

Please be informed that the data shown in this PDF document is generated from our online catalog. Please find the complete data in the user documentation. Our general terms of use for downloads are valid.



PCB direct plug, nominal cross section: 1.5 mm², color: gray, nominal current: 10 A, rated voltage (III/2): 630 V, contact surface: Sn, contact connection type: Socket, number of potentials: 6, number of rows: 1, number of positions: 6, number of connections: 6, product range: ZEC 1,5/.-ST, pitch: 7.5 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: Latching flange, type of packaging: packed in cardboard

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

Commercial data

| | |
|--------------------------------------|---------------|
| Item number | 1947984 |
| Packing unit | 50 pc |
| Minimum order quantity | 50 pc |
| Sales key | AA03 |
| Product key | AACEDA |
| GTIN | 4017918879907 |
| Weight per piece (including packing) | 12.129 g |
| Weight per piece (excluding packing) | 11.082 g |
| Customs tariff number | 85366930 |
| Country of origin | GR |

Technical data

Product properties

| | |
|-----------------------|-----------------------|
| Product type | PCB direct plug |
| Product family | ZEC 1,5/..-ST |
| Product line | COMBICON Connectors M |
| Number of positions | 6 |
| Pitch | 7.5 mm |
| Number of connections | 6 |
| Number of rows | 1 |
| Number of potentials | 6 |
| Mounting flange | without |

Data management status

| | |
|------------------|----|
| Article revision | 01 |
|------------------|----|

Electrical properties

| | |
|-----------------------------|--------|
| Nominal current I_N | 10 A |
| Nominal voltage U_N | 630 V |
| Contact resistance | 1.2 mΩ |
| Rated voltage (III/3) | 400 V |
| Rated surge voltage (III/3) | 6 kV |
| Rated voltage (III/2) | 630 V |
| Rated surge voltage (III/2) | 6 kV |
| Rated voltage (II/2) | 1000 V |
| Rated surge voltage (II/2) | 6 kV |

Connection data

Connection technology

| | |
|-------------------------|-----------------------|
| Type | Direct plug connector |
| Connector system | ZEC |
| Nominal cross section | 1.5 mm ² |
| Contact connection type | Socket |

Interlock

| | |
|-----------------|-----------------|
| Locking type | Snap-in locking |
| Mounting flange | Latching flange |

Conductor connection

| | |
|------------------------------------------------------------|---------------------------------------------|
| Connection method | Spring-cage connection |
| Connection direction of the conductor to plug-in direction | 0 ° |
| Conductor cross section rigid | 0.2 mm ² ... 1.5 mm ² |
| Conductor cross section flexible | 0.2 mm ² ... 1.5 mm ² |
| Conductor cross section AWG | 24 ... 16 |

ZEC 1,5/ 6-ST-7,5GYC2R1,6BDNZ2 - PCB connector



1947984

<https://www.phoenixcontact.com/us/products/1947984>

| | |
|-------------------------------------------------------------------------------------------|----------------------------------------------|
| Conductor cross section flexible, with ferrule without plastic sleeve | 0.25 mm ² ... 1.5 mm ² |
| Conductor cross section, flexible, with ferrule, with plastic sleeve | 0.25 mm ² ... 1.5 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 |

Specifications for ferrules without insulating collar

| | |
|---------------------------|--------------------|
| recommended crimping tool | 1212034 CRIMPFOX 6 |
|---------------------------|--------------------|

Specifications for ferrules with insulating collar

| | |
|---------------------------|--------------------|
| recommended crimping tool | 1212034 CRIMPFOX 6 |
|---------------------------|--------------------|

Mounting

| | |
|---------------|-----------------------|
| Mounting type | Direct plug-in method |
|---------------|-----------------------|

Material specifications

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 (4 - 8 µm Sn) |
| Metal surface contact area (top layer) | Tin (4 - 8 µm Sn) |

Material data - housing

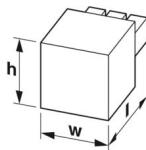
| | |
|-------------------------------------------------------------------|-------------|
| Color (Housing) | gray (7042) |
| Insulating material | PA |
| Insulating material group | I |
| CTI according to IEC 60112 | 600 |
| Flammability rating according to UL 94 | V0 |
| Glow wire flammability index GWFI according to EN 60695-2-12 | 850 |
| Glow wire ignition temperature GWIT according to EN 60695-2-13 | 775 |
| Temperature for the ball pressure test according to EN 60695-10-2 | 125 °C |

Notes

| | |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Notes on operation | 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. |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Dimensions

Dimensional drawing



Pitch

7.5 mm

Installed height

18 mm

Mechanical tests

Test for conductor damage and slackening

| | |
|---------------|---------------------|
| Specification | IEC 60999-1:1990-05 |
| Result | Test passed |

Repeated connection and disconnection

| | |
|---------------|---------------------|
| Specification | IEC 60999-1:1990-05 |
| Result | Test passed |

Pull-out test

| | |
|-----------------------------------------------------------------------------|-----------------------------------------|
| Specification | IEC 60999-1:1990-05 |
| Conductor cross section/conductor type/tractive force setpoint/actual value | 0.2 mm ² / solid / > 10 N |
| | 0.2 mm ² / flexible / > 10 N |
| | 1.5 mm ² / solid / > 40 N |
| | 1.5 mm ² / flexible / > 40 N |

Insertion and withdrawal forces

| | |
|-------------------------------------|-------------|
| Result | Test passed |
| No. of cycles | 20 |
| Insertion strength per pos. approx. | 6 N |
| Withdraw strength per pos. approx. | 3 N |

Resistance of inscriptions

| | |
|---------------|------------------------|
| Specification | IEC 60068-2-70:1995-12 |
| Result | Test passed |

Visual inspection

| | |
|---------------|---------------------|
| Specification | IEC 60512-2:1985-00 |
| Result | Test passed |

Dimension check

| | |
|---------------|---------------------|
| Specification | IEC 60512-2:1985-00 |
| Result | Test passed |

Electrical tests

Thermal test | Test group C

| | |
|---------------|-----------------------|
| Specification | IEC 60512-5-1:2002-02 |
|---------------|-----------------------|

ZEC 1,5/ 6-ST-7,5GYC2R1,6BDNZ2 - PCB connector

1947984

<https://www.phoenixcontact.com/us/products/1947984>



| | |
|----------------------------|----|
| Tested number of positions | 12 |
|----------------------------|----|

Insulation resistance

| | |
|----------------------------------------------|---------------------|
| Specification | IEC 60512-2:1985-00 |
| Insulation resistance, neighboring positions | $10^{12} \Omega$ |

Air clearances and creepage distances |

| | |
|--------------------------------------------------------|---------------------|
| Specification | IEC 60664-1:2007-04 |
| Insulating material group | I |
| Comparative tracking index (IEC 60112) | CTI 600 |
| Rated insulation voltage (III/3) | 400 V |
| Rated surge voltage (III/3) | 6 kV |
| minimum clearance value - non-homogenous field (III/3) | 5.5 mm |
| minimum creepage distance (III/3) | 5.5 mm |
| Rated insulation voltage (III/2) | 630 V |
| Rated surge voltage (III/2) | 6 kV |
| minimum clearance value - non-homogenous field (III/2) | 5.5 mm |
| minimum creepage distance (III/2) | 5.5 mm |
| Rated insulation voltage (II/2) | 1000 V |
| Rated surge voltage (II/2) | 6 kV |
| minimum clearance value - non-homogenous field (II/2) | 5.5 mm |
| minimum creepage distance (II/2) | 5.5 mm |

Environmental and real-life conditions

Vibration test

| | |
|------------------------|-----------------------------|
| Specification | IEC 60068-2-6:1995-03 |
| Frequency | 10 - 150 - 10 Hz |
| Sweep speed | 1 octave/min |
| Amplitude | 0.35 mm (10 Hz ... 60.1 Hz) |
| Acceleration | 5g (60.1 Hz ... 150 Hz) |
| Test duration per axis | 2.5 h |
| Test directions | X-, Y- and Z-axis |

Durability test

| | |
|-----------------------------|---------------------|
| Specification | IEC 60512-5:1992-08 |
| Contact resistance R_1 | 1.2 mΩ |
| Contact resistance R_2 | 1.5 mΩ |
| Insertion/withdrawal cycles | 20 |

Climatic test

| | |
|-----------------------------------|---------------------------------------------------------------------------|
| Specification | ISO 6988:1985-02 |
| Corrosive stress | 0.2 dm ³ SO ₂ on 300 dm ³ /40 °C/1 cycle |
| Thermal stress | 100 °C/168 h |
| Power-frequency withstand voltage | 3.31 kV |

Ambient conditions

ZEC 1,5/ 6-ST-7,5GYC2R1,6BDNZ2 - PCB connector

1947984

<https://www.phoenixcontact.com/us/products/1947984>

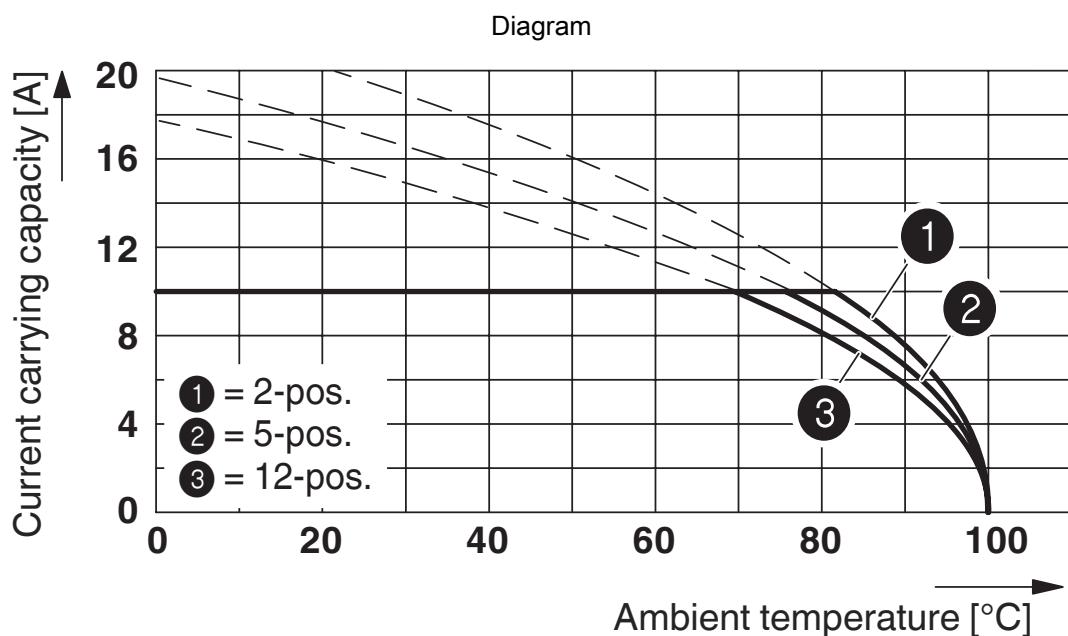


| | |
|-----------------------------------------|-----------------------------------------------------|
| Ambient temperature (operation) | -40 °C ... 100 °C (dependent on the derating curve) |
| Ambient temperature (storage/transport) | -40 °C ... 70 °C |
| Relative humidity (storage/transport) | 30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

Packaging specifications

| | |
|-------------------|---------------------|
| Type of packaging | packed in cardboard |
|-------------------|---------------------|

Drawings



Type: ZEC 1,5/...-ST-7,5

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 = 1.5 mm²

Reduction factor = 0.8

Number of positions = see diagram

Approvals

ⓘ To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1947984>

|  cULus Recognized Approval ID: E60425-19941110 | | | | |
|-------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------|-------------------|----------------------|
| | Nominal voltage U_N | Nominal current I_N | Cross section AWG | Cross section mm^2 |
| Use group B | 300 V | 10 A | 26 - 14 | - |
| Use group D | 300 V | 10 A | 26 - 14 | - |

|  VDE Gutachten mit Fertigungsüberwachung Approval ID: 40020343 | | | | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------|-------------------|----------------------|
| | Nominal voltage U_N | Nominal current I_N | Cross section AWG | Cross section mm^2 |
| | 400 V | 10 A | - | 0.2 - 1.5 |

Classifications

ECLASS

| | |
|-------------|----------|
| ECLASS-11.0 | 27460202 |
| ECLASS-12.0 | 27460202 |
| ECLASS-13.0 | 27460202 |

ETIM

| | |
|----------|----------|
| ETIM 9.0 | EC002638 |
|----------|----------|

UNSPSC

| | |
|-------------|----------|
| UNSPSC 21.0 | 39121400 |
|-------------|----------|

Environmental product compliance

EU RoHS

| | |
|-----------------------------------------|--------------------|
| Fulfills EU RoHS substance requirements | Yes, No exemptions |
|-----------------------------------------|--------------------|

China RoHS

| | |
|----------------------------------------|------------------------------------------|
| Environment friendly use period (EFUP) | EFUP-E |
| | No hazardous substances above the limits |

EU REACH SVHC

| | |
|-------------------------------------|----------------------------|
| REACH candidate substance (CAS No.) | No substance above 0.1 wt% |
|-------------------------------------|----------------------------|

Phoenix Contact 2024 © - all rights reserved

<https://www.phoenixcontact.com>

Phoenix Contact USA

586 Fulling Mill Road

Middletown, PA 17057, United States

(+717) 944-1300

info@phoenixcon.com