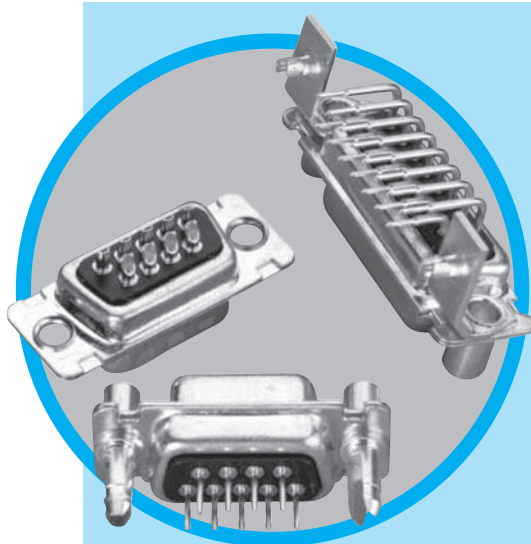


D-DF

D-Sub connectors - Screw-machined Contacts

FIXED MACHINED CONTACT CONNECTOR



Specifications

- Connectors according to MIL C24308 - NFC93425-HE5

Materials and Plating	
Shells	Steel tinned, with dimples on plug connector
Insulator	Glass-filled thermoplastic, UL 94V-0
Rear insert	Brass, tin plated 2µm (79µ") over 1.25µm (49µ") nickel
Boardlock	Phosphor bronze, tin plated 2µm (79µ") over 1.25µm (49µ") nickel
Screwlock	Brass, tin plated 2µm (79µ") over 1.25µm (49µ") nickel
Contacts	D: brass, plug and socket DF: plug = brass socket = phosphor bronze Right angle version: full gold plating over 2µm (79µ") nickel Straight version: full gold plating over 2µm (79µ") nickel

Electrical Data	
Current rating	7.5A
Voltage rating	300V AC/rms 50Hz
Withstanding voltage	1000V AC/rms 50Hz for one minute
Insulation resistance	5000MΩ
Contact resistance	D: 8.5mΩ max DF: 5mΩ max

Climatic Data	
Operating temperature	D / DF: -55°C to + 125°C
Salt spray	48 hours
Humidity	D: 21 days (40 C - 95% HR) DF: 56 days (40 C - 95% HR)

Mechanical Data		
Mating and unmating force Unit: kg (lb)		
No. of Cts	Mate (max)	Unmate (min)
9 (size E)	3.05 (6.73)	0.36 (0.79)
15 (size A)	5.09 (11.22)	0.46 (1.01)
25 (size B)	8.44 (18.61)	0.81 (1.79)
37 (size C)	12.51 (27.58)	1.1 (2.42)
50 (size D)	14.65 (32.30)	1.6 (3.53)

DESCRIPTION

Amphenol's D and DF series fixed contact D-Subminiature connectors are suitable for industrial or telecom use.

The machined contacts provide stability and reliability.

This series offers the broadest range of termination options in the Amphenol line.

*Connectors
for industrial
and
telecom use*

APPLICATIONS

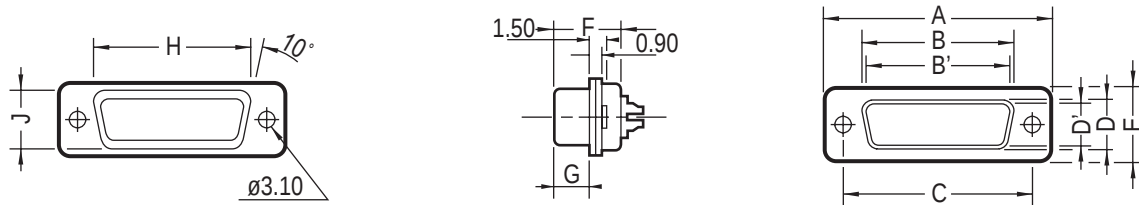
- Medical
- Industrial
- Telecom
- Any industry standard I / O connections



Amphenol

D-DF / E18

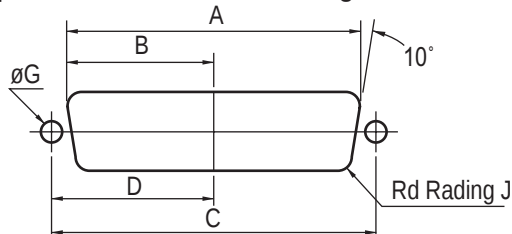
Shell size dimensions



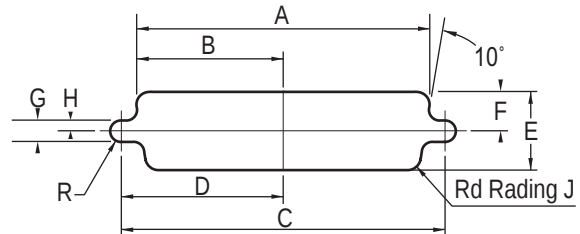
Shell size	Contact P: Pin S: Socket	A ±0.25 (±.010)	B 0/-0.20 (0/- .008)	B' +0.20/0 (+.008/0)	C ±0.10 (±.004)	D 0/-0.25 (0/- .010)	D' +0.25/0 (+.010/0)	E ±0.20 (±.008)	F +0.05/-0.20 (+.002/- .008)	F' +0.10/-0.20 (+.004/- .008)	G +0.10/-0.20 (+.004/- .008)	G' ±0.10 (±.004)	H +0.10/-0.40 (+.004/- .016)	J 0/-0.50 (0/- .020)
E	P	30.7 (1.209")		16.8 (.661")	25.0 (.984")		8.2 (.323")	12.4 (.488")		10.9 (.429")		5.9 (.232")	19.4 (.764")	11.0 (.433")
	S		16.4 (.646")			8.0 (.315")			11.1 (.437)		6.2 (.244")			
A	P	39.0 (1.535")		25.1 (.988")	33.3 (1.311")		8.2 (.323")	12.4 (.488")		10.9 (.429")		5.9 (.232")	27.7 (1.091")	11.0 (.433")
	S		24.8 (.976")			8.0 (.315")			11.1 (.437)		6.2 (.244")			
B	P	52.9 (2.083")		38.8 (1.528")	47.0 (1.850")		8.2 (.323")	12.4 (.488")		11.0 (.433")		5.8 (.228")	41.4 (1.630")	11.0 (.433")
	S		38.5 (1.513")			8.0 (.315")			11.1 (.437)		6.2 (.244")			
C	P	69.2 (2.724")		55.3 (2.177")	63.5 (2.500")		8.2 (.323")	12.4 (.488")		11.0 (.433")		5.8 (.228")	57.9 (2.280")	11.0 (.433")
	S		54.9 (2.161")			8.0 (.315")			11.1 (.437)		6.2 (.244")			
D	P	66.8 (2.630")		52.7 (2.075")	61.1 (2.406")		11.0 (.433")	15.2 (.598")		11.0 (.433")		5.8 (.228")	55.5 (2.185")	13.8 (.543")
	S		52.5 (2.067")			10.9 (.429")			11.1 (.437)		6.2 (.244")			

Panel cutouts

Optimal cutout for rear mounting



Standard cutout



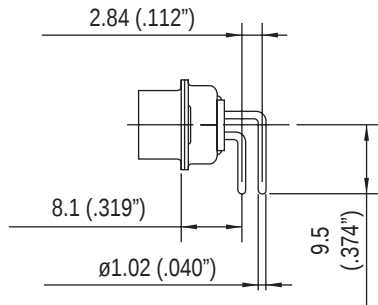
Shell size	Mounting method	A ±0.20 (±.008)	B ±0.20 (±.008)	C ±0.20 (±.008)	D ±0.20 (±.008)	E ±0.20 (±.008)	F ±0.20 (±.008)	G ±0.20 (±.008)	H ±0.20 (±.008)	J ±0.20 (±.008)
E	Front	22.2 (.874")	11.1 (.437")	25.0 (.984")	12.5 (.492")	13.0 (.512")	6.5 (.256")	3.0 (.118")	1.5 (.059")	2.1 (.083")
	Rear	20.5 (.807")	10.2 (.402")							
A	Front	30.5 (1.201")	15.3 (.602")	33.3 (1.311")	16.7 (.657")	13.0 (.512")	6.5 (.256")	3.0 (.118")	1.5 (.059")	2.1 (.083")
	Rear	28.8 (1.134")	14.4 (.567")							
B	Front	44.3 (1.744")	22.1 (.870")	47.0 (1.850")	23.5 (.925")	13.0 (.512")	6.5 (.256")	3.0 (.118")	1.5 (.059")	2.1 (.083")
	Rear	42.5 (1.673")	21.3 (.839")							
C	Front	60.7 (2.390")	30.4 (1.197")	63.5 (2.500")	31.7 (1.248")	13.0 (.512")	6.5 (.256")	3.0 (.118")	1.5 (.059")	2.1 (.083")
	Rear	59.1 (2.327")	29.5 (1.161")							
D	Front	58.3 (2.295")	29.2 (1.150")	61.1 (2.406")	30.6 (1.205")	15.8 (.622")	7.9 (.311")	3.0 (.118")	1.5 (.059")	2.1 (.083")
	Rear	56.3 (2.217")	28.2 (1.110")							

Termination

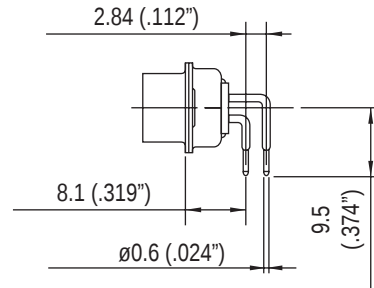
Right angle

MIL Footprint

without bracket:

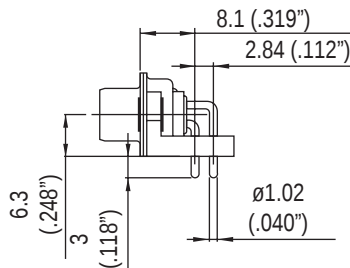


C

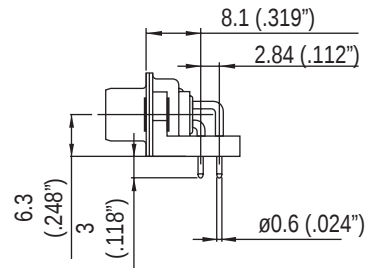


A4

plastic bracket:

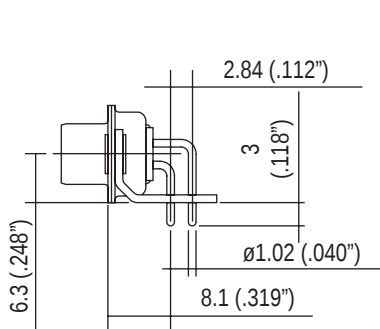


AJ3

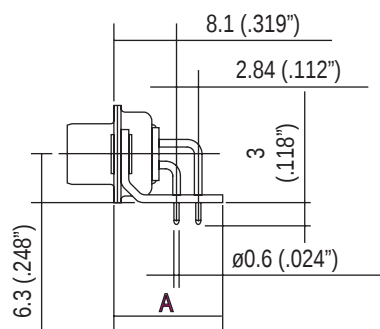


AJ4

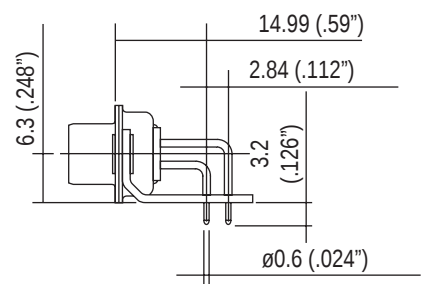
metal bracket:



A

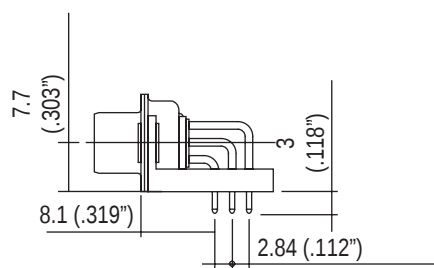


AM4: A=13.2mm
AZ4: A=11.5mm



AM4B

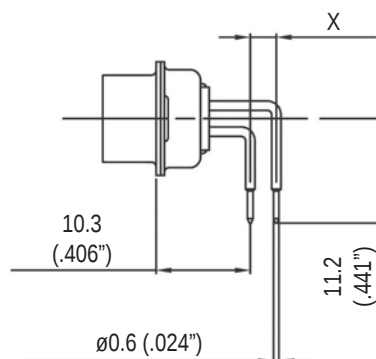
50 contacts:



Termination

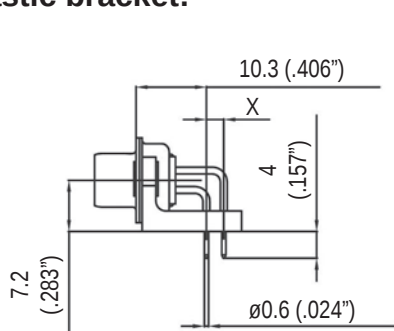
European footprint

without bracket:

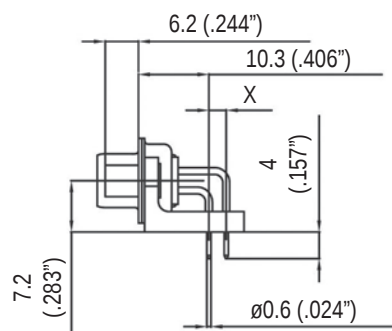


1AON: X=2.54mm
1BON: X=2.84mm

plastic bracket:

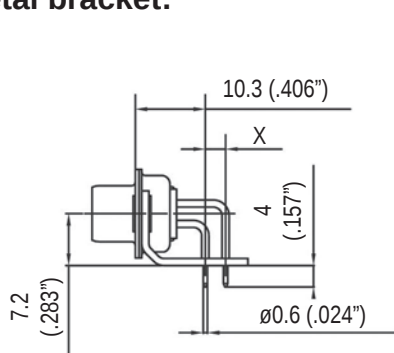


1APN: X=2.54mm
1BPN: X=2.84mm

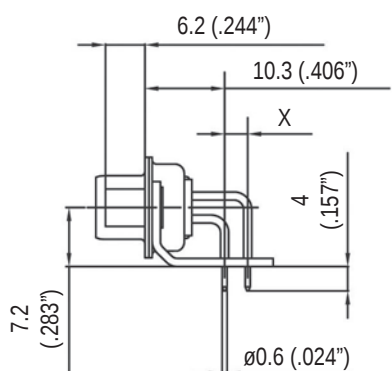


1AUN: X=2.54mm
1BUN: X=2.84mm

metal bracket:

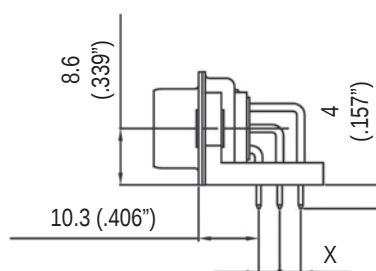


1AMN: X=2.54mm
1BMN: X=2.84mm



1ATN: X=2.54mm
1BTN: X=2.84mm

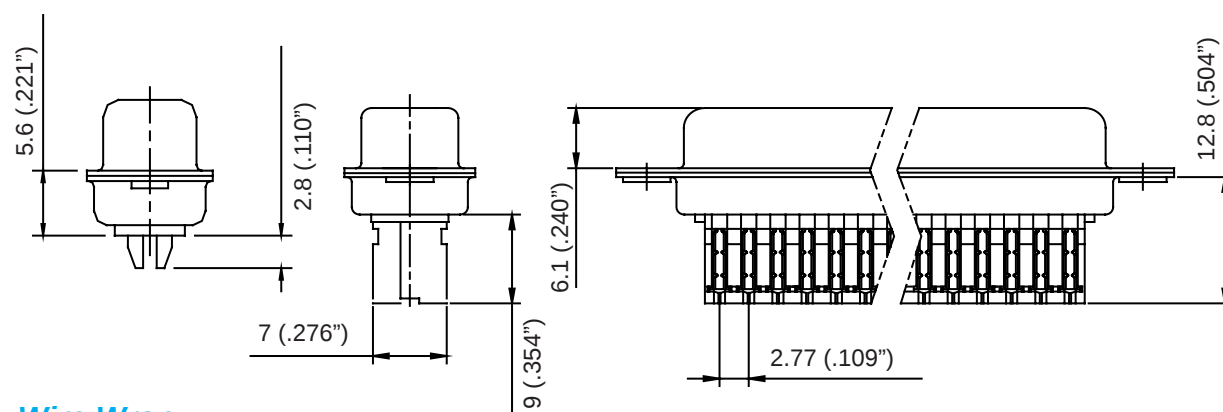
50 contacts:



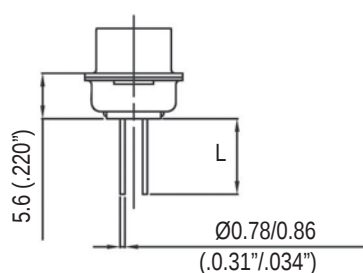
Termination

Solder Cup:

IDC (Discrete Wire):

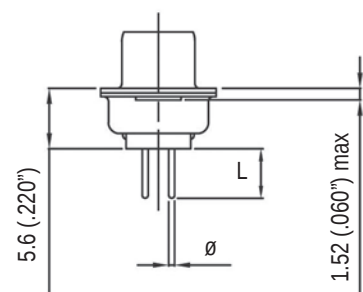


Wire Wrap:



termination	Nb of wraps	L
F179	2	9.6 (.378")
F179A	3	13 (.512")

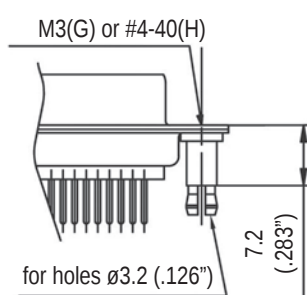
Straight PCB:



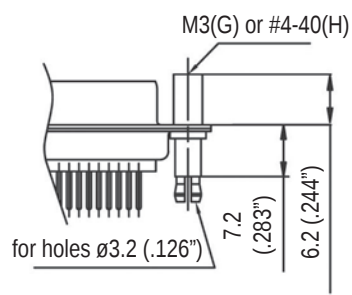
termination	Ø	L
U	0.6 (.024")	3.2 (.126")
V	1.02 (.040")	2.4 (.095")
T	0.6 (.024")	4 (.157")
OL2	0.6 (.024")	5.5 (.217")

Grounding tabs:

For straight termination



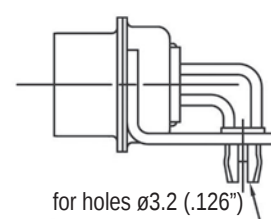
RM5



RM8

For R/A termination

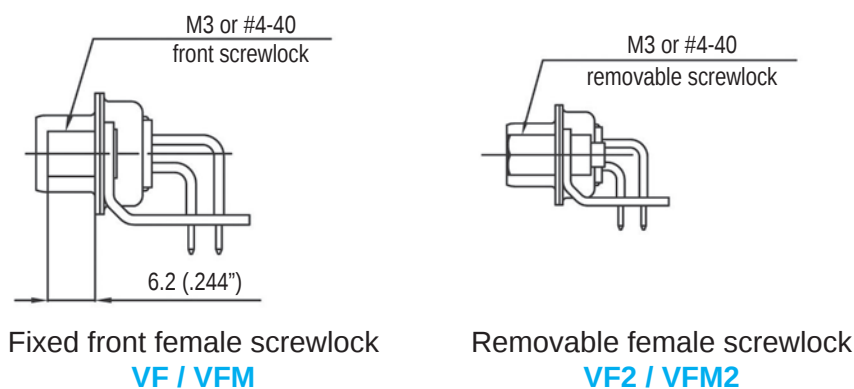
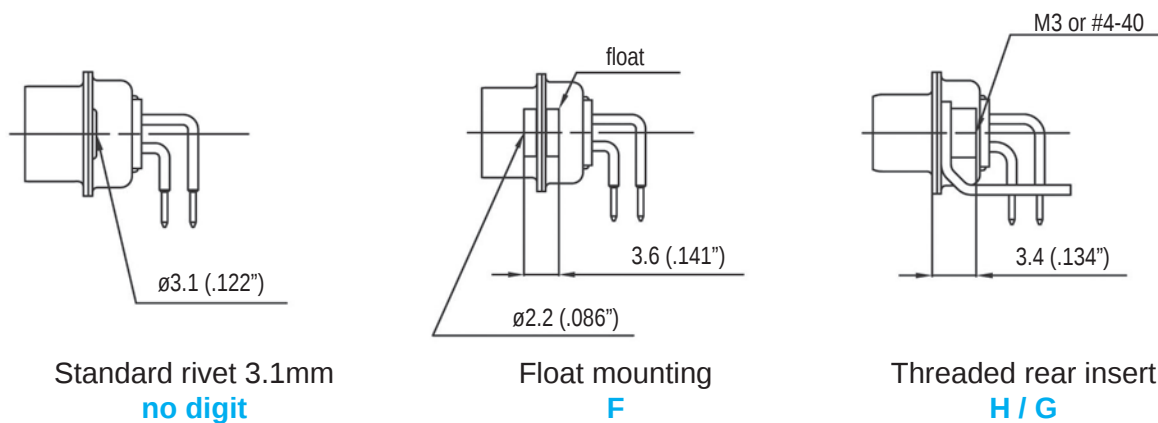
1.6mm PCB



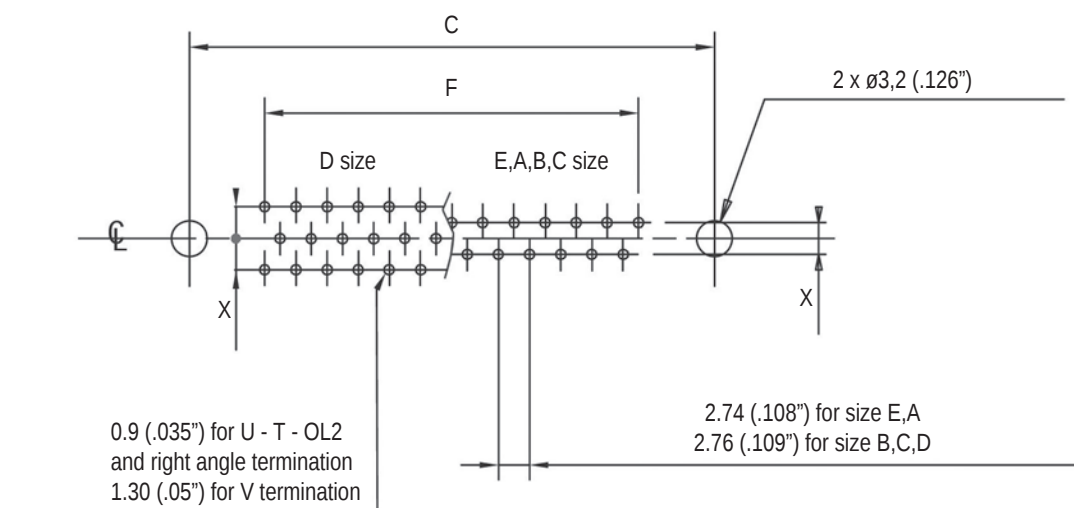
RM6

Panel mounting option

For straight and R/A termination



Recommended PCB Layout



For straight PCB: $X = 2.84\text{mm} (.112")$

For right angle PCB: MIL: $X = 2.84\text{mm} (.112")$

European: $X = 2.54\text{mm} (.100")$, 2.84mm in option

	size E	size A	size B	size C	size D
C$\pm 0,1 (.004)$	25 (.984)	33.3 (1.311)	47 (1.85)	63.5 (2.5)	61.1 (2.406)
F$\pm 0,05 (.002)$	10.96 (.431)	19.18 (.755)	33.12 (1.304)	49.68 (1.956)	44.2 (1.74)

How to order

L

RoHS Compliant

Flash	77D: 717D:	Tinned shell for receptacle Tinned shell + dimples for plug connector
0.38μm (15μ")	77DF: 717DF:	Tinned shell for receptacle Tinned shell + dimples for plug connector
0.76μm (30μ")	177DF: 777DF:	Tinned shell for receptacle Tinned shell + dimples for plug connector

Shell size:

E, A, B, C, D

Mounting options:

BLANK = Ø3.1mm rivet
H = 4-40 Rear threaded insert
G = M3 Rear threaded insert
F = Float mounting

*H & G must also be used to specify the threading for RM5 and RM8 options

Configuration:

09, 15, 25, 37, 50

Contact type:

P = Pin (plug)
S = Socket

for specific products

Panel & PCB mount options:

Straight PCB:

RM5 = Standoff + Boardlock
RM8 = Front screwlock, Standoff + Boardlock

Right Angle PCB:

RM6 = Boardlock for right angle mount

Panel:

VF = Fixed 4-40 front screwlock
VFM = Fixed M3 front screwlock
VF2 = 4-40 front screwlock
VFM2 = M3 front screwlock

Termination:

Blank = Solder-Cup
MP = IDC for discrete wire

Wire Wrap:

F179 = Tail length 9.6mm
F179A = Tail length 13mm

Straight PCB:

Ø0.6mm

U = Tail length 3.2mm
T = Tail length 4mm
OL2 = Tail length 5.5mm
Ø1.02mm

V = Tail length 2.4mm

Right Angle PCB:

MIL Footprint

Ø0.6mm tail

A4 = Without bracket
AJ4 = With plastic bracket
AM4 = With 13.2mm metal bracket
AZ4 = With 11.5mm metal bracket
AM4B = With metal bracket, 14.99mm footprint

Ø1.02mm tail

C = Without bracket
AJ3 = With plastic bracket
A = With metal bracket

European Footprint (Ø0.6mm tail)

2.54mm row spacing

1AON = Without bracket
1APN = With plastic bracket
1AUN = With plastic bracket
1AMN = With metal bracket
1ATN = With metal bracket

2.84mm row spacing

1BON = Without bracket
1BPN = With plastic bracket
1BUN = With plastic bracket
1BMN = With metal bracket
1BTN = With metal bracket

Examples:

L717D E H 09 P OL2 RM8

L177DF A 09 S 1AMN VF2 RM6

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