

Amphenol® 97 Series Connectors with solder contacts



DESIGN CHARACTERISTICS

- Medium to heavy weight cylindrical
- Durable, field-proven design
- Environmental resistant
- Single key/keyway polarization
- Threaded coupling, hard dielectric inserts
- Non-rotating contacts
- Operating temperatures from -55°C to $+125^{\circ}\text{C}$
- Cost effective
- Intermateable and intermountable with existing 97 Series and MIL-C-5015 connectors
- Underwriters Laboratories approved recognition File E115497
- Canadian Standards Association Certification File LR69183

CUSTOMER OPTIONS

- Solid or split shell construction
- Six shell styles
- 128 contact arrangements, from 1 to 52 circuits
- Alternate insert positioning
- High temperature and potting constructions
- Special plating finishes including black and green zinc alloy
- Optional gold plating on MS contacts
- Thermocouple arrangements available

Connector components are fabricated from high grade aluminum alloy, with a conductive cadmium plate finish and an olive drab chromate after-treatment. Some cable clamps are a zinc alloy with an olive drab/green chromate finish. See how to order page 19 for other finish variations.

Contacts are silver plated with pre-tinned solder cups. Optional gold over silver plating is also available. Inserts for solder style contacts are diallyl-phthalate.

Users should be aware that classes "A" and "B" of MIL-C-5015 have been cancelled, and these products are no longer qualified.

97 series solder type insert availability

Insert Number	Total Contacts	Mechanical Spacing		Service Rating	Contact Size				
		Inches	mm		0	4	8	12	16
8S-1+	1	1/16	1.57	INST.					1
10SL-3	3	1/16	1.57	A					3
10SL-4	2	1/16	1.57	A					2
12SL-844+*	4	1/16	1.57	A					4
12S-3	2	1/16	1.57	A					2
12-5+	1	1/8	3.18	D				1	
12S-6+*	2	1/16	1.57						2 Thermo- couple
14S-1†	3	1/16	1.57	A					3
14S-2	4			INST.					4
14S-4+†	1	1/8	3.18	D					1
14S-5	5			INST.					5
14S-6	6			INST.					6
14S-7	3	1/16	1.57	A					3
14S-9†	2	1/16	1.57	A					2
16S-1	7	1/16	1.57	A					7
16S-4+	2	1/8	3.18	D					2
16S-5	3	1/16	1.57	A					3
16S-6+†	3	1/16	1.57	A					3
16-7	3	1/16	1.57	A			1		2
16S-8	5	1/16	1.57	A					5
16-9	4	1/16	1.57	A				2	2
16-10	3	1/16	1.57	A				3	
16-11+†	2	1/16	1.57	A				2	
16-12	1	1/16	1.57	A		1			
16-13	2	1/16	1.57	A					2 Thermo- couple
18-1	10	1/16	1.57	A INST.					4 6
18-3†	2	1/8	3.18	D				2	
18-4	4	1/8	3.18	D					4
18-5+	3	1/8	3.18	D				2	1
18-8	8	1/16	1.57	A				1	7
18-9+	7			INST.				2	5
18-10†	4	1/16	1.57	A				4	
18-11	5	1/16	1.57	A				5	
18-12†	6	1.16	1.57	A					6
18-13	4	1/16	1.57	A			1	3	
18-16	1	5/16	7.92	C				1	
18-19†	10	1/16	1.57	A					10
18-20	5	1/16	1.57	A					5
18-22†	3	1/8	3.18	D					3
18-29+†	5	1/16	1.57	A					5
18-420*	1								1 Hi-Volt- age**
20-3†	3	1/8	3.18	D				3	

Insert Number	Total Contacts	Mechanical Spacing		Service Rating	Contact Size				
		Inches	mm		0	4	8	12	16
20-4	4	1/8	3.18	D				4	
20-6†	3	1/8	3.18	D					3
20-7	8	1/8 1/16	3.18 1.57	D A					4 4
20-8	6			INST.			2		4
20-11†	13			INST.					13
20-14	5	1/16	1.57	A			2	3	
20-15	7	1/16	1.57	A				7	
20-16	9	1/16	1.57	A				2	7
20-17	6	1/16	1.57	A				5	1
20-18	9	1/16	1.57	A				3	6
20-19†	3	1/16	1.57	A			3		
20-21	9	1/16	1.57	A				1	8
20-23	2	1/16	1.57	A			2		
20-24	4	1/16	1.57	A			2		2
20-27	14	1/16	1.57	A					14
20-29	17	1/16	1.57	A					17
20-33	11	1/16	1.57	A					11
22-1†	2	1/8	3.18	D			2		
22-2	3	1/8	3.18	D			3		
22-4†	4	1/16	1.57	A			2	2	
22-5	6	1/8	3.18	D			2	4	
22-8†	2	3/16	4.75	E				2	
22-9	3	3/16	4.75	E				3	
22-10	4	3/16	4.75	E					4
22-11	2	1/4	6.35	B					2
22-12	5	1/8	3.18	D			2		3
22-13†	5	1/8 1/16	3.18 1.57	D A					1 4
22-14	19	1/16	1.57	A					19
22-15	6	3/16 1/16	4.75 1.57	E A					1 5
22-16†	9	1/16	1.57	A				3	6
22-18	8	1/8 1/16	3.18 1.57	D A					5 3
22-19	14	1/16	1.57	A					14
22-20†	9	1/16	1.57	A					9
22-22	4	1/16	1.57	A			4		
22-23	8	1/8 1/16	3.18 1.57	D A				1	7

Not all insert arrangements are currently available for environmental individual wire seal. Consult Amphenol, Sidney, NY for availability.

† Inactive for new military design, but available for replacement or for non-military purposes.

* "MS" number not assigned. Use "97" prefix in place of "MS" in completing catalog number. See how to order, page 19.

** Hi-Voltage = 17KVAC/24KVDC

‡ Molded-in pin (MIP) insert requires (910) deviation. See how to order, pg. 19.

97 series solder type insert availability, cont.

Insert Number	Total Contacts	Mechanical Spacing		Service Rating	Contact Size				
		Inches	mm		0	4	8	12	16
22-26*	7	1/8	3.18					2	5
22-27	9	1/8	3.18	D			1		
		1/16	1.57	A					8
22-28†	7	1/16	1.57	A				7	
22-34	5	1/8	3.18	D				3	2
24-2	7	1/8	3.18	D				7	
24-5†	16	1/16	1.57	A					16
24-6	8	1/8	3.18	D				3	
		1/16	1.57	A				5	
24-7	16	1/16	1.57	A				2	14
24-9†	2	1/16	1.57	A		2			
24-10	7	1/16	1.57	A			7		
24-11	9	1/16	1.57	A			3	6	
24-12	5	1/16	1.57	A		2		3	
24-16	7	1/8	3.18	D			1		3
		1/16	1.57	A					3
24-19†	12	1/16	1.57						12
24-20*	11	1/8	3.18	D				2	9
24-21	10	1/8	3.18	D			1		9
24-22*	4	1/8	3.18	D			4		
24-27	7	3/16	4.75	E					7
24-28	24	1/16	1.57	INST.					24
28-1	9	1/8	3.18	D			1	2	
		1/16	1.57	A			2	4	
28-2	14	1/8	3.18	D				2	12
28-3	3	3/16	4.75	E			3		
28-6†	3	1/8	3.18	D		3			
28-8	12	1/16	1.57	A					9
		1/8	3.18	D					1
		3/16	4.75	E				2	
28-9	12	1/8	3.18	D				6	6
28-10	7	1/8	3.18	D				1	
		1/16	1.57	A		2	2	2	
28-11	22	1/16	1.57	A				4	18
28-12	26	1/16	1.57	A					26
28-15†	35	1/16	1.57	A					35
28-16†	20	1/16	1.57	A					20
28-17	15	1/4	6.35	B					1
		1/8	3.18	D					3
		1/16	1.57	A					11
28-18	12	5/16	7.92	C					1
		1/8	3.18	D					5
		1/16	1.57	A					2
				INST.				4	
28-19	10	1/4	6.35	B					2
		1/8	3.18	D					2
		1/16	1.57	A				4	2

Insert Number	Total Contacts	Mechanical Spacing		Service Rating	Contact Size				
		Inches	mm		0	4	8	12	16
28-20	14	1/16	1.57	A				10	4
28-21	37	1/16	1.57	A					37
32-5†	2	1/8	3.18	D	2				
32-6	23	1/16	1.57	A		2	3	2	16
32-7	35	1/16	1.57	A				7	24
				INST.					4
32-8†	30	1/16	1.57	A				6	24
32-13	23	1/8	3.18	D				5	18
32-17	4	1/8	3.18	D		4			
32-414	52	1/16	1.57	A					52
36-1†	22	1/8	3.18	D				4	18
36-5	4	1/16	1.57	A	4				
36-6	6	1/16	1.57	A	2	4			
36-7	47	1/16	1.57	A				7	40
36-8	47	1/16	1.57	A				1	46
36-9	31	1/16	1.57	A		1	2	14	14
36-10	48	1/16	1.57	A					48
36-15	35	1/16	1.57	A					34
		1/8	3.18	D					1
36-403*	52	1/16	1.57	A					52

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97 series solder type insert arrangements

Front view of pin insert or rear of socket insert illustrated.

Items highlighted are most popular and most readily available.

1 Contact

Insert Arrangement	8S-1	12-5	14S-4†	16-12	18-16	18-420*
Contacts	1#16	1#12	1#16	1#4	1#12	1#12
Service Rating	INST.	D	D	A	C	High Voltage 17KVAC/24KVDC

2 Contacts

Insert Arrangement	10SL-4	12S-3	12S-6*	14S-9†	16S-4	16-11†	16-13
Contacts	2#16	2#16	2#16	2#16	2#16	2#12	2#12
Service Rating	A	A	Thermocouple	A	D	A	A
Insert Arrangement	18-3†	20-23†	22-1†	22-8†	22-11	24-9†	32-5†
Contacts	2#12	2#8	2#8	2#12	2#16	2#4	2#0
Service Rating	D	A	D	E	B	A	D

3 Contacts

Insert Arrangement	10SL-3	14S-1†	14S-7	16S-5†	16S-6†	16-7	16-10	18-22†
Contacts	3#16	3#16	3#16	3#16	3#16	1#8, 2#16	3#12	3#16
Service Rating	A	A	A	A	A	A	A	D
Insert Arrangement	20-3†	20-6†	20-19†	22-2	22-9	28-3	28-6†	
Contacts	3#12	3#16	3#8	3#8	3#12	3#8	3#4	
Service Rating	D	D	A	D	E	E	D	