ONE Speaker Cable Guide

kordz®
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Speaker Cable Options, Q1'2018				Jacket Material		Jacket Colour		
Model	Configuration	Cross Section to scale	Spool Length metre-marked	LSZH	UL CL3	Purple	Yellow	Charcoal
ONE-SP122	12AWG (65 strands) 2 core OFC 7.5±0.2mm OD		152.5m 500ft	✓		✓	✓	2
ONE-SP142	14AWG (82 strands) 2 core OFC 7.5±0.2mm OD		152.5m 500ft	✓		✓	✓	2
ONE-SP144	14AWG (82 strands) 4 core OFC 8.8±0.2mm OD		152.5m 500ft	✓	1	✓	✓	2
ONE-SP162	16AWG (65 strands) 2 core OFC 6.0±0.2mm OD		305m 1000ft	✓		✓	✓	2
ONE-SP164	16AWG (65 strands) 4 core OFC 7.0±0.2mm OD		152.5m 500ft	✓	1	✓	✓	2

Internal Conductor Colours		
Model	Pair A	Pair B
2 core	Black, Red	—
4 core	Black, Red	Green, White

[1] Available special order, minimums apply

[2] Coming soon

- All models in plastic spool box 340H x 265W x 335D (mm).
- 12 cartons per pallet layer, maximum 3 layers per pallet.

 B-A6-EN-201808

Speaker Cable Reference

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Selected American Wire Gauge (AWG) Conductor Sizes					
Conductors	**10AWG**	**12AWG**	**14AWG**	**16AWG**	**18AWG**
Cross-section (actual size)					
Diameter (mm)	2.588	2.053	1.628	1.291	1.024
Area (mm^2)	5.261	3.309	2.081	1.309	0.823

Formulae

$$d = 0.127mm \times 92^{\frac{36-AWG}{39}}$$

$$A = \pi \times \left(\frac{d}{2}\right)^2$$

For inches, substitute 0.127mm with 0.005in

Note: Dimensions in above table are for solid cores. ONE-SP speaker cables use multiple strands to achieve the same cross-sectional area of conductor material. Therefore real-world stranded diameters and areas are approximately 5% and 10% larger, respectively.

ONE-SP Electrical Characteristics - Power loss by cable length

Cable Gauge	4Ω Speaker				8Ω Speaker				16Ω Speaker			
	10m 32ft	20m 65ft	40m 131ft	80m 262ft	10m 32ft	20m 65ft	40m 131ft	80m 262ft	10m 32ft	20m 65ft	40m 131ft	80m 262ft
16AWG	6%	12%	22%	35%	3%	6%	12%	22%	2%	3%	6%	12%
14AWG	4%	8%	15%	26%	2%	4%	8%	15%	1%	2%	4%	8%
12AWG	3%	5%	10%	18%	1%	3%	5%	10%	<1%	1%	3%	5%

Above figures are based on copper resistivity at 20°C (68°F). Resistivity and cable power loss both increase with temperature. For example, driving a 4Ω speaker over 80m of 16AWG cable loses 35% power (-1.9dB) at 20°C (68°F) and 39% (-2.1dB) at 75°C (167°F).

16AWG ≤ 13.7 Ω/km
14AWG ≤ 8.62 Ω/km
12AWG ≤ 5.64 Ω/km

Power loss % to dB conversion	5%	10%	15%	20%	25%	30%	35%	40%
	-0.2dB	-0.5dB	-0.7dB	-1.0dB	-1.2dB	-1.5dB	-1.9dB	-2.2dB

Compliance

Low Smoke Zero Halogen (LSZH)
Uses materials to aid human safety in the event of fire. Low smoke emission aids visibility and breathability during evacuation. Zero halogens are released when the cable is subjected to high heat sources and combustion, preventing the formation of toxic and corrosive gases.
CPR Declared Performance:
Eca (EN 50575:2014+A1:2016)

UL CL3
Uses materials to prevent fire propagation via the cable in the event of fire. CL3 is a general pupose standard suitable for vertical trays but **not** for more demanding situations such as risers and tunnels.