



D-Subminiature EMI/RFI Shielding Interconnection Systems



PRODUCT PROFILE



RR(Standard density) - HR(High density)

D-Sub connectors - stamped and formed contacts

REAR RELEASE CRIMP CONNECTORS

Designed for high volume production. Amphenol's rear release crimp connector and contacts provide significant cost saving.

According to MIL C24308.

PRODUCT INTRODUCTION



KEY FEATURES

- EMI/RFI shell configuration
- Removable, reusable contacts
- Automatic and manual tooling available

APPLICATIONS

- Industrial
- Telecom
- Any industry standard I/O connections

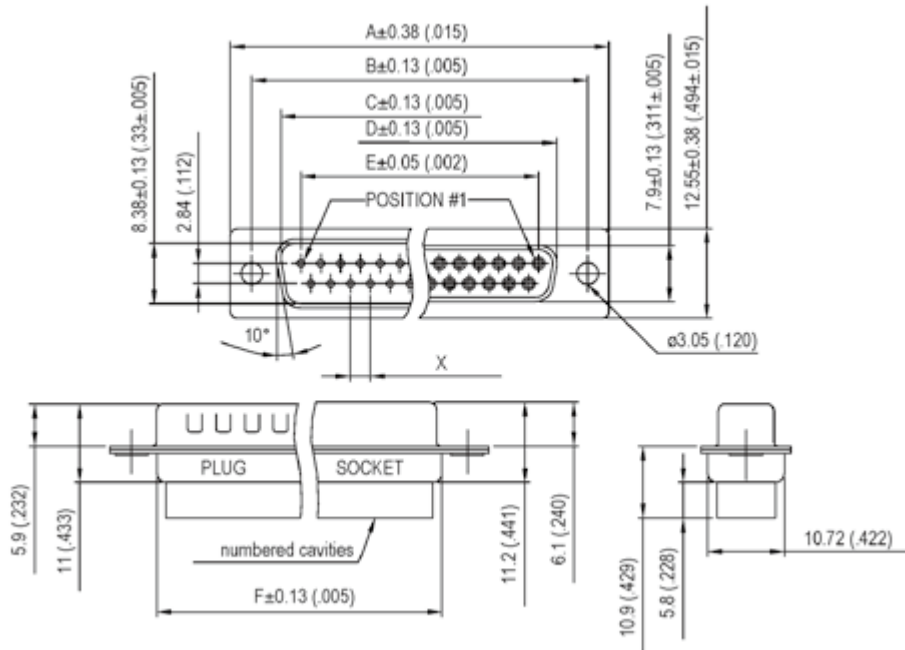
ELECTRICAL	
Rated current	5A
Rated voltage	500V AC / rms 50Hz
Withstanding voltage	RR: 1000V AC / rms 50Hz for 1 min HR: 1000V AC / rms 60Hz for 1 min
Insulation resistance	RR: 5000MΩ HR: 1000MΩ
Contact resistance	10mΩ max
Wire size	20 to 28 AWG max insulation out Φ1.27mm

MECHANICAL					
Mating and unmating force Unit: kg (lb)					
No. of contacts		Mate (max)		Unmate (min)	
RR	HR	RR	HR	RR	HR
9(size E)	15(size E)	3.05(6.74)	3.81(8.42)	0.36(0.79)	0.52(1.14)
15(size A)	26(size A)	5.09(11.24)	5.95(13.16)	0.46(1.01)	1.05(2.32)
25(size B)	44(size B)	9.26(20.46)	9.26(20.46)	0.81(1.8)	1.37(3.02)
37(size C)	62(size C)	13.48(29.78)	13.48(29.78)	1.1(2.47)	1.76(3.88)
50(size D)	78(size D)	15.82(34.96)	15.82(34.96)	1.6(3.56)	2.02(4.46)

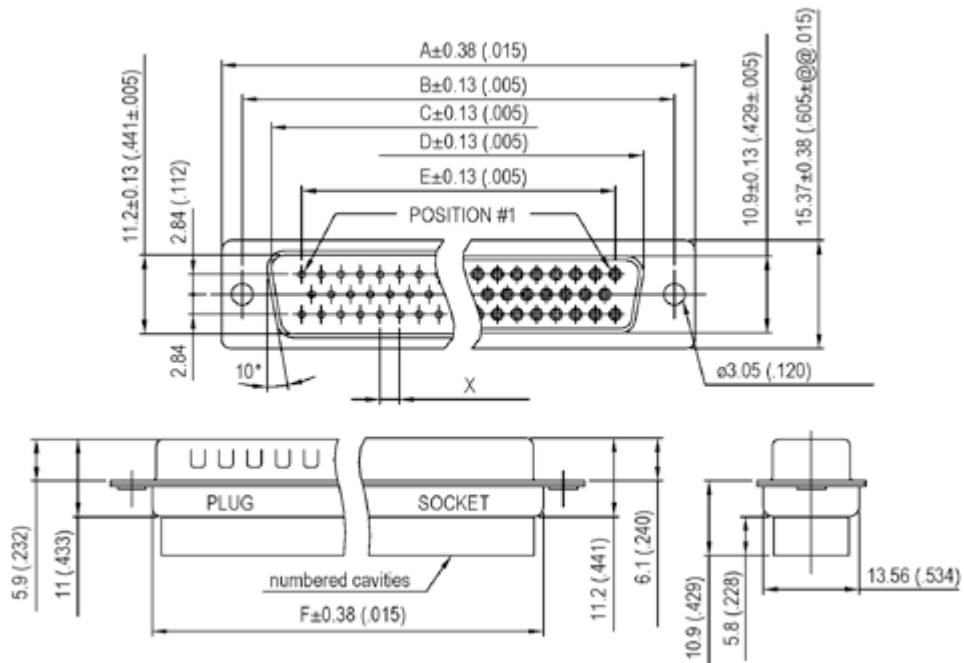
ENVIRONMENTAL	
Temperature range	-55°C to 125°C
Flammability	UL94V-0
Salt spray	48h
MATERIAL	
Shell	Steel, tin plated
Insulator	Black glass-filled thermoplastic, UL94V-0
Rear insert	Brass, tin or gold plated
Screwlock	Steel, M3 / UNC4-40

Contacts	Under plating	Crimp side
0.2μm(8μ")gold	2μm(78μ") nickel	gold flash or tin
0.2μm(20μ")gold	2μm(78μ") nickel	gold flash or tin
0.2μm(30μ")gold	2μm(78μ") nickel	gold flash or tin

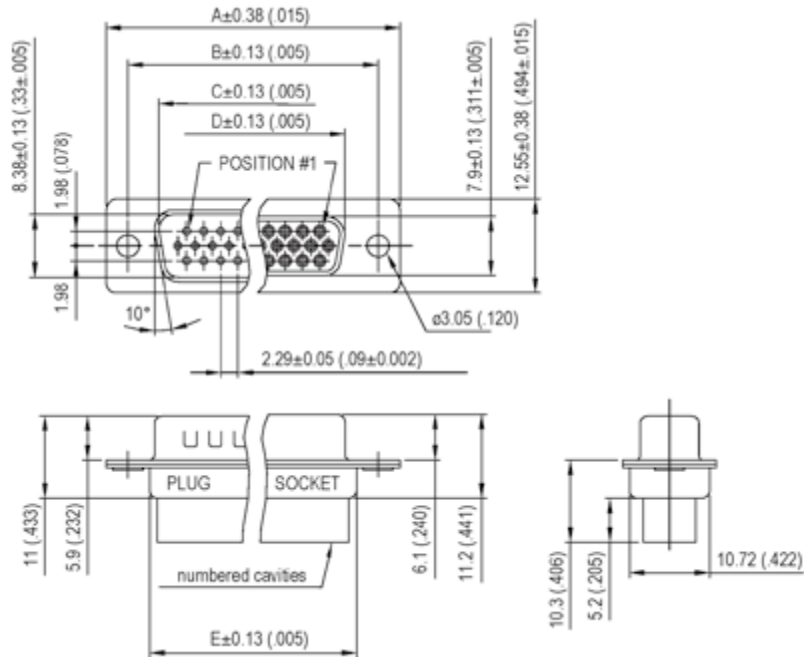
STANDARD DENSITY RR



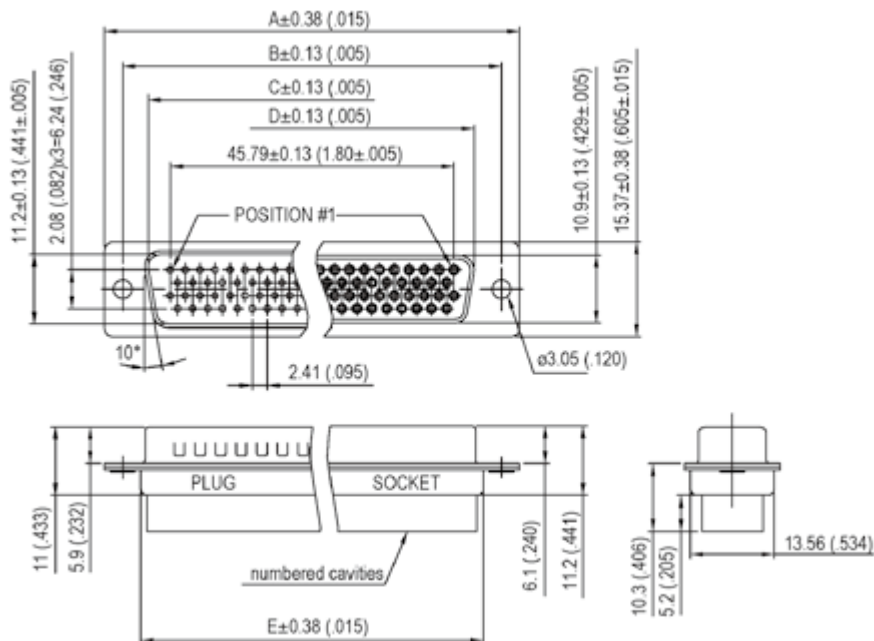
Number of contacts	DIMENSIONS mm (inch)						
	A	B	C	D	E	F	X
9	30.84 (1.21)	24.99 (.98)	16.92 (.67)	16.24 (.64)	11.09 (.44)	19.28 (.76)	2.74
15	39.24 (1.54)	33.32 (1.31)	24.7 (.972)	24.56 (.97)	19.39 (.76)	27.51 (1.08)	2.74
25	53.04 (2.09)	47.04 (1.85)	38.96 (1.53)	38.38 (1.51)	33.24 (1.31)	41.30 (1.63)	2.77
37	69.32 (2.73)	63.5 (2.50)	55.42 (2.18)	54.76 (2.16)	49.86 (1.96)	57.71 (2.27)	2.77
50	67 (2.64)	61.11 (2.41)	52.86 (2.08)	52.34 (2.06)	44.32 (1.75)	55.3 (2.18)	2.77



HIGH DENSITY HR

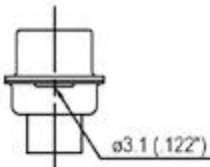


Number of contacts	DIMENSIONS mm (inch)				
	A	B	C	D	E
15	30.84 (1.21)	24.99 (.98)	16.92 (.67)	16.24 (.64)	19.28 (.76)
26	39.24 (1.54)	33.32 (1.31)	24.7 (.972)	24.56 (.97)	27.51 (1.08)
44	53.04 (2.09)	47.04 (1.85)	38.96 (1.53)	38.38 (1.51)	41.30 (1.63)
62	69.32 (2.73)	63.5 (2.50)	55.42 (2.18)	54.76 (2.16)	57.71 (2.27)
78	67 (2.64)	61.11 (2.41)	52.86 (2.08)	52.34 (2.06)	55.3 (2.18)

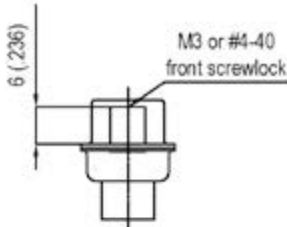


PANEL MOUNTING OPTION

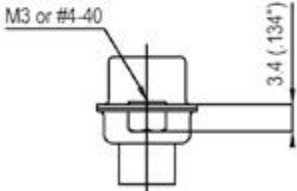
STANDARD DENSITY



Standard rivet \varnothing 3.1mm
no digit

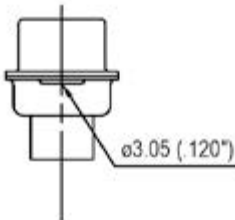


Fixed front female screwlock
VF / VFM

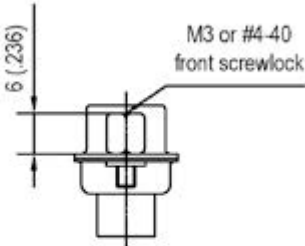


Threaded rear insert
H / G

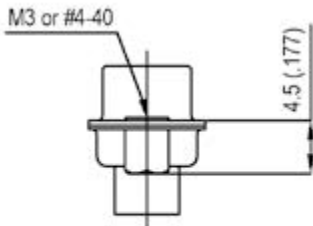
HIGH DENSITY HR



Standard rivet \varnothing 3.05mm
no digit



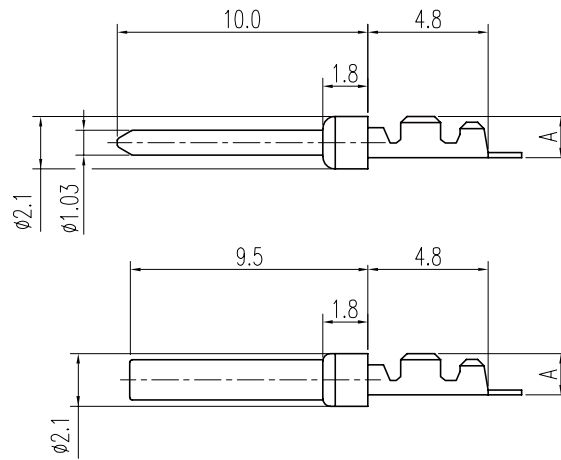
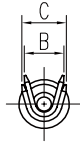
Fixed front female screwlock
VF / VFM



Threaded rear insert
H / G

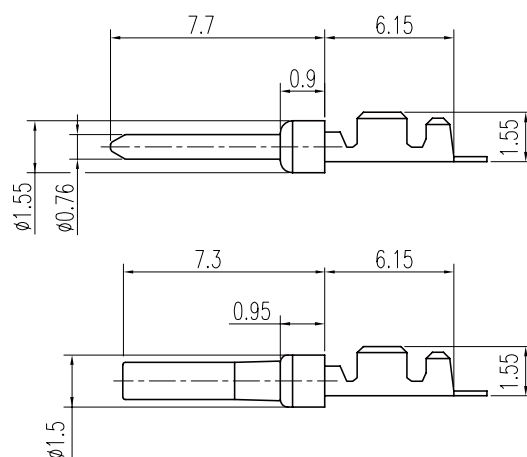
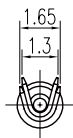
STAMPED CRIMP CONTACTS

FOR STANDARD DENSITY RR



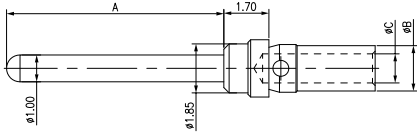
AWG	A	B	C
20 - 24	1.8 (.071")	1.9 (.075")	2.5 (.098")
24 - 28	1.4 (.055")	1.5 (.059")	1.7 (.066")

FOR HIGH DENSITY HR



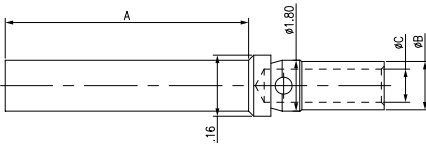
TURNED CRIMP CONTACTS - STANDARD DENSITY

Male contact



P/N	Wire size AWG	A	ΦB	ΦC	Plating
L17D3D -474T75	24 to 18	8.2	1.72	1.39	Flash gold
L17D3D -478T	24 to 20	8.2	1.72	1.17	Flash gold

Female contact



P/N	Wire size AWG	A	ΦB	ΦC	Plating
L17D3D -475T75	24 to 18	9.4	1.72	1.39	Body: Tin Clip: Gold
L17D3D -475T75G	24 to 18	9.4	1.72	1.39	Body: Flash gold Clip: Gold
L17D3D -476T	24 to 20	9.4	1.72	1.17	Body: Tin Clip: Gold
L17D3D -477T	24 to 20	9.4	1.72	1.17	Body: Flash gold Clip: Gold





MECHANICAL	
Wire tensile strength	> 75% breaking of load of the wire
Contact retention in the insulator	> 40N
Displacement	< 0.3
Number of cycles	100 cycles
ELECTRICAL	
Nominal current	AWG18: 9A AWG20: 7.5A AWG22: 5A AWG24: 3A
Contact resistance	< 10mΩ
Wire gauge	AWG18 to 24
TOOLS	
Crimping tool	17D 357-100 (M22520/2-01)
Positioner	17D 428 SP (M22520/2-08)
Extraction tool	17D 438SP
MATERIAL	
Male contact	Brass
Female contact Body	Brass
Female contact Starclip	Becu

HOW TO ORDER RR (STANDARD DENSITY)

HOUSINGS

	L	RR
177: Tinned shell for receptacle								
777: Tinned shell + dimples for plug								
Shell size: E, A, B, C, D								
Rear mounting type: H: Rear insert UNC 4-40 G: Rear insert M3 Omit: Standard rivet $\Phi 3.1\text{m}$								
Configuration: 09, 15, 25, 37, 50								
Contact type: P: Pin S: Socket								
Front mounting type: VF: Front screwlock UNC 4-40 VFM: Front screwlock M3								

CONTACTS

	L	17	RR
Wire size: D1: AWG20 to 24 D2: AWG24 to 28							
Contact type: M: Male F: Female							
Full gold plating: 01: $0.2\mu\text{m}$ ($8\mu''$) 02: $0.5\mu\text{m}$ ($20\mu''$) 04: $0.76\mu\text{m}$ ($30\mu''$)							
Selective gold plating: 11: $0.2\mu\text{m}$ ($8\mu''$) Au + $2\mu\text{m}$ ($78\mu''$) Sn 12: $0.5\mu\text{m}$ ($20\mu''$) Au + $2\mu\text{m}$ ($78\mu''$) Sn 14: $0.76\mu\text{m}$ ($30\mu''$) Au + $2\mu\text{m}$ ($78\mu''$) Sn							
Packaging: 100: Bulkpack unit (100 cts) 400: Reel of 400 cts 2K: Reel of 2000 cts 10K: Reel of 10000 cts (right feed reel) 10G: Reel of 10000 cts (left feed reel)							
				REEL WINDING DIRECTION			
							
				Left to right feed reel: G Right to left feed reel: K			

HOW TO ORDER RR (HIGH DENSITY)

HOUSINGS

	L	HR
177: Tinned shell for receptacle 777: Tinned shell + dimples for plug								
Shell size: E, A, B, C, D								
Rear mounting type: H: Rear insert UNC 4-40 G: Rear insert M3 Omit: Standard rivet $\Phi 3.1\text{m}$								
Configuration: 15, 26, 44, 62, 78								
Contact type: P: Pin S: Socket								
Front mounting type: VF: Front screwlock UNC 4-40 VFM: Front screwlock M3								

CONTACTS

	L	17	HR	D2
Wire size: D2: AWG24 to 28							
Contact type: M: Male F: Female							
Full gold plating: 01: $0.2\mu\text{m}$ ($8\mu''$) 02: $0.5\mu\text{m}$ ($20\mu''$) 04: $0.76\mu\text{m}$ ($30\mu''$)							
Selective gold plating: 11: $0.2\mu\text{m}$ ($8\mu''$) Au + $2\mu\text{m}$ ($78\mu''$) Sn 12: $0.5\mu\text{m}$ ($20\mu''$) Au + $2\mu\text{m}$ ($78\mu''$) Sn 14: $0.76\mu\text{m}$ ($30\mu''$) Au + $2\mu\text{m}$ ($78\mu''$) Sn							
Packaging: 5K: Reel of 5000 cts (right feed reel) 5G: Reel of 400 cts (left feed reel) 10K: Reel of 10000 cts (right feed reel) 10G: Reel of 10000 cts (left feed reel)							

REEL WINDING DIRECTION



Left to right feed reel: G

Right to left feed reel: K

SHIELDED D-SUB BACKSHELLS APCD-VZK SERIES

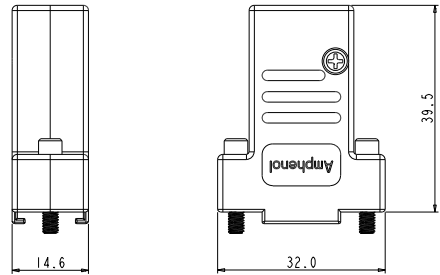


KEY FEATURES

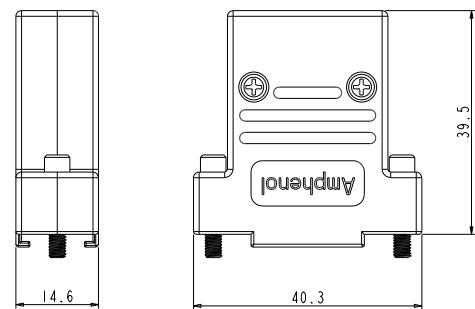
- 9 & 15 way available
- EMI shielding
- Pre-mounted screw to easy assembly
- Foil and braided cable acceptable
- Comforming with VDE 0871, FCC 20780 & 89/336/EU
- Screw lock UNC 4-40 or M3
- Other request, please contact us

ELECTRICAL		
Material	Zinc, nickel plated	
Temperature range	-55°C to 125°C	
Cable strain relief	Cable clamp with 2 assembly screws	
Cable diameter	9 PIN	5 to 8 mm (with jacket) / 10mm (without jacket)
	15 PIN	6 to 11 mm (with jacket) / 12mm (without jacket)
Locking screw	Delivered with pre-mounted jackscrews	
Hood	Top entry	
Attenuation factor	> 60dB between 300MHZ and 900 MHZ	

Dimension: 9 PIN

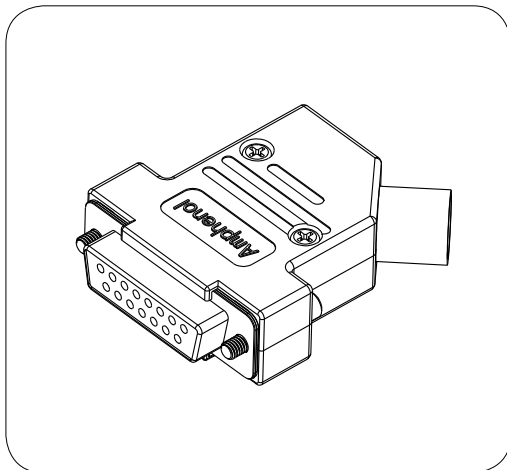


Dimension: 15 PIN



	APCD VZK	09	U	K
Product series				
Size:	09, 15			
Thread (jackscrew)	Omit: M3 U=UNC4-40			
Packaging:	K: Kit package BULK: Bulk / 100pcs			

SHIELDED D-SUB BACKSHELLS APCD-ZK SERIES

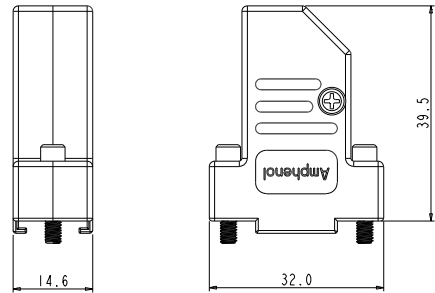


KEY FEATURES

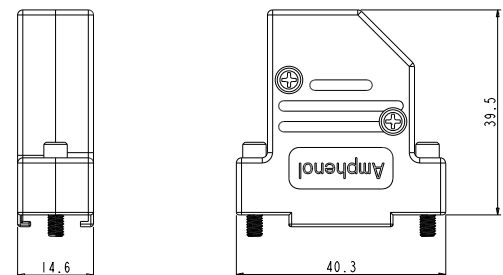
- 9 & 15 way available
- EMI shielding
- Pre-mounted screw to easy assembly
- Foil and braided cable acceptable
- Comforming with VDE 0871, FCC 20780 & 89/336/EU
- Screw lock UNC 4-40 or M3
- Other request, please contact us

ELECTRICAL		
Material	Zinc, nickel plated	
Temperature range	-55°C to 125°C	
Cable strain relief	Cable clamp with 2 assembly screws	
Cable diameter	9 PIN	5 to 8 mm (with jacket) / 10mm (without jacket)
	15 PIN	6 to 11 mm (with jacket) / 12mm (without jacket)
Locking screw	Delivered with pre-mounted jackscrews	
Hood	Side entry	
Attenuation factor	> 60dB between 300MHZ and 900 MHZ	

Dimension: 9 PIN



Dimension: 15 PIN



	APCD ZK	09	U	K
Product series				
Size:				
Thread (jackscrew)				
Omit: M3				
U=UNC4-40				
Packaging:				
K: Kit package				
BULK: Bulk / 100pcs				

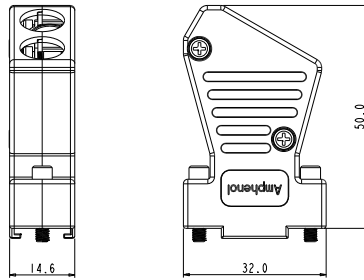
SHIELDED D-SUB BACKSHELLS **APCD-ZK 2G** SERIES



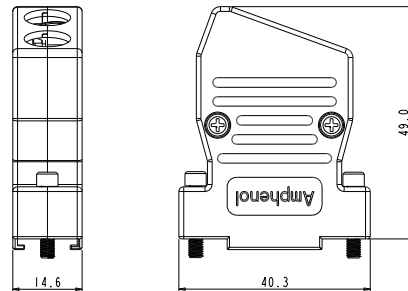
ELECTRICAL	
Material	Zinc, nickel plated
Temperature range	-55°C to 125°C
Cable strain relief	Cable clamp with 2 assembly screws
Cable diameter	5 to 8 mm (with jacket) / 10mm (without jacket)
Locking screw	Delivered with pre-mounted jackscrews
Hood	Side entry
Attenuation factor	> 60dB between 300MHZ and 900 MHZ



Dimension: 9 PIN



Dimension: 15 PIN



KEY FEATURES

- 9 & 15 way available
- EMI shielding
- Pre-mounted screw to easy assembly
- Foil and braided cable acceptable
- Comforming with VDE 0871, FCC 20780 & 89/336/EU
- Screw lock UNC 4-40 or M3
- Other request, please contact us

APCD ZK 09 U K 2G

Product series

Size:
09, 15

Thread (jackscrew)
Omit: M3
U=UNC4-40

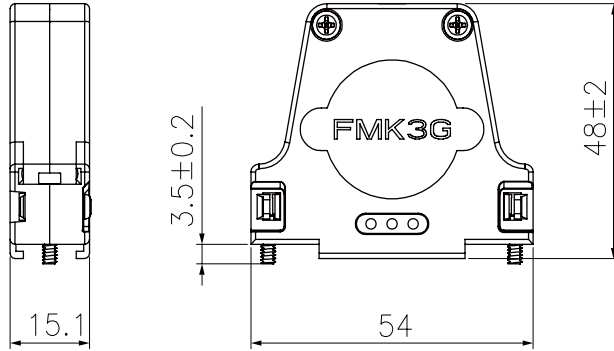
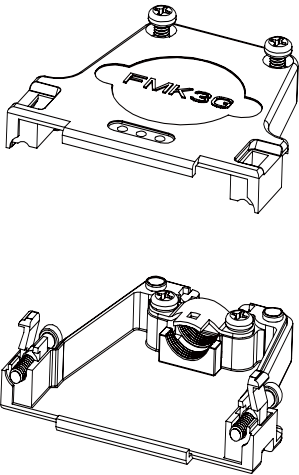
Packaging:
K: Kit package
BULK: Bulk / 100pcs

Cable entry:
2G: 2 position

SHIELDED D-SUB BACKSHELLS ASFMK3G SERIES



ELECTRICAL	
Material	Zinc, nickel plated
Temperature range	-55°C to 125°C
Cable strain relief	Cable clamp with 2 assembly screws
Cable diameter	6 to 8 mm (with jacket) / 9mm (without jacket)
Locking screw	Delivered with pre-mounted jackscrews
Hood	Top entry
Attenuation factor	> 60dB between 300MHZ and 900 MHZ



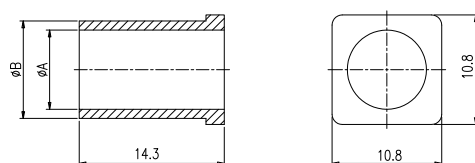
KEY FEATURES

- For Dsub size 25 (Standard density)
- EMI shielding
- Pre-mounted screw to easy assembly
- Foil and braided cable acceptable
- Comforming with VDE 0871, FCC 20780 & 89/336/EU
- Screw lock UNC 4-40 or M3
- Other request, please contact us

	ASFMK3G	M3	U
Product series			
Thread (jackscrew)			
Omit: UNC4-40			
M3: M3			
Packaging:			
Omit: Kit package			

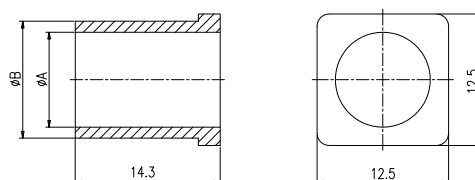
RUBBER BUSH DIMENSION

For 9 & 2 position 15 way



P/N	ϕA	ϕB
C427001210	$\phi 7.8\text{mm}$	$\phi 9.6\text{mm}$
C427001211	$\phi 6.5\text{mm}$	$\phi 9.6\text{mm}$
C427001213	$\phi 8.6\text{mm}$	$\phi 9.8\text{mm}$
P01DR00116	$\phi 5.4\text{mm}$	$\phi 9.6\text{mm}$

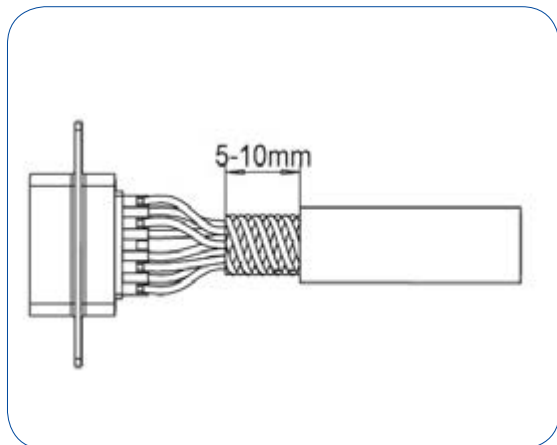
For 1 position 15 way



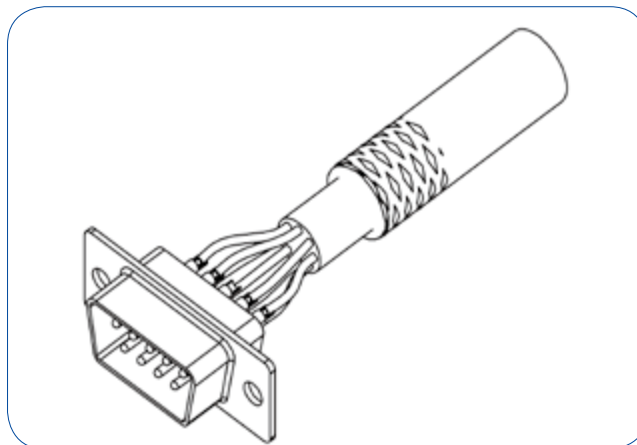
P/N	ϕA	ϕB
C427001220	$\phi 10.2\text{mm}$	$\phi 11.6\text{mm}$
C427001221	$\phi 8.9\text{mm}$	$\phi 11.6\text{mm}$
C427001222	$\phi 11.0\text{mm}$	$\phi 12.0\text{mm}$
C427001223	$\phi 7.2\text{mm}$	$\phi 11.6\text{mm}$
C427001225	$\phi 6.0\text{mm}$	$\phi 11.6\text{mm}$

ASSEMBLY INSTRUCTION APCDVZK SERIES

1. Strip cable

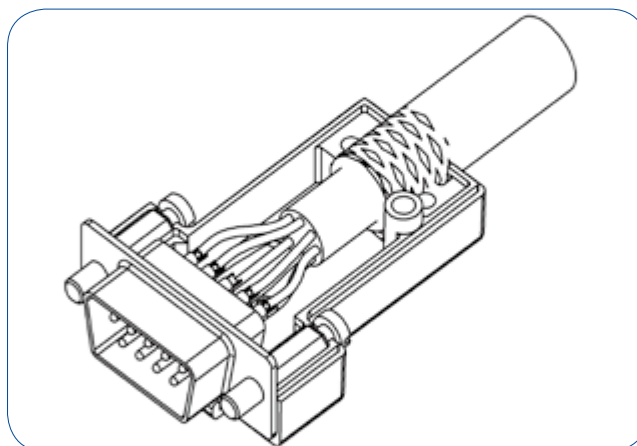
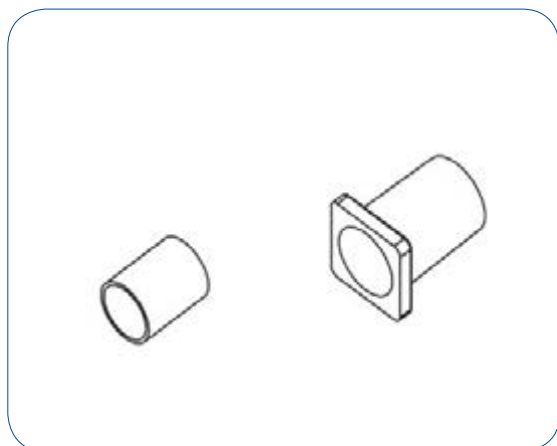


2. Bend cable shielding back on outside of cable

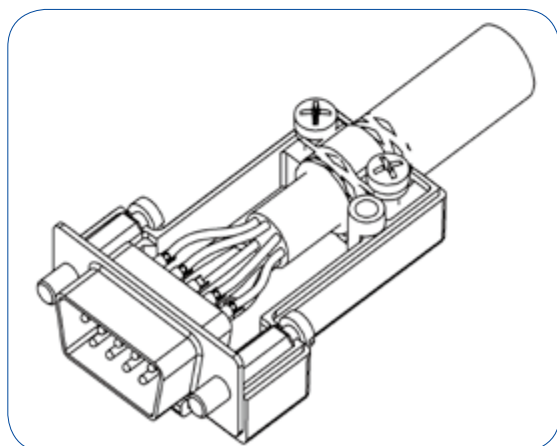


3. Mount connector and cable into the backshell.

NOTE! Ferrule and rubber bushing can be delivered as an option.

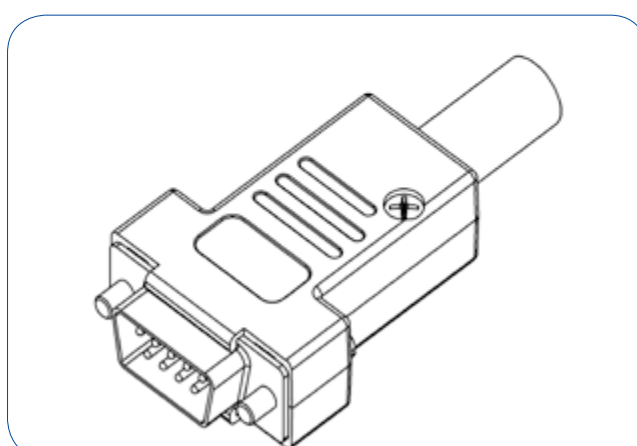


4. Mount cable clamp and screws.



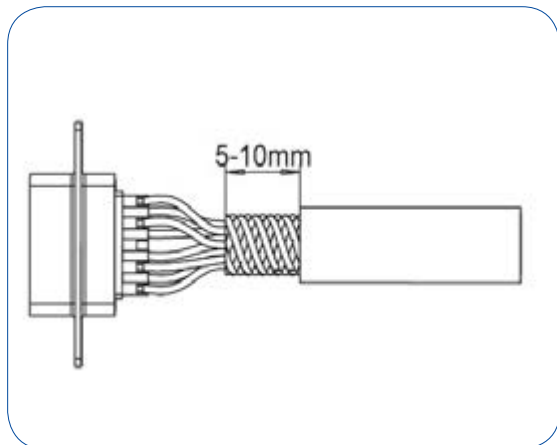
5. Assemble the another side.

Screwing force: 0.5 to 0.6 N.m

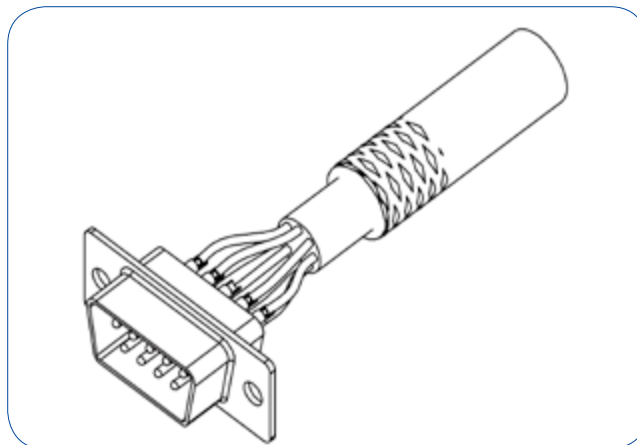


ASSEMBLY INSTRUCTION APCDZK SERIES

1. Strip cable

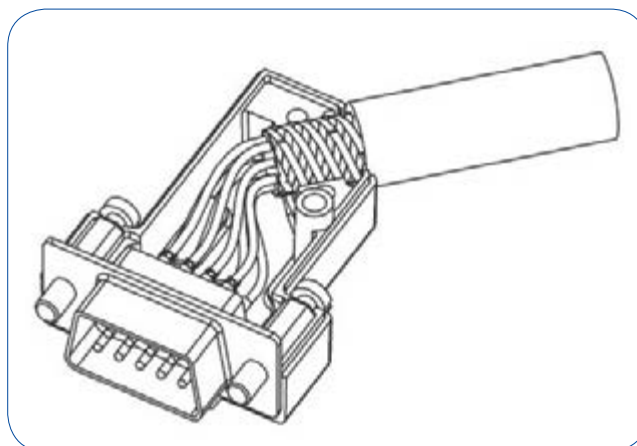
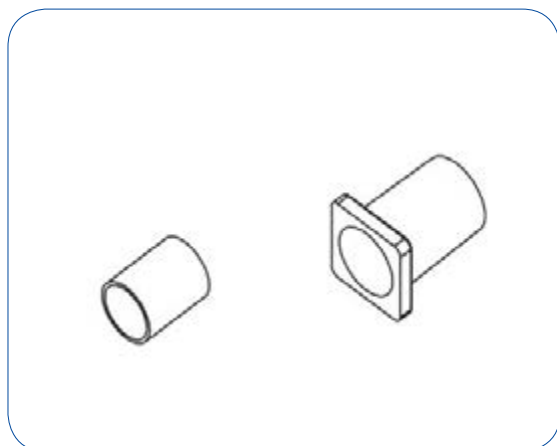


2. Bend cable shielding back on outside of cable

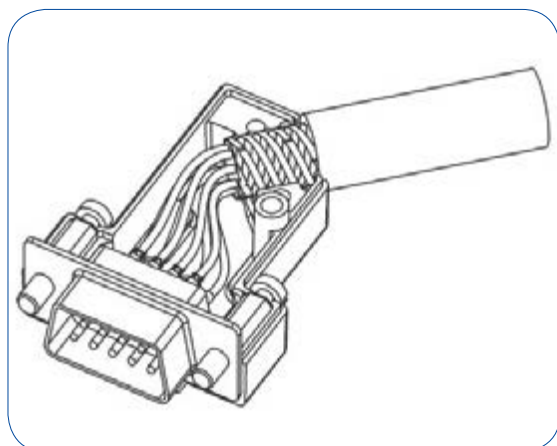


3. Mount connector and cable into the backshell.

NOTE! Ferrule and rubber bushing can be delivered as an option.

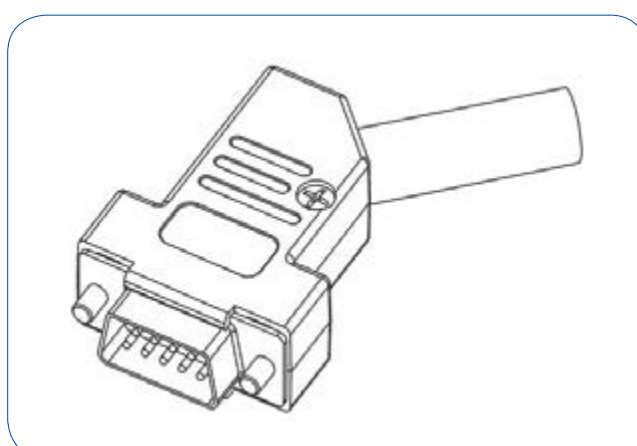


4. Mount cable clamp and screws.



5. Assemble the another side.

Screwing force: 0.5 to 0.6 N.m



TOOLS FOR STAMPED CRIMP CONTACTS

For standard density crimp contacts: 17RR series	
Contact insertion and removal tool	L17D 438 SP
Hand crimp tool for single contacts AWG 20 to 28	L17D 440 SP
Hand crimp tool for reels of 400 contacts	FA 0000 762
Crimp dies: AWG 20 to 24	FA 0000 104
Crimp dies: AWG 24 to 28	FA 0000 102
Stripping box	FE 0400
Automatic crimp machine for reels of 2000 to 1000 contacts	970 MC
Crimp dies: AWG 20 to 24	968 MC
Crimp dies: AWG 24 to 28	972 MC
or high density crimp contacts: 17HR series	
Automatic crimp machine for reels of 2000 to 1000 contacts	970 MC
Crimp dies: AWG 24 to 28	973 MC

Amphenol PCD Shenzhen

Building 21
1st Liao Keng Industrial Zone
Shi Yan Street, Bao An District Shenzhen 518108
China

Tel.: +86 755-8173-8000
Fax: +86 755-8173-8180
Email: inquiry@amphenolpcd.com.cn

www.amphenolpcd.com.cn

Notes:

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