

✓ RoHS & CE	✓ UL 94V-0/V-2
✓ Fluke Tested	✓ OEM / ODM

INDUSTRIAL-GRADE RJ45 CONNECTOR SERIES

Industrial German-Style 4+2 Field-Assembly RJ45 Zinc Alloy Shielded Connector (PROFINET / Industrial Ethernet)

Online Product Page: https://www.hxplug.com/industrial-german-style-42-field-assembly-rj45-zinc-alloy-shielded-connector-profinet-industrial-ethernet/

KEY PRODUCT HIGHLIGHTS

▸ Engineered for harsh industrial environments, this German-Style 4+2 Field-Assembly RJ45 Connector features a heavy-duty die-cast zinc alloy fully shielded shell. Designed for PROFINET, EtherCAT, and Industrial Ethernet applications, it enables toolless, on-site cable assembly while providing exceptional 360° EMI/RFI shielding and vibration-proof strain relief. High-gold-plated contacts ensure low-latency, zero-packet-loss data transmission for factory automation and motion control systems.

TECHNICAL SPECIFICATIONS & PARAMETERS

Parameter	Specification / Standard
Connector Type	German-Style 4+2 Field-Assembly RJ45 Plug
Housing Material	Die-cast Zinc Alloy (Nickel Plated)
Contact Material	Copper Alloy (Gold Plated)
Supported Protocols	PROFINET, EtherCAT, EtherNet/IP, Modbus TCP
Data Transmission	Cat5e / Cat6 Industrial Standards
Shielding Type	360° Full Metal EMI/RFI Shielding
Termination Method	Toolless IDC / Insulation Displacement
Locking Mechanism	Dual-screw shell locking + integrated strain relief

ENGINEERING OVERVIEW & APPLICATIONS

- German-Style 4+2 Precision Engineering Optimized for industrial field installation, the internal architecture cleanly separates signal lines and power/auxiliary pairs, ensuring precise contact alignment, high signal integrity, and superior mechanical durability.
- Heavy-Duty Zinc Alloy Full Shielding Constructed with nickel-plated die-cast zinc alloy housing, offering high impact resistance and 360° electromagnetic interference (EMI/RFI) protection against high-voltage gear, frequency converters, and heavy industrial machinery.
- Toolless Field Assembly (IDC Insulation Displacement) Features color-coded wire management and toolless IDC contacts. Field technicians can rapidly wire, snap-fit, and screw-lock the connector without special crimping tools or soldering—significantly reducing installation time and field maintenance costs.
- Dual-Screw Lock & Integrated Strain Relief Equipped with a secure two-screw closure system and an internal metal cable clamp to deliver exceptional pull-out resistance and stress relief. The connection remains rock-solid even in dynamic drag-chain applications and vibration-heavy machinery.
- High-Conductivity Gold-Plated Contacts Precision copper alloy pins plated with thick gold minimize contact resistance, prevent oxidation, and withstand repeated mating cycles to ensure long-term, low-latency transmission.

Target Applications

- Factory Automation & Robotics : Dynamic drag-chain cabling, PLC bus systems, and robotic arm interconnects.
- Industrial Network Infrastructure : PROFINET fieldbus networks, industrial Ethernet switches, and control cabinets.
- Harsh Operating Environments : High-vibration, high-dust, and strong EMI/RFI environments requiring reliable data and power hybrid connectivity.

Gold Plating Options FU" / 3μ" / 6μ" / 15μ" / 30μ" / 50μ" Custom Gold Plating	**100% Quality Assurance** Fluke Versiv / DSX Tested, Salt-Spray & ≥750–2000 Mating Cycles
OEM / ODM Customization Custom Mold Tooling, Housing Colors, Cable Lengths & Private Label	**Certifications & Compliance** ISO 9001:2015, RoHS, REACH, CE, UL 94V-0 / UL 94V-2 Rated

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