

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.

C 091 D

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.

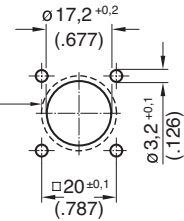
C 091 D

Female receptacle for flange mounting



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

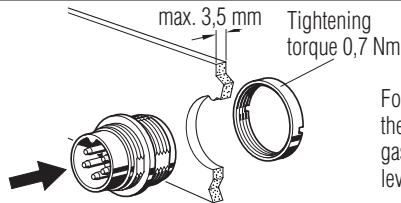
Panel Cutout



Description	Drawing	No. of cont.	Part Number solder termination		Part Number Crimp termination ¹⁾
			Contact plating silver	Contact plating gold ²⁾	
Female receptacle, sealing with O-Ring, termination: solder or crimp, contact plating: silver or gold, with sealing gasket.		3 ³⁾	C091 31T003 100 2	C091 31T003 200 2	–
		4 ³⁾	C091 31T004 100 2	C091 31T004 200 2	–
		5	C091 31T005 100 2	–	C091 11T005 000 2
		5S ³⁾	C091 31T105 100 2	–	–
		6 ³⁾	C091 31T006 100 2	C091 31T006 200 2	–
		7	C091 31T007 100 2	C091 31T007 200 2	C091 11T007 000 2
		7 ³⁾	C091 31T107 100 2	–	C091 11T107 000 2
		8 ³⁾	C091 31T008 100 2	–	–
		12	C091 31T012 100 2	C091 31T012 200 2	–
		14	C091 31T014 100 2	C091 31T014 200 2	–

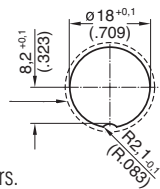
C 091 D

Male 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⁾	
Male receptacle, termination: solder or crimp, contact plating: silver or gold, panel mounting with ring nut, sealing with O-Ring.		3 ³⁾	C091 31W003 100 2	C091 31W003 200 2	C091 11W003 000 2
		4 ³⁾	C091 31W004 100 2	C091 31W004 200 2	C091 11W004 000 2
		5	C091 31W005 100 2	C091 31W005 200 2	C091 11W005 000 2
		5S ³⁾	C091 31W105 100 2	C091 31W105 200 2	C091 11W105 000 2
		6 ³⁾	C091 31W006 100 2	C091 31W006 200 2	C091 11W006 000 2
		7	C091 31W007 100 2	C091 31W007 200 2	C091 11W007 000 2
		7 ³⁾	C091 31W107 100 2	C091 31W107 200 2	C091 11W107 000 2
		8 ³⁾	C091 31W008 100 2	C091 31W008 200 2	C091 11W008 000 2
		12	C091 31W012 100 2	C091 31W012 200 2	–
		14	C091 31W014 100 2	C091 31W014 200 2	–

¹⁾ Please order crimp contacts separately, see page 43

²⁾ see remark page 34

³⁾ Contact order for DIN EN 60 130-9