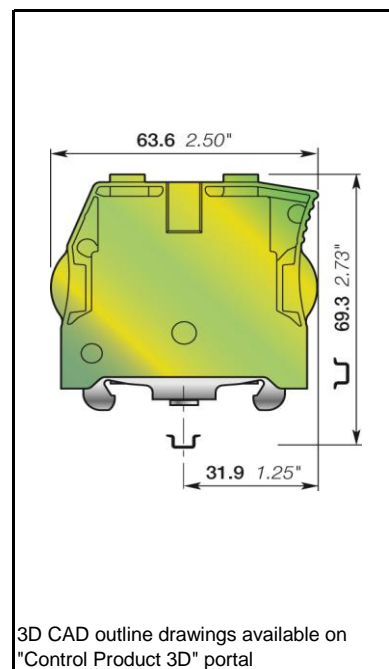




ZS50-PE Screw Clamp Terminal Blocks

Ground

- Reliable electrical and mechanical contact with the rail that exceeds the requirements of the IEC 60947-7-2 terminal block standard.



| | | |
|---|---|--------------------|
|  |  | 50 mm ² |
| | | 0 AWG |
| 16 mm 0.630 in Spacing | | |












Ordering Details

| Color | Type | Order Code | EAN Code | Pack ^(mg) | Weight (1 pce) |
|--------------|---------|-----------------|---------------|----------------------|-------------------|
| Green-Yellow | ZS50-PE | 1SNK516151R0000 | 3472595161515 | 20 | 83 g |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

Declarations and Certificates

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

Declarations and Certificates





| | | |
|---|------------------|----------------|
|  | CE | 1SND225101U10* |
|  | CB | 1SND161104A02* |
|  | 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 |  | 6.5 mm | 0.256 in | 6.5 mm | 0.256 in | | | |
| Torque |  | 3 N.m ± 0.50 N.m | 26,6 N.m ± 4.43 N.m | 3 N.m | 26,553 lb.in | | | |

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 | IEC60947-7-2 | UL1059 | | |
| | Value | 1 ... 50 mm² | 18 ... 0 AWG | | |
| 1 Flexible conductor | Norme | IEC60947-7-2 | | | |
| | 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 | | | | |
| | Value | | | | |
| 2 Flexible conductors | Norme | | | | |
| | Value | | | | |
| 2 Flexible conductors with twin ferrule | Norme | | | | |
| | Value | | | | |

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 mm²)

Cross section

| | | | | |
|-----------------------|-------------------|--------------------|-------------------|-------|
| Rated cross section | IEC60947-7-2 | 50 mm ² | UL1059 | 0 AWG |
| Maximum Cross section | Manufacturer data | 50 mm ² | Manufacturer data | 0 AWG |

Electrical characteristics

Current

| | | | |
|---|--------------------------------|-------------------|--------------------|
| Rated current | IEC60947-7-2 | | |
| | Field and factory wiring Cat.2 | | UL 1059 |
| | Factory wiring Cat.1 | | UL 1059 |
| | | | CSA-C-22.2 n°158 |
| Maximum Exe current | IEC/EN 60079-7 | | |
| Rated short-time withstand current 1 s (I _{cw}) | IEC60947-7-2 | | 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 | | 6420 A |
| Max. current (45° temperature increase) / Max. cross section (mm ²) | Manufacturer data | | 50 mm ² |
| 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 | | |
| Maximum voltage | | |
| Fuse class / Max. amp. Rating | J | |
| | T | |
| | RK1 | |
| | RK5 | |
| | G | |
| | CC | |

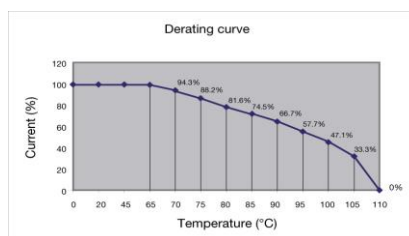
Voltage

| | | |
|---------------------------------|------------------|--------|
| Rated voltage | IEC 60947-1 | |
| Rated voltage | UL 1059 | |
| Use Group | UL 1059 | E |
| Rated voltage | CSA-C-22.2 n°158 | |
| Rated voltage Ex e | IEC/ EN 60079-7 | |
| 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 |

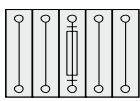
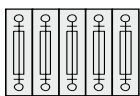
Current Derating curve for continuous service temperature



Dissipated power

| | |
|---|-------------|
| Maximum dissipated power at rated current | IEC 60947-1 |
| Maximum dissipated power at maximum Exe current | IEC 60079-7 |

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 % |
| | | Number of cycles (1 cycle = 24h) | 2 |
| Cold | Conditions | IEC 60068-2 1 | Compliant |
| | | Temperature | -55 °C |
| | | Duration of test | 96 h |
| Damp heat steady state | 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 ₂ | Conditions | ISO 6988 | Compliant |
| | | Duration of test | 48 h |
| | | Concentration | 0,2 dm ³ |
| Flowing mixed gas corrosion test | Conditions | IEC 60068-2 60 | Compliant |
| | | 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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