

# 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.

<sup>1)</sup> 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	–	–
<b>Electrical Characteristics</b>											
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 <sup>10</sup> Ω									
Contact resistance	IEC 60512-2-1 Test 2 a	< 5 m Ω									
<b>Climatic Characteristics</b>											
Climatic category	IEC 60668-1	40 / 100 / 56									
Temperature range	IEC 60668-1	- 40 °C ... + 100 °C / - 40 °F ... + 212 °F									
<b>Mechanical Characteristics</b>											
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									
<b>Materials</b>											
Housing material		die cast, nickel plated									
Dielectric material		thermoplastic									
Sealing material		neoprene									
Contact plating		silver plated / gold plated *									
<b>Further Characteristics</b>											
Termination technique		solder, crimp								solder	
Wire gauge		solder: ≤ 0,5 mm <sup>2</sup> / 20 AWG crimp: 2 - 6 pol (excluding 5S): 0,09 - 1,00 mm <sup>2</sup> / 28 - 18 AWG crimp: 5S, 7, 7S and 8-pol.: 0,09 - 0,75 mm <sup>2</sup> / 28 - 20 AWG								≤ 0,25 mm <sup>2</sup> /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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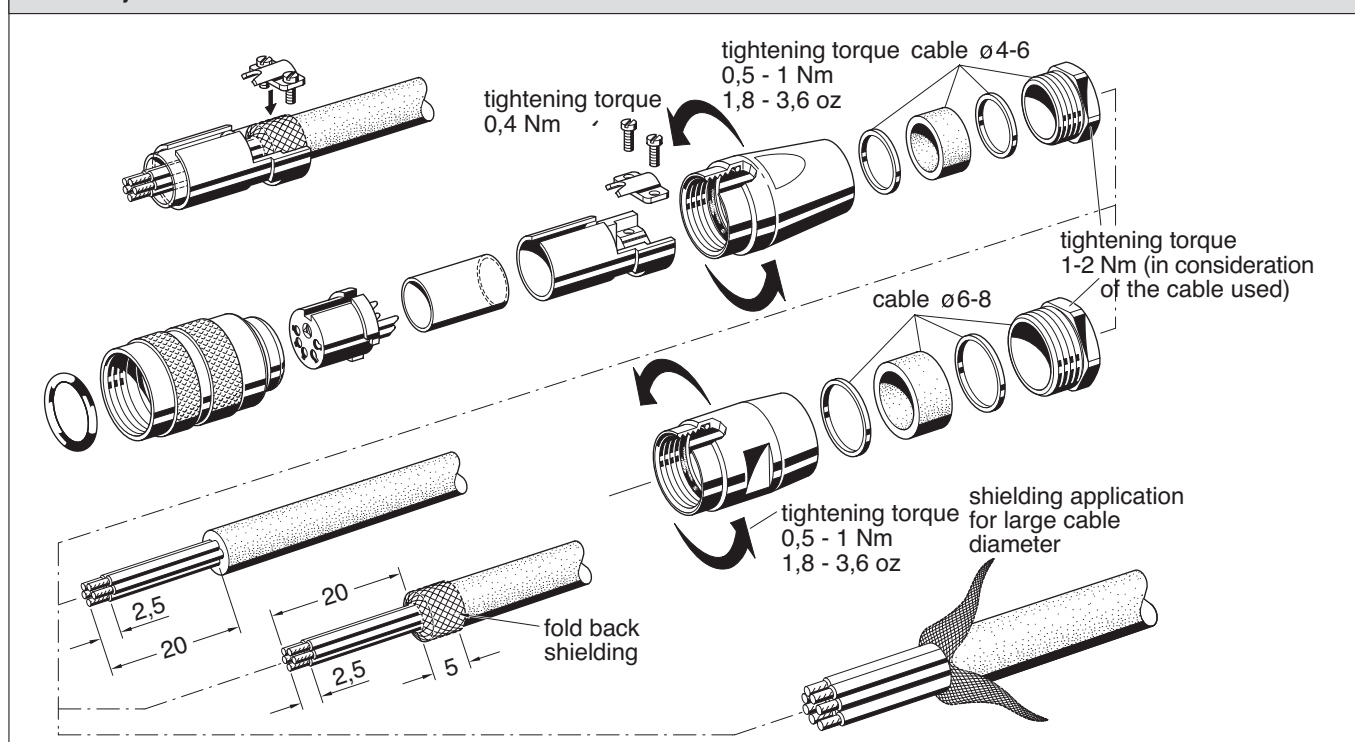
## Female cable connector



Description	Drawing	No. of cont.	Part Number solder termination		Part Number Crimp termination <sup>1)</sup>
			Contact plating silver	Contact plating gold <sup>2)</sup>	
Female cable connector, straight, for cable diameter 4-6 mm, termination: solder or crimp, contact plating: silver or gold.		3 <sup>3)</sup>	C091 31D003 100 2	–	C091 11D003 000 2
		4 <sup>3)</sup>	C091 31D004 100 2	–	C091 11D004 000 2
		5	C091 31D005 100 2	C091 31D005 200 2	C091 11D005 000 2
		5S <sup>3)</sup>	C091 31D105 100 2	–	C091 11D105 000 2
		6 <sup>3)</sup>	C091 31D006 100 2	C091 31D006 200 2	C091 11D006 000 2
		7	C091 31D007 100 2	–	C091 11D007 000 2
		7 <sup>3)</sup>	C091 31D107 100 2	–	C091 11D107 000 2
		8 <sup>3)</sup>	C091 31D008 100 2	C091 31D008 200 2	C091 11D008 000 2
		12	C091 31D012 100 2	C091 31D012 200 2	–
		14	C091 31D014 100 2	C091 31D014 200 2	–
		Female cable connector, straight, for cable diameter 6-8 mm, termination: solder or crimp, contact plating: silver or gold.		3 <sup>3)</sup>	C091 31D003 101 2
4 <sup>3)</sup>	C091 31D004 101 2			–	C091 11D004 001 2
5	C091 31D005 101 2			–	C091 11D005 001 2
5S <sup>3)</sup>	C091 31D105 101 2			–	C091 11D105 001 2
6 <sup>3)</sup>	C091 31D006 101 2			–	C091 11D006 001 2
7	C091 31D007 101 2			C091 31D007 201 2	C091 11D007 001 2
7 <sup>3)</sup>	C091 31D107 101 2			–	C091 11D107 001 2
8 <sup>3)</sup>	C091 31D008 101 2			C091 31D008 201 2	C091 11D008 001 2
12	–			C091 31D012 201 2	–
14	–			C091 31D014 201 2	–

<sup>1)</sup> Please order crimp contacts separately, see page 43 <sup>2)</sup> see remark page 34 <sup>3)</sup> Contact order for DIN EN 60 130-9

### Assembly instructions<sup>5)</sup>



<sup>5)</sup> Solder version only

<sup>6)</sup> Assembly instructions please refer to page 46 , conneting instructions