

Printed-circuit board connector - ISPC 16/ 7-ST-10,16 - 1748590

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PCB connector, nominal current: 76 A, rated voltage (III/2): 1000 V, nominal cross section: 16 mm², number of positions: 7, pitch: 10.16 mm, connection method: Push-in spring connection, color: green, contact surface: Silver




The figure shows the 5-pos. version

Your advantages

- ✓ Time saving push-in connection, tools not required
- ✓ Defined contact force ensures that contact remains stable over the long term
- ✓ Clamping space opened by means of fixed screwdriver enables convenient conductor connection
- ✓ Inverted connector with pin contacts for touch-proof device outputs or free-hanging cable/cable connections



Key Commercial Data

Packing unit	50 pc
GTIN	 4 046356 310659
GTIN	4046356310659

Technical data

Item properties

Brief article description	Printed-circuit board connector
Plug-in system	POWER COMBICON 16
Type of contact	Male connector
Range of articles	ISPC 16/..-ST
Pitch	10.16 mm
Number of positions	7
Connection method	Push-in spring connection
Locking	without
Number of levels	1
Number of connections	7
Number of potentials	7

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Technical data

Electrical parameters

Nominal current	76 A
Nom. voltage	1000 V
Rated voltage	1000 V
Rated voltage (III/2)	1000 V
Rated voltage (II/2)	1000 V
Rated surge voltage (III/3)	8 kV
Rated surge voltage (III/2)	8 kV
Rated surge voltage (II/2)	6 kV

Connection capacity

Connection method	Push-in spring connection
pluggable	Yes
Conductor cross section solid	0.75 mm ² ... 16 mm ²
Conductor cross section flexible	0.75 mm ² ... 16 mm ²
Conductor cross section AWG / kcmil	18 ... 4
Conductor cross section flexible, with ferrule without plastic sleeve	0.75 mm ² ... 16 mm ²
Conductor cross section, flexible, with ferrule, with plastic sleeve	0.75 mm ² ... 10 mm ²
2 conductors with same cross section, solid	0.75 mm ² ... 6 mm ²
2 conductors with same cross section, flexible	0.75 mm ² ... 6 mm ²
2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve	0.75 mm ² ... 4 mm ²
Cylindrical gauge a x b / diameter	- / 5.4 mm
Stripping length	18 mm

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	Electroplated silver
Metal surface terminal point (top layer)	Silver (4 - 8 µm Ag)
Metal surface contact area (top layer)	Silver (4 - 8 µm Ag)

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

Dimensions for the product

Length [l]	45.1 mm
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Technical data

Dimensions for the product

Width [w]	74.16 mm
Height [h]	25.1 mm
Pitch	10.16 mm
Height (without solder pin)	25.1 mm

Packaging information

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

Ambient conditions

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

Termination and connection method

Conductor connection test	The stripped-off ends of the largest conductor can be completely inserted in the opening of the terminal point without using excessive force.
Test result	Test passed
Test – repeated connection and release	IEC 60999-1:1999-11
	Test passed
Test for conductor damage and slackening	IEC 60999-1:1999-11
	Test passed

Pull-out test

Pull-out test	IEC 60999-1:1999-11
	Test passed
Conductor cross section / conductor type / tensile force	0.75 mm ² / solid / > 30 N
	0.75 mm ² / flexible / > 30 N
	16 mm ² / solid / > 100 N
	16 mm ² / flexible / > 100 N

Mechanical tests according to standard

Test specification	IEC 61984
Visual inspection	IEC 60512-1-1:2002-02
Dimension check	IEC 60512-1-2:2002-02
Resistance of inscriptions	IEC 60068-2-70:1995-12
Insertion and withdrawal force	IEC 60512-13-2:2006-02
No. of cycles	50
Insertion strength per pos. approx.	10 N
Withdraw strength per pos. approx.	8 N
Polarization and coding	IEC 60512-13-5:2006-02

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Technical data

Mechanical tests according to standard

Contact holder in insert	IEC 60512-15-1:2008-05
Test force per pos.	48 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)	8 mm
Minimum clearance - inhomogeneous field (III/2)	8 mm
Minimum clearance - inhomogeneous field (II/2)	5.5 mm
Minimum creepage distance value (III/3)	12.5 mm
Minimum creepage distance value (III/2)	8 mm
Minimum creepage distance value (II/2)	5.5 mm

Electrical tests - Function

Specification	IEC 60999-1:1999-11
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Temperature cycles

Specification	IEC 60999-1:1999-11
Test current (minimum cross section)	9 A DC
Test current (maximum cross section)	76 A DC
Temperature cycles	192

Current carrying capacity / derating curves

Caption	Type: ISPC 16/...-ST-10,16 with DFK-IPC 16/...-ST-10,16
Specification	IEC 61984:2008-10
Reduction factor	0.8
Note	Representation based on IEC 60512-5-2:2002-02
	For number of positions, see diagram

Mechanical tests (A)

Test specification	IEC 61984
Insertion strength per pos. approx.	10 N
Withdraw strength per pos. approx.	8 N
Polarization when inserted requirement >20 N	Test passed
Contact holder in insert requirements >20 N	Test passed

Durability tests (B)

Specification	IEC 60512-9-1:2010-03
Contact resistance R ₁	0.35 mΩ
Insertion/withdrawal cycles	50
Contact resistance R ₂	0.34 mΩ
Impulse withstand voltage at sea level	9.8 kV
Power-frequency withstand voltage	4.26 kV
Insulation resistance, neighboring positions	6 TΩ

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Technical data

Thermal tests (C)

Specification	IEC 60512-5-1:2002-02
Number of positions	9
Conductor cross section	16 mm ²
Test current	76 A DC
Upper limiting temperature requirements <100 °C	Test passed

Climatic tests (D)

Specification	ISO 6988:1985-02
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	9.8 kV
Power-frequency withstand voltage	4.26 kV

Environmental and durability tests (E)

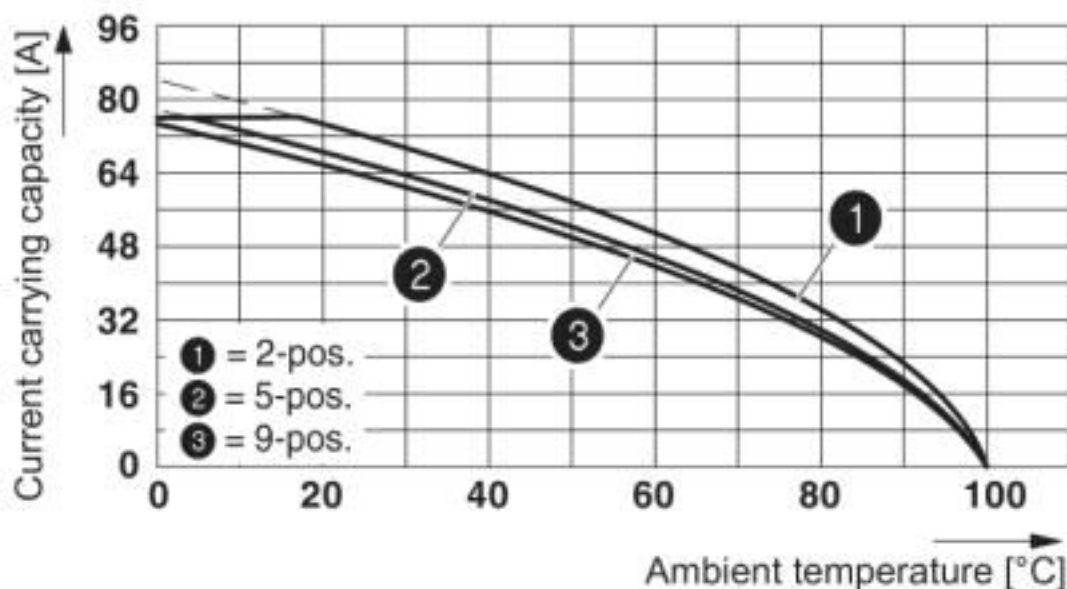
Specification	IEC 61984:2008-10
Result, degree of protection, IP code	Finger safety with IP20 test finger

Environmental Product Compliance

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

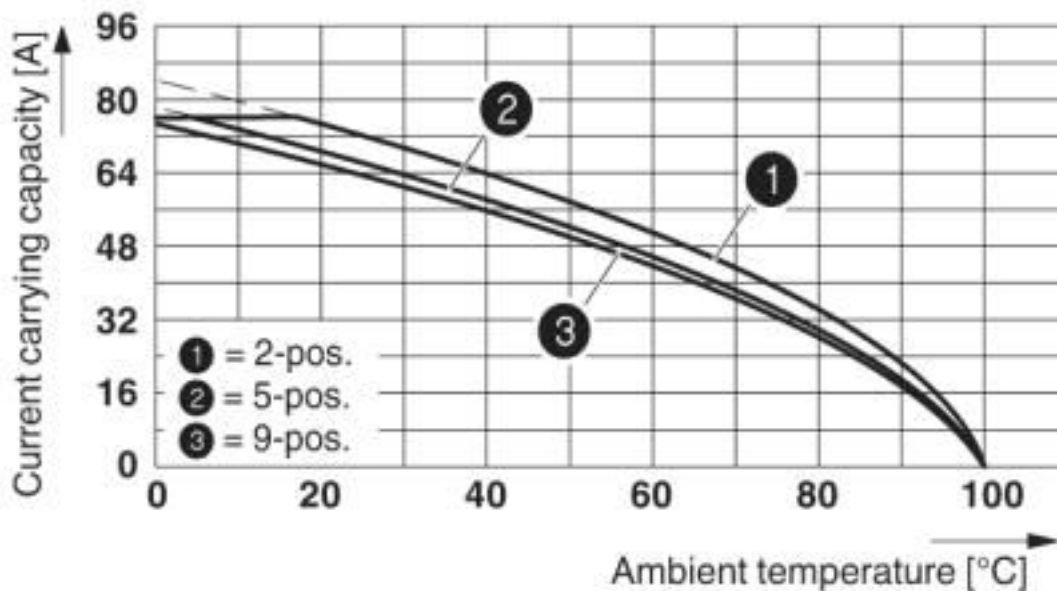
Drawings

Diagram



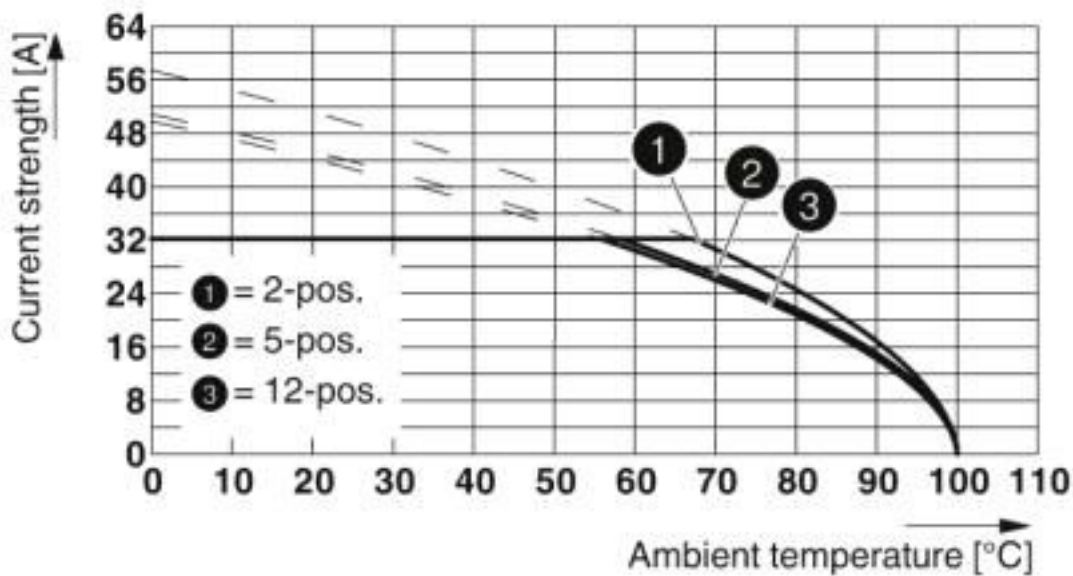
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Diagram



Derating curve for: ISPC 16/..-ST-10,16 with IPCV 16/..-G-10,16

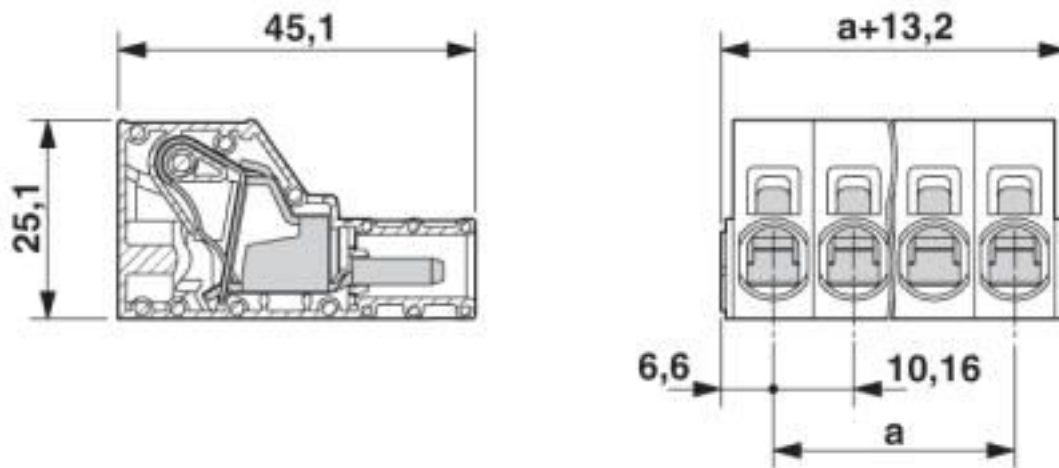
Diagram



Type: ISPC 16/...-ST-10,16 with DFK-IPC 16/...-ST-10,16

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Dimensional drawing



Classifications

eCl@ss

eCl@ss 10.0.1	27440309
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
eCl@ss 8.0	27440309
eCl@ss 9.0	27440309

ETIM

ETIM 3.0	EC001121
ETIM 4.0	EC002638
ETIM 5.0	EC002638
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

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Classifications

UNSPSC

UNSPSC 21.0	39121409
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Approvals

Approvals

Approvals

IECEE CB Scheme / SEV / EAC / cULus Recognized

Ex Approvals

Approval details

IECEE CB Scheme		http://www.iecee.org/	CH-10653-M1
Nominal voltage UN	1000 V		
Nominal current IN	76 A		
mm ² /AWG/kcmil	16		

SEV		https://www.eurofins.ch/de/	IK-4468-M1
Nominal voltage UN	1000 V		
Nominal current IN	76 A		
mm ² /AWG/kcmil	16		

EAC			B.01687
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cULus Recognized		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	E60425-20040202
	B	C	
Nominal voltage UN	600 V	600 V	
Nominal current IN	66 A	66 A	
mm ² /AWG/kcmil	20-4	20-4	

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Accessories

Accessories

Coding element

Coding profile - CP-PC RD - 1701967

Coding profile, for plugging into the coding ribs of the plug at a later date, insulating material, color: Red



Crimping tool

Crimping pliers - CRIMPFOX 16 S - 1207983



Crimping pliers for ferrules up to 16 mm²

Crimping pliers - CRIMPFOX 6 - 1212034



Crimping pliers, for ferrules without insulating collar according to DIN 46228 Part 1 and ferrules with insulating collar according to DIN 46228 Part 4, 0.25 mm² ... 6.0 mm², lateral entry, trapezoidal crimp

Screwdriver tools

Screwdriver - SZF 2-0,8X4,0 - 1204520



Actuation tool, for ST terminal blocks, also suitable for use as a bladed screwdriver, size: 0.8 x 4.0 x 100 mm, 2-component grip, with non-slip grip

Terminal marking

Marker strip - SK 5,0 WH:REEL - 0805221



Marker strip, Roll, white, unlabeled, can be labeled with: THERMOMARK ROLL 2.0, THERMOMARK ROLL, THERMOMARK ROLL X1, THERMOMARK ROLLMASTER 300/600, THERMOMARK X1.2, mounting type: adhesive, for terminal block width: 5 mm, lettering field size: continuous x 5#mm, Number of individual labels: 90000

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Accessories

Additional products

Direct plug-in block - PCU 6/ 7-STD-10,16 - 1922682



Direct plug-in block, nominal current: 41 A, rated voltage (III/2): 1000 V, nominal cross section: 6 mm², number of positions: 7, pitch: 10.16 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Silver, mounting: Direct mounting

Printed-circuit board connector - PC 16/ 7-ST-10,16 - 1967427



PCB connector, nominal current: 76 A, rated voltage (III/2): 1000 V, nominal cross section: 16 mm², number of positions: 7, pitch: 10.16 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Silver

Printed-circuit board connector - TPC 16/ 7-ST-10,16 - 1715222



PCB connector, nominal current: 76 A, rated voltage (III/2): 1000 V, nominal cross section: 16 mm², number of positions: 7, pitch: 10.16 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Silver

Printed-circuit board connector - SPC 16/ 7-ST-10,16 - 1711310



PCB connector, nominal current: 76 A, rated voltage (III/2): 1000 V, nominal cross section: 16 mm², number of positions: 7, pitch: 10.16 mm, connection method: Push-in spring connection, color: green, contact surface: Silver

Feed-through header - IPC 16/ 7-G-10,16 - 1969580



PCB headers, nominal current: 76 A, rated voltage (III/2): 1000 V, nominal cross section: 16 mm², number of positions: 7, pitch: 10.16 mm, color: green, contact surface: Silver, mounting: Wave soldering, pin layout: Linear three-way pinning, solder pin [P]: 4 mm

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Accessories

Feed-through header - IPC 16/ 7-GU-10,16 - 1969904



PCB headers, nominal current: 76 A, rated voltage (III/2): 1000 V, nominal cross section: 16 mm², number of positions: 7, pitch: 10.16 mm, color: green, contact surface: Silver, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 4 mm, Plug direction parallel to the PCB: connector part rotated by 180° with respect to the plug axis.

Feed-through header - IPCV 16/ 7-G-10,16 - 1969742



PCB headers, nominal current: 76 A, rated voltage (III/2): 1000 V, nominal cross section: 16 mm², number of positions: 7, pitch: 10.16 mm, color: green, contact surface: Silver, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 4 mm

Feed-through header - DFK-IPC 16/ 7-G-10,16 - 1702468



Feed-through header, nominal current: 76 A, rated voltage (III/2): 1000 V, nominal cross section: 16 mm², number of positions: 7, pitch: 10.16 mm, color: green, contact surface: Silver, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 4.1 mm

Feed-through header - DFK-IPC 16/ 7-GU-10,16 - 1702549



Feed-through header, nominal current: 76 A, rated voltage (III/2): 1000 V, nominal cross section: 16 mm², number of positions: 7, pitch: 10.16 mm, color: green, contact surface: Silver, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 4.1 mm

Feed-through header - DFK-IPCV 16/ 7-G-10,16 - 1703108



Feed-through header, nominal current: 76 A, rated voltage (III/2): 1000 V, nominal cross section: 16 mm², number of positions: 7, pitch: 10.16 mm, color: green, contact surface: Silver, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 4.1 mm

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Accessories

Feed-through plug - DFK-IPC 16/ 7-ST-10,16 - 1703742



Feed-through connector, nominal current: 76 A, rated voltage (III/2): 1000 V, nominal cross section: 16 mm², number of positions: 7, pitch: 10.16 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Silver

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PHOENIX CONTACT GmbH & Co. KG
Flachsmarktstr. 8
32825 Blomberg
Germany
Tel. +49 5235 300
Fax +49 5235 3 41200
<http://www.phoenixcontact.com>

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