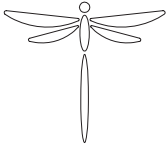
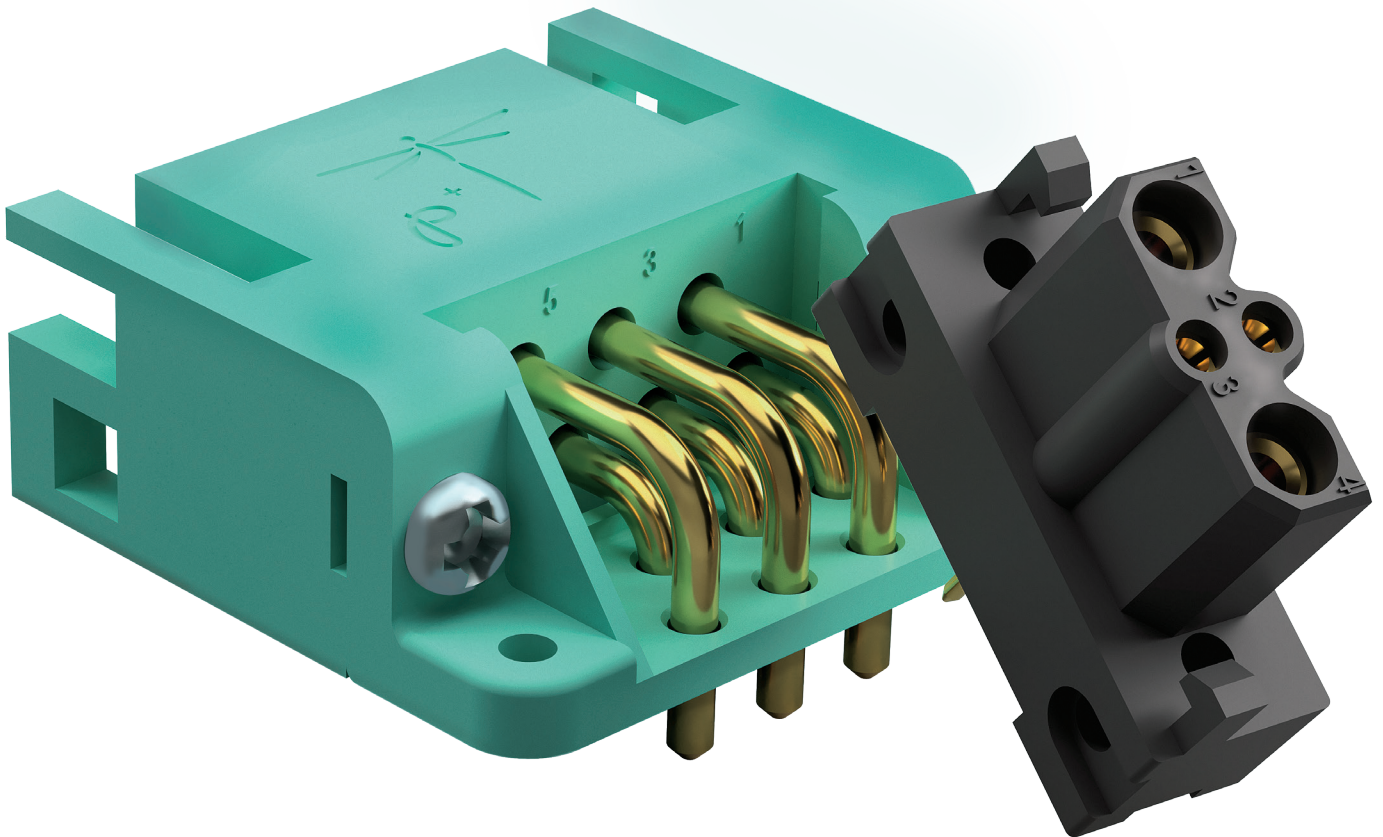


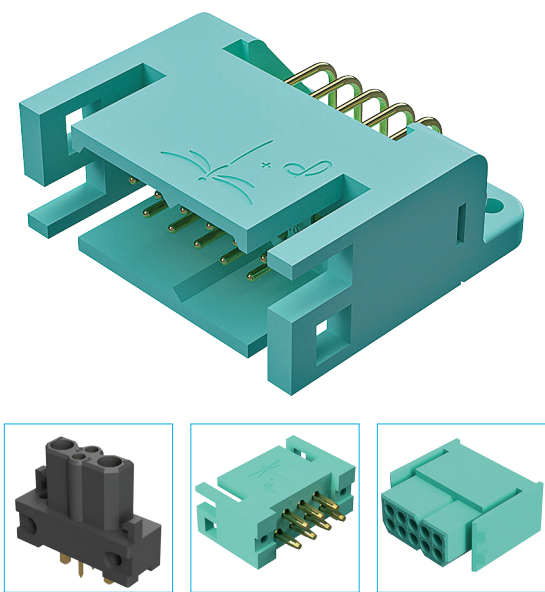
DRAGONFLY

HIGH DENSITY POWER & SIGNAL



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





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 **Dragonfly** 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 | 333 V |
| | Power | 500 V |
| Initial Contact Resistance | Signal | 5 mΩ |
| | Power ^{*1} | 3 mΩ |
| Contact Current Rating | Signal ^{*1} | up to 7.5 A |
| | Power | 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 | Open entry |
| | Power | Closed entry |
| Mating Cycles | Open entry | 500 |
| | #20 Closed entry | 1000 |
| | #16 Closed entry ^{*1} | 10,000 |

^{*1} See chart on page 3

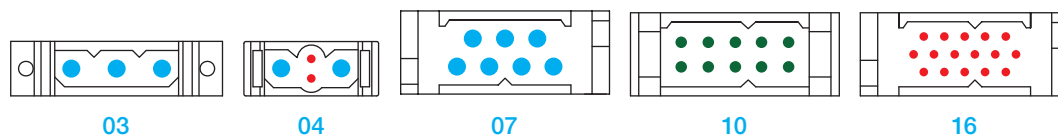
ENVIRONMENTAL

| | |
|-----------------------|--------------|
| Operating Temperature | -55 to 125°C |
|-----------------------|--------------|

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

CONTACT LAYOUTS

Scale 1:1

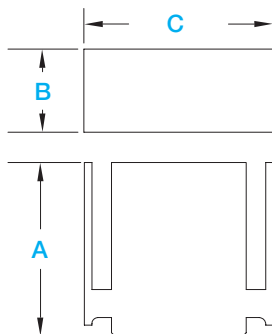


| Contact Size Chart | | |
|--------------------|-----|-----|
| #16 | #20 | #22 |
| | | |

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

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

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

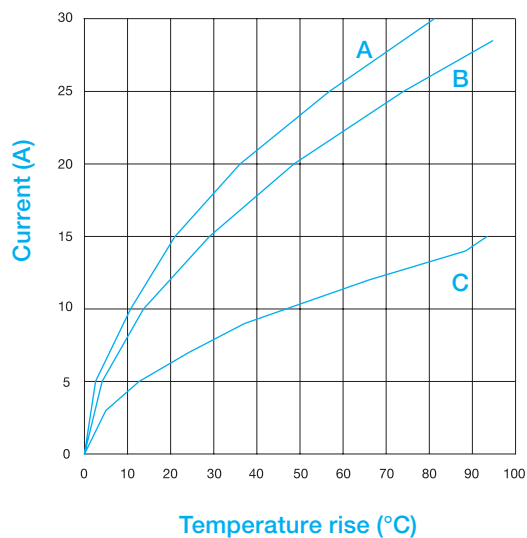
CONTACTS

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

| PART NUMBER | Size | Gender | Female Contact Style | Stranded AWG [mm ²] |
|-------------|------|--------|----------------------|---------------------------------|
| 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] |

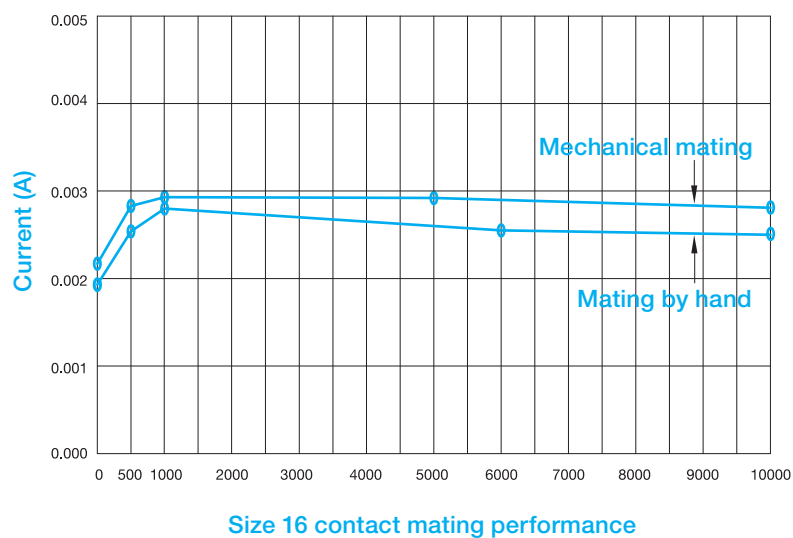
TEMPERATURE RISE CURVES & CONTACT MATING PERFORMANCE

Tested per IEC Publication 60512-3, Test 5a



- 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

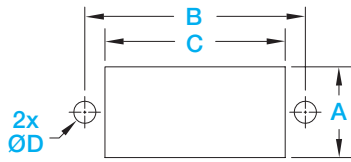


Above curves developed using DF07 connectors fully populated with size 16 contacts with 10,000 mating cycles. This information is supplied for reference. Contact wear and change in contact resistance may vary from one application to another. Contact Technical Sales to discuss details.

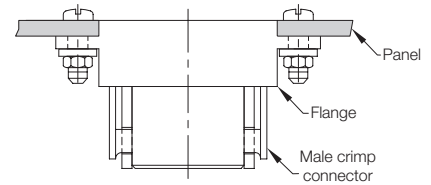
PANEL MOUNT OPTION

For male crimp connectors only

Panel Cutout

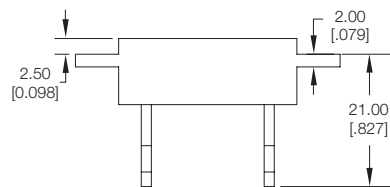
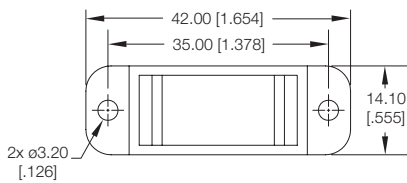


| LAYOUT | A | B | C | ØD |
|------------|-----------------|------------------|------------------|----------------|
| 03 | 7.76 [.306] | 24.00 [.945] | 18.52 [.729] | 2.44 [.096] |
| 07, 10, 16 | 14.40 [.567] | 35.00 [1.378] | 28.60 [1.126] | 3.50 [.138] |



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)

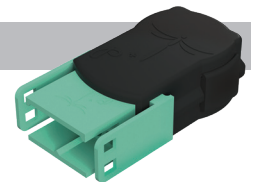
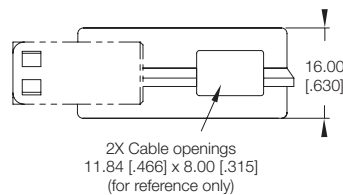
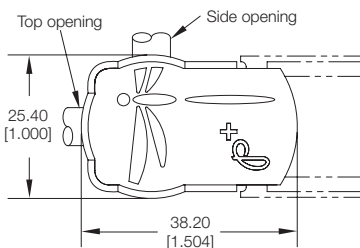


| MATERIAL | |
|----------|--|
| Flange | Nylon, UL 94V-0 Flange supplied installed |

BACKSHELL

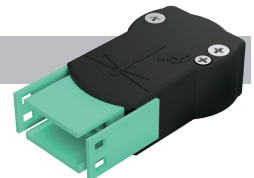
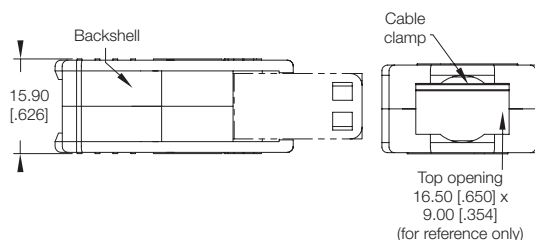
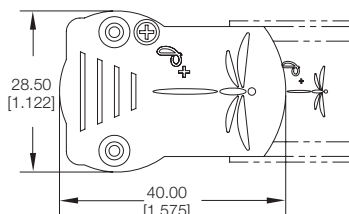
For version 07, 10 and 16

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 |

See connectpositronic.com/Dragonfly
for all other Dragonfly-related
information including:

- ✓ Footprints
- ✓ Tooling
- ✓ Product updates
- ✓ Detailed dimensions
- ✓ 2D/3D drawings

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.

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#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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