

Part Number: PL-RJ45SD7

PLANET PL-RJ45SD7 is a shielded 8P8C modular plug with direct-connection crimp termination for compatible Category 7 shielded copper cable. The single-piece easy-connector construction eliminates a separate load bar or insert, while the metallic shell provides a conductive path for cable-screen continuity when correctly prepared and terminated.

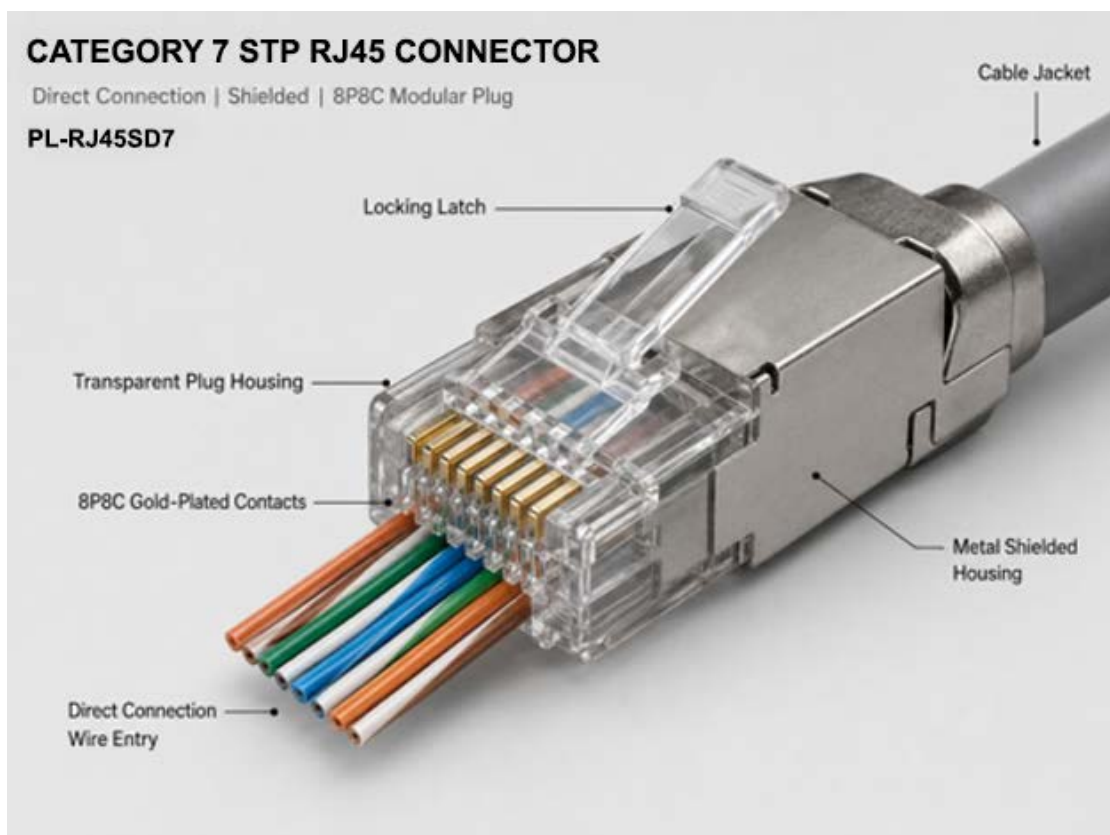
The PLANET configuration uses 15 µin hard-gold plating on the RJ45 mating contact area as standard, with 30 µin and 50 µin available as optional upgrades. Category 7 / Class F transmission performance is specified up to 600 MHz; final compliance claims should be supported by applicable IEC 60603-7-7 component or channel test evidence for the actual connector-and-cable combination.

STP Shielded Plug	15 µin Gold Standard	600 MHz Category 7	DIRECT Easy Connection
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"Direct Termination. 600 MHz Performance. Shielded Reliability."

1. General Description

PLANET PL-RJ45SD7 is a transparent shielded male modular plug intended for direct crimp termination on four-pair Category 7 shielded twisted-pair cable. The plug combines a polycarbonate inner body, metallic shield shell, 8P8C contact interface and direct conductor termination with no separate load bar or insert. Correct bonding of the cable foil/braid and drain arrangement to the connector shell is essential for maintaining shielding continuity and high-frequency performance.



CAT7 STP RJ45 Direct Connector - Annotated 3D View

2. Construction

Parameter	Specification
Product Type	Category 7 shielded RJ45-form-factor direct-connection modular plug
Part Number	PL-RJ45SD7
Interface	Shielded 8P8C male modular plug
Inner Housing	Transparent polycarbonate (PC)
Shielding	Metallic shield shell for 360° cable-screen continuity when correctly terminated
Contact System	8 copper-alloy blade contacts with selective gold-plated mating area
Gold Contact Plating	15 µin hard gold standard; 30 µin and 50 µin optional
Termination	Single-piece direct crimp termination; no separate load bar or insert
Cable Compatibility	Compatible Category 7 shielded 4-pair cable, subject to conductor and insulation O.D. dimensional confirmation
Wiring Scheme	T568A or T568B pin assignment according to the cable assembly requirement

TECHNICAL SPECIFICATIONS

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3. Electrical Characteristics

Parameter	Specification
Frequency Range	1-600 MHz Category 7 / Class F performance target
Contact Resistance	≤ 20 mΩ initial interface contact resistance, IEC 60603-7 reference
Insulation Resistance	≥ 500 MΩ, IEC 60603-7 reference
Voltage Proof - Contact to Contact	1000 V DC or AC peak, IEC 60603-7 reference
Voltage Proof - Contacts to Shield	1500 V DC or AC peak, IEC 60603-7 reference
Shield Continuity	Conductive cable-screen-to-plug-shell path when correctly terminated
Remote Powering: PoE / PoE+ / 4-Pair PoE subject to qualified cable and channel design	

4. Mechanical Characteristics

Parameter	Value
Mating Durability	≥ 750 mating cycles, IEC 60603-7 performance level reference
Housing Material	Transparent polycarbonate with metallic shielding shell
Locking Latch	Integral resilient modular-plug locking tab
Termination Construction	Direct connection / single-piece plug; no separate load bar or insert
Cable Fit	Conductor O.D., insulation O.D. and overall cable O.D. to be confirmed against the qualified production drawing

5. Technical Performance

PL-RJ45SD7 is designated as a Category 7 shielded direct-connection plug. Category 7 / Class F connectivity operates to 600 MHz under ISO/IEC 11801-1 and the corresponding connector requirements of IEC 60603-7-7. Because a product name alone does not constitute third-party compliance evidence, final project claims should be supported by applicable component or channel verification for the actual connector, cable construction and termination method.

Performance Item	Requirement	Performance Item	Requirement	Application	Requirement	Status
Frequency Range	1-600 MHz	Insertion Loss / NEXT	Cat.7 compliant when verified	1000BASE-T	Supported	Baseline
Shield Continuity	End-to-end conductive path	Return Loss / FEXT	Cat.7 compliant when verified	10GBASE-T	Supported in compliant Class F channel	Application
Category / Class	Cat.7 / Class F	TCL / TCTL / Balance	Per IEC 60603-7-7 when verified	PoE / PoE+ / 4PPoE	Supported*	Application
Wire Map	8P8C correct	Contact Continuity	Production verified	T568A / T568B	Supported	QA

* Remote powering depends on compatible cable conductor size, contact resistance, termination quality, bundle temperature and installed-channel design. Category 7 / 600 MHz compliance requires applicable test evidence and is not established by shielding or product naming alone.

APPLICATIONS, FEATURES & COMPLIANCE

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6. Applications

- Category 7 shielded copper cable termination
- 10 Gigabit Ethernet (10GBASE-T) in a compliant Class F channel
- Direct field termination and shielded cable assembly
- Data centers, enterprise and high-bandwidth structured cabling
- IP CCTV, VoIP, wireless access points and high-speed network devices
- EMI/RFI-sensitive installations using correctly bonded shielded channels
- PoE-powered devices subject to qualified remote-power and thermal design

7. Transmission & Shielding Performance

- Category 7 / Class F transmission target up to 600 MHz
- Supports 10/100/1000BASE-T and 10GBASE-T applications in a compliant installed channel
- IEC 60603-7-7 defines 8-way shielded Category 7 connector transmission requirements to 600 MHz
- Metallic shell supports cable-screen continuity; direct-connection design simplifies termination without a separate insert

8. Key Features

- 8P8C shielded modular plug with direct-connection termination
- Category 7 / Class F performance target up to 600 MHz
- 15 µin hard-gold contact plating as standard
- 30 µin and 50 µin hard-gold plating available as optional upgrades
- Transparent polycarbonate inner housing with metallic shield shell
- Single-piece easy-connector design with no separate load bar or insert
- Designed to maintain shield continuity when correctly terminated to compatible Category 7 shielded cable

9. Standards Compliance

Standard / Certification	Status
ISO/IEC 11801-1	Category 7 / Class F cabling reference up to 600 MHz
IEC 60603-7-7:2010	8-way shielded connector reference for data transmission up to 600 MHz; compliance requires supporting test evidence
IEC 60603-7 / IEC 60603-7-1	Base dimensional, mechanical and electrical connector requirements
IEEE 802.3an	10GBASE-T application support in a compliant installed channel
IEEE 802.3af / 802.3at / 802.3bt	PoE application support subject to qualified cable and thermal design
RoHS / REACH	Subject to applicable production declarations

QUALITY, OPTIONS & WARRANTY

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10. Quality Assurance

Manufactured under controlled quality procedures to ensure:

- Consistent blade-contact alignment and direct-crimp geometry
- Reliable metallic shield fit and cable-screen continuity
- Controlled hard-gold plating thickness according to the ordered configuration

Validation: Production inspection should include transparent-housing and shield integrity, contact position, direct-crimp quality, shield-continuity check, plating-thickness verification, dimensional inspection, and terminated-sample continuity / wire-map testing. Category 7 / 600 MHz claims should be supported by applicable IEC 60603-7-7 component or installed-channel test evidence.

11. Gold Plating Options

- Standard: 15 µin (0.38 µm) hard gold over nickel on the RJ45 mating contact area
- Optional upgrade: 30 µin (0.76 µm) hard gold over nickel
- Premium option: 50 µin (1.27 µm) hard gold over nickel
- Increased gold thickness improves corrosion resistance and contact-surface durability but does not by itself establish Category 7 transmission compliance

12. Warranty

25-Year System Warranty

Subject to proper installation, use of approved PLANET system components and applicable warranty terms.

Packing

BOX	100 PCS
Carton	10 Box