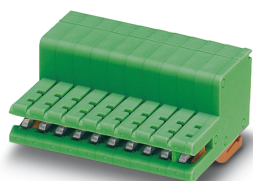


Printed-circuit board connector - ZEC 1,0/ 3-ST-3,5C1,3 R1,3NZX7 - 1998205

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PCB direct plug, nominal cross section: 1 mm², color: green, nominal current: 8 A, rated voltage (III/2): 200 V, contact surface: Tin, type of contact: Female connector, number of potentials: 3, number of rows: 1, number of positions: 3, number of connections: 3, product range: ZEC 1,0/...-ST, pitch: 3.5 mm, connection method: Spring-cage connection, mounting: Direct plug-in method, conductor/PCB connection direction: 0 °, plug-in system: ZEC, locking: Snap-in locking, mounting: Self-locking flange, type of packaging: packed in cardboard

The figure shows a 10-position version of the product

Your advantages

- ✓ Defined contact force ensures that contact remains stable over the long term
- ✓ Inexpensive direct plug-in connection with just one component
- ✓ Clamping space opened by means of fixed screwdriver enables convenient conductor connection
- ✓ Plug-in direction parallel to the PCB



Key Commercial Data

Packing unit	50 pc
GTIN	 4 017918 964047
GTIN	4017918964047

Technical data

Item properties

Brief article description	Printed-circuit board connector
Connector system	ZEC
Type of contact	Female connector
Range of articles	ZEC 1,0/...-ST
Pitch	3.5 mm
Number of positions	3
Locking	without
Number of rows	1
Number of connections	3

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Technical data

Item properties

Number of potentials	3
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Electrical parameters

Nominal current	8 A
Nom. voltage	200 V
Rated voltage (III/3)	160 V
Rated voltage (III/2)	200 V
Rated voltage (II/2)	320 V
Rated surge voltage (III/3)	2.5 kV
Rated surge voltage (III/2)	2.5 kV
Rated surge voltage (II/2)	2.5 kV

Connection capacity

Connection method	Spring-cage connection
pluggable	no
Conductor cross section solid	0.2 mm ² ... 1 mm ²
Conductor cross section flexible	0.2 mm ² ... 1 mm ²
Conductor cross section AWG / kcmil	24 ... 16
Conductor cross section flexible, with ferrule without plastic sleeve	0.25 mm ² ... 1 mm ²
Conductor cross section, flexible, with ferrule, with plastic sleeve	0.25 mm ² ... 0.75 mm ²
2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve	0.5 mm ² ... 0.5 mm ²
Stripping length	7 mm

Flange specifications

Type of locking	Snap-in locking
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Material data - contact

Note	WEEE/RoHS-compliant, free of whiskers according to IEC 60068-2-82/ JEDEC JESD 201
Contact material	Cu alloy
Surface characteristics	hot-dip tin-plated
Metal surface terminal point (top layer)	Tin (5 - 7 µm Sn)
Metal surface contact area (top layer)	Tin (5 - 7 µm Sn)

Material data - housing

Housing color	green (6021)
Insulating material	PA
Insulating material group	I
CTI according to IEC 60112	600
Flammability rating according to UL 94	V0
Glow wire flammability index GWFI according to EN 60695-2-12	850
Glow wire ignition temperature GWIT according to EN 60695-2-13	775

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Technical data

Material data - housing

Temperature for the ball pressure test according to EN 60695-10-2	125 °C
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Dimensions for the product

Caption	Schematische Abbildung - weitere Details siehe Produktfamilienzeichnung im Download Center
Length [l]	24.05 mm
Width [w]	11.9 mm
Height [h]	17.5 mm
Pitch	3.5 mm
Height (without solder pin)	17.5 mm

Packaging information

Type of packaging	packed in cardboard
Pieces per package	50
Denomination packing units	Pcs.

General product information

Type of note	Notes on operation
Note	In accordance with IEC 61984, COMBICON connectors have no switching power (COC). During designated use, they must not be plugged in or disconnected when carrying voltage or under load.

Ambient conditions

Ambient temperature (storage/transport)	-40 °C ... 70 °C
Relative humidity (storage/transport)	30 % ... 70 %
Ambient temperature (assembly)	-5 °C ... 100 °C
Ambient temperature (operation)	-40 °C ... 100 °C (dependent on the derating curve)

Termination and connection method

Test – repeated connection and release	IEC 60999-1:1990-05
	Test passed
Test for conductor damage and slackening	IEC 60999-1:1990-05
	Test passed

Pull-out test

Pull-out test	IEC 60999-1:1990-05
Conductor cross section / conductor type / tensile force	0.2 mm² / solid / > 10 N
	0.2 mm² / flexible / > 10 N
	1 mm² / solid / > 35 N
	1 mm² / flexible / > 35 N

Mechanical tests according to standard

Test specification	DIN VDE 0627 (in parts)
Visual inspection	IEC 60512-2:1985-00

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Technical data

Mechanical tests according to standard

Dimension check	IEC 60512-2:1985-00
Resistance of inscriptions	IEC 60068-2-70:1995-12
Insertion and withdrawal force	IEC 60512-7:1993-08
No. of cycles	20
Insertion strength per pos. approx.	5 N
Withdraw strength per pos. approx.	3 N

Air clearances and creepage distances

Clearances and creepage distances	IEC 60664-1:2007-04
Specification	IEC 60664-1:2007-04
Minimum clearance - inhomogeneous field (III/3)	1.5 mm
Minimum clearance - inhomogeneous field (III/2)	1.5 mm
Minimum clearance - inhomogeneous field (II/2)	1.5 mm
Minimum creepage distance value (III/3)	2 mm
Minimum creepage distance value (III/2)	1.5 mm
Minimum creepage distance value (II/2)	1.6 mm

Current carrying capacity / derating curves

Caption	Type: ZEC 1,0/...-ST-3,5 Derating curve, determined as per DIN EN 61984 (VDE 0627):2002-09 Representation based on DIN EN 60512-5-2:2003-01 Connected conductor cross section = 1 mm ² Reduction factor = 0.8 Number of positions = see diagram
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Mechanical tests (A)

Test specification	DIN VDE 0627 (in parts)
Insertion strength per pos. approx.	5 N
Withdraw strength per pos. approx.	3 N

Durability tests (B)

Specification	IEC 60512-5:1992-08
Contact resistance R ₁	1.3 mΩ
Insertion/withdrawal cycles	20
Contact resistance R ₂	2 mΩ
Insulation resistance, neighboring positions	10 ¹¹ Ω

Thermal tests (C)

Specification	IEC 60512-5-1:2002-02
Number of positions	12
Upper limiting temperature requirements <100 °C	Test passed

Climatic tests (D)

Specification	ISO 6988:1985-02
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Technical data

Climatic tests (D)

Cold stress	-40 °C/2 h
Thermal stress	100 °C/168 h
Corrosive stress	0.2 dm ³ SO ₂ on 300 dm ³ /40 °C/1 cycle
Impulse withstand voltage at sea level	2.95 kV
Power-frequency withstand voltage	1.39 kV

Environmental and durability tests (E)

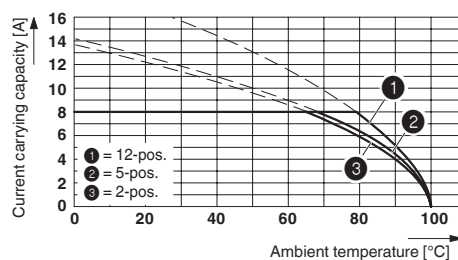
Specification	DIN VDE 0106-100:1983-03
Result, degree of protection, IP code	Finger safety in installation position

Environmental Product Compliance

China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values

Drawings

Diagram



Type: ZEC 1,0/...-ST-3,5

Derating curve, determined as per DIN EN 61984 (VDE 0627):2002-09

Representation based on DIN EN 60512-5-2:2003-01

Connected conductor cross section = 1 mm²

Reduction factor = 0.8

Number of positions = see diagram

Classifications

eCl@ss

eCl@ss 10.0.1	27440309
eCl@ss 11.0	27460202
eCl@ss 4.0	27260700
eCl@ss 4.1	27260700
eCl@ss 5.0	27260700
eCl@ss 5.1	27260700
eCl@ss 6.0	27260700
eCl@ss 7.0	27440309

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Classifications

eCl@ss

eCl@ss 9.0	27440309
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ETIM

ETIM 3.0	EC001121
ETIM 4.0	EC002637
ETIM 6.0	EC002638
ETIM 7.0	EC002638

UNSPSC

UNSPSC 6.01	30211810
UNSPSC 7.0901	39121409
UNSPSC 11	39121409
UNSPSC 12.01	39121409
UNSPSC 13.2	39121409
UNSPSC 18.0	39121409
UNSPSC 19.0	39121409
UNSPSC 20.0	39121409
UNSPSC 21.0	39121400

Approvals

Approvals

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Approvals

VDE report with production monitoring / CCA / IECCEB Scheme / EAC / cULus Recognized

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Ex Approvals

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Approval details

VDE report with production monitoring		http://www2.vde.com/de/Institut/Online-Service/ VDE-gepruefteProdukte/Seiten/Online-Suche.aspx	40020343
Nominal voltage UN	160 V		
Nominal current IN	8 A		
mm²/AWG/kcmil	0.2-1		

Printed-circuit board connector - ZEC 1,0/ 3-ST-3,5C1,3 R1,3NZX7 - 1998205

Approvals

CCA	DE1 34215
Nominal voltage UN	1000 V
Nominal current IN	10 A

IECEE CB Scheme		http://www.iecee.org/	DE1-51128
Nominal voltage UN	1000 V		
Nominal current IN	10 A		

EAC		B.01687
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cULus Recognized		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	E60425-19941110
Nominal voltage UN	150 V		
Nominal current IN	8 A		
mm²/AWG/kcmil	26-16		

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