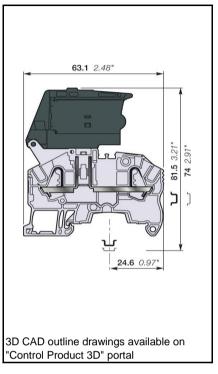
Technical Datasheet 1SNK162044D0201 Catalogue Page 1SNK162021S0201

# ZK2.5-SF PI-Spring Terminal Blocks For 5x20 fuses

Protect your circuits with 5x20 fuse terminal blocks compliant with IEC 60947-7-3 standard (fuse not supplied with the terminal blocks),

- Simplify the distribution thanks to the 2 jumper channels aligned with ZK4-3P feed-through and ZK2.5-S-R1 disconnect terminal blocks.





| - Maria  | PI-Spring<br>Terminal Blocks | 2,5 mm² |
|----------|------------------------------|---------|
| 0-80 140 | Terminal Blocks              | 12 AWG  |
| 6 mm     | 0,236 in                     | Spacing |

**Ordering Details** 

| Color           | Type     | Order Code      | EAN Code      | Pack <sup>(ing)</sup> | Weight    |
|-----------------|----------|-----------------|---------------|-----------------------|-----------|
|                 |          |                 |               |                       | (1 pce) g |
| Grey, dark grey | ZK2.5-SF | 1SNK706410R0000 | 3472597064104 | 50                    | 16,2      |
|                 |          |                 |               |                       |           |
|                 |          |                 |               |                       |           |
|                 |          |                 |               |                       |           |
|                 |          |                 |               |                       |           |
|                 |          |                 |               |                       |           |
|                 |          |                 |               |                       |           |
|                 |          |                 |               |                       |           |
|                 |          |                 |               |                       |           |
|                 |          |                 |               |                       |           |

#### **Declarations and Certificates**

|   | <b>C</b> E | CB | RoHS<br>RoHS | c <b>FU</b> us<br>USR CNR | <b>(1)</b> | <b>€</b> Gr<br>Gost R |  |
|---|------------|----|--------------|---------------------------|------------|-----------------------|--|
| - |            |    | Ø<br>BV      |                           |            |                       |  |



#### **Declarations and Certificates**

| <b>(€</b>                  | CE      | 1SND225152C10* |
|----------------------------|---------|----------------|
| <b>©</b> ∰<br>36           | СВ      | 1SND162010A02* |
| RoHS<br>RoHS               | RoHs    | 1SND230535F02* |
| c <b>PAL</b> us<br>Usa ova | USR CNR | 1SND162012A02* |
| <b>®</b>                   | CSA     | 1SND162014A02* |
| QC<br>G <sub>13</sub> R    | GOST R  | 1SND161005A11* |
|                            |         |                |
|                            |         |                |
| Bellin<br>TV               | BV      | 1SND162013A02* |
|                            |         |                |
|                            |         |                |
|                            |         |                |

#### **General Information**

| General information            |                       |                    |                  |                                |                   |                   |             |   |
|--------------------------------|-----------------------|--------------------|------------------|--------------------------------|-------------------|-------------------|-------------|---|
| The following information must | t be strictly adhered | to in order to gua | rantee the termi | nal block electrica            | I, mechanical and | d environmental p | erformance. |   |
| Protection                     | IEC 60947-1           | IP20               |                  | NEMA 1                         |                   |                   |             |   |
| Rail                           | TH35-7.5,<br>TH35-15  | TH35-7.5, TH       | 35-15            |                                |                   |                   |             |   |
| Wire stripping length          |                       | 11 mm              | 0,433 in         |                                |                   |                   |             |   |
|                                |                       | 0                  |                  | 0                              |                   | D:                |             | T |
|                                |                       | Screw clamp        |                  | Screw rail con<br>(Maximum val |                   | Disconnect de     | evice       |   |
| Operating tool                 |                       | Flat screwdriv     | er               |                                |                   |                   |             |   |
|                                |                       | 3,5 mm             | 0,138 in         |                                |                   |                   |             |   |
| Torque                         |                       |                    |                  |                                |                   |                   |             |   |
|                                |                       |                    |                  |                                |                   |                   |             |   |

#### **Material Specifications**

| Insulating material |                                 | Polyamide |
|---------------------|---------------------------------|-----------|
| CTI                 |                                 | 600 V     |
| Flammability        | UL94                            | V0        |
|                     | NF F 16101                      | I2F2      |
|                     |                                 |           |
|                     | Needle flame test: C 60615-11-5 | Compliant |
| -                   |                                 | •         |

| Connecting capacity per clamp                                             |         | PI S                     | pring             |      |  |
|---------------------------------------------------------------------------|---------|--------------------------|-------------------|------|--|
| 1 Digid Colid / Stronded conductor                                        | Norme   | IEC60947-7-3             | UL1059            |      |  |
| 1 Rigid - Solid / Stranded conductor -                                    | Value   | 0.2 4 mm²                | 26 12 AWG         |      |  |
| 1 Flexible conductor                                                      | Norme   | IEC60947-7-3             |                   |      |  |
|                                                                           | Value   | 0.22 2.5 mm <sup>2</sup> |                   |      |  |
| 1 Flexible conductor with non                                             | Norme   | Manufacturer data        | Manufacturer data |      |  |
| insulated ferrule                                                         | Value   | 0.22 2.5 mm²             | 26 14 AWG         |      |  |
| 1 Flexible conductor with insulated                                       | Norme   | Manufacturer data        | Manufacturer data |      |  |
| ferrule                                                                   | Value   | 0.22 2.5 mm <sup>2</sup> | 26 14 AWG         |      |  |
| Coura                                                                     |         |                          | 2,4 mm            |      |  |
| Gauge                                                                     |         | IEC 60947-1              |                   |      |  |
| Ferrule maximum outer diameter or co<br>insulation maximum outer diameter | nductor | Ø Max.                   | Manufacturer data | 5 mm |  |

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

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**Multi Connecting capacity per clamp** 

| 2 Rigid - Solid / Stranded      | Norme |                          |                   |  |
|---------------------------------|-------|--------------------------|-------------------|--|
| conductors                      | Value |                          |                   |  |
| 2 Flexible conductors           | Norme |                          |                   |  |
| 2 Flexible colluctors           | Value |                          |                   |  |
| 2 Flexible conductors with twin | Norme | Manufacturer data        | Manufacturer data |  |
| ferrule                         | Value | 0.22 0.5 mm <sup>2</sup> | 26 20 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 mm²)

#### **Cross section**

| Rated cross section   | IEC60947-7-3 2,5 mm <sup>2</sup> | UL1059            | 12 AWG |
|-----------------------|----------------------------------|-------------------|--------|
| Maximum Cross section | Manufacturer data                | Manufacturer data | 12 AWG |

## **Electrical characteristics Current**

| Rated current                                                             |                                |       | IEC60947-7-3      | 6,3 A |   |
|---------------------------------------------------------------------------|--------------------------------|-------|-------------------|-------|---|
|                                                                           | Field and factory wiring Cat.2 |       | UL 1059           | 16 A  |   |
|                                                                           | Factory wiring Cat.1           |       | UL 1059           |       |   |
|                                                                           |                                |       | CSA-C-22.2 n°158  | 16 A  |   |
| Maximum Exe current                                                       |                                |       | IEC/EN 60079-7    |       |   |
| Rated short-time withstand current 1 s (Icw)                              |                                |       | IEC60947-7-3      |       |   |
| 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           | 396 A |   |
| Max. current (45° temperature increase) / Max. cross section (mm²) Manufa |                                |       | Manufacturer data |       |   |
| Maximum short circuit current (1s)                                        |                                |       | Manufacturer data |       | • |

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

| SCCR                               |                               | UL 1059 |  |
|------------------------------------|-------------------------------|---------|--|
| With the following configurations: |                               |         |  |
|                                    | Suitable conductor wire range |         |  |
|                                    | Maximum voltage               |         |  |
|                                    | Fuse class / Max. amp. Rating | J       |  |
|                                    |                               | Т       |  |
|                                    |                               | RK1     |  |
|                                    |                               | RK5     |  |
|                                    |                               | G       |  |
|                                    |                               | CC      |  |

#### Voltage

| 1011490                         |                  |        |
|---------------------------------|------------------|--------|
| Rated voltage                   | IEC 60947-1      | 500 V  |
| Rated voltage                   | UL 1059          | 300 V  |
| Use Group                       | UL 1059          | B, C   |
| Rated voltage                   | CSA-C-22.2 n°158 | 300 V  |
| Rated voltage Ex e              | IEC/ EN 60079-7  |        |
| Rated impulse withstand voltage | IEC 60947-1      | 6000 V |
| Dielectric test voltage         | IEC 60947-1      |        |
| 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 |
|                             |            |             |             |

**Dissipated power** 

Maximum dissipated power at rated current

| Maximum dissipated power at maximum Exe current              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | IEC 60079-7 |     |
|--------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|-----|
| Rated power dissipation at an ambient tem                    | perature of 23 °C - IEC 60947-7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 7-3         |     |
| Separate arrangement / Overload and short-circuit protection |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |             | 2,5 |
| Separate arrangement / Exclusive short-circuit protection    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | ks          | 4   |
| Compound arrangement / Overload and short-circuit protection |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |             | 1,6 |
| Compound arrangement / Exclusive short-circuit protection    | \$\begin{align*} \begin{align*} \begin |             | 4   |

IEC 60947-1 1,6 W

#### **Environmental Characteristics** Additional climatic tests

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

| Corrosion                        |            |                                   |
|----------------------------------|------------|-----------------------------------|
| Salt mist                        |            | IEC 60068-2 11 Compliant          |
|                                  | Conditions | Duration of test 1000 h           |
|                                  |            | Concentration 5 %                 |
| SO2                              |            | 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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#### Vibrations and shocks

| Sinusoidal vibrations                            |             | IEC 60068-2-6 Compliant           |  |
|--------------------------------------------------|-------------|-----------------------------------|--|
|                                                  | Conditions  | Frequency range 5 100 Hz          |  |
|                                                  | <del></del> | Number of cycles 1                |  |
|                                                  |             | Acceleration 7 m/s <sup>2</sup>   |  |
| Functional random vibrations                     |             | IEC 61373 Compliant               |  |
| Category 1 Class B 3 axes                        | Conditions  | Duration of test 20 mn            |  |
|                                                  |             | Frequency range 5 150 Hz          |  |
|                                                  |             | Acceleration 1 m/s <sup>2</sup>   |  |
| Long life testing at increased random vibrations |             | IEC 61373 Compliant               |  |
| Category 1 Class B 3 axes                        | Conditions  | Duration of test 5 h              |  |
|                                                  |             | Frequency range 5 150 Hz          |  |
|                                                  |             | Acceleration 5,7 m/s <sup>2</sup> |  |
| Shock                                            |             | IEC 61373 Compliant               |  |
| Category 1 Class B 3 axes                        | Conditions  | Duration of test 30 ms            |  |
|                                                  |             | Acceleration 5 G                  |  |

#### **ZK2.5-SF Terminal Block Accessories Compatibility**

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

| Description               | Туре     | Order Code      | Pack <sup>(ing)</sup> | Weight    |  |
|---------------------------|----------|-----------------|-----------------------|-----------|--|
|                           |          |                 | pieces                | g (1 pce) |  |
| 1 End Stops               | BAM3     | 1SNK900001R0000 | 50                    | 13.80     |  |
|                           | BAZ1     | 1SNK900002R0000 | 20                    | 5.30      |  |
|                           | BAZH1    | 1SNK900102R0000 | 20                    | 23.90     |  |
| 2 End Sections            | EK2.5-3P | 1SNK705911R0000 | 20                    | 2,4       |  |
| 3 Jumper Bars             | JB5-2    | 1SNK905302R0000 | 50                    | 1.30      |  |
|                           | JB5-3    | 1SNK905303R0000 | 50                    | 2.00      |  |
|                           | JB6-2    | 1SNK906302R0000 | 50                    | 1.30      |  |
|                           | JB6-3    | 1SNK906303R0000 | 50                    | 2.10      |  |
|                           | JB6-4    | 1SNK906304R0000 | 50                    | 2.90      |  |
|                           | JB6-5    | 1SNK906305R0000 | 50                    | 3.60      |  |
|                           | JB6-10   | 1SNK906310R0000 | 20                    | 7.40      |  |
|                           | JB6-50   | 1SNK906350R0000 | 10                    | 38.10     |  |
| 4 Circuit Separators      | CS-R3    | 1SNK900107R0000 | 20                    | 6,4       |  |
| 5 Test Adapters           | TP2      | 1SNK900203R0000 | 20                    | 1.73      |  |
|                           | TP4      | 1SNK900205R0000 | 20                    | 2.41      |  |
| 6 Test Connectors         | TC5-R1   | 1SNK900201R0000 | 10                    | 5.23      |  |
| 7 Spacers                 | ES-TC6   | 1SNK900105R0000 | 10                    | 0.80      |  |
| 8 Mounting Rails          | PR3.G2   | 1SNA164800R0300 | 2                     |           |  |
|                           | PR4      | 1SNA168500R1200 | 2                     | 915.00    |  |
|                           | PR5      | 1SNA168700R2200 | 2                     |           |  |
|                           | PR30     | 1SNA173220R0500 | 2                     | 328.00    |  |
|                           | PR3.Z2   | 1SNA174300R1700 | 2                     |           |  |
|                           | PR50     | 1SNA178529R0400 | 2                     | 1 288.00  |  |
| 9 Tools                   | PS-3     | 1SNK900650R0000 | 1                     | 380.00    |  |
| 10 Terminal Block Markers | MC512    | 1SNK140000R0000 | 22                    | 9.00      |  |
|                           | MC512-YL | 1SNK140004R0000 | 22                    | 9.00      |  |
|                           | MC512PA  | 1SNK149999R0000 | 20                    | 10.00     |  |
|                           | MC612    | 1SNK150000R0000 | 22                    | 10.00     |  |
|                           | MC612-YL | 1SNK150004R0000 | 22                    | 10.00     |  |
|                           | MC612PA  | 1SNK159999R0000 | 20                    | 11.00     |  |
|                           | PROCAP5  | 1SNK900609R0000 | 20                    | 0.69      |  |
|                           | UMH      | 1SNK900611R0000 | 10                    | 0.20      |  |
|                           | PROCAP6  | 1SNK900612R0000 | 20                    | 0.78      |  |
|                           | SAT6     | 1SNK900615R0000 | 5                     | 6.00      |  |
|                           |          |                 |                       |           |  |
|                           |          |                 |                       |           |  |
|                           |          |                 |                       |           |  |
|                           |          |                 |                       |           |  |
|                           |          |                 |                       |           |  |
|                           |          |                 |                       |           |  |
|                           |          |                 |                       |           |  |

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5

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