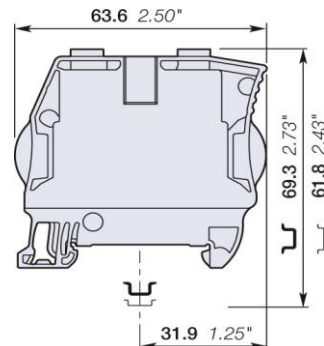




# ZS50 Screw Clamp Terminal Blocks Feed-through

Combine high performance with compact dimensions:

- Connect conductors up to 50 mm<sup>2</sup> (CB certified) 0 AWG in just 16 mm 0.630 in spacing,
- Perfectly adapted to solar applications: 1250 V DC (1000 V AC) IEC and 1000 V UL,
- Closed terminal block: no end section needed, optimized rigidity.



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

		50 mm <sup>2</sup>
		0 AWG
16 mm 0.630 in Spacing		













## Ordering Details

Color	Type	Order Code	EAN Code	Pack <sup>(mg)</sup>	Weight (1 pce) g
Grey	ZS50	1SNK516011R0000	3472595160112	20	52,9
Blue	ZS50-BL	1SNK516021R0000	3472595160211	20	52,9
Yellow	ZS50-YL	1SNK516060R0000	3472595160600	20	52,9

## Declarations and Certificates

CE	CB	RoHS	UL		CSA	EAC Ex	ATEX	IECEx	
BR-Ex e II	Haz Loc	BV		DNV	ATEX Declaration				

## Declarations and Certificates





	CE	1SND225100U10*
	CB	1SND161103A02*
	RoHS	1SND230491F02*
	UL	1SND161041A02*
	CSA	1SND161070A02*
	EAC Ex	
	ATEX	1SND162004A17*
	IECEx	1SND162005A17*
	BR-Ex e II	1SND161042A02*
	UL Haz Loc	1SND161047A02*
	BV	1SND161073A02*
	DNV	1SND161087A02*
Atex Declaration	Atex Declaration	1SND225085C10*

## Explosive Atmosphere: ATEX Classification

Group Category	Protection Method
IM2 II 2 GD Ex eb I/II/IIIC	Ex e: increased security
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	IEC 60947-1	IP10		NEMA 1				
Rail		TH 35-7.5, TH 35-15						
Wire stripping length		17 mm	0.669 in					
Operating tool		Flat screwdriver						
Torque		6.5 mm 3 N.m ± 0.50 N.m	0.256 in 26,6 N.m ± 4.43 N.m					

## Material Specifications

Insulating material	Polyamide
CTI	1000 V
Flammability	UL94 V0
	NF F 16101 I2F2
	Needle flame test: C 60615-11-5 Compliant

## Connecting capacity per clamp

		Screw clamp			
1 Rigid - Solid / Stranded conductor	Norme	IEC60947-7-1	UL1059		
	Value	1 ... 50 mm²	18 ... 0 AWG		
1 Flexible conductor	Norme	IEC60947-7-1			
	Value	1 ... 50 mm²			
1 Flexible conductor with non insulated ferrule	Norme	Manufacturer data	Manufacturer data		
	Value	1 ... 50 mm²	18 ... 0 AWG		
1 Flexible conductor with insulated ferrule	Norme	Manufacturer data	Manufacturer data		
	Value	1 ... 50 mm²	18 ... 0 AWG		
Gauge		Dia.11			
		IEC 60947-1			
Ferrule maximum outer diameter or conductor insulation maximum outer diameter		Manufacturer data	15.7 mm		

The "Connecting capacity with ferrule" data is guaranteed with ABB crimping tool PS-3 (crimping capacity up to 10 mm²).

As part of its on-going product improvement, ABB reserves the right to modify the characteristics or the products described in this document. The information given is not contractual. For further details please contact the ABB company marketing these products in your country.

## Multi Connecting capacity per clamp

2 Rigid - Solid / Stranded conductors	Norme	IEC60947-7-1	UL1059		
	Value	1 ... 25 mm <sup>2</sup>	18 ... 4 AWG		
2 Flexible conductors	Norme	IEC60947-7-1			
	Value	1 ... 25 mm <sup>2</sup>			
2 Flexible conductors with twin ferrule	Norme	Manufacturer data	Manufacturer data		
	Value	1 ... 16 mm <sup>2</sup>	18 ... 4 AWG		

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 (crimping capacity up to 10 mm<sup>2</sup>)

## Cross section

Rated cross section	IEC60947-7-1	50 mm <sup>2</sup>	UL1059	0 AWG
Maximum Cross section	Manufacturer data	50 mm <sup>2</sup>	Manufacturer data	0 AWG

## Electrical characteristics

### Current

Rated current	IEC60947-7-1		150 A
	Field and factory wiring Cat.2		UL 1059
	Factory wiring Cat.1		UL 1059
	CSA-C-22.2 n°158		140 A
Maximum Exe current	IEC/EN 60079-7		150 A
Rated short-time withstand current 1 s (Icw)	IEC60947-7-1		6000 A
Short-time withstand current	0.5 s	Manufacturer data	
	5 s	Manufacturer data	
	10 s	Manufacturer data	
	30 s	Manufacturer data	
	1 min	Manufacturer data	
Rated short-circuit withstand current	UL 1059		
Max. current (45° temperature increase) / Max. cross section (mm <sup>2</sup> )	Manufacturer data		150 A 50 mm <sup>2</sup>
Maximum short circuit current (1s)	Manufacturer data		6000 A

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

SCCR	UL 1059	100 kA
With the following configurations:		
Suitable conductor wire range	10 ... 0 AWG	
Maximum voltage	600 V	
Fuse class / Max. amp. Rating	J	250 A
	T	250 A
	RK1	200 A
	RK5	100 A
	G	60 A
	CC	30 A

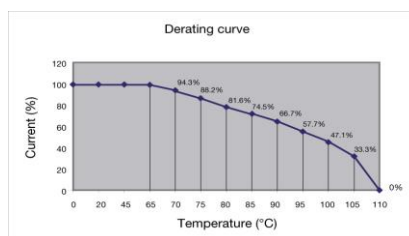
## Voltage

Rated voltage	IEC 60947-1	1000 V
Rated voltage	UL 1059	1000 V
Use Group	UL 1059	E
Rated voltage	CSA-C-22.2 n°158	1000 V
Rated voltage Ex e	IEC/ EN 60079-7	880 V
Rated impulse withstand voltage	IEC 60947-1	8000 V
Dielectric test voltage	IEC 60947-1	2200 V
Pollution degree	IEC 60947-1	3
Overvoltage category	IEC 60947-1	III

## Temperature range

Ambient temperature min/max	Storage	-55 ... +110 °C	-67 ... +230 °F
	Installing	-5 ... +40 °C	+23 ... +104 °F
	Service	-55 ... +110 °C	-67 ... +230 °F

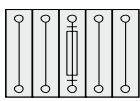
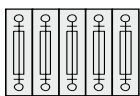
Current Derating curve for continuous service temperature



## Dissipated power

Maximum dissipated power at rated current	IEC 60947-1	4,8 W
Maximum dissipated power at maximum Exe current	IEC 60079-7	4,8 W

## Rated power dissipation at an ambient temperature of 23 °C - IEC 60947-7-3

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

## Environmental Characteristics

### Additional climatic tests

Dry heat	Conditions	IEC 60068-2 2	Compliant
		Temperature	110 °C
		Duration of test	96 h
Cyclic damp heat	Conditions	IEC 60068-2 30	Compliant
		Temperature	55 °C
		Relative humidity	95 %
Cold		Number of cycles (1 cycle = 24h)	2
	Conditions	IEC 60068-2 1	Compliant
		Temperature	-55 °C
Damp heat steady state		Duration of test	96 h
	Conditions	IEC 60068-2-78	Compliant
		Temperature	40 °C
		Relative humidity	93 %
		Duration of test	96 h

## Corrosion

Salt mist	Conditions	IEC 60068-2 11	Compliant
		Duration of test	96 h
		Concentration	5 %
SO <sub>2</sub>		ISO 6988	Compliant
	Conditions	Duration of test	48 h
		Concentration	0,2 dm <sup>3</sup>
Flowing mixed gas corrosion test		IEC 60068-2 60	Compliant
	Conditions	Number of the test method	3
		Duration of test	21 j

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Sinusoidal vibrations		IEC 60068-2-6	Compliant
	Conditions	Frequency range	5 ... 100 Hz
		Number of cycles	1
		Acceleration	7 m/s²
Functional random vibrations		IEC 61373	
Category 1 Class B 3 axes	Conditions	Duration of test	
		Frequency range	
		Acceleration	
Long life testing at increased random vibrations		IEC 61373	
Category 1 Class B 3 axes	Conditions	Duration of test	
		Frequency range	
		Acceleration	
Shock		IEC 61373	
Category 1 Class B 3 axes	Conditions	Duration of test	
		Acceleration	

Some accessories may modify the terminal block's rating. See complete information in the accessories catalog page.

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