

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

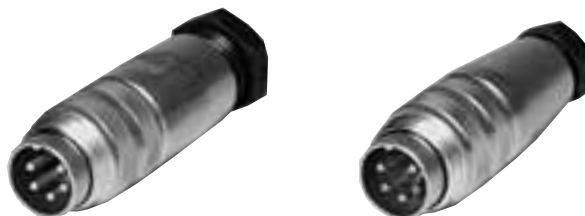
General Characteristics	Standard	Characteristics										
Number of contacts		3	4	5	5 Stereo	6	7	7	8	12	14	
View on termination side of contact insert												
Contact arrangement acc. to DIN		41 524	—	—	41 524	45 322	—	45 329	45 326	—	—	
Contact arrangement acc. to IEC		60130-9	60130-9	—	60130-9	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 mm² / 20 AWG crimp: 2 - 6 pol (excluding 5S): 0,09 - 1,00 mm² / 28 - 18 AWG crimp: 5S, 7, 7S and 8-pol.: 0,09 - 0,75 mm² / 28 - 20 AWG									≤ 0,25 mm²/24 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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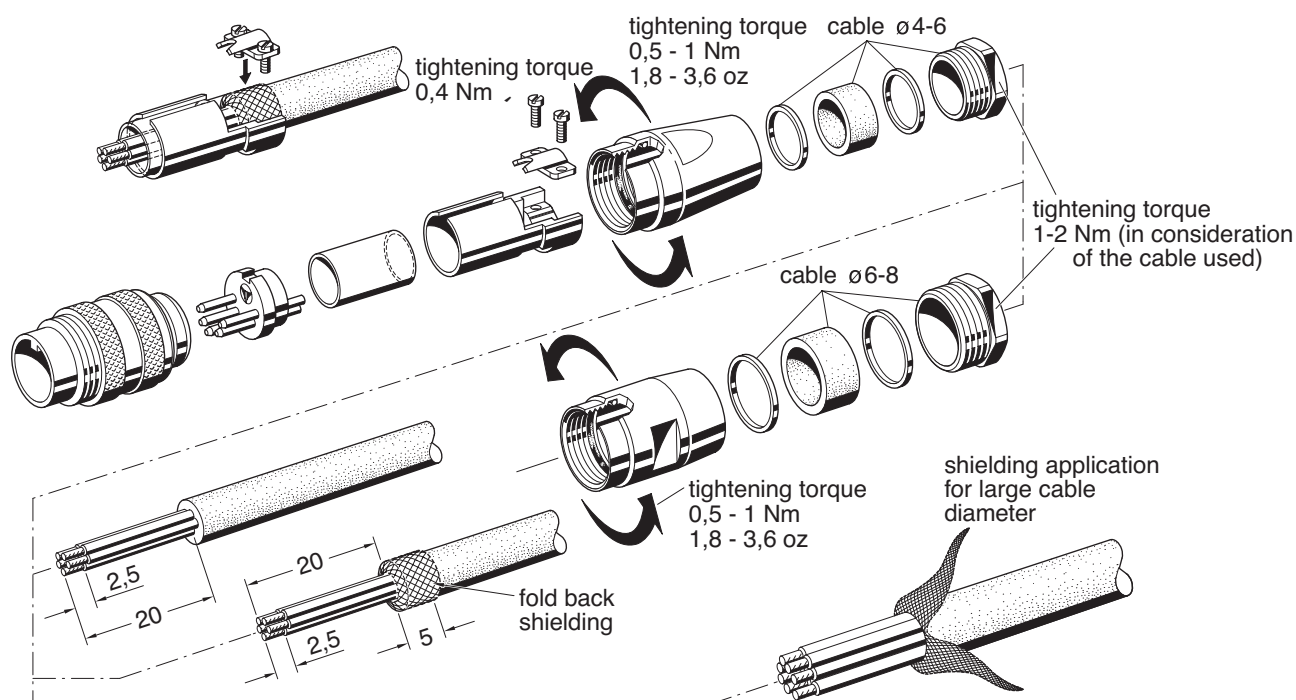
Male cable connector



Description	Drawing	No. of cont.	Part Number solder termination		Part Number Crimp termination ¹⁾
			Contact plating silver	Contact plating gold ²⁾	
Male cable connector, straight, for cable diameter 4-6 mm, termination: solder or crimp, contact plating: silver or gold.		3 ³⁾	C091 31H003 100 2	—	C091 11H003 000 2
		4 ³⁾	C091 31H004 100 2	—	C091 11H004 000 2
		5	C091 31H005 100 2	C091 31H005 200 2	C091 11H005 000 2
		5S ³⁾	C091 31H105 100 2	C091 31H105 200 2	C091 11H105 000 2
		6 ³⁾	C091 31H006 100 2	C091 31H006 200 2	C091 11H006 000 2
		7	C091 31H007 100 2	—	C091 11H007 000 2
		7 ³⁾	C091 31H107 100 2	C091 31H107 200 2	C091 11H107 000 2
		8 ³⁾	C091 31H008 100 2	C091 31H008 200 2	C091 11H008 000 2
		12	C091 31H012 100 2	C091 31H012 200 2	—
		14	C091 31H014 100 2	C091 31H014 200 2	—
Male cable connector, straight, for cable diameter 6-8 mm, termination: solder or crimp, contact plating: silver or gold.		3 ³⁾	C091 31H003 101 2	—	C091 11H003 001 2
		4 ³⁾	C091 31H004 101 2	—	C091 11H004 001 2
		5	C091 31H005 101 2	—	C091 11H005 001 2
		5S ³⁾	C091 31H105 101 2	—	C091 11H105 001 2
		6 ³⁾	C091 31H006 101 2	—	C091 11H006 001 2
		7	C091 31H007 101 2	C091 31H007 201 2	C091 11H007 001 2
		7 ³⁾	C091 31H107 101 2	—	C091 11H107 001 2
		8 ³⁾	C091 31H008 101 2	C091 31H008 201 2	C091 11H008 001 2
		12	C091 31H012 101 2	C091 31H012 201 2	—
		14	—	C091 31H014 201 2	—

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

Assembly instructions⁵⁾

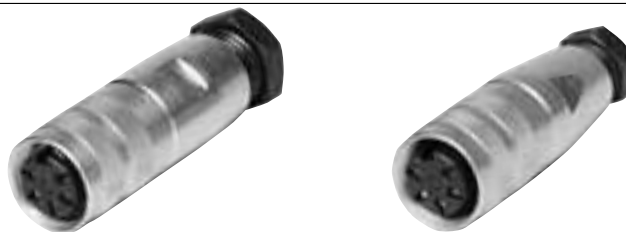


⁵⁾ Solder version only

⁶⁾ Assembly instructions please refer to page 46, connecting instructions

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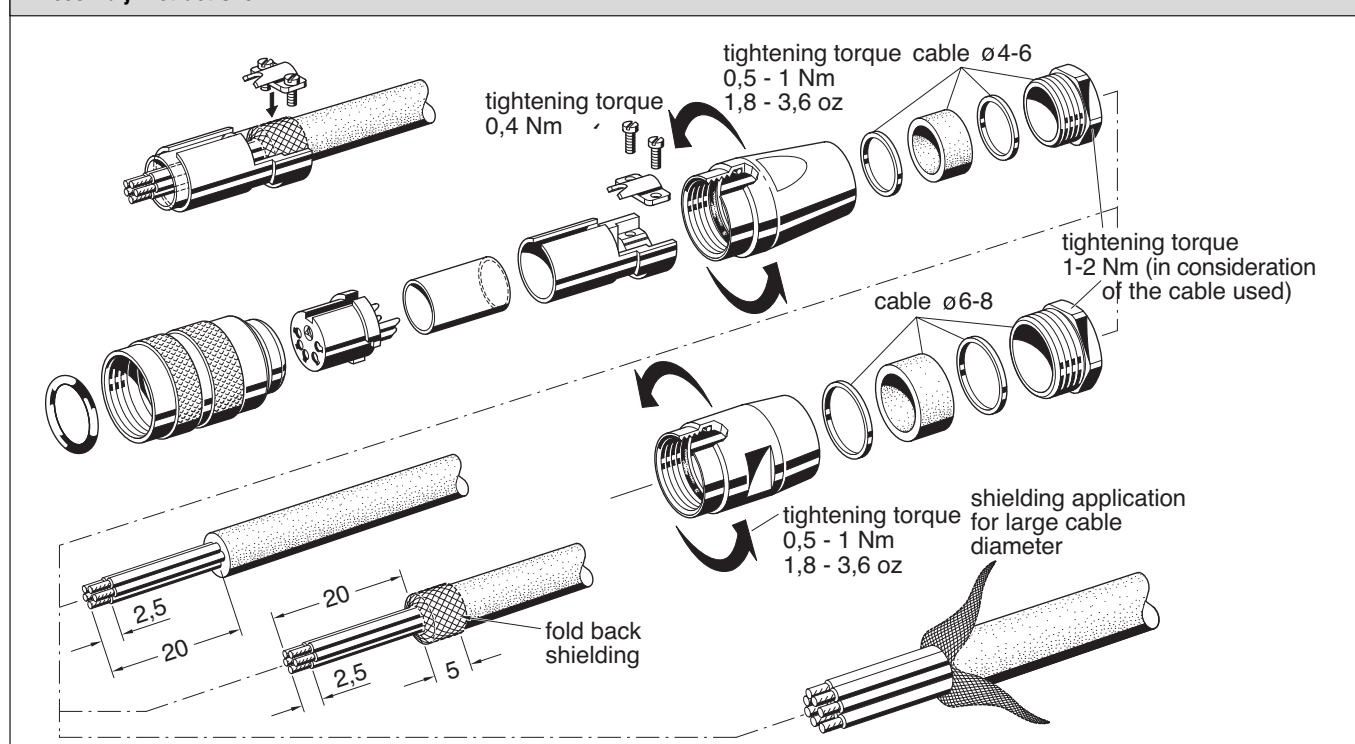
Female cable connector



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

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

Assembly instructions⁵⁾



⁵⁾ Solder version only

⁶⁾ Assembly instructions please refer to page 46 , conneting instructions

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Connector Right Angle



Description	Drawing	No. of cont.	Part Number solder termination Contact plating silver	Part Number Crimp termination ¹⁾
Male cable connector, right angled, for cable diameter 4-6 mm, termination: solder or crimp. Dimension A = 55,5 mm		3 ³⁾	C091 31K003 100 2	C091 11K003 000 2
		4 ³⁾	C091 31K004 100 2	C091 11K004 000 2
		5	C091 31K005 100 2	C091 11K005 000 2
		5S ³⁾	C091 31K105 100 2	C091 11K105 000 2
		6 ³⁾	C091 31K006 100 2	C091 11K006 000 2
		7	C091 31K007 100 2	C091 11K007 000 2
		7 ³⁾	C091 31K107 100 2	C091 11K107 000 2
		8 ³⁾	C091 31K008 100 2	C091 11K008 000 2
		12	C091 31K012 100 2	—
		14	C091 31K014 100 2	—
Male cable connector, right angled, for cable diameter 6-8 mm, termination: solder or crimp. Dimension A = 57,5 mm		3 ³⁾	C091 31K003 101 2 ⁵⁾	C091 11K003 001 2 ⁵⁾
		4 ³⁾	C091 31K004 101 2 ⁵⁾	C091 11K004 001 2 ⁵⁾
		5	C091 31K005 101 2	C091 11K005 001 2 ⁵⁾
		5S ³⁾	C091 31K105 101 2	C091 11K105 001 2 ⁵⁾
		6 ³⁾	C091 31K006 101 2	C091 11K006 001 2
		7	C091 31K007 101 2	C091 11K007 001 2
		7 ³⁾	C091 31K107 101 2	C091 11K107 001 2
		8 ³⁾	C091 31K008 101 2	C091 11K008 001 2
		12	C091 31K012 101 2	—
		14	C091 31K014 101 2	—

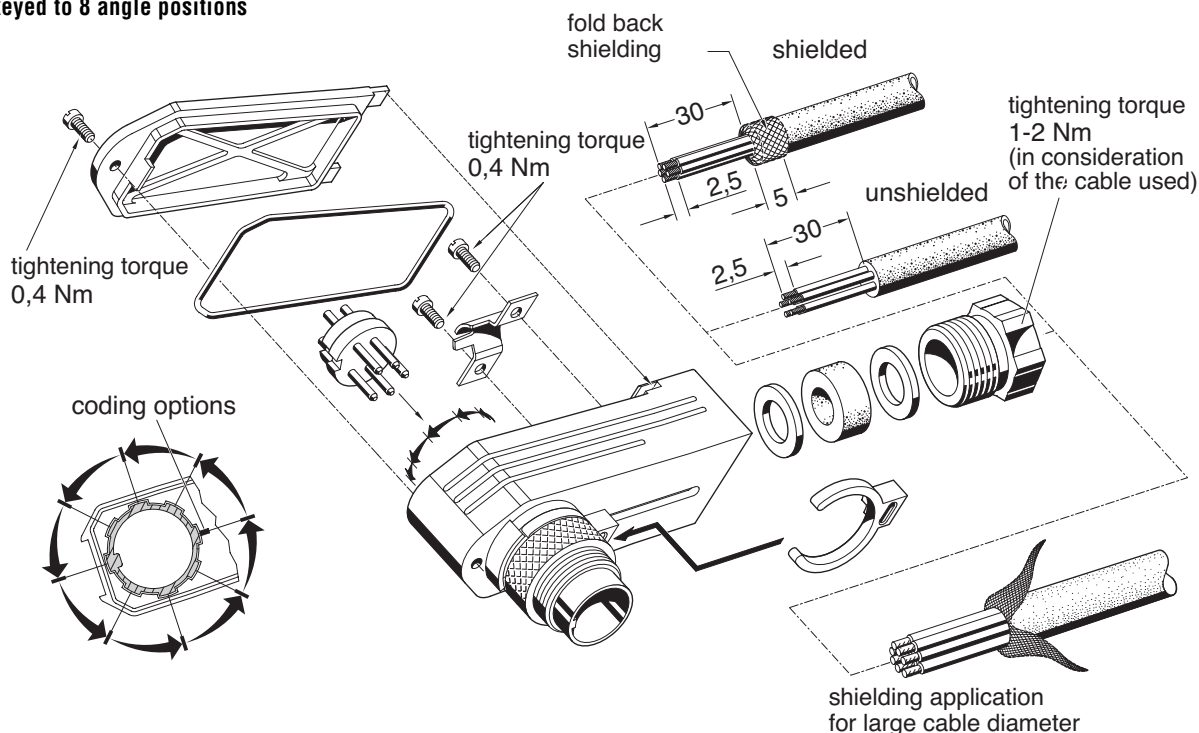
¹⁾ Please order crimp contacts separately, see page 43

³⁾ Contact order for DIN EN 60 130-9

⁵⁾ Available upon request.

Assembly instructions ⁴⁾

Can be keyed to 8 angle positions



⁴⁾ For assembly Instructions please refer to page 46, connecting instructions

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Connector Right Angle

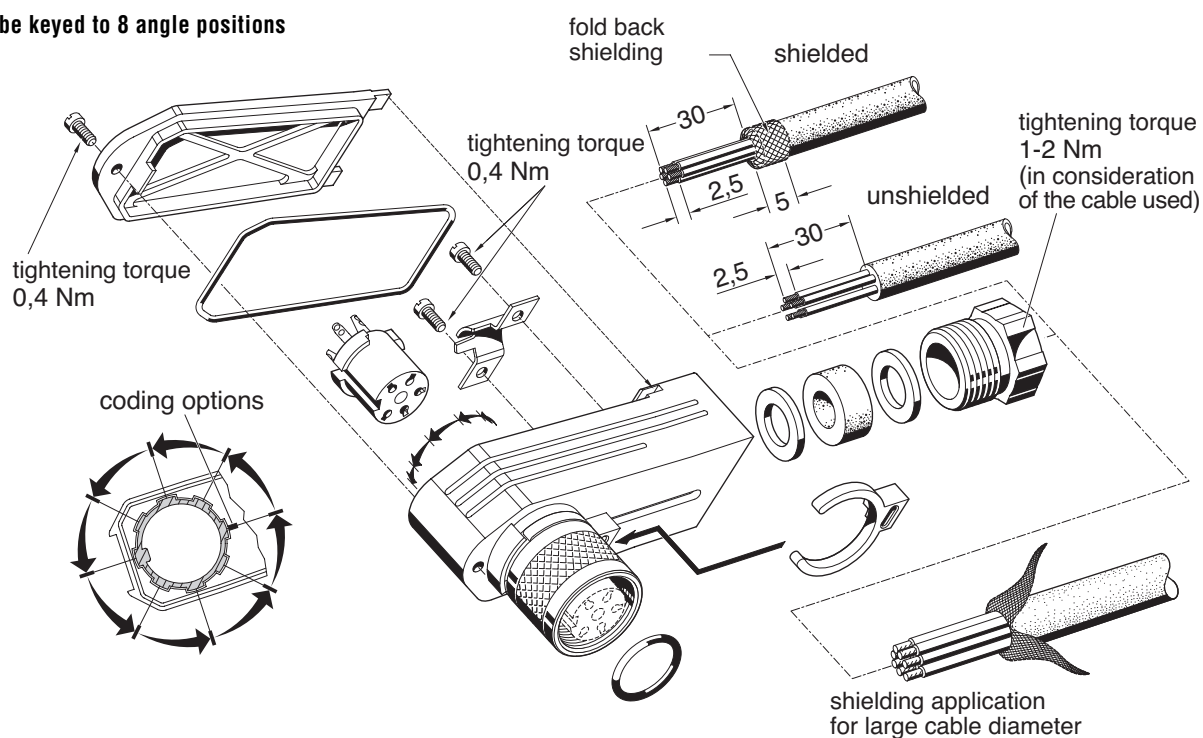


Description	Drawing	No. of cont.	Part Number solder termination Contact plating silver	Part Number Crimp termination ¹⁾
Female cable connector, right angled, for cable diameter 4-6 mm, termination: solder or crimp. Dimension A = 55,5 mm		3 ³⁾	C091 31F003 100 2	C091 11F003 000 2
		4 ³⁾	C091 31F004 100 2	C091 11F004 000 2
		5	C091 31F005 100 2	C091 11F005 000 2
		5S ³⁾	C091 31F105 100 2	C091 11F105 000 2
		6 ³⁾	C091 31F006 100 2	C091 11F006 000 2
		7	C091 31F007 100 2	C091 11F007 000 2
		7 ³⁾	C091 31F107 100 2	C091 11F107 000 2
		8 ³⁾	C091 31F008 100 2	C091 11F008 000 2
		12	C091 31F012 100 2	—
		14	C091 31F014 100 2	—
Female cable connector, right angled, for cable diameter 6-8 mm, termination: solder or crimp. Dimension A = 57,5 mm		3 ³⁾	C091 31F003 101 2 ⁵⁾	C091 11F003 001 2 ⁵⁾
		4 ³⁾	C091 31F004 101 2 ⁵⁾	C091 11F004 001 2 ⁵⁾
		5	C091 31F005 101 2	C091 11F005 001 2 ⁵⁾
		5S ³⁾	C091 31F105 101 2	C091 11F105 001 2 ⁵⁾
		6 ³⁾	C091 31F006 101 2	C091 11F006 001 2
		7	C091 31F007 101 2	C091 11F007 001 2
		7 ³⁾	C091 31F107 101 2	C091 11F107 001 2
		8 ³⁾	C091 31F008 101 2	C091 11F008 001 2
		12	C091 31F012 101 2	—
		14	C091 31F014 101 2	—

¹⁾ Please order crimp contacts separately, see page 43 ³⁾ Contact order for DIN EN 60 130-9 ⁵⁾ Available upon request

Assembly instructions ⁴⁾

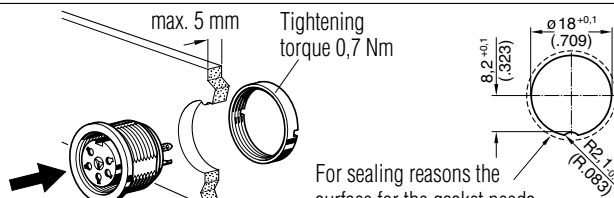
Can be keyed to 8 angle positions



⁴⁾ For assembly Instructions please refer to page 46, connecting instructions

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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	—
		3 ³⁾	C091 61N003 110 2	—	—
		4 ³⁾	C091 61N004 110 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.		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	—
		3 ³⁾	C091 61N003 120 2	—	—
		4 ³⁾	C091 61N004 120 2	—	—
		5	C091 61N005 120 2	—	—
		5S ³⁾	C091 61N105 120 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.		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	—	—	—
		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	—	—
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.		7 ³⁾	C091 61N107 130 2	—	—
		8 ³⁾	C091 61N008 130 2	—	—
		12	—	—	—
		14	—	—	—

¹⁾ Please order crimp contacts separately, see page 43

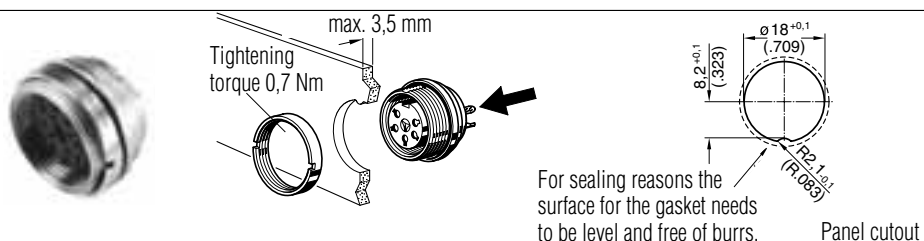
²⁾ see remark page 34

³⁾ Contact order for DIN EN 60 130-9

⁴⁾ Available upon request.

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Female receptacle for rear mounting



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 31G003 100 2	—	C091 11G003 000 2
		4 ³⁾	C091 31G004 100 2	C091 31G004 200 2	C091 11G004 000 2
		5	C091 31G005 100 2	C091 31G005 200 2	C091 11G005 000 2
		5S ³⁾	C091 31G105 100 2	—	C091 11G105 000 2
		6 ³⁾	C091 31G006 100 2	—	C091 11G006 000 2
		7	C091 31G007 100 2	C091 31G007 200 2	C091 11G007 000 2
		7 ³⁾	C091 31G107 100 2	—	C091 11G107 000 2
		8 ³⁾	C091 31G008 100 2	C091 31G008 200 2	C091 11G008 000 2
		12	C091 31G012 100 2	C091 31G012 200 2	—
		14	C091 31G014 100 2	C091 31G014 200 2	—
		3 ³⁾	C091 61G003 110 2	—	—
		4 ³⁾	C091 61G004 110 2	—	—
Female receptacle, termination: straight dip solder, contact plating: silver or gold, pin length 10,5 mm from flange, panel mounting with ring nut, sealing with O-Ring, solder area: tin plated.		5	C091 61G005 110 2	—	—
		5S ³⁾	C091 61G105 110 2	—	—
		6 ³⁾	C091 61G006 110 2	C091 G006 210 2	—
		7	C091 61G007 110 2	—	—
		7 ³⁾	C091 61G107 110 2	—	—
		8 ³⁾	C091 61G008 110 2	—	—
		12	C091 61G012 110 2	C091 61G012 210 2	—
		14	C091 61G014 110 2	C091 61G014 210 2	—
		3 ³⁾	C091 61G003 120 2	—	—
		4 ³⁾	C091 61G004 120 2	—	—
		5	C091 61G005 120 2	—	—
		5S ³⁾	C091 61G105 120 2	—	—
Female receptacle, termination: straight dip solder, contact plating: silver, pin length 14,5 mm from flange, panel mounting with ring nut, sealing with O-Ring, solder area: tin plated.		6 ³⁾	C091 61G006 120 2	—	—
		7	C091 61G007 120 2	—	—
		7 ³⁾	C091 61G107 120 2	—	—
		8 ³⁾	C091 61G008 120 2	—	—
		12	—	—	—
		14	—	—	—
		3 ³⁾	C091 61G003 130 2	—	—
		4 ³⁾	C091 61G004 130 2	—	—
		5	C091 61G005 130 2	—	—
		5S ³⁾	C091 61G105 130 2	—	—
		6 ³⁾	C091 61G006 130 2	—	—
		7	C091 61G007 130 2	—	—
Female receptacle, termination: straight dip solder, contact plating: silver, pin length 19,5 mm from flange, panel mounting with ring nut, sealing with O-Ring, solder area: tin plated.		7 ³⁾	C091 61G107 130 2	—	—
		8 ³⁾	C091 61G008 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.

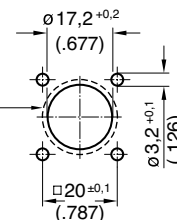
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Female receptacle for flange mounting



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

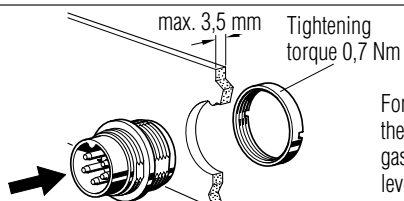
Panel Cutout



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	—

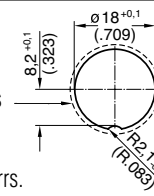
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Male receptacle for front mounting



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	—

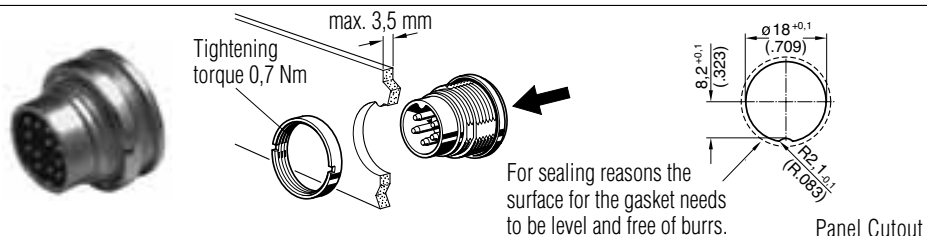
¹⁾ Please order crimp contacts separately, see page 43

²⁾ see remark page 34

³⁾ Contact order for DIN EN 60 130-9

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Male receptacle for rear mounting



Panel Cutout

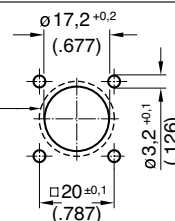
Description	Drawing	No. of cont.	Part Number solder termination		Part Number Crimp termination ¹⁾
			Contact plating silver	Contact plating gold ²⁾	
Male receptacle, termination: solder or crimp, contact plating: silver or gold, panel mounting with ring nut, sealing with O-Ring.		3 ³⁾	C091 31C003 100 2	C091 31C003 200 2	C091 11C003 000 2
		4 ³⁾	C091 31C004 100 2	C091 31C004 200 2	C091 11C004 000 2
		5	C091 31C005 100 2	C091 31C005 200 2	C091 11C005 000 2
		5S ³⁾	C091 31C105 100 2	C091 31C105 200 2	C091 11C105 000 2
		6 ³⁾	C091 31C006 100 2	C091 31C006 200 2	C091 11C006 000 2
		7	C091 31C007 100 2	C091 31C007 200 2	C091 11C007 000 2
		7 ³⁾	C091 31C107 100 2	C091 31C107 200 2	C091 11C107 000 2
		8 ³⁾	C091 31C008 100 2	C091 31C008 200 2	C091 11C008 000 2
		12	C091 31C012 100 2	C091 31C012 200 2	—
		14	C091 31C014 100 2	C091 31C014 200 2	—

C 091 D

Male 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⁾	
Male receptacle, sealing with O-Ring, termination: solder or crimp, contact plating: silver or gold, with sealing gasket.		3 ³⁾	C091 31S003 100 2	—	C091 11S003 000 2
		4 ³⁾	C091 31S004 100 2	—	—
		5	C091 31S005 100 2	—	C091 11S005 000 2
		5S ³⁾	C091 31S105 100 2	—	—
		6 ³⁾	C091 31S006 100 2	C091 31S006 200 2	—
		7	C091 31S007 100 2	—	C091 11S007 000 2
		7 ³⁾	C091 31S107 100 2	—	C091 11S107 000 2
		8 ³⁾	C091 31S008 100 2	C091 31S008 200 2	—
		12	C091 31S012 100 2	C091 31S012 200 2	—
		14	C091 31S014 100 2	C091 31S014 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

C 091

Crimp contacts

Stamped single contacts

Stamped contacts on reel for hand crimping tools

Stamped contacts on reel for crimp machines



packaging unit 100 pcs



200 pcs



2000 pcs
(feeding left or right hand side)

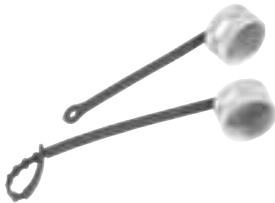
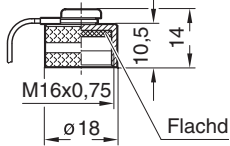
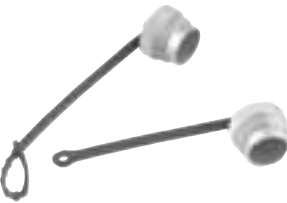
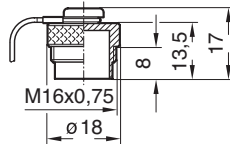
Type of Contact	Contact Ø	Wire Gauge	max. Insul. Ø	Supplied as	Pcs.	Part Number	
						silver	gold
Pin contact 	1.5 mm	0.09-0.25 mm ²	0.7-1.6	single contact	100	VN01 015 0052 (1)	VN01 015 0052 (2)
				contacts on reel	200	ZN01 015 0052 (1)	ZN01 015 0052 (2)
				right	2000	HN01 015 0052 (1)	HN01 015 0052 (2)
				left	2000	TN01 015 0052 (1)	TN01 015 0052 (2)
		0.35-0.50 mm ²	1.0-2.0	single contact	100	VN01 015 0046 (1)	VN01 015 0046 (2)
				contacts on reel	200	ZN01 015 0046 (1)	ZN01 015 0046 (2)
				right	2000	HN01 015 0046 (1)	HN01 015 0046 (2)
				left	2000	TN01 015 0046 (1)	TN01 015 0046 (2)
		0.75-1.0 mm ²	1.6-2.1	single contact	100	VN01 015 0047 (1)	VN01 015 0047 (2)
				contacts on reel	200	ZN01 015 0047 (1)	ZN01 015 0047 (2)
				right	2000	HN01 015 0047 (1)	HN01 015 0047 (2)
				left	2000	TN01 015 0047 (1)	TN01 015 0047 (2)
Socket contact 	1.5 mm	0.09-0.25 mm ²	0.7-1.6	single contact	100	VN02 015 0052 (1)	VN02 015 0052 (2)
				contacts on reel	200	ZN02 015 0052 (1)	ZN02 015 0052 (2)
				right	2000	HN02 015 0052 (1)	HN02 015 0052 (2)
				left	2000	TN02 015 0052 (1)	TN02 015 0052 (2)
		0.35-0.50 mm ²	1.0-2.0	single contact	100	VN02 015 0046 (1)	VN02 015 0046 (2)
				contacts on reel	200	ZN02 015 0046 (1)	ZN02 015 0046 (2)
				right	2000	HN02 015 0046 (1)	HN02 015 0046 (2)
				left	2000	TN02 015 0046 (1)	TN02 015 0046 (2)
		0.75-1.0 mm ²	1.6-2.1	single contact	100	VN02 015 0047 (1)	VN02 015 0047 (2)
				contacts on reel	200	ZN02 015 0047 (1)	ZN02 015 0047 (2)
				right	2000	HN02 015 0047 (1)	HN02 015 0047 (2)
				left	2000	TN02 015 0047 (1)	TN02 015 0047 (2)

Connecting Range	Wire Gauge		Stripping length	Crimp height (average values)	Crimp retention force acc. DIN EN 60352-2 N
	mm ²	AWG			
0.09-0.25	0.09	28	3.0 + 0.5	0.85-0.89	11
		26			15
	0.14			0.86-0.90	18
		24			28
	0.25			0.91-0.97	32
0.35-0.50	0.35	22	3.0 + 0.5	0.90-1.06	40
	0.50	20		0.95-1.11	60
0.75-1.00	0.75		3.5 + 1.0	1.33-1.50	85
		18			90
	1.00			1.36-1.53	108

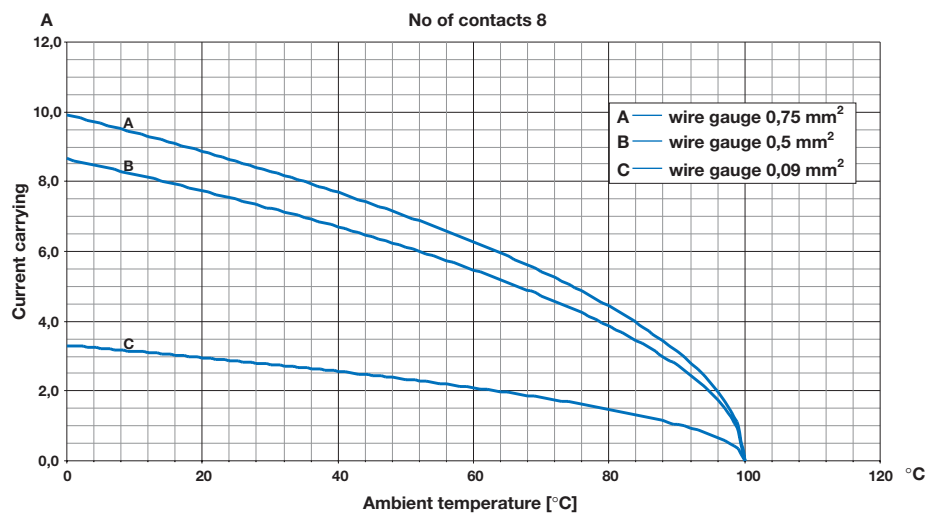
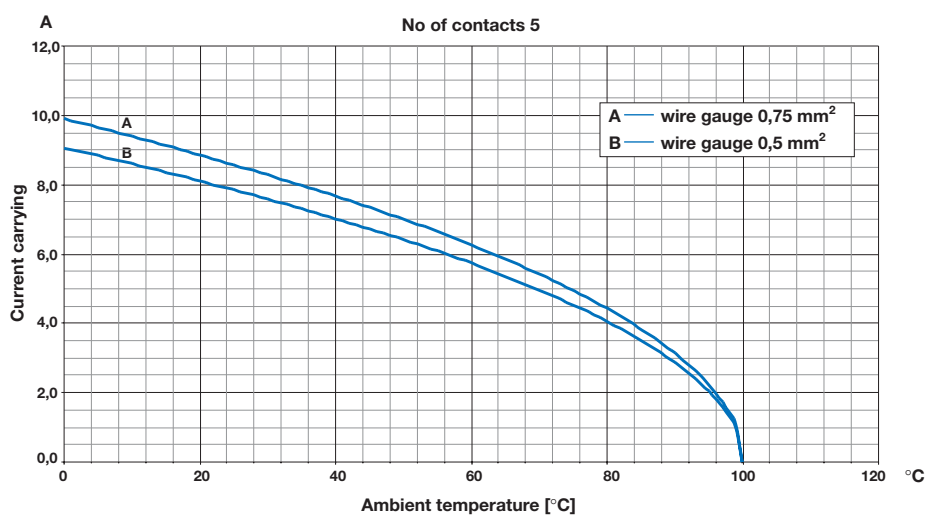
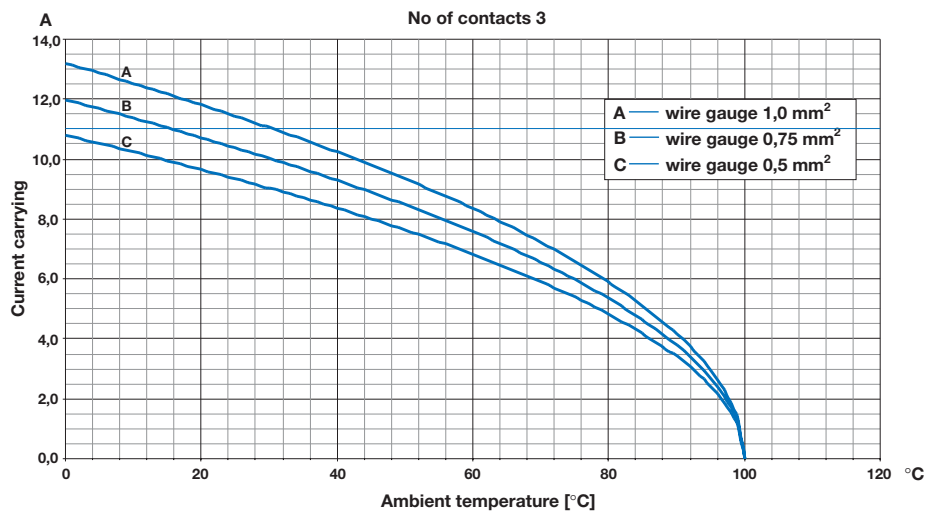
These min. values are based on the copper wire tensile strength with $\delta_B \approx 230 \text{ N/mm}^2$.

C 091

Accessories

Description	for Series	Drawing			Part Number
Spanner wrench for receptacles with ring nut.	C 091 A C 091 B C 091 D				N 45 091-000 1
Spanner wrench for male and female cable connectors.	C 091 A C 091 B C 091 D				FH 0300-091
Protective cover for male cable connectors and male receptacles.	C 091 A C 091 D	 			for male cable connectors C 091 00U000 120 2 L = 85 mm for male receptacles C 091 00U000 130 2 L = 60 mm C 091 00U000 131 2 L = 100 mm
Protective cover for female cable connectors and female receptacles, brass nickel plated.	C 091 A C 091 D	 			for female cable connectors C 091 00V000 120 2 L = 85 mm for female receptacles C 091 00V000 130 2 L = 60 mm C 091 00V000 131 2 L = 100 mm
Knurled ring-nut for male and female receptacles.	C 091 A C 091 D				T1336 060 9
Colored back-shells thermoplast.	C 091 A C 091 B		Colour	Pieces	Part Number
			blue	10 100	T 2993 510 9X T 2993 510 9C
			red	10 100	T 2993 511 9X T 2993 511 9C
			yellow	10 100	T 2993 512 9X T 2993 512 9C
			green	10 100	T 2993 513 9X T 2993 513 9C

The following current derating curves refer to the stated numbers of contacts and wire gauges, when all contacts are simultaneously loaded with the same current.
The maximum ambient temperature for the series C091 is 100°C.





1. General Remarks

These connectors are designed and produced in conformity with the low voltage directive (73/23/EWG) respectively Gerätesicherheitsgesetz (German law) and are especially in accordance with the standards DIN EN 61984 (VDE 0627); IEC 60664-1 (VDE 0110-1) and IEC 60529.

The connectors may be used only within the technical ratings.

All technical data refer to mated connectors under live conditions. The safety of the connector system depends on the correct selection of products, proper assembly of the connector device, and a precise fit of the connectors.

2. Application Remarks

Connectors with / without breaking capacity must be used according to specified technical ratings.

The technical data represent the initial value of mated parts under predetermined conditions and length of time. These values could change with different test parameters or product requirements.

The C 091 Series connectors are used in a wide variety of industries and equipment. Some of these include industrial machines and controls, data processing, instrumentation and test equipment, medical devices, telecommunication's network and equipment, plus outdoor and marine applications. All rated data for the connectors listed in this catalog are based on over-voltage category and pollution degree for electronic applications. Connectors were completely mated according to their respective safety locking mechanism. Selection and testing of connectors with / without breaking capacity to meet specific product or industrial requirements such as rated voltage and the related clearances and creepage distances are the responsibility of the user.

3. Assembling Remarks

Certain appliances and equipment include protective measures that relate to the coupling devices of the male and female receptacle housings. (see also DIN VDE 0100 part 410; IEC 60364-4-41).

Care must be taken to insure the parts are correctly mated and screws are tightened with the proper torque. Protection against electrical shock on the termination side of the connector (receptacles, contact insert) shall be secured by suitable mounting.

4. Termination Remarks

The dimensions as stated in the assembly instructions are for general information only and can vary depending on cable styles and types.

Please note in the case of an internal strain relief: Always clamp the outer cable mantle (not the individual lead wires) to avoid damage of the lead wire insulation. In case of shielded cables, fold the braid over the outer mantle to avoid damage of the lead wire insulation when clamping the braid.

In case of clamping rings, make sure that the lead wire insulation is not damaged when connecting (clamping) the braid.

Cable connectors are effectively secured when using the internal cable clamp. When the connector contains a simple gland bushing for retention the cable should have a strain relief close behind the connector. All cable properties or specifications must be compatible with the connector design and materials. Designated wire conductors must be terminated to the correct poles in the connector. Please make sure that the usability of the cable in conjunction with the clamping ring is given.

Crimp contacts must be fully inserted into the plastic housing and retention assured with a slight tug on the wire.

Wire should be stripped correctly according to printed specifications to ensure no electrical contact can be made between the conductors. There should be no nicked or cut strains during the stripping action.

5. Classification according to DIN EN 61984 / IEC 61984 (VDE 0627)

Style	enclosed	unenclosed	protective earthing contact	cable clamp	finger safety mated	finger safety unmated	hand back safety mated	Connector with breaking capacity ¹⁾	rewirable	Cable clamp	
										with	without
Male cable connector		X		X	X				X	X	
Female cable connector	X			X	X	X	X		X	X	
Male panel connector					X ¹⁾				X		X
Female panel connector		X			X ¹⁾	X ¹⁾	X ¹⁾		X		X

¹⁾ Protection against electrical shock on the termination side has to be secured by proper mounting.

Degree of protection

Electrical devices to which connectors belong have to be protected for safety reasons from outside influences like dust, foreign objects, direct contact, moisture and water. This protection is provided on industrial connectors by their housings with their latching devices and sealed cable entries. The degree of protection can be selected depending on the type of intended use. The standard IEC 60529 and/or DIN EN 60529 has specified the degree of protection and divided into several classes.

The degree of protection is indicated in the following way:

Code letters — IP 65
(Ingress Protection)
1st charact. numeral (degree of protection against access to hazardous parts and against solid foreign objects)
2nd charact. numeral (degree of protection against ingress of water)
The following charts give an overview about all protection degrees.

1st charact. numeral	Brief description	Definition
0	Non-protected	—
1	Protected against access to hazardous parts with the back of a hand. Protected against solid foreign objects of $\geq 50\text{mm } \varnothing$.	The probe, sphere of $50\text{mm } \varnothing$, shall not fully penetrate and shall have adequate clearance from hazardous parts.
2	Protected against access to hazardous parts with a finger. Protected against solid foreign objects of $\geq 12.5\text{mm } \varnothing$.	The jointed test finger of $12\text{mm } \varnothing$, 80mm length, shall have adequate clearance from hazardous parts. The probe, sphere of $12.5\text{mm } \varnothing$, shall not fully penetrate.
3	Protected against access to hazardous parts with a tool. Protected against solid foreign objects of $\geq 2.5\text{mm } \varnothing$.	The probe of $2.5\text{mm } \varnothing$ shall not penetrate at all.
4	Protected against access to hazardous parts with a wire. Protected against solid foreign objects of $\geq 1\text{mm } \varnothing$.	The probe of $1\text{mm } \varnothing$ shall not penetrate at all.
5	Protected against access to hazardous parts with a wire. Dust-protected.	The probe of $1\text{mm } \varnothing$ shall not penetrate. Intrusion of dust is not totally prevented, but dust shall not penetrate in a quantity to interfere with satisfactory operation of the device or to impair safety.
6	Protected against access to hazardous parts with a wire. Dust-tight.	The probe of $1\text{mm } \varnothing$ shall not penetrate. No intrusion of dust.

2nd charact. numeral	Brief description	Definition
0	Non-protected	—
1	Protected against vertically falling water drops	Vertically falling drops shall have no harmful effects.
2	Protected against vertically falling water drops when enclosure tilted up to 15°	Vertically falling drops shall have no harmful effects when the enclosure is tilted at any angle up to 15° on either side of the vertical.
3	Protected against spraying water	Water sprayed at an angle up to 60° on either side of the vertical shall have no harmful effects.
4	Protected against splashing water	Water splashed against the enclosure from any direction shall have no harmful effects.
5	Protected against water jets	Water projected in jets against the enclosure from any direction shall have no harmful effects.
6	Protected against powerful water jets	Water projected in powerful jets against the enclosure from any direction shall have no harmful effects.
7	Protected against the effects of temporary immersion in water	Intrusion of water in quantities causing harmful effects shall not be possible when the enclosure is temporally immersed in water for 30 min. in 1m depth.
8	Protected against the effects of continuous immersion in water	Intrusion of water in quantities causing harmful effects shall not be possible when the enclosure is continuously immersed in water under conditions which shall be agreed between manufacturer and user but which are more severe than for numeral 7.
9 K ¹⁾	Protected against water during high pressure/steam jet cleaning	Water projected in powerful jets with high pressure against the enclosure from any direction shall have no harmful effects.

1) Remark: Numeral acc. to DIN 40050 part 9, vehicles IP code