

Metal Backshells for D-Sub Connectors

Two-piece Backshells with Angled or Straight and Regular- or Large- Size Cable Outlet

Category: D-Sub Connector Backshells (Hoods)
Type: Die-Cast Backshells (Hoods)

Die-Cast Backshells for D-Sub Connectors, available with either straight or angled and regular- or large- size cable outlets, provide connector protection, strain relief and organized cable routing

www.molex.com/link/dsubconnectors.html



Metal Backshells for D-Sub Connectors

Training presentation
Datasheet
Business Development Manager

[Metal Backshells for D-Sub Connectors PRES.pdf](#)
[Lit. Number 987652-0064](#)(English)
Brian DaRos, Power & Signal, CCS

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MARKETS AND APPLICATIONS

Industrial

Control Panels
Silicon Chip Manufacturing
CNC Machines

Industrial Automation

Dense connector spacing
Long cable runs
Battery Module

Scientific

Test equipment and measurement
Automated inspection equipment

Medical

Patient Monitoring
Diagnostic equipment

Commercial Vehicle

Telematics
GPS

Metal Backshells for D-Sub Connectors



Target Customer Job Functions

Distributor

Engineering

Manufacturing/Quality

OEM

Purchasing/Procurement

System Integrator



Control panel on test equipment

For Whom is it intended (current and future customers)?

For customers who require D-Sub Connector protection with strain relief and organized cable routing in applications including manufacturing equipment, industrial automation, medical equipment, testing device equipment and commercial vehicles.



Patient Monitoring

CROSS-SELLING AND UP-SELLING OPPORTUNITIES



D-Sub connectors, Cable assemblies, other D-Sub accessories

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Metal Backshells for D-Sub Connectors

VITAL PRODUCT INFORMATION

What makes this product different compared to the competition?

- Large inner chamber and wide cable outlet accommodate a variety of cable types and sizes
- Configurable for locking screws, thumbscrews and slide locks or spring locks
- For cable-to-cable or cable-to-panel connections

How does this product/solution create value for our customers?

- Offers cable strain relief, preventing damage to crimp or solder joints
- Provides robust coupling of connectors and organizes cable routings in confined spaces
- Metal backshells are shielded

PRODUCT FEATURES AND ADVANTAGES

Metal Backshells for D-Sub Connectors

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Metal Backshells for D-Sub Connectors are available with either straight or angled cable outlets and provide connector protection, strain relief and organized cable routing



Metal Backshells for D-Sub Connectors

Features and Advantages



Examples of metal backshell applications

Markets and Applications

Manufacturing Equipment

Control panels
Silicon chip manufacturing
CNC machines

Industrial Automation

Dense connector spacings
Long cable runs
Battery modules

Scientific

Test and measurement equipment
Automated inspection equipment

Medical

Patient monitoring
Diagnostic equipment

Commercial Vehicle

Telematics
GPS agriculture



Control panel on test equipment



Patient monitoring

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Metal Backshells for D-Sub Connectors



VITAL PRODUCT INFORMATION (continued)

Industry Need	Industry Challenge	Industry Solution	Anticipated Results
Connector Protection	Industrial equipment with D-Sub connections can be damaged or jostled around, loosening up over time and creating intermittent signals.	Molex Metal Backshells for D-Sub Connectors are rugged and durable providing shielding and dependable protection from damage in harsh environments.	Customers will rely on Molex Metal Backshells for protection of their D-Sub connectors.
Organized Cable Routing	Test and measurement and industrial automation OEMS often use D-Subs connectors with high-power and coaxial contacts having multiple large-diameter cables that do not fit inside typical backshells.	Molex Metal Backshells for D-Sub Connectors have large inner chambers and wide cable outlets that offer organization in the cable routing suitable for mixed-layout D-Subs with special contacts.	Customers will find it more convenient to use Molex Metal Backshells for D-Sub Connectors for larger cables and mixed-layout D-Sub connectors as they will provide proper fitting and organized cable routing.
Cable Strain Relief	Medical, telecommunications and scientific applications with heavy AWG wires and long runs put high forces on the connector and its mate. As a result, connectors can un-mate or experience damage to solder joints, causing poor connections and intermittent signals.	Molex Metal Backshells for D-Sub Connectors provide built-in strain relief, for reliable connections and signal transmission.	Managing long, heavy cables will be easier with Molex Metal Backshells for D-Sub Connectors, and customers' end products will be more reliable.

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Metal Backshells for D-Sub Connectors



Situation, Problem, Implication, Need Payoff (SPIN)

The SPIN questions on this page are examples and should be used as a possible starting point for a deeper inquiry that pertains to specific customers and their situations/environments. Please use the techniques from the Molex Value Selling training to develop your own SPIN questions to use when meeting with your prospects and customers.

Need	Situation	Problem	Implication	Need Payoff
Connector Protection	Does your equipment have D-Sub connections?	Are those connections likely to be damaged or compromised due to lack of dependable protection?	How does a failure in connection affect the reliability of your end product? How does it impact your time and costs?	How would rugged, shielded and durable metal backshells protecting your D-sub connectors benefit your bottom line?
Organized Cable Routing	Do you use mixed layout D-Sub connectors?	Do your mixed-layout D-Sub connectors contain high-power and coaxial contacts with multiple large diameter cables? Are they too large for typical backshells?	Are you unable to find a large enough backshell to house your connectors and cables?	If you were able to use a backshell without changing your D-sub connectors and large-diameter cables, how would that enhance your design?
Cable Strain Relief	Do you use heavy AWG wires with long runs that put high forces on the D-Sub connector and its mate?	Do the connectors un-mate or cause damage to solder joints?	Does your equipment experience intermittent signals due to poor connection as a result?	How would using a rugged backshell that provides strain relief for a wide range of cables affect the reliability of your connections?

ADDITIONAL SPIN QUESTIONS TO ASK CUSTOMERS

- › Are you looking for a fully shielded backshell?
- › What is your preferred latching method?
- › What size D-Sub connector are you using? (Sizes 1 to 5)
- › What is the outer diameter of your cable bundle or wires?

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PRODUCT FEATURES AND ADVANTAGES



Rubber bushing

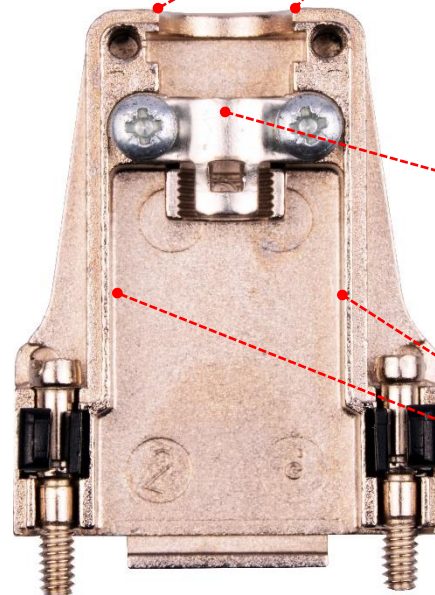
Provides cable dressing for variety of cable sizes (optional use)



Catch-spring system and pre-mounted locking screws included

Enables easy assembly

UL recognized
File No. E168813



View without lid

Wide cable outlet

Accommodates a wide range of cable diameters

Cable clamp

Protects cable from repeated use and harsh environments

Large inner chamber

Allows for standard, high-density and mixed-layout D-sub connectors with special contacts



RoHS compliant by exemption

Meets European Union regulations for banned materials hazardous to the environment

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Metal Backshells for D-Sub Connectors

ADDITIONAL PRODUCT INFORMATION

Available Products



D-Sub Shell Size 1-5

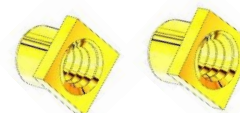
Straight and angled versions

Standard and large cable outlet versions

Available Accessories*



Dust Covers



Threaded Inserts



Knurled Thumbscrew



**Knurled
Thumbscrew with
plastic cap**

**Accessories are sold separately; please contact BDM or PM for ordering information and details*

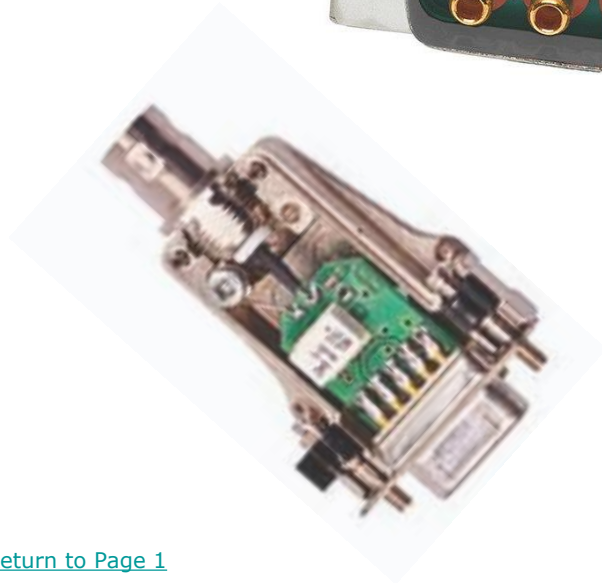
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ADDITIONAL PRODUCT INFORMATION



Examples of metal backshell applications

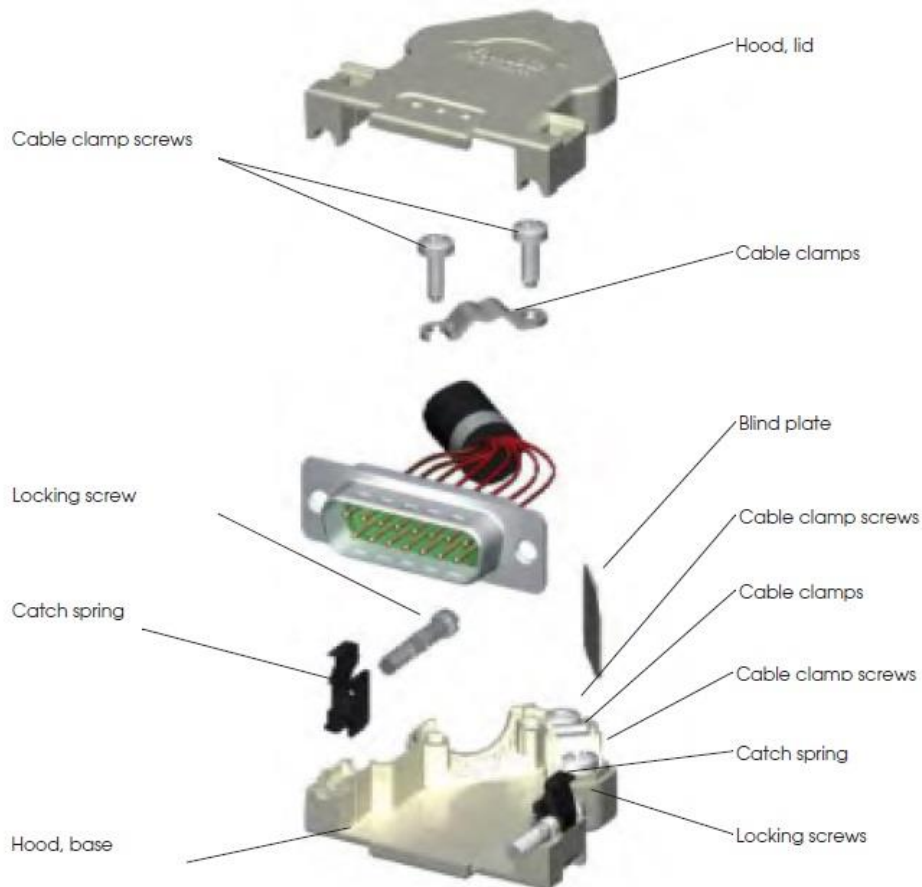


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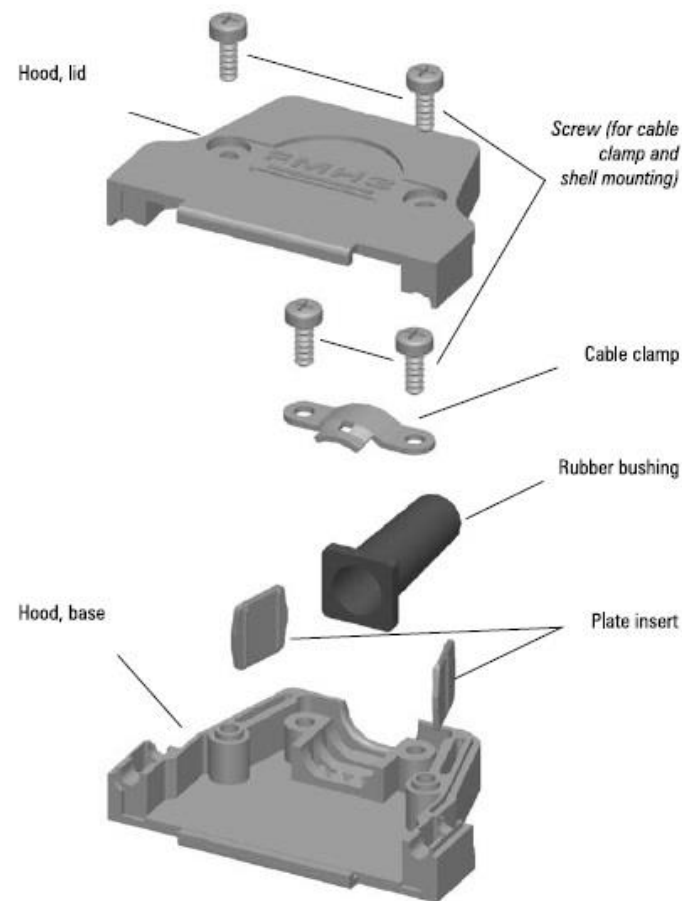
Metal Backshells for D-Sub Connectors

Component and Assembly Detail

FMD# (Angled Version)



FMH# (Straight Version)



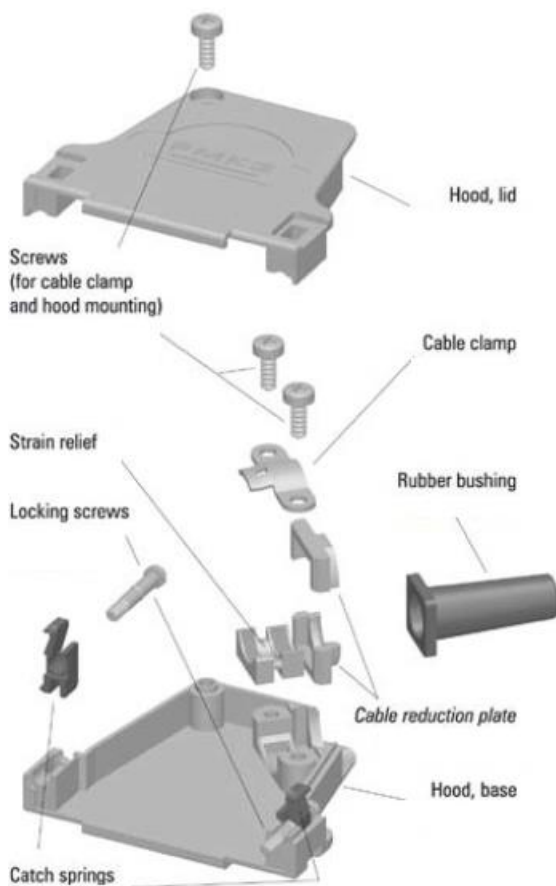
**Delivery quantity of components vary by part number; refer to sales drawing for details*

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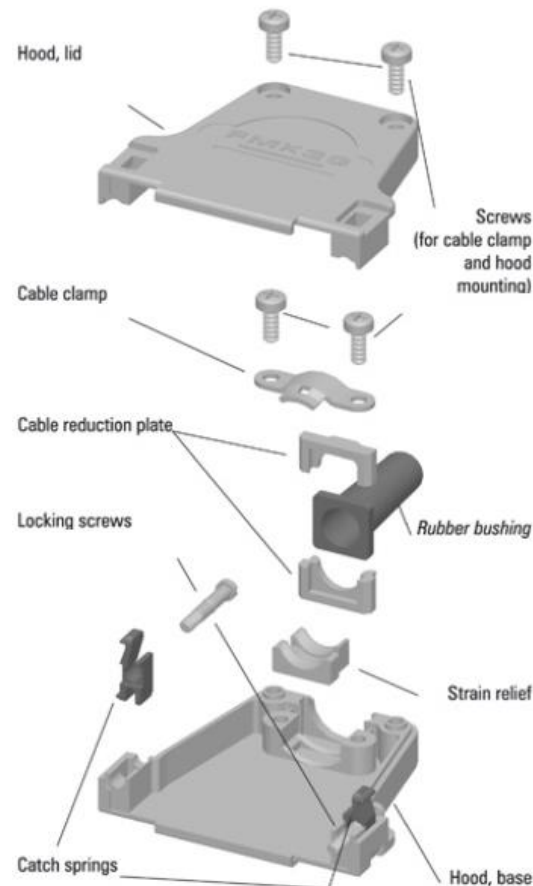
Metal Backshells for D-Sub Connectors

Component and Assembly Detail

FMK# (Angled Version)



FMK#G (Straight Version)



**Delivery quantity of components vary by part number; refer to sales drawing for details*

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Metal Backshells for D-Sub Connectors



*COMPETITIVE PRODUCT AND CROSS-REFERENCE INFORMATION

Product and Technical Differences				
Attribute	TE Connectivity D-Sub Backshells	Positronic Hoods/Backshells	CONEC D-Sub Hoods	ITT Inc. Cannon+ Backshells
Competitive URL	https://www.te.com/usa-en/plp/d-sub-backshells-clamps/Y30Er.html	https://www.connectpositronic.com/wp-content/uploads/2016/10/C007RevF_DsubAccess.pdf	https://www.conec.com/catalog/en/d-sub-connectors/d-sub-hoods.html?a000113=2538	http://www.ittcannon.com/Core/medialibrary/ITTCannon/website/Literature/Catalogs-Brochures/ITT-Cannon-D-Subminiature-Catalog.pdf?ext=.pdf

*Information gathered from the world wide web at the time of this product launch

STRATEGY (MARKET / COMPETITION / MOLEX)



Our competitive advantage is the versatility of our backshell design. It is able to accommodate standard, high density and mixed layout connectors. Either solder or crimp type D-sub connectors can be used. Also, the large outlet can accommodate a wide range of wires. Most of these products are also available through our distributors.

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Metal Backshells for D-Sub Connectors



SPECIFICATIONS

Physical

Material: Zinc die-cast

Plating: nickel plated

Operating Temperature: -35 to +100°C

Reference Information

UL File No.: E168813

Designed In: Millimeters

Mechanical

Torque (max.): 40 Ncm

Screwhead: Pozidriv

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Metal Backshells for D-Sub Connectors



ORDERING INFORMATION

Part No.	Engineering No.	Shell Size	Orientation	Cable Diameter	Minimum Order Quantity	Book Price & Samples Loaded in SAP	
					(MOQ)	Pricing	Samples Plant #
						(Y or N)	(Click link to order samples)
1731110095	FMD1	1	65° Angle (Dual)	4.8 to 10.0mm	100	Yes	Upon request
1731110096	FMD2	2	65° Angle (Dual)	4.8 to 11.0mm	100		
1731110086	FMH1	1	Straight	5.0 to 8.0mm	100		
1731110087	FMH2	2	Straight	5.0 to 8.5mm	100		
1731110088	FMH3	3	Straight	9.0 to 11.0mm	100		
1731110089	FMH4	4	Straight	8.5 to 11.0mm	100		
1731110090	FMH5	5	Straight	10.0 to 12.5mm	100		
1727040095	FMK1	1	45° Angle	3.0 to 9.5mm	100		
1727040096	FMK1G	1	Straight	3.0 to 9.5mm	100		
1731110190	FMK1-K201	1	45° Angle	10.0 to 11.5mm	100		
1727040097	FMK2	2	45° Angle	3.0 to 8.5mm	100		
1727040098	FMK2G	2	Straight	3.0 to 8.5mm	100		
1731110060	FMK2G-K201	2	Straight	8.0 to 12.5mm	100		
1731110061	FMK2-K201	2	45° Angle	8.5 to 12.5mm	100		

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Metal Backshells for D-Sub Connectors



ORDERING INFORMATION (continued)

Part No.	Engineering No.	Shell Size	Orientation	Cable Diameter	Minimum Order Quantity	Book Price & Samples Loaded in SAP	
					(MOQ)	Pricing	Samples Plant #
						(Y or N)	(click link to order samples)
1727040099	FMK3	3	45° Angle	3.0 to 8.5mm	100	Yes	Upon request
1727040100	FMK3G	3	Straight	3.0 to 8.5mm	100		
1731110058	FMK3G-K201	3	Straight	8.0 to 12.5mm	100		
1731110062	FMK3-K201	3	45° Angle	8.5 to 12.5mm	100		
1727040101	FMK4	4	45° Angle	3.0 to 12.0mm	100		
1727040102	FMK4G	4	Straight	3.0 to 12.0mm	100		
1731110065	FMK4G-K201	4	Straight	12.0 to 15.0mm	50		
1731110063	FMK4-K201	4	45° Angle	12.0 to 15.0mm	100		
1727040103	FMK5	5	45° Angle	3.0 to 12.0mm	50		
1727040104	FMK5G	5	Straight	3.0 to 12.0mm	50		
1731110059	FMK5G-K201	5	Straight	12.0 to 15.0mm	100		
1731110064	FMK5-K201	5	45° Angle	12.0 to 15.0mm	100		

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Industrial — AME: Riky Comini, John Harrison; Japan: Kenichi Yamauchi

Industry Webpage Placement

Medical — Anthony Kalaijakis, Wayne Shockloss, Ryan Stiles; Korea: ManHo Choo

Commercial Vehicle - AME: Greg LaMirand, Kurt Krutsch APS: Julie Tay, Clark Chou KOR; Manho Choo Japan: Akihiro Tezuka

CONTENT INDEX

Contact Information	Category Tab
Business Development Manager	Brian DaRos
Content Marketing Specialist	Etiennette Harris
Industry Overview Page	Category Tab
Commercial Aerospace	All
Industrial	All
Medical	All
Web Location	Super Family Page D-Sub; Tab: Backshells
Web overview page	www.molex.com/link/dsubconnectors.html
Datasheet - Translations will be available 8 weeks after the release of the English datasheet	987652-0064.pdf (English) 987652-0061.pdf (German) 987652-0062.pdf (Spanish) 987652-0063.pdf (Japanese)
Training presentation	Presentation Site: Metal Backshells for D-Sub Connectors PRES.pdf
SEO keywords for molex.com	TIER 1: Metal backshells, D-Sub, Hood TIER 2: ESD protection, ruggedized, large inner chamber

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