



# Composite Series

## MIL-DTL-38999 Series III

# 8D - D38999 Composite Series



## Connector part numbers

<b>Basic Series</b>	<b>8D</b>	<b>0</b>	<b>-</b>	<b>11</b>	<b>J</b>	<b>35</b>	<b>P</b>	<b>N</b>	<b>-</b>	<b>-</b>	<b>L</b>
<b>Shell style:</b>											
0: Square flange receptacle											
5: Plug with RFI shielding											
<b>Type:</b>											
None: Connectors with standard crimp contacts.											
L: Receptacle with long PC tail (male and female size #22D, #20).											
C: Receptacle with short PC tail (male and female #22D, #20, #16).											
S: Receptacle with specific PC tail (male et female #22D)											
W: Receptacle with male contacts #22D for wire wrap (3 wraps)											
T: Receptacle with male contacts #20 for wire wrap (2 wraps)											
P: Receptacle with solder cup (male and female size #22D; male #16 & #12; female #16 & #12 and male female #20 please consult us)											
<b>Shell size: 09, 11, 13, 15, 17, 19, 21, 23, 25</b>											
<b>Plating:</b>											
J: Olive drab cadmium											
M: Nickel											
X: Without plating											
<b>Contact layout:</b> See pages 11 to 14											
<b>Contact type:</b>											
P: Pin (500 mating/unmating)											
H: Pin (1500 mating/unmating)											
A: Connector supplied less pin contact or with specific contacts (connector marking: A + orientation)											
S: Socket (500 mating/unmating)											
J: Socket (1500 mating/unmating)											
B: Connector supplied less socket contact or with specific contacts (connector marking: B + orientation)											
<b>Orientation: N, A, B, C, D, E</b> (see page 65)											
<b>Specification:</b>											
046: Tinned straight PC tail											
251: Connector provided with power contacts (layouts with contact #8)											
022: Fuel tank											
<b>Special custom:</b>											
None: Standard plastic cap											
M: Antistatic plastic cap											
L: For P or S contact type only, connectors delivered without contacts, connectors marking P or S plus orientation.											

## MIL-DTL-38999 part numbers\*

<b>Basic Series</b>	<b>D38999</b>	<b>20</b>	<b>M</b>	<b>B</b>	<b>35</b>	<b>P</b>	<b>N</b>	<b>L</b>
<b>Shell style:</b>								
20: Square flange receptacle								
26: Plug with RFI shielding.								
<b>Plating:</b>								
J: Olive drab cadmium								
M: Nickel								
<b>Shell size: 09=A, 11=B, 13=C, 15=D, 17=E, 19=F, 21=G, 23=H, 25=J</b>								
<b>Contact layout:</b> See page 15 for layout according to MIL-DTL-38999								
<b>Contact type:</b>								
P: Pin (500 mating/unmating)								
H: Pin (1500 mating/unmating)								
A: Connector supplied less pin contact or with specific contacts (connector marking: A + orientation)								
S: Socket (500 mating/unmating)								
J: Socket (1500 mating/unmating)								
B: Connector supplied less socket contact or with specific contacts (connector marking: B + orientation)								
<b>Orientation: N, A, B, C, D, E</b> (see page 65)								
L: For P or S contact type only, connector delivered without contacts, connector marking P or S (without L)								

\* Note: To place an order of MIL connectors delivered without MIL removable crimp contacts and keep P or S plus orientation marking, it must be specify clearly on the order (by adding a suffix L at the end of the P/N or specified in comment).

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## BACC part numbers

<b>Basic Series:</b> BACC63CT: 8D5*M (composite plug) BACC63CU: 8D0*M (composite square flange receptacle)	<b>BACC63CT</b>	<b>13</b>	<b>98</b>	<b>P</b>	<b>N</b>	<b>H</b>
<b>Shell size:</b> 09=A, 11=B, 13=C, 15=D, 17=E, 19=F, 21=G, 23=H, 25=J						
<b>Contact layout:</b> See page 15 for layout according to BACC						
<b>Contact type:</b> P: Pin A: Connector supplied less pin contact or with specific contacts (connector marking: A + orientation) S: Socket B: Connector supplied less socket contact or with specific contacts (connector marking: B + orientation)						
<b>Orientation:</b> N, A, B, C, D, E (see page 65)						
H: Without contacts & without filler plug = L -: Empty with contacts						

## EN3645 part numbers

<b>Basic Series</b>	<b>EN3645</b>	<b>J</b>	<b>6</b>	<b>G</b>	<b>N</b>	<b>35</b>	<b>B</b>	<b>N</b>
<b>Plating:</b> J: Olive drab cadmium M: Nickel								
<b>Shell style:</b> 0: Square flange receptacle 6: Plug								
<b>Shell size:</b> 09=A, 11=B, 13=C, 15=D, 17=E, 19=F, 21=G, 23=H, 25=J								
<b>Grounding:</b> N: Standard insert not grounded								
<b>Contact layout:</b> See page 15 for layout according to EN3645								
<b>Contact type:</b> A: Connector supplied less pin contact B: Connector supplied less socket contact F: Socket M: Pin								
<b>Orientation:</b> N, A, B, C, D, E (see page 65)								

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## Dimensions

Receptacle type 0										
	Shell size	A Max	B Max	C Max	D Thread	E <sup>±0.3</sup>	F	G	H <sup>±0.2</sup>	J <sup>±0.2</sup>
	09 (A)	19.65	11.96	3.65	M12 x 1-6g	23.8	18.26	15.09	3.25	5.49
11 (B)	M15 x 1-6g				26.2	20.62	18.26	4.93		
13 (C)	M18 x 1-6g				28.6	23.01	20.62	4.39		
15 (D)	M22 x 1-6g				31	24.61	23.01			
17 (E)	M25 x 1-6g				33.3	26.97	24.61			
19 (F)	3.7	M28 x 1-6g	36.5	29.36	26.97	4.93				
21 (G)	18.85	12.76	4.35	M31 x 1-6g	39.7	31.75	29.36	3.91	6.15	
23 (H)				4.4	M34 x 1-6g	42.9	34.93			31.75
25 (J)					M37 x 1-6g	46	38.1			34.93

Plug type 5				
	Shell size	A Max.	B thread	C Max.
	09 (A)	31.00	M12 x 1-6g	21.80
11 (B)	31.00	M15 x 1-6g	25.00	
13 (C)	31.00	M18 x 1-6g	29.40	
15 (D)	31.00	M22 x 1-6g	32.50	
17 (E)	31.00	M25 x 1-6g	35.70	
19 (F)	31.00	M28 x 1-6g	38.50	
21 (G)	31.00	M31 x 1-6g	41.70	
23 (H)	31.00	M34 x 1-6g	44.90	
25 (J)	31.00	M37 x 1-6g	48.00	

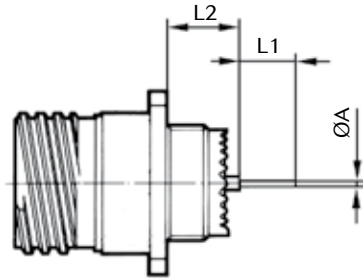
Mated connectors			
	Shell size	A Max.	B Max.
	09 (A)	37.00	52.30
11 (B)	37.00	52.30	
13 (C)	37.00	52.30	
15 (D)	37.00	52.30	
17 (E)	37.00	52.30	
19 (F)	37.00	52.30	
21 (G)	36.00	51.30	
23 (H)	36.00	51.30	
25 (J)	36.00	51.30	

Note: All dimensions are in millimeters (mm)

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## Receptacle with straight PC tail contacts



	Shell size			09 (A)	11 (B)	13 (C)	15 (C)	17 (E)	19 (F)	21 (G)	23 (H)	25 (J)
	Contact size	Contact type	PC tail type									
A	#22D	M & F	L & C	0.70								
	#22D	M & F	S	0.50								
	#20	M & F	C	0.70								
	#16	M & F	C	1.15								
L1	#22D	M & F	L	8.50								
	#22D	M & F	C	4.00								
	#22D	M & F	S	5.00								
	#20	M & F	C	5.00								
	#16	M & F	C	5.00								
L2	Min	#22D	M	L & C	9.48				9.59			
	Max	#22D	M	L & C	10.38				10.48			
	Min	#22D	F	L & C	9.15				9.26			
	Max	#22D	F	L & C	10.58				10.69			
	Min	#22D	M	S	9.65				9.76			
	Max	#22D	M	S	10.55				10.65			
	Min	#22D	F	S	9.65				9.76			
	Max	#22D	F	S	10.55				10.65			
	Min	#20	M	C	9.65				9.76			
	Max	#20	M	C	10.55				10.65			
	Min	#20	F	C	9.65				9.76			
	Max	#20	F	C	10.55				10.65			
	Min	#16	M	C	9.65				9.76			
	Max	#16	M	C	10.55				10.65			
	Min	#16	F	C	9.65				9.76			
	Max	#16	F	C	10.55				10.65			

M: Male contact    F: Female contact    L: Long PC tail    C: Short PC tail    S: Specific PC tail

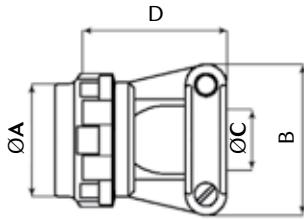
Note: All dimensions are in millimeters (mm)

# 8D - D38999 Composite Series

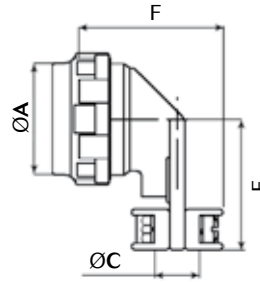


## Backshells

### Straight cable clamp (Type 91)



### 90° cable clamp (Type 92)



Shell size	ØA Max	B Max	C Max	D Max	E	F
09	21.80	24.90	5.55	21.25	22.20	26.95
11	25.00	26.00	6.70	24.30	23.80	27.95
13	29.40	30.50	8.75	27.95	26.20	30.00
15	32.50	33.00	11.70	27.95	28.60	33.00
17	35.70	36.10	13.85	31.25	33.30	35.05
19	38.50	38.60	15.60	35.80	34.95	36.85
21	41.70	41.65	17.75	38.35	38.10	39.15
23	44.90	45.00	19.80	42.15	41.30	41.15
25	48.00	48.00	21.60	44.70	44.45	42.95

Basic Series

M85049

91

11

M

**Backshell type:**

91: Straight cable clamp

92: 90° cable clamp

**Shell size:**

09, 11, 13, 15, 17, 19, 21, 23, 25

**Plating:**

J: Olive drab cadmium over electroless nickel

M: Electroless nickel

T: Without plating

Note: All dimensions are in millimeters (mm)

# 8D - D38999 Composite Series



## Connectors weight

	With contacts				Without contact			
	Plug (type 5)		Receptacle (type 0)		Plug (type 5)		Receptacle (type 0)	
	Male	Female	Male	Female	Male	Female	Male	Female
09-35	8.5	10.1	7.8	9.4	8.1	8.6	7.4	7.9
09-98	8.5	9.8	7.8	9.1	8.1	8.6	7.4	7.9
11-01	12.8	15.7	10.4	13.3	12.1	14.1	9.7	11.7
11-02	11.5	14.1	09.3	11.8	10.9	12.5	08.7	10.3
11-04	12.6	15.7	10.2	13.3	12.0	14.1	9.7	11.7
11-05	12.6	15.8	10.2	13.4	11.9	13.8	9.5	11.5
11-22	11.4	13.8	09.1	11.6	11.1	12.8	08.8	10.6
11-35	12.5	16.0	10.1	13.6	11.6	12.8	9.2	10.4
11-80	15.25	18.6	13.40	10.4	10.75	11.63	08.90	09.4
11-98	12.5	15.3	10.1	12.9	11.7	12.8	9.3	10.5
11-99	11.8	15.0	09.6	12.8	10.8	12.2	08.6	10.0
13-04	17.2	20.9	13.7	17.5	15.6	17.9	12.4	14.3
13-08	17.6	22.8	14.1	19.2	16.5	19.6	12.9	16.1
13-26	17.9	23.6	14.4	20.1	16.2	18.9	12.7	15.4
13-35	17.4	23.1	13.8	19.6	15.8	17.6	12.3	14.1
13-98	17.2	21.8	13.7	18.3	15.8	17.9	12.3	14.3
15-05	21.4	26.7	16.6	21.9	19.8	22.8	15.0	18.0
15-15	22.2	29.3	17.4	24.5	19.9	23.0	15.1	18.1
15-18	22.4	31.3	17.6	26.5	19.9	24.0	15.0	19.2
15-19	22.0	29.6	17.1	24.8	19.2	22.0	14.5	17.2
15-35	22.0	31.3	17.2	26.5	19.4	22.0	14.6	17.2
15-97	21.8	28.9	17.1	24.1	19.4	22.6	14.7	17.8
17-02	26.51	38.85	25.23	37.57	19.35	22.35	18.07	21.07
17-06	25.9	35.5	23.2	32.8	21.9	25.9	19.2	23.2
17-08	24.9	33.6	22.2	30.1	22.4	27.4	19.7	24.7
17-26	25.5	36.3	22.8	33.6	21.8	25.9	19.2	23.1
17-35	25.7	39.3	23.0	36.6	21.9	25.5	19.2	22.8
17-75	31.3	42.6	28.6	39.9	22.3	28.6	19.6	25.9
17-99	25.5	36.1	22.8	33.4	22.0	26.1	19.3	23.4
19-11	32.1	45.7	26.1	39.7	28.7	37.1	22.7	31.1
19-32	31.3	44.7	25.3	38.7	26.8	31.9	20.8	25.9
19-35	31.6	48.1	25.6	42.0	27.1	31.6	21.0	25.6
21-11	38.0	57.9	32.8	52.6	30.8	40.3	25.5	35.1
21-16	35.1	50.4	29.9	45.2	30.2	37.9	24.9	32.7
21-35	35.4	56.1	30.1	50.8	29.9	36.3	24.6	31.1
21-39	36.8	57.1	31.5	51.9	31.0	40.8	25.7	35.5
21-41	35.3	52.7	30.1	47.5	29.6	36.3	24.3	31.0
21-48	42.41	62.40	37.71	57.70	29.3	36.2	24.6	31.5
21-75	47.3	64.2	42.6	59.50	29.3	36.2	24.6	31.5
23-21	43.1	66.3	38.0	61.2	36.5	49.9	31.5	44.8
23-35	41.4	67.5	36.3	62.5	34.4	42.5	29.3	37.5
23-53	41.5	63.6	36.4	58.6	34.1	42.4	29.0	37.4
23-55	42.2	65.3	42.2	60.2	34.5	43.3	29.4	38.2
25-07	53.6	90.05	49.0	84.85	37.8	51.8	33.2	46.6
25-11	59.08	81.60	54.48	77.00	40.8	53.8	36.2	49.2
25-19	51.7	83.7	46.6	78.6	39.2	53.3	34.0	48.2
25-24	51.2	82.5	46.1	77.4	39.6	54.0	34.4	48.9
25-29	49.5	78.5	44.4	73.4	40.5	55.9	35.4	50.7
25-35	47.3	80.1	42.2	75.0	38.4	48.1	33.2	43.0
25-37	49.27	80.36	45.47	76.16	37.8	51.50	34.0	47.30
25-44	69.64	93.70	65.04	94.65	36.1	45.80	31.5	46.75
25-43	49.6	80.2	44.4	75.1	40.1	55.4	35.0	50.3
25-46	51.9	75.7	46.7	70.1	37.2	47.4	32.1	42.2
25-61	46.6	73.4	41.5	68.2	38.1	48.9	32.9	43.8
25-08	72.9	104.8	67.8	99.6	36.9	48.8	31.8	43.6
25-20	57.9	88.2	52.8	83.0	36.4	46.6	31.3	41.5
25-04	50.4	80.2	45.3	75.0	41.2	54.8	36.1	49.6

Weight in gram (+/- 15%)