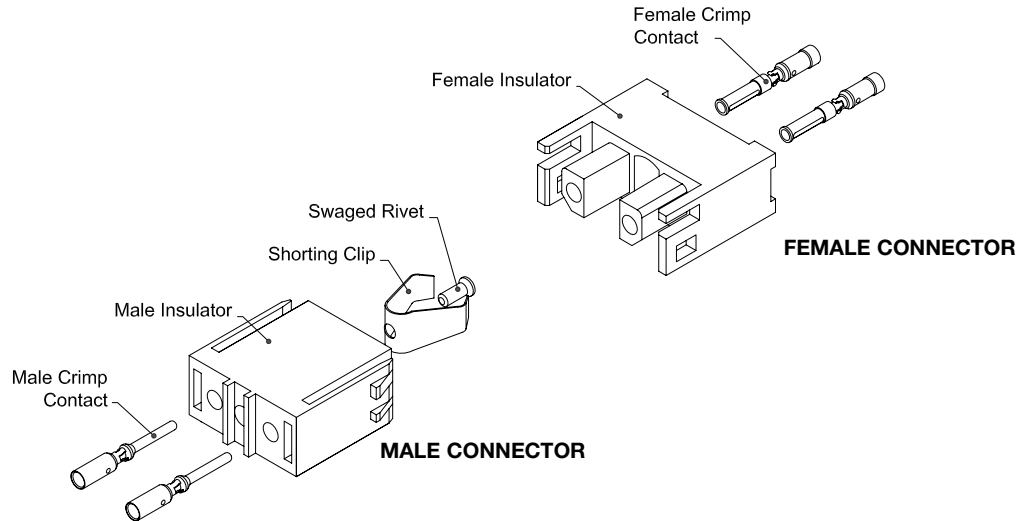


TWO POLE AUTOSHUNT

The Positronic AutoShunt system allows circuit to be insulated from one another when the system is coupled. When the system is uncoupled circuit is shorted together through the male connector.



TECH SPECS

GENERAL

Part Number Prefix	DF
Performance Level	Industrial
Qualifications	UL and TÜV certification in process.

MATERIAL AND FINISHES

Insulator	Glass-filled nylon, UL 94V-0, green color.
Contacts	Precision machined copper alloy with gold flash over nickel plate. Other finishes available upon request.
Shorting Clip	Copper alloy with gold plate.
Swaged Rivet	Copper alloy with gold plate.

ELECTRICAL

Contact Current Rating	15 amperes, continuous.
Initial Contact Resistance	0.003 ohms max. per IEC 512-2, Test 2b.
Insulation Resistance	5 G ohms min. per IEC 512-2, Test 3a.
Voltage Proof	2,400 V rms
Creepage Distance	4 mm [0.157 inch] minimum.
Working Voltage	600 V rms

MECHANICAL

Removable Contacts	Insert contact to rear face of insulator, release from front face of insulator. Female contact feature "closed entry" design for highest reliability.
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Removable Contact Retention in Insulator	67N [15 lbs.] min. per IEC 512-8 Test 15a.
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Polarization	Provided in insulator design.
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Locking System	Insulators provide locking between cable to cable, cable to printed board and cable to panel mount applications.
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ENVIRONMENTAL

Operating Temperature	55° to +125° C
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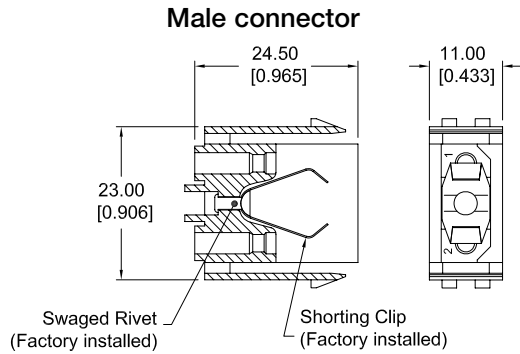


Positronic[®]
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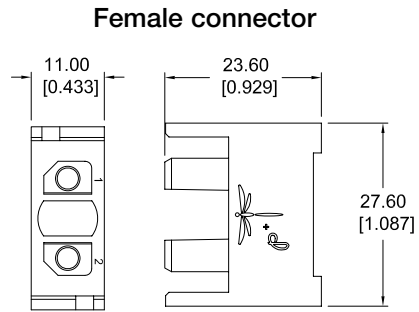
THE SCIENCE OF **CERTAINTY**[®]

Catalog C-30 Rev.C1

CONNECTOR OUTLINE DIMENSIONS



Typical part number: DFS02M00



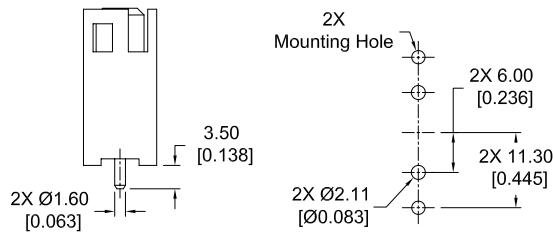
Typical part number: DFS02F00

CONTACT TERMINATION DIMENSIONS AND HOLE PATTERNS

CODE F3 and F4

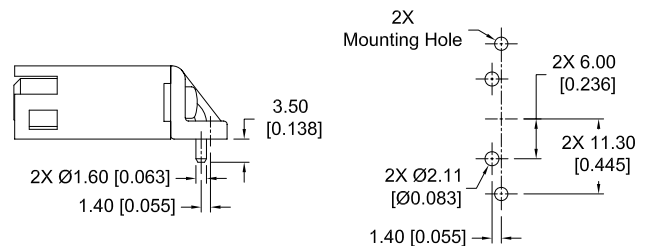
Female, straight PCB mount

Specify Code F3 in Step 3



Female, right angle (90°) PCB mount

Specify Code F4 in Step 3



Suggested printed board hole sizes:

Suggest $\text{Ø}2.00 \pm 0.08$ [0.079 \pm 0.003] holes for connector mounting holes with push-on fasteners.
Suggest $\text{Ø}2.54$ [0.100] holes for connector mounting holes with screws.

SCREW TERMINATION CONNECTOR

CODE M7, FOR MALE CONNECTORS

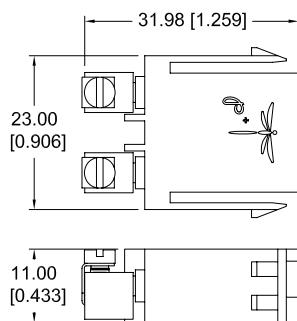
Screw terminations allow for convenient field installation when required.

Male connector

Specify Code M7 in Step 3

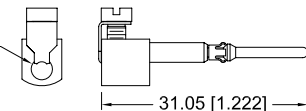
Supplied with two (2) contacts

Typical part number: DFS02M70



Replacement Contact

For use with wire size 12 AWG [4.0 mm²] or smaller



Typical part number: MST112N3

MATERIAL:

Copper alloy with gold plate.

PLATING:

STANDARD FINISH:

Gold flash over nickel plate.

OPTIONAL FINISHES:

0.76 μ [0.000030 inch] gold over nickel available by adding -14 suffix onto part number.
Example: MST112N3-14.
1.27 μ [0.000050 inch] gold over nickel available by adding -15 suffix onto part number.
Example: MST112N3-15.

Dimensions are in millimeters [inches].
All dimensions are subject to change.

PANEL MOUNT CONNECTOR

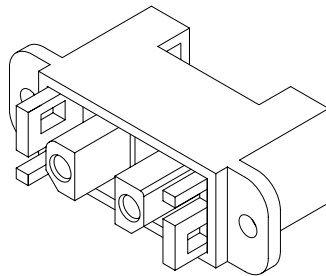
CODE PS, FOR FEMALE CONNECTORS

Removable crimp contacts must be ordered separately

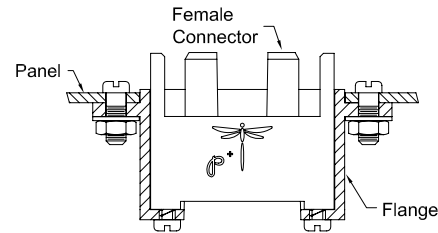
Female connector
Specify Code PS in Step 4

Female connector
installed in flange

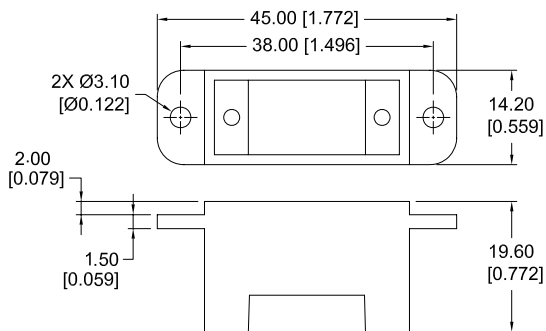
Typical part number:
DFS02F0PS



Installation to panel
Suggested installation of DFS02F0PS to
panel with screws and nuts.
(Screws and nuts shown for reference only.)



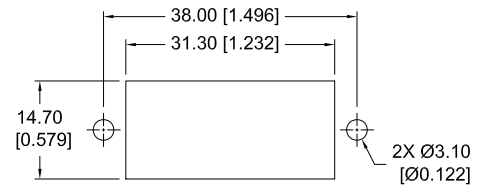
Flange dimensions



MATERIAL:

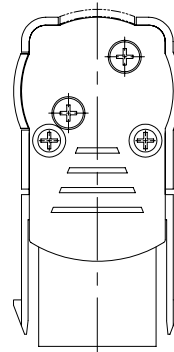
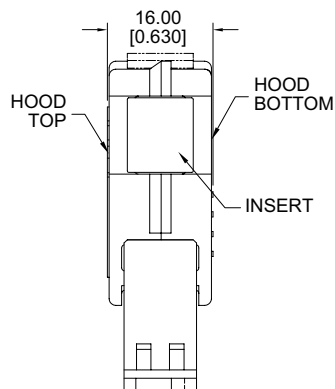
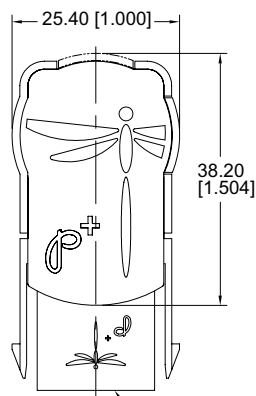
Flange:
Glass-filled, nylon,
UL94V-0, black color.

Panel cutout



HOOD OUTLINE DIMENSIONS

CODE W, FOR MALE CONNECTORS



MALE WITH
SHORTING DEVICE

MATERIALS:

Hood top and bottom, insert:
Polypropylene, UL94 V-0. Color: black.

Hood screws:
Steel with black oxide or
Steel with zinc plate and chromate seal

Cable clamp (not shown):
Steel, nickel plate.

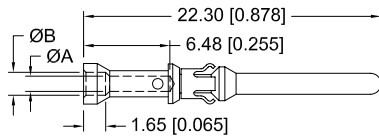
Cable clamp screws:
Steel with black oxide or
Steel with zinc plate and chromate seal

REMOVABLE CRIMP CONTACTS

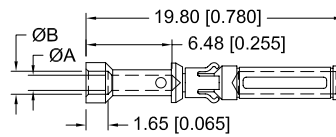
SIZE 16

Removable crimp contacts must be ordered separately

MALE CONTACT



FEMALE CONTACT



MATERIAL: Cooper alloy with gold plate.

PLATING:

STANDARD FINISH: Gold flash over nickel plate.
OPTIONAL FINISHES: 0.76µ [0.000030 inch] gold over nickel available by adding -14 suffix onto part number. Example: MC112N3-14.
 1.27µ [0.000050 inch] gold over nickel available by adding -15 suffix onto part number. Example: FC112N2-15-1565.0.

MALE CONTACT	FEMALE CONTACT	WIRE SIZE AWG [MM ²]	ØA	ØB
MC112N3	FC112N2-1565.0	12 [4.0]	2.49 [0.098]	N/A
MC114N3	FC114N2-1565.0	14-16 [2.5-1.5]	2.06 [0.081]	2.64 [0.104]
MC116N3	FC116N2-1565.0	16-18 [1.5-1.0]	1.70 [0.067]	2.36 [0.093]
MC120N3	FC120N2-1565.0	20-22-24 [0.5-0.3-0.025]	1.14 [0.045]	1.73 [0.068]

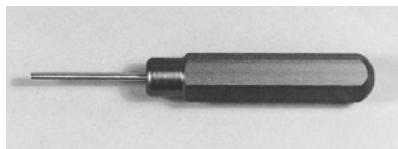
Please use correct wire size and it should be smaller than ØA of the contact. Connector body may not accommodate thick insulation AWG 12 wires. Customer review recommended.

RECOMMENDED TOOLS FOR CRIMP CONTACTS

CONTACT EXTRACTION TOOL
SHOWN FOR REFERENCE ONLY



CONTACT INSERTION TOOL
SHOWN FOR REFERENCE ONLY



CYCLE-CONTROLLED STEP ADJUSTABLE HAND CRIMP TOOL
SHOWN FOR REFERENCE ONLY



CONTACT SIZE	CONTACT EXTRACTION TOOL	CONTACT INSERTION TOOL	HAND CRIMP TOOL	SEMI-AUTOMATIC CRIMP MACHINE
SIZE 16	9081-8-0-0	9099-0	9501-0 with 9502-1 positioner	9550-0

CREATE A PART

ORDERING INFORMATION - CODE NUMBERING SYSTEM

Specify Complete Connector By Selecting An Option From Step 1 Through 4

STEP	1	2	3	4	5	6
EXAMPLE	DF	S02	F0	0	/AA	-XXX.X

STEP 1 - BASIC SERIES

DF - DragonFly

STEP 2 - CONNECTOR VARIANTS

S02 - AutoShunt Connector
Two (2) size 16 power contacts

STEP 3 - CONNECTOR GENDER AND TYPE OF CONTACTS

- F0 - Female, removable contact. Order contacts separately.
- F3 - Female, solder, straight PCB mount.
- F4 - Female, solder, right angle (90°) PCB mount.
- M0 - Male, removable contact. Order contacts separately.
- M7 - Male, screw termination contact. Supplied with 2 contacts.

Consult factory for other versions

STEP 6 - SPECIAL OPTIONS

Contact technical sales for special options

STEP 5 - 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: DFS02F00

STEP 4 - MOUNTING STYLES

- 0 - None
- *N - Push-on fastener.
- *B - Plastic 90° mounting bracket.
- *BN - Plastic 90° mounting bracket with push-on fastener.
- *PS - Panel mount for female connector with removable contact only.
Female connector installed to flange.
- W - Hood for male connector only.

* For female connector only.

Unless otherwise specified, dimensional tolerances are:

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

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