

IMSA Spec Cable & Wire

Since, 1896, the International Municipal Signal Association (IMSA) has been concerned with many aspects of governmental public safety, communications and signaling. The majority of its members are municipal, county, state/provincial and federal officials and employees located throughout the United States and Canada.

The development of a series of electrical cable and wire specifications is one of the many services provided by IMSA. These specifications assure specifying engineers, purchasers and users that they are receiving quality cable and wire that will perform reliably within the application scope of each specification.

The cable constructions offer maximum resistance to moisture and weathering and are primarily designed for outside installations, including aerial, underground duct, and direct earth burial. They are also excellent options for industrial and other users when selecting control and communications cables for outside installations.

For more information on IMSA cable specifications, see the *IMSA Primer* in the Appendix Section.

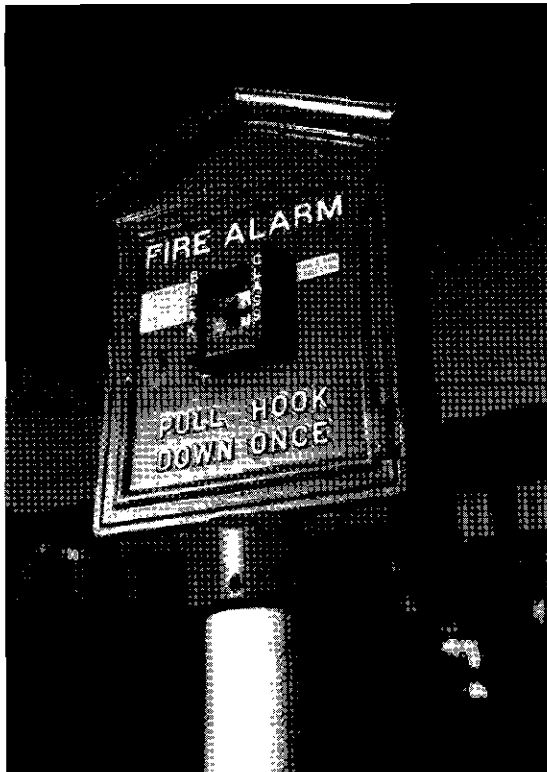


Table 5.1

Straight Conductor Color Code

Cables having more than 21 conductors are identifiable by their location in the concentric layers in the cable assembly.

Conductor Number	Insulation Color	Stripe Color
1	Black	-
2	White	-
3	Red	-
4	Green	-
5	Orange	-
6	Blue	-
7	White	Black
8	Red	Black
9	Green	Black
10	Orange	Black
11	Blue	Black
12	Black	White
13	Red	White
14	Green	White
15	Blue	White
16	Black	Red
17	White	Red
18	Orange	Red
19	Blue	Red
20	Red	Green
21	Orange	Green

Table 5.2

Twisted Pair Color Code

Cables containing more than 25 pairs are identifiable by color-coded binding tapes.

Pair Number	Tip Color	Ring Color
1	White	Blue
2	White	Orange
3	White	Green
4	White	Brown
5	White	Slate
6	Red	Blue
7	Red	Orange
8	Red	Green
9	Red	Brown
10	Red	Slate
11	Black	Blue
12	Black	Orange
13	Black	Green
14	Black	Brown
15	Black	Slate
16	Yellow	Blue
17	Yellow	Orange
18	Yellow	Green
19	Yellow	Brown
20	Yellow	Slate
21	Violet	Blue
22	Violet	Orange
23	Violet	Green
24	Violet	Brown
25	Violet	Slate

Current IMSA Signal and Communications Cable Specifications

Spec. No.	Voltage Rating	Conductor Application	Type Installation	Configuration	Design Features
19-1	600	Signal	Aerial, Duct	Straight	PVC outer jacket
19-2	600	Signal Communications	Aerial, Duct	Twisted Pairs	PVC outer jacket Shielded
19-3	600	Signal Self-Supporting	Figure 8 Aerial	Straight	PVC outer jacket Integrated messenger
19-4	600	Signal Communications	Figure 8 Aerial Self-Supporting	Twisted Pairs	PVC outer jacket Shielded Integrated messenger
19-5	600	Signal	Direct Earth Burial	Straight	PVC outer jacket Shielded Double jacketed
19-6	600	Signal Communications	Direct Earth Burial	Twisted Pairs	PVC outer jacket Shielded Double jacketed
20-1	600	Signal	Aerial, Duct	Straight	PE outer jacket
20-2	600	Signal Communications	Aerial, Duct	Twisted Pairs	PE outer jacket Shielded
20-3	600	Signal	Figure 8 Aerial Self-Supporting	Straight	Polyethylene outer jacket Integrated messenger
20-4	600	Signal Communications	Figure 8 Aerial Self-Supporting	Twisted Pairs	PE outer jacket Shielded Integrated messenger
20-5	600	Signal	Direct Earth Burial	Straight	Polyethylene outer jacket Shielded Double jacketed
20-6	600	Signal Communications	Direct Earth Burial	Twisted Pairs	PE outer jacket Shielded Double jacketed
26-3	N/A Signal	Alarm Self-Supporting	Aerial Hard-drawn Copper	Single	Black PE Insulation
28-3	N/A Signal	Alarm Self-Supporting	Aerial Copper-Clad Steel	Single	Black PE Insulation
29-1	600 Signal	Alarm Self-Supporting	Aerial, Hard-drawn Copper	Parallel	Black PE Insulation
29-2	600 Signal	Alarm Self-Supporting	Aerial, Copper-Clad Steel	Parallel	Black PE Insulation
29-3	600 Signal	Alarm Self-Supporting	Aerial, Hard-drawn Copper	Parallel Black PE Insulation	RED PVC outer jacket
29-4	600 Signal	Alarm Self-Supporting	Aerial, Copper-Clad Steel	Parallel Black PE Insulation	RED PVC outer jacket
39-2	300	Communications	Aerial, Duct	Twisted Pairs	PVC outer jacket Shielded