

## SHEATH BONDING AND GROUNDING

The following tables present sheath resistance data for nVent PYROTENAX System 1850 MI cables. Resistance values are given in ohms per thousand feet at 25°C (77°F). The last column in each table lists the equivalent grounding conductor size based on the sheath resistance.

Both the Canadian Electrical Code (Rule 10-804) and the National Electrical Code (Section 250.118(9) and Section 332.108) allow the sheath of copper sheathed mineral insulated cables to be employed as an equipment grounding conductor.

**TABLE 1 SINGLE CONDUCTOR CABLE**

Cable reference	Conductor size (AWG/kcmil)	Nominal sheath resistance (ohms per 1000 ft)	Equivalent grounding conductor size (AWG)
1/14-230	14	0.706	10
1/12-246	12	0.618	8
1/10-277	10	0.562	8
1/8-298	8	0.438	8
1/6-340	6	0.355	6
1/4-402	4	0.222	4
1/3-449	3	0.179	3
1/2-449	2	0.171	3
1/1-496	1	0.147	2
1/1/0-512	1/0	0.149	2
1/2/0-580	2/0	0.117	1
1/3/0-621	3/0	0.093	1/0
1/4/0-684	4/0	0.103	1/0
1/250-746	250	0.087	1/0
1/350-834	350	0.102	1/0
1/500-1000	500	0.073	2/0

**TABLE 2 TWO CONDUCTOR CABLE**

Cable reference	Conductor size (AWG)	Nominal sheath resistance (ohms per 1000 ft)	Equivalent grounding conductor size (AWG)
2/14-371	14	0.327	6
2/12-402	12	0.247	4
2/10-449	10	0.242	4
2/8-512	8	0.188	3
2/6-590	6	0.142	2
2/4-684	4	0.116	1
2/3-768	3	0.092	1/0
2/2-865	2	0.071	2/0
2/1-975	1	0.057	3/0

**TABLE 3 THREE CONDUCTOR CABLE**

Cable reference	Conductor size (AWG)	Nominal sheath resistance (ohms per 1000 ft)	Equivalent grounding conductor size (AWG)
3/14-387	14	0.231	4
3/12-480	12	0.140	2
3/10-480	10	0.140	2
3/8-590	8	0.104	1/0
3/6-621	6	0.102	1/0
3/4-746	4	0.071	2/0
3/3-834	3	0.057	3/0

**TABLE 4 FOUR CONDUCTOR CABLE**

Cable reference	Conductor size (AWG)	Nominal sheath resistance (ohms per 1000 ft)	Equivalent grounding conductor size (AWG)
4/14-465	14	0.155	2
4/12-465	12	0.217	4
4/10-590	10	0.117	1
4/8-590	8	0.117	1
4/6-730	6	0.075	2/0

**TABLE 5 SEVEN CONDUCTOR CABLE**

Cable reference	Conductor size (AWG)	Nominal sheath resistance (ohms per 1000 ft)	Equivalent grounding conductor size (AWG)
7/14-496	14	0.168	2
7/12-543	12	0.123	1
7/10-621	10	0.102	1/0
7/8-710	8	0.075	2/0

**North America**

Tel +1.800.545.6258  
 Fax +1.800.527.5703  
[thermal.info@nvent.com](mailto:thermal.info@nvent.com)

**Europe, Middle East, Africa**

Tel +32.16.213.511  
 Fax +32.16.213.604  
[thermal.info@nvent.com](mailto:thermal.info@nvent.com)

**Asia Pacific**

Tel +86.21.2412.1688  
 Fax +86.21.5426.3167  
[cn.thermal.info@nvent.com](mailto:cn.thermal.info@nvent.com)

**Latin America**

Tel +1.713.868.4800  
 Fax +1.713.868.2333  
[thermal.info@nvent.com](mailto:thermal.info@nvent.com)



[nVent.com](http://nVent.com)

Our powerful portfolio of brands:

**CADDY ERICO HOFFMAN RAYCHEM SCHROFF TRACER**