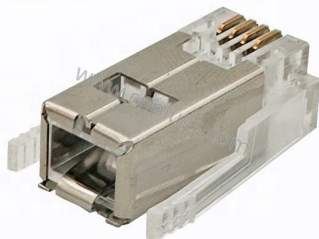


Telecom Connectors

SDL 4P Shielded Male Plug, 50 Ω Pin and Earth/Shield Termination, Tray Pack



Key specifications

Connector family	SDL (Shielded Data Link), 50-series class
Gender / system	Male plug, cable-to-board
Positions	4P signal pins + earth / shield termination
Pitch	1.27 mm (0.050 in)

Product summary

- 4-position SDL male modular plug with pin contacts plus earth / shield termination
- Metal-shielded 50-ohm class body for EMI-sensitive cable-to-board links
- RJ9-size 4P nose — not a telephone 4P4C handset plug; keyed SDL latch geometry
- Gold-plated copper-alloy contacts, 50 μ m class, 1.5 A / 30 V signal duty
- Crimp / IDC termination for 24–26 AWG shielded round or flat data cable
- Dual side latches and 1.27 mm pitch for AMP / TE 50-series SDL receptacles
- Tray packaging for EMS lines, incoming count, and ESD-safe kitting
- OEM / ODM: gold thickness, cable OD, and tray quantity on request

Product page:

<https://www.cnplugins.com/product/sdl-4p-male-plug-shielded-50ohm-pin-earth-tray/>

Category: Telecom Connectors

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Product details

Shielded 4P SDL Male Plug with Pin and Earth, 50 Ohm Tray Pack

This RJ9 SDL modular terminal plug is a 4-position male connector built as a Shielded Data Link (SDL) cable plug, not as a 4P4C handset plug. Buyers who search “RJ9 4P” usually mean the compact four-position modular nose. What they need on an industrial or instrument harness is the SDL version: a keyed housing, dual side latches, a metal shield, and a dedicated earth path that bonds the cable braid to the receptacle shell. This part is that plug — 4P pin plus earth, 50-ohm shielded class, shipped in trays for OEM and EMS lines.

SDL was introduced so a modular-looking plug could carry shielded data without the crosstalk and ground bounce of an unshielded 4P4C. The 50-series geometry (1.27 mm centerline) is the interface still used on industrial I/O, printers, POS, medical peripherals, test fixtures, and many PLC or operator-panel tails. If your BOM calls an AMP / TE 4-position SDL plug assembly, a 4P shielded pin-and-earth terminal, or a tray-packed 50-ohm modular plug, this is the correct family. For Ethernet or VFD keypad work, do not use this SKU — see our [RJ45 8P8C modular plugs](#) instead.

A [electrical connector](#) in this class has two jobs: eight-or-fewer signal blades must wipe cleanly, and the shield must present a low-impedance path to chassis so [electromagnetic interference](#) does not ride the cable into the board. The 50-ohm designation on this plug matches the 50-series SDL system and the 50 Ω characteristic impedance common on shielded instrument and RF-adjacent data leads. Confirm cable impedance and receptacle series (36 or 50) before you freeze the harness drawing.

Pin Contacts, Earth Path, and Why Shielding Matters

Four gold-plated copper-alloy pins carry the circuit. A separate earth member ties the tin-plated shield can to the cable braid or drain. That is the “pin & earth” construction procurement writes on the PO. Without the earth member, the metal shell is only cosmetic and the cable fails EMC at the first meter. With it, the plug and the board receptacle form a continuous Faraday path from jacket to PCB ground pad.

The housing is glass-filled polycarbonate, typically smoke gray or clear-gray, UL 94 V-2. The shield is brass or carbon steel with bright tin. Contacts are selective gold, 50 microinches (1.27 μm) over nickel as standard — the thickness industrial buyers specify when the plug will be mated hundreds of times on a service cable. Current class is 1.5 A per contact at 30 V. Operating range is $-20\text{ }^{\circ}\text{C}$ to $+80\text{ }^{\circ}\text{C}$. Termination is crimp / IDC for 24–26 AWG (0.12–0.21 mm²) with conductor insulation about 1.14–1.27 mm. Round jacketed shielded cable is the usual mate; flat shielded ribbon is available on the same 4P SDL nose.

Not a telephone RJ9 — do not crimp it as 4P4C

A consumer RJ9 / RJ10 / RJ22 handset plug is an 4P4C handset plug with a single top latch. An SDL 4P plug is keyed, uses side latches, and will not seat correctly in a telephone jack — and a telephone plug will not latch in an SDL receptacle. Mixing them is the most common incoming-quality failure on mixed-connector lines. Keep this part on the SDL / shielded-data bin, next to the matching 4P SDL board receptacles and shielded 4-conductor data cable.

Where this 4P shielded plug is used

Typical assemblies: cable-to-board tails on industrial controllers, shielded sensor and encoder pigtailed that use a 4P modular face, POS and printer I/O, medical cart peripherals, ATE fixtures, and replacement leads for AMP 50-series SDL ports. EMS plants specify tray pack so the plug can be counted, kitted, and presented to a bench crimp press without a polybag dump. Service depots order the same tray as a spare so field techs do not

substitute a telephone handset plug.

Need the other end of the link? Add a shielded 4P SDL PCB receptacle or a finished SDL cable assembly on the same order.

How OEM and EMS Buyers Should Write the PO

Specify: SDL 4P male plug, shielded, pin and earth, 50-ohm / 50-series, tray packaging. Add wire AWG, round or flat cable, and gold thickness. Do not write “RJ9 4P4C telephone plug” or the line will ship the wrong latch. Tray pack is the default for SMT and harness cells; bag pack is only for MRO spares if you ask for it.

Incoming inspection

Check four signal blades plus a continuous shield/earth member. Confirm side latches, not a single top tab. Confirm the plug keys into your SDL receptacle and will not enter a telephone jack. Continuity: pins 1–4 isolated from the shell; shell bonded to the drain after crimp. Gold should be 50 µin class unless you ordered flash gold for a one-time mate. Count pieces by tray pocket, not by bag weight.

Technical specifications

Specification	Published value
Connector family	SDL (Shielded Data Link), 50-series class
Gender / system	Male plug, cable-to-board
Positions	4P signal pins + earth / shield termination
Pitch	1.27 mm (0.050 in)
Shielding	Metal shell, tin-plated; braid / drain bonded to earth
Impedance class	50 ohm / 50-series SDL
Latch	Keyed, dual side latches (SDL, not RJ9 top tab)
Housing	Polycarbonate, glass-filled; smoke gray / clear-gray; UL 94 V-2
Shield material	Brass or carbon steel, bright tin
Contact material	Copper alloy
Contact plating	Gold over nickel, 50 µin (1.27 µm) standard
Termination	Crimp / IDC
Wire size	24–26 AWG (0.12–0.21 mm ²), stranded
Cable type	Shielded round jacket or shielded flat / ribbon
Insulation OD	Approx. 1.14–1.27 mm (0.045–0.050 in)
Current / voltage	1.5 A max / 30 V (signal)
Operating temperature	–20 °C to +80 °C
Typical plug length	Approx. 21.7–22.6 mm (series dependent)
Packaging	Tray (OEM count, ESD-safe kitting)

Specification	Published value
Compliance	RoHS; UL 94 V-2 housing; REACH on request
Fit reference	Compatible with AMP / TE 50-series 4-position SDL plugs (e.g. 520424 / 1761184 families). Third-party equivalent unless invoice states OEM.