

### UL 2919 MULTI-PAIRED OVERALL SHIELDED 24 GAGE (7 x 32) UL CLASSIFIED CL2

EIA RS-232, EIA RS-422 AND RS485

**DESCRIPTION:**

Twisted pairs of polyethylene insulated 24 AWG, seven strand tinned conductors, cabled with overall alum. mylar shield with 24 (7) AWG tinned copper drain wire; jacketed with flame retardant gray PVC, .032 inch nominal wall thickness; nominal mutual capacitance 12.5 pF/Ft, 100 ohm.

**TEMPERATURE RATING:** -20°C to +80°C

**APPLICATIONS:**

Polyethylene insulated and paired for low capacitance for extended distance peripheral interconnection, digital data communications systems utilizing balance circuits, or unbalanced circuits requiring superior capacitance matching, where overall RF shield isolation is necessary; Extended Distance Cable - recommended for use up to 200 feet

**COLOR CODE:**

See Chart 11, Back cover

† See Chart 12, Back cover

OLYMPIC NO.	NUMBER OF PAIRS	NOMINAL OVERALL DIAMETER	NOM. CAP. pF/ft**
9600	2	.264"	12.5
9601	3	.278"	12.5
9602	4	.300"	12.5
† 9604A	6	.353"	12.5
9605	7	.353"	12.5
† 9607A	9	.409"	12.5
† 9609A	12 + 1 single	.456"	12.5

### 22 GAGE SOLID CONDUCTORS UL CLASSIFIED CM

OLYMPIC NO.	U.L. STYLE NO.	NOM. D.C.R.		NO. OF PAIRS	NOM. O.D.	NOMINAL VEL OF PROP.	NOM. CAPACITANCE		
		CENTER COND.	SHIELD				pF/ft**	pF/ft**	pF/m**
6172	2668	22 (solid) tinned copper 16.1 Ω/M'	Alum. mylar w/ stranded drain wire 6.3 Ω/M'	2	.385"	78%	8.8	—	—

Black PVC jacket. Conductor color code: Black/yellow Red/blue  
TEMPERATURE RATING: -20°C to +60°C

### PAIRED CABLE/OVERALL FOIL SHIELD 24 GAGE, (7 x 32) UL CLASSIFIED CL2

**DESCRIPTION:**

Tinned copper, vinyl insulated, twisted pairs, overall aluminum mylar shield, 24 AWG stranded tinned copper drain wire, chrome vinyl jacket

**TEMPERATURE RATING:**

-20°C to +80°C

**COLOR CODE:**

See Chart 3, Page 94

\* See Chart 4, Page 94

OLYMPIC NO.	UL STYLE NO.	NO. OF PAIRS	NOM. WALL THICKNESS	NOM. JACKET THICKNESS	NOM. O.D.	SUGGESTED WORKING VOLTAGE	NOM. CAP. pF/ft**
2944	2464 (300V)	1	.010"	.032"	.156"	300	41
2945		2	.010"	.032"	.222"	300	30
2946		3	.010"	.032"	.232"	300	30
2947		4	.010"	.032"	.265"	300	30
2948		5	.010"	.035"	.280"	300	30
2949		6	.010"	.035"	.295"	300	30
2950		7	.010"	.035"	.300"	300	30
2951		8	.010"	.035"	.330"	300	30
2952		9	.010"	.035"	.340"	300	30
2953		S-R PVC	10	.010"	.040"	.380"	300
2954	15		.010"	.040"	.425"	300	30
2955	19		.010"	.040"	.450"	300	30
2956	25		.010"	.045"	.515"	300	30
* 2957	50		.010"	.050"	.700"	300	30

Passes the VW-1 (Fr-1) vertical flame test

\*\* Capacitance between conductors

#### CHART No. 1

##### CONDUCTOR COLOR

1st	Black
2nd	White
3rd	Red
4th	Green
5th	Brown
6th	Blue
7th	Orange
8th	Yellow
9th	Purple
10th	Gray
11th	Pink
12th	Tan

#### CHART No. 1a

##### PAIR COLORS

1	White/White/Black
2	White/White/Red
3	White/White/Green
4	White/White/Blue

#### CHART No. 2: IPCEA COLOR CODE (NECKI) (Insulated Power Cable Engineers Association)

CONDUCTOR	COLOR	CONDUCTOR	COLOR	CONDUCTOR	COLOR
1st	Black	18th	Orange/Red	35th	Wht/Red/Org
2nd	White	19th	Blue/Red	36th	Org/Wht/Blue
3rd	Red	20th	Red/Green	37th	Wht/Red/Blue
4th	Green	21st	Orange/Green	38th	Blk/Wht/Grn
5th	Orange	22nd	Blk/Wht/Red	39th	Wht/Blk/Grn
6th	Blue	23rd	Wht/Blk/Red	40th	Red/Wht/Grn
7th	White/Black	24th	Red/Blk/Wht	41st	Grn/Wht/Blue
8th	Red/Black	25th	Grn/Blk/Wht	42nd	Org/Red/Grn
9th	Green/Black	26th	Org/Blk/Wht	43rd	Blue/Red/Grn
10th	Orange/Black	27th	Blue/Blk/Wht	44th	Blk/Wht/Blue
11th	Blue/Black	28th	Blk/Red/Grn	45th	Wht/Blk/Blue
12th	Black/White	29th	Wht/Red/Grn	46th	Red/Wht/Blue
13th	Red/White	30th	Red/Blk/Grn	47th	Grn/Org/Red
14th	Green/White	31st	Grn/Blk/Org	48th	Org/Red/Blue
15th	Blue/White	32nd	Org/Blk/Grn	49th	Blue/Red/Org
16th	Black/Red	33rd	Blue/Wht/Org	50th	Blk/Org/Red
17th	White/Red	34th	Blk/Wht/Org		

#### CHART No. 3 : PAIRED CABLES

PAIR NO.	COLOR COMBINATION	PAIR NO.	COLOR COMBINATION	PAIR NO.	COLOR COMBINATION	PAIR NO.	COLOR COMBINATION
1	Black paired with Red	11	Red paired with Yellow	21	White paired with Brown	31	Purple paired with White
2	Black paired with White	12	Red paired with Brown	22	White paired with Orange	32	Purple paired with Dark Grn
3	Black paired with Green	13	Red paired with Orange	23	Blue paired with Yellow	33	Purple paired with Lt. Blue
4	Black paired with Blue	14	Green paired with White	24	Blue paired with Brown	34	Purple paired with Yellow
5	Black paired with Yellow	15	Green paired with Blue	25	Blue paired with Orange	35	Purple paired with Brown
6	Black paired with Brown	16	Green paired with Yellow	26	Brown paired with Yellow	36	Purple paired with Black
7	Black paired with Orange	17	Green paired with Brown	27	Brown paired with Orange	37	Gray paired with White
8	Red paired with White	18	Green paired with Orange	28	Orange paired with Yellow		
9	Red paired with Green	19	White paired with Blue	29	Purple paired with Orange		
10	Red paired with Blue	20	White paired with Yellow	30	Purple paired with Red		

#### CHART No. 4 : MULTIPAIR CABLES

PAIR NO.	COLOR COMBINATION	PAIR NO.	COLOR COMBINATION	PAIR NO.	COLOR COMBINATION
1	Blue paired with White	18	Brown/White striped paired with White	35	Green/White striped paired with Red
2	Orange paired with White	19	Brown/Slate striped paired with White	36	Green/Brown striped paired with Red
3	Green paired with White	20	Slate/White striped paired with White	37	Green/Slate striped paired with Red
4	Brown paired with White	21	Blue paired with Red	38	Brown/White striped paired with Red
5	Slate paired with White	22	Orange paired with Red	39	Brown/Slate striped paired with Red
6	Blue/White striped paired with White	23	Green paired with Red	40	Slate/White striped paired with Red
7	Blue/Orange striped paired with White	24	Brown paired with Red	41	Blue paired with Black
8	Blue/Green striped paired with White	25	Slate paired with Red	42	Orange paired with Black
9	Blue/Brown striped paired with White	26	Blue/White striped paired with Red	43	Green paired with Black
10	Blue/Slate striped paired with White	27	Blue/Orange striped paired with Red	44	Brown paired with Black
11	Orange/White striped paired with White	28	Blue/Green striped paired with Red	45	Slate paired with Black
12	Orange/Green striped paired with White	29	Blue/Brown striped paired with Red	46	Blue/White striped paired with Black
13	Orange/Brown striped paired with White	30	Blue/Slate striped paired with Red	47	Blue/Orange striped paired with Black
14	Orange/Slate striped paired with White	31	Orange/White striped paired with Red	48	Blue/Green striped paired with Black
15	Green/White striped paired with White	32	Orange/Green striped paired with Red	49	Blue/Brown striped paired with Black
16	Green/Brown striped paired with White	33	Orange/Brown striped paired with Red	50	Blue/Slate striped paired with Black
17	Green/Slate striped paired with White	34	Orange/Slate striped paired with Red	51	Orange/White striped paired with Black

## CHART No. 9 Standard Telephone Color Coding

### TIP AND RING BAND MARKING COLOR CODE

**Color Coding:** Individual pairs are color coded by using solid colored wires or by applying colored bands of contrasting color to solid colored wires. Color combinations are such that each wire is banded with the color of its mate (e.g., in a blue and white pair, the blue wire has a white band and the white wire has a blue band). The band marked color code is shown in the table below.

### Pair Color Code

PAIR NO.	TIP	RING	PAIR NO.	TIP	RING
1	White-Blue	Blue-White	14	Black-Brown	Brown-Black
2	White-Orange	Orange-White	15	Black-Slate	Slate-Black
3	White-Green	Green-White	16	Yellow-Blue	Blue-Yellow
4	White-Brown	Brown-White	17	Yellow-Orange	Orange-Yellow
5	White-Slate	Slate-White	18	Yellow-Green	Green-Yellow
6	Red-Blue	Blue-Red	19	Yellow-Brown	Brown-Yellow
7	Red-Orange	Orange-Red	20	Yellow-Slate	Slate-Yellow
8	Red-Green	Green-Red	21	Violet-Blue	Blue-Violet
9	Red-Brown	Brown-Red	22	Violet-Orange	Orange-Violet
10	Red-Slate	Slate-Red	23	Violet-Green	Green-Violet
11	Black-Blue	Blue-Black	24	Violet-Brown	Brown-Violet
12	Black-Orange	Orange-Black	25	Violet-Slate	Slate-Violet
13	Black-Green	Green-Black			

**Cable Assembly:** In cables having 25 pairs or less, the twisted pairs are assembled to form a substantially cylindrical core. In cables having more than 25 pairs, the pairs are arranged in groups, each containing a maximum of 25 pairs, each group with similar colors but wrapped with distinctively colored binder threads to permit distinction between groups. Binder thread color codes are shown in the table below.

### Binder Thread Color Code

BINDER NO.	BINDER COLOR	BINDER NO.	BINDER COLOR
1	White-Blue	3	White-Green
2	White-Orange	4	White-Brown

## CHART No. 10\*

\* Color code repeats after 36 conductors

CON NO.	INSUL. COLOR	STRIPE COLOR	CON NO.	INSUL. COLOR	STRIPE COLOR	CON NO.	INSUL. COLOR	STRIPE COLOR
1	Black	—	13	Blue	Red	25	Yellow	Orange
2	Red	—	14	Orange	Red	26	Brown	Orange
3	Blue	—	15	Yellow	Red	27	Black	Yellow
4	Orange	—	16	Brown	Red	28	Red	Yellow
5	Yellow	—	17	Black	Blue	29	Blue	Yellow
6	Brown	—	18	Red	Blue	30	Orange	Yellow
7	Red	Black	19	Orange	Blue	31	Brown	Yellow
8	Blue	Black	20	Yellow	Blue	32	Black	Brown
9	Orange	Black	21	Brown	Blue	33	Red	Brown
10	Yellow	Black	22	Black	Orange	34	Blue	Brown
11	Brown	Black	23	Red	Orange	35	Orange	Brown
12	Black	Red	24	Blue	Orange	36	Yellow	Brown

### CHART No. 11

Pair #1. Black Yellow	Pair #5. Black/White White/Black	Pair #9. Yellow/White White/Yellow
Pair #2. Red Violet	Pair #6. Brown/White White/Brown	Pair #10. Green/White White/Green
Pair #3. Blue Brown	Pair #7. Red/White White/Red	Pair #11. Blue/White White/Blue
Pair #4. Orange Green	Pair #8. Orange/White White/Orange	Pair #12. Violet/White White/Violet Plus one: Green/Yellow

### CHART No. 12

1. Black paired with Black/White
  2. White paired with White/Black
  3. Red paired with White/Red
  4. Green paired with White/Green
  5. Brown paired with White/Brown
  6. Blue paired with White/Blue
  7. Orange paired with White/Orange
  8. Yellow paired with White/Yellow
  9. Violet paired with White/Violet
  10. Gray paired with White/Gray
  11. Pink paired with White/Pink
  12. Tan paired with White/Tan
- Single: Green/Yellow