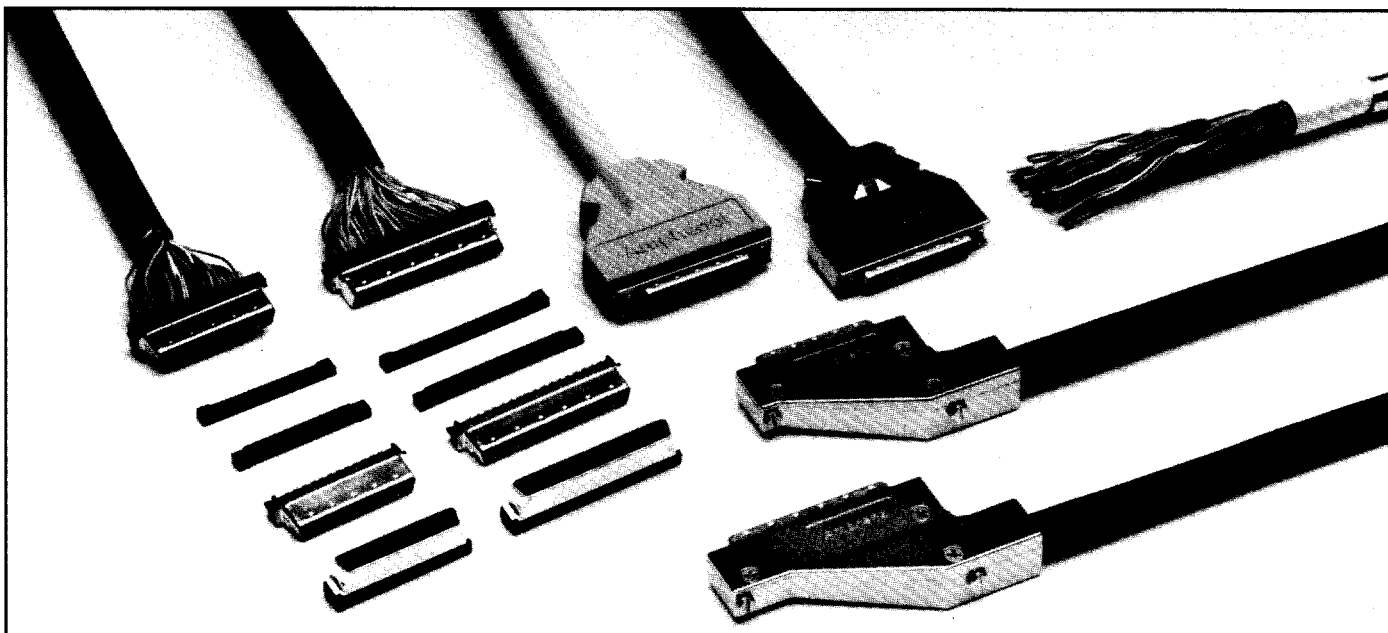


Amphenol®

High Density Connector & Cable System for SCSI



Amphenol's **257 series connector** and **167 series cable** are part of a high density (.050" pitch) interconnect system which meets ANSI requirements for SCSI 2 and 3. The Amphenol products in this brochure are intermateable with other industry standard connectors. Amphenol's "Accu-Pierce" termination tool can efficiently terminate high volumes of connectors to cable. Amphenol is in a unique position as the only connector supplier to offer an *entire SCSI 2 connector system* including cable, connector, backshells and termination tool.

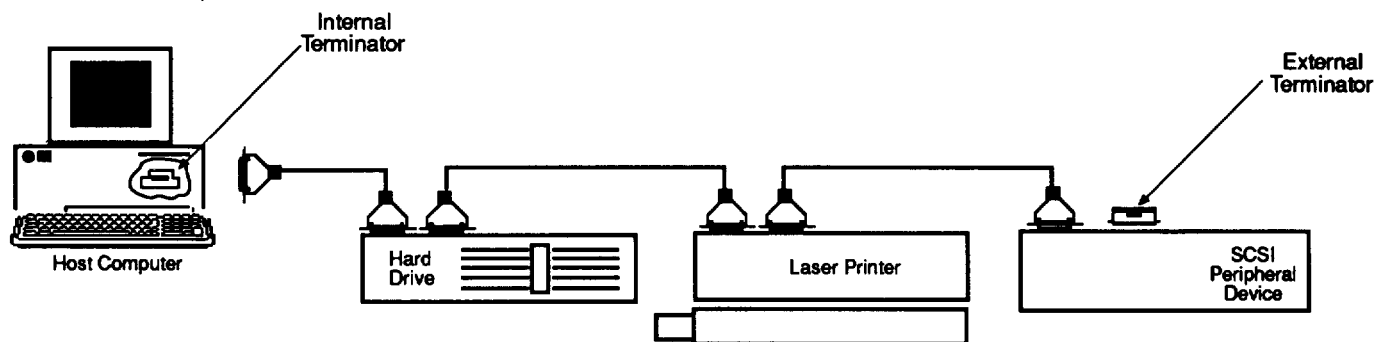
SCSI (Small Computer System Interface) is a parallel I/O bus system used to connect a host computer to peripheral devices such as disk drives, tape drives, printers, plotters, optical scanners, or CD ROMs (see figure below).

SCSI 2 defines the physical and electrical parameters of a system which allows 8-bit and 16-bit parallel data transfers on up to a maximum of eight peripheral devices. The exterior connector system defined in SCSI 2 is either a 50 position or 68 position .050" pitch "D" connector with squeeze-to-release latch mating on the backshell. The connector is terminated to shielded round jacketed cable, either 25 or 34 twisted pairs. The characteristic impedance of the cable should be no less

than 90 ohms and no greater than 140 ohms single ended. The connectors are terminated and shielded with die cast backshells that contain the latches and strain relief.

SCSI 3 is an upgrade of SCSI 2 to allow up to 32 peripheral SCSI devices to be daisy chained. SCSI 3 requires the male connector contact to have "coined" edges for higher reliability. The 68 position .050" pitch "D" connector with #2-56 thumbscrew mating on the backshell is the standard interface for SCSI 3 external "P" and "Q" cables. The connector is terminated to shielded round jacketed cable, 34 twisted pairs. The characteristic impedance of the cable should be 72 ohms minimum, 96 ohms maximum with 84 ohms being the nominal single ended measurement. The connectors are terminated and shielded with die cast backshells that contain the #2-56 thumbscrews and strain relief. The backshell is available with a straight or right angle cable exit.

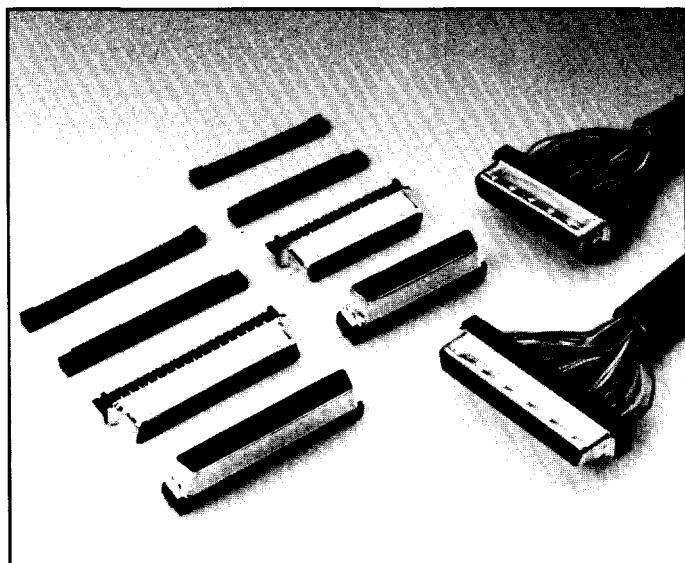
Other SCSI products, such as SCSI 1 (micro-ribbon) connectors, SCSI 2 PCB mount connectors and terminators are also available from Amphenol. Contact factory for additional information.



Typical SCSI Bus Interconnect System

Amphenol® SCSI 2 Connector Cable Mount Plug

257 Series



Specifications

Materials

Contact: Phosphor Bronze, plated 30μ" min. gold on mating end, 100-200μ" tin/lead on termination end, over 50μ" min nickel underplate

Front Shell: Steel, plated with 200μ" min. bright tin over 50μ" min. copper

Insulator: Black Thermoplastic, UL 94VO

Electrical

Current Rating: 1 amp per contact

Insulation Resistance: 1000 megohms min.

Dielectric Withstanding Voltage: 500 VAC min. at sea level

Contact Resistance: 25 milliohms max.

Mechanical / Environmental

Connector Mating Force: 50 position: 22 lbs. max.
68 position: 31 lbs. max.

Connector Unmating Force: 50 position: 2.2 lbs. min.
68 position: 3.3 lbs. min.

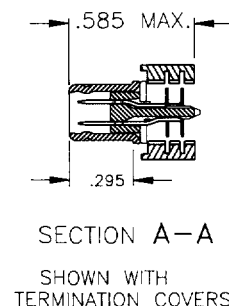
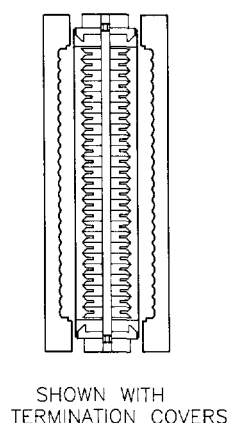
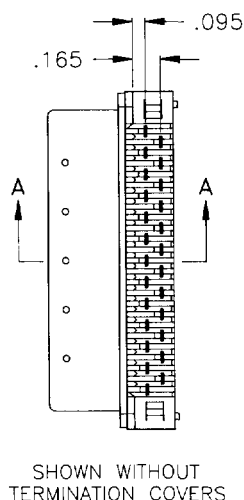
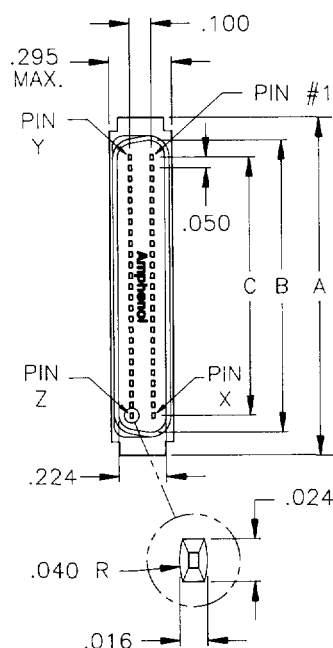
Operating Temperature Range: -55°C to +105°C

Recommended AWG

28-30 AWG stranded, insulation o.d. .026"-.036"
Wire must be approved by Amphenol.

Dimensions

Number of Positions	A	B	C	Pin X	Pin Y	Pin Z
50	1.571	1.372	1.200	25	26	50
68	2.021	1.822	1.650	34	35	68



Ordering Information

Number of Positions	Kit: Connector with Termination Cover	Connector Only	Termination Cover
50	257-K050P-AM00	257-C050P-AM00	257-T050-00
68	257-K068P-AM00	257-C068P-AM00	257-T068-00

Amphenol® Die Cast Backshells

257 Series

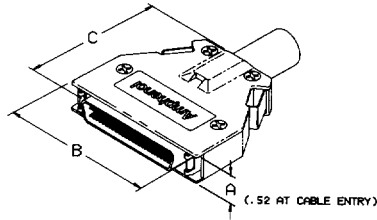


Figure 1
Straight Exit With Latches

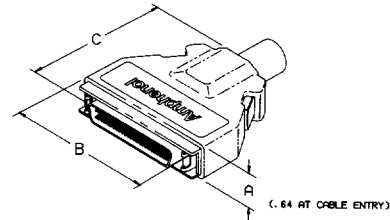


Figure 2
Straight Exit With Latches and Boot

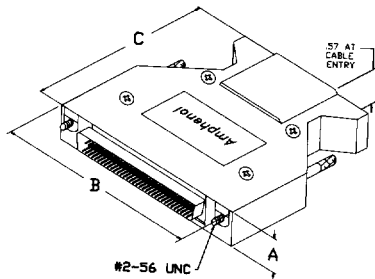


Figure 3
Straight Exit With Thumbscrews

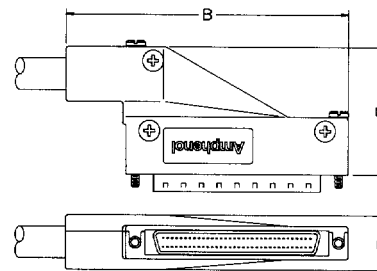


Figure 4
Right Angle Exit With Screws

Specifications

Die Cast Shell: Zinc, bright nickel plating
Latch Hardware: Stainless steel
Shield Support Ring: Brass, tin plated
Compression Insert: PVC, black, UL 94 V-O
 (Figure 3 only.)

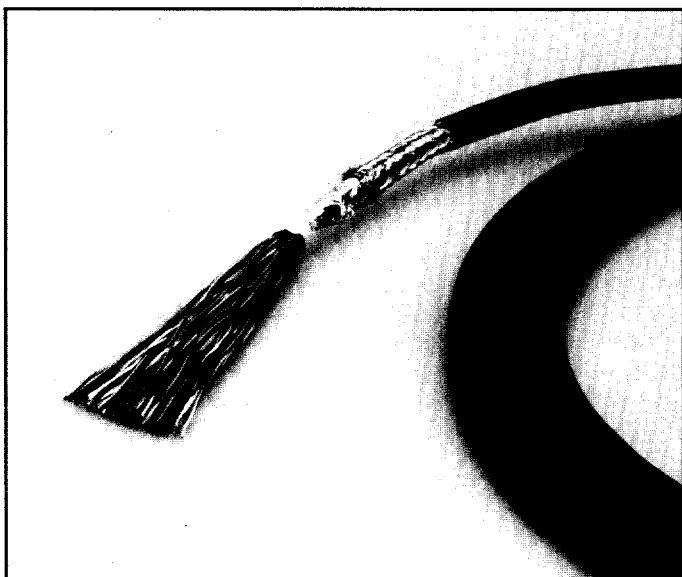
Screws: Steel, zinc plated w/ clear chromate
Boot (Cover): ABS, smoke gray color
 Boot also available in black. Contact factory.

Dimensions / Ordering Information

Description	Cable O.D. Max.	Figure	Connector Size	Part Number	A	B	C
Straight Exit with Latches	.420	1	50	257-S050C-420	.40	1.94	1.78
Straight Exit with Latches	.440	1	50	257-S050C-440	.40	1.94	1.78
Straight Exit with Latches		1	68	Contact Factory			
Straight Exit with Latches and Boot	.420	2	50	257-S050CB-420	.50	2.05	1.90
Straight Exit with Latches and Boot	.440	2	50	257-S050CB-440	.50	2.05	1.90
Straight Exit with Latches and Boot		2	68	Contact Factory			
Straight Exit with Thumbscrews		3	50	Contact Factory			
Straight Exit with Thumbscrews	.490	3	68	257-S068T-490	.40	2.52	1.85
Right Angle Exit with Screws	.440	4	50	257-S050R-440	.62	2.72	1.43
Right Angle Exit with Screws	.440	4	68	257-S068R-440	.62	3.17	1.43
Right Angle Exit with Screws	.490	4	68	257-S068R-490	.62	3.17	1.43

Spectra-Strip® SCSI Cable

167 Series



Description

Spectra-Strip's 167 Series SCSI cable is designed to meet all the current requirements of the SCSI 2 and SCSI 3 cable specifications. It consists of individually color coded discrete twisted pairs of 28 AWG wire insulated with expanded polyolefin for excellent electrical characteristics. The cable is electrically shielded with a high coverage tinned copper braid and protected by an overall jacket of PVC. Both the cable color code and jacket color can be specified to meet customer requirements. The cable is compatible with all current SCSI 2 and SCSI 3 type connectors and termination processes. The cable is available in bulk put-ups in lengths from 100 to 500 feet. Custom and unshielded cables are also available. The cable is UL listed power limited circuit cable type CL2, FT-4, and CSA certified.

Physical Specifications

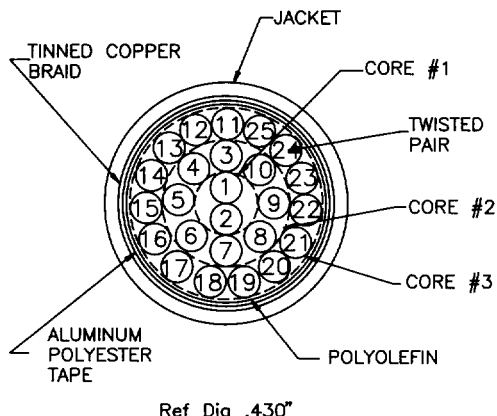
Conductors:	28-7/36 AWG tinned copper
Insulation:	.010" expanded polyolefin, .035" O.D.
Pair Layout:	See below
Dielectric Spacer:	.005" expanded polyolefin
Shielding:	aluminum / polyester tape with 85% minimum coverage Tinned copper braid
Jacket:	.033" black PVC (Contact factory for color options.)
Temperature Rating:	-20°C to +75°C
Print:	E116273 (UL) 75°C 28 AWG CL2 LL31941 CSA AWM I/II A 75°C 300V FT-4

Electrical Specifications

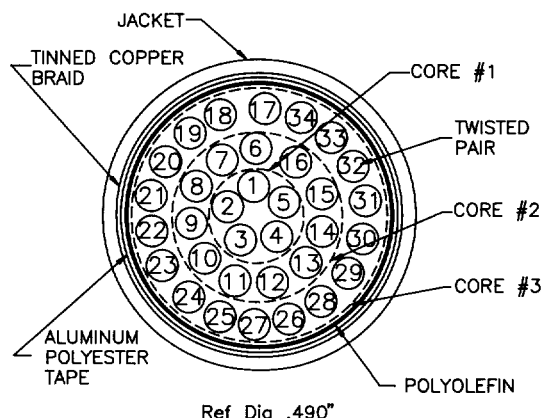
Impedance:	84 ± 6 ohms (single ended)* 130 ohms (differential)
Capacitance:	18 pf/ft.*
Propagation Delay:	1.4 ns/ft.
Voltage:	300 volts
Current Rating:	1 amp @ 10°C rise above ambient
DC Resistance:	63 ohms/ 1,000' @ 20°C

* Single-ended, one conductor of each pair commoned to shield and ground.

Part Number 167-2898-998
25 Pair Layout (2-8-15)

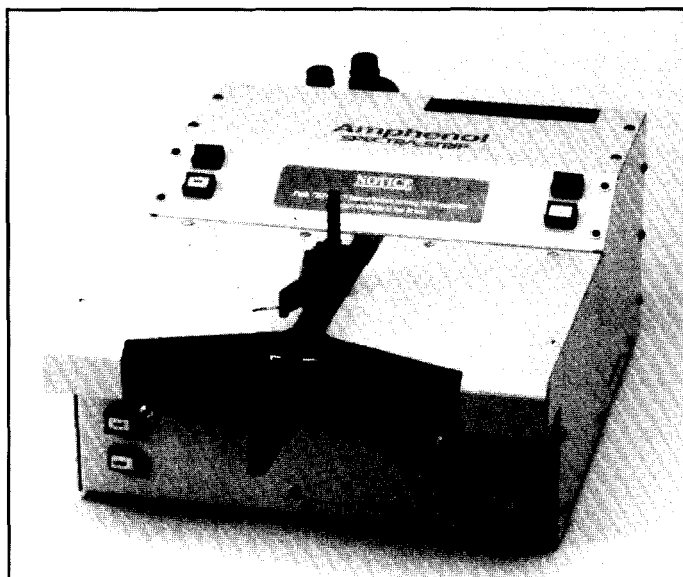


Part Number 167-2898-999
34 Pair Layout (5-11-18)



Amphenol® SCSI Connector Termination Tooling

359 Series



Accu-Pierce Semi-Automatic Tool

Amphenol's new Accu-Pierce is the latest in semi-automatic production machines for inserting cable one pair at a time into Amphenol 257 series connectors.

The new Accu-Pierce has program capabilities for terminating the 257 series 50 and 68 position connectors. In addition, the operator can program the machine to skip selected positions in either of the connector sizes.

The Accu-Pierce includes the nest for top cable entry. Options include an adapter for 90° cable entry.

Specifications

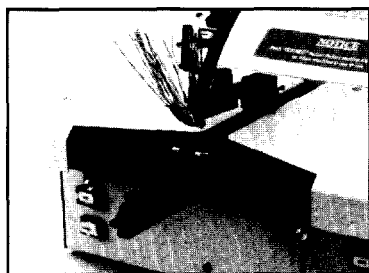
Electrical Requirements: 110 VAC, $\pm 10\%$, 1 Ph, 60 Hz
Pneumatic Requirements: 80-120 PSI
Height: 9 inches
Length: 22 inches
Width: 15 inches
Weight: 60 lbs. (27.2kg)

Ordering Information

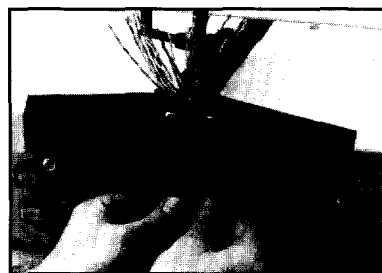
Part Number	Description
359-8000	Accu-Pierce 8000 with Top Entry Nest
359-800-009	90° Adapter Kit

Contact factory for manual tooling information.

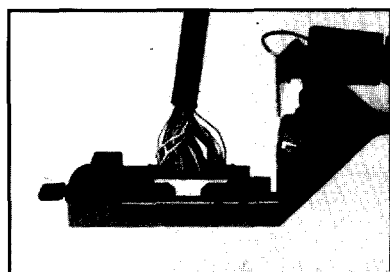
Cabling Procedure



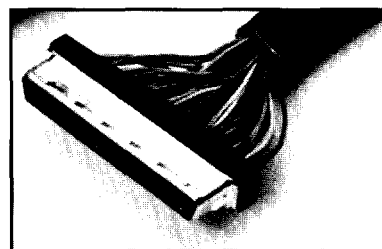
1. Position cable in holder.
Position connector in nest.



2. Draw down conductor pairs
to terminate.



3. Connector fully terminated.
Shown without covers.



4. Assemble covers.
Seat covers with arbor press.

Amphenol

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Fax: (203) 281-5872

- **Amphenol** Connectors

- **SPECTRA-STRIP** Cable
ISO 9001 Certified

Dimensions and characteristics subject to change without notice.
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