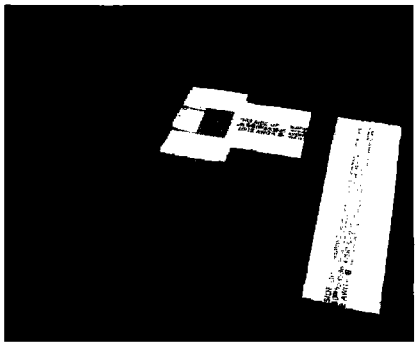
AMP Undercarpet Cabling System for Power and Communication

The AMP Undercarpet Cabling System is an effective alternative to conventional round conductor cable for the power, telephone and data distribution and workstation wiring of commercial and industrial offices. With this system, all your power, voice and data networks can be routed virtually anywhere on the floor without the restrictions encountered with underfloor ducts, walls, partitions and poles. The flat, low-profile design of the cables and receptacle fittings allows the system to be installed directly on the top of the floor; whether it's wood, ceramic, composition or concrete; and then covered with modular carpeting (squares).



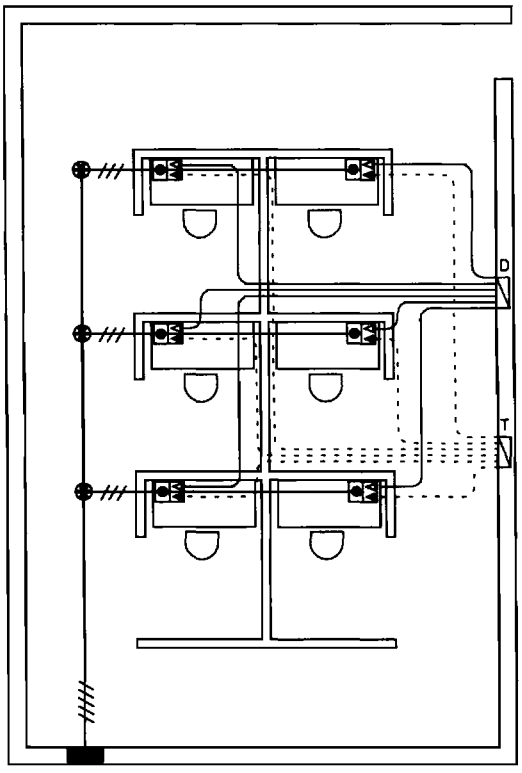
If you decide to change your office arrangement, your cabling system can be changed to fit your new requirements just as easily as you move the furniture. Take up a few sections of the modular carpeting, reroute the undercarpet cabling to your new scheme, relocate the floor receptacles and lay the carpet squares back in place. Presto! You're back in business.

When coupled with other NETCONNECT Open Cabling Systems solutions, like the AMP Communications Outlet, the AMP Undercarpet Cabling System makes even the most complex office wiring scheme simple, economical and virtually invisible. Whatever your system needs, they can be handled with ease—from tasklighting to telephones and coffee warmer to computers.

AMP offers a vast array of products to bring data, telephone and video to the workstation. Request AMP NETCONNECT Open Cabling Systems Catalog 82164.

Additional product and application information is available from the AMP Product Information Center for the following sources:

Catalog #296266	"Undercarpet Layout and Planning Manual"
Training Video #198023	"Undercarpet Cabling System"



Undercarpet Power Legend

- Universal Wall Box - Power
- Combination Power/Data/Tel DCR
- Tap (Step Down 5-Conductor to 3-Conductor)

Undercarpet Tel/Data Legend

- Universal Wall Box - Tel/Data

Cable Legend

- Undercarpet 5-Conductor Power Cable
- Undercarpet 3-Conductor Power Cable
- Category 5 - Data
- Category 3 - Telephone

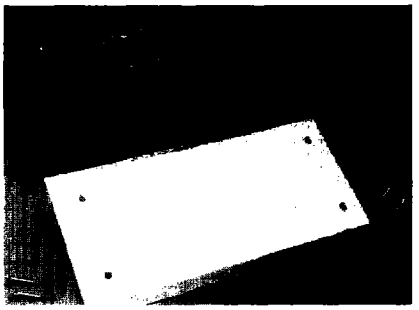
Note: Only to be used with carpet squares meeting the National Electrical Code.

AMP Undercarpet Cabling System for Power and Communication (Continued)

Components required for Undercarpet Power Distribution -

- Transition box (flush, surface or floor)
- Transition block
- Cable
- Floor preparation (for slab-on grade)
- Top shield
- Top shield bonding clips
- Hold down tape
- Spray adhesive
- Direct-connecting receptacles

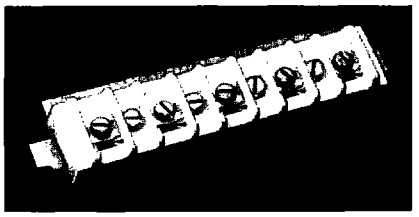
Power Transition Box and Cover



Typically used for transition from round cable to undercarpet power cable. Order Transition Block Separately.

Description	Part Number
Flush Wall Box (Use transition box)	554805-1
Flush Wall Box Cover	553292-1
Surface Wall Box (Use transition box)	553288-1
Surface Wall Box Cover	553289-1
Floor Duct Fitting (Use transition box)	553286-1
Floor Duct Fitting Cover	553287-1

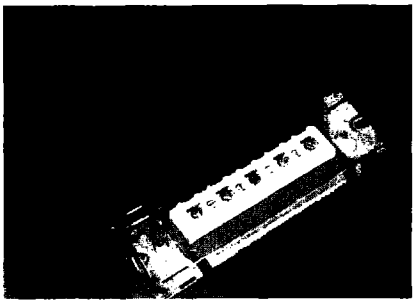
Power Transition Block



Part Number 554862-1

Used with transition boxes and floor service fittings to transition from round cable to 3- or 5-conductor undercarpet power cable

Power Whip Kit, 3 & 5 Conductor

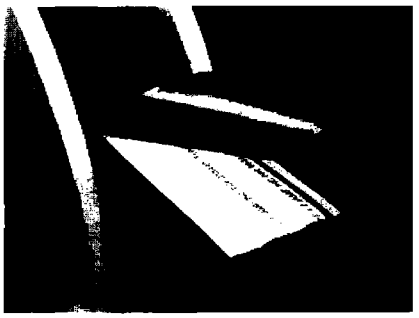


Part Number 554181-1 Black

Part Number 554181-3 Gray

Typically used for transition from undercarpet power cable to round cable to feed modular furniture power systems. Includes transition block. Accepts 12.7 [1/2"] EMT fitting for conduit.

Power Cable



Standard

No. of Conductors	Conductor Colors	Size AWG	Width (mm/in.)	Part Number Roll Length (m/ft.) 12.70/50	25.40/100	63.50/250
3	White, Green & Black	12	70.36 [2.77]	3-553079-3	3-553079-4	3-553079-1
		10		3-553445-3	3-553445-4	3-553445-1
5	White, Green, Black, Blue & Red	12	117.35 [4.62]	3-553239-3	3-553239-4	3-553239-1
		10		3-553447-3	3-553447-4	3-553447-1

With Isolated Ground–For Use With Sensitive Computer Equipment

No. of Conductors	Conductor Colors	Size AWG	Width (mm/in.)	Part Number Roll Length (m/ft.) 12.70/50	25.40/100	63.50/250
5	White, Green, Black, Red, Green, & Yellow	12	117.35 [4.62]	3-553820-3	3-553820-4	3-553820-1

AMP Undercarpet Cabling System for Power and Communication (Continued)

Components for Undercarpet Power Distribution

Top Shield–
Corrosion-Resistant Steel

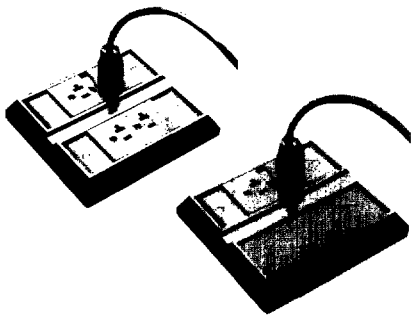


No. of Conductors	Width (mm/in.)	Part Number		
		50/12.70	Roll Length (m/ft.) 100/25.40	250/63.50
3 & 5	166.15 [6.62]	553536-3	553536-4	553536-1

Floor Preparation
Yellow vinyl for Slab-on-Grade Installation

Width (in./mm)	Roll (ft./m)	Part Number
203.20 [8]	63.50 [250]	554123-1

Low-Profile Direct-Connecting Receptacle (DCR) Kits



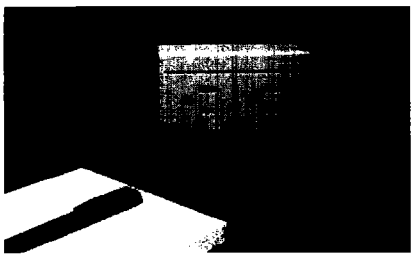
Direct-Connecting Receptacle

Description	Part Number
3-Conductor Duplex	553947*
3-Conductor Dual Duplex	554192*
3-Conductor Duplex & Voice/Data Blank	554142*
5-Conductor Duplex (Requires adapter for circuit selection)	554186*
5-Conductor Duplex Isolated Ground (Requires adapter for circuit selection)	558650*

5 Conductor Circuit Adapters

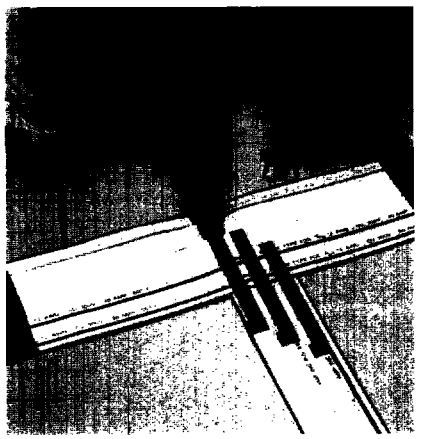
Description	Part Number
Blue Circuit	554188-1**
Red Circuit	554189-1**
Black Circuit	553910-1**
Isolated Ground Red Circuit	553908-1***
Isolated Ground Black Circuit	553909-1***

*Add suffix for color: -1 for Black, -3 for Gray.
**Use only with standard 5-conductor cable
***Use only with isolated ground cable



Desktop Mount Duplex Outlet (Gray)
Part Number 556222-1

Cable Installation Accessories



Taps and splices require the following components–

- Tap or splice (1 per conductor)
- Hand tool
- Insulator kit
- Top shield
- Top shield bonding clip (min. 2 per tap/splice)
- Hold down tape

DCR removal requires the following–

- Splice (1 per DCR)
- Hand tool
- Insulator kit
- Top shield
- Top shield bonding clip (min. 4 per DCR)
- Hold down tape

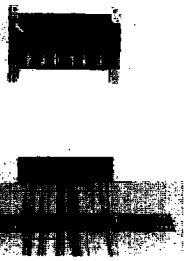
Description	Part Number
Individual Tap	553455-2
Individual Splice	553454-1
Tap/Splice Hand Tool	58073-1
Top Shield Bonding Clip (Required for turns, taps and splices)	553534-1
Insulator Kit	556411-1
Spray Adhesive	553453-1
Hold Down Tape, 45.72 m [180 ft.]	553481-1

AMP Undercarpet Cabling System for Power and Communication (Continued)

Components required for Undercarpet Voice/Data Distribution

- Transition box (flush, surface or floor)
- Transition block
- Cable
- Top/Bottom shield
- Hold down tape
- Floor fitting
- Voice/Data Jacks

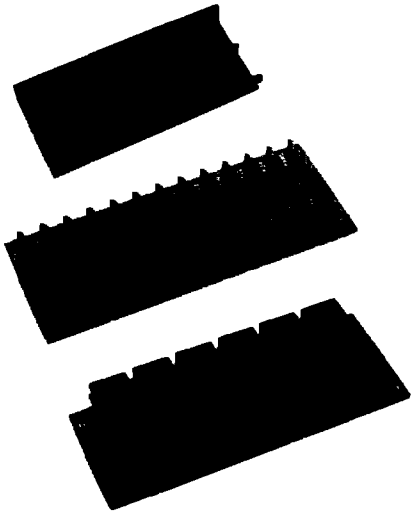
Voice/Data Transition Fitting



Description	Part Number
Flush Wall Frame	553739-2
Cover	553095-1

See also Flush Floor Service Box on page 14

Voice/Data Transition Blocks

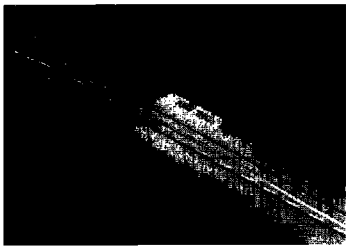


From	To		Category	Part Number
110 Block In	110 Block Out	6 Out	5	569396-1
50 AMP-BARREL terminals	4-Pair 50 AMP-BARREL terminals	6 Out	5	557934-1*
25-Pair Plug Top Entry	2-Pair RJ14C	12 Out	3	554462-1
25-Pair Plug Side Entry	3-Pair RJ25C	8 Out	3	553867-1
25-Pair Plug Top Entry	3-Pair RJ25C	8 Out	3	553930-1
25-Pair Plug Side Entry	4-Pair T568B	6 Out	3	553868-1
25-Pair Plug Top Entry	4-Pair T568B	6 Out	3	553929-1
25-Pair Plug Top Entry	3-Pair AMP-BARREL terminals	8 Out	3	554279-1
25-Pair Plug Top Entry	4-Pair AMP-BARREL terminals	6 Out	3	554280-1

*Requires Wire Insertion Tool 231890-1



Communication Cables

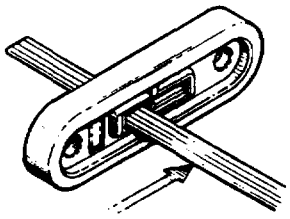


Part Number	Category	Length	
		m	ft.
4-Pair Cables			
557874-1	5	76.2	250
555318-1	3	76.2	250
554056-5	Voice	76.2	250
554056-6	Voice	152.4	500
25-Pair Cables, Pre-connectorized Male/Female, Voice			
554659-1	Voice	1.52	5
554659-2	Voice	3.05	10
554659-3	Voice	4.57	15
554659-4	Voice	6.1	20
554659-5	Voice	7.62	25
554659-6	Voice	9.14	30
554659-7	Voice	10.67	35
554659-8	Voice	12.19	40
554659-9	Voice	13.72	45
1-554659-0	Voice	15.24	50

AMP Undercarpet Cabling System for Power and Communication (Continued)

Components for Undercarpet Voice/Data Distribution

Cable Installation Accessories

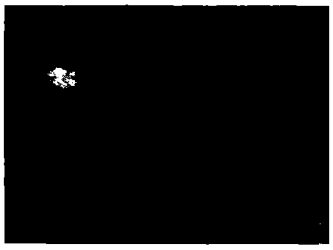


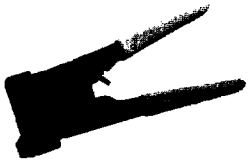
Cable Stripper

Description		Length		Part Number
		m	ft.	
Hold Down Tape		54.86	180	553481-1
Bottom Shield	25-Pair (554659)	76.2	250	553463-1
	4-Pair (554056)*	30.48	100	553579-1
Top Shield	25-Pair (554659)	30.48	100	553462-1
	4-Pair (554056)*			553579-1
Cable Stripper for 554056 Cable				554804-1
Wire Insertion Tool for 557934-1				231890-1

*4-Pair Category 3 and 5 cables do not require top and bottom shield.

Modular Plugs for Undercarpet Cables





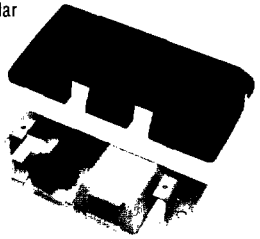
Description	Modular Plug Part Number	Professional Hand Tool with Die Set
Kits with strain relief for 554056 cable		
3-Pair, 20 kits per package	554111-1	2-231652-8
4-Pair, 20 kits per package	554112-1	2-231652-1
Plugs for Category 3, 4 and 5 cables		
3-Pair, 100 plugs per box	5-555042-3	2-231652-8
4-Pair, 100 plugs per box	5-554720-3	2-231652-1

626 Pneumatic Tool System Request AMP Catalog 124208

Miniature Floor Fitting Kits

Accept 110Connect Jack Kits or Toolless Modular Jacks and Couplers shown on pages 14 and 87

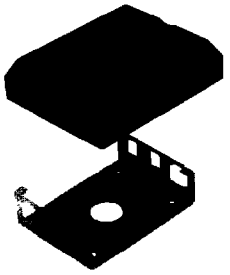




Description	Color	Part Number
2-Port	Black	554206-1
	Gray	554206-3
4-Port	Black	555287-1
	Gray	555287-3

Low Profile Floor Mounted Dual Data Kit

Part Number 555535-1 (Black)
Part Number 555535-3 (Gray)

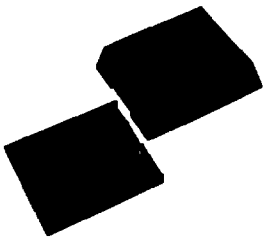


This is a low profile kit that matches the design of the DCR and other low profile kits. It will accommodate up to two four-position data connectors and up to four keystone jacks or modular couplers (see pg. 87). It mounts to the floor with double-sided tape (supplied), or it can be mounted with screws or studs (customer supplied). Fitting can be fed with cable from two sides or through the bottom.

Cover also contains four knock-outs which accept Single Port AMP Communications Outlets. Request Catalog 82164.

Storage Fitting[1] Low Profile

Typically used to store excess cable. Will also accommodate one voice/data transition block.



Description	Color	Part Number
Kit	Black	554201-1
	Gray	554201-3

[1]Also applicable to data systems

AMP Undercarpet Cabling System for Power and Communication (Continued)

Components for Undercarpet Voice/Data Distribution

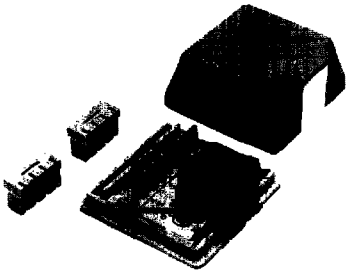
Category 5
110Connect Jack Kits



Description	Part Number
4-Pair T568B	558053-1
4-Pair T568A	558054-1
Bracket only*	569996-1

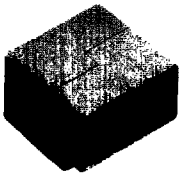
* Bracket will accept any of the unshielded 110Connect jacks shown on page 87. Bracket is supplied with double-faced tape.

Category 3
Toolless Modular Jack
For Direct Line Cord
(Flat or Round) Plug-In.



Description	Part Number
3-Pair, RJ25C	554268-1
3-Pair, MMJ	554268-2
4-Pair, T568B	554269-1
4-Pair, Keyed T568B	554269-2

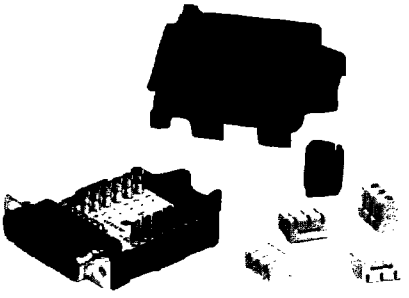
Category 3 Couplers
For Line Cord Plug-In (Mount in Floor Fitting Kits 554206 and 555287).
Backed with adhesive tape. Wired one-to-one.



Description	Part Number
For 3-Pair	553737-1
For 4-Pair	553738-1

Field Programmable
EIA RS-232 Connector

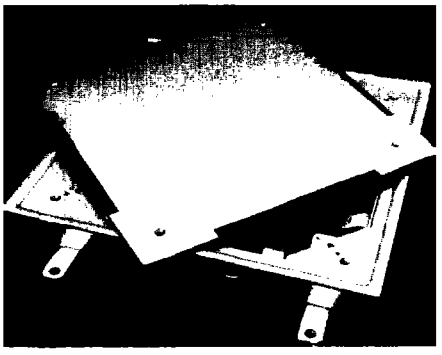
Plug
Part Number
554799-1
Receptacle
Part Number
554798-1



The Field Programmable EIA RS-232 Connector is designed to provide easy hook-up to data processing equipment. The standard EIA RS-232 25-position "D"-type connector is used.

Flush Floor Service Box

Power, Voice/Data Applications



Description	Part Number
Box and Temporary Cover	555039-1
Activation Kit	555038-1
Partition Kit required when power is mixed with data or communication circuits	555040-1
Bridge Kit used only for Feed-Thru power when mixed with data or communication circuits	555041-1

Undercarpet Cable and Accessories for the IBM Alternative Cabling System

Undercarpet Cable Wall Boxes

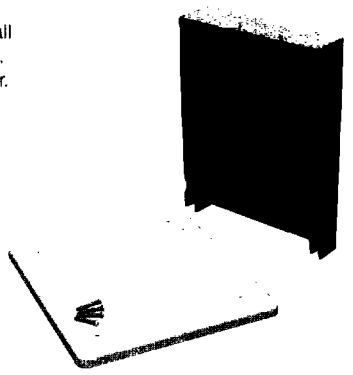
The wall boxes provide the capability to connect undercarpet cables to a maximum of four IBM Cabling System data connectors and four IBM Cabling System Telephone Jack connectors (P/N 553983-1 and 554546-1), which are used to terminate Type 1 or Type 2 cables.

Flush Mount Wall Box

This box is installed inside the wall and is supplied with a low-profile, decorative cover in a neutral color.

Part Number 554783-1

Functionally Equivalent to IBM Part No. 6339130

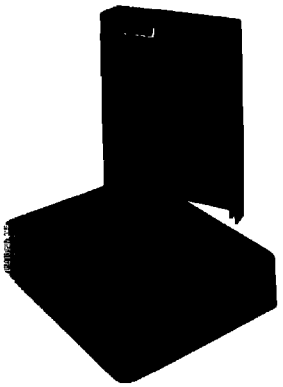


Surface Mount Wall Box

The surface mount wall box is installed directly on the wall and is supplied with a deep, decorative cover.

Part Number 554784-1

Functionally Equivalent to IBM Part No. 6339129



Undercarpet Cable

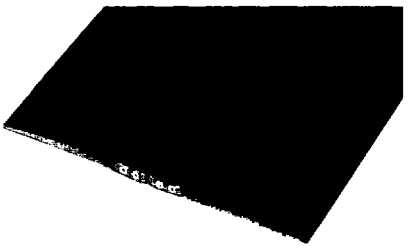
(for IBM Alternative System Cable Type 8)

Functionally Equivalent to IBM Part No. 4716750

150 Ohm Type 8 cable is used only under carpet materials. It contains two parallel pairs of .128 mm² [26 AWG] solid copper conductors for data communication. Each pair is individually shielded.

To determine cable run lengths; Length=Type 1 + 1.5x Types 6 & 9, and 2x Type 8.

Reel (m/ft.)	Part Number
106.68 [350]	554681-1
60.96 [200]	554681-2
15.24 [50]	554681-3



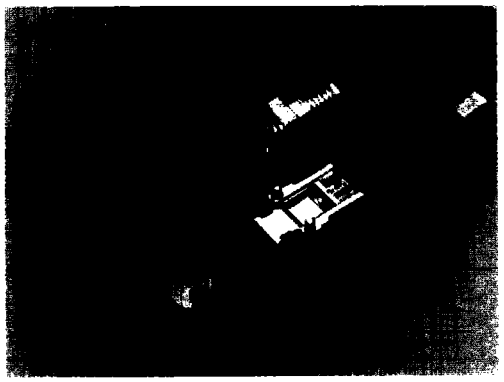
Data Cable Slitting Tool

Part No. 231783-1

Functionally Equivalent to IBM Part No. 6339138



Undercarpet Cable Connector Kit



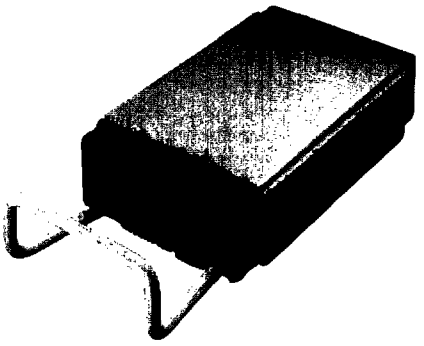
Box of 25

Part Number 554733-1

This connector must be used to terminate the ends of Type 8 cable. It will mate with the Data Connector (P/N 554000-1) for the standard IBM Cabling System. A dust cover with attaching strap is included with each connector. A stripping tool to prepare the cable for connector installation is included in each box of 25 connectors.

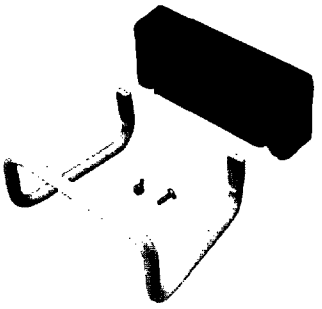
Undercarpet Cable and Accessories for the IBM Alternative Cabling System

Floor Monument
Part Number 554770-1
Functionally Equivalent to IBM Part No. 6339128



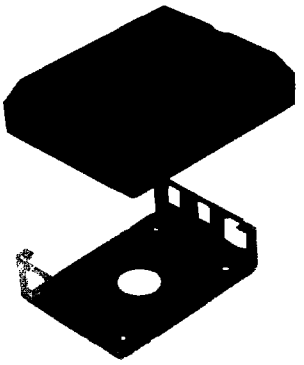
The floor monument is installed near the workstation using adhesive cement or screws. An undercarpet cable terminated with a Data Connector is installed in the opening provided in the faceplate. A standard IBM Cabling System data connector can then be plugged into the faceplate. The faceplate also provides an opening with a spring-loaded, sliding door for the installation of a keystone jack P/N 553983-1 and 554546-1, (see pg. 87). A heavy, metal kick-ring protects the cables and connectors plugged into the monument.

Floor Monument Faceplate Kit
Part Number 554771-1
Functionally Equivalent to IBM Part No. 6339131
Adapter Bar*
Part Number 554764-1
* Also available separately



The kit includes a faceplate, kick-ring, and mounting screws identical to those installed on the floor monument. It can be installed on the floor monument in place of a blank end-plate to provide a second data and telephone outlet to serve a second workstation terminal and telephone. Connectors are not included.

Low Profile Floor Mounted Dual Data Kit
Part Number 555535-1 (Black)
Part Number 555535-3 (Gray)



This is a low profile kit that matches the design of the DCR and other low profile kits. It will accommodate up to two four-position data connectors and up to four keystone jacks or modular couplers (see pg. 87). It mounts to the floor with double-sided tape (supplied), or it can be mounted with screws or studs (customer supplied). Fitting can be fed with cable from two sides or through the bottom.

Cover also contains four knock-outs which accept Single Port AMP Communications Outlet. Request Catalog 82164.