

SECTION 8

C-FILTER COMBINATION D-SUB CONNECTORS

In addition to our filtered connectors such as standard and High Density, D-SUB, CONEC has developed the Combination D-SUB Filter connector product family.

The low pass filters connect each contact through a capacitor to the connector housing.

Filtered D-SUB Connectors used in I/O applications for power in or power out where EMI/RFI problems can occur, are the right solution for those type of occurrences.

Filter capacitance can be selected for specific applications. Please refer to Page 8 | 4 for performance data.





Thus if undesirable high-frequency noise should occur in the environment or inside the device itself, the appropriately selected interface connector, fitted with filters, is able to suppress the noise directly at the interface.

Such connectors, for example, can also reliably eliminate the noise frequencies generated by the power supply's own switching operation. The filters employed in these power connectors meet today's safety requirements for surge and DC dielectric strength. Filter connectors in the CONEC product line offer dielectric strength ratings up to 1500 VDC.



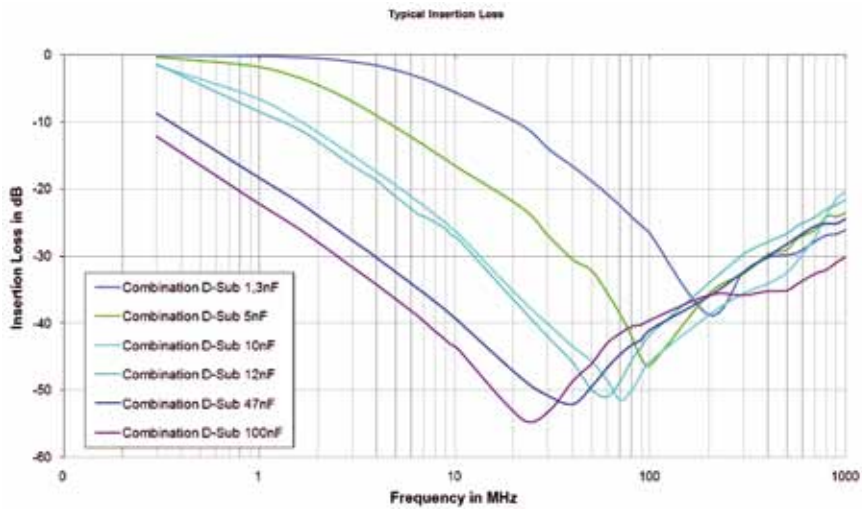
TECHNICAL DATA

Materials	Variations 2W2C – 3W3C – 3W3 – 5W5 – 8W8	
Insulator	Polyester GF UL94 V0	
Contacts	CU alloy	
Contact plating	Mating area gold plated over nickel	
Shell	Steel tin plated /brass tin plated	
Mechanical and electrical characteristics		
Test voltage U eff/NM	1000 V	
Dielectric with standing voltage	Standard DWV 707 VDC/ high DWV 1020 VDC / ultra high DWV 1500 VDC	
Working voltage	100 VDC Depending on isolation coordination (refer to DIN VDE 0110/IEC 664-1)	
Contact resistance	Max. 10 mΩ prior to stressing, Δ R max. 10 mΩ after stressing per DIN 41652, Part 2	
Insulation resistance	≥1 GΩ at 100 VDC	
Current rating	up to 65 A (20°C)	
Temperature storage range	-55°C to + 125°C	
Temperature working range	-55°C to + 125°C	
Humidity	40°C / 85% relative humidity / RH	
Capacitor values For other capacitance values please contact the factory.	1.3 nF ± 20% tolerance 5 nF ± 20% tolerance 10 nF ± 20% tolerance	12 nF ± 20% tolerance 47 nF ± 20% tolerance 100 nF ± 20% tolerance
Quality class	A = Quality class 3 = 50 mating cycles C = Quality class 1 = 500 mating cycles	

Technical alterations are subject to change without notice.

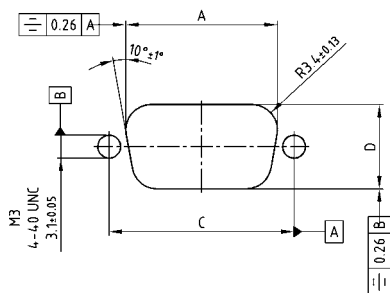
INSERTION LOSS

C-FILTER

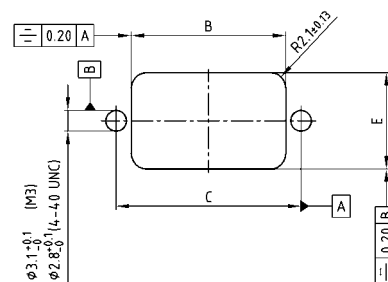


PANEL CUT-OUT

Rear panel mounting



Front panel mounting



Shell size	A ± 0.1	B ± 0.1	C ± 0.1	D ± 0.1	E ± 0.1
9	20.50	20.90	25.00	11.40	13.00
15	28.80	29.20	33.30	11.40	13.00
25	42.50	42.90	47.04	11.40	13.00
37	59.10	59.40	63.50	11.40	13.00
50	56.30	57.00	61.10	14.10	15.80

SOLDER PROFILE

Connector Type	Preheating		Solder terminal dipping parameters	
	max. Temperature	Duration	max. Solder bath Temperature	max. Terminal Immersion Time
Filter D-SUB	100°C	30s	260°C	5s
Combo D-SUB Filter	120°C	120s	260°C	5s
Filter D-SUB Water Resistant	100°C	30s	240°C	5s
Combo D-SUB Water Resistant	120°C	120s	240°C	5s
D-SUB Water Resistant	120°C	120s	240°C	5s
D-SUB Solid Body Type Water Resistant	150°C	180s	265°C	8s
RJ45 Modular Jack Filtered	150°C	180s	265°C	8s
Filter Plates	150°C	180s	265°C	8s

Recommended wave-solder parameters for CONEC connectors.

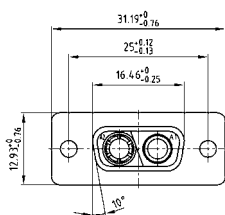
C-FILTER COMBINATION D-SUB 2W2C

Solder cup – Precision machined contacts – For wire size AWG 8...20



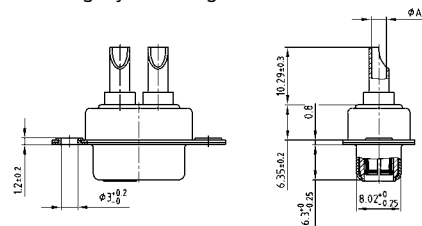
RoHS compliant – UL listed, File No.: E228329

SOCKET CONNECTOR

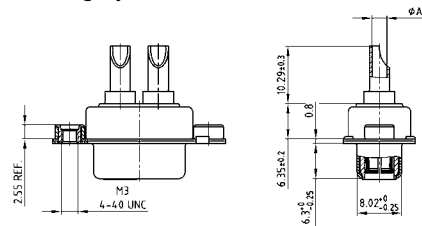


Termination code	Current rating	Wire size	Ø A
41	10A	AWG 16-20	1.80
42	20A	AWG 12-14	2.70
43	30A	AWG 10-12	3.50
44	40A	AWG 8-10	4.80

Mounting style: Through-hole



Mounting style: Threaded insert



ORDER DATA

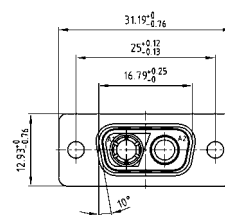
SOCKET CONNECTOR				
Type	Mounting style	AWG	Capacitance	Part Number
2W2C	Through-hole	16...20	47 nF	2F2C SA 22 S41A10 X
2W2C	Through-hole	12...14	47 nF	2F2C SA 22 S42A10 X
2W2C	Through-hole	10...12	47 nF	2F2C SA 22 S43A10 X
2W2C	Through-hole	8...10	47 nF	2F2C SA 22 S44A10 X
2W2C	4-40 UNC Threaded insert	16...20	47 nF	2F2C SA 22 S41A30 X
2W2C	4-40 UNC Threaded insert	12...14	47 nF	2F2C SA 22 S42A30 X
2W2C	4-40 UNC Threaded insert	10...12	47 nF	2F2C SA 22 S43A30 X
2W2C	4-40 UNC Threaded insert	8...10	47 nF	2F2C SA 22 S44A30 X
2W2C	M3 Threaded insert	16...20	47 nF	2F2C SA 22 S41A20 X
2W2C	M3 Threaded insert	12...14	47 nF	2F2C SA 22 S42A20 X
2W2C	M3 Threaded insert	10...12	47 nF	2F2C SA 22 S43A20 X
2W2C	M3 Threaded insert	8...10	47 nF	2F2C SA 22 S44A20 X

For other capacitance values refer to the part number creator.

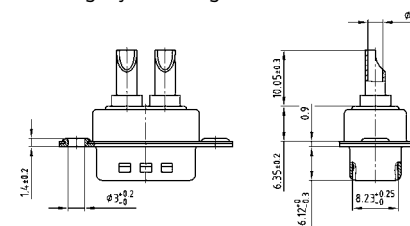
DESCRIPTION

- Coding design = 1 Plug and 1 socket contact
- 707 VDC (other DWV on request)
- Mounting styles:
 - with through-hole, Ø .118" / 3 mm
 - with 4-40 UNC or M3 threaded insert
- Quality class 3 (also available in quality class 1)
- Shell: Steel tin plated, optionally brass tin plated
- Selective gold plated contacts available on request

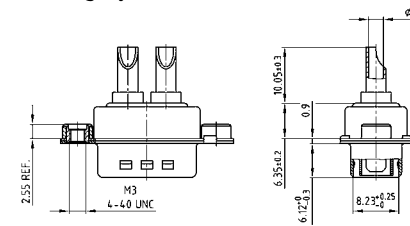
PLUG CONNECTOR



Mounting style: Through-hole



Mounting style: Threaded insert



PLUG CONNECTOR				
Type	Mounting style	AWG	Capacitance	Part Number
2W2C	Through-hole	16...20	47 nF	2F2C PA 22 S41A10 X
2W2C	Through-hole	12...14	47 nF	2F2C PA 22 S42A10 X
2W2C	Through-hole	10...12	47 nF	2F2C PA 22 S43A10 X
2W2C	Through-hole	8...10	47 nF	2F2C PA 22 S44A10 X
2W2C	4-40 UNC Threaded insert	16...20	47 nF	2F2C PA 22 S41A30 X
2W2C	4-40 UNC Threaded insert	12...14	47 nF	2F2C PA 22 S42A30 X
2W2C	4-40 UNC Threaded insert	10...12	47 nF	2F2C PA 22 S43A30 X
2W2C	4-40 UNC Threaded insert	8...10	47 nF	2F2C PA 22 S44A30 X
2W2C	M3 Threaded insert	16...20	47 nF	2F2C PA 22 S41A20 X
2W2C	M3 Threaded insert	12...14	47 nF	2F2C PA 22 S42A20 X
2W2C	M3 Threaded insert	10...12	47 nF	2F2C PA 22 S43A20 X
2W2C	M3 Threaded insert	8...10	47 nF	2F2C PA 22 S44A20 X

Capacitance value	Code
100 nF	28
47 nF	22
12 nF	14
10 nF	12
5 nF	08
1.3 nF	05

C-FILTER COMBINATION D-SUB 3W3

Solder cup – Precision machined contacts – For wire size AWG 8...20

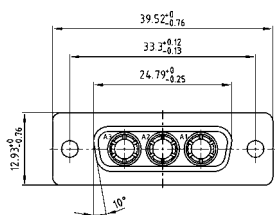


RoHS compliant – UL listed, File No.: E228329

DESCRIPTION

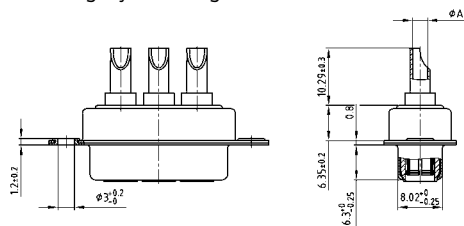
- 707 VDC (other DWV on request)
- Mounting styles:
 - with through-hole, Ø .118" / 3 mm
 - with 4-40 UNC or M3 threaded insert
- Quality class 3 (also available in quality class 1)
- Shell: Steel tin plated, optionally brass tin plated
- Selective gold plated contacts available on request

SOCKET CONNECTOR

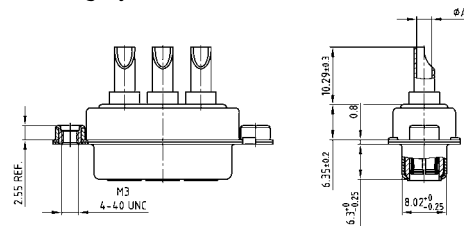


Termination code	Current rating	Wire size	Ø A
41	10A	AWG 16-20	1.80
42	20A	AWG 12-14	2.70
43	30A	AWG 10-12	3.50
44	40A	AWG 8-10	4.80

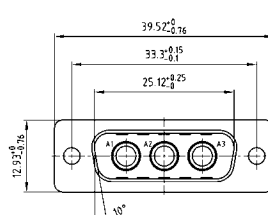
Mounting style: Through-hole



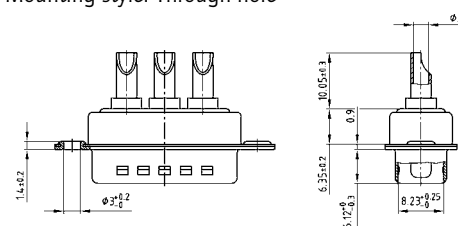
Mounting style: Threaded insert



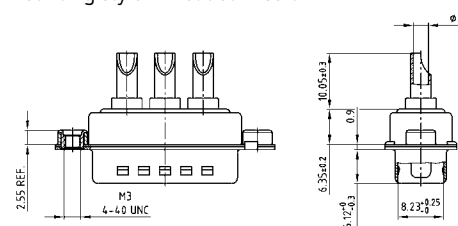
PLUG CONNECTOR



Mounting style: Through-hole



Mounting style: Threaded insert



ORDER DATA

SOCKET CONNECTOR				
Type	Mounting style	AWG	Capacitance	Part Number
3W3	Through-hole	16...20	47 nF	3F3S SA 22 S41A10 X
3W3	Through-hole	12...14	47 nF	3F3S SA 22 S42A10 X
3W3	Through-hole	10...12	47 nF	3F3S SA 22 S43A10 X
3W3	Through-hole	8...10	47 nF	3F3S SA 22 S44A10 X
3W3	4-40 UNC Threaded insert	16...20	47 nF	3F3S SA 22 S41A30 X
3W3	4-40 UNC Threaded insert	12...14	47 nF	3F3S SA 22 S42A30 X
3W3	4-40 UNC Threaded insert	10...12	47 nF	3F3S SA 22 S43A30 X
3W3	4-40 UNC Threaded insert	8...10	47 nF	3F3S SA 22 S44A30 X
3W3	M3 Threaded insert	16...20	47 nF	3F3S SA 22 S41A20 X
3W3	M3 Threaded insert	12...14	47 nF	3F3S SA 22 S42A20 X
3W3	M3 Threaded insert	10...12	47 nF	3F3S SA 22 S43A20 X
3W3	M3 Threaded insert	8...10	47 nF	3F3S SA 22 S44A20 X

PLUG CONNECTOR				
Type	Mounting style	AWG	Capacitance	Part Number
3W3	Through-hole	16...20	47 nF	3F3S PA 22 S41A10 X
3W3	Through-hole	12...14	47 nF	3F3S PA 22 S42A10 X
3W3	Through-hole	10...12	47 nF	3F3S PA 22 S43A10 X
3W3	Through-hole	8...10	47 nF	3F3S PA 22 S44A10 X
3W3	4-40 UNC Threaded insert	16...20	47 nF	3F3S PA 22 S41A30 X
3W3	4-40 UNC Threaded insert	12...14	47 nF	3F3S PA 22 S42A30 X
3W3	4-40 UNC Threaded insert	10...12	47 nF	3F3S PA 22 S43A30 X
3W3	4-40 UNC Threaded insert	8...10	47 nF	3F3S PA 22 S44A30 X
3W3	M3 Threaded insert	16...20	47 nF	3F3S PA 22 S41A20 X
3W3	M3 Threaded insert	12...14	47 nF	3F3S PA 22 S42A20 X
3W3	M3 Threaded insert	10...12	47 nF	3F3S PA 22 S43A20 X
3W3	M3 Threaded insert	8...10	47 nF	3F3S PA 22 S44A20 X

For other capacitance values refer to the part number creator.

Capacitance value	Code
100 nF	28
47 nF	22
12 nF	14
10 nF	12
5 nF	08
1.3 nF	05

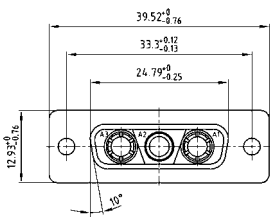
C-FILTER COMBINATION D-SUB 3W3C

Solder cup – Precision machined contacts – For wire size AWG 8...20



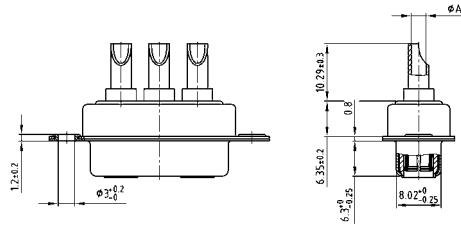
RoHS compliant – UL listed, File No.: E228329

SOCKET CONNECTOR

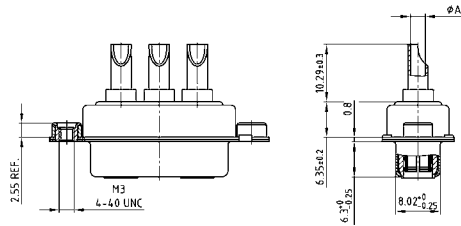


Termination code	Current rating	Wire size	Ø A
41	10A	AWG 16-20	1.80
42	20A	AWG 12-14	2.70
43	30A	AWG 10-12	3.50
44	40A	AWG 8-10	4.80

Mounting style: Through-hole



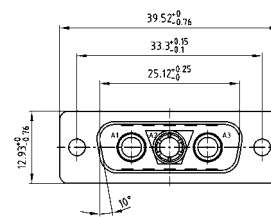
Mounting style: Threaded insert



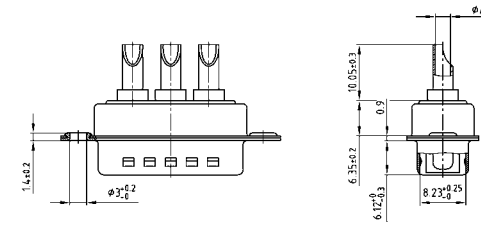
DESCRIPTION

- Coded socket connector = 1 Plug and 2 Socket contacts
- Coded plug connector = 2 Plugs and 1 Socket contact
- 707 VDC (other DWV on request)
- Mounting styles:
 - with through-hole, Ø .118"/3 mm
 - with 4-40 UNC or M3 threaded insert
- Quality class 3 (also available in quality class 1)
- Shell: Steel tin plated, optionally brass tin plated
- Selective gold plated contacts available on request

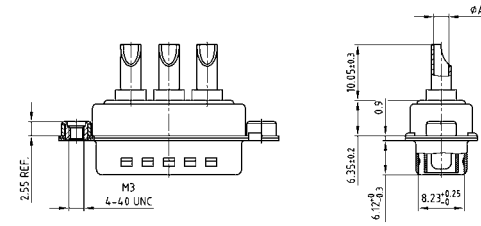
PLUG CONNECTOR



Mounting style: Through-hole



Mounting style: Threaded insert



ORDER DATA

SOCKET CONNECTOR				
Type	Mounting style	AWG	Capacitance	Part Number
3W3C	Through-hole	16...20	47 nF	3F3C SA 22 S41A10 X
3W3C	Through-hole	12...14	47 nF	3F3C SA 22 S42A10 X
3W3C	Through-hole	10...12	47 nF	3F3C SA 22 S43A10 X
3W3C	Through-hole	8...10	47 nF	3F3C SA 22 S44A10 X
3W3C	4-40 UNC Threaded insert	16...20	47 nF	3F3C SA 22 S41A30 X
3W3C	4-40 UNC Threaded insert	12...14	47 nF	3F3C SA 22 S42A30 X
3W3C	4-40 UNC Threaded insert	10...12	47 nF	3F3C SA 22 S43A30 X
3W3C	4-40 UNC Threaded insert	8...10	47 nF	3F3C SA 22 S44A30 X
3W3C	M3 Threaded insert	16...20	47 nF	3F3C SA 22 S41A20 X
3W3C	M3 Threaded insert	12...14	47 nF	3F3C SA 22 S42A20 X
3W3C	M3 Threaded insert	10...12	47 nF	3F3C SA 22 S43A20 X
3W3C	M3 Threaded insert	8...10	47 nF	3F3C SA 22 S44A20 X

PLUG CONNECTOR				
Type	Mounting style	AWG	Capacitance	Part Number
3W3C	Through-hole	16...20	47 nF	3F3C PA 22 S41A10 X
3W3C	Through-hole	12...14	47 nF	3F3C PA 22 S42A10 X
3W3C	Through-hole	10...12	47 nF	3F3C PA 22 S43A10 X
3W3C	Through-hole	8...10	47 nF	3F3C PA 22 S44A10 X
3W3C	4-40 UNC Threaded insert	16...20	47 nF	3F3C PA 22 S41A30 X
3W3C	4-40 UNC Threaded insert	12...14	47 nF	3F3C PA 22 S42A30 X
3W3C	4-40 UNC Threaded insert	10...12	47 nF	3F3C PA 22 S43A30 X
3W3C	4-40 UNC Threaded insert	8...10	47 nF	3F3C PA 22 S44A30 X
3W3C	M3 Threaded insert	16...20	47 nF	3F3C PA 22 S41A20 X
3W3C	M3 Threaded insert	12...14	47 nF	3F3C PA 22 S42A20 X
3W3C	M3 Threaded insert	10...12	47 nF	3F3C PA 22 S43A20 X
3W3C	M3 Threaded insert	8...10	47 nF	3F3C PA 22 S44A20 X

For other capacitance values refer to the part number creator.

Capacitance value	Code
100 nF	28
47 nF	22
12 nF	14
10 nF	12
5 nF	08
1.3 nF	05

C-FILTER COMBINATION D-SUB 5W5

Solder cup – Precision machined contacts – For wire size AWG 8...20

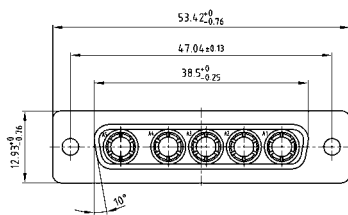


RoHS compliant – UL listed, File No.: E228329

DESCRIPTION

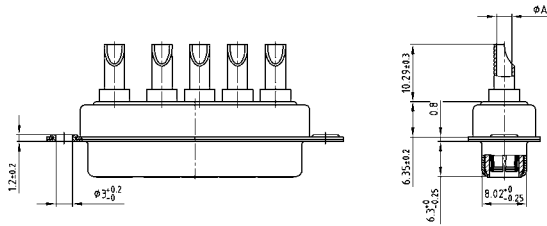
- 707 VDC (other DWV on request)
- Mounting styles:
 - with through-hole, \varnothing .118" / 3 mm
 - with 4-40 UNC or M3 threaded insert
- Quality class 3 (also available in quality class 1)
- Shell: Steel tin plated, optionally brass tin plated
- Selective gold plated contacts available on request

SOCKET CONNECTOR

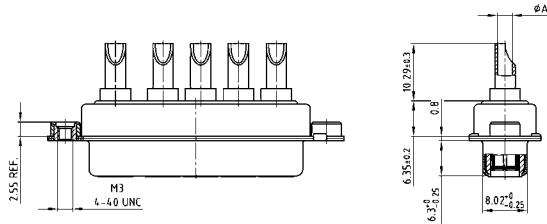


Termination code	Current rating	Wire size	Ø A
41	10A	AWG 16-20	1.80
42	20A	AWG 12-14	2.70
43	30A	AWG 10-12	3.50
44	40A	AWG 8-10	4.80

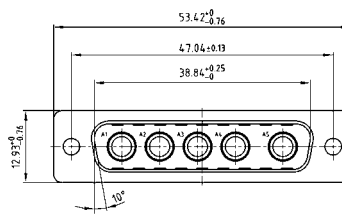
Mounting style: Through-hole



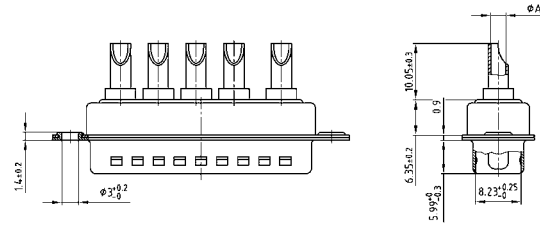
Mounting style: Threaded insert



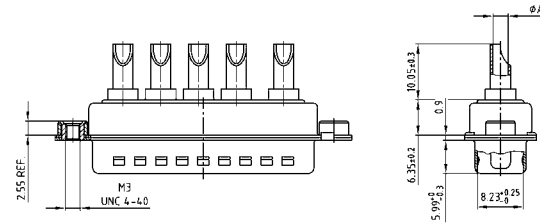
PLUG CONNECTOR



Mounting style: Through-hole



Mounting style: Threaded insert



ORDER DATA

SOCKET CONNECTOR				
Type	Mounting style	AWG	Capacitance	Part Number
5W5	Through-hole	16...20	47 nF	5F55 SA 22 S41A10 X
5W5	Through-hole	12...14	47 nF	5F55 SA 22 S42A10 X
5W5	Through-hole	10...12	47 nF	5F55 SA 22 S43A10 X
5W5	Through-hole	8...10	47 nF	5F55 SA 22 S44A10 X
5W5	4-40 UNC Threaded insert	16...20	47 nF	5F55 SA 22 S41A30 X
5W5	4-40 UNC Threaded insert	12...14	47 nF	5F55 SA 22 S42A30 X
5W5	4-40 UNC Threaded insert	10...12	47 nF	5F55 SA 22 S43A30 X
5W5	4-40 UNC Threaded insert	8...10	47 nF	5F55 SA 22 S44A30 X
5W5	M3 Threaded insert	16...20	47 nF	5F55 SA 22 S41A20 X
5W5	M3 Threaded insert	12...14	47 nF	5F55 SA 22 S42A20 X
5W5	M3 Threaded insert	10...12	47 nF	5F55 SA 22 S43A20 X
5W5	M3 Threaded insert	8...10	47 nF	5F55 SA 22 S44A20 X

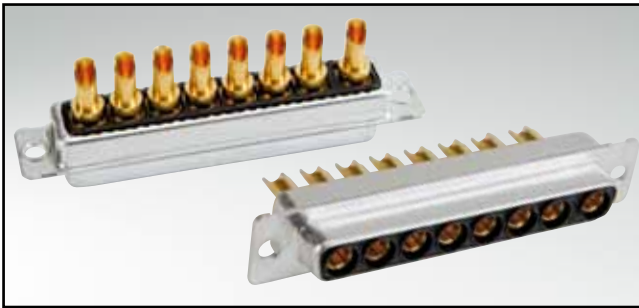
PLUG CONNECTOR				
Type	Mounting style	AWG	Capacitance	Part Number
5W5	Through-hole	16...20	47 nF	5F55 PA 22 S41A10 X
5W5	Through-hole	12...14	47 nF	5F55 PA 22 S42A10 X
5W5	Through-hole	10...12	47 nF	5F55 PA 22 S43A10 X
5W5	Through-hole	8...10	47 nF	5F55 PA 22 S44A10 X
5W5	4-40 UNC Threaded insert	16...20	47 nF	5F55 PA 22 S41A30 X
5W5	4-40 UNC Threaded insert	12...14	47 nF	5F55 PA 22 S42A30 X
5W5	4-40 UNC Threaded insert	10...12	47 nF	5F55 PA 22 S43A30 X
5W5	4-40 UNC Threaded insert	8...10	47 nF	5F55 PA 22 S44A30 X
5W5	M3 Threaded insert	16...20	47 nF	5F55 PA 22 S41A20 X
5W5	M3 Threaded insert	12...14	47 nF	5F55 PA 22 S42A20 X
5W5	M3 Threaded insert	10...12	47 nF	5F55 PA 22 S43A20 X
5W5	M3 Threaded insert	8...10	47 nF	5F55 PA 22 S44A20 X

For other capacitance values refer to the part number creator.

Capacitance value	Code
100 nF	28
47 nF	22
12 nF	14
10 nF	12
5 nF	08
1.3 nF	05

C-FILTER COMBINATION D-SUB 8W8

Solder cup – Precision machined contacts – For wire size AWG 8...20

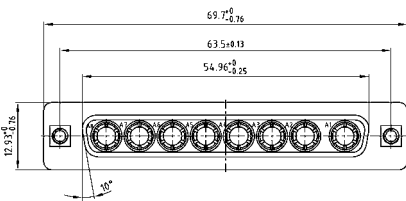


RoHS compliant – UL listed, File No.: E228329

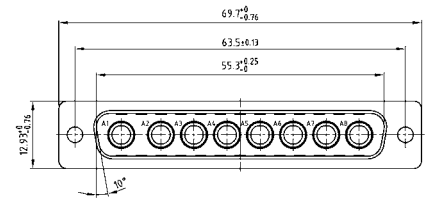
DESCRIPTION

- 707 VDC (other DWV on request)
- Mounting styles:
 - with through-hole, $\varnothing .118"/3 \text{ mm}$
 - with 4-40 UNC or M3 threaded insert
- Quality class 3 (also available in quality class 1)
- Shell: Steel tin plated, optionally brass tin plated
- Selective gold plated contacts available on request

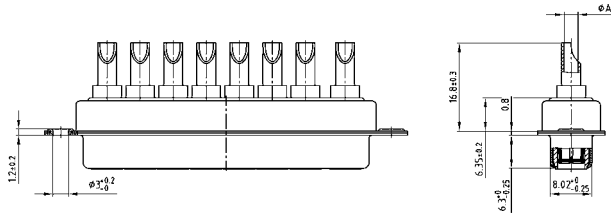
SOCKET CONNECTOR



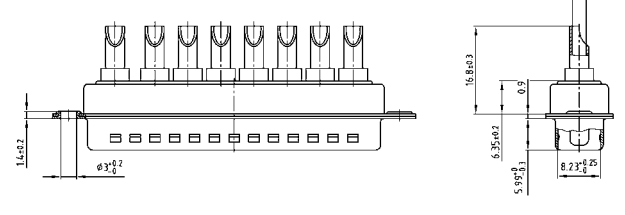
Termination code	Current rating	Wire size	Ø A
41	10A	AWG 16-20	1.80
42	20A	AWG 12-14	2.70
43	30A	AWG 10-12	3.50
44	40A	AWG 8-10	4.80



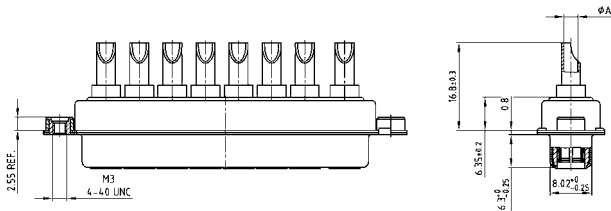
Mounting style: Through-hole



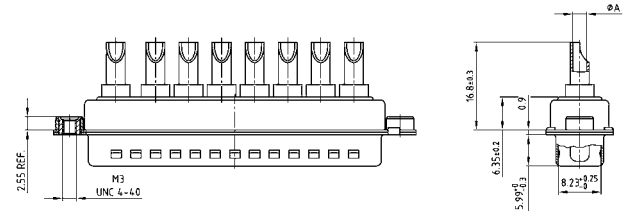
Mounting style: Through-hole



Mounting style: Threaded insert



Mounting style: Threaded insert



ORDER DATA

SOCKET CONNECTOR				
Type	Mounting style	AWG	Capacitance	Part Number
8W8	Through-hole	16...20	47 nF	8F8S SA 22 S41A10 X
8W8	Through-hole	12...14	47 nF	8F8S SA 22 S42A10 X
8W8	Through-hole	10...12	47 nF	8F8S SA 22 S43A10 X
8W8	Through-hole	8...10	47 nF	8F8S SA 22 S44A10 X
8W8	4-40 UNC Threaded insert	16...20	47 nF	8F8S SA 22 S41A30 X
8W8	4-40 UNC Threaded insert	12...14	47 nF	8F8S SA 22 S42A30 X
8W8	4-40 UNC Threaded insert	10...12	47 nF	8F8S SA 22 S43A30 X
8W8	4-40 UNC Threaded insert	8...10	47 nF	8F8S SA 22 S44A30 X
8W8	M3 Threaded insert	16...20	47 nF	8F8S SA 22 S41A20 X
8W8	M3 Threaded insert	12...14	47 nF	8F8S SA 22 S42A20 X
8W8	M3 Threaded insert	10...12	47 nF	8F8S SA 22 S43A20 X
8W8	M3 Threaded insert	8...10	47 nF	8F8S SA 22 S44A20 X

PLUG CONNECTOR				
Type	Mounting style	AWG	Capacitance	Part Number
8W8	Through-hole	16...20	47 nF	8F8S PA 22 S41A10 X
8W8	Through-hole	12...14	47 nF	8F8S PA 22 S42A10 X
8W8	Through-hole	10...12	47 nF	8F8S PA 22 S43A10 X
8W8	Through-hole	8...10	47 nF	8F8S PA 22 S44A10 X
8W8	4-40 UNC Threaded insert	16...20	47 nF	8F8S PA 22 S41A30 X
8W8	4-40 UNC Threaded insert	12...14	47 nF	8F8S PA 22 S42A30 X
8W8	4-40 UNC Threaded insert	10...12	47 nF	8F8S PA 22 S43A30 X
8W8	4-40 UNC Threaded insert	8...10	47 nF	8F8S PA 22 S44A30 X
8W8	M3 Threaded insert	16...20	47 nF	8F8S PA 22 S41A20 X
8W8	M3 Threaded insert	12...14	47 nF	8F8S PA 22 S42A20 X
8W8	M3 Threaded insert	10...12	47 nF	8F8S PA 22 S43A20 X
8W8	M3 Threaded insert	8...10	47 nF	8F8S PA 22 S44A20 X

For other capacitance values refer to the part number creator.

Capacitance value	Code
100 nF	28
47 nF	22
12 nF	14
10 nF	12
5 nF	08
1.3 nF	05

Filter Power D-Sub



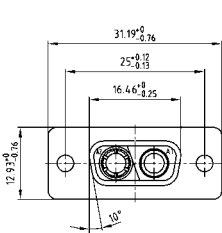
C-FILTER COMBINATION D-SUB 2W2C

Solder pin – Straight – Precision machined contacts

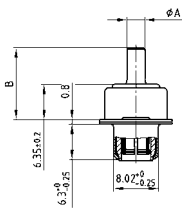


RoHS compliant – UL listed, File No.: E228329

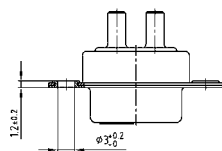
SOCKET CONNECTOR



Termination code	Current rating	Ø A	B ± 0.3	PCB thickness
48	20A	1.95	9.65	1.6
49	20A	2.60	10.65	1.6
50	20A	2.85	10.05	1.6
51	30A	3.18	12.85	1.6/ 2.3/ 3.2
52	40A	3.75	11.10	1.6/ 2.3/ 3.2



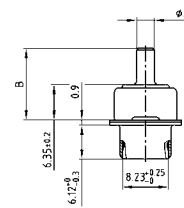
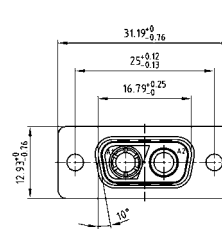
Mounting style: Through-hole



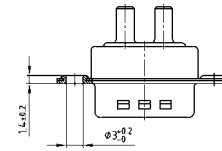
DESCRIPTION

- Coded design = 1 plug and 1 socket contact
- 707 VDC (other DWV on request)
- Mounting styles:
 - with through-hole Ø .118"/3.0 mm
 - with 4-40 UNC or M3 threaded insert*
 - with 4-40 UNC or M3 threaded rear spacer*
 - with 4-40 UNC or M3 threaded rear spacer with PCB clip*, .291"/7.4**mm
- Quality class 3 (also available in quality class 1)
- Shell: Steel tin plated, optionally brass tin plated
- Consists of selective plated contacts

PLUG CONNECTOR



Mounting style: Through-hole



ORDER DATA

SOCKET CONNECTOR				
Type	Mounting style	Ø A	Capacitance	Part Number
2W2C	Through-hole	.080" / 1.95	47 nF	2F2C SA 22 S48A10 X
2W2C	Through-hole	.102" / 2.60	47 nF	2F2C SA 22 S49A10 X
2W2C	Through-hole	.110" / 2.85	47 nF	2F2C SA 22 S50A10 X
2W2C	Through-hole	.130" / 3.18	47 nF	2F2C SA 22 S51A10 X
2W2C	Through-hole	.150" / 3.75	47 nF	2F2C SA 22 S52A10 X

PLUG CONNECTOR				
Type	Mounting style	Ø A	Capacitance	Part Number
2W2C	Through-hole	.080" / 1.95	47 nF	2F2C PA 22 S48A10 X
2W2C	Through-hole	.102" / 2.60	47 nF	2F2C PA 22 S49A10 X
2W2C	Through-hole	.110" / 2.85	47 nF	2F2C PA 22 S50A10 X
2W2C	Through-hole	.130" / 3.18	47 nF	2F2C PA 22 S51A10 X
2W2C	Through-hole	.150" / 3.75	47 nF	2F2C PA 22 S52A10 X

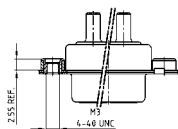
For other capacitance values refer to the part number creator.

Capacitance value	Code
100 nF	28
47 nF	22
12 nF	14
10 nF	12
5 nF	08
1.3 nF	05

C-FILTER COMBINATION D-SUB 2W2C – Mounting styles

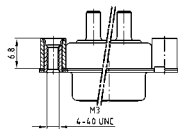
Solder pin – Straight – Precision machined contacts

ORDER DATA



SOCKET CONNECTOR				
Type	Mounting style 4-40 UNC	Ø A	Capacitance	Part Number
2W2C	Threaded insert	.080"/1.95	47 nF	2F2C SA 22 S48A30 X
2W2C	Threaded insert	.102"/2.60	47 nF	2F2C SA 22 S49A30 X
2W2C	Threaded insert	.110"/2.85	47 nF	2F2C SA 22 S50A30 X
2W2C	Threaded insert	.130"/3.18	47 nF	2F2C SA 22 S51A30 X
2W2C	Threaded insert	.150"/3.75	47 nF	2F2C SA 22 S52A30 X

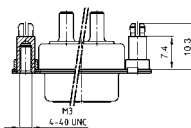
PLUG CONNECTOR				
Type	Mounting style 4-40 UNC	Ø A	Capacitance	Part Number
2W2C	Threaded insert	.080"/1.95	47 nF	2F2C PA 22 S48A30 X
2W2C	Threaded insert	.102"/2.60	47 nF	2F2C PA 22 S49A30 X
2W2C	Threaded insert	.110"/2.85	47 nF	2F2C PA 22 S50A30 X
2W2C	Threaded insert	.130"/3.18	47 nF	2F2C PA 22 S51A30 X
2W2C	Threaded insert	.150"/3.75	47 nF	2F2C PA 22 S52A30 X



SOCKET CONNECTOR				
Type	Mounting style 4-40 UNC	Ø A	Capacitance	Part Number
2W2C	Threaded rear spacer	.080"/1.95	47 nF	2F2C SA 22 S48A50 X
2W2C	Threaded rear spacer	.102"/2.60	47 nF	2F2C SA 22 S49A50 X
2W2C	Threaded rear spacer	.110"/2.85	47 nF	2F2C SA 22 S50A50 X
2W2C	Threaded rear spacer	.130"/3.18	47 nF	2F2C SA 22 S51A50 X
2W2C	Threaded rear spacer	.150"/3.75	47 nF	2F2C SA 22 S52A50 X

PLUG CONNECTOR				
Type	Mounting style 4-40 UNC	Ø A	Capacitance	Part Number
2W2C	Threaded rear spacer	.080"/1.95	47 nF	2F2C PA 22 S48A50 X
2W2C	Threaded rear spacer	.102"/2.60	47 nF	2F2C PA 22 S49A50 X
2W2C	Threaded rear spacer	.110"/2.85	47 nF	2F2C PA 22 S50A50 X
2W2C	Threaded rear spacer	.130"/3.18	47 nF	2F2C PA 22 S51A50 X
2W2C	Threaded rear spacer	.150"/3.75	47 nF	2F2C PA 22 S52A50 X

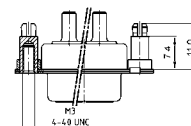
.291" / 7.4 mm for .063" / 1.6 mm circuit board thickness. (Length of spacer .256" / 6.5 mm on request)



SOCKET CONNECTOR				
Type	Mounting style 4-40 UNC	Ø A	Capacitance	Part Number
2W2C	Threaded rear spacer PCB clip	.080"/1.95	47 nF	2F2C SA 22 S48E20 X
2W2C	Threaded rear spacer PCB clip	.102"/2.60	47 nF	2F2C SA 22 S49E20 X
2W2C	Threaded rear spacer PCB clip	.110"/2.85	47 nF	2F2C SA 22 S50E20 X
2W2C	Threaded rear spacer PCB clip	.130"/3.18	47 nF	2F2C SA 22 S51E20 X
2W2C	Threaded rear spacer PCB clip	.150"/3.75	47 nF	2F2C SA 22 S52E20 X

PLUG CONNECTOR				
Type	Mounting style 4-40 UNC	Ø A	Capacitance	Part Number
2W2C	Threaded rear spacer PCB clip	.080"/1.95	47 nF	2F2C PA 22 S48E20 X
2W2C	Threaded rear spacer PCB clip	.102"/2.60	47 nF	2F2C PA 22 S49E20 X
2W2C	Threaded rear spacer PCB clip	.110"/2.85	47 nF	2F2C PA 22 S50E20 X
2W2C	Threaded rear spacer PCB clip	.130"/3.18	47 nF	2F2C PA 22 S51E20 X
2W2C	Threaded rear spacer PCB clip	.150"/3.75	47 nF	2F2C PA 22 S52E20 X

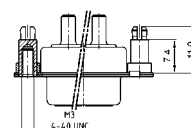
.291" / 7.4 mm for .091" / 2.3 mm circuit board thickness. (Length of spacer .256" / 6.5 mm on request)



SOCKET CONNECTOR				
Type	Mounting style 4-40 UNC	Ø A	Capacitance	Part Number
2W2C	Threaded rear spacer PCB clip	.130"/3.18	47 nF	2F2C SA 22 S51E40 X
2W2C	Threaded rear spacer PCB clip	.150"/3.75	47 nF	2F2C SA 22 S52E40 X

PLUG CONNECTOR				
Type	Mounting style 4-40 UNC	Ø A	Capacitance	Part Number
2W2C	Threaded rear spacer PCB clip	.130"/3.18	47 nF	2F2C PA 22 S51E40 X
2W2C	Threaded rear spacer PCB clip	.150"/3.75	47 nF	2F2C PA 22 S52E40 X

.291" / 7.4 mm for .126" / 3.2 mm circuit board thickness. (Length of spacer .256" / 6.5 mm on request)



SOCKET CONNECTOR				
Type	Mounting style 4-40 UNC	Ø A	Capacitance	Part Number
2W2C	Threaded rear spacer PCB clip	.130"/3.18	47 nF	2F2C SA 22 S51E60 X
2W2C	Threaded rear spacer PCB clip	.150"/3.75	47 nF	2F2C SA 22 S52E60 X

PLUG CONNECTOR				
Type	Mounting style 4-40 UNC	Ø A	Capacitance	Part Number
2W2C	Threaded rear spacer PCB clip	.130"/3.18	47 nF	2F2C PA 22 S51E60 X
2W2C	Threaded rear spacer PCB clip	.150"/3.75	47 nF	2F2C PA 22 S52E60 X

For other capacitance values refer to the part number creator.

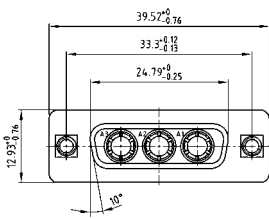
C-FILTER COMBINATION D-SUB 3W3

Solder pin – Straight – Precision machined contacts

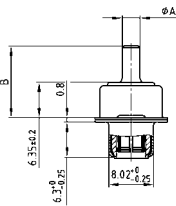


RoHS compliant – UL listed, File No.: E228329

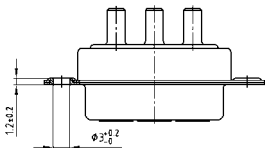
SOCKET CONNECTOR



Termination code	Current rating	Ø A	B ± 0.3	PCB thickness
48	20A	1.95	9.65	1.6
49	20A	2.60	10.65	1.6
50	20A	2.85	10.05	1.6
51	30A	3.18	12.85	1.6/ 2.3/ 3.2
52	40A	3.75	11.10	1.6/ 2.3/ 3.2



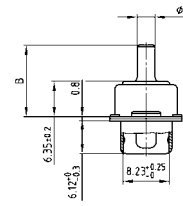
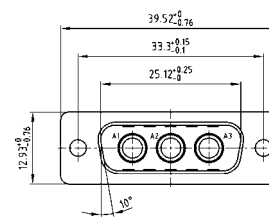
Mounting style: Through-hole



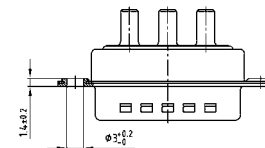
DESCRIPTION

- 707 VDC (other DWV on request)
- Mounting styles:
 - with through-hole Ø .118"/3.0 mm
 - with 4-40 UNC or M3 threaded insert*
 - with 4-40 UNC or M3 threaded rear spacer*
 - with 4-40 UNC or M3 threaded rear spacer with PCB clip*, .291"/7.4** mm
- Quality class 3 (also available in quality class 1)
- Shell: Steel tin plated, optionally brass tin plated
- Consists of selective plated contacts

PLUG CONNECTOR



Mounting style: Through-hole



ORDER DATA

SOCKET CONNECTOR				
Type	Mounting style	Ø A	Capacitance	Part Number
3W3	Through-hole	.080"/1.95	47 nF	3F3S SA 22 S48A10 X
3W3	Through-hole	.102"/2.60	47 nF	3F3S SA 22 S49A10 X
3W3	Through-hole	.110"/2.85	47 nF	3F3S SA 22 S50A10 X
3W3	Through-hole	.130"/3.18	47 nF	3F3S SA 22 S51A10 X
3W3	Through-hole	.150"/3.75	47 nF	3F3S SA 22 S52A10 X

PLUG CONNECTOR				
Type	Mounting style	Ø A	Capacitance	Part Number
3W3	Through-hole	.080"/1.95	47 nF	3F3S PA 22 S48A10 X
3W3	Through-hole	.102"/2.60	47 nF	3F3S PA 22 S49A10 X
3W3	Through-hole	.110"/2.85	47 nF	3F3S PA 22 S50A10 X
3W3	Through-hole	.130"/3.18	47 nF	3F3S PA 22 S51A10 X
3W3	Through-hole	.150"/3.75	47 nF	3F3S PA 22 S52A10 X

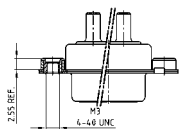
For other capacitance values refer to the part number creator.

Capacitance value	Code
100 nF	28
47 nF	22
12 nF	14
10 nF	12
5 nF	08
1.3 nF	05

C-FILTER COMBINATION D-SUB 3W3 – Mounting styles

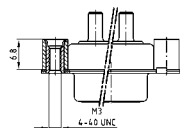
Solder pin – Straight – Precision machined contacts

ORDER DATA



SOCKET CONNECTOR				
Type	Mounting style 4-40 UNC	Ø A	Capacitance	Part Number
3W3	Threaded insert	.080"/1.95	47 nF	3F3S SA 22 S48A30 X
3W3	Threaded insert	.102"/2.60	47 nF	3F3S SA 22 S49A30 X
3W3	Threaded insert	.110"/2.85	47 nF	3F3S SA 22 S50A30 X
3W3	Threaded insert	.130"/3.18	47 nF	3F3S SA 22 S51A30 X
3W3	Threaded insert	.150"/3.75	47 nF	3F3S SA 22 S52A30 X

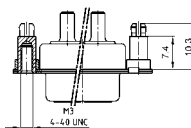
PLUG CONNECTOR				
Type	Mounting style 4-40 UNC	Ø A	Capacitance	Part Number
3W3	Threaded insert	.080"/1.95	47 nF	3F3S PA 22 S48A30 X
3W3	Threaded insert	.102"/2.60	47 nF	3F3S PA 22 S49A30 X
3W3	Threaded insert	.110"/2.85	47 nF	3F3S PA 22 S50A30 X
3W3	Threaded insert	.130"/3.18	47 nF	3F3S PA 22 S51A30 X
3W3	Threaded insert	.150"/3.75	47 nF	3F3S PA 22 S52A30 X



SOCKET CONNECTOR				
Type	Mounting style 4-40 UNC	Ø A	Capacitance	Part Number
3W3	Threaded rear spacer	.080"/1.95	47 nF	3F3S SA 22 S48A50 X
3W3	Threaded rear spacer	.102"/2.60	47 nF	3F3S SA 22 S49A50 X
3W3	Threaded rear spacer	.110"/2.85	47 nF	3F3S SA 22 S50A50 X
3W3	Threaded rear spacer	.130"/3.18	47 nF	3F3S SA 22 S51A50 X
3W3	Threaded rear spacer	.150"/3.75	47 nF	3F3S SA 22 S52A50 X

PLUG CONNECTOR				
Type	Mounting style 4-40 UNC	Ø A	Capacitance	Part Number
3W3	Threaded rear spacer	.080"/1.95	47 nF	3F3S PA 22 S48A50 X
3W3	Threaded rear spacer	.102"/2.60	47 nF	3F3S PA 22 S49A50 X
3W3	Threaded rear spacer	.110"/2.85	47 nF	3F3S PA 22 S50A50 X
3W3	Threaded rear spacer	.130"/3.18	47 nF	3F3S PA 22 S51A50 X
3W3	Threaded rear spacer	.150"/3.75	47 nF	3F3S PA 22 S52A50 X

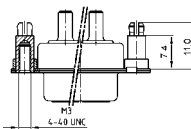
.291" / 7.4 mm for .063" / 1.6 mm circuit board thickness. (Length of spacer .256" / 6.5 mm on request)



SOCKET CONNECTOR				
Type	Mounting style 4-40 UNC	Ø A	Capacitance	Part Number
3W3	Threaded rear spacer PCB clip	.080"/1.95	47 nF	3F3S SA 22 S48E20 X
3W3	Threaded rear spacer PCB clip	.102"/2.60	47 nF	3F3S SA 22 S49E20 X
3W3	Threaded rear spacer PCB clip	.110"/2.85	47 nF	3F3S SA 22 S50E20 X
3W3	Threaded rear spacer PCB clip	.130"/3.18	47 nF	3F3S SA 22 S51E20 X
3W3	Threaded rear spacer PCB clip	.150"/3.75	47 nF	3F3S SA 22 S52E20 X

PLUG CONNECTOR				
Type	Mounting style 4-40 UNC	Ø A	Capacitance	Part Number
3W3	Threaded rear spacer PCB clip	.080"/1.95	47 nF	3F3S PA 22 S48E20 X
3W3	Threaded rear spacer PCB clip	.102"/2.60	47 nF	3F3S PA 22 S49E20 X
3W3	Threaded rear spacer PCB clip	.110"/2.85	47 nF	3F3S PA 22 S50E20 X
3W3	Threaded rear spacer PCB clip	.130"/3.18	47 nF	3F3S PA 22 S51E20 X
3W3	Threaded rear spacer PCB clip	.150"/3.75	47 nF	3F3S PA 22 S52E20 X

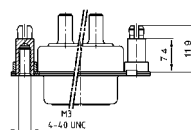
.291" / 7.4 mm for .091" / 2.3 mm circuit board thickness. (Length of spacer .256" / 6.5 mm on request)



SOCKET CONNECTOR				
Type	Mounting style 4-40 UNC	Ø A	Capacitance	Part Number
3W3	Threaded rear spacer PCB clip	.130"/3.18	47 nF	3F3S SA 22 S51E40 X
3W3	Threaded rear spacer PCB clip	.150"/3.75	47 nF	3F3S SA 22 S52E40 X

PLUG CONNECTOR				
Type	Mounting style 4-40 UNC	Ø A	Capacitance	Part Number
3W3	Threaded rear spacer PCB clip	.130"/3.18	47 nF	3F3S PA 22 S51E40 X
3W3	Threaded rear spacer PCB clip	.150"/3.75	47 nF	3F3S PA 22 S52E40 X

.291" / 7.4 mm for .126" / 3.2 mm circuit board thickness. (Length of spacer .256" / 6.5 mm on request)



SOCKET CONNECTOR				
Type	Mounting style 4-40 UNC	Ø A	Capacitance	Part Number
3W3	Threaded rear spacer PCB clip	.130"/3.18	47 nF	3F3S SA 22 S51E60 X
3W3	Threaded rear spacer PCB clip	.150"/3.75	47 nF	3F3S SA 22 S52E60 X

PLUG CONNECTOR				
Type	Mounting style 4-40 UNC	Ø A	Capacitance	Part Number
3W3	Threaded rear spacer PCB clip	.130"/3.18	47 nF	3F3S PA 22 S51E60 X
3W3	Threaded rear spacer PCB clip	.150"/3.75	47 nF	3F3S PA 22 S52E60 X

For other capacitance values refer to the part number creator.

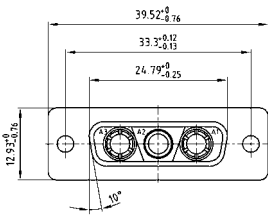
C-FILTER COMBINATION D-SUB 3W3C

Solder pin – Straight – Precision machined contacts

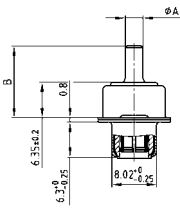


RoHS compliant – UL listed, File No.: E228329

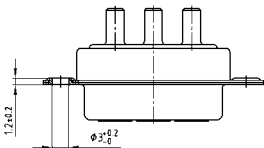
SOCKET CONNECTOR



Termination code	Current rating	Ø A	B ± 0.3	PCB thickness
48	20A	1.95	9.65	1.6
49	20A	2.60	10.65	1.6
50	20A	2.85	10.05	1.6
51	30A	3.18	12.85	1.6/ 2.3/ 3.2
52	40A	3.75	11.10	1.6/ 2.3/ 3.2



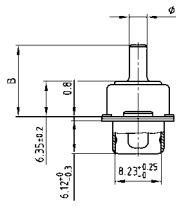
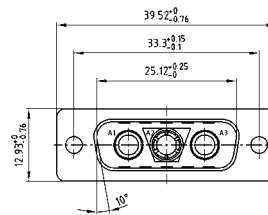
Mounting style: Through-hole



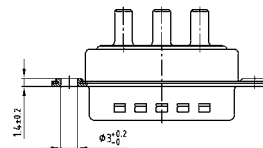
DESCRIPTION

- Coded socket connectors = 1 plug and 2 socket contacts
- Coded plug connectors = 2 plugs and 1 socket contact
- 707 VDC (other DWV on request)
- Mounting styles:
 - with through-hole Ø .118"/3.0 mm
 - with 4-40 UNC or M3 threaded insert*
 - with 4-40 UNC or M3 threaded rear spacer*
 - with 4-40 UNC or M3 threaded rear spacer with PCB clip*, .291"/7.4**mm
- Quality class 3 (also available in quality class 1)
- Shell: Steel tin plated, optionally brass tin plated
- Consists of selective plated contacts

PLUG CONNECTOR



Mounting style: Through-hole



ORDER DATA

SOCKET CONNECTOR				
Type	Mounting style	Ø A	Capacitance	Part Number
3W3C	Through-hole	.080"/1.95	47 nF	3F3C SA 22 S48A10 X
3W3C	Through-hole	.102"/2.60	47 nF	3F3C SA 22 S49A10 X
3W3C	Through-hole	.110"/2.85	47 nF	3F3C SA 22 S50A10 X
3W3C	Through-hole	.130"/3.18	47 nF	3F3C SA 22 S51A10 X
3W3C	Through-hole	.150"/3.75	47 nF	3F3C SA 22 S52A10 X

PLUG CONNECTOR				
Type	Mounting style	Ø A	Capacitance	Part Number
3W3C	Through-hole	.080"/1.95	47 nF	3F3C PA 22 S48A10 X
3W3C	Through-hole	.102"/2.60	47 nF	3F3C PA 22 S49A10 X
3W3C	Through-hole	.110"/2.85	47 nF	3F3C PA 22 S50A10 X
3W3C	Through-hole	.130"/3.18	47 nF	3F3C PA 22 S51A10 X
3W3C	Through-hole	.150"/3.75	47 nF	3F3C PA 22 S52A10 X

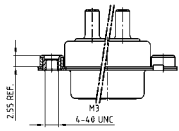
For other capacitance values refer to the part number creator.

Capacitance value	Code
100 nF	28
47 nF	22
12 nF	14
10 nF	12
5 nF	08
1.3 nF	05

C-FILTER COMBINATION D-SUB 3W3C – Mounting styles

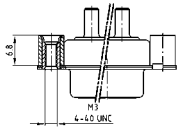
Solder pin – Straight – Precision machined contacts

ORDER DATA



SOCKET CONNECTOR				
Type	Mounting style 4-40 UNC	Ø A	Capacitance	Part Number
3W3C	Threaded insert	.080"/1.95	47 nF	3F3C SA 22 S48A30 X
3W3C	Threaded insert	.102"/2.60	47 nF	3F3C SA 22 S49A30 X
3W3C	Threaded insert	.110"/2.85	47 nF	3F3C SA 22 S50A30 X
3W3C	Threaded insert	.130"/3.18	47 nF	3F3C SA 22 S51A30 X
3W3C	Threaded insert	.150"/3.75	47 nF	3F3C SA 22 S52A30 X

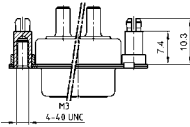
PLUG CONNECTOR				
Type	Mounting style 4-40 UNC	Ø A	Capacitance	Part Number
3W3C	Threaded insert	.080"/1.95	47 nF	3F3C PA 22 S48A30 X
3W3C	Threaded insert	.102"/2.60	47 nF	3F3C PA 22 S49A30 X
3W3C	Threaded insert	.110"/2.85	47 nF	3F3C PA 22 S50A30 X
3W3C	Threaded insert	.130"/3.18	47 nF	3F3C PA 22 S51A30 X
3W3C	Threaded insert	.150"/3.75	47 nF	3F3C PA 22 S52A30 X



SOCKET CONNECTOR				
Type	Mounting style 4-40 UNC	Ø A	Capacitance	Part Number
3W3C	Threaded rear spacer	.080"/1.95	47 nF	3F3C SA 22 S48A50 X
3W3C	Threaded rear spacer	.102"/2.60	47 nF	3F3C SA 22 S49A50 X
3W3C	Threaded rear spacer	.110"/2.85	47 nF	3F3C SA 22 S50A50 X
3W3C	Threaded rear spacer	.130"/3.18	47 nF	3F3C SA 22 S51A50 X
3W3C	Threaded rear spacer	.150"/3.75	47 nF	3F3C SA 22 S52A50 X

PLUG CONNECTOR				
Type	Mounting style 4-40 UNC	Ø A	Capacitance	Part Number
3W3C	Threaded rear spacer	.080"/1.95	47 nF	3F3C PA 22 S48A50 X
3W3C	Threaded rear spacer	.102"/2.60	47 nF	3F3C PA 22 S49A50 X
3W3C	Threaded rear spacer	.110"/2.85	47 nF	3F3C PA 22 S50A50 X
3W3C	Threaded rear spacer	.130"/3.18	47 nF	3F3C PA 22 S51A50 X
3W3C	Threaded rear spacer	.150"/3.75	47 nF	3F3C PA 22 S52A50 X

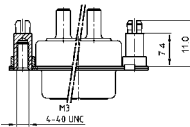
.291" / 7.4 mm for .063" / 1.6 mm circuit board thickness. (Length of spacer .256" / 6.5 mm on request)



SOCKET CONNECTOR				
Type	Mounting style 4-40 UNC	Ø A	Capacitance	Part Number
3W3C	Threaded rear spacer PCB clip	.080"/1.95	47 nF	3F3C SA 22 S48E20 X
3W3C	Threaded rear spacer PCB clip	.102"/2.60	47 nF	3F3C SA 22 S49E20 X
3W3C	Threaded rear spacer PCB clip	.110"/2.85	47 nF	3F3C SA 22 S50E20 X
3W3C	Threaded rear spacer PCB clip	.130"/3.18	47 nF	3F3C SA 22 S51E20 X
3W3C	Threaded rear spacer PCB clip	.150"/3.75	47 nF	3F3C SA 22 S52E20 X

PLUG CONNECTOR				
Type	Mounting style 4-40 UNC	Ø A	Capacitance	Part Number
3W3C	Threaded rear spacer PCB clip	.080"/1.95	47 nF	3F3C PA 22 S48E20 X
3W3C	Threaded rear spacer PCB clip	.102"/2.60	47 nF	3F3C PA 22 S49E20 X
3W3C	Threaded rear spacer PCB clip	.110"/2.85	47 nF	3F3C PA 22 S50E20 X
3W3C	Threaded rear spacer PCB clip	.130"/3.18	47 nF	3F3C PA 22 S51E20 X
3W3C	Threaded rear spacer PCB clip	.150"/3.75	47 nF	3F3C PA 22 S52E20 X

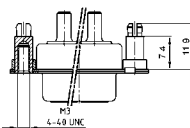
.291" / 7.4 mm for .091" / 2.3 mm circuit board thickness. (Length of spacer .256" / 6.5 mm on request)



SOCKET CONNECTOR				
Type	Mounting style 4-40 UNC	Ø A	Capacitance	Part Number
3W3C	Threaded rear spacer PCB clip	.130"/3.18	47 nF	3F3C SA 22 S51E40 X
3W3C	Threaded rear spacer PCB clip	.150"/3.75	47 nF	3F3C SA 22 S52E40 X

PLUG CONNECTOR				
Type	Mounting style 4-40 UNC	Ø A	Capacitance	Part Number
3W3C	Threaded rear spacer PCB clip	.130"/3.18	47 nF	3F3C PA 22 S51E40 X
3W3C	Threaded rear spacer PCB clip	.150"/3.75	47 nF	3F3C PA 22 S52E40 X

.291" / 7.4 mm for .126" / 3.2 mm circuit board thickness. (Length of spacer .256" / 6.5 mm on request)



SOCKET CONNECTOR				
Type	Mounting style 4-40 UNC	Ø A	Capacitance	Part Number
3W3C	Threaded rear spacer PCB clip	.130"/3.18	47 nF	3F3C SA 22 S51E60 X
3W3C	Threaded rear spacer PCB clip	.150"/3.75	47 nF	3F3C SA 22 S52E60 X

PLUG CONNECTOR				
Type	Mounting style 4-40 UNC	Ø A	Capacitance	Part Number
3W3C	Threaded rear spacer PCB clip	.130"/3.18	47 nF	3F3C PA 22 S51E60 X
3W3C	Threaded rear spacer PCB clip	.150"/3.75	47 nF	3F3C PA 22 S52E60 X

For other capacitance values refer to the part number creator.

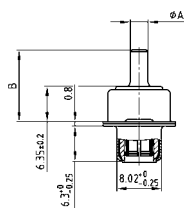
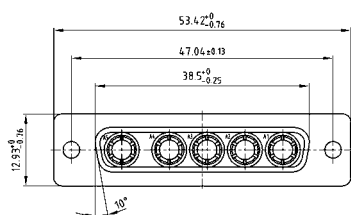
C-FILTER COMBINATION D-SUB 5W5

Solder pin – Straight – Precision machined contacts

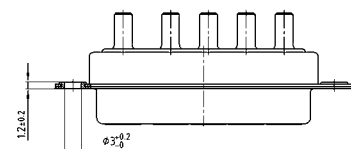


RoHS compliant – UL listed, File No.: E228329

SOCKET CONNECTOR



Mounting style: Through-hole

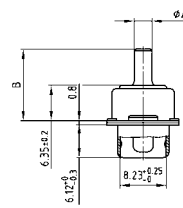
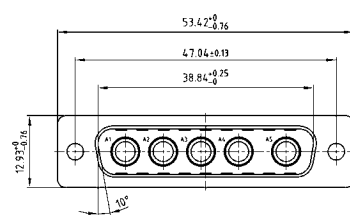


Termination code	Current rating	Ø A	B +0,3	PCB Thickness
48	20A	1.95	9.65	1.6
49	20A	2.60	10.65	1.6
50	20A	2.85	10.05	1.6
51	30A	3.18	12.85	1.6/ 2.3/ 3.2
52	40A	3.75	11.10	1.6/ 2.3/ 3.2

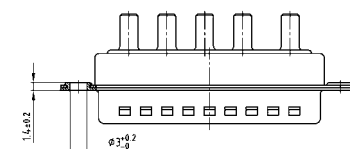
DESCRIPTION

- 707 VDC (other DWV on request)
- Mounting styles:
 - with through-hole \varnothing .118"/3.0 mm
 - with 4-40 UNC or M3 threaded insert*
 - with 4-40 UNC or M3 threaded rear spacer*
 - with 4-40 UNC or M3 threaded rear spacer with PCB clip*, .291"/7.4** mm
- Quality class 3 (also available in quality class 1)
- Shell: Steel tin plated, optionally brass tin plated
- Consists of selective plated contacts

PLUG CONNECTOR



Mounting style: Through-hole



ORDER DATA

SOCKET CONNECTOR				
Type	Mounting style	Ø A	Capacitance	Part Number
5W5	Through-hole	.080"/1.95	47 nF	5F55 SA 22 S48A10 X
5W5	Through-hole	.102"/2.60	47 nF	5F55 SA 22 S49A10 X
5W5	Through-hole	.110"/2.85	47 nF	5F55 SA 22 S50A10 X
5W5	Through-hole	.130"/3.18	47 nF	5F55 SA 22 S51A10 X
5W5	Through-hole	.150"/3.75	47 nF	5F55 SA 22 S52A10 X

PLUG CONNECTOR				
Type	Mounting style	Ø A	Capacitance	Part Number
5W5	Through-hole	.080"/1.95	47 nF	5F55 PA 22 S48A10 X
5W5	Through-hole	.102"/2.60	47 nF	5F55 PA 22 S49A10 X
5W5	Through-hole	.110"/2.85	47 nF	5F55 PA 22 S50A10 X
5W5	Through-hole	.130"/3.18	47 nF	5F55 PA 22 S51A10 X
5W5	Through-hole	.150"/3.75	47 nF	5F55 PA 22 S52A10 X

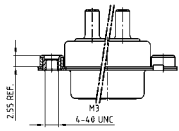
For other capacitance values refer to the part number creator.

Capacitance value	Code
100 nF	28
47 nF	22
12 nF	14
10 nF	12
5 nF	08
1.3 nF	05

C-FILTER COMBINATION D-SUB 5W5 – Mounting styles

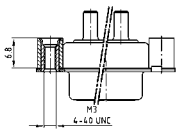
Solder pin – Straight – Precision machined contacts

ORDER DATA



SOCKET CONNECTOR				
Type	Mounting style 4-40 UNC	Ø A	Capacitance	Part Number
5W5	Threaded insert	.080"/1.95	47 nF	5F55 SA 22 S48A30 X
5W5	Threaded insert	.102"/2.60	47 nF	5F55 SA 22 S49A30 X
5W5	Threaded insert	.110"/2.85	47 nF	5F55 SA 22 S50A30 X
5W5	Threaded insert	.130"/3.18	47 nF	5F55 SA 22 S51A30 X
5W5	Threaded insert	.150"/3.75	47 nF	5F55 SA 22 S52A30 X

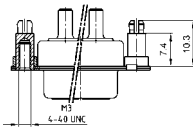
PLUG CONNECTOR				
Type	Mounting style 4-40 UNC	Ø A	Capacitance	Part Number
5W5	Threaded insert	.080"/1.95	47 nF	5F55 PA 22 S48A30 X
5W5	Threaded insert	.102"/2.60	47 nF	5F55 PA 22 S49A30 X
5W5	Threaded insert	.110"/2.85	47 nF	5F55 PA 22 S50A30 X
5W5	Threaded insert	.130"/3.18	47 nF	5F55 PA 22 S51A30 X
5W5	Threaded insert	.150"/3.75	47 nF	5F55 PA 22 S52A30 X



SOCKET CONNECTOR				
Type	Mounting style 4-40 UNC	Ø A	Capacitance	Part Number
5W5	Threaded rear spacer	.080"/1.95	47 nF	5F55 SA 22 S48A50 X
5W5	Threaded rear spacer	.102"/2.60	47 nF	5F55 SA 22 S49A50 X
5W5	Threaded rear spacer	.110"/2.85	47 nF	5F55 SA 22 S50A50 X
5W5	Threaded rear spacer	.130"/3.18	47 nF	5F55 SA 22 S51A50 X
5W5	Threaded rear spacer	.150"/3.75	47 nF	5F55 SA 22 S52A50 X

PLUG CONNECTOR				
Type	Mounting style 4-40 UNC	Ø A	Capacitance	Part Number
5W5	Threaded rear spacer	.080"/1.95	47 nF	5F55 PA 22 S48A50 X
5W5	Threaded rear spacer	.102"/2.60	47 nF	5F55 PA 22 S49A50 X
5W5	Threaded rear spacer	.110"/2.85	47 nF	5F55 PA 22 S50A50 X
5W5	Threaded rear spacer	.130"/3.18	47 nF	5F55 PA 22 S51A50 X
5W5	Threaded rear spacer	.150"/3.75	47 nF	5F55 PA 22 S52A50 X

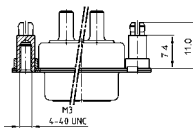
.291" / 7.4 mm for .063" / 1.6 mm circuit board thickness. (Length of spacer .256" / 6.5 mm on request)



SOCKET CONNECTOR				
Type	Mounting style 4-40 UNC	Ø A	Capacitance	Part Number
5W5	Threaded rear spacer PCB clip	.080"/1.95	47 nF	5F55 SA 22 S48E20 X
5W5	Threaded rear spacer PCB clip	.102"/2.60	47 nF	5F55 SA 22 S49E20 X
5W5	Threaded rear spacer PCB clip	.110"/2.85	47 nF	5F55 SA 22 S50E20 X
5W5	Threaded rear spacer PCB clip	.130"/3.18	47 nF	5F55 SA 22 S51E20 X
5W5	Threaded rear spacer PCB clip	.150"/3.75	47 nF	5F55 SA 22 S52E20 X

PLUG CONNECTOR				
Type	Mounting style 4-40 UNC	Ø A	Capacitance	Part Number
5W5	Threaded rear spacer PCB clip	.080"/1.95	47 nF	5F55 PA 22 S48E20 X
5W5	Threaded rear spacer PCB clip	.102"/2.60	47 nF	5F55 PA 22 S49E20 X
5W5	Threaded rear spacer PCB clip	.110"/2.85	47 nF	5F55 PA 22 S50E20 X
5W5	Threaded rear spacer PCB clip	.130"/3.18	47 nF	5F55 PA 22 S51E20 X
5W5	Threaded rear spacer PCB clip	.150"/3.75	47 nF	5F55 PA 22 S52E20 X

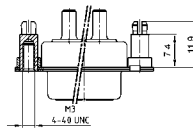
.291" / 7.4 mm for .091" / 2.3 mm circuit board thickness. (Length of spacer .256" / 6.5 mm on request)



SOCKET CONNECTOR				
Type	Mounting style 4-40 UNC	Ø A	Capacitance	Part Number
5W5	Threaded rear spacer PCB clip	.130"/3.18	47 nF	5F55 SA 22 S51E40 X
5W5	Threaded rear spacer PCB clip	.150"/3.75	47 nF	5F55 SA 22 S52E40 X

PLUG CONNECTOR				
Type	Mounting style 4-40 UNC	Ø A	Capacitance	Part Number
5W5	Threaded rear spacer PCB clip	.130"/3.18	47 nF	5F55 PA 22 S51E40 X
5W5	Threaded rear spacer PCB clip	.150"/3.75	47 nF	5F55 PA 22 S52E40 X

.291" / 7.4 mm for .126" / 3.2 mm circuit board thickness. (Length of spacer .256" / 6.5 mm on request)



SOCKET CONNECTOR				
Type	Mounting style 4-40 UNC	Ø A	Capacitance	Part Number
5W5	Threaded rear spacer PCB clip	.130"/3.18	47 nF	5F55 SA 22 S51E60 X
5W5	Threaded rear spacer PCB clip	.150"/3.75	47 nF	5F55 SA 22 S52E60 X

PLUG CONNECTOR				
Type	Mounting style 4-40 UNC	Ø A	Capacitance	Part Number
5W5	Threaded rear spacer PCB clip	.130"/3.18	47 nF	5F55 PA 22 S51E60 X
5W5	Threaded rear spacer PCB clip	.150"/3.75	47 nF	5F55 PA 22 S52E60 X

For other capacitance values refer to the part number creator.

C-FILTER COMBINATION D-SUB 8W8

Solder pin – Straight – Precision machined contacts

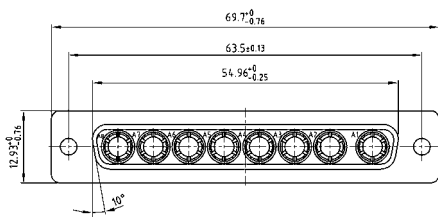


RoHS compliant – UL listed, File No.: E228329

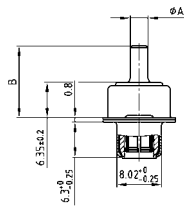
DESCRIPTION

- 707 VDC (other DWV on request)
- Mounting styles:
 - with through-hole \varnothing .118"/3.0 mm
 - with 4-40 UNC or M3 threaded insert*
 - with 4-40 UNC or M3 threaded rear spacer*
 - with 4-40 UNC or M3 threaded rear spacer with PCB clip*, .291"/7.4** mm
- Quality class 3 (also available in quality class 1)
- Shell: Steel tin plated, optionally brass tin plated
- Consists of selective plated contacts

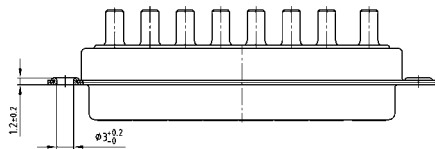
SOCKET CONNECTOR



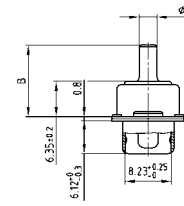
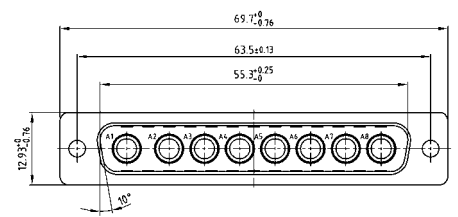
Termination code	Current rating	Ø A	B ± 0.3	PCB thickness
48	20A	1.95	9.65	1.6
49	20A	2.60	10.65	1.6
50	20A	2.85	10.05	1.6
51	30A	3.18	12.85	1.6/ 2.3/ 3.2
52	40A	3.75	11.10	1.6/ 2.3/ 3.2



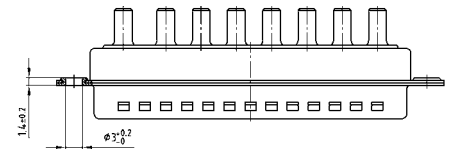
Mounting style: Through-hole



PLUG CONNECTOR



Mounting style: Through-hole



ORDER DATA

SOCKET CONNECTOR				
Type	Mounting style	Ø A	Capacitance	Part Number
8W8	Through-hole	.080"/1.95	47 nF	8F8S SA 22 S48A10 X
8W8	Through-hole	.102"/2.60	47 nF	8F8S SA 22 S49A10 X
8W8	Through-hole	.110"/2.85	47 nF	8F8S SA 22 S50A10 X
8W8	Through-hole	.130"/3.18	47 nF	8F8S SA 22 S51A10 X
8W8	Through-hole	.150"/3.75	47 nF	8F8S SA 22 S52A10 X

PLUG CONNECTOR				
Type	Mounting style	Ø A	Capacitance	Part Number
8W8	Through-hole	.080"/1.95	47 nF	8F8S PA 22 S48A10 X
8W8	Through-hole	.102"/2.60	47 nF	8F8S PA 22 S49A10 X
8W8	Through-hole	.110"/2.85	47 nF	8F8S PA 22 S50A10 X
8W8	Through-hole	.130"/3.18	47 nF	8F8S PA 22 S51A10 X
8W8	Through-hole	.150"/3.75	47 nF	8F8S PA 22 S52A10 X

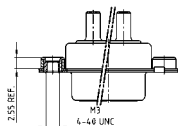
For other capacitance values refer to the part number creator.

Capacitance value	Code
100 nF	28
47 nF	22
12 nF	14
10 nF	12
5 nF	08
1.3 nF	05

C-FILTER COMBINATION D-SUB 8W8 – Mounting styles

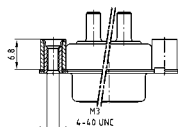
Solder pin – Straight – Precision machined contacts

ORDER DATA



SOCKET CONNECTOR				
Type	Mounting style 4-40 UNC	Ø A	Capacitance	Part Number
8W8	Threaded insert	.080"/1.95	47 nF	8F8S SA 22 S48A30 X
8W8	Threaded insert	.102"/2.60	47 nF	8F8S SA 22 S49A30 X
8W8	Threaded insert	.110"/2.85	47 nF	8F8S SA 22 S50A30 X
8W8	Threaded insert	.130"/3.18	47 nF	8F8S SA 22 S51A30 X
8W8	Threaded insert	.150"/3.75	47 nF	8F8S SA 22 S52A30 X

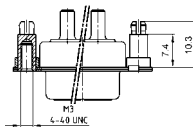
PLUG CONNECTOR				
Type	Mounting style 4-40 UNC	Ø A	Capacitance	Part Number
8W8	Threaded insert	.080"/1.95	47 nF	8F8S PA 22 S48A30 X
8W8	Threaded insert	.102"/2.60	47 nF	8F8S PA 22 S49A30 X
8W8	Threaded insert	.110"/2.85	47 nF	8F8S PA 22 S50A30 X
8W8	Threaded insert	.130"/3.18	47 nF	8F8S PA 22 S51A30 X
8W8	Threaded insert	.150"/3.75	47 nF	8F8S PA 22 S52A30 X



SOCKET CONNECTOR				
Type	Mounting style 4-40 UNC	Ø A	Capacitance	Part Number
8W8	Threaded rear spacer	.080"/1.95	47 nF	8F8S SA 22 S48A50 X
8W8	Threaded rear spacer	.102"/2.60	47 nF	8F8S SA 22 S49A50 X
8W8	Threaded rear spacer	.110"/2.85	47 nF	8F8S SA 22 S50A50 X
8W8	Threaded rear spacer	.130"/3.18	47 nF	8F8S SA 22 S51A50 X
8W8	Threaded rear spacer	.150"/3.75	47 nF	8F8S SA 22 S52A50 X

PLUG CONNECTOR				
Type	Mounting style 4-40 UNC	Ø A	Capacitance	Part Number
8W8	Threaded rear spacer	.080"/1.95	47 nF	8F8S PA 22 S48A50 X
8W8	Threaded rear spacer	.102"/2.60	47 nF	8F8S PA 22 S49A50 X
8W8	Threaded rear spacer	.110"/2.85	47 nF	8F8S PA 22 S50A50 X
8W8	Threaded rear spacer	.130"/3.18	47 nF	8F8S PA 22 S51A50 X
8W8	Threaded rear spacer	.150"/3.75	47 nF	8F8S PA 22 S52A50 X

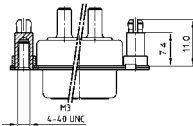
.291" / 7.4 mm for .063" / 1.6 mm circuit board thickness. (Length of spacer .256" / 6.5 mm on request)



SOCKET CONNECTOR				
Type	Mounting style 4-40 UNC	Ø A	Capacitance	Part Number
8W8	Threaded rear spacer PCB clip	.080"/1.95	47 nF	8F8S SA 22 S48E20 X
8W8	Threaded rear spacer PCB clip	.102"/2.60	47 nF	8F8S SA 22 S49E20 X
8W8	Threaded rear spacer PCB clip	.110"/2.85	47 nF	8F8S SA 22 S50E20 X
8W8	Threaded rear spacer PCB clip	.130"/3.18	47 nF	8F8S SA 22 S51E20 X
8W8	Threaded rear spacer PCB clip	.150"/3.75	47 nF	8F8S SA 22 S52E20 X

PLUG CONNECTOR				
Type	Mounting style 4-40 UNC	Ø A	Capacitance	Part Number
8W8	Threaded rear spacer PCB clip	.080"/1.95	47 nF	8F8S PA 22 S48E20 X
8W8	Threaded rear spacer PCB clip	.102"/2.60	47 nF	8F8S PA 22 S49E20 X
8W8	Threaded rear spacer PCB clip	.110"/2.85	47 nF	8F8S PA 22 S50E20 X
8W8	Threaded rear spacer PCB clip	.130"/3.18	47 nF	8F8S PA 22 S51E20 X
8W8	Threaded rear spacer PCB clip	.150"/3.75	47 nF	8F8S PA 22 S52E20 X

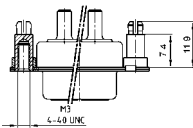
.291" / 7.4 mm for .091" / 2.3 mm circuit board thickness. (Length of spacer .256" / 6.5 mm on request)



SOCKET CONNECTOR				
Type	Mounting style 4-40 UNC	Ø A	Capacitance	Part Number
8W8	Threaded rear spacer PCB clip	.130"/3.18	47 nF	8F8S SA 22 S51E40 X
8W8	Threaded rear spacer PCB clip	.150"/3.75	47 nF	8F8S SA 22 S52E40 X

PLUG CONNECTOR				
Type	Mounting style 4-40 UNC	Ø A	Capacitance	Part Number
8W8	Threaded rear spacer PCB clip	.130"/3.18	47 nF	8F8S PA 22 S51E40 X
8W8	Threaded rear spacer PCB clip	.150"/3.75	47 nF	8F8S PA 22 S52E40 X

.291" / 7.4 mm for .126" / 3.2 mm circuit board thickness. (Length of spacer .256" / 6.5 mm on request)



SOCKET CONNECTOR				
Type	Mounting style 4-40 UNC	Ø A	Capacitance	Part Number
8W8	Threaded rear spacer PCB clip	.130"/3.18	47 nF	8F8S SA 22 S51E60 X
8W8	Threaded rear spacer PCB clip	.150"/3.75	47 nF	8F8S SA 22 S52E60 X

PLUG CONNECTOR				
Type	Mounting style 4-40 UNC	Ø A	Capacitance	Part Number
8W8	Threaded rear spacer PCB clip	.130"/3.18	47 nF	8F8S PA 22 S51E60 X
8W8	Threaded rear spacer PCB clip	.150"/3.75	47 nF	8F8S PA 22 S52E60 X

For other capacitance values refer to the part number creator.

C-FILTER COMBINATION D-SUB 2W2C

Solder pin – Angled – Precision machined contacts – Metal bracket

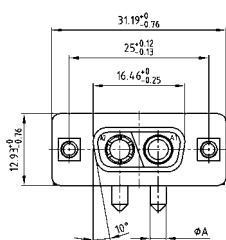


RoHS compliant – UL listed, File No.: E228329

DESCRIPTION

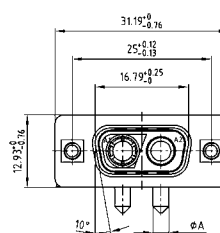
- coded design = 1 plug and 1 socket contact
- 707 VDC (other DWV on request)
- Mounting styles:
 - with mounting bracket and 4-40 UNC or M3 threaded insert
 - with mounting bracket, PCB clip and 4-40 UNC or M3 threaded insert
- Quality class 3 (also available in quality class 1)
- Shell: Steel tin plated, optionally brass tin plated
- Consists of selective plated contacts

SOCKET CONNECTOR

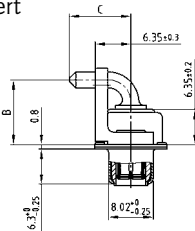
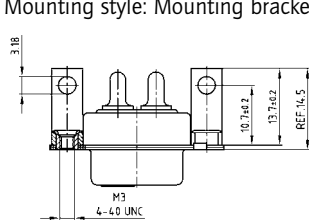


Termination code	Current rating	Ø A	B ± 0.3	C ± 0.3
56	20A	2.85	11.65	11.00
57	30A	3.18	20.35	9.50
58	40A	3.75	11.65	11.00

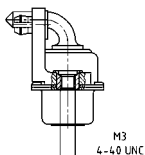
PLUG CONNECTOR



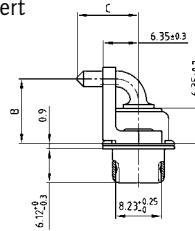
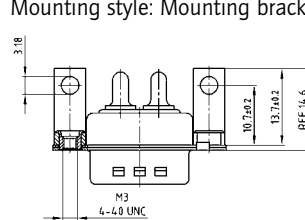
Mounting style: Mounting bracket, threaded insert



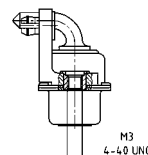
Mounting style: Mounting bracket, PCB clip and threaded insert



Mounting style: Mounting bracket, threaded insert



Mounting style: Mounting bracket, PCB clip and threaded insert



ORDER DATA

SOCKET CONNECTOR			
Type	Mounting style 4-40 UNC	Ø A	Capacitance Part Number
2W2C	Mounting bracket/Threaded insert	.110"/2.85	47 nF 2F2C SA 22 S56K20 X
2W2C	Mounting bracket/Threaded insert	.126"/3.20	47 nF 2F2C SA 22 S57K20 X
2W2C	Mounting bracket/Threaded insert	.150"/3.75	47 nF 2F2C SA 22 S58K20 X
2W2C	Mounting bracket/PCB clip/Threaded insert	.110"/2.85	47 nF 2F2C SA 22 S56K40 X
2W2C	Mounting bracket/PCB clip/Threaded insert	.126"/3.20	47 nF 2F2C SA 22 S57K40 X
2W2C	Mounting bracket/PCB clip/Threaded insert	.150"/3.75	47 nF 2F2C SA 22 S58K40 X

PLUG CONNECTOR			
Type	Mounting style 4-40 UNC	Ø A	Capacitance Part Number
2W2C	Mounting bracket/Threaded insert	.110"/2.85	47 nF 2F2C PA 22 S56K20 X
2W2C	Mounting bracket/Threaded insert	.126"/3.20	47 nF 2F2C PA 22 S57K20 X
2W2C	Mounting bracket/Threaded insert	.150"/3.75	47 nF 2F2C PA 22 S58K20 X
2W2C	Mounting bracket/PCB clip/Threaded insert	.110"/2.85	47 nF 2F2C PA 22 S56K40 X
2W2C	Mounting bracket/PCB clip/Threaded insert	.126"/3.20	47 nF 2F2C PA 22 S57K40 X
2W2C	Mounting bracket/PCB clip/Threaded insert	.150"/3.75	47 nF 2F2C PA 22 S58K40 X

PCB clip .122"/3.1 ± .004"/0.10 mm hole diameter and .063"/1.6 mm circuit board thickness.
For other capacitance values refer to the part number creator.

Capacitance value	Code
100 nF	28
47 nF	22
12 nF	14
10 nF	12
5 nF	08
1.3 nF	05

C-FILTER COMBINATION D-SUB 3W3

Solder pin – Angled – Precision machined contacts – Metal bracket

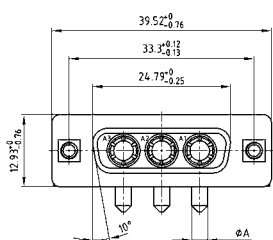


RoHS compliant – UL listed, File No.: E228329

DESCRIPTION

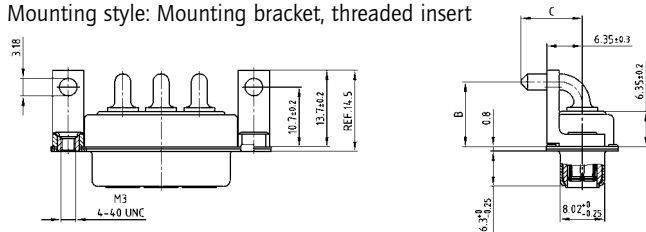
- 707 VDC (other DWV on request)
- Mounting styles:
 - with mounting bracket and 4-40 UNC or M3 threaded insert
 - with mounting bracket, PCB clip and 4-40 UNC or M3 threaded insert
- Thread design M3 on request
- Quality class 3 (also available in quality class 1)
- Shell: Steel tin plated, optionally brass tin plated
- Consists of selective plated contacts

SOCKET CONNECTOR

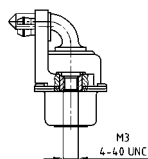


Termination code	Current rating	Ø A	B ± 0.3	C ± 0.3
56	20A	2.85	11.65	11.00
57	30A	3.18	20.35	9.50
58	40A	3.75	11.65	11.00

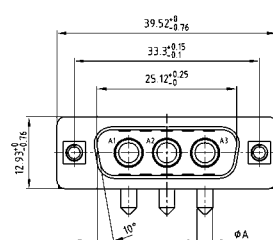
Mounting style: Mounting bracket, threaded insert



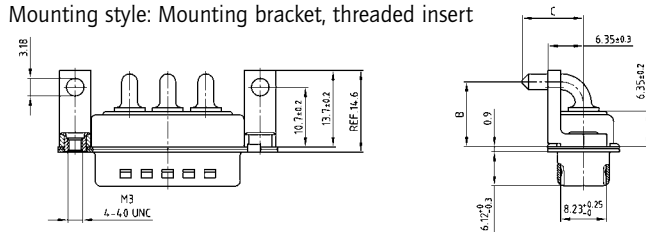
Mounting style: Mounting bracket, PCB clip and threaded insert



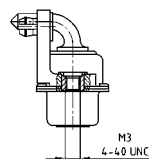
PLUG CONNECTOR



Mounting style: Mounting bracket, threaded insert



Mounting style: Mounting bracket, PCB clip and threaded insert



ORDER DATA

SOCKET CONNECTOR				
Type	Mounting style 4-40 UNC	Ø A	Capacitance	Part Number
3W3	Mounting bracket/Threaded insert	.110"/2.85	47 nF	3F3S SA 22 S56K20 X
3W3	Mounting bracket/Threaded insert	.126"/3.20	47 nF	3F3S SA 22 S57K20 X
3W3	Mounting bracket/Threaded insert	.150"/3.75	47 nF	3F3S SA 22 S58K20 X
3W3	Mounting bracket/PCB clip/Threaded insert	.110"/2.85	47 nF	3F3S SA 22 S56K40 X
3W3	Mounting bracket/PCB clip/Threaded insert	.126"/3.20	47 nF	3F3S SA 22 S57K40 X
3W3	Mounting bracket/PCB clip/Threaded insert	.150"/3.75	47 nF	3F3S SA 22 S58K40 X

PLUG CONNECTOR				
Type	Mounting style	Ø A	Capacitance	Part Number
3W3	Mounting bracket/Threaded insert	.110"/2.85	47 nF	3F3S PA 22 S56K20 X
3W3	Mounting bracket/Threaded insert	.126"/3.20	47 nF	3F3S PA 22 S57K20 X
3W3	Mounting bracket/Threaded insert	.150"/3.75	47 nF	3F3S PA 22 S58K20 X
3W3	Mounting bracket/PCB clip/Threaded insert	.110"/2.85	47 nF	3F3S PA 22 S56K40 X
3W3	Mounting bracket/PCB clip/Threaded insert	.126"/3.20	47 nF	3F3S PA 22 S57K40 X
3W3	Mounting bracket/PCB clip/Threaded insert	.150"/3.75	47 nF	3F3S PA 22 S58K40 X

PCB clip .122"/3.1 ± .004"/0.10 mm hole diameter and .063"/1.6 mm circuit board thickness. For other capacitance values refer to the part number creator.

Potential capacitance values

Capacitance	Code
100 nF	28
47 nF	22
12 nF	14
10 nF	12
5 nF	08
1.3 nF	05

C-FILTER COMBINATION D-SUB 3W3C

Solder pin – Angled – Precision machined contacts – Metal bracket

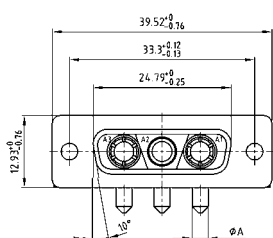


RoHS compliant – UL listed, File No.: E228329

DESCRIPTION

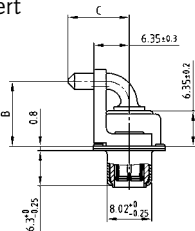
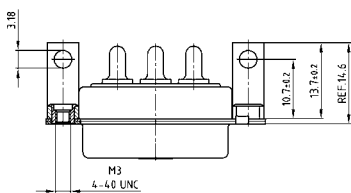
- Coded socket connector = 1 plug and 2 socket contacts
- Coded plug connector = 2 plugs and 1 socket contact
- 707 VDC (other DWV on request)
- Mounting styles:
 - with mounting bracket and 4-40 UNC or M3 threaded insert
 - with mounting bracket, PCB clip and 4-40 UNC or M3 threaded insert
- Quality class 3 (also available in quality class 1)
- Shell: Steel tin plated, optionally brass tin plated

SOCKET CONNECTOR

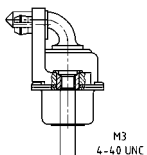


Termination code	Current rating	Ø A	B ± 0.3	C ± 0.3
56	20A	2.85	11.65	11.00
57	30A	3.18	20.35	9.50
58	40A	3.75	11.65	11.00

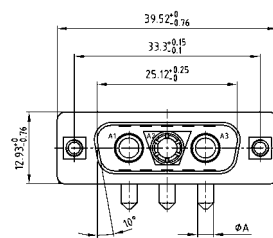
Mounting style: Mounting bracket, threaded insert



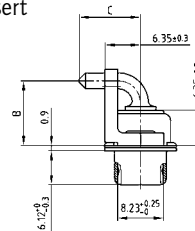
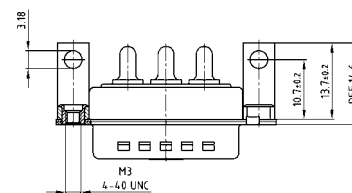
Mounting style:
Mounting bracket, PCB clip and threaded insert



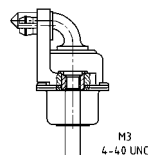
PLUG CONNECTOR



Mounting style: Mounting bracket, threaded insert



Mounting style:
Mounting bracket, PCB clip and threaded insert



ORDER DATA

SOCKET CONNECTOR				
Type	Mounting style	Ø A	Capacitance	Part Number
3W3C	Mounting bracket/Threaded insert	.110"/2.85	47 nF	3F3C SA 22 S56K20X
3W3C	Mounting bracket/Threaded insert	.126"/3.20	47 nF	3F3C SA 22 S57K20X
3W3C	Mounting bracket/Threaded insert	.150"/3.75	47 nF	3F3C SA 22 S58K20X
3W3C	Mounting bracket/PCB clip/Threaded insert	.110"/2.85	47 nF	3F3C SA 22 S56K40X
3W3C	Mounting bracket/PCB clip/Threaded insert	.126"/3.20	47 nF	3F3C SA 22 S57K40X
3W3C	Mounting bracket/PCB clip/Threaded insert	.150"/3.75	47 nF	3F3C SA 22 S58K40X

PLUG CONNECTOR				
Type	Mounting style	Ø A	Capacitance	Part Number
3W3C	Mounting bracket/Threaded insert	.110"/2.85	47 nF	3F3C PA 22 S56K20 X
3W3C	Mounting bracket/Threaded insert	.126"/3.20	47 nF	3F3C PA 22 S57K20 X
3W3C	Mounting bracket/Threaded insert	.150"/3.75	47 nF	3F3C PA 22 S58K20 X
3W3C	Mounting bracket/PCB clip/Threaded insert	.110"/2.85	47 nF	3F3C PA 22 S56K40 X
3W3C	Mounting bracket/PCB clip/Threaded insert	.126"/3.20	47 nF	3F3C PA 22 S57K40 X
3W3C	Mounting bracket/PCB clip/Threaded insert	.150"/3.75	47 nF	3F3C PA 22 S58K40 X

PCB clip .122"/3.1 ± .004"/0.10 mm hole diameter and .063"/1.6 mm circuit board thickness.
For other capacitance values refer to the part number creator.

Capacitance value	Code
100 nF	28
47 nF	22
12 nF	14
10 nF	12
5 nF	08
1.3 nF	05

C-FILTER COMBINATION D-SUB 5W5

Solder pin – Angled – Precision machined contacts – Metal bracket

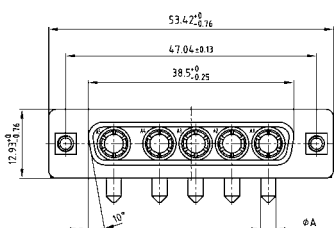


RoHS compliant – UL listed, File No.: E228329

DESCRIPTION

- 707 VDC (other DWV on request)
- Mounting styles:
 - with mounting bracket and 4-40 UNC or M3 threaded insert
 - with mounting bracket, PCB clip and 4-40 UNC or M3 threaded insert
- Quality class 3 (also available in quality class 1)
- Shell: Steel tin plated, optionally brass tin plated
- Consists of selective plated contacts

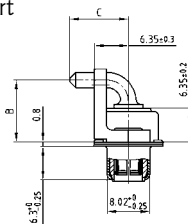
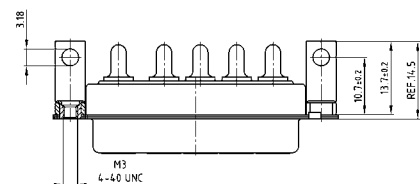
SOCKET CONNECTOR



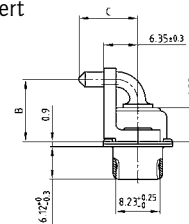
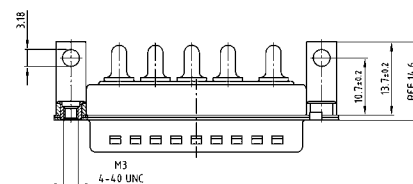
Termination code	Current rating	Ø A	B ± 0.3	C ± 0.3
56	20A	2.85	11.65	11.00
57	30A	3.18	20.35	9.50
58	40A	3.75	11.65	11.00

PLUG CONNECTOR

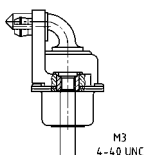
Mounting style: Mounting bracket, threaded insert



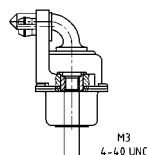
Mounting style: Mounting bracket, threaded insert



Mounting style:
Mounting bracket, PCB clip and threaded insert



Mounting style:
Mounting bracket, PCB clip and threaded insert



ORDER DATA

SOCKET CONNECTOR				
Type	Mounting style	Ø A	Capacitance	Part Number
5W5	Mounting bracket/Threaded insert	.110"/2.85	47 nF	5F55 SA 22 S56K20 X
5W5	Mounting bracket/Threaded insert	.126"/3.20	47 nF	5F55 SA 22 S57K20 X
5W5	Mounting bracket/Threaded insert	.150"/3.75	47 nF	5F55 SA 22 S58K20 X
5W5	Mounting bracket/PCB clip/Threaded insert	.110"/2.85	47 nF	5F55 SA 22 S56K40 X
5W5	Mounting bracket/PCB clip/Threaded insert	.126"/3.20	47 nF	5F55 SA 22 S57K40 X
5W5	Mounting bracket/PCB clip/Threaded insert	.150"/3.75	47 nF	5F55 SA 22 S58K40 X

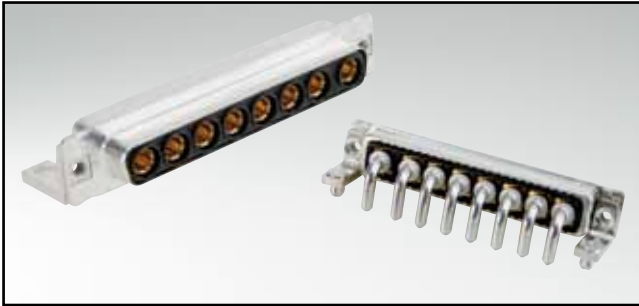
PLUG CONNECTOR				
Type	Mounting style	Ø A	Capacitance	Part Number
5W5	Mounting bracket/Threaded insert	.110"/2.85	47 nF	5F55 PA 22 S56K20 X
5W5	Mounting bracket/Threaded insert	.126"/3.20	47 nF	5F55 PA 22 S57K20 X
5W5	Mounting bracket/Threaded insert	.150"/3.75	47 nF	5F55 PA 22 S58K20 X
5W5	Mounting bracket/PCB clip/Threaded insert	.110"/2.85	47 nF	5F55 PA 22 S56K40 X
5W5	Mounting bracket/PCB clip/Threaded insert	.126"/3.20	47 nF	5F55 PA 22 S57K40 X
5W5	Mounting bracket/PCB clip/Threaded insert	.150"/3.75	47 nF	5F55 PA 22 S58K40 X

PCB clip .122"/3.1 ± .004"/0.10 mm hole diameter and .063"/1.6 mm circuit board thickness.
For other capacitance values refer to the part number creator.

Capacitance value	Code
100 nF	28
47 nF	22
12 nF	14
10 nF	12
5 nF	08
1.3 nF	05

C-FILTER COMBINATION D-SUB 8W8

Solder pin – Angled – Precision machined contacts – Metal bracket

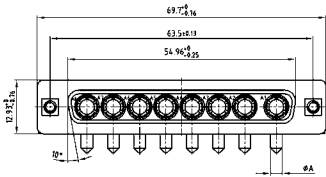


RoHS compliant – UL listed, File No.: E228329

DESCRIPTION

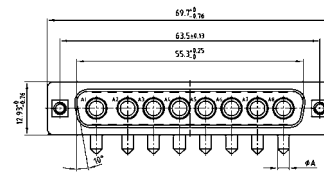
- 707 VDC (other DWV on request)
- Mounting styles:
 - with mounting bracket and 4-40 UNC or M3 threaded insert
 - with mounting bracket, PCB clip and 4-40 UNC or M3 threaded insert
- Quality class 3 (also available in quality class 1)
- Shell: Steel tin plated, optionally brass tin plated
- Consists of selective plated contacts

SOCKET CONNECTOR

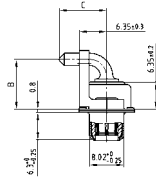
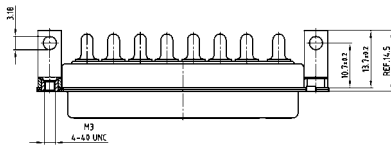


Termination code	Current rating	Ø A	B ± 0.3	C ± 0.3
56	20A	2.85	11.65	11.00
57	30A	3.18	20.35	9.50
58	40A	3.75	11.65	11.00

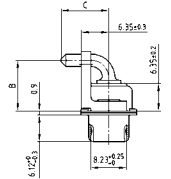
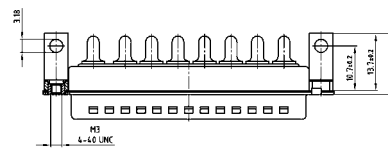
PLUG CONNECTOR



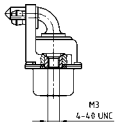
Mounting style: Mounting bracket, threaded insert



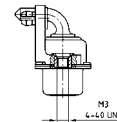
Mounting style: Mounting bracket, threaded insert



Mounting style:
Mounting bracket, PCB clip and threaded insert



Mounting style:
Mounting bracket, PCB clip and threaded insert



ORDER DATA

SOCKET CONNECTOR				
Type	Mounting style	Ø A	Capacitance	Part Number
8W8	Mounting bracket/Threaded insert	.110"/2.85	47 nF	8F8S SA 22 S56K20 X
8W8	Mounting bracket/Threaded insert	.126"/3.20	47 nF	8F8S SA 22 S57K20 X
8W8	Mounting bracket/Threaded insert	.150"/3.75	47 nF	8F8S SA 22 S58K20 X
8W8	Mounting bracket/PCB clip/Threaded insert	.110"/2.85	47 nF	8F8S SA 22 S56K40 X
8W8	Mounting bracket/PCB clip/Threaded insert	.126"/3.20	47 nF	8F8S SA 22 S57K40 X
8W8	Mounting bracket/PCB clip/Threaded insert	.150"/3.75	47 nF	8F8S SA 22 S58K40 X

PLUG CONNECTOR				
Type	Mounting style	Ø A	Capacitance	Part Number
8W8	Mounting bracket/Threaded insert	.110"/2.85	47 nF	8F8S PA 22 S56K20 X
8W8	Mounting bracket/Threaded insert	.126"/3.20	47 nF	8F8S PA 22 S57K20 X
8W8	Mounting bracket/Threaded insert	.150"/3.75	47 nF	8F8S PA 22 S58K20 X
8W8	Mounting bracket/PCB clip/Threaded insert	.110"/2.85	47 nF	8F8S PA 22 S56K40 X
8W8	Mounting bracket/PCB clip/Threaded insert	.126"/3.20	47 nF	8F8S PA 22 S57K40 X
8W8	Mounting bracket/PCB clip/Threaded insert	.150"/3.75	47 nF	8F8S PA 22 S58K40 X

PCB clip .122"/3.1 ± .004"/0.10 mm hole diameter and .063"/1.6 mm circuit board thickness.
For other capacitance values refer to the part number creator.

Capacitance value	Code
100 nF	28
47 nF	22
12 nF	14
10 nF	12
5 nF	08
1.3 nF	05

C-FILTER COMBINATION D-SUB 2W2C

Press-fit contact – Straight – Precision machined contacts

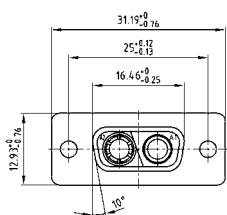


RoHS compliant – UL listed, File No.: E228329

DESCRIPTION

- Coded design = 1 plug and 1 socket contact
- 707 VDC (other DWV on request)
- Mounting styles:
 - with threaded rear spacer and 4-40 UNC or M3 threaded insert
 - with rear press-fit spacer and 4-40 UNC or M3 threaded insert
- Quality class 3 (also available in quality class 1)
- Shell: Steel tin plated, optionally brass tin plated
- Consists of selective plated contacts

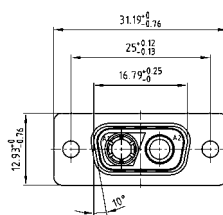
SOCKET CONNECTOR



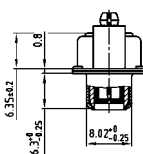
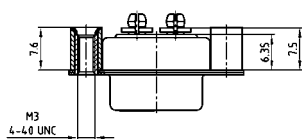
Termination code	Current rating	A ± 0.03	B min.	B max.
P1	30A	3.13	2.96	3.11
P2	30A	3.27	3.10	3.25
P4	30A	3.22	3.02	3.20

Copper thickness 25µm minimum
Tin thickness 5µm minimum
Drilled hole Ø A±0.03
(finished hole after reflow: Ø B min. - Ø B max.)
5:1

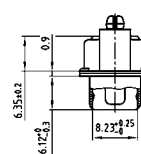
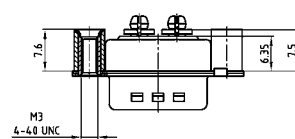
PLUG CONNECTOR



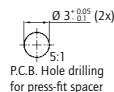
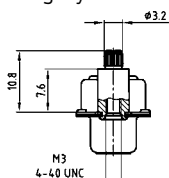
Mounting style: 4-40 UNC threaded rear spacer



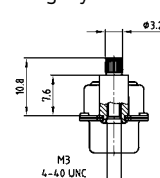
Mounting style: 4-40 UNC threaded rear spacer



Mounting style: 4-40 UNC rear press-fit spacer



Mounting style: 4-40 UNC rear press-fit spacer



ORDER DATA

SOCKET CONNECTOR				
Type	Mounting style 4-40 UNC	Ø A	Capacitance	Part Number
2W2C Threaded rear spacer	.120" / 3.13		47 nF	2F2C SA 22 SP1AA0 X
2W2C Threaded rear spacer	.130" / 3.27		47 nF	2F2C SA 22 SP2AA0 X
2W2C Threaded rear spacer	.120" / 3.22		47 nF	2F2C SA 22 SP4AA0 X
2W2C Rear press-fit spacer	.120" / 3.13		47 nF	2F2C SA 22 SP1W40 X
2W2C Rear press-fit spacer	.120" / 3.27		47 nF	2F2C SA 22 SP2W40 X
2W2C Rear press-fit spacer	.120" / 3.22		47 nF	2F2C SA 22 SP4W40 X

PLUG CONNECTOR				
Type	Mounting style 4-40 UNC	Ø A	Capacitance	Part Number
2W2C Threaded rear spacer	.120" / 3.13		47 nF	2F2C PA 22 SP1AA0 X
2W2C Threaded rear spacer	.130" / 3.27		47 nF	2F2C PA 22 SP2AA0 X
2W2C Threaded rear spacer	.120" / 3.22		47 nF	2F2C PA 22 SP4AA0 X
2W2C Rear press-fit spacer	.120" / 3.13		47 nF	2F2C PA 22 SP1W40 X
2W2C Rear press-fit spacer	.120" / 3.27		47 nF	2F2C PA 22 SP2W40 X
2W2C Rear press-fit spacer	.120" / 3.22		47 nF	2F2C PA 22 SP4W40 X

PCB clip .122" / 3.1 ± .004" / 0.10 mm hole diameter and .063" / 1.6 mm circuit board thickness.
For other capacitance values refer to the part number creator.

Capacitance value	Code
100 nF	28
47 nF	22
12 nF	14
10 nF	12
5 nF	08
1.3 nF	05

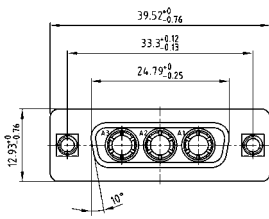
C-FILTER COMBINATION D-SUB 3W3

Press-fit contact – Straight – Precision machined contacts



RoHS compliant – UL listed, File No.: E228329

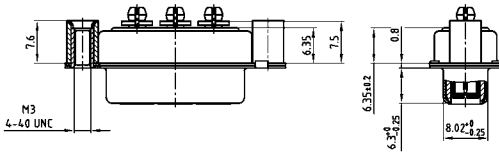
SOCKET CONNECTOR



Termination code	Current rating	A ± 0.03	B min.	B max.
P1	30A	3.13	2.96	3.11
P2	30A	3.27	3.10	3.25
P4	30A	3.22	3.02	3.20

Copper thickness 25µm minimum
Tin thickness 5µm minimum
Drilled hole $\varnothing A \pm 0.03$
(finished hole after reflow: $\varnothing B$ min. - $\varnothing B$ max.)

Mounting style: 4-40 UNC threaded rear spacer



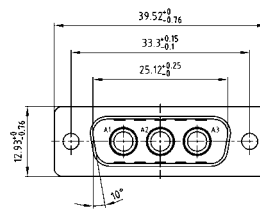
Mounting style: Rear press-fit spacer



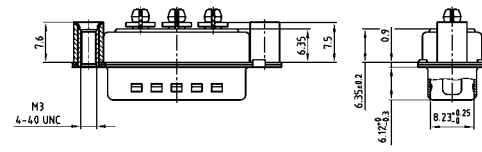
DESCRIPTION

- 707 VDC (other DWV on request)
- Mounting styles:
 - with threaded rear spacer and 4-40 UNC or M3 threaded insert
 - with rear press-fit spacer and 4-40 UNC or M3 threaded insert
- Quality class 3 (also available in quality class 1)
- Shell: Steel tin plated, optionally brass tin plated
- Consists of selective plated contacts

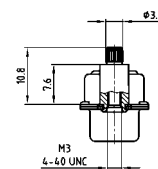
PLUG CONNECTOR



Mounting style: 4-40 UNC threaded rear spacer



Mounting style: Rear press-fit spacer



ORDER DATA

SOCKET CONNECTOR			
Type	Mounting style 4-40 UNC	Ø A	Capacitance Part Number
3W3	Threaded rear spacer	.120"/3.13	47 nF 3F3S SA 22 SP1AA0 X
3W3	Threaded rear spacer	.130"/3.27	47 nF 3F3S SA 22 SP2AA0 X
3W3	Threaded rear spacer	.120"/3.22	47 nF 3F3S SA 22 SP4AA0 X
3W3	Rear press-fit spacer	.120"/3.13	47 nF 3F3S SA 22 SP1W40 X
3W3	Rear press-fit spacer	.120"/3.27	47 nF 3F3S SA 22 SP2W40 X
3W3	Rear press-fit spacer	.120"/3.22	47 nF 3F3S SA 22 SP4W40 X

PLUG CONNECTOR			
Type	Mounting style 4-40 UNC	Ø A	Capacitance Part Number
3W3	Threaded rear spacer	.120"/3.13	47 nF 3F3S PA 22 SP1AA0 X
3W3	Threaded rear spacer	.130"/3.27	47 nF 3F3S PA 22 SP2AA0 X
3W3	Threaded rear spacer	.120"/3.22	47 nF 3F3S PA 22 SP4AA0 X
3W3	Rear press-fit spacer	.120"/3.13	47 nF 3F3S PA 22 SP1W40 X
3W3	Rear press-fit spacer	.120"/3.27	47 nF 3F3S PA 22 SP2W40 X
3W3	Rear press-fit spacer	.120"/3.22	47 nF 3F3S PA 22 SP4W40 X

PCB clip .122"/3.1 ± .004"/0.10 mm hole diameter and .063"/1.6 mm circuit board thickness. For other capacitance values refer to the part number creator.

Capacitance value	Code
100 nF	28
47 nF	22
12 nF	14
10 nF	12
5 nF	08
1.3 nF	05

C-FILTER COMBINATION D-SUB 3W3C

Press-fit contact – Straight – Precision machined contacts

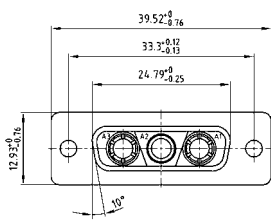


RoHS compliant – UL listed, File No.: E228329

DESCRIPTION

- Coded socket connector = 1 plug and 2 socket contacts
- Coded plug connector = 2 plugs and 1 socket contact
- 707 VDC (other DWV on request)
- Mounting styles:
 - with threaded rear spacer and 4-40 UNC or M3 threaded insert
 - with rear press-fit spacer and 4-40 UNC or M3 threaded insert
- Quality class 3 (also available in quality class 1)
- Shell: Steel tin plated, optionally brass tin plated
- Consists of selective plated contacts

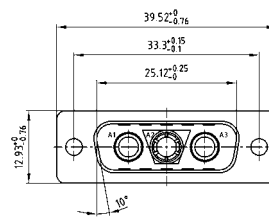
SOCKET CONNECTOR



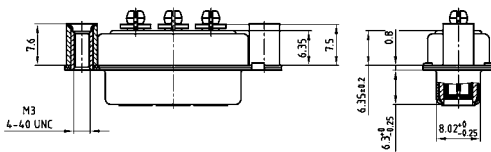
Termination code	Current rating	A ± 0.03	B min.	B max.
P1	30A	3.13	2.96	3.11
P2	30A	3.27	3.10	3.25
P4	30A	3.22	3.02	3.20

Copper thickness 25µm minimum
Tin thickness 5µm minimum
Drilled hole Ø A±0.03 (finished hole after reflow: Ø B min. - Ø B max.)

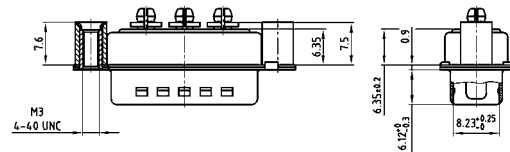
PLUG CONNECTOR



Mounting style: 4-40 UNC threaded rear spacer



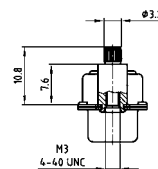
Mounting style: 4-40 UNC threaded rear spacer



Mounting style: 4-40 UNC rear press-fit spacer



Mounting style: 4-40 UNC rear press-fit spacer



ORDER DATA

SOCKET CONNECTOR				
Type	Mounting style 4-40 UNC	Ø A	Capacitance	Part Number
3W3C	Threaded rear spacer	.120" / 3.13	47 nF	3F3C SA 22 SP1AA0 X
3W3C	Threaded rear spacer	.130" / 3.27	47 nF	3F3C SA 22 SP2AA0 X
3W3C	Threaded rear spacer	.120" / 3.22	47 nF	3F3C SA 22 SP4AA0 X
3W3C	Rear press-fit spacer	.120" / 3.13	47 nF	3F3C SA 22 SP1W40X
3W3C	Rear press-fit spacer	.120" / 3.27	47 nF	3F3C SA 22 SP2W40X
3W3C	Rear press-fit spacer	.120" / 3.22	47 nF	3F3C SA 22 SP4W40X

PLUG CONNECTOR				
Type	Mounting style 4-40 UNC	Ø A	Capacitance	Part Number
3W3C	Threaded rear spacer	.120" / 3.13	47 nF	3F3C PA 22 SP1AA0 X
3W3C	Threaded rear spacer	.130" / 3.27	47 nF	3F3C PA 22 SP2AA0 X
3W3C	Threaded rear spacer	.120" / 3.22	47 nF	3F3C PA 22 SP4AA0 X
3W3C	Rear press-fit spacer	.120" / 3.13	47 nF	3F3C PA 22 SP1W40X
3W3C	Rear press-fit spacer	.120" / 3.27	47 nF	3F3C PA 22 SP2W40X
3W3C	Rear press-fit spacer	.120" / 3.22	47 nF	3F3C PA 22 SP4W40X

PCB clip .122" / 3.1 ± .004" / 0.10 mm hole diameter and .063" / 1.6 mm circuit board thickness. For other capacitance values refer to the part number creator.

Capacitance value	Code
100 nF	28
47 nF	22
12 nF	14
10 nF	12
5 nF	08
1.3 nF	05

C-FILTER COMBINATION D-SUB 5W5

Press-fit contact – Straight – Precision machined contacts

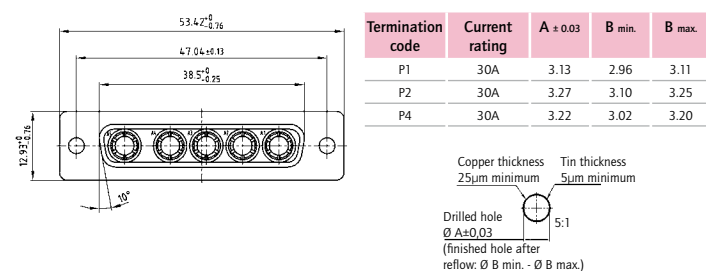


RoHS compliant – UL listed, File No.: E228329

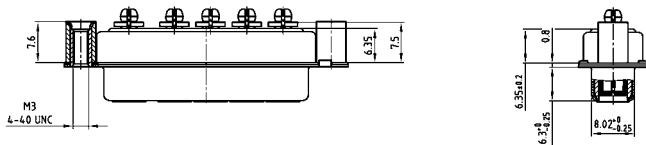
DESCRIPTION

- 707 VDC (other DWV on request)
- Mounting styles:
 - with threaded rear spacer and 4-40 UNC or M3 threaded insert
 - with rear press-fit spacer and 4-40 UNC or M3 threaded insert
- Quality class 3 (also available in quality class 1)
- Shell: Steel tin plated, optionally brass tin plated
- Consists of selective plated contacts

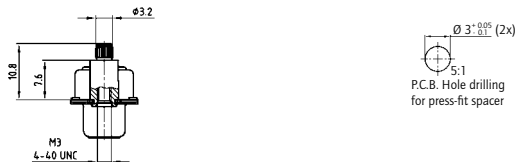
SOCKET CONNECTOR



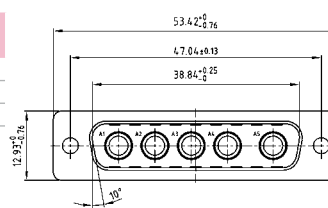
Mounting style: 4-40 UNC threaded rear spacer



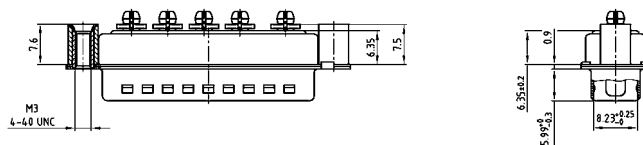
Mounting style: Rear press-fit spacer



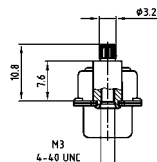
PLUG CONNECTOR



Mounting style: 4-40 UNC threaded rear spacer



Mounting style: Rear press-fit spacer



ORDER DATA

SOCKET CONNECTOR			
Type	Mounting style 4-40 UNC	Ø A	Capacitance Part Number
5W5	Threaded rear spacer	.120" / 3.13	47 nF 5F55 SA 22 SP1AA0 X
5W5	Threaded rear spacer	.130" / 3.27	47 nF 5F55 SA 22 SP2AA0 X
5W5	Threaded rear spacer	.120" / 3.22	47 nF 5F55 SA 22 SP4AA0 X
5W5	Rear press-fit spacer	.120" / 3.13	47 nF 5F55 SA 22 SP1W40 X
5W5	Rear press-fit spacer	.120" / 3.27	47 nF 5F55 SA 22 SP2W40 X
5W5	Rear press-fit spacer	.120" / 3.22	47 nF 5F55 SA 22 SP4W40 X

PLUG CONNECTOR			
Type	Mounting style 4-40 UNC	Ø A	Capacitance Part Number
5W5	Threaded rear spacer	.120" / 3.13	47 nF 5F55 PA 22 SP1AA0 X
5W5	Threaded rear spacer	.130" / 3.27	47 nF 5F55 PA 22 SP2AA0 X
5W5	Threaded rear spacer	.120" / 3.22	47 nF 5F55 PA 22 SP4AA0 X
5W5	Rear press-fit spacer	.120" / 3.13	47 nF 5F55 PA 22 SP1W40 X
5W5	Rear press-fit spacer	.120" / 3.27	47 nF 5F55 PA 22 SP2W40 X
5W5	Rear press-fit spacer	.120" / 3.22	47 nF 5F55 PA 22 SP4W40 X

PCB clip .122" / 3.1 ± .004" / 0.10 mm hole diameter and .063" / 1.6 mm circuit board thickness. For other capacitance values refer to the part number creator.

Capacitance value	Code
100 nF	28
47 nF	22
12 nF	14
10 nF	12
5 nF	08
1.3 nF	05

C-FILTER COMBINATION D-SUB 8W8

Press-fit contact – Straight – Precision machined contacts

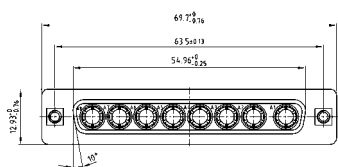


RoHS compliant – UL listed, File No.: E228329

DESCRIPTION

- 707 VDC (other DWV on request)
- Mounting styles:
 - with threaded rear spacer and 4-40 UNC or M3 threaded insert
 - with rear press-fit spacer and 4-40 UNC or M3 threaded insert
- Quality class 3 (also available in quality class 1)
- Shell: Steel tin plated, optionally brass tin plated
- Consists of selective plated contacts

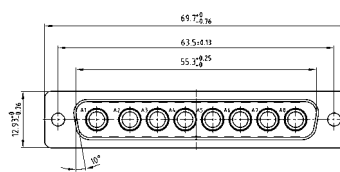
SOCKET CONNECTOR



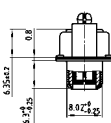
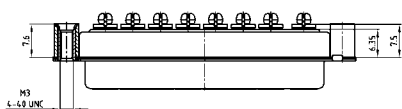
Termination code	Current rating	A ± 0.03	B min.	B max.
P1	30A	3.13	2.96	3.11
P2	30A	3.27	3.10	3.25
P4	30A	3.22	3.02	3.20

Copper thickness 25µm minimum
Tin thickness 5µm minimum
Drilled hole $\varnothing A \pm 0.03$
(finished hole after reflow: $\varnothing B$ min. - $\varnothing B$ max.)

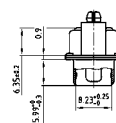
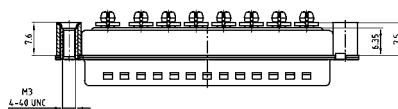
PLUG CONNECTOR



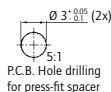
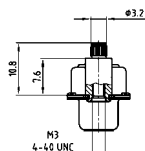
Mounting style: 4-40 UNC threaded rear spacer



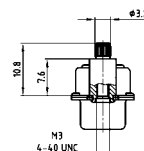
Mounting style: 4-40 UNC threaded rear spacer



Mounting style: 4-40 UNC rear press-fit spacer



Mounting style: 4-40 UNC rear press-fit spacer



ORDER DATA

SOCKET CONNECTOR			
Type	Mounting style 4-40 UNC	$\varnothing A$	Capacitance Part Number
8W8	Threaded rear spacer	.120" / 3.13	47 nF 8F8S SA 22 SP1AA0 X
8W8	Threaded rear spacer	.130" / 3.27	47 nF 8F8S SA 22 SP2AA0 X
8W8	Threaded rear spacer	.120" / 3.22	47 nF 8F8S SA 22 SP4AA0 X
8W8	Rear press-fit spacer	.120" / 3.13	47 nF 8F8S SA 22 SP1W40 X
8W8	Rear press-fit spacer	.120" / 3.27	47 nF 8F8S SA 22 SP2W40 X
8W8	Rear press-fit spacer	.120" / 3.22	47 nF 8F8S SA 22 SP4W40 X

PLUG CONNECTOR			
Type	Mounting style 4-40 UNC	$\varnothing A$	Capacitance Part Number
8W8	Threaded rear spacer	.120" / 3.13	47 nF 8F8S PA 22 SP1AA0 X
8W8	Threaded rear spacer	.130" / 3.27	47 nF 8F8S PA 22 SP2AA0 X
8W8	Threaded rear spacer	.120" / 3.22	47 nF 8F8S PA 22 SP4AA0 X
8W8	Rear press-fit spacer	.120" / 3.13	47 nF 8F8S PA 22 SP1W40 X
8W8	Rear press-fit spacer	.120" / 3.27	47 nF 8F8S PA 22 SP2W40 X
8W8	Rear press-fit spacer	.120" / 3.22	47 nF 8F8S PA 22 SP4W40 X

PCB clip .122" / 3.1 ± .004" / 0.10 mm hole diameter and .063" / 1.6 mm circuit board thickness.
For other capacitance values refer to the part number creator.

Capacitance value	Code
100 nF	28
47 nF	22
12 nF	14
10 nF	12
5 nF	08
1.3 nF	05



Mulder-Hardenberg bv, The Netherlands
Tel.: +31 (0)23 - 531 91 84
info@m-h.biz

Mulder-Hardenberg N.V., Belgium
Tel.: +32 (0)3 - 660 13 20
info@m-h.biz

Mulder-Hardenberg GmbH, Germany
Tel.: +49 (0)6192 - 97 91 85
info@m-h.biz

www.mulder-hardenberg.com