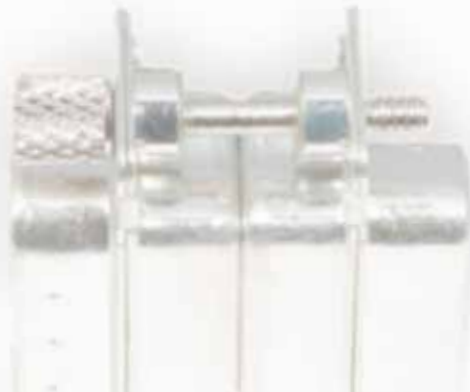


## SECTION 4

# FILTER D-SUB ADAPTERS, FILTER PLATES

In some cases EMC problems do not become apparent until after a device has been put into service where it is exposed to interference in its installed location. Ambient conditions and the device influence one another mutually. Devices with high rates of data transfer or many devices operating simultaneously at different frequencies can cause mutually disruptive interference that prevents satisfactory operation. These conditions cannot always be foreseen during the design phase of a device. Where EMC problems arise under certain operating conditions, CONEC's broad product line of standardized D-SUB filter adapters with a myriad of filter capacities and different filter technologies represents a quick and effective solution.





Retrofit to the existing D-SUB interface connector, this can prove to be the solution to many different EMC problems.

The CONEC team will be glad to help you select the right product.



# PART NUMBER CREATOR

**2 4 3 A 1105 O X**

<b>Product Line</b>	
<b>Design</b>	
3 = Adapter, standard DWV	
4 = Adapter, high DWV	
9* = Adapter, ultra high DWV * on request	
<b>Quality class for contacts</b>	
A = Quality class 3 / 50 mating cycles	
B = Quality class 2 / 200 mating cycles	
C = Quality class 1 / 500 mating cycles	
<b>Serial number</b>	
<b>Design</b>	
OX = Standard design	

## Filter connectors for higher DWV

Increasing requirements, with respect to higher DWV for filter connectors, have induced us to carry out advanced development in this direction. CONEC is capable of delivering filter connectors with DWV of 1500 VDC.

- The various DWV ratings are as follows:
- 1 Standard DWV .....300/424 VDC
  - 2 High DWV.....707 VDC
  - 3 Ultra high DWV.....1000/1500 VDC (on request)

Furthermore, the filter connector can be designed for ultra high DWV of up to 2500 VDC at 10/700 pulse voltage. Filter connectors so designed fulfill the standards established according to CE requirements, i.e. 1414 VDC. For example, capacity ratings range from 180 pF to 1300 pF for standard series.

Special capacitance values are also available.

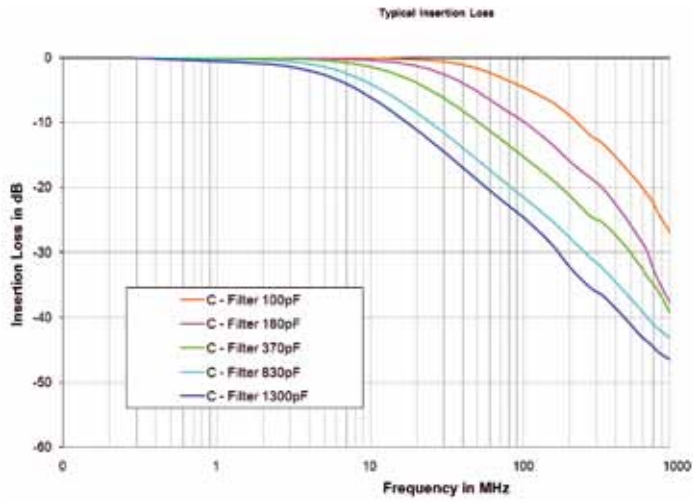
# TECHNICAL DATA

Materials	Filter D-SUB Adapter 9, 15, 25, 37 and 50 position	Filter D-SUB Adapter High-Density 15-, 25-, 44-, and 78 position
Insulator	Polyester GF UL94 V-0	
Contacts	CU alloy	
Contact plating	Gold plated over nickel	
Shell	Steel tin plated / brass tin plated	
Mechanical and electrical characteristics		
Dielectric with standing voltage	<ul style="list-style-type: none"> <li>• Standard 424 VDC</li> <li>• Standard 300 VDC (for .T-Filter)</li> <li>• High DWV 707 VDC</li> <li>• Ultra high DWV 1500 VDC *</li> <li>• Ultra high DWV 1000 VDC * (for .T-Filter)</li> </ul> *on request	<ul style="list-style-type: none"> <li>• Standard 300 VDC</li> </ul>
Working voltage	<ul style="list-style-type: none"> <li>• Standard 100 VDC*</li> <li>• High DWV 100 VDC*</li> <li>• Ultra high DWV 200 VDC*</li> </ul> *Depending on isolation coordination (refer to DIN VDE 0110/IEC 664-1)	<ul style="list-style-type: none"> <li>• Standard 100 VDC*</li> </ul>
Contact resistance	Max. 10 mΩ prior to stressing, Δ R max. 10 mΩ after stressing per DIN 41652, Part 2	
Insulation resistance	≥ 1GΩ	
Current rating	7.5 A (UL) / 5 A (CSA,VDE)	3 A (UL,VDE) / 2.5 A (CSA)
Voltage surge 10/700μs	Standard 300 V High voltage 500 V	Standard 300 V
Mating and unmating forces	9 pos. ≤ 30 N 15 pos. ≤ 50 N 25 pos. ≤ 83 N 37 pos. ≤ 123 N 50 pos. ≤ 167 N	15 pos. ≤ 50 N 26 pos. ≤ 83 N 44 pos. ≤ 110 N 62 pos. ≤ 170 N
Temperature working range	-25°C to +105° C	-25°C to +85°C
Humidity	40°C / 85% relative humidity / RH	
Capacitor values For other capacitance values please contact the factory.	180 pF ± 20% tolerance 370 pF ± 20% tolerance 830 pF ± 20% tolerance 1300 pF ± 20% tolerance other capacitor values on request	180 pF ± 20% tolerance 370 pF ± 20% tolerance 830 pF ± 20% tolerance
Quality class	A = Quality class 3 = 50 mating cycles B = Quality class 2 = 200 mating cycles C = Quality class 1 = 500 mating cycles	

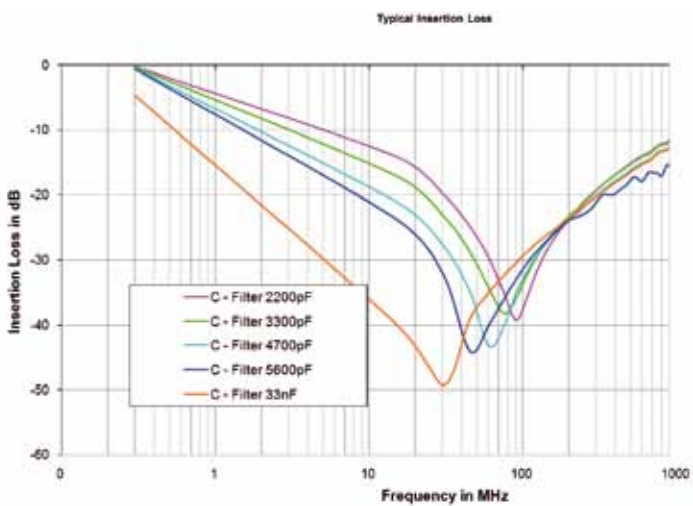
Technical alterations are subject to change without notice.

# INSERTION LOSS

## C-FILTER WITH PLANAR FILTER TECHNOLOGY

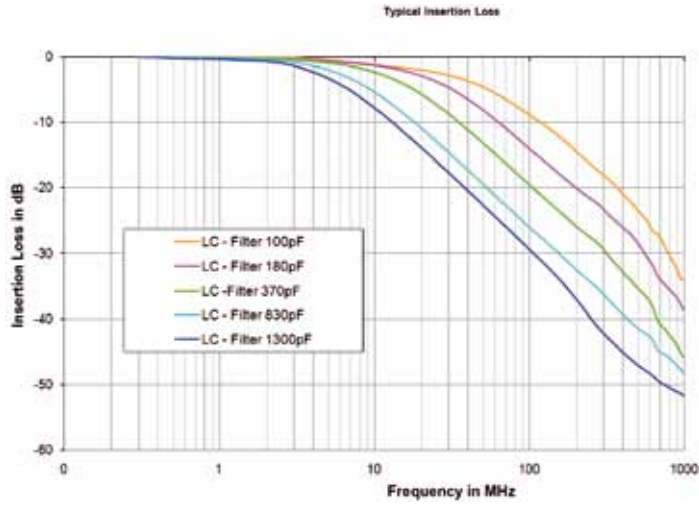


## C-FILTER WITH CHIP TECHNOLOGY

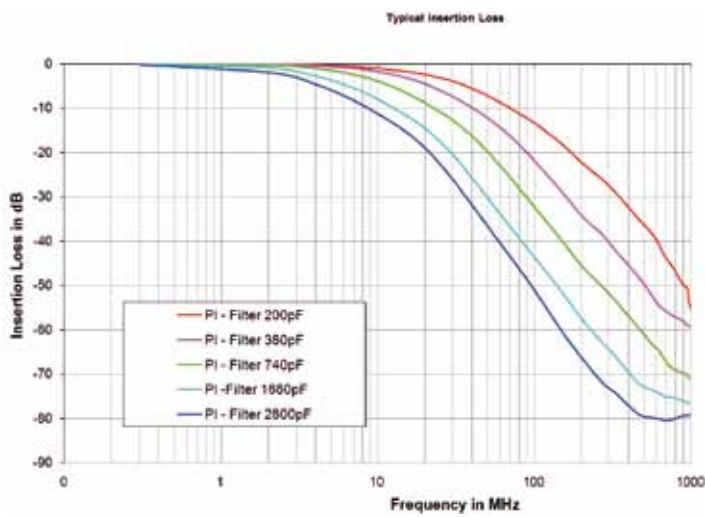


# INSERTION LOSS

## LC-FILTER WITH PLANAR FILTER TECHNOLOGY



## $\pi$ -FILTER WITH PLANAR FILTER TECHNOLOGY



# C-FILTER D-SUB ADAPTER

Socket connector / Plug connector – Precision machined contacts – Full Metal



RoHS compliant – CSA listed, File No.: LR 115000-1 – UL listed, File No.: E202784

## DESCRIPTION

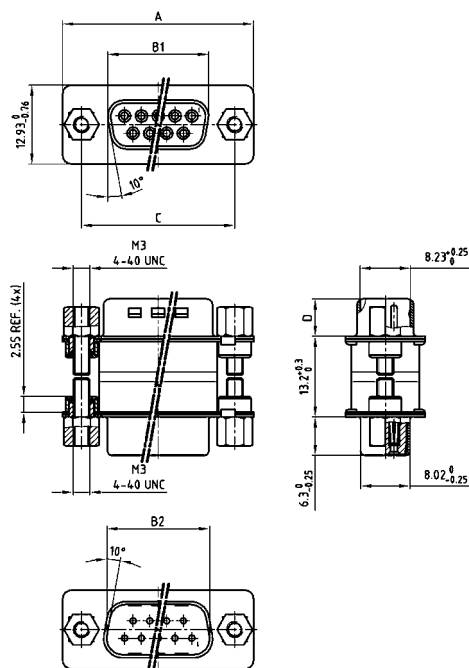
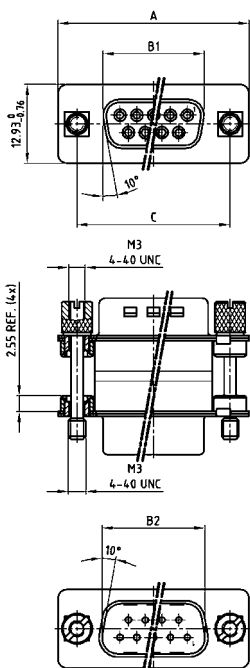
- Mounting styles:
  - with 4-40 UNC or M3 jack screw
  - with 4-40 UNC or M3 hex bolt
- Quality class 3 (also available in quality class 1)
- Shell: Steel tin plated

## PRODUCT DRAWING

Version with jack screw

No. of pos.	A -0.76	B1 -0.25	B2 +0.25	C	D -0.3
09	31.19	16.46	16.79	25.00 $^{+0.12}_{-0.13}$	6.10
15	39.52	24.79	25.12	33.30 $^{+0.15}_{-0.10}$	6.12
25	53.42	38.50	38.84	47.04 $^{+0.13}$	5.99
37	69.70	54.96	55.30	63.50 $^{+0.12}$	5.99

Version with hex bolt



## ORDER DATA

**Capacitance 180 pF**

SOCKET CONNECTOR / PLUG CONNECTOR WITH JACK SCREW		
No. of pos.	Mounting style	Part Number
09	4-40 UNC Jack screw	243 A 12160 X
15	4-40 UNC Jack screw	243 A 12170 X
25	4-40 UNC Jack screw	243 A 12180 X
37	4-40 UNC Jack screw	243 A 12190 X
09	M3 Jack screw	243 A 12320 X
15	M3 Jack screw	243 A 12330 X
25	M3 Jack screw	243 A 12340 X
37	M3 Jack screw	243 A 12350 X

SOCKET CONNECTOR / PLUG CONNECTOR WITH HEX BOLT		
No. of pos.	Mounting style	Part Number
09	4-40 UNC Hex bolt	243 A 13120 X
15	4-40 UNC Hex bolt	243 A 13130 X
25	4-40 UNC Hex bolt	243 A 13140 X
37	4-40 UNC Hex bolt	243 A 13150 X
09	M3 Hex bolt	243 A 13280 X
15	M3 Hex bolt	243 A 13290 X
25	M3 Hex bolt	243 A 13300 X
37	M3 Hex bolt	243 A 13310 X

# C-FILTER D-SUB ADAPTER

Socket connector / Plug connector – Precision machined contacts – Full Metal

**ORDER DATA**

**Capacitance 370 pF**

SOCKET CONNECTOR / PLUG CONNECTOR WITH JACK SCREW			SOCKET CONNECTOR / PLUG CONNECTOR WITH HEX BOLT		
No. of pos.	Mounting style	Part Number	No. of pos.	Mounting style	Part Number
09	4-40 UNC Jack screw	243 A 12200 X	09	4-40 UNC Hex bolt	243 A 13160 X
15	4-40 UNC Jack screw	243 A 12210 X	15	4-40 UNC Hex bolt	243 A 13170 X
25	4-40 UNC Jack screw	243 A 12220 X	25	4-40 UNC Hex bolt	243 A 13180 X
37	4-40 UNC Jack screw	243 A 12230 X	37	4-40 UNC Hex bolt	243 A 13190 X
09	M3 Jack screw	243 A 12360 X	09	M3 Hex bolt	243 A 13320 X
15	M3 Jack screw	243 A 12370 X	15	M3 Hex bolt	243 A 13330 X
25	M3 Jack screw	243 A 12380 X	25	M3 Hex bolt	243 A 13340 X
37	M3 Jack screw	243 A 12390 X	37	M3 Hex bolt	243 A 13350 X

**Capacitance 830 pF**

SOCKET CONNECTOR / PLUG CONNECTOR WITH JACK SCREW			SOCKET CONNECTOR / PLUG CONNECTOR WITH HEX BOLT		
No. of pos.	Mounting style	Part Number	No. of pos.	Mounting style	Part Number
09	4-40 UNC Jack screw	243 A 12240 X	09	4-40 UNC Hex bolt	243 A 13200 X
15	4-40 UNC Jack screw	243 A 12250 X	15	4-40 UNC Hex bolt	243 A 13210 X
25	4-40 UNC Jack screw	243 A 12260 X	25	4-40 UNC Hex bolt	243 A 13220 X
37	4-40 UNC Jack screw	243 A 12270 X	37	4-40 UNC Hex bolt	243 A 13230 X
09	M3 Jack screw	243 A 12400 X	09	M3 Hex bolt	243 A 13360 X
15	M3 Jack screw	243 A 12410 X	15	M3 Hex bolt	243 A 13370 X
25	M3 Jack screw	243 A 12420 X	25	M3 Hex bolt	243 A 13380 X
37	M3 Jack screw	243 A 12430 X	37	M3 Hex bolt	243 A 13390 X

**Capacitance 1300 pF**

SOCKET CONNECTOR / PLUG CONNECTOR WITH JACK SCREW			SOCKET CONNECTOR / PLUG CONNECTOR WITH HEX BOLT		
No. of pos.	Mounting style	Part Number	No. of pos.	Mounting style	Part Number
09	4-40 UNC Jack screw	243 A 12280 X	09	4-40 UNC Hex bolt	243 A 13240 X
15	4-40 UNC Jack screw	243 A 12290 X	15	4-40 UNC Hex bolt	243 A 13250 X
25	4-40 UNC Jack screw	243 A 12300 X	25	4-40 UNC Hex bolt	243 A 13260 X
37	4-40 UNC Jack screw	243 A 12310 X	37	4-40 UNC Hex bolt	243 A 13270 X
09	M3 Jack screw	243 A 12440 X	09	M3 Hex bolt	243 A 13400 X
15	M3 Jack screw	243 A 12450 X	15	M3 Hex bolt	243 A 13410 X
25	M3 Jack screw	243 A 12460 X	25	M3 Hex bolt	243 A 13420 X
37	M3 Jack screw	243 A 12470 X	37	M3 Hex bolt	243 A 13430 X



# C-FILTER D-SUB ADAPTER

Socket connector / Plug connector – Precision machined contacts – Low profile

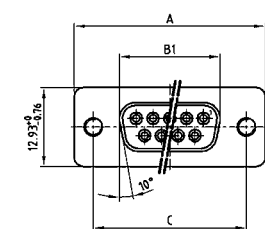


RoHS compliant – CSA listed, File No.: LR 115000-1 – UL listed, File No.: E202784

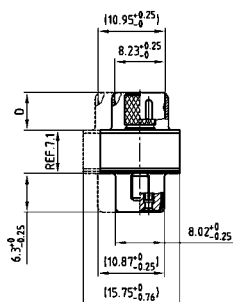
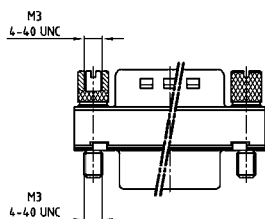
## DESCRIPTION

- Mounting style:  
with 4-40 UNC or M3 jack screw
- Quality class 3 (also available in quality class 1)
- Shell: Steel tin plated

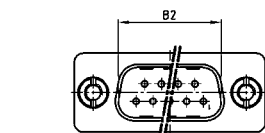
## PRODUCT DRAWING



No. of pos.	A -0.76	B1 -0.25	B2 +0.25	C	D -0.3
09	31.19	16.46	16.79	25.00 <sup>+0.12</sup> <sub>-0.13</sub>	6.10
15	39.52	24.79	25.12	33.30 <sup>+0.15</sup> <sub>-0.10</sub>	6.12
25	53.42	38.50	38.84	47.04 <sup>+0.13</sup>	5.99
37	69.70	54.96	55.30	63.50 <sup>+0.13</sup>	5.99
50	67.31	52.55	52.68	61.10 <sup>+0.14</sup> <sub>-0.11</sub>	5.99



50 pos. = Dim. in ( \_ )



## ORDER DATA

**Capacitance 180 pF**

SOCKET CONNECTOR / PLUG CONNECTOR WITH JACK SCREW			SOCKET CONNECTOR / PLUG CONNECTOR WITH JACK SCREW		
No. of pos.	Mounting style	Part Number	No. of pos.	Mounting style	Part Number
09	4-40 UNC Jack screw	243 A 11030 X	09	M3 Jack screw	243 A 11080 X
15	4-40 UNC Jack screw	243 A 11040 X	15	M3 Jack screw	243 A 11090 X
25	4-40 UNC Jack screw	243 A 11050 X	25	M3 Jack screw	243 A 11100 X
37	4-40 UNC Jack screw	243 A 11060 X	37	M3 Jack screw	243 A 11110 X
50	4-40 UNC Jack screw	243 A 11070 X	50	M3 Jack screw	243 A 11120 X

# C-FILTER D-SUB ADAPTER

Socket connector / Plug connector – Precision machined contacts – Low profile

**ORDER DATA**

Capacitance 370 pF					
SOCKET CONNECTOR / PLUG CONNECTOR WITH JACK SCREW			SOCKET CONNECTOR / PLUG CONNECTOR WITH JACK SCREW		
No. of pos.	Mounting style	Part Number	No. of pos.	Mounting style	Part Number
09	4-40 UNC Jack screw	243 A 10010 X	09	M3 Jack screw	243 A 10510 X
15	4-40 UNC Jack screw	243 A 10020 X	15	M3 Jack screw	243 A 10520 X
25	4-40 UNC Jack screw	243 A 10030 X	25	M3 Jack screw	243 A 10530 X
37	4-40 UNC Jack screw	243 A 10040 X	37	M3 Jack screw	243 A 10540 X
50	4-40 UNC Jack screw	243 A 10130 X	50	M3 Jack screw	243 A 10550 X

Capacitance 830 pF					
SOCKET CONNECTOR / PLUG CONNECTOR WITH JACK SCREW			SOCKET CONNECTOR / PLUG CONNECTOR WITH JACK SCREW		
No. of pos.	Mounting style	Part Number	No. of pos.	Mounting style	Part Number
09	4-40 UNC Jack screw	243 A 10090 X	09	M3 Jack screw	243 A 10610 X
15	4-40 UNC Jack screw	243 A 10100 X	15	M3 Jack screw	243 A 10620 X
25	4-40 UNC Jack screw	243 A 10110 X	25	M3 Jack screw	243 A 10630 X
37	4-40 UNC Jack screw	243 A 10120 X	37	M3 Jack screw	243 A 10640 X
50	4-40 UNC Jack screw	243 A 10150 X	50	M3 Jack screw	243 A 10650 X

Capacitance 1300 pF					
SOCKET CONNECTOR / PLUG CONNECTOR WITH JACK SCREW			SOCKET CONNECTOR / PLUG CONNECTOR WITH JACK SCREW		
No. of pos.	Mounting style	Part Number	No. of pos.	Mounting style	Part Number
09	4-40 UNC Jack screw	243 A 10050 X	09	M3 Jack screw	243 A 10560 X
15	4-40 UNC Jack screw	243 A 10060 X	15	M3 Jack screw	243 A 10570 X
25	4-40 UNC Jack screw	243 A 10070 X	25	M3 Jack screw	243 A 10580 X
37	4-40 UNC Jack screw	243 A 10080 X	37	M3 Jack screw	243 A 10590 X
50	4-40 UNC Jack screw	243 A 10140 X	50	M3 Jack screw	243 A 10600 X

# LC-FILTER D-SUB ADAPTER

Socket connector / Plug connector – Precision machined contacts – Full Metal



RoHS compliant – CSA listed, File No.: LR 115000-1 – UL listed, File No.: E202784

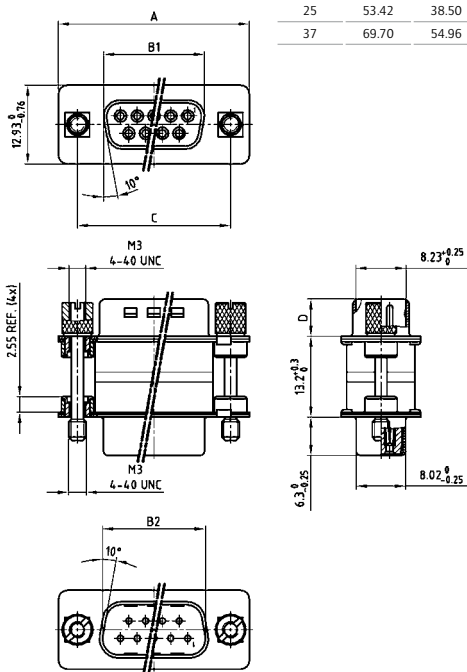
## DESCRIPTION

- Mounting styles:
  - with 4-40 UNC or M3 jack screw
  - with 4-40 UNC or M3 hex bolt
- Quality class 3 (also available in quality class 1)
- Shell: Steel tin plated

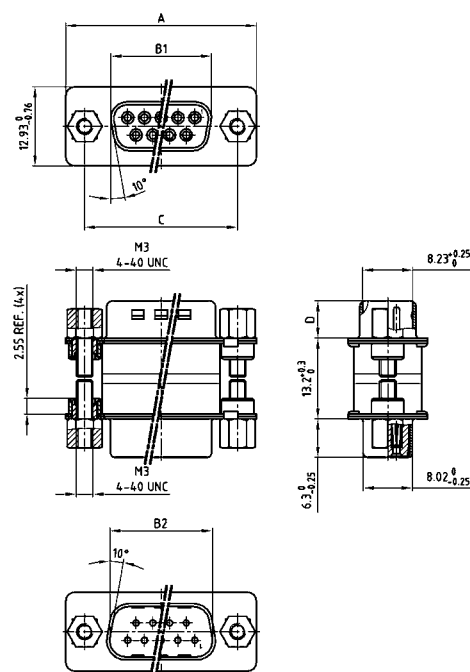
## PRODUCT DRAWING

Version with jack screw

No. of pos.	A -0.76	B1 -0.25	B2 +0.25	C	D -0.3
09	31.19	16.46	16.79	25.00 $^{+0.12}_{-0.13}$	6.10
15	39.52	24.79	25.12	33.30 $^{+0.15}_{-0.10}$	6.12
25	53.42	38.50	38.84	47.04 $^{+0.13}_{-0.13}$	5.99
37	69.70	54.96	55.30	63.50 $^{+0.13}_{-0.13}$	5.99



Version with hex bolt



## ORDER DATA

**Capacitance 180 pF**

SOCKET CONNECTOR / PLUG CONNECTOR WITH JACK SCREW		
No. of pos.	Mounting style	Part Number
09	4-40 UNC Jack screw	243 A 12800 X
15	4-40 UNC Jack screw	243 A 12810 X
25	4-40 UNC Jack screw	243 A 12820 X
37	4-40 UNC Jack screw	243 A 12830 X
09	M3 Jack screw	243 A 12960 X
15	M3 Jack screw	243 A 12970 X
25	M3 Jack screw	243 A 12980 X
37	M3 Jack screw	243 A 12990 X

SOCKET CONNECTOR / PLUG CONNECTOR WITH HEX BOLT		
No. of pos.	Mounting style	Part Number
09	4-40 UNC Hex bolt	243 A 13440 X
15	4-40 UNC Hex bolt	243 A 13450 X
25	4-40 UNC Hex bolt	243 A 13460 X
37	4-40 UNC Hex bolt	243 A 13470 X
09	M3 Hex bolt	243 A 13600 X
15	M3 Hex bolt	243 A 13610 X
25	M3 Hex bolt	243 A 13620 X
37	M3 Hex bolt	243 A 13630 X

# LC-FILTER D-SUB ADAPTER

Socket connector / Plug connector – Precision machined contacts – Full Metal

**ORDER DATA**

**Capacitance 370 pF**

SOCKET CONNECTOR / PLUG CONNECTOR WITH JACK SCREW			SOCKET CONNECTOR / PLUG CONNECTOR WITH HEX BOLT		
No. of pos.	Mounting style	Part Number	No. of pos.	Mounting style	Part Number
09	4-40 UNC Jack screw	243 A 12840 X	09	4-40 UNC Hex bolt	243 A 13480 X
15	4-40 UNC Jack screw	243 A 12850 X	15	4-40 UNC Hex bolt	243 A 13490 X
25	4-40 UNC Jack screw	243 A 12860 X	25	4-40 UNC Hex bolt	243 A 13500 X
37	4-40 UNC Jack screw	243 A 12870 X	37	4-40 UNC Hex bolt	243 A 13510 X
09	M3 Jack screw	243 A 13000 X	09	M3 Hex bolt	243 A 13640 X
15	M3 Jack screw	243 A 13010 X	15	M3 Hex bolt	243 A 13650 X
25	M3 Jack screw	243 A 13020 X	25	M3 Hex bolt	243 A 13660 X
37	M3 Jack screw	243 A 13030 X	37	M3 Hex bolt	243 A 13670 X

**Capacitance 830 pF**

SOCKET CONNECTOR / PLUG CONNECTOR WITH JACK SCREW			SOCKET CONNECTOR / PLUG CONNECTOR WITH HEX BOLT		
No. of pos.	Mounting style	Part Number	No. of pos.	Mounting style	Part Number
09	4-40 UNC Jack screw	243 A 12880 X	09	4-40 UNC Hex bolt	243 A 13520 X
15	4-40 UNC Jack screw	243 A 12890 X	15	4-40 UNC Hex bolt	243 A 13530 X
25	4-40 UNC Jack screw	243 A 12900 X	25	4-40 UNC Hex bolt	243 A 13540 X
37	4-40 UNC Jack screw	243 A 12910 X	37	4-40 UNC Hex bolt	243 A 13550 X
09	M3 Jack screw	243 A 13040 X	09	M3 Hex bolt	243 A 13680 X
15	M3 Jack screw	243 A 13050 X	15	M3 Hex bolt	243 A 13690 X
25	M3 Jack screw	243 A 13060 X	25	M3 Hex bolt	243 A 13700 X
37	M3 Jack screw	243 A 13070 X	37	M3 Hex bolt	243 A 13710 X

**Capacitance 1300 pF**

SOCKET CONNECTOR / PLUG CONNECTOR WITH JACK SCREW			SOCKET CONNECTOR / PLUG CONNECTOR WITH HEX BOLT		
No. of pos.	Mounting style	Part Number	No. of pos.	Mounting style	Part Number
09	4-40 UNC Jack screw	243 A 12920 X	09	4-40 UNC Hex bolt	243 A 13560 X
15	4-40 UNC Jack screw	243 A 12930 X	15	4-40 UNC Hex bolt	243 A 13570 X
25	4-40 UNC Jack screw	243 A 12940 X	25	4-40 UNC Hex bolt	243 A 13580 X
37	4-40 UNC Jack screw	243 A 12950 X	37	4-40 UNC Hex bolt	243 A 13590 X
09	M3 Jack screw	243 A 13080 X	09	M3 Hex bolt	243 A 13720 X
15	M3 Jack screw	243 A 13090 X	15	M3 Hex bolt	243 A 13730 X
25	M3 Jack screw	243 A 13100 X	25	M3 Hex bolt	243 A 13740 X
37	M3 Jack screw	243 A 13110 X	37	M3 Hex bolt	243 A 13750 X

# π-FILTER D-SUB ADAPTER

Socket connector / Plug connector – Precision machined contacts – Full Metal



RoHS compliant – CSA listed, File No.: LR 115000-1 – UL listed, File No.: E202784

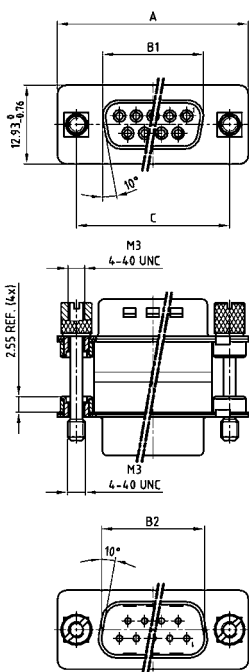
## DESCRIPTION

- Mounting styles:
  - with 4-40 UNC or M3 jack screw
  - with 4-40 UNC or M3 hex bolt
- Quality class 3 (also available in quality class 1)
- Shell: Steel tin plated

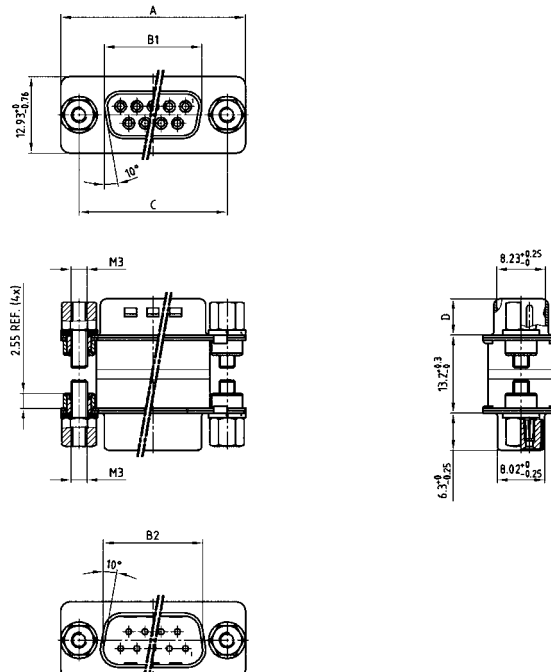
## PRODUCT DRAWING

Version with jack screw

No. of pos.	A -0.76	B1 -0.25	B2 +0.25	C	D -0.3
09	31.19	16.46	16.79	25.00 <sup>+0.12</sup> / <sub>0.13</sub>	6.10
15	39.52	24.79	25.12	33.30 <sup>+0.15</sup> / <sub>0.10</sub>	6.12
25	53.42	38.50	38.84	47.04 <sup>+0.13</sup> / <sub>0.13</sub>	5.99
37	69.70	54.96	55.30	63.50 <sup>+0.13</sup> / <sub>0.13</sub>	5.99



Version with hex bolt



## ORDER DATA

**Capacitance 2 x 180 pF**

SOCKET CONNECTOR / PLUG CONNECTOR WITH JACK SCREW		
No. of pos.	Mounting style	Part Number
09	4-40 UNC Jack screw	MAP 1XAAAR02R361 X
15	4-40 UNC Jack screw	MAP 2XAAAR02R361 X
25	4-40 UNC Jack screw	MAP 3XAAAR02R361 X
37	4-40 UNC Jack screw	MAP 4XAAAR02R361 X
09	M3 Jack screw	MAP 1XAAAR01R361 X
15	M3 Jack screw	MAP 2XAAAR01R361 X
25	M3 Jack screw	MAP 3XAAAR01R361 X
37	M3 Jack screw	MAP 4XAAAR01R361 X

SOCKET CONNECTOR / PLUG CONNECTOR WITH HEX BOLT		
No. of pos.	Mounting style	Part Number
09	4-40 UNC Hex bolt	MAP 1XAAAH02R361 X
15	4-40 UNC Hex bolt	MAP 2XAAAH02R361 X
25	4-40 UNC Hex bolt	MAP 3XAAAH02R361 X
37	4-40 UNC Hex bolt	MAP 4XAAAH02R361 X
09	M3 Hex bolt	MAP 1XAAAH01R361 X
15	M3 Hex bolt	MAP 2XAAAH01R361 X
25	M3 Hex bolt	MAP 3XAAAH01R361 X
37	M3 Hex bolt	MAP 4XAAAH01R361 X

# π-FILTER D-SUB ADAPTER

Socket connector / Plug connector – Precision machined contacts – Full Metal

**ORDER DATA**

**Capacitance 2 x 370 pF**

SOCKET CONNECTOR / PLUG CONNECTOR WITH JACK SCREW			SOCKET CONNECTOR / PLUG CONNECTOR WITH HEX BOLT		
No. of pos.	Mounting style	Part Number	No. of pos.	Mounting style	Part Number
09	4-40 UNC Jack screw	MAP 1XAAAR02R741 X	09	4-40 UNC Hex bolt	MAP 1XAAAH02R741 X
15	4-40 UNC Jack screw	MAP 2XAAAR02R741 X	15	4-40 UNC Hex bolt	MAP 2XAAAH02R741 X
25	4-40 UNC Jack screw	MAP 3XAAAR02R741 X	25	4-40 UNC Hex bolt	MAP 3XAAAH02R741 X
37	4-40 UNC Jack screw	MAP 4XAAAR02R741 X	37	4-40 UNC Hex bolt	MAP 4XAAAH02R741 X
09	M3 Jack screw	MAP 1XAAAR01R741 X	09	M3 Hex bolt	MAP 1XAAAH01R741 X
15	M3 Jack screw	MAP 2XAAAR01R741 X	15	M3 Hex bolt	MAP 2XAAAH01R741 X
25	M3 Jack screw	MAP 3XAAAR01R741 X	25	M3 Hex bolt	MAP 3XAAAH01R741 X
37	M3 Jack screw	MAP 4XAAAR01R741 X	37	M3 Hex bolt	MAP 4XAAAH01R741 X

**Capacitance 2 x 830 pF**

SOCKET CONNECTOR / PLUG CONNECTOR WITH JACK SCREW			SOCKET CONNECTOR / PLUG CONNECTOR WITH HEX BOLT		
No. of pos.	Mounting style	Part Number	No. of pos.	Mounting style	Part Number
09	4-40 UNC Jack screw	MAP 1XAAAR02R162 X	09	4-40 UNC Hex bolt	MAP 1XAAAH02R162 X
15	4-40 UNC Jack screw	MAP 2XAAAR02R162 X	15	4-40 UNC Hex bolt	MAP 2XAAAH02R162 X
25	4-40 UNC Jack screw	MAP 3XAAAR02R162 X	25	4-40 UNC Hex bolt	MAP 3XAAAH02R162 X
37	4-40 UNC Jack screw	MAP 4XAAAR02R162 X	37	4-40 UNC Hex bolt	MAP 4XAAAH02R162 X
09	M3 Jack screw	MAP 1XAAAR01R162 X	09	M3 Hex bolt	MAP 1XAAAH01R162 X
15	M3 Jack screw	MAP 2XAAAR01R162 X	15	M3 Hex bolt	MAP 2XAAAH01R162 X
25	M3 Jack screw	MAP 3XAAAR01R162 X	25	M3 Hex bolt	MAP 3XAAAH01R162 X
37	M3 Jack screw	MAP 4XAAAR01R162 X	37	M3 Hex bolt	MAP 4XAAAH01R162 X

**Capacitance 2 x 1300 pF**

SOCKET CONNECTOR / PLUG CONNECTOR WITH JACK SCREW			SOCKET CONNECTOR / PLUG CONNECTOR WITH HEX BOLT		
No. of pos.	Mounting style	Part Number	No. of pos.	Mounting style	Part Number
09	4-40 UNC Jack screw	MAP 1XAAAR02R262 X	09	4-40 UNC Hex bolt	MAP 1XAAAH02R262 X
15	4-40 UNC Jack screw	MAP 2XAAAR02R262 X	15	4-40 UNC Hex bolt	MAP 2XAAAH02R262 X
25	4-40 UNC Jack screw	MAP 3XAAAR02R262 X	25	4-40 UNC Hex bolt	MAP 3XAAAH02R262 X
37	4-40 UNC Jack screw	MAP 4XAAAR02R262 X	37	4-40 UNC Hex bolt	MAP 4XAAAH02R262 X
09	M3 Jack screw	MAP 1XAAAR01R262 X	09	M3 Hex bolt	MAP 1XAAAH01R262 X
15	M3 Jack screw	MAP 2XAAAR01R262 X	15	M3 Hex bolt	MAP 2XAAAH01R262 X
25	M3 Jack screw	MAP 3XAAAR01R262 X	25	M3 Hex bolt	MAP 3XAAAH01R262 X
37	M3 Jack screw	MAP 4XAAAR01R262 X	37	M3 Hex bolt	MAP 4XAAAH01R262 X

# C-FILTER D-SUB ADAPTER – HIGH DENSITY

Socket connector / Plug connector – Precision machined contacts – Low profile



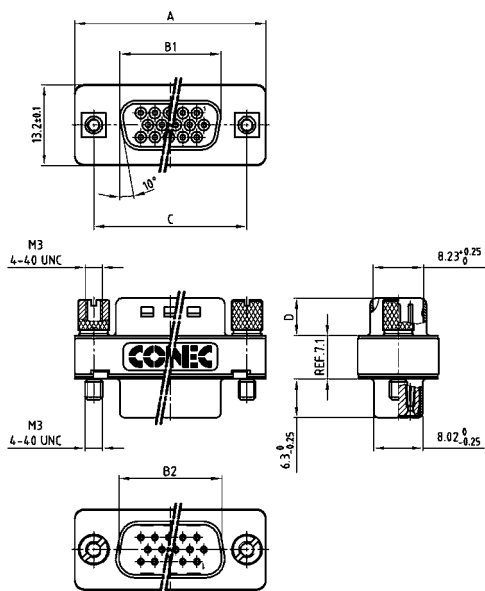
RoHS compliant – CSA listed, File No.: LR 115000-1 – UL listed, File No.: E202784

## DESCRIPTION

- Mounting style:  
with 4-40 UNC or M3 jack screw
- Quality class 3 (also available in quality class 1)
- Shell: Steel tin plated

## PRODUCT DRAWING

C-Filter design



No. of pos.	A -0.76	B1 -0.25	B2 +0.25	C	D -0.3
15	31.19	16.46	16.79	25.00 <sup>+0.12</sup> <sub>-0.13</sub>	6.10
26	39.52	24.79	25.12	33.30 <sup>+0.15</sup> <sub>-0.10</sub>	6.12
44	53.42	38.50	38.84	47.04 <sup>+0.13</sup>	5.99
62	69.70	54.96	55.30	63.50 <sup>+0.13</sup>	5.99

## ORDER DATA

SOCKET CONNECTOR / PLUG CONNECTOR WITH C-FILTER			SOCKET CONNECTOR / PLUG CONNECTOR WITH C-FILTER		
No. of pos.	Mounting style	Part Number	No. of pos.	Mounting style	Part Number
<b>Capacitance 180 pF</b>					
15	4-40 UNC Jack screw	243 A 11600 X	15	M3 Jack screw	243 A 11720 X
26	4-40 UNC Jack screw	243 A 11610 X	26	M3 Jack screw	243 A 11730 X
44	4-40 UNC Jack screw	243 A 11620 X	44	M3 Jack screw	243 A 11740 X
62	4-40 UNC Jack screw	243 A 11630 X	62	M3 Jack screw	243 A 11750 X
<b>Capacitance 370 pF</b>					
15	4-40 UNC Jack screw	243 A 11640 X	15	M3 Jack screw	243 A 11760 X
26	4-40 UNC Jack screw	243 A 11650 X	26	M3 Jack screw	243 A 11770 X
44	4-40 UNC Jack screw	243 A 11660 X	44	M3 Jack screw	243 A 11780 X
62	4-40 UNC Jack screw	243 A 11670 X	62	M3 Jack screw	243 A 11790 X
<b>Capacitance 830 pF</b>					
15	4-40 UNC Jack screw	243 A 11680 X	15	M3 Jack screw	243 A 11800 X
26	4-40 UNC Jack screw	243 A 11690 X	26	M3 Jack screw	243 A 11810 X
44	4-40 UNC Jack screw	243 A 11700 X	44	M3 Jack screw	243 A 11820 X
62	4-40 UNC Jack screw	243 A 11710 X	62	M3 Jack screw	243 A 11830 X

# LC-FILTER D-SUB ADAPTER – HIGH DENSITY

Socket connector / Plug connector – Precision machined contacts – Low profile



RoHS compliant – CSA listed, File No.: LR 115000-1 – UL listed, File No.: E202784

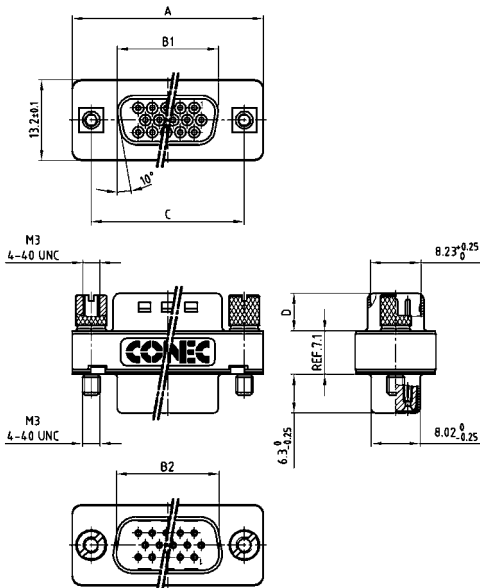
## DESCRIPTION

- Mounting style:  
with 4-40 UNC or M3 jack screw
- Quality class 3 (also available in quality class 1)
- Shell: Steel tin plated

## PRODUCT DRAWING

LC-Filter design

No. of pos.	A -0.76	B1 -0.25	B2 +0.25	C	D -0.3
15	31.19	16.46	16.79	25.00 <sup>+0.12</sup> <sub>-0.13</sub>	6.10
26	39.52	24.79	25.12	33.30 <sup>+0.15</sup> <sub>-0.10</sub>	6.12
44	53.42	38.50	38.84	47.04 <sup>+0.13</sup>	5.99
62	69.70	54.96	55.30	63.50 <sup>+0.13</sup>	5.99



## ORDER DATA

SOCKET CONNECTOR / PLUG CONNECTOR WITH LC-FILTER			SOCKET CONNECTOR / PLUG CONNECTOR WITH LC-FILTER		
No. of pos.	Mounting style	Part Number	No. of pos.	Mounting style	Part Number
<b>Capacitance 180 pF</b>					
15	4-40 UNC Jack screw	243 A 13780 X	15	M3 Jack screw	243 A 13900 X
26	4-40 UNC Jack screw	243 A 13790 X	26	M3 Jack screw	243 A 13910 X
44	4-40 UNC Jack screw	243 A 13800 X	44	M3 Jack screw	243 A 13920 X
62	4-40 UNC Jack screw	243 A 13810 X	62	M3 Jack screw	243 A 13930 X
<b>Capacitance 370 pF</b>					
15	4-40 UNC Jack screw	243 A 13820 X	15	M3 Jack screw	243 A 13940 X
26	4-40 UNC Jack screw	243 A 13830 X	26	M3 Jack screw	243 A 13950 X
44	4-40 UNC Jack screw	243 A 13840 X	44	M3 Jack screw	243 A 13960 X
62	4-40 UNC Jack screw	243 A 13850 X	62	M3 Jack screw	243 A 13970 X
<b>Capacitance 830 pF</b>					
15	4-40 UNC Jack screw	243 A 13860 X	15	M3 Jack screw	243 A 13980 X
26	4-40 UNC Jack screw	243 A 13870 X	26	M3 Jack screw	243 A 13990 X
44	4-40 UNC Jack screw	243 A 13880 X	44	M3 Jack screw	243 A 14000 X
62	4-40 UNC Jack screw	243 A 13890 X	62	M3 Jack screw	243 A 14010 X



# C-FILTER D-SUB ADAPTER – HIGH DENSITY

Socket connector / Plug connector – Precision machined contacts – Special design



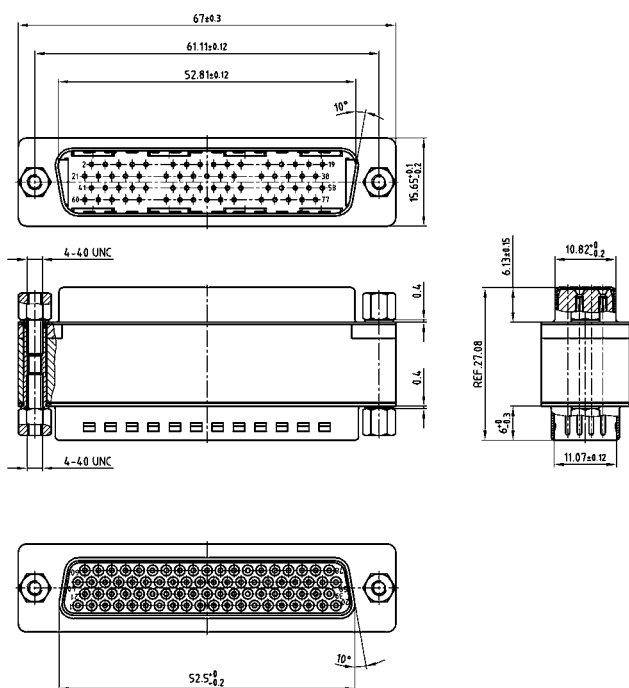
RoHS compliant – CSA listed, File No.: LR 115000-1 – UL listed, File No.: E202784

## DESCRIPTION

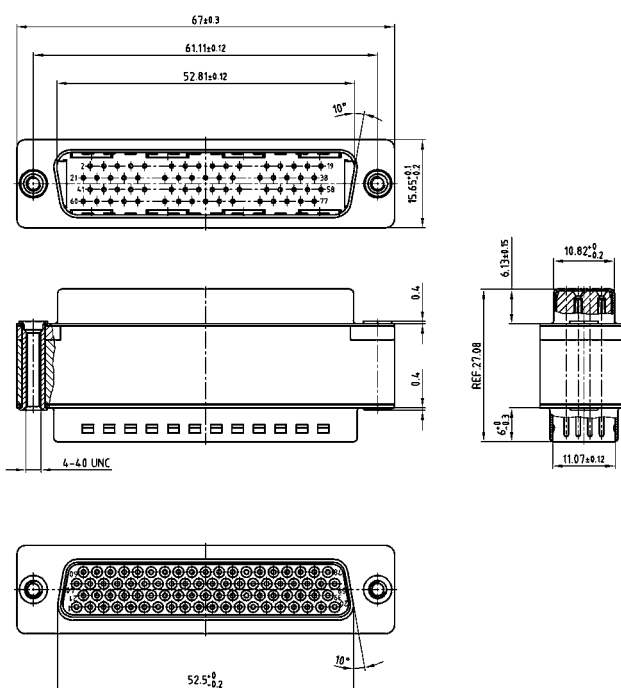
- Special design: 64 contacts in 78 pos. shell
- Impulse withstand voltage 2500 KV (10/700 μs)
- Working voltage 1000 VDC
- Mounting styles:
  - with 4-40 UNC hex bolt
  - with 4-40 UNC threaded insert
- Quality class 1 (other quality classes on request)
- Shell: Steel tin plated

## PRODUCT DRAWING

Design with hex bolt

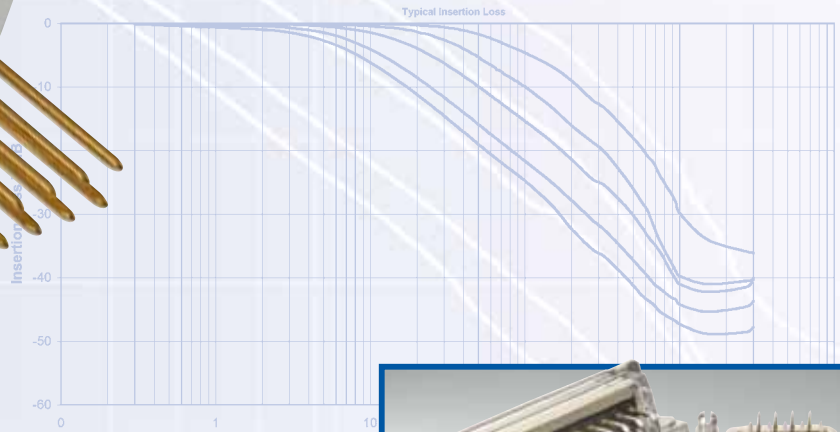


Design with threaded insert



## ORDER DATA

Capacitance 1000 pF			
SOCKET CONNECTOR / PLUG CONNECTOR WITH HEX BOLT		SOCKET CONNECTOR / PLUG CONNECTOR WITH THREADED INSERT	
No. of pos.	Mounting style	Part Number	Part Number
64 / 78	4-40 UNC Hex bolt	244 C 13760 X	244 C 13770 X



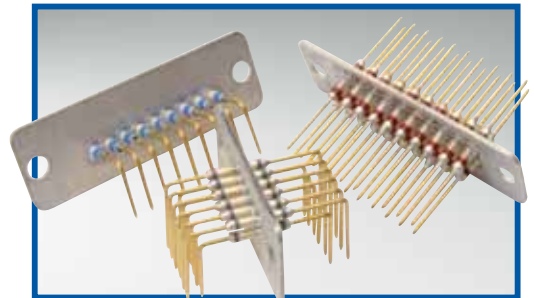
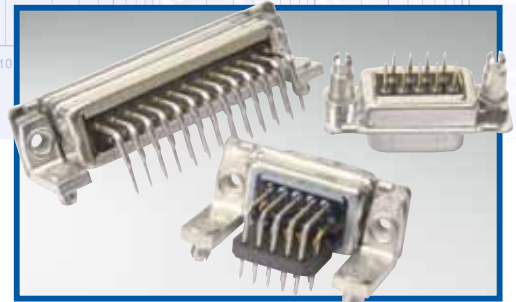
# CONEC Filter connectors

Integration of connectors with filter saves space on the printed board and reduced EMI/RFI problems.

CONEC offers a wide range of connectors with single and multi-level filter technology. Today CONEC connectors are a compact component of optimal screening concepts.

CONEC – intelligent EMI/RFI protection for your application.

- Filter D-SUB connectors
- Filter Combination D-SUB connectors
- Filtered 7W2/9W4 Connectors for  $\mu$ TCA Power Supply
- Filter Adapters
- Filter Plates
- Customer Specific Filter Applications
- RJ45-Magnetic Modular Jacks
- IP67 protected Filter Connectors



## C- AND $\pi$ -FILTER PLATES

CONEC EMI filter plates are used in modules or systems where the transmission of clean, interference-free signals is a top priority. Filter plates are simple to install, they are either mounted directly on the enclosure or even directly onto the PC board. Mounting holes are provided to fasten the filter plate with screws or rivets.

Each contact on the filter plate can be specified for a C- or  $\pi$ -filter to achieve ideal adaptation to the requirements of the given application. Various different filter capacitance values are available. Aside from standard filter values, a myriad of other filter capacitances can be realized and a single filter plate can also be populated with a mix of different capacitance values. The following pages provide a small overview of standard configurations.

The additional configuration please contact factory.



# PART NUMBER CREATOR

**CFP 1 B 2 0 8 C 101 1 X**

**Product line**

**Lead spacing configuration**

- 1 = Lead spacing .100" / 2.54 mm
- 2 = Lead spacing .079" / 2.00 mm (only in C-Filter available)

**Base plate size**

- A = 1.060" / 26.92 mm x = .500" / 12.70 mm
- B = 1.560" / 39.62 mm x = .500" / 12.70 mm
- C = 2.560" / 65.02 mm x = .500" / 12.70 mm
- D = 3.560" / 90.42 mm x = .500" / 12.70 mm

**Number of rows**

- 1 = Single row (bottom row)
- 2 = Double rows

**Number of filter per row**

.100" / 2.54 mm lead spacing	.079" / 2.00 mm lead spacing
Plate size A: 01.....05	Plate size A: 02.....06
Plate size B: 01.....10	Plate size B: 03.....12
Plate size C: 01.....20	Plate size C: 10.....25
Plate size D: 13.....30	Plate size D: 20.....37

**Filter circuits**

- C = C-Filter
- P =  $\pi$ -Filter

**Capacitance**

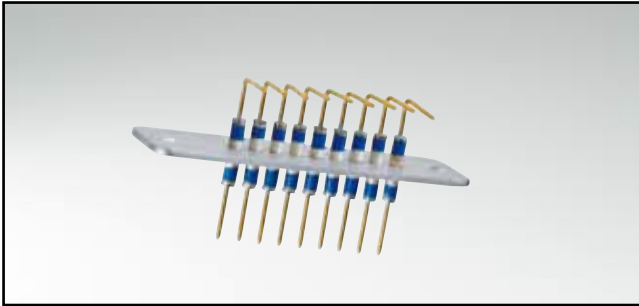
C-Filter	$\pi$ -Filter
680 = 0068pF ± 20%	680 = 0068pF ± 20%
101 = 0100pF ± 20%	101 = 0100pF ± 20%
141 = 0140pF + 100/-0%	141 = 0140pF + 100/-0%
471 = 0470pF ± 20%	471 = 0470pF ± 20%
821 = 0820pF ± 20%	821 = 0820pF ± 20%
102 = 1000pF ± 20%	102 = 1000pF ± 20%
152 = 1500pF ± 20%	172 = 1700pF + 100/-0%
252 = 2500pF + 100/-0%	252 = 2500pF + 100/-0%
402 = 4000pF + 100/-0%	502 = 5000pF + 100/-0%

**Termination**

- 1 = Round contact straight
- 2 = Round contact 90° left
- 3 = Round contact 90° right
- 4 = Round contact 90° both
- 5 = Square contacts straight (only with .100" / 2.54 mm lead spacing available)

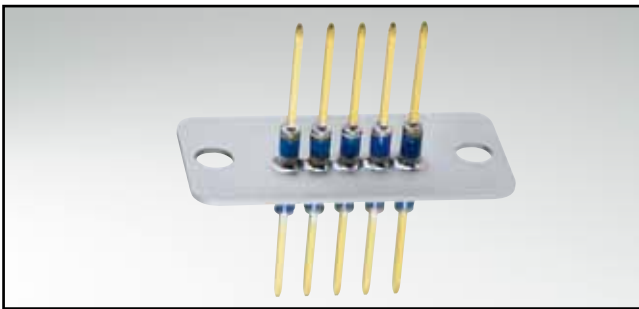
- X = Standard

## OVERVIEW C- AND $\pi$ -FILTER PLATES



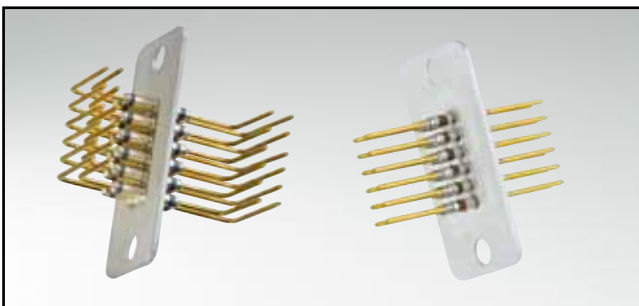
### DESCRIPTION

- C- or  $\pi$ -Filter Plates lead spacing .100"/2.54 mm, 1-row
- Round contact  $\varnothing$  .025"/0.64 mm
- Number of positions: 1-21 filter contacts
- Designs:
  - straight
  - 90° left
  - 90° right
  - 90° both
- Diverse filter capacitance



### DESCRIPTION

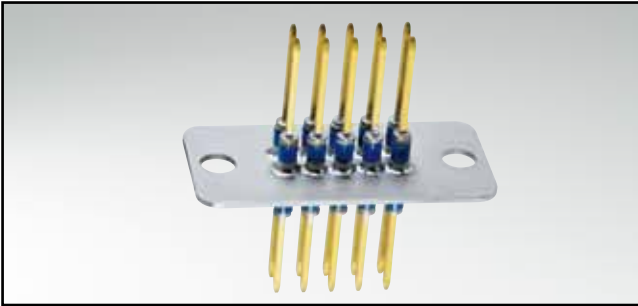
- C- or  $\pi$ -Filter Plates lead spacing .100"/2.54 mm, 1-row
- Square end pin .025"/0,64 x .025"/0,64 mm
- Number of positions: 1-21 filter contacts
- Design: Straight
- Diverse filter capacitance



### DESCRIPTION

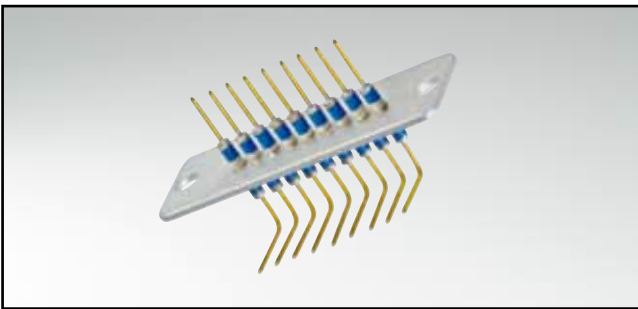
- C- or  $\pi$ -Filter Plates lead spacing .100"/2.54 mm, 2-row
- Round contact  $\varnothing$  .025"/0.64 mm
- Number of positions: 2-42 filter contacts
- Designs:
  - straight
  - 90° left
  - 90° right
  - 90° both
- Diverse filter capacitance

## OVERVIEW C- AND $\pi$ -FILTER PLATES



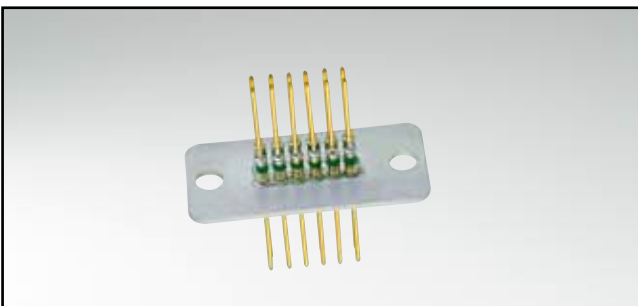
### DESCRIPTION

- C- or  $\pi$ -Filter Plates lead spacing .100" / 2.54 mm, 2-row
- Square end pin .025" / 0,64 x .025" / 0,64 mm
- Number of positions: 2-42 filter contacts
- Design: Straight
- Diverse filter capacitance



### DESCRIPTION

- C- or  $\pi$ -Filter Plates lead spacing .079" / 2.00 mm, 1-row
- Round contact  $\varnothing$  .020" / 0.51 mm
- Number of positions: 2-28 filter contacts
- Designs:
  - straight
  - 90° left
  - 90° right
  - 90° both
- Diverse filter capacitance



### DESCRIPTION

- C- or  $\pi$ -Filter Plates lead spacing .079" / 2.00 mm, 2-row
- Round contact  $\varnothing$  .020" / 0.51 mm
- Number of positions: 4-56 filter contacts
- Designs:
  - straight
  - 90° left
  - 90° right
  - 90° both
- Diverse filter capacitance