

Part Number:

PL-KE6UTL



FEATURES

- Category 6 unshielded toolless keystone jack, 180° cable entry, intended for 1 to 250 MHz U/UTP channel applications.
- Supports T568A and T568B wiring with a color-coded IDC termination cap.
- Toolless termination provides strain relief, bend-radius control and secure cable retention; the IDC profile is 110-compatible where permitted by the approved installation instruction.
- Accepts 23&24 AWG solid or stranded copper conductors ; CCA and CCS conductors are not accepted. Conductor construction and insulation diameter shall follow the approved production drawing.
- High-impact polycarbonate housing with UL 94 V-0 material flammability rating.
- RJ45 mating contacts use nickel underplate and gold plating: 15 microinch standard; 30 or 50 microinch optional.
- Minimum 750 plug insertion/removal cycles and lead-free, RoHS-compliant IDC finish.
- Category 6 transmission performance shall be confirmed for the released PL-KE6UTL configuration by a component report through 250 MHz.

APPLICATIONS

- 1000BASE-T, 100BASE-TX and 10BASE-T Ethernet
- Voice and IP telephony
- 2.5GBASE-T and 5GBASE-T when the complete installed channel is validated
- IEEE 802.3 PoE applications subject to complete-channel current and thermal verification

REFERENCE STANDARDS

- ANSI/TIA-568.2-E - Category 6 balanced twisted-pair cabling and components
- ISO/IEC 11801-1:2017 (including Amd 1:2025 and its Cor 1:2025) - Category 6 / Class E
- EN 50173-1:2018 - Category 6 / Class E generic cabling
- IEC 60603-7-4:2010 - Unshielded 8-way connectors up to 250 MHz
- TIA TSB-5021 - Installed Category 5e/6 cabling assessment for 2.5GBASE-T and 5GBASE-T
- IEEE 802.3-2022 + Cor 1:2024 - Ethernet and remote-powering application compatibility
- IEC 60512-99-002:2022 + Amd 1:2025 - PoE unmating endurance under electrical load

GOLD PLATING CONFIGURATION

STANDARD	OPTION	OPTION
15 microinch 0.38 micrometre	30 microinch 0.76 micrometre	50 microinch 1.27 micrometre

CHARACTERISTICS

Property	Specification
Category / bandwidth	Category 6 connecting hardware; 1-250 MHz; unshielded U/UTP system use
RJ45 housing	High-impact polycarbonate (PC), UL 94 V-0 material rating
IDC cap / housing	High-impact polycarbonate (PC), UL 94 V-0 material rating
RJ45 contact material	Phosphor bronze with 50-60 microinch (1.27-1.52 micrometre) nickel underplate
Gold-plated contact area	Minimum 3 mm contact length; 15 microinch (0.38 micrometre) gold standard
Optional gold plating	30 microinch (0.76 micrometre) or 50 microinch (1.27 micrometre), available as options
IDC terminal	Phosphor bronze, nickel underplate and lead-free tin finish; 110-compatible IDC profile subject to the approved installation instruction
Cable compatibility	23&24 AWG solid or stranded copper conductors ; CCA/CCS excluded; construction and insulation diameter per approved production drawing
Wiring scheme	T568A and T568B color coding
Insertion force	Maximum 8.8 N (approximately 900 gf) for 8 contacts
Plug retention	Minimum 75.5 N (approximately 7.7 kgf) between jack and compatible plug
Operating temperature	-30°C to +70°C
RJ45 durability	Minimum 750 mating cycles; contact resistance checked at defined test intervals
IDC durability	Up to 200 termination-cap operations, subject to post-cycle electrical verification
Component qualification	Independent component report to ANSI/TIA-568.2-E and IEC 60603-7-4 through 250 MHz; test setup, samples, limits and PASS margins identified
Electrical verification	Released report shall state rated voltage/current and measured contact-resistance, insulation-resistance and dielectric-strength results
Environmental	RoHS-compliant materials; lead-free IDC plating

MANDATORY CAT.6 CABLE / LINK VALIDATION

Mandatory parameter	Reference requirement
DC loop resistance	Maximum 18.76 ohm/100 m at 20°C (9.38 ohm/100 m per conductor)
Mutual capacitance	Maximum 5.6 nF/100 m at 1 kHz
Propagation delay	Maximum 538 ns/100 m; record measurement frequency and test configuration
Delay skew	Maximum 45 ns/100 m

PL-KE6UTL RELEASE CONTROLS

Control	Required release evidence
Transmission performance	Independent component report through 250 MHz covering insertion loss, return loss, NEXT, FEXT/ACR-F and applicable power-sum parameters; identify test setup, samples, limit set and worst-case PASS margins.
Electrical integrity	Released electrical report shall state contact resistance, insulation resistance, dielectric strength and rated voltage/current using identified test methods.
Cable interface	Approved drawing shall define the permitted 24 AWG solid/stranded copper construction, conductor diameter, insulation diameter and termination preparation; CCA/CCS are excluded.
Mechanical interface	Approved drawing shall define keystone dimensions, tolerances, faceplate/patch-panel compatibility, cable retention and permitted termination method.
Remote powering	Where PoE is claimed, verify resistance unbalance, current-carrying capacity, temperature rise and unmating under electrical load for the released connector and complete channel.
Ordering traceability	Ordering codes and reports shall distinguish the standard 15 microinch contact finish from the optional 30 and 50 microinch versions.

COMPLIANCE NOTES

- 2.5GBASE-T, 5GBASE-T and PoE application support depends on the validated complete installed channel and is not a standalone keystone rating.
- UL 94 V-0 identifies the flammability rating of the plastic material; it does not by itself represent a UL product listing.
- Gold thickness applies to the RJ45 mating-contact area, not to the IDC termination contacts.
- Category 6 compliance applies only to the released PL-KE6UTL construction represented by the approved drawing and matching test report.

PERFORMANCE DOCUMENTATION: Detailed electrical performance test reports and compliance documentation for the released product configuration are available upon request.

Packing 1pc / PE bag

BOX	50 PCS
Carton	500 PCS