

Amphenol

Amphenol-Tuchel Electronics GmbH

C 091 A/B/D Series Circular Connectors



C 091 D



Main Features

- Metal locking ring; screw locking according to DIN EN 60130-9 / IEC 60130-9
- Full metal construction
- Protection class IP 65 and IP 67
- Number of contacts: 3 – 8, 12 and 14 contacts
- Internal strain relief
- Good shielding effectiveness when mated and locked
- Male and female cable connectors
 - Straight or right angled
 - Solder connection: 3 – 8, 12 and 14 contacts
 - Crimp connection: 3 – 8 contacts
 - With cable glands for cable diameter 4 – 6 mm or 6 – 8 mm
- Male and female receptacles
 - Panel mount types for front or rear panel mounting
 - Pcb mount types, straight
 - With 4-hole flange
 - With dip solder contacts of various contact lengths
 - Solder connection: 3 – 8, 12 and 14 contacts
 - Crimp connection: 3 – 8 contacts
- UL registered under file number E 63 093 UL













UNDERWRITERS LABORATORIES INC.

¹⁾ In general approvals refer to representative versions of the connector series. Test report upon request.

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Characteristics

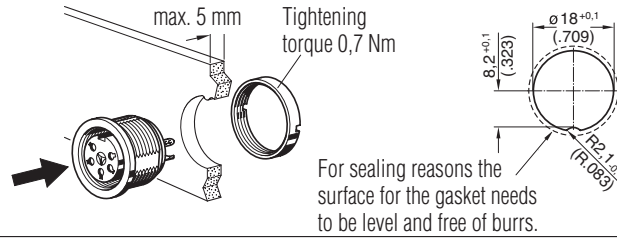
General Characteristics	Standard	Characteristics									
Number of contacts		3	4	5	5 Stereo	6	7	7	8	12	14
View on termination side of contact insert											
Contact arrangement acc. to DIN		41 524	–	–	41 524	45 322	–	45 329	45 326	–	–
Contact arrangement acc. to IEC		60130-9	60130-9	–	60130-9	60130-9	–	60130-9	60130-9	–	–
Electrical Characteristics											
Rated voltage	IEC 60664-1	300 V ≈			100V ≈	300 V ≈			100 V ≈		150 V ≈
Rated voltage	UL 1977	250 V								60 V	
Rated impulse withstand voltage	IEC 60664-1	1500 V			1200 V	1500 V			1200 V		
Pollution degree	IEC 60664-1	1									
Installation category	IEC 60664-1	I									
Insulation group	IEC 60664-1	II, 400 ≤ CTI < 600									
Current rating	IEC 60512-5-2 Test 5 b UL 1977	5 A / + 40 °C / + 104 °F please refer also to current derating curves page 45								3 A / + 40 °C / + 104 °F	
Insulation resistance	IEC 60512-3-1 Test 3 a	> 10 ¹⁰ Ω									
Contact resistance	IEC 60512-2-1 Test 2 a	< 5 m Ω									
Climatic Characteristics											
Climatic category	IEC 60668-1	40 / 100 / 56									
Temperature range	IEC 60668-1	- 40 °C ... + 100 °C / - 40 °F ... + 212 °F									
Mechanical Characteristics											
IP-degree	IEC 60529	IP 67 / IP 65									
Insertion and withdrawal forces	IEC 60512-13-2 Test 13 b	25 N 90.oz	30 N 110.oz	35 N 125.oz	50 N 180.oz	55 N 200.oz	60 N 220.oz	50 N 180.oz			
Mechanical operation	IEC 60512 Test 9 a	Silver ≥ 500 mating cycles Gold ≥ 1000 mating cycles									
Materials											
Housing material		die cast, nickel plated									
Dielectric material		thermoplastic									
Sealing material		neoprene									
Contact plating		silver plated / gold plated *									
Further Characteristics											
Termination technique		solder, crimp								solder	
Wire gauge		solder: ≤ 0,5 mm ² / 20 AWG crimp: 2 - 6 pol (excluding 5S): 0,09 - 1,00 mm ² / 28 - 18 AWG crimp: 5S, 7, 7S and 8-pol.: 0,09 - 0,75 mm ² / 28 - 20 AWG								≤ 0,25 mm ² /24 AWG	
Flammability		UL 94 V0									
Locking system	IEC 60130-9	metal screw coupling; tightening torque 0,5 - 0,7 Nm									
UL	UL 1977	Conditions of acceptability									

Caution: Do not connect or disconnect under load. Metal housing parts shall be securely incorporated to protected ground.

* **Remark for gold plated contacts:** In order to avoid brittle inter-metallic connections, gold-plated terminals have to be tin-plated in the solder area.

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Female receptacle for front mounting



For sealing reasons the surface for the gasket needs to be level and free of burrs.

Panel cutout

Description	Drawing	No. of cont.	Part Number solder termination		Part Number Crimp termination ¹⁾		
			Contact plating silver	Contact plating gold ²⁾			
Female receptacle, termination: solder or crimp, contact plating: silver or gold, panel mounting with ring nut, sealing with O-Ring.		3 ³⁾	C091 31N003 100 2	–	C091 11N003 000 2		
		4	C091 31N004 100 2	–	C091 11N004 000 2		
		5	C091 31N005 100 2	C091 31N005 200 2	C091 11N005 000 2		
		5S ³⁾	C091 31N105 100 2	–	C091 11N105 000 2		
		6 ³⁾	C091 31N006 100 2	–	C091 11N006 000 2		
		7	C091 31N007 100 2	–	C091 11N007 000 2		
		7 ³⁾	C091 31N107 100 2	–	C091 11N107 000 2		
		8 ³⁾	C091 31N008 100 2	C091 31N008 200 2	C091 11N008 000 2		
		12	C091 31N012 100 2	C091 31N012 200 2	–		
		14	C091 31N014 100 2	C091 31N014 200 2	–		
		Female receptacle, termination: straight dip solder, contact plating: silver or gold, pin length 15 mm from flange, panel mounting with ring nut, sealing with O-Ring, solder area: tin plated.		3 ³⁾	C091 61N003 110 2	–	–
				4 ³⁾	C091 61N004 110 2	–	–
				5	C091 61N005 110 2	–	–
				5S ³⁾	C091 61N105 110 2	–	–
6	C091 61N006 110 2			–	–		
7	C091 61N007 110 2			–	–		
7 ³⁾	C091 61N107 110 2			–	–		
8 ³⁾	C091 61N008 110 2			–	–		
12	–			C091 61N012 210 2	–		
14	–			C091 61N014 210 2	–		
Female receptacle, termination: straight dip solder, contact plating: silver, pin length 19 mm from flange, panel mounting with ring nut, sealing with O-Ring, solder area: tin plated.				3 ³⁾	C091 61N003 120 2	–	–
				4 ³⁾	C091 61N004 120 2	–	–
				5	C091 61N005 120 2	–	–
				5S ³⁾	C091 61N105 120 2	–	–
		6 ³⁾	C091 61N006 120 2	–	–		
		7	C091 61N007 120 2	–	–		
		7 ³⁾	C091 61N107 120 2	–	–		
		8 ³⁾	C091 61N008 120 2	–	–		
		12	–	–	–		
		14	–	–	–		
		Female receptacle, termination: straight dip solder, contact plating: silver, pin length 24 mm from flange, panel mounting with ring nut, sealing with O-Ring, solder area: tin plated.		3 ³⁾	C091 61N003 130 2	–	–
				4 ³⁾	C091 61N004 130 2	–	–
				5	C091 61N005 130 2	–	–
				5S ³⁾	C091 61N105 130 2	–	–
6 ³⁾	C091 61N006 130 2			–	–		
7	C091 61N007 130 2			–	–		
7 ³⁾	C091 61N107 130 2			–	–		
8 ³⁾	C091 61N008 130 2			–	–		
12	–			–	–		
14	–			–	–		

¹⁾ Please order crimp contacts separately, see page 43

²⁾ see remark page 34

³⁾ Contact order for DIN EN 60 130-9

⁴⁾ Available upon request.