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 ⁹¹ EC 60664-1 250 ∨ 1500 ∨ 200 ∨	Contact arrangement	IEC 60130-91)	✓	✓		✓	✓		✓	✓		
Rated impulse withstand voltage	Electrical Characteristics											
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 ¹⁰ Ω ⁴⁾									
Climatic category IEC 60668-1	Contact resistance	IEC 60512-2-1	$<$ 5 m Ω									
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.

¹⁾ Edition 2000-05

²⁾ values in brackets are according to DIN EN 61076-2-106

³⁾ designed acc. pollution degree 2; can be used under pollution degree 3 when the rules of IEC 60644-1 are fulfilled

 $^{^{\}scriptscriptstyle 4)}$ under operating conditions >10 8 Ω

⁵⁾ 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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