

Section 3: Connectors, Plugs, and Jacks

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Introduction to Connectors, Plugs, and Jacks

Connectors, plugs, and jacks, whether they are wire or fiber, provide the essential connecting points between cables and equipment.

Wire, Plugs, and Jacks

The standard plug for the AT&T Premises Distribution System is the 8-pin modular plug. It is already part of most of the modular cords used in PDS, but it can also be attached in the field.

The standard jack in PDS is the 8-pin modular jack or information outlet. Though the term “jack” refers only to the receptacle that receives the plug, it is often used as a synonym for the entire outlet. A connecting block is another term for an information outlet or jack. Here, however, the emphasis is on the fact that the outlet is the place where the 4-pair inside wire is connected onto a 110-type connecting block or a quick-connect terminal.

PDS offers both flush-mounted and surface-mounted connecting blocks used as information outlets. Flush-mounted connecting blocks preserve the aesthetic appearance of a wall and are easily installed in prewired environments where plasterboard has not yet been placed. Surface-mounted connecting blocks are easier and more economical to install in environments where plasterboard, and perhaps even a decorative wall surface, is already in place. The AT&T Universal Information Outlet can be either flush-mounted or surface-mounted, according to the needs of a specific application. PDS components also include plugs and jacks for field termination of cable, and faceplates and covers as decorative accessories.

Fiber Connectors, Plugs, and Couplings

There are two kinds of connectors used for optical fiber in the AT&T Premises Distribution System: array connectors and ST connectors. Array connectors are used to align and protect each fiber in a ribbon cable when two ribbon cables are being joined. Factory-terminated fiber ribbon cables have ribbon leads, called “arrays,” each terminated with an array connector, which consists of two grooved silicon chips. A bridging silicon chip with precision-etched grooves is used to align each array of the cable; a second chip fits on top of the butted ribbon array, and two spring clips clamp the two arrays together. If the array connectors are factory-installed on both ribbon cables being spliced, then the splice can be made using the 1030B Tool Kit (see Section 6). If the cables are unconnectorized, then a 1009C Array Connector must be field-installed on each ribbon before two ribbons are spliced together.

A connector plug is used to terminate fibers whenever a fiber cable consisting of individual fibers (as opposed to ribbons) is being installed at a cross-connect or interconnect module, or is being connected to optical or electrical equipment. The ST Connector Plug (P2020A-C-125) is used for most applications. When the ST connector plug is used at an optical fiber cross connect, it is inserted into the ST Connector Coupling (C2000A-2), which is mounted on the 10A Connector Panel in the 100A Lightguide Interconnection Unit (see Section 2). The plug or connector can be installed in the field using the appropriate tool kit (see Section 6).

Connecting Block, Flush-Mounted, 102A

Applications

The 102A Connecting Block, like the 105AF Connecting Block, is used to terminate one 4-pair inside cable and provides a point for plugging in a terminal with up to eight conductors. Two 102A Connecting Blocks can be mounted in the same electrical box.

Description

The 102A is a flush-mounted connecting block, consisting of an 8-position, 8-conductor jack attached to a 110-type insulation displacement terminal for easy termination of inside wiring. It is designed for use with the 400A or 65B Faceplate.

Product Code	Color	Comcode
102A-50	Ivory	103 083 200
102A-54	Brown	103 327 714



Connecting Block, Flush-Mounted, 105AF

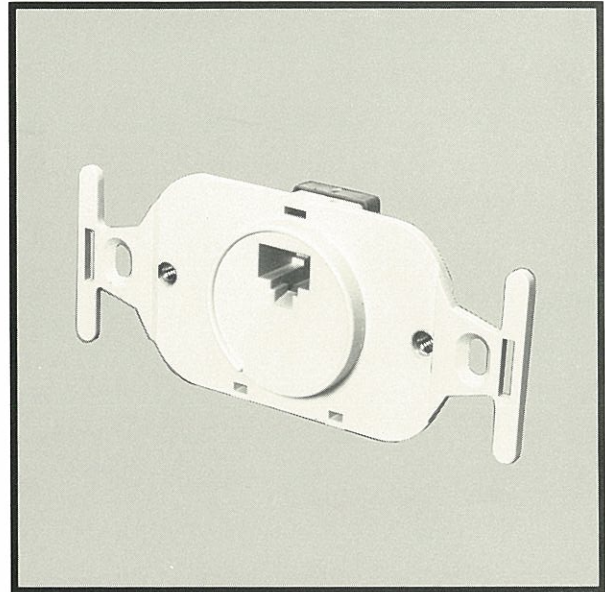
Applications

The 105AF Connecting Block, like the 102A Connecting Block, is used to terminate one 4-pair inside cable and provides a point for plugging in a terminal with up to eight conductors.

Description

The 105AF is a flush-mounted connecting block, consisting of an 8-position, 8-conductor jack attached to quick-connect terminals for easy termination of inside wiring. It is designed for use with a standard single electrical outlet faceplate.

Product Code	Comcode
105AF-50	103 762 423



Connecting Block, Flush-Mounted, 106AFD

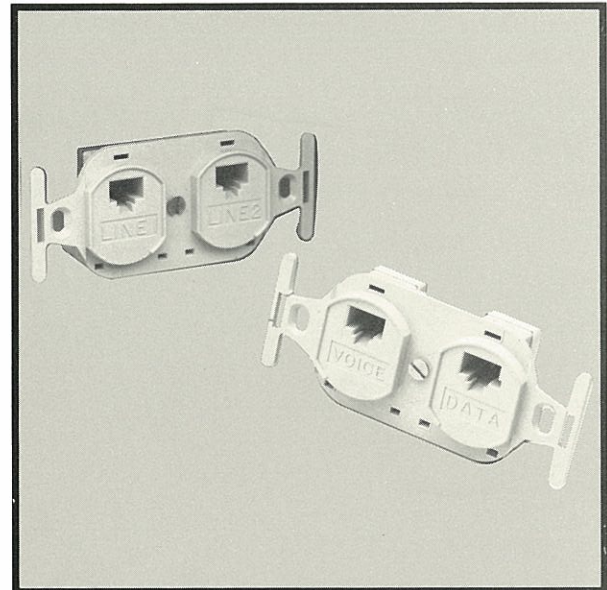
Applications

The 106AFD Connecting Block is used to terminate two 4-pair inside cables and provides a point for plugging in two terminals with up to eight conductors each.

Description

The 106AFD is a flush-mounted connecting block, consisting of two 8-position, 8-conductor jacks attached to quick-connect terminals for easy termination of inside wiring. It is designed for use with a standard electrical outlet box and a standard duplex electrical outlet faceplate.

Product Code	Comcode
106AFD-50	103 762 431



Connecting Block, Surface-Mounted, 103A

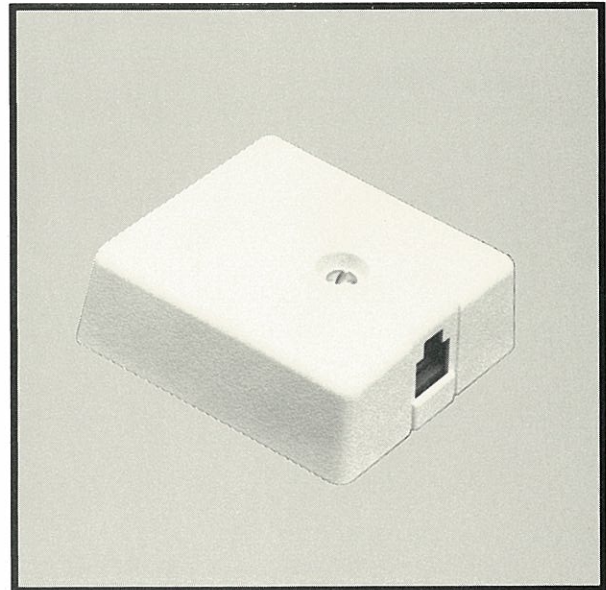
Applications

The 103A Connecting Block is used to terminate one 4-pair inside cable and provides a point for plugging in a terminal with up to eight conductors.

Description

The 103A consists of an 8-position, 8-conductor jack connected to a 110-type insulation displacement connector.

Product Code	Comcode
103A-50	103 104 220



Connecting Block, Surface-Mounted, 103B

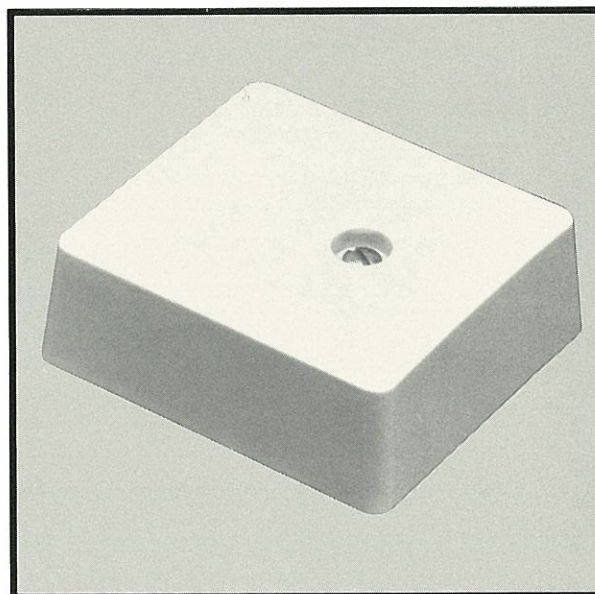
Applications

The 103B Connecting Block, mounted on the floor, is used to terminate flat undercarpet cable. The cover of the 103B serves as a template for cutting the carpet. Once the connecting block is installed and the carpet has been cut, the 103B cover is discarded and the 172A Decorative Cover is installed.

Description

The 103B consists of an 8-conductor jack connected to a 110-type insulation displacement connector. Its cover has no jack opening.

Product Code	Comcode
103B-50	103 759 429



Connecting Block, Surface-Mounted, 104A

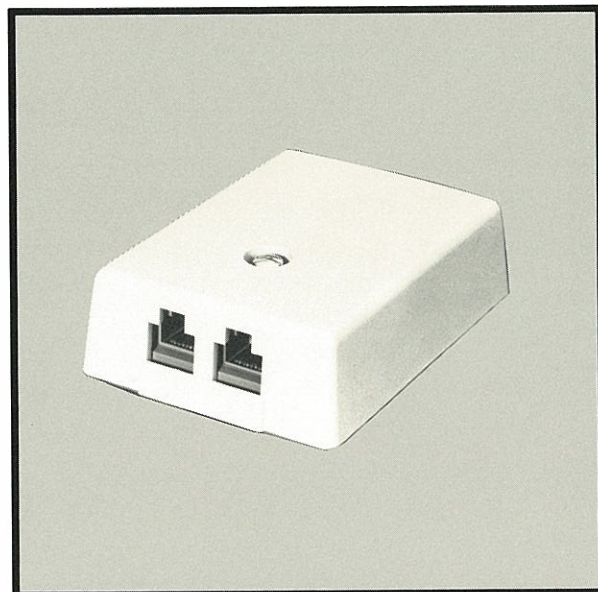
Applications

The 104A Connecting Block is used to terminate two 4-pair inside cables and provides a point for plugging in two terminals, each with up to eight conductors.

Description

The 104A consists of two 8-position, 8-conductor jacks attached to 110-type insulation displacement connectors.

Product Code	Comcode
104A-50	103 116 943



Connecting Block, Surface-Mounted, 121A

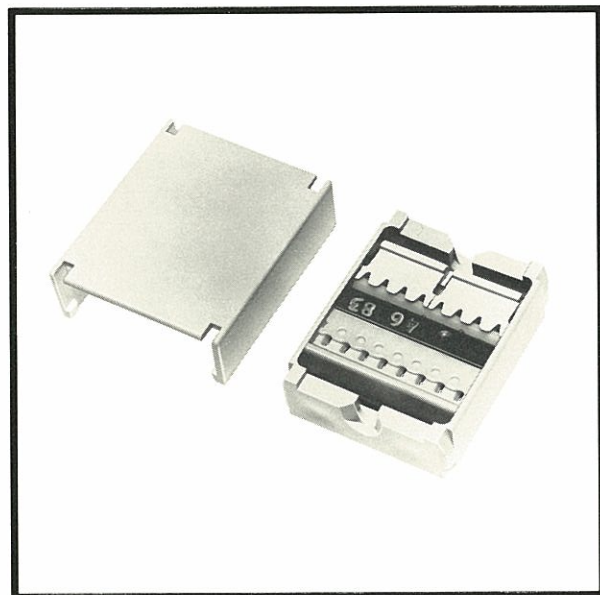
Applications

The 121A is used to terminate either round or flat 4-pair inside cable and provides a port for plugging in two terminals, each with up to eight conductors.

Description

The 121A Connecting Block consists of two 8-conductor jacks attached to connectors that accept either round inside wire or flat undercarpet cable.

Product Code	Comcode
121A-50	103 810 362



Cover, Decorative, 172A

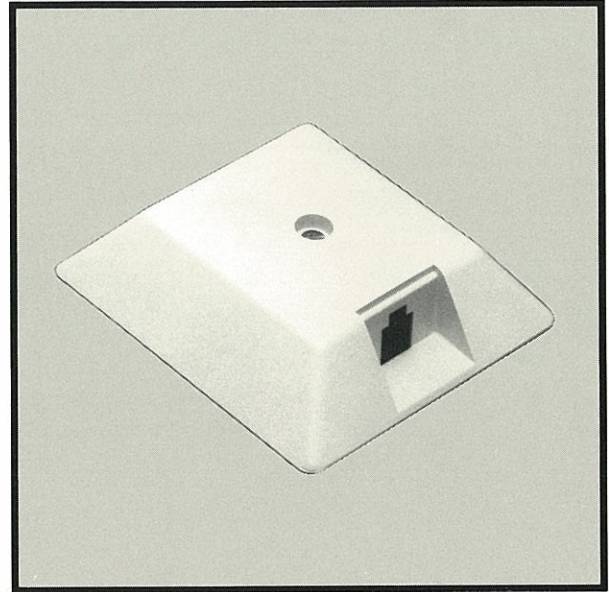
Application

The 172A Decorative Cover is used to replace the cover on the 103B Connecting Block after the 103B has been installed and the carpet has been cut.

Description

The 172A is a plastic cover with sloping sides to make it unobtrusive under carpet.

Product Code	Comcode
172A-50	103 761 581



Faceplate, 65B

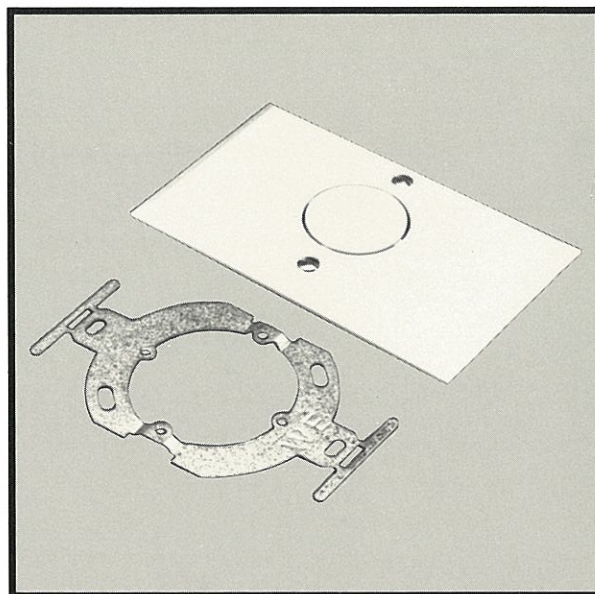
Application

The 65B Faceplate is used to cover a hole in the wall containing a standard electrical outlet box or an 800 Series station wire box, when the hole does not contain an active jack.

Description

The 65B Faceplate Kit consists of a rectangular faceplate, a steel mounting bracket, and thread cutting screws for attaching the faceplate to an 800 Series wire box. Its circular center is removable so that a 102A Connecting Block can be mounted.

Product Code	Color	Comcode
65B-50	Ivory	103 658 498
65B-54	Brown	103 658 506



Faceplate, 400A

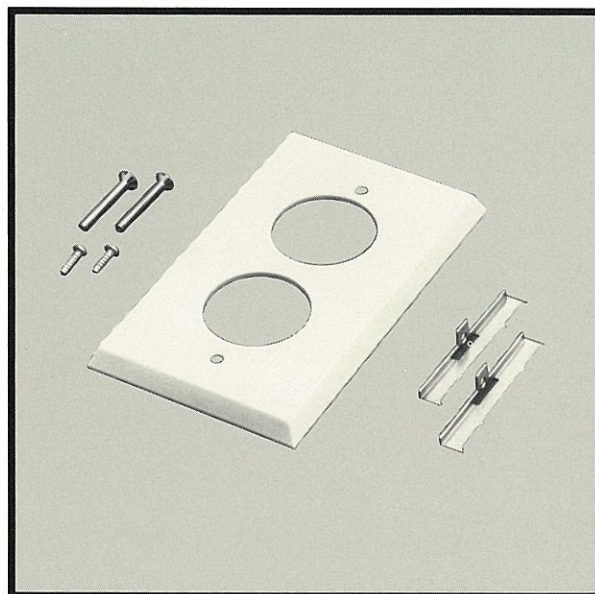
Applications

The 400A Faceplate is used with two 102A Connecting Blocks in a single electrical outlet box.

Description

The 400A Faceplate Kit includes a rectangular faceplate with two openings, two mounting brackets, and four screws for attaching the faceplate to an electrical outlet box.

Product Code	Color	Comcode
400A-50	Ivory	103 111 209
400A-54	Brown	103 167 789



4-Pair Modular Plug

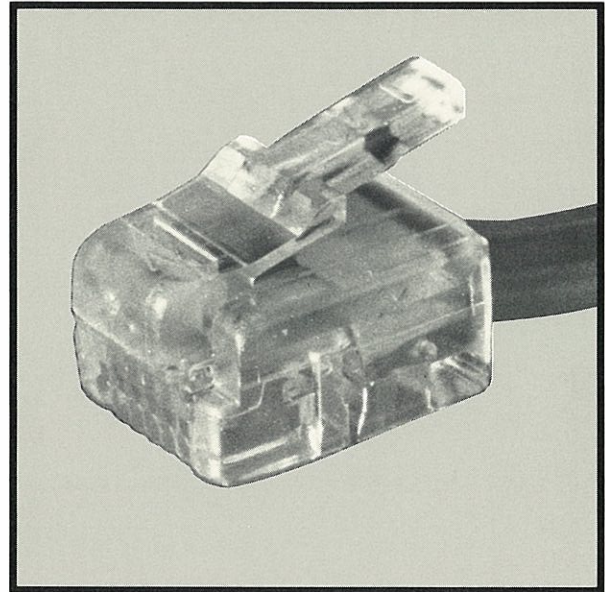
Applications

The 4-Pair Modular Plug is used to provide a means for field terminating 24-gauge, 4-pair inside cable with solid or stranded copper conductors.

Description

The 4-Pair Modular Plug is an 8-position plug with a clear plastic body.

Product Code	Comcode
MOD-4P	403 617 699



Universal Information Outlet (UIO)

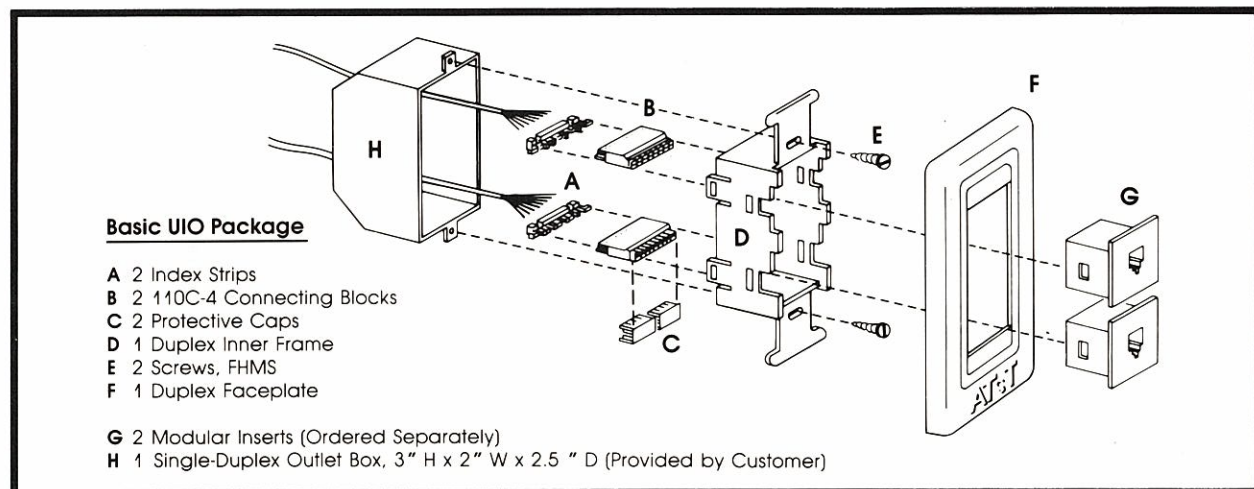
Applications

The Universal Information Outlet (UIO) is used to terminate 4-pair cable and to provide a point for plugging in a voice or data terminal.

Description

The UIO consists of a wall unit, either flush- or surface-mounted, into which two modular inserts can be placed. There are three such inserts available: an 8-position jack insert, a 6-position jack insert, and a blank cover insert.

Product Code	Description	Comcode
743A	Basic UIO package, including a duplex inner frame, a 411A duplex faceplate, two index strips, two 110C-4 connecting blocks, two protective caps, two FHMS screws, and an instruction sheet	104 201 736
400A	Surface-mounted frame	105 178 677
401A	8-position jack insert	105 038 137
401B	6-position jack insert	105 038 145
401C	Blank cover insert	105 190 904



Array Connector, 1009C

Applications

The 1009C Array Connector is used to connect ribbon fiber cables.

Description

The 1009C Array Connector consists of two 30-mil grooved silicon chips that align and connect one 12-fiber ribbon to another 12-fiber ribbon.

Product Code	Comcode
1009C	103 707 188

Connector Coupling, ST (C2000A-2)

Applications

The ST Connector Coupling (C2000A-2) mates fiber cables with ST Connector Plugs (P2020A-C-125). It will accept two ST connector plugs and is designed for use with the 10A Lightguide Connector Panel in the 100A Lightguide Interconnection Unit.

Description

The C2000A-2 connector coupling accommodates precision ceramic or plastic ST connector plugs and ensures the proper positioning of the fiber cables. It is threaded for mounting in a predrilled or pre-punched hole using a locknut. The coupler is based on a longitudinally split sleeve; the thickness of the sleeve's wall varies, causing its inside diameter to remain circular even when a cylindrical insert forces it open.

Product Code	Comcode
C2000A-2	104 148 028



Connector Plug, ST (P2020A-C-125)

Applications

The ST Connector Plug (P2020A-C-125) connects fiber cables to equipment, cross connects, or interconnects. ST connector plugs can be mounted on fibers in the field using the 1032A Tool Kit (see Section 6).

Description

The ST is a keyed ceramic or plastic-tipped connector plug that uses a bayonet-type “twist-lock” mounting arrangement. It will accept 125-μm outside diameter multimode fiber cables.

Specifications

Physical Specifications

Length: 0.89 in.

Product Code	Comcode
P2020A-C-125 (ceramic)	104 148 002
P2020A-A-125 (plastic)	105 218 333



Surface Outlet, 10S2A

Applications

The 10S2A Surface Outlet is used to terminate a single fiber run horizontally from the satellite closet and provides a point for connecting an optical fiber cable to equipment located at individual workstations.

Description

The 10S2A Surface Outlet consists of a molded plastic cover and base and a mounting bracket for an ST (P2020A-C-125) Connector Plug. Molded plastic retaining rings are used to store slack in a 1-inch radius.

Specifications

Physical Specifications

Height: 4.9 in.

Width: 3.4 in.

Depth: 1.9 in.

Product Code	Comcode
10S2A	104 325 683