BB-825-56	1 and 2
-110	BB-818-38	1 and 2
-111	C-828-06	1 and 2
-112	C-828-10	1 and 2
-113	C-830-56	1 and 2
-114	C-840-38	1 and 2
-115ASG	D-750-10	2
-116	D-750-14	2
-117	D-751-56	2
-118	D-751-38	2
-119	E-760-10	2
-120	E-760-14	2
-121	E-757-56	2
-122	E-757-38	2
-123	F-767-14	2
-124	F-766-56	2
-125	F-766-38	2
-126	G-775-14	2
-127	G-775-38	2

MS-25036 Type II Insulated		
MS-25036 Dash No.	Molex-ETC Order No.	Class
-128	G-774-12	2
-129	H-781-14	2
-130	H-781-38	2
-131	H-780-12	2
-132	H-781-14	2
-133	H-781-38	2
-134	H-780-12	2
-135	J-785-56	2
-136	J-385-38	2
-137		2
-138	K-790-38	2
-139	K-790-12	2
-140		2
-141	L-795-12	2
-143	M-8114-02	2
-144	M-8113-04	2
-145	M-8118-06	2
-146	M-8118-08	2
-147	M-8118-10	2
-148	AA-820-04	1 and 2
-149	AA-821-08	1 and 2
-150	AA-822-14	1 and 2
-152	BB-823-04	1 and 2
-153	BB-837-08	1 and 2
-154	BB-825-14	1 and 2
-156	C-828-08	1 and 2
-157	C-830-14	1 and 2
-159	AA-820-02	1 and 2

WINDOW BUTT SPLICES/MIL-T-7928/5

Window butt splices have military approval to withstand the most harsh environments. The window guarantees proper wire insertion and crimp tool alignment. They are nylon insulated and have an insulation grip that provides superior strain relief.

MS-7928/5 Dash No.	Molex-ETC Order No.
-3	WA-840
-4	WB-841
-5	WC-842