## C 091 D+ Characteristics

Number of contacts   Number of contacts   Number of contacts   Number of contact insert   Number of contact insert   Number of male o	General Characteristics	Standard	Charact	eristics								
Din En   Off-and characteristics   Din En   Off-and	Number of contacts		3	4	5	5	6	7	7	8	12	14
Contact rangement   EC 6013-0-91   V   V   V   V   V   V   V   V   V				000							00000	00000
Part	Contact arrangement											
Rated voltage <sup>91</sup>   EC 60664-1   250 ∨   1500 ∨   200 ∨	Contact arrangement	IEC 60130-91)	✓	✓		✓	✓		✓	✓		
Rated impulse withstand voltage	<b>Electrical Characteristics</b>											
Pollution degree 70   IEC 60664-1   Installation category   IEC 60664-1   III     Insulation group   IEC 60664-1   III     Current rating   IEC 60664-1   III     Current rating   IEC 60512-3-2   10 A / + 40 °C   7 A / + 40 °C   3 A / + 40 °C     Insulation resistance   IEC 60512-3-1	Rated voltage 2)	IEC 60664-1	150 V ≃ 100 V ≃								32 V ≃	
Installation category	Rated impulse withstand voltage 2)	IEC 60664-1	2500 V 1500 V								800 V	
Insulation group   IEC 60664-1   IEC 60512-S-2   10 A / + 40 °C   10 A	Pollution degree 2)	IEC 60664-1	3 3)									
Current rating   EC 60512-5-2   Ul 1977   10 A / + 40 °C   7 A / + 40 °C   3 A / + 40 °C     Insulation resistance   IEC 60512-3-1	Installation category	IEC 60664-1	₩									
Insulation resistance   IEC 60512-3-1	Insulation group	IEC 60664-1	II.									
Contact resistance         IEC 60512-2-1	Current rating		10 A /	10 A / + 40 °C 7 A / + 40 °C							3 A / + 40 °C	
Climatic Characteristics         IEC 60668-1         40 / 100 / 20         40 / 100 / 20         40 / 100 / 20         40 / 100 / 20         40 / 100 / 20         40 / 20 / 20 / 20         50 / 20 / 20 / 20         50 / 20 / 20 / 20         50 / 20 / 20 / 20         50 / 20 / 20 / 20         50 / 20 / 20 / 20 / 20         50 / 20 / 20 / 20 / 20         50 / 20 / 20 / 20 / 20         50 / 20 / 20 / 20 / 20         50 / 20 / 20 / 20 / 20 / 20 / 20 / 20 /	Insulation resistance	IEC 60512-3-1	> 10 <sup>10</sup> Ω <sup>4)</sup>									
Climatic category   IEC 60668-1	Contact resistance	IEC 60512-2-1	$<$ 5 m $\Omega$									
Temperature range	Climatic Characteristics											
Mechanical Characteristics         T20h           IP-degree         IEC 60529         IP68 (in mated condition)           Insertion and withdrawal forces         IEC 60512-13-2         25 N 90.0z         30 N 125.0z         180.0z         180.0z         220.0z         180.0z           Mechanical operation         IEC 60512-9-1         Silver ≥ 500 mating cycles Gold = 1000 mating cycles         220.0z         180.0z	Climatic category	IEC 60668-1	40 / 100 / 21									
Nechanical Characteristics   Silvar	Temperature range	IEC 60668-1	-40 °C + 100 °C									
Fedegree   IEC 60529   Fedegree   IEC 60512-13-2   Fedegree   IEC 60512-9-1   IEC 6	Salt Spray Resistance		720h									
Insertion and withdrawal forces   IEC 60512-13-2   25 N   30 N   35 N   125.0z   180.0z   180.0z   180.0z   220.0z   180.0z   180.0z	Mechanical Characteristics											
Mechanical operation   IEC 60512-9-1   IEC 60512-9-1   Silver ≥ 500 mating cycles   Gold ≥ 1000 mating cycles	IP-degree	IEC 60529	IP68 (in mated condition)									
MaterialsZinc die cast, nickel platedHousing materialZinc die cast, nickel platedDielectric materialthermoplasticSealing materialchloropreneContact platingsilver plated / gold plated 5)Further Characteristics**Termination technique**Solder: ≤ 0,5 mm² / 20 AWG crimp: 2 - 6 pol (excluding 5S): 0,09 - 1,00 mm² / 28 - 18 AWG crimp: 0,09-0,25 mm² / 24 AWGWire gaugesolder: ≤ 0,5 mm² / 20 AWG crimp: 5S, 7, 7S and 8-pol.: 0,09 - 0,75 mm² / 28 - 20 AWGsolder: ≤ 0,25 mm² / 24 AWG crimp: 0,09-0,25 mm² / 28 - 24 AWGFlammabilityUL 94 V0	Insertion and withdrawal forces	IEC 60512-13-2										
Housing material  Dielectric material  Sealing material  Contact plating  Further Characteristics  Termination technique  Wire gauge  Wire gauge  Flammability  Tinc die cast, nickel plated  thermoplastic  Chloroprene  chloroprene  silver plated / gold plated ⁵)  Solder: ≤ 0,25 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  LU 94 V0	Mechanical operation	IEC 60512-9-1	The state of the s									
Dielectric material thermoplastic  Sealing material chloroprene  Contact plating silver plated / gold plated ⁵)  Further Characteristics  Termination technique solder, crimp  Wire gauge solder: ≤ 0,5 mm² / 20 AWG crimp: 2 - 6 pol (excluding 5S): 0,09 - 1,00 mm² / 28 - 18 AWG crimp: 0,09-0,25 mm² / 24 AWG crimp: 5S, 7, 7S and 8-pol.: 0,09 - 0,75 mm² / 28 - 20 AWG  Flammability UL 94 V0	Materials											
Sealing materialchloropreneContact platingsilver plated / gold plated 5)Further Characteristicssolder, crimpTermination techniquesolder, crimpWire gaugesolder: ≤ 0,5 mm² / 20 AWG crimp: 2 - 6 pol (excluding 5S): 0,09 - 1,00 mm² / 28 - 18 AWG crimp: 0,09-0,25 mm² / 28 - 24 AWGFlammabilityUL 94 V0	Housing material		Zinc die cast, nickel plated									
Contact plating silver plated / gold plated 5)  Further Characteristics  Termination technique solder, crimp  Wire gauge solder: ≤ 0,5 mm² / 20 AWG crimp: 2 - 6 pol (excluding 5S): 0,09 - 1,00 mm² / 28 - 18 AWG crimp: 0,09-0,25 mm² / 24 AWG crimp: 5S, 7, 7S and 8-pol.: 0,09 - 0,75 mm² / 28 - 20 AWG  Flammability UL 94 V0	Dielectric material		thermoplastic									
Further Characteristics           Termination technique         solder, crimp           Wire gauge         solder: ≤ 0,5 mm² / 20 AWG         solder: ≤ 0,25 mm² / 24 AWG           crimp: 2 - 6 pol (excluding 5S): 0,09 - 1,00 mm² / 28 - 18 AWG         crimp: 0,09-0,25 mm² / 28 - 20 AWG           crimp: 5S, 7, 7S and 8-pol.: 0,09 - 0,75 mm² / 28 - 20 AWG         / 28 - 24 AWG	Sealing material		chloroprene									
Termination technique       solder, crimp         Wire gauge       solder: ≤ 0,5 mm² / 20 AWG       solder: ≤ 0,25 mm² / 24 AWG         crimp: 2 - 6 pol (excluding 5S): 0,09 - 1,00 mm² / 28 - 18 AWG       24 AWG         crimp: 5S, 7, 7S and 8-pol.: 0,09 - 0,75 mm² / 28 - 20 AWG       28 - 24 AWG         Flammability       UL 94 V0	Contact plating		silver plated / gold plated 5)									
Wire gauge	Further Characteristics											
Solder: \$\(\circ\), 6 \(\text{Tim}\)   7 20 \(\text{AWG}\)   28 - 18 \(\text{AWG}\)   24 \(\text{AWG}\)   27 \(\text{crimp: 2 - 6 pol (excluding 5S): 0,09 - 1,00 mm^2 / 28 - 18 AWG crimp: 0,09-0,25 mm^2 / 28 - 20 AWG   24 \(\text{AWG}\)   28 -	Termination technique		solder, crimp									
·	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  crimp: 5S 7 7S and 8-pol : 0.09 - 0.75 mm² / 28 - 20 AWG									
Locking system IEC 60130-9 metal screw coupling; tightening torque 0,5 - 0,7 Nm	Flammability						UL 9	4 V0				
	Locking system	IEC 60130-9	metal screw coupling; tightening torque 0,5 - 0,7 Nm									

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

<sup>1)</sup> Edition 2000-05

<sup>&</sup>lt;sup>2)</sup> values in brackets are according to DIN EN 61076-2-106

<sup>&</sup>lt;sup>3)</sup> designed acc. pollution degree 2; can be used under pollution degree 3 when the rules of IEC 60644-1 are fulfilled

 $<sup>^{\</sup>scriptscriptstyle 4)}$  under operating conditions >10  $^{8}$   $\Omega$ 

<sup>&</sup>lt;sup>5)</sup> 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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