Planet
Structure Cabling Systems

In-line Jack direct connector

Modular Plug

Part Number: PL-MFFRJ4

PLANET PL-MFFRJ4 is a compact in-line RJ45 jack direct connector intended to provide a serviceable transition between a standard RJ45 plug and directly terminated balanced twisted-pair cable. The design combines an 8P8C female jack, color-coded cable termination and a protective housing in one field-installable connection point.

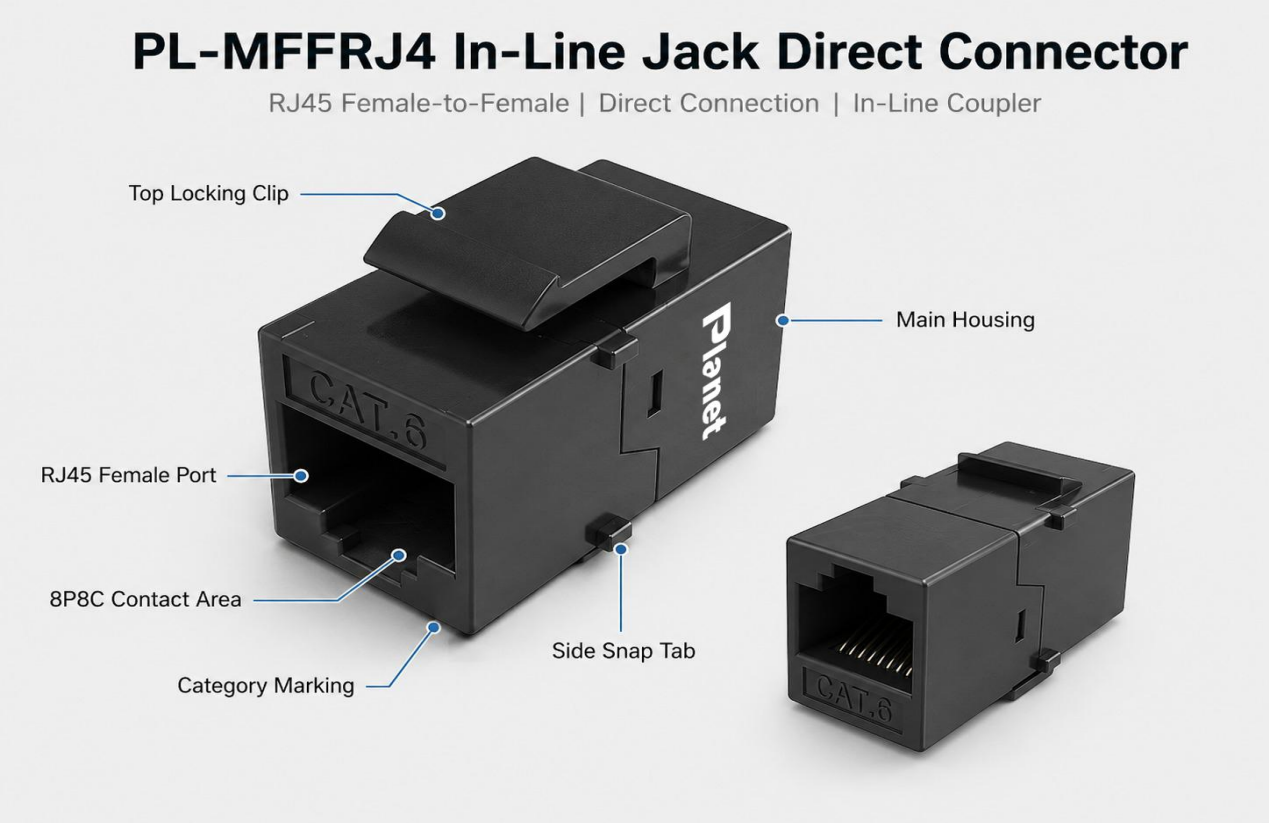
The enhanced PLANET specification uses 15 µin gold-plated RJ45 mating contacts as standard, with 30 µin and 50 µin available as optional upgrades. Category 6 / Class E performance up to 250 MHz is the engineering target; formal component-performance claims should be supported by qualified production test evidence.

RJ45	DIRECT	15 µin	250 MHz
8P8C Female	IDC Termination	Gold Standard	Cat6 Target

"Direct Termination. Compact Installation. Controlled Connectivity."

1. General Description

PL-MFFRJ4 is designed as an in-line female-jack-to-direct-termination connector for structured copper cabling. One side accepts a standard RJ45 8P8C plug; the cable side terminates the four balanced pairs directly on a color-coded IDC module using T568A or T568B pair identification. This arrangement avoids the need for a second modular plug and is useful for field extension, repair, transition and service-access points. The installed link remains governed by the performance of every cable and connector in the complete channel.



PL-MFFRJ4 In-Line Jack Direct Connector - Realistic Component View

2. Construction

Parameter	Specification
Product Type	In-Line RJ45 Jack Direct Connector
Part Number	PL-MFFRJ4
Front Interface	1 × RJ45 8P8C female jack
Cable Termination	Direct 8-position IDC termination with T568A / T568B color identification
Shielding	360° metal-shielded housing / shield-continuity architecture
RJ45 Contact Material	Phosphor bronze / copper-alloy spring contacts over nickel
Gold Contact Plating	15 µin standard; 30 µin and 50 µin optional
IDC Contact Material	Copper-alloy / phosphor-bronze IDC contacts; tin/nickel finish subject to production confirmation
Supported Conductors	22–26 AWG solid copper preferred; stranded compatibility subject to qualified production design
Housing	Compact metal shield with engineering thermoplastic termination carrier

TECHNICAL SPECIFICATIONS **IN-LINE JACK DIRECT CONNECTOR | PL-MFFRJ4**

3. Electrical Characteristics

Parameter	Specification
Frequency Range	1–250 MHz engineering target for Category 6 / Class E applications
System Impedance	100 Ω balanced cabling system interface
Contact Resistance	≤ 20 mΩ design target; qualification evidence required
Insulation Resistance	≥ 500 MΩ design target; qualification evidence required
Dielectric Withstand	1,000 V AC / 1 minute design target, subject to qualified production test
Remote Powering	PoE / PoE+ / 4-Pair PoE pass-through subject to channel design, contact resistance and thermal verification
Wiring Scheme: T568A / T568B | 4 balanced pairs | 8 conductors	

4. Mechanical Characteristics

Parameter	Value
RJ45 Mating Durability	≥ 750 mating cycles qualification target
IDC Re-Termination	Multiple termination capability subject to IDC design qualification and conductor condition
Cable Retention	Integrated termination / strain-control design; sample pull test recommended
Operating Temperature	-10°C to +60°C typical design range
Storage Temperature	-40°C to +70°C typical design range

5. Technical Performance

PL-MFFRJ4 is specified as a passive in-line connection component for use in a compliant balanced copper channel. Category 6 / Class E performance should be validated as a complete terminated component and within the installed channel. Transmission performance depends on pair untwist, termination workmanship, cable category, connector count and total channel length.

Performance Item	Requirement	Performance Item	Requirement	Application	Requirement	Status
Frequency	1–250 MHz target	Insertion Loss / NEXT	Cat6 compliant when verified	1000BASE-T	Supported	Baseline
Return Loss	Cat6 compliant when verified	Wire Map	T568A / T568B correct termination	10/100BASE-T	Supported	Baseline
Channel Class	Class E / Cat6 target	Pair Continuity	All 4 pairs / 8 conductors	PoE / PoE+	Pass-through*	Application
Mating Interface	RJ45 8P8C female	Shield Continuity	360° housing when properly bonded	4-Pair PoE	Pass-through*	Conditional

* Remote-power support depends on the complete installed channel, conductor size, contact resistance, ambient temperature and applicable bundle/thermal limits.

APPLICATIONS, FEATURES & COMPLIANCE **IN-LINE JACK DIRECT CONNECTOR | PL-MFFRJ4**

6. Applications

- Field extension or repair of balanced copper network links
- RJ45 patch-cord transition to directly terminated horizontal cable
- Telecommunications rooms, cabinets and service-access locations
- Enterprise, commercial and industrial LAN connections
- IP CCTV, VoIP and wireless access-point cabling
- Temporary or permanent service connection where an in-line jack is preferred
- PoE-powered device links when the complete installed channel is verified

7. Transmission Performance

- Category 6 / Class E performance target up to 250 MHz
- Supports 10/100/1000BASE-T applications in a compliant channel
- Direct IDC termination minimizes the need for an additional modular plug
- Shielded architecture helps maintain EMI/RFI protection when properly bonded

8. Key Features

- RJ45 8P8C female jack to direct 8-position IDC termination
- 15 µin hard-gold RJ45 mating contact plating as standard
- 30 µin and 50 µin gold-plating options for enhanced contact durability
- T568A / T568B color-coded termination guide
- Compact in-line construction for field service and transition points
- 360° metal shielding architecture for compatible shielded cabling systems
- 100% continuity, wire-map and visual/mechanical inspection recommended

9. Standards Compliance

Standard / Certification	Status
ANSI/TIA-568.2-E	Category 6 balanced twisted-pair component/channel reference
ISO/IEC 11801-1	Class E generic cabling system reference
IEC 60603-7-5	8-way shielded connector reference for Category 6 up to 250 MHz
IEEE 802.3ab	1000BASE-T application support in a compliant Category 6 channel
IEEE 802.3af / 802.3at / 802.3bt	Remote-power application subject to qualified installed-channel design
RoHS / REACH	Subject to applicable production declaration / certification

10. Quality Assurance

Manufactured under controlled quality procedures to ensure:

- Consistent RJ45 contact alignment and IDC pair-position accuracy
- Stable housing closure, shield continuity and cable retention
- Controlled gold-plating thickness according to the ordered configuration

Validation: Production inspection should include visual/mechanical checks, 100% continuity and wire-map testing, mating-fit inspection, shield-continuity verification, IDC termination checks, plating-thickness verification and representative Category 6 transmission testing. Formal third-party or laboratory evidence should be provided when required by the consultant or tender specification.

11. Gold Plating & Product Options

- Standard RJ45 mating contact plating: 15 µin (0.38 µm) hard gold over nickel
- Optional RJ45 mating contact plating: 30 µin (0.76 µm) hard gold over nickel
- Premium RJ45 mating contact plating: 50 µin (1.27 µm) hard gold over nickel
- Housing finish, wire-gauge range and higher durability qualification may be customized subject to order confirmation and supporting production evidence

12. Warranty

25-Year System Warranty	Subject to proper installation, use within an approved PLANET structured cabling system and applicable warranty terms.

Packing 1pc / PE bag

BOX	50 PCS
Carton	500 PCS