



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



## Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

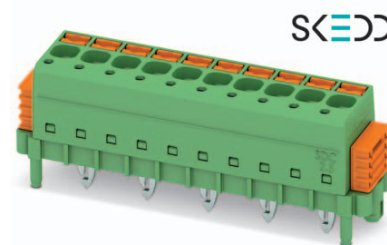
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



Order No.: 1864105

Type: SDC 2,5/ 9-PV-5,0-ZB

Plug component, Push-in spring connection



The figure shows a 10-position version

## 1 Main features



- |                           |                           |                        |                     |
|---------------------------|---------------------------|------------------------|---------------------|
| • Number of positions     | 9                         | • Nominal current      | 12 A                |
| • Conductor cross section | 2.5 mm <sup>2</sup>       | • Nominal voltage      | 200 V               |
| • Color                   | green                     | • Connection direction | 0 °                 |
| • Pitch                   | 5.00 mm                   | • Type of packaging    | packed in cardboard |
| • Connection method       | Push-in spring connection |                        |                     |

## 2 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
- ✓ Time saving push-in connection, tools not required
- ✓ Intuitive use through colour coded actuation lever
- ✓ Quick and convenient testing using integrated test option



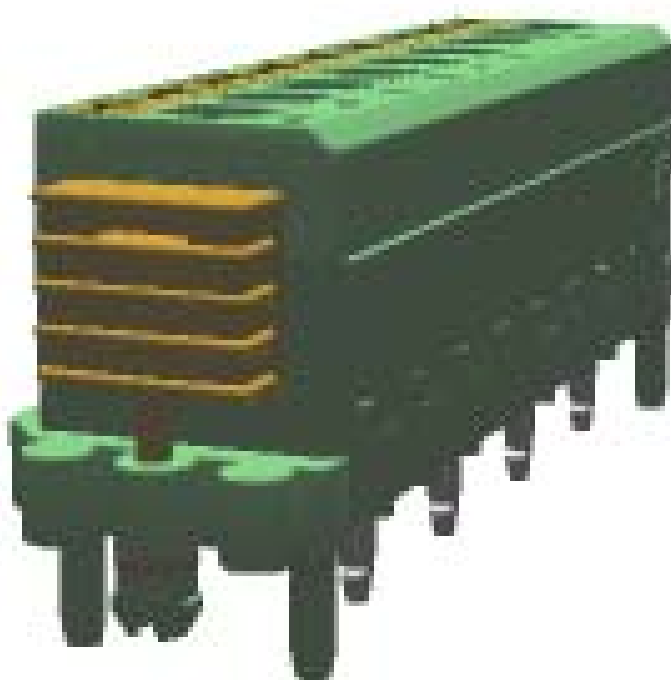
Make sure you always use the latest documentation.  
It can be downloaded at: [phoenixcontact.net/product/1864105](http://phoenixcontact.net/product/1864105)

**3 Table of contents**

1	Main features.....	1
2	Your advantages .....	1
3	Table of contents .....	2
4	3D model in PDF can be activated (Acrobat Reader only).....	3
5	Item properties.....	4
	5.1 Connection capacity .....	4
	5.2 Material data .....	4
	5.3 Dimensions .....	4
6	Series drawing.....	5
7	Packaging information .....	6
8	Application.....	6
	8.1 Temperature limit values .....	6
9	Mechanical tests.....	7
	9.1 Air and creepage distances .....	7
10	Electrical tests .....	8
	10.1 Electrical data .....	8
	10.2 Current carrying capacity/derating curves .....	8
11	Type approval and special tests .....	8
12	Approvals .....	8
13	Commercial data .....	8
	13.1 Combination tests.....	9

1864105 SDC 2,5/ 9-PV-5,0-ZB

4 3D model in PDF can be activated (Acrobat Reader only)



**1864105 SDC 2,5/ 9-PV-5,0-ZB****5 Item properties**

Order No.	1864105
Type	SDC 2,5/ 9-PV-5,0-ZB
Range of articles	SDC 2,5/...-PV
Pitch	5.00 mm
Number of positions	9
Connection method	Push-in spring connection
Mounting type	SKEDD - Direct plug-in technology
Pin layout	ZB - Zig-zag back pinning W
Note	WEEE/RoHS-compliant, whisker-free acc. to IEC 60068-2-82/JEDEC JESD 201

**5.1 Connection capacity**

Conductor cross section, solid	0.2 mm <sup>2</sup> to 2.5 mm <sup>2</sup>
Conductor cross section, flexible	0.2 mm <sup>2</sup> to 2.5 mm <sup>2</sup>
Conductor cross section AWG/kcmil	24 to 12
Conductor cross section flexible, with ferrule without plastic sleeve	0.25 mm <sup>2</sup> to 2.5 mm <sup>2</sup> Ferrule see above
Conductor cross section flexible, with ferrule with plastic sleeve	0.25 mm <sup>2</sup> to 2.5 mm <sup>2</sup> Ferrule see above
Stripping length	10 mm

**5.2 Material data**

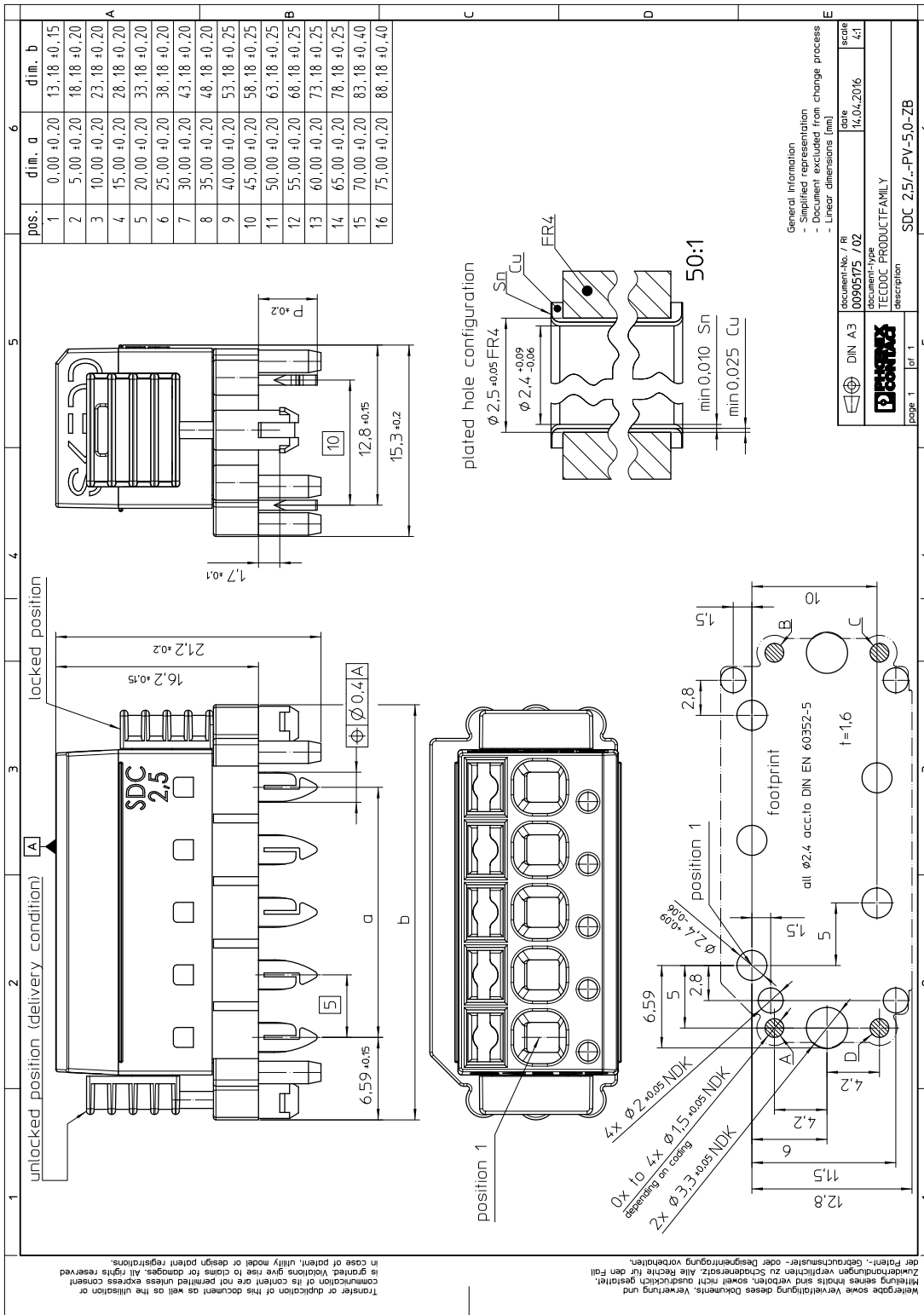
Material of metal parts		
Contact material	Cu alloy	
Surface contact area	Ni 1.5 µm ... 4 µm , Sn 4 µm ... 8 µm	
Soldering area surface		
Surface characteristics	Tin-plated	
Insulating material data	Housing	Actuation element
Insulating material	PA	PBT
CTI according to IEC 60112	600	275
Flammability rating according to UL 94	V0	V0
Color	green (6021)	orange (2003)

**5.3 Dimensions**

Dimension a	40 mm
Length	15.3 mm
Width	53.18 mm
Constructional height	21.2 mm
Height	21.2 mm
Length of the solder pin [P]	4.7 mm
Pin spacing	10.00 mm
Hole diameter	2.4 mm

1864105 SDC 2,5/ 9-PV-5,0-ZB

6 Series drawing



**1864105 SDC 2,5/ 9-PV-5,0-ZB****7 Packaging information**

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

**8 Application****8.1 Temperature limit values**

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

**1864105 SDC 2,5/ 9-PV-5,0-ZB****9 Mechanical tests**

Mechanical test group A	
Specification	IEC 61984:2008-10
Visual test	Test passed
Specification	IEC 60512-1-1:2002-02
Dimensional test	Test passed
Specification	IEC 60512-1-2:2002-02
Resistance of marking	Test passed
Specification	IEC 60068-2-70:1995-12
Insertion and withdrawal force	Test passed
Specification	IEC 60512-13-2:2006-02
No. of cycles	25
Insertion strength per pos. approx.	8 N ( )
Withdraw strength per pos. approx.	6 N ( )
Polarization and coding	Test passed
Specification	IEC 60512-13-5:2006-02
Test force	20 N
Contact retention in insert	Test passed
Specification	IEC 60512-15-1:2008-05
Test force per pos.	20 N

**9.1 Air and creepage distances**

Component			
Specification	IEC 60664-1:2007-04		
Mains type	unearthed mains		
Insulating material group			
Comparative tracking index (IEC 60112:2003-01)	CTI 275		
Rated insulation voltage	200 V	320 V	320 V
Rated surge voltage	4 kV	4 kV	4 kV
Degree of pollution	3	2	2
Overvoltage category	III	III	II
Minimum clearance case A (inhomogeneous field)	3 mm	3 mm	3 mm
Minimum value of the creepage path requirement in acc. with table	3.2 mm	3.2 mm	3.2 mm



**1864105 SDC 2,5/ 9-PV-5,0-ZB****10 Electrical tests****10.1 Electrical data**

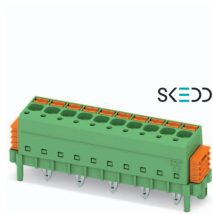
Rated current/rated insulation voltage/rated surge voltage/degree of pollution	12 A			2
--	------	--	--	---

**10.2 Current carrying capacity/derating curves**

Specification	
Note	Representation based on IEC 60512-5-2:2002-02
Reduction factor	
Number of positions	See diagram
Conductor cross section	
Note	

**11 Type approval and special tests****12 Approvals****13 Commercial data**

Order No.	1864105
Type	SDC 2,5/ 9-PV-5,0-ZB
GTIN	4055626210506
Pieces per package	50
Net weight (SAP)	2.22 g
Customs tariff number	
Country of origin	

**1864105 SDC 2,5/ 9-PV-5,0-ZB****13.1 Combination tests****SDC 2,5/..-PV**

Specification	IEC 61984			
<b>Mechanical tests</b>				
Insertion/withdrawal force per position	8 N / 6 N			
	Test passed			
Contact holder in insert Requirements > 24 N	Test passed			
	1.1 mΩ			
Insertion/withdrawal cycles	25			
	Test passed			
	Test passed			
Rated voltage (III/2)	320 V			
	16			
	2.5 mm <sup>2</sup>			
Test current	Test passed			
	-40 °C/2 h			
	100 °C/168 h			
	0.2 dm <sup>3</sup> SO <sub>2</sub> on 300 dm <sup>3</sup> / 40 °C/1 cycle			
	Test passed			
	Test passed			
	Test passed			
<b>Environmental and durability tests</b>				
Result, degree of protection, IP code	Finger safety (IP20 test finger) in acc. with IEC 60529:1989-11 + AMD 1:1999-11 + AMD 2:2013-08			