



Positronic Industries
connectpositronic.com

ENVIRONMENTAL D-SUBMINIATURE, IMPROVED UNIBODY DESIGN

WIN-D
Win-DD
Series



**** One piece unibody housing eliminates need for sealants ****

**** Standard and high density options ****

**** Improved temperature range ****

**** Increased performance ****

**** Higher reliability ****

**** Lower cost ****

WIN-D and WIN-DD series D-subminiature connectors have been a popular choice in applications with environmental considerations. WIN-D and WIN-DD environmental D-subminiature connectors achieve water and dust ingress protection to IP67.

Positronic now offers a new “unibody” design. The unibody design eliminates the need to add sealants as a secondary operation. This allows more rapid manufacturing of the connector, which reduces cost. In addition, concern over differences in coefficients of expansion of dissimilar materials is minimized. This allows for improved performance and a wider operating temperature range.

For extremely harsh environments, or where “**Corrosion Resistance**” is required, the contacts are supplied with extra gold plating thickness, and the connector shells and jackscrews are supplied in stainless steel. For applications where “**Corrosion**

Protection” is adequate, contact surfaces are plated with gold flash over nickel. Shells and accessories are zinc plated with dichromate seal.

The unibody design is offered in 9 and 25 contact female variants, and a 26 position female high density variant. A variety of solder terminated contacts and “cul-de-sac” accessories are available to meet specific application requirements. WIN-D and WIN-DD Series connectors conform to IEC 807-2 Performance Level 2 mechanical and dimensional requirements and conform to EIA RS232 and RS449 and CCITT X.24 interface standards.



RoHS Compliant options available!



POSITRONIC INDUSTRIES

Catalog C-006-1 Rev. A

Springfield, Missouri USA • 800.641.4054 • info@connectpositronic.com

w w w . c o n n e c t p o s i t r o n i c . c o m



ENVIRONMENTAL CHARACTERISTICS:

WIN-D and WIN-DD series connectors mounted on IEC 529 or NEMA 250-1991 enclosures for electrical equipment.

WIN-D and WIN-DD Connector Panel mount sealing plates, when mounted on the walls of enclosures, maintain the dust and water ingress protection rating of IEC 529 or NEMA 250 enclosure on which they are mounted.

WIN-D and WIN-DD connector enclosure assemblies provide dust and water ingress protection to IP67, which allows temporary immersion in water to a depth of 1.0 meter for 30 minutes without ingress of water or dust to the enclosure.

ENVIRONMENTAL TEST SPECIFICATIONS

Applicable IEC Moisture Tests

IP65 IEC 529 Test 14.2.5 – Spray nozzle 6.3 mm diameter, delivery rate 12.5 liters per minute, 1 minute duration of connector exposure to spray. When conducting this test on Portable Enclosure Connectors, the protective cover must be securely fastened over the face of the connector.

Requirements

No water to have penetrated enclosure through connector.

Applicable IEC Moisture Tests

IP67 IEC 529 Test 14.2.7 – Temporary immersion, 1.0 meter for 30 minutes.

Requirements

No water to have penetrated enclosure through connector.

Applicable IEC Connector Tests After Moisture Exposure Tests Have Been Performed

IEC 512-2, Test 3a – Insulation Resistance

IEC 512-2, Test 4a – Voltage proof

Limited water immersion testing was performed on virgin connectors before leaving our factory. We recommend that our environmental connectors be retested by our customers after a suitable period of time/temperature conditioning has taken place to determine the suitability of the connector for the application. We cannot predict service life of our connectors for all applications.

Requirements

Portable enclosure. 1 G ohm minimum insulation resistance after connector face and contacts are dried. Voltage proof 1,000 V rms.

Products described within this catalog may be protected by one or more of the following US. patents:

#4,721,472 #4,900,261 #5,255,580
#5,329,697 #6,260,268 #6,835,079

Patented in Canada, 1992 Other Patents Pending

Unless otherwise specified, dimensional tolerances are:

- 1] ± 0.001 inches [0.03 mm] for male contact mating diameters.
- 2] ± 0.003 inches [0.08 mm] for contact termination diameters.
- 3] ± 0.005 inches [0.13 mm] for all other diameters.
- 4] ± 0.015 inches [0.38 mm] for all other dimensions.

Positronic Industries believes the data contained herein to be reliable. Since the technical information is given free of charge, the User employs such information at his own discretion and risk. Positronic Industries assumes no responsibility for results obtained or damages incurred from use of such information in whole or in part.

Positronic Industries' FEDERAL SUPPLY CODE (Cage Code) FOR MANUFACTURERS is 28198



MATERIALS AND FINISHES:

Insulator:	Nylon resin, UL 94V-0 black color.
Contacts:	Female contacts – precision machined high tensile phosphor bronze.
Contact Plating:	<p>“Corrosion Protection”: gold flash over nickel plate.</p> <p>“Corrosion Resistant”: gold plate 0.000030 inch [0.75 micron] over nickel plate.</p>
Shells and Jackscrew Systems and Cul-de-Sac Mounting Accessories:	<p>“Corrosion Protection”: steel, zinc plated with dichromate seal.</p> <p>“Corrosion Resistant”: stainless steel passivated.</p>
Push-on Fasteners:	Phosphor bronze with tin plate.
Angle Brackets:	Brass, zinc plate with dichromate seal.
Interfacial Seal:	Elastomer or TPE.
Panel Mount Sealing Plate Assembly:	Glass filled thermoplastic with elastomer O-ring.
Protective cover over connector shell:	Conductive polyethylene or conductive polyester.

ELECTRICAL CHARACTERISTICS:

Contact Current Rating:	<p>7.5 amperes nominal, size 20 contacts</p> <p>5 amperes nominal, size 22 contacts</p>
Initial Contact Resistance:	0.010 ohms maximum.
Insulator Resistance:	5 G ohms.
Clearance and Creepage Distance Minimum:	0.039 inch [1mm].
Proof Voltage:	1000 V r.m.s.
Working Voltage:	300 V r.m.s.

MECHANICAL CHARACTERISTICS:

Fixed Contacts:	<p>WIN-D Size 20 contact, female contact – rugged open entry design.</p> <p>WIN-DD Size 22 contact, female contact – rugged open entry design.</p>
Contact Retention in Insulator:	6 lbs. [27N]
Contact Terminations:	<p>WIN-D Solder cup contacts – 0.042 inch [1.06 mm] minimum hole diameter for 20 AWG [0.5 mm²] wire maximum. Straight printed board mount – 0.028 inch [0.71 mm] diameter. 90° printed board mount – 0.028 inch [0.71 mm] diameter for all printed board contact footprints.</p> <p>WIN-D Solder cup contacts – 0.035 inch [0.89 mm] minimum hole diameter for 22 AWG [0.3 mm²] wire maximum. Straight printed board mount – 0.020 inch [0.5 mm] diameter. 90° printed board mount contact terminations 0.030 inch [0.76 mm] diameter.</p>
Polarization:	Trapezoidally shaped shells.
Enclosure Mounting Accessories:	Cul-de-sac blind hole fasteners, angle brackets and push-on fasteners.
Inside Wall Enclosure Mount:	Minimum thickness 0.040 inch [1.02 mm]. Maximum thickness 0.080 inch [2.03 mm].
Locking Systems:	Jackscrews.
Mechanical Operations:	500 operations minimum per IEC 512-5.
Required Sealing Plate Mounting Torque:	<p>1.75 in-lb. [0.20 Nm] minimum.</p> <p>8.00 in-lb. [0.90 Nm] maximum.</p>
CLIMATIC CHARACTERISTICS:	
Temperature Range:	-40°C to +125°C

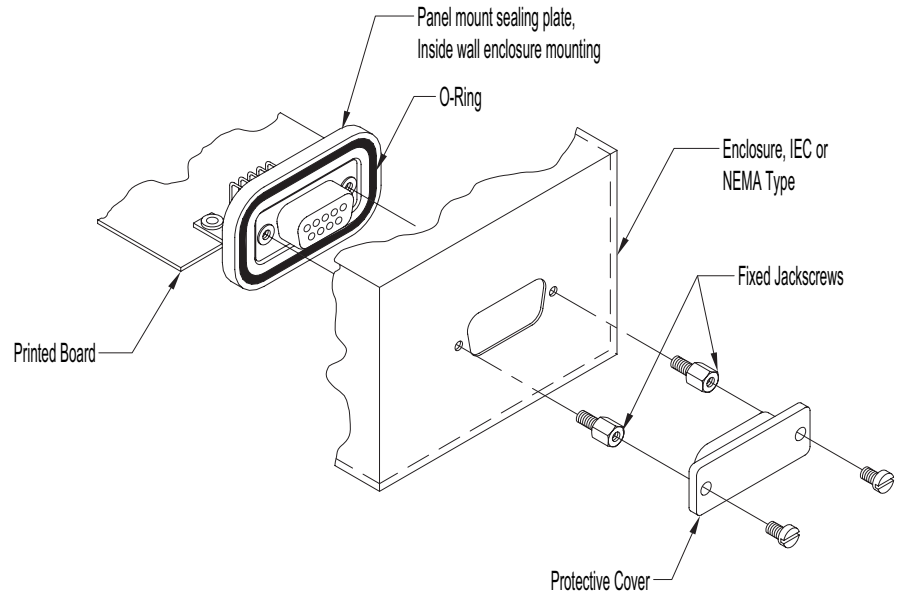


For RoHS options see page 11.



FIXED ENCLOSURE MOUNTED CONNECTOR

The connector is mounted on the portable enclosure. The mating connector is in a remote location and is non-environmental.



The system consists of an input/output connector mechanically mounted and sealed to a portable enclosure containing electrical equipment. The connector and enclosure together provide a degree of protection from dust and moisture in accordance with IEC or NEMA ingress protection requirements. The enclosure and connector may be exposed to dust, splashing water, intermittent rain, or limited water immersion during its

outdoor use. When **“Corrosion Resistance”** is a requirement, the connector should be equipped with stainless steel shells and jackscrews, and contacts plated 0.000030 inch [0.75 microns] gold over nickel.

The portable enclosure will be connected (down loaded) periodically to a non-environmental performance connector positioned in a dry and controlled atmosphere environment.

CONNECTOR-ENCLOSURE UNIT ENVIRONMENTAL RATINGS

IEC 529 Classification Designations Rated to IP67 Degree of Protection

IP67, **“Corrosion Protected”**

Dust tight and limited effects of water immersion, 1.0 meter for 30 minutes. Corrosion protected with zinc plated dichromate sealed shells and jackscrews. Contacts plated gold flash over nickel.

IP67, **“Corrosion Resistance”**

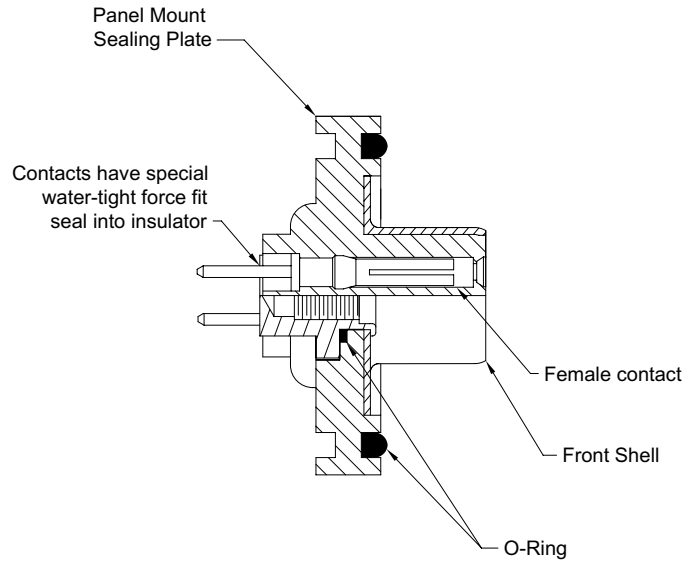
Dust tight and limited effects of water immersion 1.0 meter for 30 minutes. Corrosion resistant with stainless steel shells and jackscrews. Contacts plated 0.000030 inch [0.75 microns] gold over nickel.

NEMA Enclosure Types Approximate Equivalents of IP67 Degree of Protection

NEMA Types 3, 3R, 4 and 6

NEMA Type 4X

ENCLOSURE MOUNTED CONNECTOR





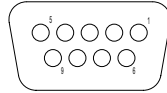
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ENVIRONMENTAL D-SUBMINIATURE, IMPROVED UNIBODY DESIGN

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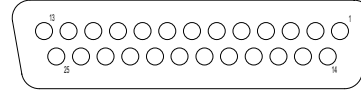
CONTACT VARIANTS

FACE VIEW OF FEMALE CONNECTOR



WD9F

Available with female contacts

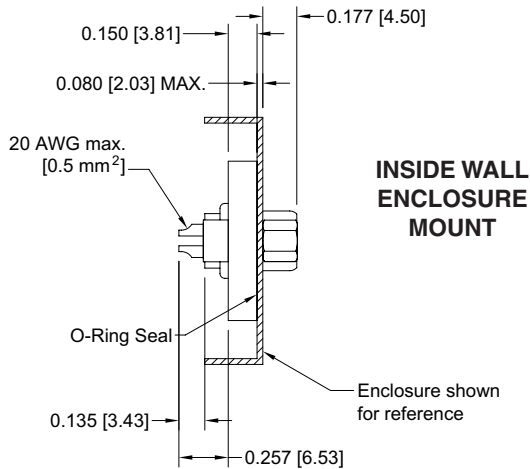


WD25F

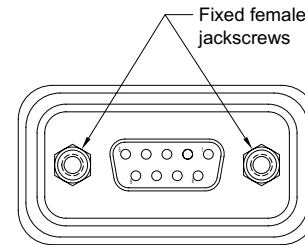
Available with female contacts

Positronic is ready to support requirements for other D-subminiature connector variants. Consult Technical Sales.

SOLDER CUP CONNECTOR WITH ENCLOSURE WALL MOUNT SEALING PLATE CODE 2



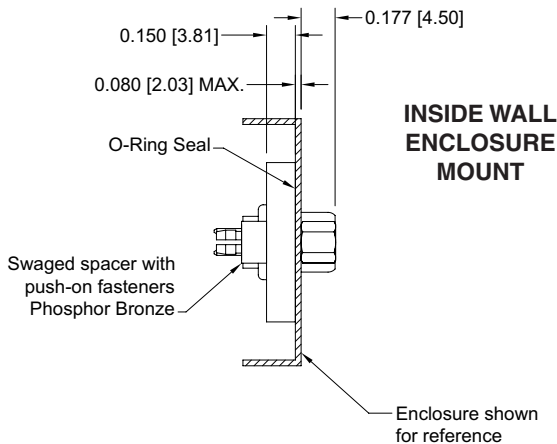
INSIDE WALL ENCLOSURE MOUNT



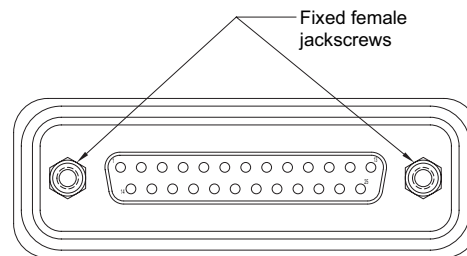
Example Part Number:
WD9F2C5AT7U

STRAIGHT PRINTED BOARD MOUNT CONNECTOR

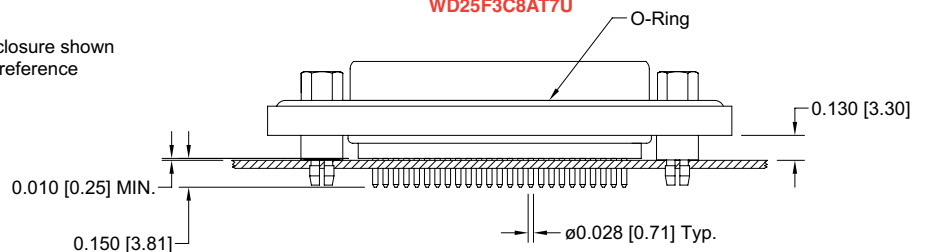
WITH ENCLOSURE WALL MOUNT SEALING PLATE CODE 3, 0.150 [3.81] CONTACT EXTENSION



INSIDE WALL ENCLOSURE MOUNT



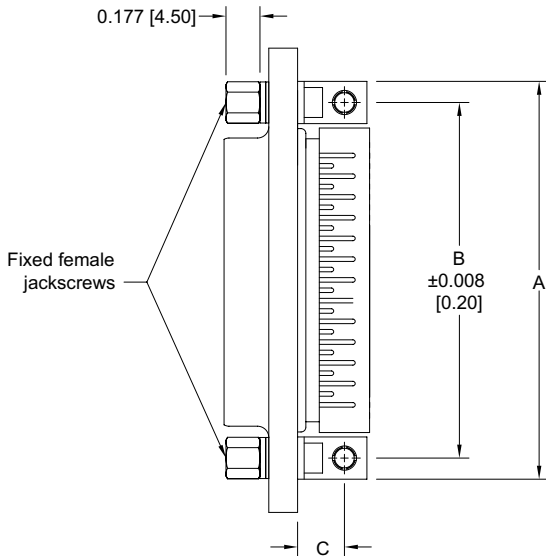
Example Part Number:
WD25F3C8AT7U



6 DIMENSIONS ARE IN INCHES [MILLIMETERS].
ALL DIMENSIONS ARE SUBJECT TO CHANGE.

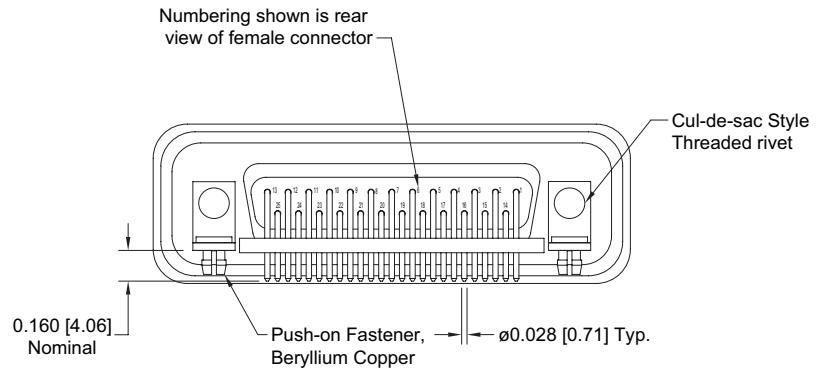
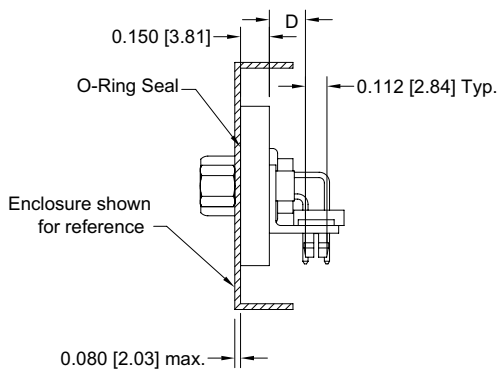
**90° PRINTED BOARD MOUNT CONNECTOR
WITH ENCLOSURE MOUNT SEALING PLATE
ORDERING CODE 5, 0.188 [4.78] CONTACT EXTENSION**

**INSIDE WALL
ENCLOSURE
MOUNT**



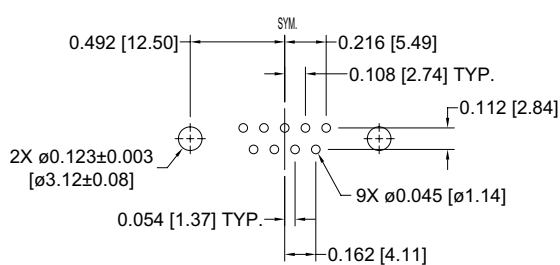
WD005C700U 0.188 [4.78] CONTACT EXTENSION				
PART NUMBER	A	B	C	D
WD905C700U	1.204 [30.58]	0.984 [24.99]	0.244 [6.20]	0.188 [4.78]
WD2505C700U	2.072 [52.63]	1.852 [47.04]	0.244 [6.20]	0.188 [4.78]

**Example Part Number:
WD25F5C7AT7U**

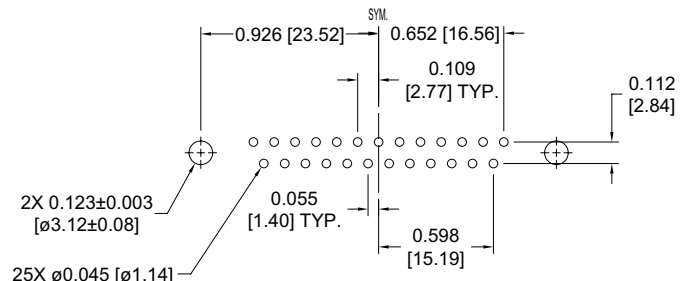


**90° AND STRAIGHT PRINTED BOARD
CONTACT HOLE PATTERN**

Hole identification shown for female connector.
Mount connector with mating face positioned to follow direction of arrows.



WD9



WD25

Suggest 0.045 [1.14] Ø hole for contact termination positions
Suggest 0.123 ±0.003 [3.12 ±0.08] Ø hole for mounting connector with push-on fasteners

**DIMENSIONS ARE IN INCHES [MILLIMETERS].
ALL DIMENSIONS ARE SUBJECT TO CHANGE.**



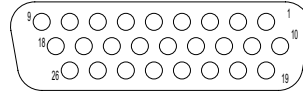
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ENVIRONMENTAL D-SUBMINIATURE, IMPROVED UNIBODY DESIGN

WIN-D
Win-DD
Series

CONTACT VARIANTS

FACE VIEW OF FEMALE CONNECTOR



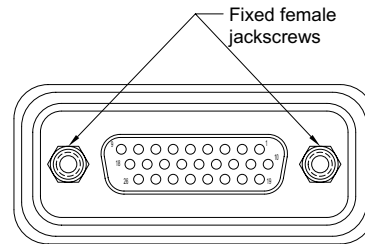
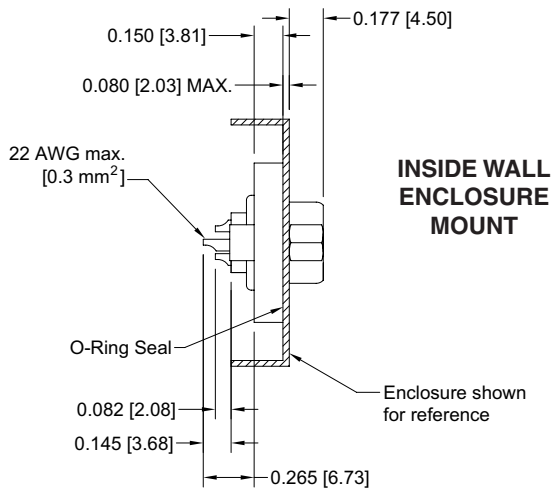
WDD26F

Available with female contacts

Positronic is ready to support requirements for other D-subminiature connector variants. Consult Technical Sales.

SOLDER CUP CONNECTOR

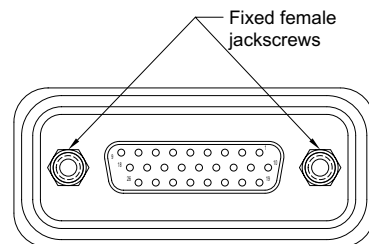
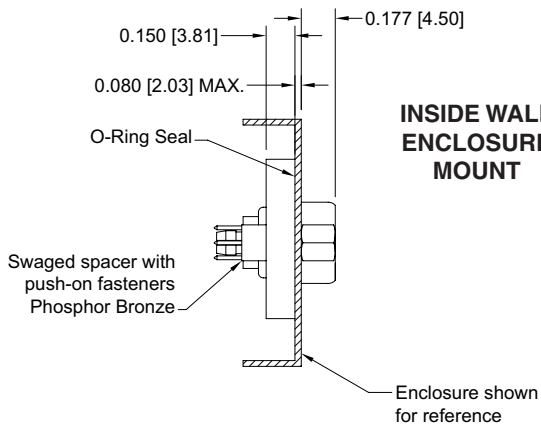
WITH ENCLOSURE WALL MOUNT SEALING PLATE CODE 2



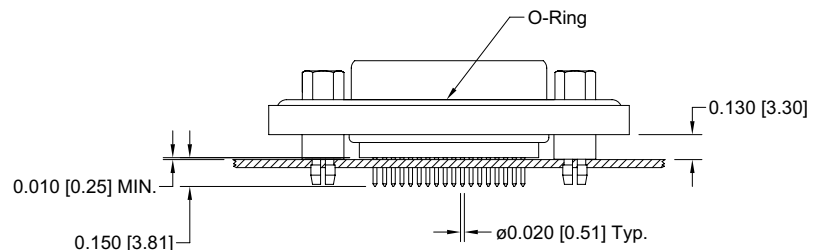
Example Part Number:
WDD26F2C5AT7U

STRAIGHT PRINTED BOARD MOUNT CONNECTOR

WITH ENCLOSURE WALL MOUNT SEALING PLATE CODE 3, 0.150 [3.81] CONTACT EXTENSION



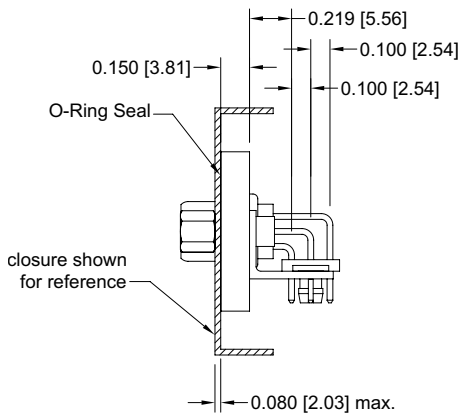
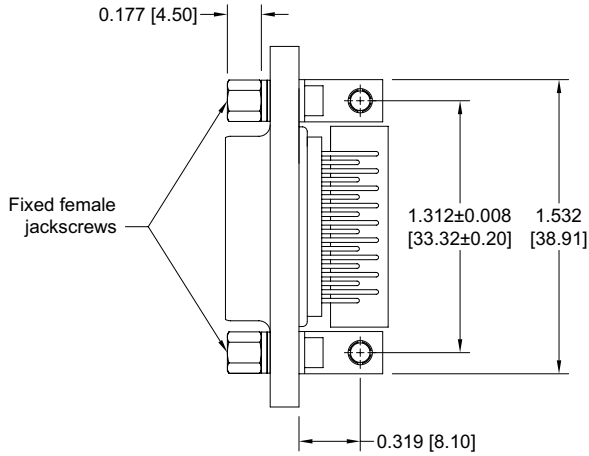
Example Part Number:
WDD26F3C8AT7U



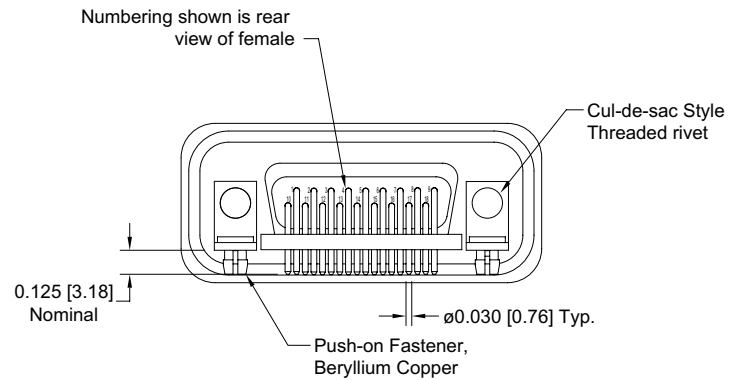
8 DIMENSIONS ARE IN INCHES [MILLIMETERS].
ALL DIMENSIONS ARE SUBJECT TO CHANGE.

90° PRINTED BOARD MOUNT CONNECTOR
WITH ENCLOSURE MOUNT SEALING PLATE
CODE 4, 0.219 [5.56] CONTACT EXTENSION

**INSIDE WALL
ENCLOSURE MOUNT**

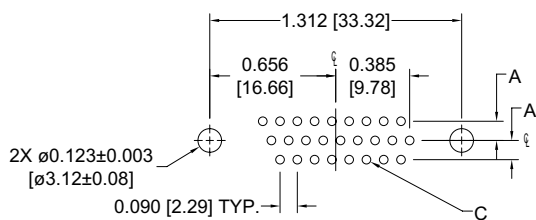


Example Part Number:
WDD26F4C7AT7U



**90° AND STRAIGHT PRINTED BOARD
CONTACT HOLE PATTERN**

Mount connector with mating face positioned to follow direction of arrows.



CODE NUMBER	A	C
4	0.100 [2.54]	0.045 [1.14]
3	0.078 [1.98]	0.035 [0.89]



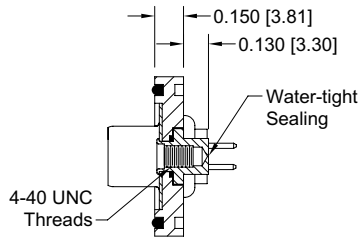
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ENVIRONMENTAL D-SUBMINIATURE, IMPROVED UNIBODY DESIGN

WIN-D
Win-DD
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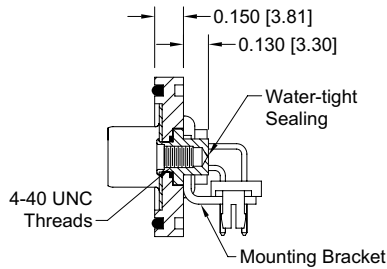
CUL-DE-SAC STYLE MOUNTING ACCESSORIES

INSIDE WALL ENCLOSURE MOUNT



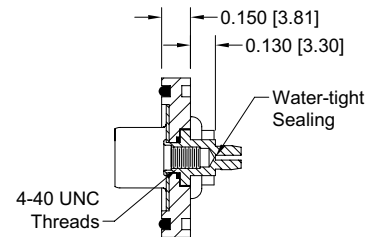
C5

STEEL, ZINC PLATE
WITH DICHROMATE SEAL OR
STAINLESS STEEL, PASSIVATED



C7

STEEL, ZINC PLATE
WITH DICHROMATE SEAL, OR
STAINLESS STEEL, PASSIVATED

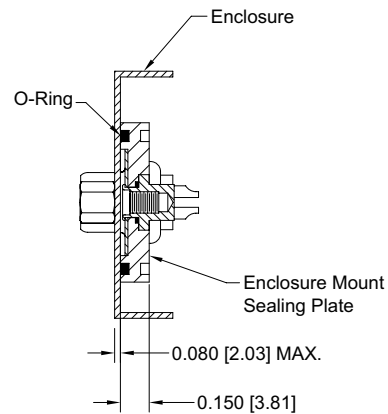
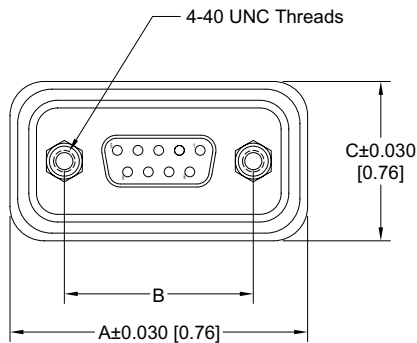


C8

PHOSPHOR BRONZE,
TIN PLATE

CONNECTOR TO ENCLOSURE WALL MOUNT SEALING PLATE

INSIDE WALL ENCLOSURE MOUNT



CONNECTOR VARIANT	A	B	C
WD9	1.550 [39.37]	0.984 [24.99]	0.830 [21.08]
WDD26	1.878 [47.70]	1.312 [33.32]	0.830 [21.08]
WD25	2.418 [61.42]	1.852 [47.04]	0.830 [21.08]

SEALING PLATE MATERIAL: GLASS FILLED THERMOPLASTIC


SEALING PLATE IS MOUNTED TO ENCLOSURE WALL WITH JACKSCREWS TORQUED TO A VALUE OF 1.75 in-lb [0.20 Nm] MINIMUM, 8.00 in-lb [0.90 Nm] MAXIMUM

ORDERING INFORMATION - CODE NUMBERING SYSTEM

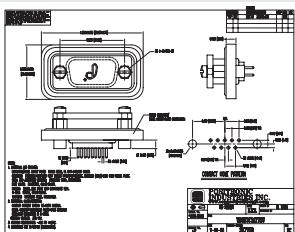
Specify Complete Connector By Selecting An Option From Step 1 Through 8

For Systems 1 & 2 Enclosure Mounted Connectors

WD and WDD Series

STEP	1	2	3	4	5	6	7	8	9	10
EXAMPLE PART NUMBERS	WD	9	F	3	C5	A	T7	SU	/AA	
	WDD	26	F	2	C5	A	T7	SU	/AA	
STEP 1 - BASIC SERIES WD and WDD Series										STEP 10 - SPECIAL OPTIONS CONTACT TECHNICAL SALES FOR SPECIAL OPTIONS
STEP 2 - CONNECTOR VARIANTS WD Series Connector Variants 9 - Female only* 25 - Female only* WDD Series Connector Variants 26 - Female only*										STEP 9 - ENVIRONMENTAL COMPLIANCE OPTIONS  /AA - Compliant per EU Directive 2002/95/EC (RoHS) NOTE: If compliance to environmental legislation is not required, this step will not be used. Example: SGM26FSCN00J0
STEP 3 - CONNECTOR GENDER F – Female contact										
STEP 4 - CONTACT TERMINATION TYPE 2 - Solder cup, use for both WD and WDD series. 3 - Solder, straight printed board mount with 0.150 [3.81] tail length. Use for both WD and WDD series. 4 - Solder 90° printed board mount, for use with WDD series only, contact extension 0.219 [5.56]. 5 - Solder 90° printed board mount, for use with WD series only, contact extension 0.188 [4.78].										STEP 8 - SHELL AND ACCESSORY OPTIONS U - Corrosion Protected Unibody Design Steel shells and jackscrews zinc plated with dichromate seal. Contacts gold flash over nickel plate. SU- Corrosion Resistant Unibody Design Stainless steel shells and jackscrews Contacts 0.000030 inch [0.75µ] gold plated over nickel.
STEP 5 - CUL-DE-SAC STYLE MOUNTING ACCESSORIES C5 - Inside wall mounting for Code 2 and 3 type contacts only. C7 - Inside wall mounting for Code 4 and 5, 90° type contact printed board mount only. Consists of an assembly of angle bracket, alignment bar and push-on fastener. C8 - Inside wall mounting for Code 3 type contacts only. Includes push-on fastener.										STEP 7 - FEMALE FIXED JACKSCREWS T7 - Mandatory for C5, C7 and C8 cul-de-sac mounting accessories.
										STEP 6 - ENCLOSURE WALL MOUNT SEALING PLATE A - Inside wall enclosure mounted connector.

NOTE: Once you have made a connector selection, contact Technical Sales if you would like to receive a drawing in DXF, PDF format or a 3-dimensional IGES file.



SK Drawing



3-dimensional model

* Positronic is ready to support requirements for other D-subminiature connector variants. Consult Technical Sales.

NORTH AMERICAN LOCATIONS

UNITED STATES, Springfield, Missouri, Corporate Headquarters

Factory Sales and Engineering Offices (800) 641-4054

PUERTO RICO, Ponce Factory

Factory Sales and Engineering Offices (800) 641-4054

MEXICO

Factory Sales and Engineering Offices (800) 872-7674

CANADA

Factory Sales and Engineering Offices (800) 327-8272

ASIA/PACIFIC LOCATIONS

SINGAPORE, Asia/Pacific Headquarters

Factory Sales and Engineering Offices (65) 6842-1419

ASIA, Direct Sales Offices

Taiwan Sales Office (88) 62-2937-8775

China Sales Office (86) 755-2643-7578

Korea Sales Office (82) 31-909-8047/8

JAPAN

Sales and Engineering Offices (81) 3-5812-7720

INDIA

Factory Sales and Engineering Offices (91) 20-2439-4810

ASIA/PACIFIC, Technical Agents

Technical Agents in Malaysia, Australia, New Zealand, Philippines,
Hong Kong, Vietnam, Thailand

EUROPEAN LOCATIONS

FRANCE, Auch Factory, European Headquarters

Factory Sales and Engineering Offices 33 (0)5 62 63 44 91

EUROPE, Direct Sales Offices

Northern France Sales Office 33 (0)1 45 88 13 88

Southern France Sales Office 33 (0)4 67 72 80 28

Italy Sales Office 39 (0)2 54 116 106

Northern Germany Sales Office 49 (0)30 34 504 307

Southern Germany Sales Office 49 (0)2351 63 47 39

EUROPE, Technical Agents

Technical Agents in Austria, Benelux, Eastern Europe Countries, Greece,
Ireland, Scandinavia, Spain, Switzerland and the United Kingdom

MIDEAST, Technical Agents

Technical Agents in Israel and Turkey



POSITRONIC INDUSTRIES, INC.

423 N Campbell Ave • PO Box 8247 • Springfield, MO 65801
Tel (417) 866-2322 • Fax (417) 866-4115 • Toll Free (800) 641-4054
info@connectpositronic.com

POSITRONIC INDUSTRIES, S.A.S.

Zone Industrielle d'Engachies • 46 Route d'Engachies
France 32020 Auch Cedex 9
Telephone 33 (0)5 62 63 44 91 • Fax 33 (0)5 62 63 51 17
contact@connectpositronic.com

POSITRONIC ASIA PTE LTD.

3014A Ubi Road 1 #07-01 • Singapore 408703
Telephone (65) 6842 1419 • Fax (65) 6842 1421
singapore@connectpositronic.com