

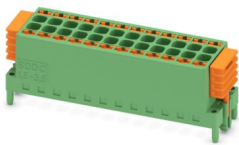
SDDC 1,5/12-PV-3,5 - Direct connector



1848749

<https://www.phoenixcontact.com/in/products/1848749>

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PCB direct plug, nominal cross section: 1.5 mm², color: green, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Sn, number of potentials: 24, number of rows: 2, number of positions: 12, number of connections: 24, product range: SDDC 1,5/..-PV, pitch: 3.5 mm, connection method: Push-in spring connection, mounting: SKEDD - Direct plug-in technology, conductor/PCB connection direction: 90 °, pin layout: Linear double pinning, plug-in system: SKEDD, locking: Snap-in locking, mounting method: Latching flange, type of packaging: packed in cardboard

Your advantages

- SKEDD direct plug-in technology enables flexible positioning on the PCB
- Reduced component and process costs: simple insertion by hand and vibration-resistant connection
- Contacts arranged in a double row enable high packing density in a compact area
- Wide range of applications, thanks to suitability for PCBs with chemically tin-plated or Hot Air Leveling (HAL) surface
- Time saving push-in connection, tools not required
- Intuitive operation due to color-coded actuating push button
- Quick and convenient testing using integrated test option

Commercial data

Item number	1848749
Packing unit	50 pc
Minimum order quantity	50 pc
Note	Made to order (non-returnable)
Sales key	AAB
Product key	AABDDA
GTIN	4055626307510
Weight per piece (including packing)	10.744 g
Weight per piece (excluding packing)	9.864 g
Customs tariff number	85366990
Country of origin	PL

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Technical data

Product properties

Product type	PCB direct plug
Product family	SDDC 1,5/...-PV
Product line	COMBICON Connectors S
Number of positions	12
Pitch	3.5 mm
Number of connections	24
Number of rows	2
Number of potentials	24
Pin layout	Linear double pinning

Electrical properties

Nominal current I_N	8 A
Nominal voltage U_N	160 V
Contact resistance	1.4 mΩ
Rated voltage (III/3)	160 V
Rated surge voltage (III/3)	2.5 kV
Rated voltage (III/2)	160 V
Rated surge voltage (III/2)	2.5 kV
Rated voltage (II/2)	400 V
Rated surge voltage (II/2)	2.5 kV

Connection data

Connection technology

Connector system	SKEDD
Nominal cross section	1.5 mm²

Interlock

Locking type	Snap-in locking
Mounting flange	Latching flange

Conductor connection

Connection method	Push-in spring connection
Connection direction of the conductor to plug-in direction	0 °
Conductor cross section rigid	0.2 mm² ... 1.5 mm²
Conductor cross section flexible	0.2 mm² ... 1.5 mm²
Conductor cross section AWG	24 ... 16
Conductor cross section flexible, with ferrule without plastic sleeve	0.2 mm² ... 1.5 mm²
Conductor cross section, flexible, with ferrule, with plastic sleeve	0.2 mm² ... 1 mm²
Cylindrical gauge a x b / diameter	2.4 mm x 1.5 mm / 1.6 mm
Stripping length	8 mm

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Specifications for ferrules without insulating collar

recommended crimping tool	1212034 CRIMPFOX 6
ferrules without insulating collar, according to DIN 46228-1	Cross section: 0.5 mm ² ; Length: 8 mm ... 10 mm
	Cross section: 0.75 mm ² ; Length: 8 mm ... 10 mm
	Cross section: 1 mm ² ; Length: 8 mm ... 10 mm
	Cross section: 1.5 mm ² ; Length: 8 mm

Specifications for ferrules with insulating collar

recommended crimping tool	1212034 CRIMPFOX 6
ferrules with insulating collar, according to DIN 46228-4	Cross section: 0.25 mm ² ; Length: 8 mm ... 10 mm
	Cross section: 0.5 mm ² ; Length: 8 mm ... 10 mm
	Cross section: 0.75 mm ² ; Length: 10 mm
	Cross section: 1 mm ² ; Length: 10 mm

Mounting

Mounting type	SKEDD - Direct plug-in technology
Pin layout	Linear double pinning

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)	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

Material data – actuating element

Insulating material	PBT
Insulating material group	I
CTI according to IEC 60112	600
Flammability rating according to UL 94	V0

Notes

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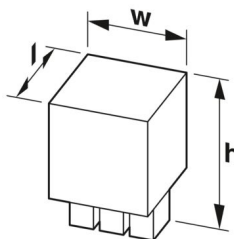
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Notes on operation

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	3.5 mm
Width [w]	49.3 mm
Height [h]	17.6 mm
Length [l]	13.5 mm
Installed height	14 mm
Pin dimensions	0.9 x 2 mm

PCB design

Pin spacing	7.00 mm
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Mechanical tests

Conductor connection

Specification	IEC 60999-1:1999-11
Result	Test passed

Test for conductor damage and slackening

Specification	IEC 60999-1:1999-11
Result	Test passed

Repeated connection and disconnection

Specification	IEC 60999-1:1999-11
Result	Test passed

Pull-out test

Specification	IEC 60999-1:1999-11
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	25
Insertion strength per pos. approx.	8 N

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Withdraw strength per pos. approx.	6 N
Contact holder in insert	
Specification	IEC 60512-15-1:2008-05
Contact holder in insert Requirements >20 N	Test passed
Resistance of inscriptions	
Specification	IEC 60068-2-70:1995-12
Result	Test passed
Polarization and coding	
Specification	IEC 60512-13-5:2006-02
Result	Test passed
Visual inspection	
Specification	IEC 60512-1-1:2002-02
Result	Test passed
Dimension check	
Specification	IEC 60512-1-2:2002-02
Result	Test passed

Electrical tests

Thermal test Test group C	
Specification	IEC 60512-5-1:2002-02
Tested number of positions	16
Insulation resistance	
Specification	IEC 60512-3-1:2002-02
Insulation resistance, neighboring positions	> 5 MΩ
Temperature cycles	
Specification	IEC 60999-1:1999-11
Result	Test passed
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)	160 V
Rated surge voltage (III/3)	2.5 kV
minimum clearance value - non-homogenous field (III/3)	1.5 mm
minimum creepage distance (III/3)	2 mm
Rated insulation voltage (III/2)	160 V
Rated surge voltage (III/2)	2.5 kV
minimum clearance value - non-homogenous field (III/2)	1.5 mm

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minimum creepage distance (III/2)	1.5 mm
Rated insulation voltage (II/2)	400 V
Rated surge voltage (II/2)	2.5 kV
minimum clearance value - non-homogenous field (II/2)	1.5 mm
minimum creepage distance (II/2)	2 mm

Environmental and real-life conditions

Vibration test

Specification	IEC 60068-2-6:2007-12
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 60512-9-1:2010-03
Impulse withstand voltage at sea level	2.95 kV
Contact resistance R_1	1.4 mΩ
Contact resistance R_2	1.5 mΩ
Insertion/withdrawal cycles	25
Insulation resistance, neighboring positions	> 5 MΩ

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	1.39 kV

Ambient conditions

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
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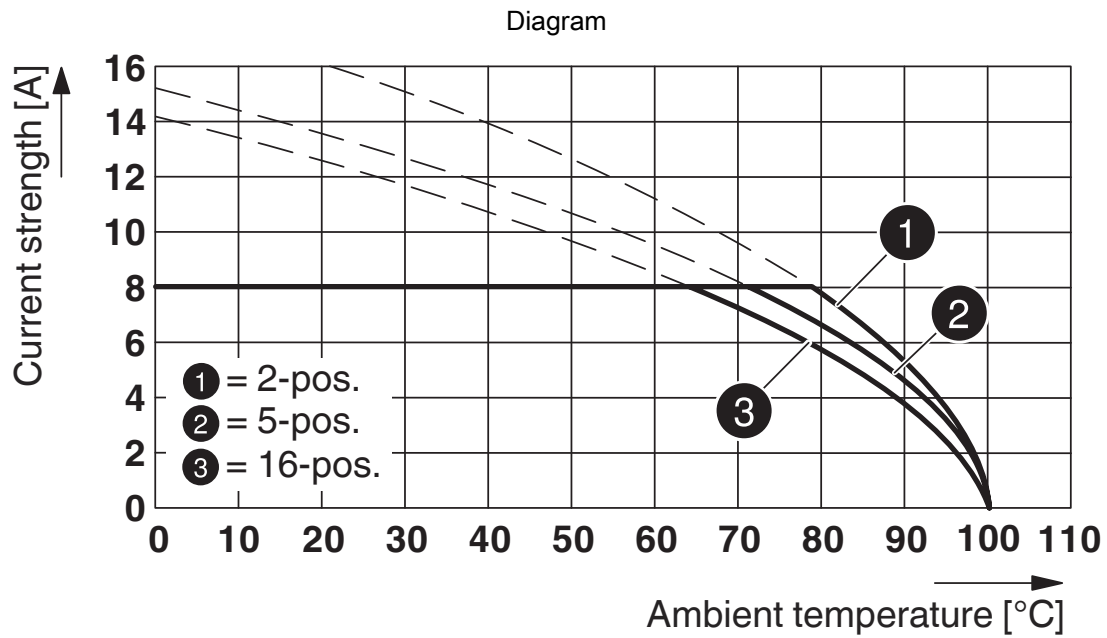
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Drawings



Type: SDDC 1,5/...-PV-3,5

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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/in/products/1848749>

 cULus Recognized Approval ID: E60425-20160718				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
Use group B	300 V	8 A	24 - 16	-
Use group D	300 V	8 A	24 - 16	-

 VDE approval of drawings Approval ID: 40044617				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
	160 V	8 A	-	0.2 - 1.5

 UL Recognized Approval ID: E60425-20160718				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
Use group F	250 V	8 A	24 - 16	-

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Classifications

ECLASS

ECLASS-11.0	27460201
ECLASS-12.0	27460201
ECLASS-13.0	27460201

ETIM

ETIM 9.0	EC002637
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UNSPSC

UNSPSC 21.0	39121400
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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%
EF3.0 Climate Change	
CO2e kg	0.39 kg CO2e

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Accessories

CP-PT 1,5 - Coding profile

1985564

<https://www.phoenixcontact.com/in/products/1985564>

Coding profile, inserted into the hole on the plug, made from red insulating material, diameter: 1.35 mm



SK 3,5/2,8:FORTL.ZAHLEN - Marker card

0804073

<https://www.phoenixcontact.com/in/products/0804073>



Marker card, Sheet, white, labeled, horizontal: consecutive numbers 1 ... 10, 11 ... 20, etc. up to 91 ... 99, mounting type: adhesive, for terminal block width: 3.5 mm, Number of individual labels: 14, text field height: 2.8 mm, text field width: 3.5 mm

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SK 2,8 REEL P3,5 WH CUS - Marker card

0825121

<https://www.phoenixcontact.com/in/products/0825121>



Marker card, can be ordered: by card, white, labeled according to customer specifications, mounting type: adhesive, for terminal block width: 3.5 mm

SK U/2,8 WH:UNBEDRUCKT - Marker card

0803883

<https://www.phoenixcontact.com/in/products/0803883>



Marker card, Din A4, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, Office printing systems, mounting type: adhesive, for terminal block width: 210 mm, Number of individual labels: 3600, text field height: 2.8 mm, text field width: 186 mm

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SK 2,8 WH:REEL - Marker strip

0805205

<https://www.phoenixcontact.com/in/products/0805205>



Marker strip, Roll, white, unlabeled, can be labeled with: THERMOMARK E.300 (D)/600 (D), THERMOMARK ROLL 2.0, THERMOMARK ROLL, THERMOMARK ROLL X1, THERMOMARK ROLLMaster 300/600, THERMOMARK X1.2, mounting type: adhesive, Number of individual labels: 14, text field height: 2.8 mm, text field width: 90000 mm

MPS-MT 1-S4-B RD VPE1 - Test plug

1020292

<https://www.phoenixcontact.com/in/products/1020292>

Test plug terminal block, product range: Test plug



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MPS-MT 1-S4-B RD - Accessories

1982800

<https://www.phoenixcontact.com/in/products/1982800>

Test plug terminal block



CRIMPFOX 6 - Crimping pliers

1212034

<https://www.phoenixcontact.com/in/products/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

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AI 0,25- 8 YE - Ferrule

3203037

<https://www.phoenixcontact.com/in/products/3203037>



Ferrule, Length contact range: 8 mm, sleeve length: 12.5 mm, color: yellow

AI 0,5 - 8 WH - Ferrule

3200014

<https://www.phoenixcontact.com/in/products/3200014>



Ferrule, Length contact range: 8 mm, sleeve length: 14 mm, color: white

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AI 0,5 - 8 WH -1000 - Ferrule

3200881

<https://www.phoenixcontact.com/in/products/3200881>



Ferrule, Length contact range: 8 mm, sleeve length: 14 mm, color: white

AI 0,75-10 GY - Ferrule

3201288

<https://www.phoenixcontact.com/in/products/3201288>



Ferrule, Length contact range: 10 mm, sleeve length: 16 mm, color: gray

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AI 1 -10 RD - Ferrule

3200182

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Ferrule, Length contact range: 10 mm, sleeve length: 16 mm, color: red

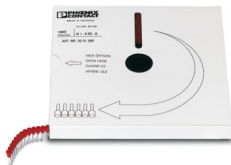


AI 1 - 8 RD-B - Ferrule

3201385

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Ferrule, Length contact range: 8 mm, sleeve length: 14 mm, color: red



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A 0,5 - 8 - Ferrule

3202481

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Ferrule, Length contact range: 8 mm, sleeve length: 8 mm, color: silver

A 0,75- 8 - Ferrule

3202504

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Ferrule, Length contact range: 8 mm, sleeve length: 8 mm, color: silver

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A 0,75-10 - Ferrule

3200234

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Ferrule, Length contact range: 12 mm, sleeve length: 10 mm, color: silver

A 1 - 8 - Ferrule

3202517

<https://www.phoenixcontact.com/in/products/3202517>



Ferrule, Length contact range: 8 mm, sleeve length: 8 mm, color: silver

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A 1 -10 - Ferrule

3200250

<https://www.phoenixcontact.com/in/products/3200250>



Ferrule, Length contact range: 10 mm, sleeve length: 10 mm, color: silver

A 1,5 -10 - Ferrule

3200276

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Ferrule, Length contact range: 10 mm, sleeve length: 10 mm, color: silver

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