



# ZS4-D1 Screw Clamp Terminal Block

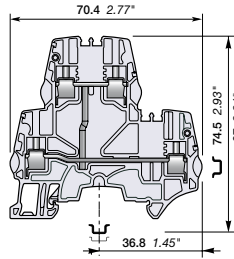
## Double deck



**4 mm<sup>2</sup>**  
**12 AWG**

5.2 mm 0.205 in Spacing

### Features and Benefits



- Ease one potential distribution on 4 independent screw clamps,
- Save space by connecting conductors up to 4 mm<sup>2</sup> (CB certified) 12 AWG in just 5.2 mm 0.205 in spacing.

3D CAD outline drawings available on "Control Product 3D" portal





Ordering Details	Type	Order Code	EAN Code	Pack <sup>(ing)</sup>	Weight g (1 pce)	
Grey	<input type="checkbox"/>	ZS4-D1	1SNK 505 211 R0000	3472595052110	50	15.25

Declarations and Certificates		Document Part Number
	UE Directive	1SND 225 081 C1006
	Third Party Certificate	1SND 161 023 A0200
	RoHS	1SND 230 491 F0203
Atex Declaration	Atex Declaration	1SND 225 085 C1003

Explosive Atmosphere: ATEX Classification	
Group Category	Protection Method
IM 2	Ex e: increased security
II 2GD *	
* in the presence of explosive dust atmosphere, terminal blocks are to be installed in certified enclosure II 2D	

## General Information


The following information must be strictly adhered to in order to guarantee the terminal block electrical, mechanical and environmental performance.

Protection		<b>IP 20</b>	<i>NEMA 1</i>		
Rail		<b>DIN3-TH35</b>			
Wire stripping length		<b>10 mm</b>	<i>0.394 in</i>		
		Screw clamp		Screw rail contact (Maximum value)	
Operating tool		<b>Flat screwdriver</b>			
		<b>3.5 mm</b>	<i>0.138 in</i>		
Torque		<b>0.6 Nm</b> <b>± 0.1 Nm</b>	<i>5.31 lb.in</i> <i>± 0.885 lb.in</i>	<b>± 0.1 Nm</b>	<i>± 0.885 lb.in</i>
Mechanical endurance of disconnect system					

## Material Specifications

Insulating material	<b>Polyamide</b>
IRC	<b>600 V</b>
Flammability	UL94
	<b>NF F 16 101</b>
	<b>V0</b>
Needle flame test IEC 60695-11-5	<b>Compliant</b>

## Connecting capacity per clamp

1 Rigid conductor		<b>0.2-4 mm<sup>2</sup></b>		<i>24-10 AWG</i>
1 Flexible conductor without ferrule		<b>0.22-4 mm<sup>2</sup></b>		<i>24-12 AWG</i>
1 Flexible conductor with ferrule		<b>0.22-4 mm<sup>2</sup></b>		<i>24-12 AWG</i>
Ferrule maximum outer diameter		<b>4.7 mm</b>	<i>0.185 in</i>	

## Multi Connecting capacity per clamp

2 Rigid conductors		<b>0.2-1 mm<sup>2</sup></b>		<i>24-18 AWG</i>
2 Flexible conductors without ferrule		<b>0.22-1 mm<sup>2</sup></b>		<i>24-18 AWG</i>
2 Flexible conductors with twin ferrule		<b>0.22-1.5 mm<sup>2</sup></b>		<i>22-16 AWG</i>

Don't mix **solid and flexible** conductors in the same clamp

Don't mix **solid or flexible** conductors of different sizes in the same clamp

The "Connecting capacity with ferrule " data is guaranteed with ABB crimping tool PS-3

## Cross section

Rated cross section		<b>4 mm<sup>2</sup></b>		<i>12 AWG</i>
Maximum Cross section	<b>Manufacturer data</b>	<b>4 mm<sup>2</sup></b>	<i>Manufacturer data</i>	<i>10 AWG</i>

Gauge **A3-B3 / 3 mm / 0.118 in / IEC 60947-7-1**

## Electrical characteristics

### Current

Rated current		IEC 60947-7-1	<b>29 A</b>
	Field and factory wiring Cat.2	UL 1059	<b>20 A</b>
	Factory wiring Cat.1	UL 1059	
		CSA-C-22.2 n° 158	<b>20 A</b>
Rated short-time withstand current 1 s (I <sub>cw</sub> )			<b>480 A</b>
Short-time withstand current	0.5 s	Manufacturer data	
	5 s	Manufacturer data	
	10 s	Manufacturer data	
	30 s	Manufacturer data	
	1 mn	Manufacturer data	
Rated short circuit withstand		CSA-C-22.2 n° 158	
Max. current (45° temperature increase) / Max. cross section (mm <sup>2</sup> )		Manufacturer data	<b>29 A    4 mm<sup>2</sup></b>
Maximum short circuit current (1s)		Manufacturer data	<b>480 A</b>

## Short Circuit Current Rating (SCCR) SA UL 1059 supplement

SCCR UL 1059

With the following configurations:

Maximum voltage	
Suitable conductor wire range	
Fuse rating	
Fuse designation	
Fuse manufacturer name	
Fuse type	
Short circuit current	

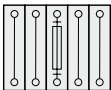
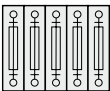
### Voltage

Rated voltage	IEC 60947-1	<b>800 V</b>
Rated voltage	UL 1059	<b>300 V</b>
Use Group	UL 1059	<b>C</b>
Rated voltage	CSA-C-22.2 n° 158	<b>300 V</b>
Rated voltage Ex e	IEC/EN 60079-11	<b>400 V</b>
Rated impulse withstand voltage		<b>8000 V</b>
Dielectric test voltage		<b>2000 V</b>
Pollution degree	IEC 60947-1	<b>3</b>
Overtoltage category	IEC 60947-1	<b>III</b>

### Dissipated power

Maximum dissipated power at rated current	IEC	<b>1.9 W</b>
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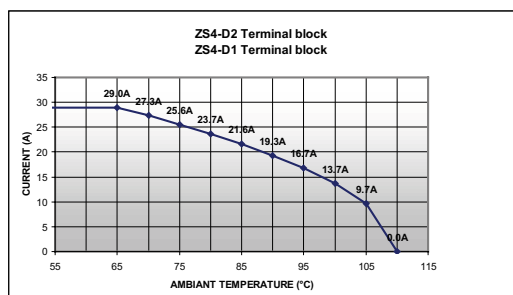
### Rated power dissipation at an ambient temperature of 23 °C - IEC 60947-7-3

Overload and short-circuit protection Separate arrangement	 <p>1 fuse and 4 feed-through blocks</p>	
Exclusive short-circuit protection Separate arrangement		
Overload and short-circuit protection Compound arrangement	 <p>5 fuse blocks</p>	
Exclusive short-circuit protection Compound arrangement		

### Temperature range

Ambient temperature min/max	Storage	<b>-55 +110 °C</b>	<i>-67 +230 F</i>
	Installing	<b>-5 +40 °C</b>	<i>-23 +104 F</i>
	Service	IEC 60068-2-1	<b>-55 +110 °C</b>
		EN 60079-7	<b>-55 +85 °C</b>

Current Derating curve for continuous service temperature



## Environmental Characteristics

### Additional climatic tests

Dry heat	Conditions	IEC 60068-2-2	<b>Compliant</b>	
		Temperature	<b>+100 °C</b>	
		Duration of test	<b>96 h</b>	
Cyclic damp heat	Conditions	IEC 60068-2-30	<b>Compliant</b>	
		Temperature	<b>+55 °C</b>	
		Number of cycles	<b>2</b>	
Cold	Conditions	IEC 60068-2-1	<b>Compliant</b>	
		Temperature	<b>-40 °C</b>	
		Duration of test	<b>96 h</b>	
Z/ABDM climatic sequence	Conditions	IEC 60068-2-61	<b>Compliant</b>	
		Dry heat Duration of test / Temperature	<b>16 h</b>	<b>+85 °C</b>
		Cyclic damp heat Number of cycles / Temperature	<b>1</b>	<b>+55 °C</b>
		Cold Duration of test / Temperature	<b>2 h</b>	<b>-25 °C</b>

### Corrosion

Salt mist	Conditions	IEC 60068-2-11	<b>Compliant</b>	
		Duration of test	<b>96 h</b>	
		Concentration	<b>5 %</b>	
SO <sub>2</sub>	Conditions	ISO 6988	<b>Compliant</b>	
		Duration of test	<b>48 h</b>	
		Concentration	<b>0.2 dm<sup>3</sup></b>	
Sulfur dioxide	Conditions	IEC 60068-2-42		
Hydrogen sulfur	Conditions	IEC 60068-2-43		
Flowing mixed gas corrosion test	Conditions	IEC 60068-2-60		
		Number of the test method		
		Duration of test		

### Vibrations

Vibrations	Conditions	IEC 60068-2-6	<b>Compliant</b>			
		Frequency range	<b>10-55 Hz</b>			
		Number of cycles	<b>10</b>			
		Amplitude				
		Acceleration	<b>10 m/s<sup>2</sup></b>			
Random vibrations and climatic sequence	Conditions	IEC 60068-2-64				
		Duration of test				
		Frequency range				
		Acceleration				
		Climatic cycles				
		Step 1 -> Temperature / Duration of test				
Step 2 -> Temperature / Duration of test						
		Temperature variation per minute				

## ZS4-D1 Terminal Block Accessories Compatibility

Description	Type	Order Code	Pack <sup>(ing)</sup> pieces	Weight g (1 pce)	Technical Datasheet PDF
<b>1</b> End Stops	<b>BAZH1</b>	<b>1SNK 900 102 R0000</b>	20	23.90	<b>1SNK 160 026 D0201</b>
<b>2</b> End Sections	<b>ES4-D2</b>	<b>1SNK 505 960 R0000</b>	20	4.10	<b>1SNK 160 022 D0201</b>
<b>3</b> Jumper Bars	<b>JB5-2</b>	<b>1SNK 905 302 R0000</b>	50	1.30	<b>1SNK 160 027 D0201</b>
	<b>JB5-3</b>	<b>1SNK 905 303 R0000</b>	50	2.00	<b>1SNK 160 027 D0201</b>
	<b>JB5-4</b>	<b>1SNK 905 304 R0000</b>	50	2.70	<b>1SNK 160 027 D0201</b>
	<b>JB5-5</b>	<b>1SNK 905 305 R0000</b>	50	3.50	<b>1SNK 160 027 D0201</b>
	<b>JB5-10</b>	<b>1SNK 905 310 R0000</b>	30	7.10	<b>1SNK 160 027 D0201</b>
<b>4</b> Test Adapters	<b>TP2</b>	<b>1SNK 900 203 R0000</b>	20	1.73	<b>1SNK 160 036 D0201</b>
	<b>TP4</b>	<b>1SNK 900 205 R0000</b>	20	2.42	<b>1SNK 160 036 D0201</b>
<b>5</b> Test Connectors	<b>TC5</b>	<b>1SNK 900 200 R0000</b>	10	5.23	<b>1SNK 160 042 D0201</b>
	<b>TC5-R1</b>	<b>1SNK 900 201 R0000</b>	10	5.23	<b>1SNK 160 042 D0201</b>
<b>6</b> Shield Connectors	<b>SHB</b>	<b>1SNK 900 602 R0000</b>	20	4.90	<b>1SNK 160 025 D0201</b>
<b>7</b> Tools	<b>PS-3</b>	<b>1SNK 900 650 R0000</b>	1	380.00	<b>1SNK 160 024 D0201</b>
<b>8</b> Terminal Block Markers	<b>MC512</b>	<b>1SNK 140 000 R0000</b>	22	0.06	<b>1SNK 160 003 D0201</b>
	<b>PROCAP5</b>	<b>1SNK 900 609 R0000</b>	20	0.70	<b>1SNK 160 013 D0201</b>
	<b>UMH</b>	<b>1SNK 900 611 R0000</b>	10	0.20	<b>1SNK 160 001 D0201</b>
	<b>SAT5</b>	<b>1SNK 900 614 R0000</b>	5	6.00	<b>1SNK 160 013 D0201</b>