

IEC Power Connectors Guide

Difference and how to select guide

Blog V1.0

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1. WHAT IS IEC 60320?

IEC 60320 is the international standard governing non-locking appliance couplers operating at up to 250 Volts. The main differences between these connectors lie in current capacity (amperage), pin layout/shape, grounding, and operating temperature tolerance.

2- NAMING SYSTEMS

1. Odd Numbers vs. Even Numbers:

- **Odd numbers** (e.g., C7, C13, C19) refer to the **female connector** (the socket on the cable end).
- **Even numbers** (e.g., C8, C14, C20) refer to the **male inlet** (the plug integrated into the device).
- *Rule: **Connector** = **Outlet** + 1* (e.g., a C13 cord connects to a C14 device inlet).

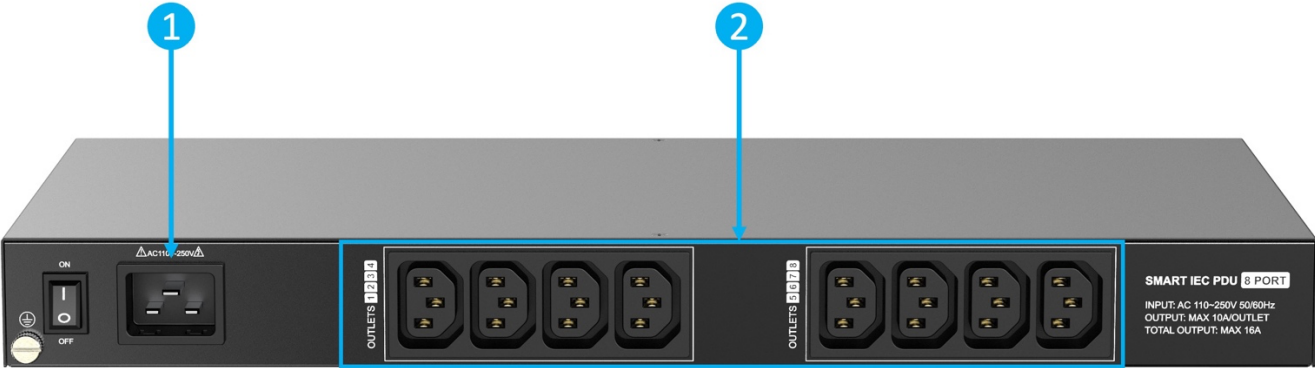
2. **High Temperature (Hot-Condition) Variants:** Connectors with a notch (like C15) are rated for higher temperatures (120°C vs standard 70°C). A high-temp C15 cord can plug into a standard C14 inlet, but a standard C13 cord **cannot** plug into a high-temp C16 inlet for safety reasons.

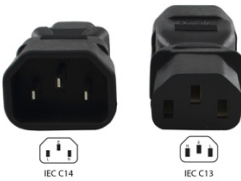
3. COMPARISON CHART

Connector (Female)	Appliance inlet (Male)	Plug connector (Male)	Appliance outlet (Female)	Diagram	Earth contact	Polarized	Rewirable connector allowed?	Max. current (A)	Appliance class	Pin spacing, centres (mm)	Max. pin temp. (°C)
C1	C2	-	-		No	No	No	0.2	II	6.6	70
C3	C4	-	-		No	Yes		2.5	II	10	70
C5	C6	A	B		Yes	Yes	No	2.5	I	10 (H) 4.5 (V)	70
C7	C8	C	D		No	No	No	2.5	II	8.6	70
C9	C10	-	-		No	No	No	6	II	10	70
C11	C12	-	-		No	Yes		10	II	10	70
C13	C14	E	F		Yes	Yes	Yes	10	I	14 (H) 4 (V)	70

C15	C16	M	N		Yes	Yes	Yes	10	I	14 (H) 4 (V)	120
C15A	C16A	O	P		Yes	Yes	Yes	10	I	14 (H) 4 (V)	155
C17	C18	G	H		No	Yes	No	10	II	14	70
C19	C20	I	J		Yes	Yes	Yes	16	I	13 (H) 8 (V)	70
C21	C22	Q	R		Yes	Yes	Yes	16	I	13 (H) 8 (V)	155
C23	C24	K	L		No	Yes	No	16	II	13	70

4. IPOWER IEC8 PLUG



No.	Description	Connect to:	Note
1	IEC C20, Inlet, power input. AC 110-250V 16A		1x power inlet cable in the package, with options of EU, UK, US, AU types.
2	ICE C13, Outlet, power output. Up to 10A per port.		Without in the package, user shall purchase IEC C14 to other connectors cords by themselves according to project use. For example: C14-C13 power cord.