

Contents

HD10 Series Overview 134

Performance Specifications 134

Material Specifications 134

Dimensions 135

Configurations 136

Ordering Information 137

Special Modifications 138

Accessories 139-142

How To Instructions 143

HD10 Series

HD10 Series Overview

The HD10 series is an environmentally sealed, thermoplastic, and cylindrical connector series. With arrangements from 3 to 9 cavities, HD10 connectors accept size 4, 12, or 16 contacts and are available either in-line or flanged. HD10 connectors are heavily used for diagnostic applications and are available with or without a coupling ring.



DEUTSCH CONNECTOR PERFORMANCE SPECIFICATIONS

Temperature:	Operating at temperatures -55°C to +125°C
Durability:	No electrical or mechanical defects after 100 cycles of engagement and disengagement.
Vibration:	No unlocking or unmating and exhibits no mechanical or physical damage after sinusoidal vibration levels of 20 G's at 10 to 2000 Hz in each of the three mutually perpendicular planes. No electrical discontinuities longer than 1 microsecond.
Fluid Resistance:	Connectors show no damage when exposed to most fluids used in industrial applications.
Insulation Resistance:	1000 megohms minimum at 25°C.
Immersion:	IP68 rating
Moisture Resistance:	Properly wired and mated connections will withstand immersion under three feet of water without loss of electronic qualities or leakage.
Dielectric Withstanding Voltage:	Current leakage less than 2 milliamps at 1500 volts AC.
Thermal Cycle:	No cracking, chipping or leaking after 20 test cycles from -55°C to +125°C.

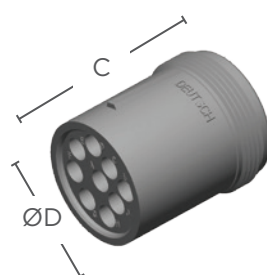
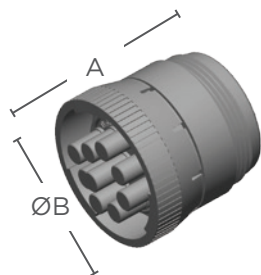
MATERIAL SPECIFICATIONS

Grommet:	Silicone rubber
Insert Retainer:	Thermoplastic
Receptacle	
Interfacial Seal:	Silicone rubber
Shell:	Thermoplastic



HD10 Series

DIMENSIONS



HD10 Plug

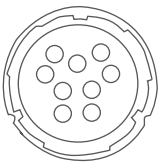
HD10 Receptacle

Cavity	Overall Length A	Overall Height ØB	Overall Length C	Overall Height ØD
3	1.609 (40.87)	1.069 (27.15)	1.639 (41.63)	.851 (21.62)
4	1.639 (41.63)	1.595 (40.51)	1.639 (41.63)	1.281 (32.54)
5	1.609 (40.87)	1.218 (30.94)	1.639 (41.63)	1.001 (25.43)
6	1.619 (41.12)	1.453 (36.91)	1.639 (41.63)	1.141 (28.98)
9	1.609 (40.87)	1.593 (40.47)	1.639 (41.63)	1.281 (32.54)

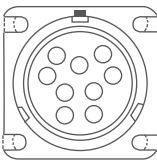
Dimensions are for reference only.

CONNECTOR STYLES

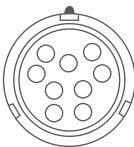
Plug
HD16



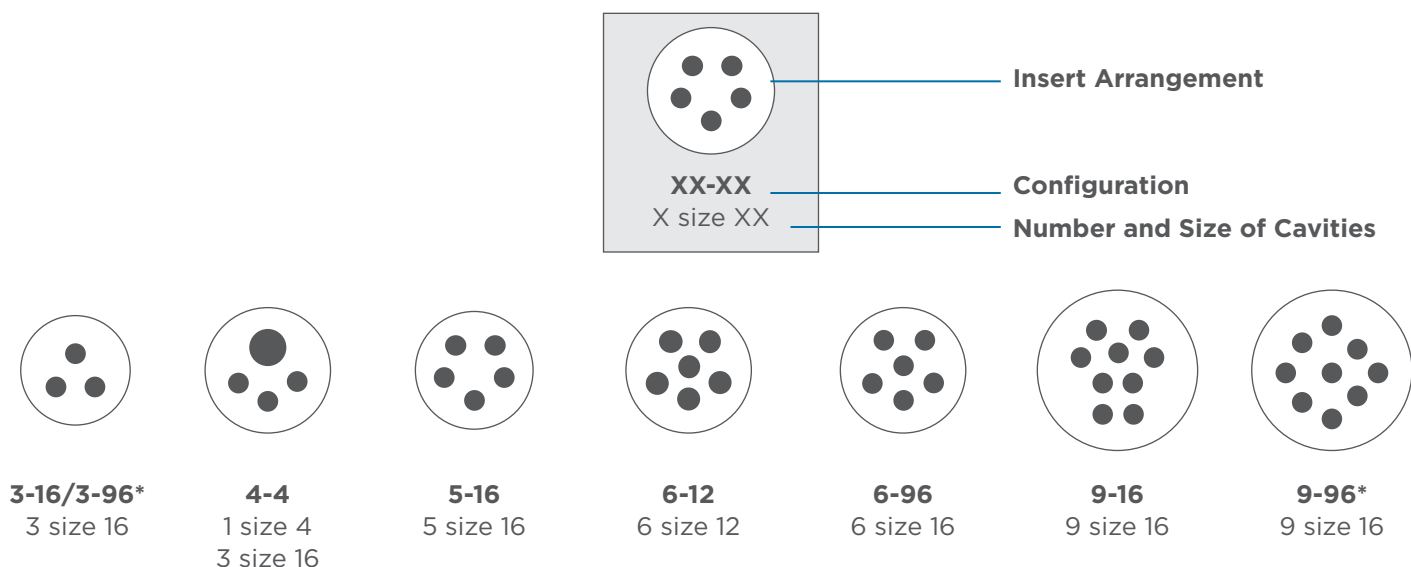
Square Flange
Receptacle
HD10



In-line
Receptacle
HD14

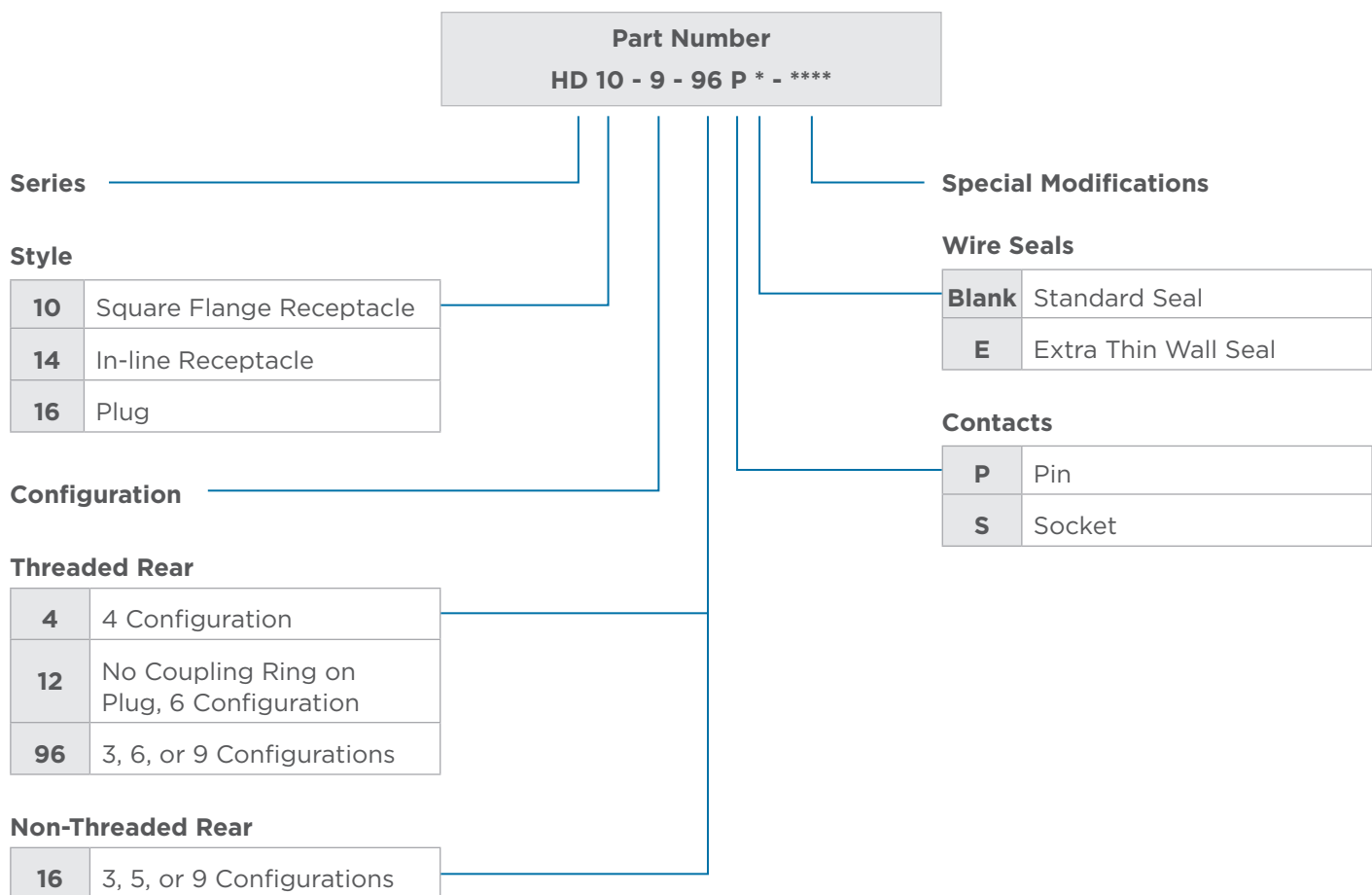


CONFIGURATIONS



*Also available in an "E" seal

PART NUMBERING SYSTEM



HD10 Series

ORDERING INFORMATION

Here are some of the common part numbers in the HD10 series. Several additional connectors may be available.

Position	Contact Size	Rear Threads	Plug	Receptacle Inline	Receptacle Flange
3	16	no	HD16-3-16S	HD14-3-16P	-
		yes	HD16-3-96S	HD14-3-96P	HD10-3-96P
4	4/16	yes	HD16-4-4S	-	HD10-4-4P
5	16	no	HD16-5-16S	HD14-5-16P	HD10-5-16P
6	16	yes	HD16-6-96S	HD14-6-96P	HD10-6-96P
6	12	yes	HD16-6-12S-B010	HD14-6-12P	HD10-6-12P
9	16	no	HD16-9-16S	HD14-9-16P	HD10-9-16P
		yes	HD16-9-96S	HD14-9-96P	HD10-9-96P
9 (1939)	16	yes	HD16-9-1939S	HD14-9-1939P	HD10-9-1939P

WIRE SEALING RANGE

The wire sealing range is the recommended outside diameter of the wire insulation required to maintain an environmental seal in the rear connector cavities.

Contact Size	Standard Seal	Extra Thin Seal E-Seal
16 14-20 AWG (2.0-0.5mm ²)	.100-.150 (2.54-3.81)	.053-.120 (1.35-3.05)
12 10-14 AWG (5.0-2.0mm ²)	.134-.170 (3.40-4.32)	-
4 6 AWG (13.0mm ²)	.280-.292 (7.11-7.42)	-

Special Modifications

HD10 series connectors offer several modifications to enhance the design flexibility and meet application specific needs. Options include the addition of a coupling ring and connector body color, just to mention a few. By combining the HD10 series connectors with the available modifications and accessories, the design possibilities are increased.



B010 MODIFICATION

The B010 modification provides the addition of a coupling ring used for mating. The B010 modification is only available on the HD16-6-12S-B010 connector.



E004 MODIFICATION

The E004 modification changes the HD10 series connector from the standard gray to a black connector body.



J1939 MODIFICATIONS (BP03, P080)

The P080 modification changes the HD10 series connector body color from the standard gray to green and meets the J1939 Type II requirements. The BP03 modification is similar to the P080 modification, but features a panel mount.



N005 MODIFICATION

The N005 modification is an HD10 series receptacle with molded-in, straight PCB pins.

HD10 Series

Accessories

Several accessory items are available to complement HD10 series connectors including boots, backshells, gaskets, and protective caps. Accessory items cover a wide array of design requirements such as assisting with mounting, providing additional protection, and offering enhanced aesthetics.

BACKSHELLS



DEUTSCH HD10 series backshells are designed to screw onto all threaded HD10 connectors. Rated for temperatures from -40°C to +134°C, the rigid, durable backshells offer a high level of protection, provide strain relief, and improve aesthetics.



Connector Part Number	Cable Diameter	Backshell Part Number	Compression Nut Part Number
HD1*-3-96*	.187-.300	M902-2131	M902-2041
	.300-.430	M902-2132	M902-2042
HD1*-6-96*/HD1*-6-12*	.187-.300	M902-2161	M902-2041
	.300-.430	M902-2162	M902-2042
	.430-.570	M902-2163	M902-2053
	.570-.710	M902-2164	M902-2054
HD1*-9-96*/HD1*-9-1939**	.187-.300	M902-2191	M902-2041
	.300-.430	M902-2192	M902-2042
	.430-.570	M902-2193	M902-2053
	.570-.710	M902-2194	M902-2054

Backshell Technical Specifications:

Material - PC/PET Polyester Blend, UV-Stabilized, Flame Retardant, Black

Flammability - UL94-VO rated material, Weatherability - UL746C

STRAIN RELIEF

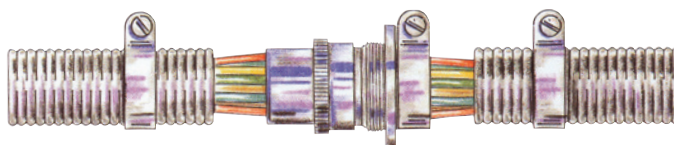
DEUTSCH HD10 series strain reliefs are designed to screw onto threaded 3, 4, 6, and 9 cavity HD10 connectors. The rigid, durable strain reliefs offer a high level of protection, provide tie wrap holders to reduce strain from the wires, and improve aesthetics.



Part Number	Description
HD18-003	3 cavity strain relief
HD18-006	6 cavity strain relief
HD18-009	4 or 9 cavity strain relief

helpful hint

Attaching the connector to a structure eliminates straining the electrical system in service.



BOOTS



Boots provide a professional looking finishing touch for DEUTSCH HD10 series connectors. Made of durable plastisol, these slip-on boots are not only aesthetically appealing, but also provide increased protection from dirt, paint overspray, and pressure washing. The plastisol boots are rated from -20°F to +212°F (-28°C to + 100°C) and offer a slip-on design making installation quick and easy.



Part Number	Description
HD10-3BT	3 cavity boot, gray
HD10-5BT	5 cavity boot, gray
HD10-5BT-BK	5 cavity boot, black
HD10-6BT	6 cavity boot, gray
HD10-6BT-BK	6 cavity boot, black
HD10-9BT	9 cavity boot, gray
HD10-9BT-BK	9 cavity boot, black

*Distorting the boots can lessen their longevity

GASKETS



Moisture, dirt, salt, sand, and road debris can all work their way into electrical panels through unsealed mounting flanges. Rated to operate in environments from -70°F to +225°F (-56°C to +107°C), these rugged high quality neoprene gaskets form a tight seal between the panel face and connector flange to help keep out destructive elements. The gaskets have a thickness of .125" and the material meets the UL-94-HBF, Mil-R-6130C, and FMVSS-302 flammability specifications.



Gasket Part Number	Connector Part Number
HD10-3-GKT	HD10-3-****
HD10-5-GKT	HD10-5-****
HD10-6-GKT	HD10-6-****
HD10-9-GKT	HD10-9-****

PROTECTIVE DUST CAPS

HD10 series protective dust caps provide an environmental seal and are used to protect the connector interface when the connector is not mated.



Part Number	Description
HDC14-3	3 cavity plug protective cap
HDC14-6	6 cavity plug protective cap
HDC14-9	9 cavity plug protective cap
HDC16-3	3 cavity receptacle protective cap
HDC16-5	5 cavity receptacle protective cap
HDC16-6	6 cavity receptacle protective cap
HDC16-6-E004	6 cavity receptacle protective cap, black
HDC16-9	9 cavity receptacle protective cap
HDC16-9-E004	9 cavity receptacle protective cap, black

LANYARDS



Lanyards are available in nitrile or nylon coated steel and designed for use with protective dust caps.



HDC9-JDL082397
(DEUTSCH HDC16-9-E004 dust cap assembled with JDL082397)



HDC16-9-L47N
(DEUTSCH HDC16-9 dust cap assembled with L47N-600-1)

Lanyard	Material	Material Diameter	Length	Min. Breaking Strength
 JDL082397	Nitrile o-ring, 3M heat shrink with thermoplastic adhesive	.07 inches	5.31 inches	---
 L47N-600-1	7 x 7 galvanized steel cable coated with clear nylon	.047 inches	6 inches	270 lbs.

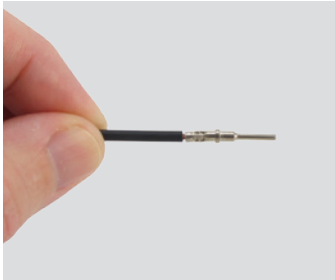
Dimensions are for reference only.

Dust Cap/Lanyard Assembly Part Number*	Used On	Connector Cavities	Lanyard Material	Dust Cap Color
HDC14-3-JDL	Plug	3	Nitrile	Gray
HDC14-6-JDL	Plug	6	Nitrile	Gray
HDC14-6-LA	Plug	6	Steel	Gray
HDC14-9-JDL	Plug	9	Nitrile	Gray
HDC16-3-JDL	Receptacle	3	Nitrile	Gray
HDC16-3-LA	Receptacle	3	Steel	Gray
HDC16-5-LA	Receptacle	5	Steel	Gray
HDC16-6-JDL	Receptacle	6	Nitrile	Gray
HDC16-6-LA	Receptacle	6	Steel	Gray
HDC16-9-JDL	Receptacle	9	Nitrile	Gray
HDC9-JDL082397	Receptacle	9	Nitrile	Black
HDC16-9-L47N	Receptacle	9	Steel	Gray
HDC16-9-E004-L47N	Receptacle	9	Steel	Black

*Other dust cap/lanyard assemblies may be available

How To Instructions

CONTACT INSERTION



Step 1:
Grasp crimped contact approximately one inch behind the contact barrel.

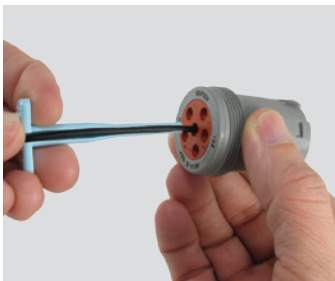


Step 2:
Hold connector with rear grommet facing you.

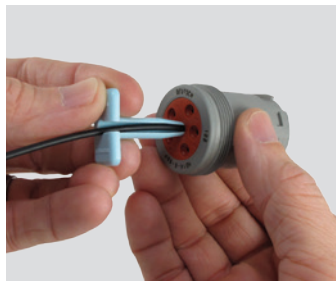


Step 3:
Push contact straight into connector grommet until a click is felt. A slight tug will confirm that it is properly locked in place.

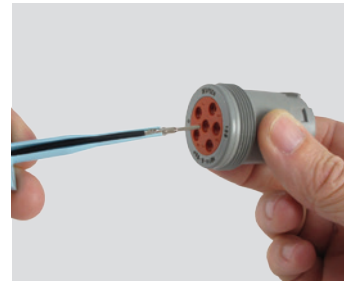
CONTACT REMOVAL



Step 1:
With rear insert toward you, snap appropriate size removal tool over the wire of contact to be removed.



Step 2:
Slide tool along the wire into the insert cavity until it engages contact and resistance is felt.



Step 3:
Pull contact wire assembly out of connector.