How to Select a Wire Marker

There are four main questions to ask yourself when you're starting the process of marking wires. These questions will help you select a wire marker that best suits your needs.

1. Are you marking the wire after termination?

Sleeve markers can only be used before termination because they must be slipped over the open end of the wire. These non-adhesive markers provide flexibility as they can be moved prior to being heat-shrunk. Once shrunk, these markers fit snugly around wires for permanent identification which will stand up to harsh environments.

2. What gauge wire are you marking?

The size of the wire determines the diameter of the sleeve or the height of the label to be used.

3. Will you print your own markers or purchase preprinted ones?

Preprinted markers are available in a large variety of stock legends, and custom legends are available for any large jobs. These markers come in a variety of packaging and formats for ease of use and ease of transport. They are ideal for any application.

Printable markers are meant to be printed with variable legends as needed. Various methods for this include: portable wire marking printers or computer software linked to thermal transfer, dot matrix, laser or ink-jet printers. An extensive array of sizes are available for every application. These printable markers offer the flexibility of printing legends on demand. They are also ideal for applications that require long legends.

4. In what type of environment will these wire markers be placed?

It is extremely important to select a wire marker material that will last for your application. Too many companies go to the trouble of marking only to have to do it all again because they did not select the correct material. Be sure to ask yourself these questions before you select your wire marker:

Does it need to withstand contact with oil, water, chemicals or solvents?

- Are there self-extinguishing properties or requirements?
- Will the marking be exposed to high temperatures?
- Any industry or special specification requirements?
- Should it withstand dirt and environmental factors?

How to Select a Marker Size

Brady offers a variety of marker sizes for your wire marking needs. Please view the charts listed below to assist you in choosing the minimum recommended label height for your specific type of wire or cable that you are identifying.

Size AWG.	O.D. mm (inch)	Circumference mm (inch)	Minimum Recommended Label Height mm (inch)
Type THW Wire O.D.			
18	2.74 (0.108)	2.64 (0.34)	12.70 (0.500)
16	3.00 (0.118)	9.42 (0.37)	12.70 (0.500)
14	4.11 (0.162)	12.91 (0.51)	19.05 (0.750)
12	4.55 (0.179)	14.29 (0.56)	25.40 (1.000)
10	5.05 (0.199)	15.86 (0.63)	25.40 (1.000)
8	7.01 (0.276)	22.01 (0.87)	38.10 (1.500)
6	8.20 (0.323)	25.75 (1.02)	38.10 (1.500)
4	9.45 (0.372)	29.67 (1.17)	44.45 (1.750)
3	10.19 (0.401)	32.00 (1.26)	50.80 (2.000)
2	11.00 (0.433)	34.54 (1.36)	50.80 (2.000)
1	12.90 (0.508)	40.51 (1.60)	63.50 (2.500)
1/0	13.95 (0.549)	43.80 (1.72)	63.50 (2.500)
2/0	15.11 (0.595)	47.45 (1.87)	76.20 (3.000)
3/0	16.43 (0.647)	51.59 (2.03)	76.20 (3.000)
4/0	17.91 (0.705)	56.24 (2.21)	88.90 (3.500)
Type THHN Wire O.D.			
18	2.26 (0.089)	7.10 (0.28)	12.70 (0.500)
16	2.54 (0.100)	7.98 (0.31)	12.70 (0.500)
14	2.67 (0.105)	8.38 (0.33)	12.70 (0.500)
12	3.10 (0.122)	9.73 (0.38)	12.70 (0.500)
10	3.89 (0.153)	12.21 (0.48)	19.05 (0.750)
8	5.54 (0.218)	17.40 (0.68)	25.40 (1.000)
6	6.53 (0.257)	20.50 (0.81)	31.75 (1.250)
4	8.33 (0.328)	26.16 (1.03)	38.10 (1.500)
3	9.04 (0.356)	28.39 (1.12)	44.45 (1.750)
2	9.86 (0.388)	30.96 (1.22)	50.80 (2.000)
1	11.43 (0.450)	35.89 (1.41)	57.15 (2.250)
1/0	12.47 (0.491)	36.16 (1.54)	63.50 (2.500)
2/0	13.64 (0.537)	42.83 (1.69)	63.50 (2.500)
3/0	14.94 (0.588)	46.91 (1.85)	69.85 (2.750)
4/0	16.41 (0.646)	51.53 (2.03)	76.20 (3.000)
Type PVC Wire O.D.			
22	1.57 (0.062)	4.93 (0.19)	7.62 (0.300)
20	1.75 (0.069)	5.50 (0.22)	7.62 (0.300)
18	2.00 (0.079)	6.28 (0.25)	12.70 (0.500)
16	2.34 (0.092)	7.53 (0.29)	12.70 (0.500)
14	3.50 (0.138)	10.99 (0.43)	19.05 (0.750)
12	4.01 (0.158)	12.59 (0.50)	19.05 (0.750)
10	4.65 (0.183)	14.60 (0.57)	25.40 (1.000)
8	6.35 (0.250)	19.94 (0.79)	31.75 (1.250)
Type Teflon Wire O.D.			
22	1.52 (0.060)	4.77 (0.19)	7.62 (0.300)
20	1.73 (0.068)	5.43 (0.21)	7.62 (0.300)
18	2.01 (0.079)	6.31 (0.25)	12.70 (0.500)
16	2.26 (0.089)	7.10 (0.28)	12.70 (0.500)

Approx. wire gauge based on AWG for THHN wire.

IP Series, PR Plus & BBP72 Print Ribbons on page 134
Full Material Properties on page 227.