

Voltage EX1010
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Pronunciation [edit]

AWG is colloquially referred to as *gauge* and the zeros in large wire sizes are referred to as *aught* /ɔːt/. Wire sized 1 AWG is referred to as "one gauge" or "No. 1" wire; similarly, smaller diameters are pronounced "x gauge" or "No. X" wire, where x is the positive integer AWG number. Consecutive AWG wire sizes larger than No. 1 wire are designated by the number of zeros:

- No. 0, typically written 1/0 and is referred to as "one aught" wire
- No. 00, typically written 2/0 and is referred to as "two aught" wire
- No. 000, typically written 3/0 and is referred to as "three aught" wire,

and so on. ^[10]

See also [edit]

- IEC 60228 for international standard wire sizes
- Standard wire gauge (former British standard)
- A chart comparing all known wire gauges (PDF)
- Number 8 wire, a term used in the New Zealand vernacular
- Stubs Iron Wire Gauge
- Electric power distribution
- Electrical wiring
- Cable
- Power cord
- Extension cord
- Magnet wire
- Body jewelry sizes

References [edit]

- ↑ *ASTM Standard B 258-02, Standard specification for standard nominal diameters and cross-sectional areas of AWG sizes of solid round wires used as electrical conductors*, ASTM International, 2002
- ↑ SteelNavel.com Body Piercing Jewelry Size Reference — illustrating the different ways that size is measured on different kinds of jewelry
- ↑ The logarithm to the base 92 can be computed using any other logarithm, such as common or natural logarithm, using

log

92

⁡
x
=
(
log
⁡
x
)
/
(
log
⁡
92
)

.
- ↑ ASTM Standard B 258-02, page 4
- ↑ The result is roughly 2.0050, or one-quarter of one percent higher than 2
- ↑ Figure for solid copper wire at 68 °F, computed based on 100% IACS conductivity of 58.0 MS/m, which agrees with multiple sources:
 - http://www.eskimo.com/~billb/tesla/wire1.txt
 - Mark Lund, PowerStream Inc., *American Wire Gauge table and AWG Electrical Current Load Limits* , retrieved 2008-05-02 (although the ft/m conversion seems slightly erroneous)
 - Belden Master Catalog , 2006, although data from there for gauges 35 and 37–40 seems obviously wrong.High-purity oxygen-free copper can achieve up to 101.5% IACS conductivity; e.g., the Kanthal conductive alloys data sheet lists slightly lower resistances than this table.
- ↑ *NFPA 70 National Electrical Code 2008 Edition* . Table 310.16 page 70-148, *Allowable ampacities of insulated conductors rated 0 through 2000 volts, 60°C through 90°C, not more than three current-carrying conductors in raceway, cable, or earth (directly buried) based on ambient temperature of 30°C*. Extracts from *NFPA 70* do not represent the full position of *NFPA* and the original complete Code must be consulted. In particular, the maximum permissible overcurrent protection devices may set a lower limit.
- ↑ Computed using equations from H. Wayne Beaty; Donald G. Fink, eds. (2007), *The Standard Handbook for Electrical Engineers* (15th ed.), McGraw Hill, pp. 4–25, ISBN 0-07-144146-8
- ↑ Douglas Brooks (December 1998), "Fusing Current: When Traces Melt Without a Trace" , *Printed Circuit Design* **15** (12): 53
- ↑ Glossary of Power Terms | Event Solutions

Further reading [edit]

- Donald G. Fink and H. Wayne Beaty, *Standard Handbook for Electrical Engineers, Eleventh Edition*, McGraw-Hill, New York, 1978, ISBN 0-07-020974-X, page 4-18 and table 4-11.

External links [edit]

- How to Gauge Traces
- Conversion and calculation of cable diameter to AWG and vice versa
- Table of wire resistivities for bigger gauge (insulation included)
- Bare copper wire AWG NEMA/IEC metric standard sizes
- Reference for conversions and maximum safe current loads
- Glossary of common Electrical Terms & Reference Chart

Categories: Wire gauges | Customary units of measurement in the United States

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