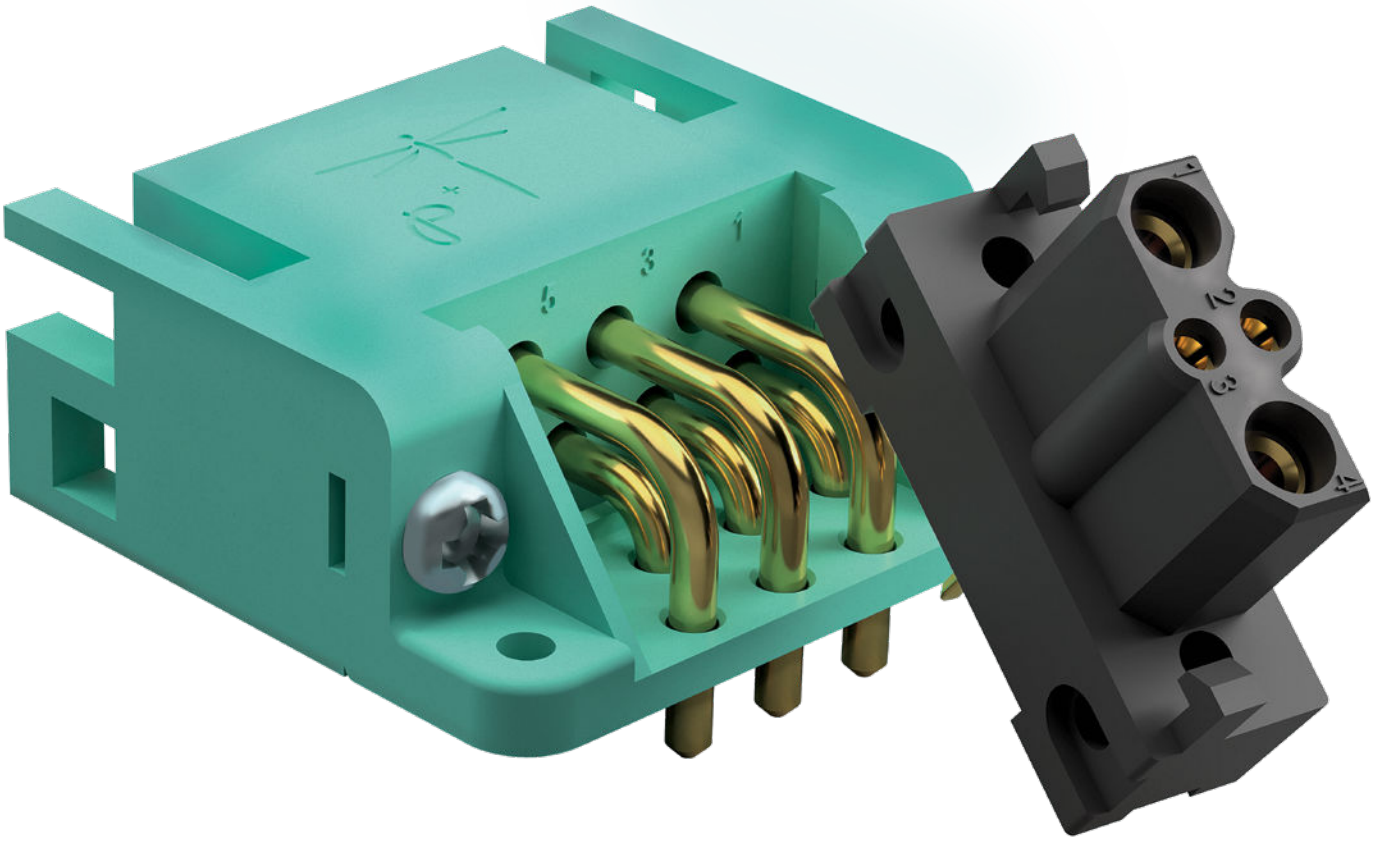
DRAGONFLY

HIGH DENSITY POWER & SIGNAL

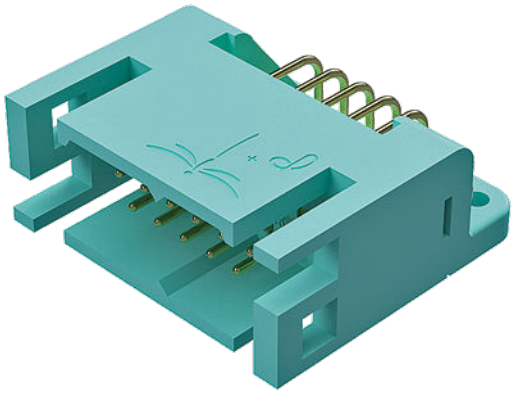
- Cost effective high density power & signal solution
- Current rating up to 20A per contact
- Integral locking latch mechanism

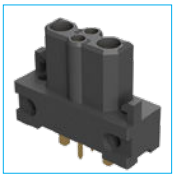


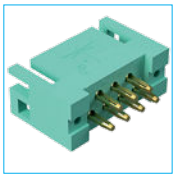
Positronic®
an **Amphenol** company

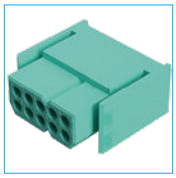
THE SCIENCE OF **CERTAINTY®**

M012 20/06









Dragonfly connectors are designed for staging a with versatile combination of power and signal solutions in a compact design. Dragonfly series also offers PCB mount, panel mount and cable connections in a small form factor design utilizing high-reliability, high-retention and high cycle life precision machined contacts.

Trust the **Dragnfly** to deliver ***The Science of Certainty*** in cost-sensitive, power and signal applications.

TECH SPECS

GENERAL	
Part Number Prefix	DF
Performance Level	Industrial
Qualifications	UL

MATERIAL	
Insulator Material	Nylon
Insulator Color	Green Black
Flammability Rating	UL 94V-0
Contact Material	Copper alloy
Contact Plating	Gold flash

ELECTRICAL		
Working Voltage (rms)	Signal Power	333 V 500 V
Initial Contact Resistance	Signal Power*1	5 mΩ 3 mΩ
Contact Current Rating	Signal*1 Power	up to 7.5 A up to 20 A

*1 Values established using standard conductivity alloy

MECHANICAL		
Contact Style	Fixed Removable	
Contact Termination	Crimp Contact Straight solder Straight press-fit Right angle solder	
Female Contact Design	Signal Power	Open entry Closed entry
Mating Cycles	Open entry #20 Closed entry #16 Closed entry*1	500 1000 10,000

*1 See chart on page 3

ENVIRONIMENTAL	
Operating Temperature	-55 to 125ºC

To download detailed product information,
visit www.connectpositronic.com/Dragonfly/ProductSpecs

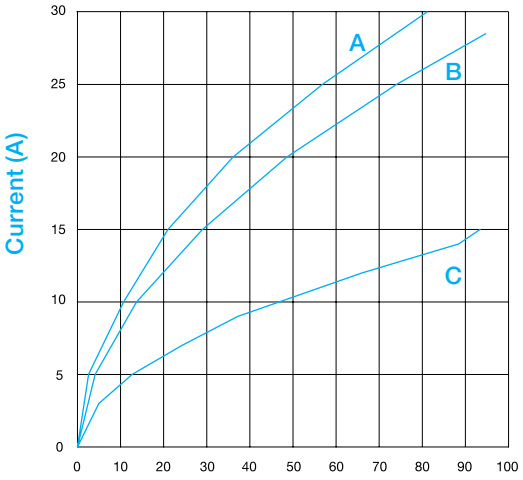
CONTACTS

Contact Technical Sales for crimp contact part numbers not listed here.

PART NUMBER	Size	Gender	Female Contact Style	Stranded AWG [mm²]
FC112N2/AA	#16	Female	Closed entry	#12 [4.0]
MC112N/AA	#16	Male	n/a	#12 [4.0]
FC114N2/AA	#16	Female	Closed entry	#14-16 [2.5-1.5]
MC114N/AA	#16	Male	n/a	#14-16 [2.5-1.5]
FC116N2/AA	#16	Female	Closed entry	#16-18 [1.5-1.0]
MC116N/AA	#16	Male	n/a	#16-18 [1.5-1.0]
FC120N2/AA	#16	Female	Closed entry	#20-24 [.5-.25]
MC120N/AA	#16	Male	n/a	#20-24 [.5-.25]
FC718N7/AA	#20	Female	Open entry	#18 [1.0]
FC718N2/AA	#20	Female	Closed entry	#18 [1.0]
MC718N/AA	#20	Male	n/a	#18 [1.0]
FC720N7/AA	#20	Female	Open entry	#20-24 [.5-.25]
FC720N2/AA	#20	Female	Closed entry	#20-24 [.5-.25]
MC720N/AA	#20	Male	n/a	#20-24 [.5-.25]
FC422N8/AA	#22	Female	Closed entry	#22-26 [.3-.14]
MC422N/AA	#22	Male	n/a	#22-28 [.3-.08]

TEMPERATURE RISE CURVES & CONTACT MATING PERFORMANCE

Tested per IEC Publication 60512-3, Test 5a

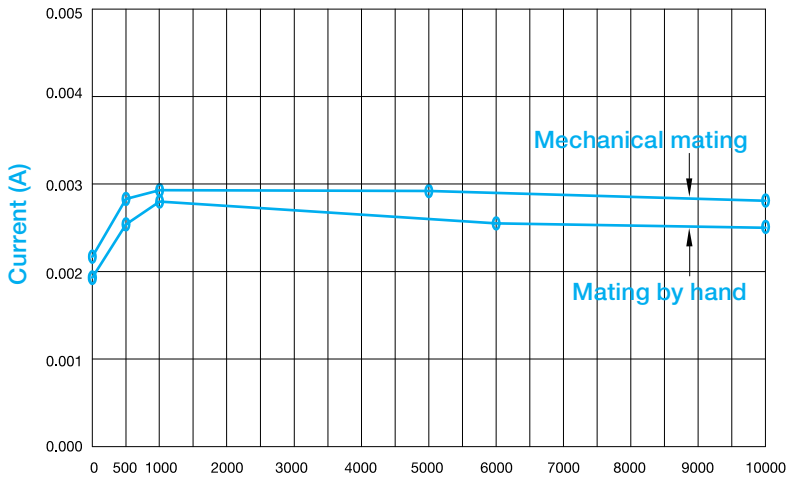


Temperature rise (°C)

A Developed with DF04 connectors and AWG 12 wires.
B Developed with DF07 connectors and AWG 12 wires.
C Developed with DF10 connectors and AWG 18 wires.

All power contacts under load.

Tested per IEC Publication 60512-2, Test 2b



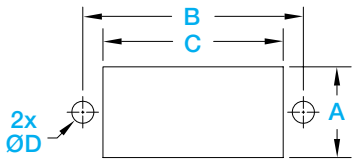
Size 16 contact mating performance

Above curves developed using DF07 connectors fully populated with size 16 contacts with 10,000 mating cycles. This information is supplied for reference. Contact wear and change in contact resistance may vary from one application to another. Contact Technical Sales to discuss details.

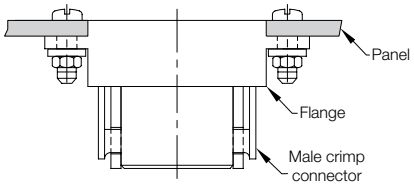
PANEL MOUNT OPTION

For male crimp connectors only

Panel Cutout

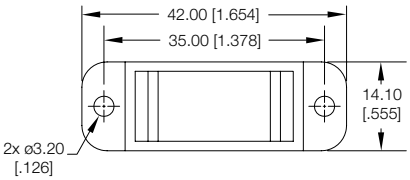


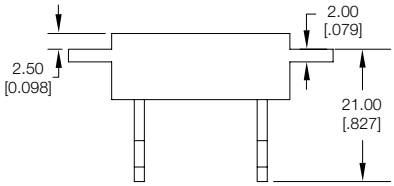
LAYOUT	A	B	C	ØD
03	7.76 [.306]	24.00 [.945]	18.52 [.729]	2.44 [.096]
07, 10, 16	14.40 [.567]	35.00 [1.378]	28.60 [1.126]	3.50 [.138]



Suggested installation of connector to panel with screws and nuts. *(Screws and nuts shown for reference only)*

Flange Dimensions (for 07, 10 and 16 layouts)



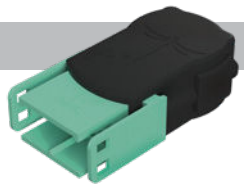


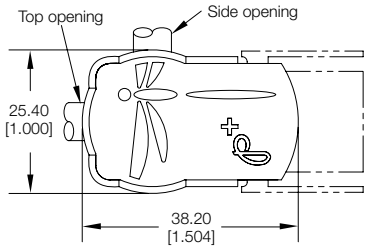
MATERIAL	
Flange	Nylon, UL 94V-0 Flange supplied installed

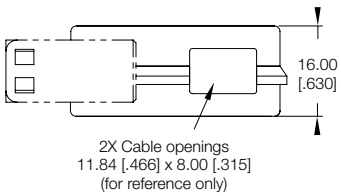
BACKSHELL

For version 07, 10 and 16

W1 - Top and side opening

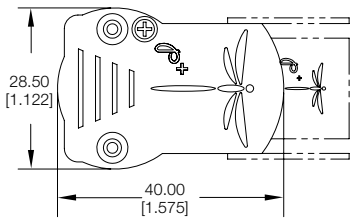


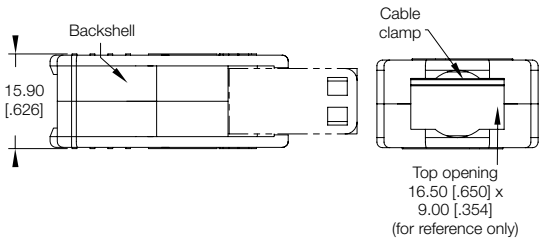




MATERIALS	
Backshell	Polypropylene, UL 94V-0, black
Cable clamp	Steel with nickel plate
Screws	Steel with nickel plate or black oxide

W2 - Top opening (For larger wire bundle)





MATERIALS	
Backshell	Nylon, UL 94V-0, black
Cable clamp	Steel with nickel plate
Screws	Steel with nickel plate or black oxide

CONTACT LAYOUTS

Scale 1:1

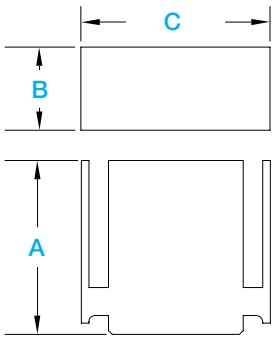
03 04 07 10 16

Contact Size Chart		
#16	#20	#22
●	●	●

All Positronic products utilize solid, machined contacts.

DIMENSIONS

For the sake of brevity, only basic dimensions of the free cable male is shown here. Full dimensional detail is available in the respective product drawings.



LAYOUT	Termination	A	B	C
03	Cable Connector	26.20 [1.031]	7.20 [.283]	28.00 [1.102]
04	Cable Connector	26.20 [1.032]	7.20 [.283]	17.80 [.701]
07, 10 and 16	Cable Connector	23.00 [.906]	11.00 [.433]	25.00 [.984]

CREATE A PART

DF	03	M	0	0	/AA

Series

DF Dragonfly

Layout

03 (3) #16 *
04 (2) #16, (2) #22
07 (7) #16
10 (10) #20
16 (16) #22

* only available for code '0' Termination

Contact Gender

M Male pin
F Female socket

Termination

0 Wire, order contacts separately
3 Straight solder, for version 04, 07, 10 and 16 only *
31 Straight solder, for female connectors of version 10 only
4 Right angle solder, for version 04, 07, 10 and 16 only *
41 Right angle solder, for female connectors of version 10 only
42 Right angle solder, for version 04 male only, uses longer insulator
93 Straight press-fit, for versions 04 and 07 only *
98 Straight press-fit, for versions 10 and 16 only

* For code 3, 4 & 93: Size 16 & 20 are closed entry contacts; Size 22 is open entry contacts

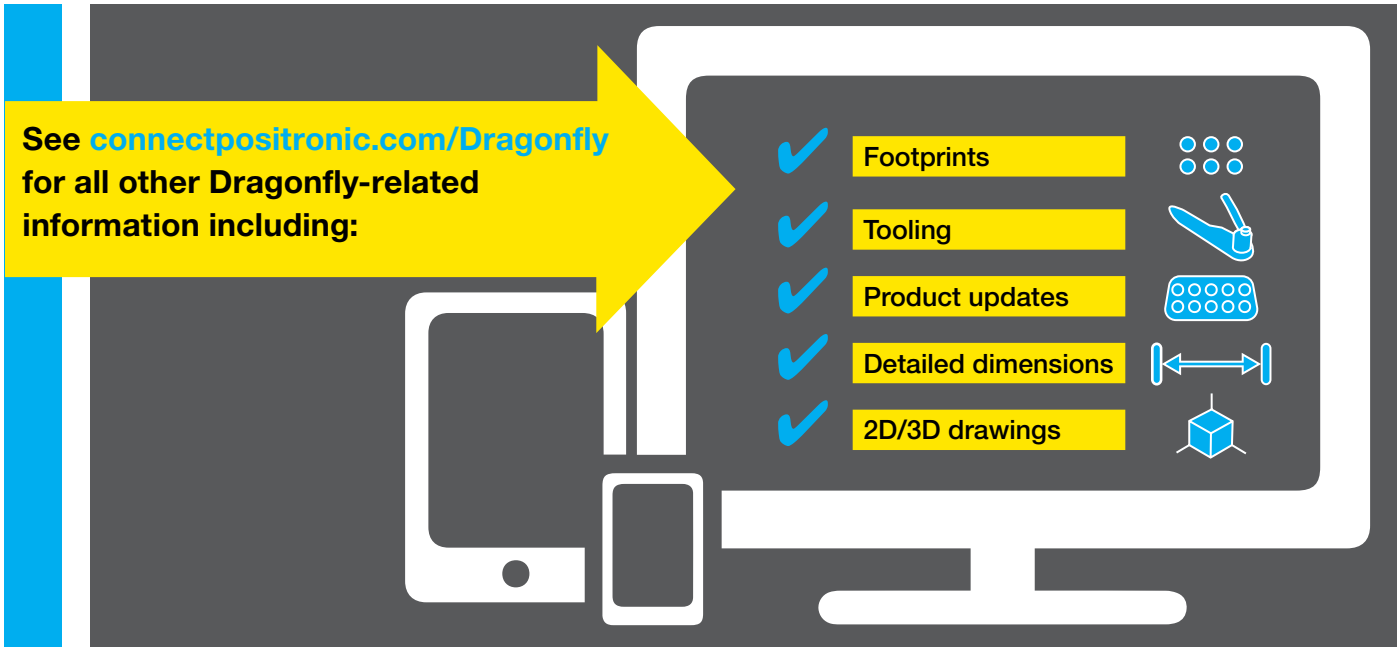
Environmental Compliance

/AA RoHS 5/6 (< 4% lead)

Accessories *1

0 None
B Angle brackets
BN Angle brackets, boardlocks
N Boardlocks *2
P Panel mount
W1 Backshell, modular opening
W2 Backshell, top opening, wide body

*1 For suggested straight mount pcb holes sizes of compliant press-fit connectors, please consult Technical Sales
*2 For all straight PCB mount versions and DF04 code 4 right angle PCB version only)



All dimensional tolerances are ± 0.38 [0.015], unless otherwise specified: ±0.03 mm [0.001 inches] for male contact mating diameters; ±0.08 mm [0.003 inches] for contact termination diameters; ±0.13 mm [0.005 inches] for all other diameters; ±0.38 mm [0.015 inches] for all other dimensions. Dimensions are in millimeter [inches]. All dimensions are subject to change. Product pictures may not be identical in appearance to actual production parts.

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

#4,900,261* #5,255,580 #5,329,697 #6,260,268
#6,835,079 #7,115,002 #8,944,697 #9,304,263

*Patented in Canada, 1992 Other patents pending

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