Sustainable PCB Connection Solutions			
Parameter Category	**Parameter Name**	**Parameter Requirements/Description**	**Sustainable Design Value**
Basic Environmental Properties	Environmental Compliance Level	Meets EU/international green standards	RoHS 2.0, REACH, Halogen-Free, Lead-Free
	Material Recyclability	Separable metal/plastic design	Disassemblable, single material, recycling rate ≥85%
	Low-Carbon Design	Reduce full lifecycle carbon footprint	-25% ~ -40%
	Extended Lifecycle	Repairable and reusable	≥5000 mating cycles, reworkable
Plastic Materials	Main Plastic Material	Halogen-free, bio-based, recyclable	LCP/PPS/PA66 (halogen-free), bio-based PA410
	Flammability Rating	Eco-friendly flame retardant, no bromine/chlorine	UL94 V-0, non-halogen type
	Recycled Material Usage Ratio	Reuse of production runners	30% recycled content, performance unchanged
	Degradability	Industrial compostable (optional)	PLA/PHA composite eco-friendly material
Metal Terminals	Terminal Base Material	High-purity copper alloy, 100% recyclable	Phosphor bronze, brass, beryllium copper
	Plating Process	Cyanide-free, lead-free, low-pollution	Cyanide-free tin plating, cyanide-free nickel plating,
	Plating Thickness	Thinner plating design to save precious metals	0.2~0.8 μm eco-friendly plating
	Corrosion Resistance	Reduce replacement frequency, extend lifespan	Salt spray ≥48~72h
Connection Technology	Connection Method	Solder-free low-carbon connection (core decarbonization)	SKEDD direct insertion, crimping, insulation displacement, solder-free locking
	Soldering Demand	Reduce high-temperature soldering, lower energy consumption	No reflow/soldering required, cold connection
	Disassemblability	Non-destructive repair, reusable assembly	Non-destructive disassembly ≥10 times
	Assembly Efficiency	Reduce labor and energy consumption	Tool-free quick mating, zero consumables
Electrical Performance	Rated Voltage	Stable and reliable, reduce	5~250V
	Rated Current	High conductivity, low loss, energy saving	1~30A
	Contact Resistance	Low impedance, low heat generation, power saving	≤10 mΩ
	Insulation Resistance	High insulation, high reliability	≥1000 MΩ

Mechanical Performance	Mating Life	Extend product lifecycle	5000~10000 cycles
	Retention Force	High stability, reduce failures	≥10N
	Vibration/Shock Resistance	Reduce failure rate, reduce scrap	10~50g
Environmental Resistance	Operating Temperature	Wide temperature stability, reduce replacement	-40℃~+125℃
	Ingress Protection Rating	Reduce environmental damage, extend lifespan	IP40~IP67
	Salt Spray Rating	Corrosion resistance, extend service life	≥48h/72h
Recycling & Circular Economy	No Hazardous Substances	Non-toxic combustion, environmental safety	No halogen, no lead, no cadmium, no antimony
	Recycling Structure	Easy disassembly and sorting	One-click separation of metal/plastic
	Recycled Utilization Rate	Closed-loop material recycling	100% copper alloy recycling, plastic ≥80%
	End-of-Life Treatment	Non-toxic, low pollution	Non-toxic incineration, recyclable
Application Scenarios	Green Application Fields	Low-carbon/environmental/export-compliant products	New energy, industrial control, automotive, medical, consumer electronics
Remarks	Sustainable Highlights	Technical summary	Halogen-free, cyanide-free, solder-free, disassemblable, recyclable, low-carbon