Cheatography

Wiring Color Codes Cheat Sheet

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Introduction

Wiring for AC and DC power distribution branch circuits are color coded for identification of individual wires. In some jurisdictions all wire colors are specified in legal documents. In other jurisdictions, only a few conductor colors are so codified. In that case, local custom dictates the “optional” wire colors.

IEC, AC: Most of Europe abides by IEC (International Electrotechnical Commission) wiring color codes for AC branch circuits. These are listed in Table below. The older color codes in the table reflect the previous style which did not account for proper phase rotation. The protective ground wire (listed as green-yellow) is green with yellow stripe.

Credit: http://www.allaboutcircuits.com/textbook/reference/chpt-2/wiring-color-codes/

US AC power circuit wiring color codes

US, AC:The US National Electrical Code only mandates white (or grey) for the neutral power conductor and bare copper, green, or green with yellow stripe for the protective ground. In principle any other colors except these may be used for the power conductors. Black, red, and blue are used for 208 VAC three-phase; brown, orange and yellow are used for 480 VAC. Conductors larger than #6 AWG are only available in black and are color taped at the ends.

US AC power circuit wiring color table

Function	Label	Color, Common	Alternative
Protective ground	PG	bare, green, or green--yellow	green
Neutral	N	white	grey
Line, single phase	L	black or red (2nd hot)	
Line, 3-phase	L1	black	brown
Line, 3-phase	L2	red	orange
Line, 3-phase	L3	blue	yellow

US DC Power Circuit color codes

US DC power: The US National Electrical Code (for both AC and DC) mandates that the grounded neutral conductor of a power system be white or grey. The protective ground must be bare, green or green-yellow striped. Hot (active) wires may be any other colors except these. However, common practice (per local electrical inspectors) is for the first hot (live or active) wire to be black and the second hot to be red. Usage of the ungrounded system is discouraged for safety. However, red (+) and black (-) follows the coloring of the grounded systems in the table..

US recommended DC power circuit wiring colors

Function	Label	Color
Protective ground	PG	bare, green, or green--yellow
2-wire ungrounded DC Power System		
Positive	L+	no recommendation (red)
Negative	L-	no recommendation (black)
2-wire grounded DC Power System		
Positive (of a negative grounded) circuit	L+	red
Negative (of a negative grounded) circuit	N	white
Positive (of a positive grounded) circuit	N	white
Negative (of a positive grounded) circuit	L-	black
3-wire grounded DC Power System		
Positive	L+	red
Mid-wire (center tap)	N	white
Negative	L-	black

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