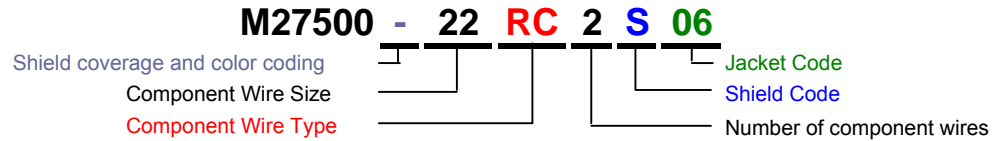


M27500 Basic Wire Specifications



Component Wire Codes

(The Code is attached to the Mil-Spec Number for it's component wire style)

<i>Sorted By Mil-Spec Number of Component Wires</i>							
A	MIL-W-5086/1 ¹	CA	MIL-W-22759/13	SP	MIL-W-22759/43	MF	MIL-W-81044/7
B	MIL-W-5086/2 ^{1 2}	CB	MIL-W-22759/14	SR	MIL-W-22759/44	MG	MIL-W-81044/8 ³
C	MIL-W-5086/3 ^{1 2}	CC	MIL-W-22759/15	SS	MIL-W-22759/45	MH	MIL-W-81044/9
P	MIL-W-5086/4 ¹	TE	MIL-W-22759/16	ST	MIL-W-22759/46	MJ	MIL-W-81044/10
AA	MIL-W-5086/5 ¹	TF	MIL-W-22759/17	WB	MIL-W-22759/80	MK	MIL-W-81044/11 ³
AB	MIL-W-5086/6 ¹	TG	MIL-W-22759/18	WC	MIL-W-22759/81 ³	ML	MIL-W-81044/12
AD	MIL-W-5086/7 ¹	TH	MIL-W-22759/19	WE	MIL-W-22759/82 ³	MM	MIL-W-81044/13
H	MIL-W-8777,MS25471	TK	MIL-W-22759/20	WF	MIL-W-22759/83 ³	MR	MIL-W-81381/7 ³
F	MIL-W-8777,MS 27110	TL	MIL-W-22759/21	WG	MIL-W-22759/84 ³	MS	MIL-W-81381/8 ³
EA	MIL-W-22759/1	TM	MIL-W-22759/22	WH	MIL-W-22759/85 ³	MT	MIL-W-81381/9 ³
EA	MIL-W-22759/2	TN	MIL-W-22759/23	WJ	MIL-W-22759/86 ³	MV	MIL-W-81381/10 ³
RA	MIL-W-22759/3	JB	MIL-W-22759/28	WK	MIL-W-22759/87 ³	MW	MIL-W-81381/11 ³
RB	MIL-W-22759/4	JC	MIL-W-22759/29	WL	MIL-W-22759/88 ³	MY	MIL-W-81381/12 ³
VA	MIL-W-22759/5	JD	MIL-W-22759/30	WM	MIL-W-22759/89 ³	NA	MIL-W-81381/13 ³
WA	MIL-W-22759/6	JE	MIL-W-22759/31	WN	MIL-W-22759/90 ³	NB	MIL-W-81381/14 ³
SA	MIL-W-22759/7	SB	MIL-W-22759/32	WP	MIL-W-22759/91 ³	NE	MIL-W-81381/17 ³
TA	MIL-W-22759/8	SC	MIL-W-22759/33	WR	MIL-W-22759/92 ³	NF	MIL-W-81381/18 ³
LE	MIL-W-22759/9	SD	MIL-W-22759/34	JA	MIL-W-25038/3	NG	MIL-W-81381/19 ³
LH	MIL-W-22759/10	SE	MIL-W-22759/35	JF	MIL-W-25038/5	NH	MIL-W-81381/20 ³
RC	MIL-W-22759/11	SM	MIL-W-22759/41	MD	MIL-W-81044/5 ³	NK	MIL-W-81381/21 ³
RE	MIL-W-22759/12	SN	MIL-W-22759/42	ME	MIL-W-81044/6	NL	MIL-W-81381/22 ³

Sorted by Component Code							
A	MIL-W-5086/1 ¹	MD	MIL-W-81044/5 ³	NK	MIL-W-81381/21 ³	TG	MIL-W-22759/18
AA	MIL-W-5086/5 ¹	ME	MIL-W-81044/6	NL	MIL-W-81381/22 ³	TH	MIL-W-22759/19
AB	MIL-W-5086/6 ¹	MF	MIL-W-81044/7	P	MIL-W-5086/4 ¹	TK	MIL-W-22759/20
AD	MIL-W-5086/7 ¹	MG	MIL-W-81044/8 ³	RA	MIL-W-22759/3	TL	MIL-W-22759/21
B	MIL-W-5086/2 ^{1 2}	MH	MIL-W-81044/9	RB	MIL-W-22759/4	TM	MIL-W-22759/22
C	MIL-W-5086/3 ^{1 2}	MJ	MIL-W-81044/10	RC	MIL-W-22759/11	TN	MIL-W-22759/23
CA	MIL-W-22759/13	MK	MIL-W-81044/11 ³	RE	MIL-W-22759/12	VA	MIL-W-22759/5
CB	MIL-W-22759/14	ML	MIL-W-81044/12	SA	MIL-W-22759/7	WA	MIL-W-22759/6
CC	MIL-W-22759/15	MM	MIL-W-81044/13	SB	MIL-W-22759/32	WB	MIL-W-22759/80
EA	MIL-W-22759/1	MR	MIL-W-81381/7 ³	SC	MIL-W-22759/33	WC	MIL-W-22759/81 ³
EA	MIL-W-22759/2	MS	MIL-W-81381/8 ³	SD	MIL-W-22759/34	WE	MIL-W-22759/82 ³
F	MIL-W-8777,MS 27110	MT	MIL-W-81381/9 ³	SE	MIL-W-22759/35	WF	MIL-W-22759/83 ³
H	MIL-W-8777,MS25471	MV	MIL-W-81381/10 ³	SM	MIL-W-22759/41	WG	MIL-W-22759/84 ³
JA	MIL-W-25038/3	MW	MIL-W-81381/11 ³	SN	MIL-W-22759/42	WH	MIL-W-22759/85 ³
JB	MIL-W-22759/28	MY	MIL-W-81381/12 ³	SP	MIL-W-22759/43	WJ	MIL-W-22759/86 ³
JC	MIL-W-22759/29	NA	MIL-W-81381/13 ³	SR	MIL-W-22759/44	WK	MIL-W-22759/87 ³
JD	MIL-W-22759/30	NB	MIL-W-81381/14 ³	SS	MIL-W-22759/45	WL	MIL-W-22759/88 ³
JE	MIL-W-22759/31	NE	MIL-W-81381/17 ³	ST	MIL-W-22759/46	WM	MIL-W-22759/89 ³
JF	MIL-W-25038/5	NF	MIL-W-81381/18 ³	TA	MIL-W-22759/8	WN	MIL-W-22759/90 ³
LE	MIL-W-22759/9	NG	MIL-W-81381/19 ³	TE	MIL-W-22759/16	WP	MIL-W-22759/91 ³
LH	MIL-W-22759/10	NH	MIL-W-81381/20 ³	TF	MIL-W-22759/17	WR	MIL-W-22759/92 ³

¹ Not for use in aerospace applications.

² Inactive for new design.

³ Not for Naval Air Systems Command Usage

Shield Codes

(When both double shield and double jacket are specified, the inner jacket is between the two layers of shield.)

Letter Code		Description	Maximum temperature limit for shield material	
Single Shield	Double Shield		° C	° F
U	---	No Shield	N/A	N/A
T	V	Round, tin-coated copper	150	302
S	W	Round, silver-coated copper	200	392
N	Y	Round, nickel-coated copper	260	500
F	Z	Round, stainless steel	400	752
C	R	Round, heavy nickel-coated copper	400	752
M	K	Round, silver-coated high strength copper alloy	200	392
P	L	Round, nickel-coated high strength copper alloy	260	500
G	A	Flat, silver-coated copper	200	392
H	B	Flat, silver-coated high strength copper alloy	200	392
*	#	Flat, nickel-coated copper	260	500
J	D	Flat, tin-coated copper	150	302
E	X	Flat, nickel-coated high strength copper alloy	260	500

I	Q	Flat, nickel-chromium alloy	400	752
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Jacket Code

(Descriptions include jacket material and color)

Jacket Code		Description	Temperature limit for jacket material	
Single Jacket	Double Jacket		° C	° F
00	00	No Jacket	N/A	N/A
01	51 ¹	Extruded white polyvinylchloride (PVC)	90	194
02 ²	52 ²	Extruded clear polyamide in accordance with ASTM-D-4066	105	221
03	53	White Polyamide braid impregnated with clear polyamide finisher over polyester tape	105	221
04	54	Polyester braid impregnated with high temperature finishers over polyester tape	150	302
05	55	Extruded clear fluorinated ethylene propylene (FEP)	200	392
06	56	Extruded or taped and heat sealed white polytetrafluoroethylene (PTFE)	260	500
07	57	White polytetrafluoroethylene (PTFE) treated glass braid impregnated and coated with polytetrafluoroethylene finisher over presintered polytetrafluoroethylene tape	260	500
08 ³	58 ³	Cross-linked white extruded polyvinylidene fluoride (PVDF)	150	302
09	59	Extruded white fluorinated ethylene propylene (FEP)	200	392
10 ³	60 ³	Extruded clear polyvinylidene fluoride (PVDF)	125	257
11*	61*	Tape of natural polyimide combined with clear fluorinated ethylene propylene (FEP) wrapped and heat sealed with (FEP) outer surface	200	392
12*	62*	Tape of natural polyimide combined with fluorinated ethylene propylene (FEP) wrapped and heat sealed with polyimide outer surface	200	392
14	64	Extruded white ethylene-tetrafluoroethylene copolymer (ETFE)	150	302
15	65	Extruded clear ethylene-tetrafluoroethylene copolymer (ETFE)	150	302
16	66	Braid of aromatic polyamide with high temperature finisher over presintered polytetrafluoroethylene (PTFE) tape	200	392
17 ^a	67 ^a	Extruded white ethylene chlorotrifluoroethylene (ECTFE)	150	302
18 ^a	68 ^a	Extruded clear ethylene chlorotrifluoroethylene (ECTFE)	150	302
20	70	Extruded white perfluoroalkoxy (PFA)	260	500
21	71	Extruded clear perfluoroalkoxy (PFA)	260	500
22	72	Tape of polyimide combined with clear fluorinated ethylene propylene (FEP) wrapped and heat sealed with opaque polyimide outer surface	200	392
23	73	Extruded white cross-linked modified ethylene-tetrafluoroethylene copolymer (XLETFE)	200	392
24	74	Tape layer of white polytetrafluoroethylene (PTFE) wrapped over a tape layer of natural polyimide combined with FEP and heat sealed	200	392

¹ Polyvinylchloride (PVC) materials shall not be used for Aerospace application

² Jacket material 02/52 is not to be used for cables having a diameter of 0.251" (6.38mm) or greater

³ Jacket materials 08, 10, 58, and 60 are not to be used for cables having a diameter of 0.401" (10.19mm) or greater

Shield covering and color coding

(Color coding for M27500 cables is specified in conjunction with desired shield coverage.)

Color code for Shield Coverage of		M27500 terminology	Component wire identification method
85%	90%		
"_"	C	Preferred method, Table IIIA	White wires with colored stripes - stripe color per Table IIIA
F	H	Preferred method, Table IIIB	White wires with colored stripes - stripe color per Table IIIB
A	D	Optional method A, Table IIIA	Solid color wires - colors per Table IIIA
G	J	Optional method A, Table IIIB	Solid color wires - colors per Table IIIB
B	E	Optional method B, Table IIIC	Wires are all the same color (based on AWG size), per Table IIIC. Bands of a contrasting color are printed on each wire to denote wire number (circuit ID) per Table IIID.
K	M	Optional method C	Wires are all the same color (based on AWG size), per Table IIIC. Numbers in a contrasting color are printed on each wire to denote wire number (circuit ID).
L	N	Optional method D	White wires with numbers in a contrasting color printed on each wire to denote wire number (circuit ID).

Table IIIA Color Coding

- For "preferred method" color coding, color are stripes on white insulation (wire #1 has no stripe). Wires 11-15 have double stripes as indicated.
- For "optional method A" color coding, colors are solid insulation color. Wires 11-15 have a stripe in a lighter shade of the base color.

Wire Number														
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
White	Blue	Orange	Green	Red	Black	Yellow	Violet	Gray	Brown	Blue / Blue	Orange / Orange	Green / Green	Red / Red	Black / Black

Table IIIB Color Coding

- For "preferred method" color coding, colors are stripes on white inculation (wire #5 has no stripe), for wires 1-10. For wires 11-15, color pairs indicate insulation of the first color, with a stripe of the second color.
- For "optional method A" color coding, colors are solid insulation color, for wires 1-10. For wires 11-15, color pairs indicate insulation of the first color, with a stripe of the second color.
- For **either method** the color of the wire in a one-conductor cable is white.

Wire Number														
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Red	Blue	Yellow	Green	White	Black	Brown	Orange	Violet	Gray	Red / White	Blue / White	Yellow / White	Green/White	Black / White














Table IIIC Color Coding

- For "optional method B" color coding, wire insulation color is based on AWG size, with color bands per Table IIID to indicate wire number (circuit ID).
- For "optional method C" color coding, wire insulation color is based on AWG size, with numbers printed on each wire to indicate wire number (circuit ID).

AWG Size	Color	AWG Size	Color
26	Black	10	Brown
24	Blue	8	Red
22	Green	6	Blue
20	Red	4	Yellow
18	White	2	Red
16	Blue	1	White
14	Green	0	Blue
12	Yellow	00	Green

Table IIID Color Band Configuration

- For "optional method B" color coding, band groups as shown below are printed on wires to indicate wire number (circuit ID).

Wire Number	Band configuration	Wire Number	Band Configuration
1	None	9	1 wide, 2 narrow 
2	2 narrow 	10	1 wide, 3 narrow 
3	3 narrow 	11	1 wide, 4 narrow 
4	4 narrow 	12	1 wide, 5 narrow 
5	5 narrow 	13	2 wide, 1 narrow 
6	6 narrow 	14	2 wide, 2 narrow 
7	7 narrow 	15	2 wide, 3 narrow 
8	1 wide, 1 narrow 