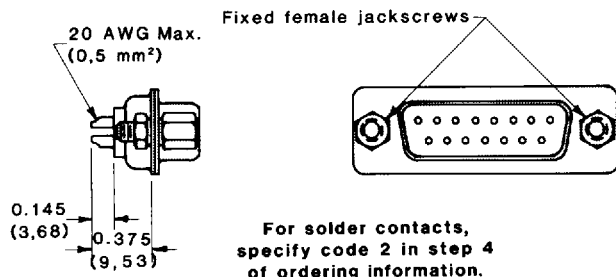
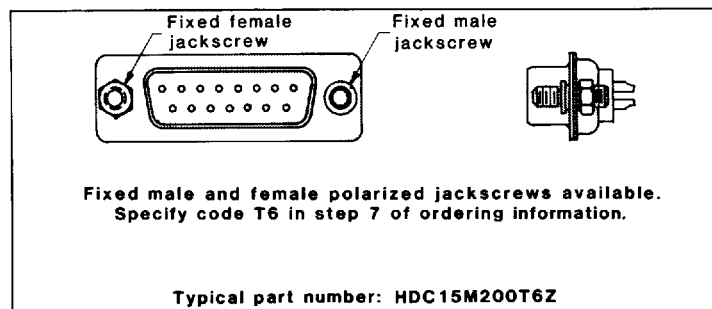


SOLDER CONNECTOR



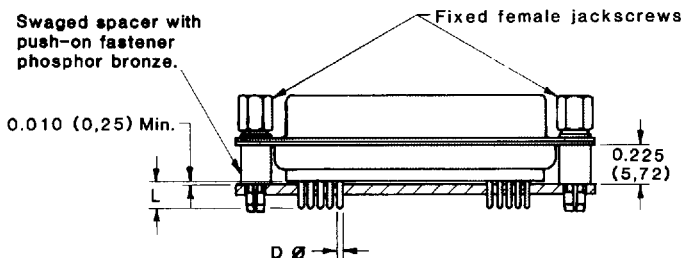
Typical part number: HDC15M200T2Z



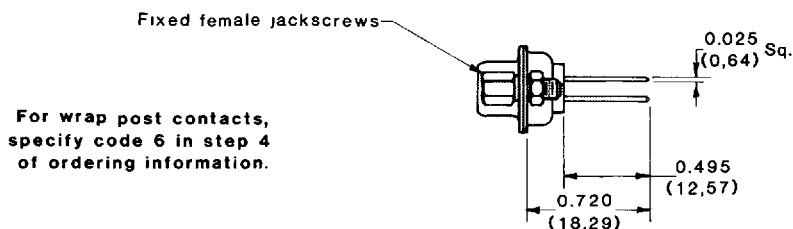
STRAIGHT PRINTED BOARD MOUNT CONNECTOR

CODE NO.	L	D
3	0.170 (4,32)	0.028 (0,71)
32	0.375 (9,53)	0.028 (0,71)
36	0.236 (6,00)	0.024 (0,61)

For straight printed board
mount contacts, specify code no.
in step 4 of ordering information.

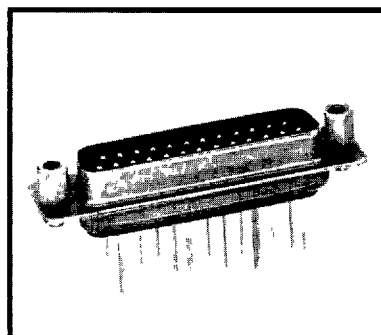


WRAP POST CONNECTOR



Typical part number: HDC15F600T0

DIMENSIONS ARE IN INCHES (MILLIMETERS)
ALL DIMENSIONS SUBJECT TO CHANGE



HDC25M6S50T0

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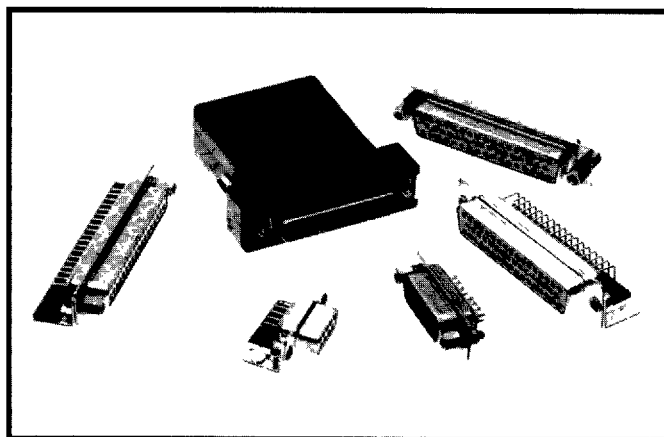
HARMO-D Series

**MILITARY QUALITY, FIXED CONTACT, SUBMINIATURE-D CONNECTORS
FOR MILITARY AND SEVERE INDUSTRIAL ENVIRONMENTAL APPLICATIONS**

**Size 20 Contacts, Fixed
Military/Industrial
Quality Connectors
IEC Publication 807-2
Performance Level One
MIL-C-24308**

U.L. Recognized File #E49351 **CSA Recognized File # LR54219**

**Telecommunication
U.L. File #14098**



Harmo-D Series connectors are Military/Industrial quality rectangular connectors designed for use in sheltered, mildly corrosive environments having a wide range of temperature, pressure and humidity changes. These fixed contact connectors are qualified to MIL-C-24308 and meet the performance requirements of IEC 807-2, Performance Level One.

Harmo-D Series connectors utilize precision machined contacts which are fixed within the connector body. The female contact features a rugged, closed entry design contact with a stainless steel shroud.

Five standard connector variants are offered in arrangements of

9, 15, 25, 37 and 50 contacts. Each connector variant is available with contact terminations for solder, wrap post and straight and 90° printed board mount terminations with Inch and Metric footprints. Harmo-D Series connectors are mateable and compatible with all D-Subminiature connectors conforming to IEC 807-2 and MIL-C-24308.

A wide assortment of printed board mounting hardware, cable support hoods and locking systems is available from stock.

Harmo-D Series connectors conform to EIA RS 232 and RS 449, and CCITT X.24 interface connection requirements.

HARMO-D SERIES TECHNICAL CHARACTERISTICS

MATERIALS AND FINISHES:

Insulator:	Glass filled DAP per MIL-M-14, SDG-F, UL 94V-0, green color.
Contacts:	Male contacts—precision machined brass alloy. Female contacts—precision machined high tensile phosphor bronze with stainless steel shroud.
Contact Plating:	Military performance—0.000050 inch (1.25 microns) gold over copper plate. Industrial performance—gold flash over nickel plate.
Shells:	Steel or brass with tin plate; zinc and cadmium plate with dichromate seal, stainless steel, passivated.
Mounting Spacers and Brackets:	Nylon plastic, or brass with tin plate; zinc plate with dichromate seal.
Push-On Fasteners:	Phosphor bronze or beryllium copper with tin plate.
Jackscrew Systems:	Steel with zinc plate and dichromate seal, or clear zinc plate.
Vibration Lock Systems:	Slide lock and lock tabs, steel with nickel plate.
Hoods:	Thermoplastic UL 94V-0. Composite, brass or steel with zinc plate and dichromate seal.

ELECTRICAL CHARACTERISTICS:

Contact Current Rating:	7.5 amperes nominal.
Initial Contact Resistance:	0.005 ohms maximum.
Proof Voltage:	1000 V r.m.s.
Insulator Resistance:	5 G ohms.
Clearance and Creepage Distance (minimum):	0.039 inch (1.0mm).
Working Voltage:	300 V. r.m.s.

CLIMATIC CHARACTERISTICS:

Temperature Range:	-55°C to +125°C.
Damp Heat, Steady State:	56 days.

MECHANICAL CHARACTERISTICS:

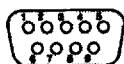
Fixed Contacts:	Size 20 contact, male contact—0.040 inch (1.02mm) diameter. Female contact—closed entry design with stainless steel shroud. 9 lbs. (40 N).
Contact Retention In Insulator:	
Resistance To Solder Iron Heat:	650°F (350°C) for 10 seconds duration per IEC 512-6.
Contact Terminations:	Solder contacts—0.042 inch (1.06mm) minimum hole diameter in solder style contact for 20 AWG (0.5mm ²) wire maximum. Straight Printed Board Mount—0.028 inch (0.71mm) diameter and 0.042 inch (0.61mm) diameter. 90° Printed Board Mount—0.028 (0.71mm) diameter for Inch System footprint, and 0.024 (0.61mm) diameter for European Metric footprint. Wrap Post—0.025 inch (0.64mm) square.
Shells:	Male shells may be dimpled for EMI/ESD ground paths.
Polarization:	Trapezoidally shaped shells and polarized jackscrews.
Mounting To Angle Brackets:	Jackscrews and riveted fasteners with 0.120 inch (3.05mm) clearance hole, and threaded riveted fasteners with 4-40 threads and nylon lock inserts.
Mounting To Printed Board:	Rapid installation push-on fasteners and mounting posts.
Locking Systems:	Jackscrews and vibration locking systems.
Mechanical Operations:	1000 operations minimum per IEC 512-5.



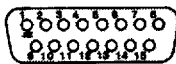
**POSITRONIC
INDUSTRIES, INC.**

CONTACT VARIANTS

FACE VIEW OF MALE OR REAR VIEW OF FEMALE



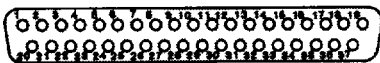
HDC 9



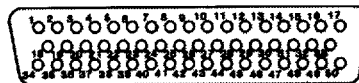
HDC 15



HDC 25

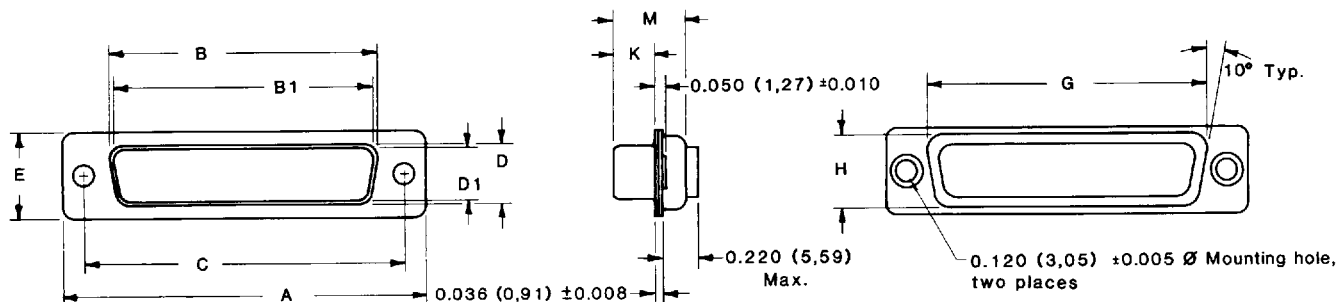


HDC 37



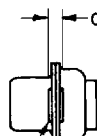
HDC 50

STANDARD SHELL ASSEMBLY

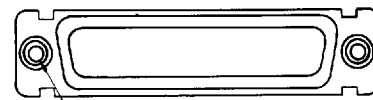


0.120 (3,05) ± 0.005 $\varnothing$ Mounting hole, two places
0.154 (3,91) $\varnothing$ Mounting hole available

OPTIONAL SHELL ASSEMBLY



0.032 (0,81)
Total diametral float



0.086 (2,18) ± 0.005 $\varnothing$ Mounting hole, two places

OPTIONAL SHELL ASSEMBLY WITH UNIVERSAL FLOAT MOUNTS

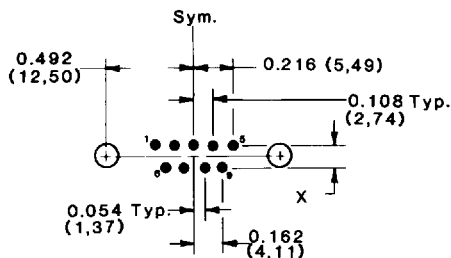
CONNECTOR VARIANT SIZES	A ± 0.015	B ± 0.005	B1 ± 0.005	C ± 0.005	D ± 0.005	D1 ± 0.005	E ± 0.015	G ± 0.010	H ± 0.010	K ± 0.005	M ± 0.010
HDC 9 M	1.213 (30,81)		0.666 (16,92)	0.984 (24,99)		0.329 (8,36)	0.494 (12,55)	0.759 (19,28)	0.422 (10,72)	0.233 (5,92)	0.422 (10,72)
HDC 9 F	1.213 (30,81)	0.643 (16,33)		0.984 (24,99)	0.311 (7,90)		0.494 (12,55)	0.759 (19,28)	0.422 (10,72)	0.243 (6,17)	0.429 (10,90)
HDC 15 M	1.541 (39,14)		0.994 (25,25)	1.312 (33,32)		0.329 (8,36)	0.494 (12,55)	1.083 (27,51)	0.422 (10,72)	0.233 (5,92)	0.422 (10,72)
HDC 15 F	1.541 (39,14)	0.971 (24,66)		1.312 (33,32)	0.311 (7,90)		0.494 (12,55)	1.083 (27,51)	0.422 (10,72)	0.243 (6,17)	0.429 (10,90)
HDC 25 M	2.088 (53,04)		1.534 (38,96)	1.852 (47,04)		0.329 (8,36)	0.494 (12,55)	1.625 (41,28)	0.422 (10,72)	0.230 (5,84)	0.426 (10,82)
HDC 25 F	2.088 (53,04)	1.511 (38,38)		1.852 (47,04)	0.311 (7,90)		0.494 (12,55)	1.625 (41,28)	0.422 (10,72)	0.243 (6,17)	0.429 (10,90)
HDC 37 M	2.729 (69,32)		2.182 (55,42)	2.500 (63,50)		0.329 (8,36)	0.494 (12,55)	2.272 (57,71)	0.422 (10,72)	0.230 (5,84)	0.426 (10,82)
HDC 37 F	2.729 (69,32)	2.159 (54,84)		2.500 (63,50)	0.311 (7,90)		0.494 (12,55)	2.272 (57,71)	0.422 (10,72)	0.243 (6,17)	0.429 (10,90)
HDC 50 M	2.635 (66,93)		2.079 (52,81)	2.406 (61,11)		0.441 (11,20)	0.605 (15,37)	2.178 (55,32)	0.534 (13,56)	0.230 (5,84)	0.426 (10,82)
HDC 50 F	2.635 (66,93)	2.064 (52,43)		2.406 (61,11)	0.423 (10,74)		0.605 (15,37)	2.178 (55,32)	0.534 (13,56)	0.243 (6,17)	0.429 (10,90)

Dimensions are in inches (millimeters).

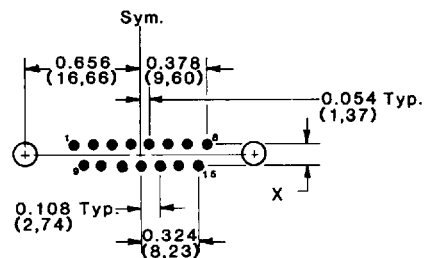
All dimensions are subject to change.

90° AND STRAIGHT PRINTED BOARD CONTACT HOLE PATTERN

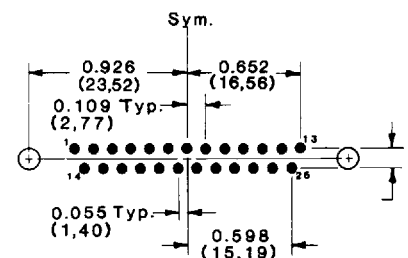
Hole identification shown for male connector, use mirror image for female connector.
Mount connector with mating face positioned to follow direction of arrows.



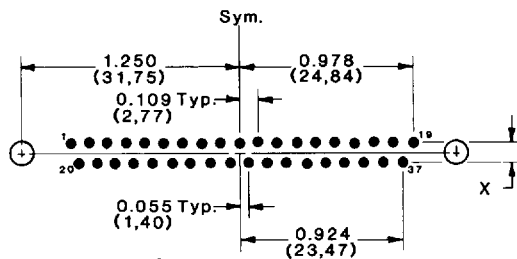
HDC9



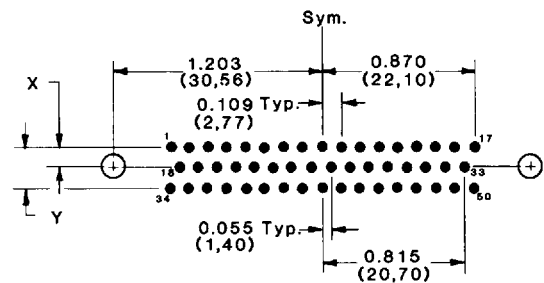
HDC15



HDC25



HDC37



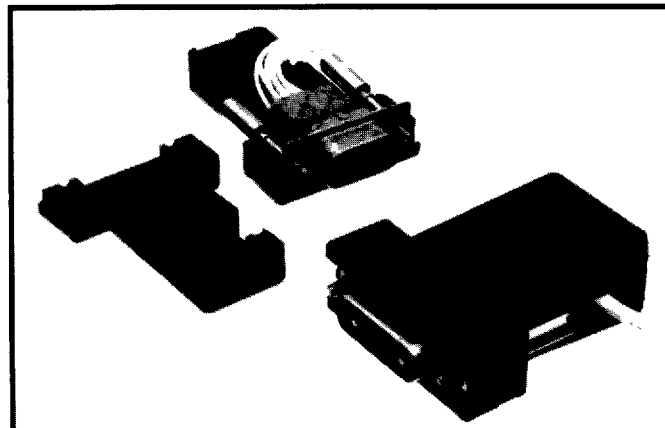
HDC50

CODE NO.	X	Y
3	0.112 (2,84)	0.224 (5,69)
5	0.112 (2,84)	0.224 (5,69)
32	0.112 (2,84)	0.224 (5,69)
36	0.112 (2,84)	0.224 (5,69)
* 42	0.100 (2,54)	0.200 (5,08)

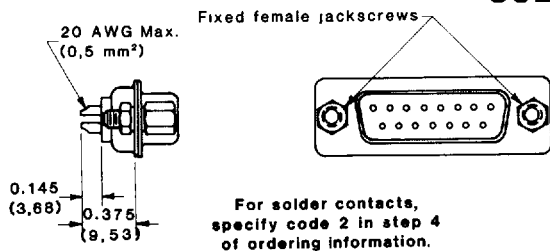
Suggest 0.039 (0,99) Ø hole for 0.024 (0,61) Ø contact termination positions.
Suggest 0.045 (1,14) Ø hole for 0.028 (0,71) Ø contact termination positions.
Suggest 0.123 ± 0.003 (3,12) Ø hole for mounting connector with push-on fasteners.

DIMENSIONS ARE IN INCHES (MILLIMETERS)
ALL DIMENSIONS SUBJECT TO CHANGE

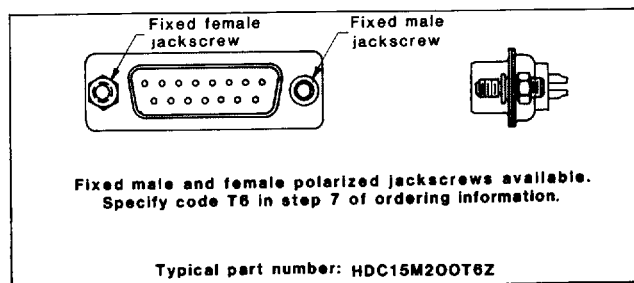
*Metric system, European contact hole pattern.



SOLDER CONNECTOR



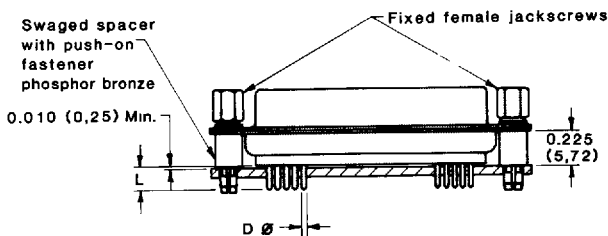
Typical part number: HDC15M200T2Z



STRAIGHT PRINTED BOARD MOUNT CONNECTOR

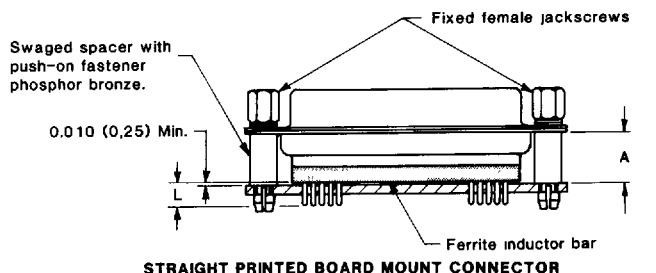
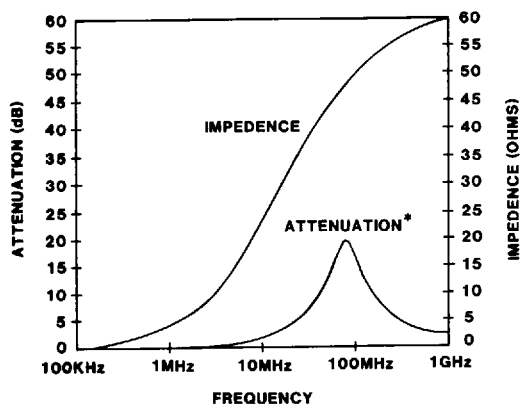
CODE NO.	L	D
3	0.170 (4,32)	0.028 (0,71)
32	0.375 (9,53)	0.028 (0,71)
36	0.236 (6,00)	0.024 (0,61)

For straight printed board mount contacts, specify code no. in step 4 of ordering information.



FERRITE INDUCTOR BAR FOR EMI/RFI NOISE SUPPRESSION

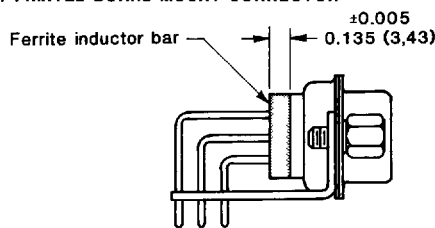
FILTERING CHARACTERISTICS



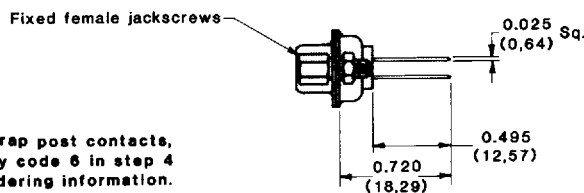
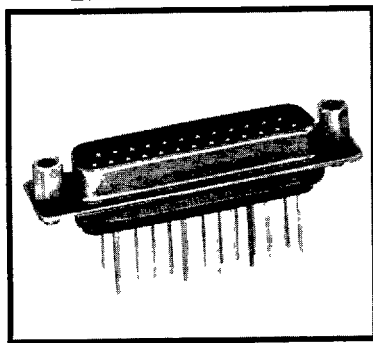
SERIES	CODE NO.
MD	32,4,59,6
ED	36,6
DD	32
ODD	32,5
HDC	32,36,6

MATERIAL: NICKEL ZINC CERAMIC.

Specify code F or Q in step 6 of ordering information. F for ferrite inductor and Q for ferrite inductor with push-on fastener.



WRAP POST CONNECTOR



DIMENSIONS ARE IN INCHES (MILLIMETERS)
ALL DIMENSIONS SUBJECT TO CHANGE