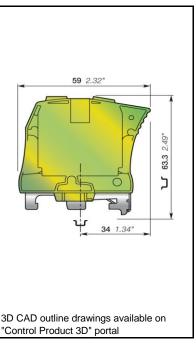
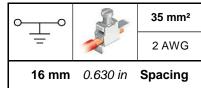
# ZS35-PE Screw Clamp Terminal Blocks Ground

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







**Ordering Details** 

| Color        | Type    | Order Code      | EAN Code      | Pack <sup>(ing)</sup> | Weight    |
|--------------|---------|-----------------|---------------|-----------------------|-----------|
|              |         |                 |               |                       | (1 pce) g |
| Green-Yellow | ZS35-PE | 1SNK516150R0000 | 3472595161508 | 20                    | 81.80     |
|              |         |                 |               |                       |           |
|              |         |                 |               |                       |           |
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|              |         |                 |               |                       |           |

### Declarations and Certificates

| C€ | IEC TEGE | RoHS | <i>R</i> J | <b>(1)</b> | EH[Ex  | ⟨£x⟩ | <b>IECE</b> × |  |
|----|----------|------|------------|------------|--------|------|---------------|--|
| CE | CB       | RoHS | USR        |            | EAC Ex | ATEX | IECEX         |  |





| <b>Declarations and Ce</b>     |                     |                  |                 |             | 1                                |                  | 4001    | 200540    | \41 I4 O*  |    |  |
|--------------------------------|---------------------|------------------|-----------------|-------------|----------------------------------|------------------|---------|-----------|------------|----|--|
|                                | CE                  |                  |                 |             |                                  |                  |         |           | )1U10*     |    |  |
| RoHS                           | CB                  |                  |                 |             | 1SND161027A02*                   |                  |         |           |            |    |  |
| RoHS                           | RoHS                |                  |                 |             | 1SND230491F02*<br>1SND161041A02* |                  |         |           |            |    |  |
| isi                            | USR                 | USK              |                 |             |                                  |                  | TOINL   | 216104    | 11AU2"     |    |  |
| <b>(f)</b>                     | CSA                 |                  |                 |             |                                  |                  | 1SNI    | D16106    | 67A02*     |    |  |
| ENC Ex                         | EAC E               | Χ                |                 |             |                                  |                  |         |           |            |    |  |
| (Ex)<br>ATEX                   | ATEX                |                  |                 |             |                                  |                  |         |           | )4A17*     |    |  |
| <u>IECCx</u><br>ITOFX          | IECEx               |                  |                 |             |                                  |                  |         |           | )5A17*     |    |  |
| ER Facil                       | BR-Ex               |                  |                 |             |                                  |                  |         |           | 12A02*     |    |  |
| FAX<br>Haz Loc                 |                     | laz Loc          |                 |             |                                  |                  | _       |           | 17A02*     |    |  |
| By Rev                         | BV                  |                  |                 |             |                                  |                  |         |           | 73A02*     |    |  |
| Sign.<br>Pins.                 | RINA                |                  |                 |             |                                  |                  |         |           | 38A02*     |    |  |
| DVV                            | DNV                 |                  |                 |             |                                  |                  | 1SNI    | D16108    | 37A02*     |    |  |
| Atex Declaration               | Atex D              | eclaration       |                 |             |                                  |                  | 1SN[    | 022508    | 35C10*     |    |  |
| Explosive Atmos                | phere: ATE          | X Classifi       | ication         |             |                                  |                  |         |           |            |    |  |
| Group Category                 |                     |                  |                 |             | Protectio                        | n Method         |         |           |            |    |  |
| IM2 II 2 GD Ex eb I/II/I       | IIC                 |                  |                 |             | Ex e: inc                        | reased securit   | У       |           |            |    |  |
| In the presence of exp         | osive dust atmo     | osphere, tern    | ninal blocks ar | e to be ir  | nstalled in                      | certified enclo  | sure II | 2D        |            |    |  |
|                                |                     |                  |                 |             |                                  |                  |         |           |            |    |  |
| <b>General Information</b>     |                     |                  |                 |             |                                  |                  |         |           |            |    |  |
| The following information must | be strictly adhered | d to in order to | guarantee the t | erminal blo | ock electrica                    | al, mechanical a | nd envi | ronmental | performanc | e. |  |
| Protection                     | IEC 60947-1         | IP10             |                 | NE          | MA 1                             |                  |         |           |            |    |  |
| Rail                           |                     | TH 35-7.5,       | TH 35-15        |             |                                  |                  |         |           |            |    |  |
| Wire stripping length          |                     | 17 mm            | 0.669 in        |             |                                  |                  |         |           |            |    |  |
|                                |                     |                  | ·               | •           |                                  |                  | •       |           | •          |    |  |
|                                |                     | Screw clan       | np              |             | ew rail cor<br>ximum val         |                  | Disc    | onnect d  | levice     |    |  |
| Operating tool                 |                     | Flat screwd      | driver          |             |                                  |                  |         |           |            |    |  |
|                                |                     | 6.5 mm           | 0.256 in        | 5.5         | mm                               | 0.217 in         |         |           |            |    |  |
| Torque                         |                     | 2.65 N.m         | 23.4 N.m        | 1.6         | N.m                              | 14.2 lb.in       | +       |           |            |    |  |
| •                              |                     | ± 0.15 N.m       | ± 1.33 N.I      |             |                                  |                  |         |           |            |    |  |
| Material Specificatio          | ins                 |                  |                 |             |                                  |                  |         |           |            |    |  |
| Insulating material            |                     |                  |                 |             |                                  |                  |         | Polyami   | de         |    |  |
| CTI                            |                     |                  |                 |             |                                  |                  |         | 600 V     |            |    |  |
| Flammability                   |                     |                  |                 |             |                                  |                  | UL94    | V0        |            |    |  |
| •                              |                     | _                |                 |             |                                  | NF F             |         | _         |            |    |  |
|                                |                     | _                |                 | NIc         | adla flam                        | e test : C 60615 | 5_11_E  | Complia   | ant        |    |  |
|                                |                     |                  |                 | INE         | Jouis Hallit                     | . 1631.0 00010   | J-11-0  | Jonnpila  | 4111       |    |  |
| Connecting capacity            | per clamp           |                  |                 | Screv       | v clamp                          |                  |         |           |            |    |  |
| 1 Rigid - Solid / Stranded co  | onductor —          | Norme            | 6 05            | nm?         | 10                               | 2 414/0          |         |           |            | ₩  |  |
|                                |                     | Value            | 6 35 m          | ıın-        | 10                               | 2 AWG            | -       |           |            | +  |  |
| 1 Flexible conductor           |                     | Norme            | 6 05            | nm2         | 1                                |                  | -       |           |            | +  |  |
| A Floridate con Core 199       |                     | Value            | 6 35 m          |             | NA                               | ooturor data     | +       |           |            | +  |  |
| 1 Flexible conductor with no   | on                  | Norme            | Manufacture     |             |                                  | acturer data     |         |           |            | +  |  |
| insulated ferrule              |                     | Value            | 4 35 m          |             |                                  | 2 AWG            |         |           |            | -  |  |
| 1 Flexible conductor with in-  | sulated             | Norme            | Manufacture     |             | 1                                | acturer data     | 1       |           |            | ₩  |  |
| corrulo                        |                     | 1/01             | 4 95 ~          | nm2         | 1 10                             | 2 414/           | 1       |           |            |    |  |

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

4 ... 35 mm² A9

IEC 60947-1

Ø Max.

10 ... 2 AWG

10 mm

0.394 in

Manufacturer data

14 mm

0.551 in

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Value

Ferrule maximum outer diameter or conductor

insulation maximum outer diameter

ferrule

Gauge

**Multi Connecting capacity per clamp** 

| 2 Rigid - Solid / Stranded      | Norme |  |  |
|---------------------------------|-------|--|--|
| conductors                      | Value |  |  |
| 2 Flexible conductors           | Norme |  |  |
| 2 Flexible collductors          | Value |  |  |
| 2 Flexible conductors with twin | Norme |  |  |
| ferrule                         | 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   | 35 mm²                               | 2 AWG                   |
|-----------------------|--------------------------------------|-------------------------|
| Maximum Cross section | Manufacturer data 35 mm <sup>2</sup> | Manufacturer data 2 AWG |

# **Electrical characteristics Current**

| Rated current                                 |                                |       |                   |        |                    |
|---|--------------------------------|-------|-------------------|--------|--------------------|
|   | 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 (Icw)  |                                |       |                   | 4200 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           | 4032 A |                    |
| Max. current (45° temperature increase) / Max | . cross section (mm²)          |       | Manufacturer data |        | 35 mm <sup>2</sup> |
| Maximum short circuit current (1s)            |                                |       | Manufacturer data | 4200 A | •                  |

### 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

| Rated voltage                   | IEC 60947-1      |        |
|---------------------------------|------------------|--------|
| Rated voltage                   | UL 1059          |        |
| Use Group                       | UL 1059          | B, C   |
| 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 |
|                             |            |             |             |

**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  Separate arrangement / Exclusive short-circuit protection |   |  |
|---|---|--|
| Compound arrangement / Overload and short-circuit protection  | 1 |  |
| Compound arrangement / Exclusive short-circuit protection   |   |  |

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

| Dry heat               |            | IEC 60068-2 2                    | Compliant |
|------------------------|------------|----------------------------------|-----------|
|                        | Conditions | Temperature                      | +100 °C   |
|                        |            | Duration of test                 | 96 h      |
| Cyclic damp heat       |            | IEC 60068-2 30                   | Compliant |
|                        | Conditions | Temperature                      | +55 °C    |
|                        |            | Relative humidity                |           |
|                        |            | Number of cycles (1 cycle = 24h) | 2         |
| Cold                   |            | IEC 60068-2 1                    | Compliant |
|                        | Conditions | Temperature                      | -40 °C    |
|                        |            | Duration of test                 | 96 h      |
| Damp heat steady state |            | IEC 60068-2-78                   |           |
|                        | Conditions | Temperature                      |           |
|                        |            | Relative humidity                |           |
|                        |            | Duration of test                 |           |

### Correcion

| Corrosion                        |            |                           |                     |
|----------------------------------|------------|---------------------------|---------------------|
| Salt mist                        |            | IEC 60068-2 11            | Compliant           |
|                                  | Conditions | Duration of test          | 96 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            |                     |
|                                  | Conditions | Number of the test method |                     |
|                                  |            | Duration of test          |                     |

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### **Vibrations and shocks**

| Sinusoidal vibrations                            |            | IEC 60068-2-6 Compliant          |
|--|------------|----------------------------------|
|  | Conditions | Frequency range 10 55 Hz         |
|  |            | Number of cycles 10              |
|  |            | Acceleration 10 m/s <sup>2</sup> |
| 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                     |

### **ZS35-PE Terminal Block Accessories Compatibility**

| Some accessories may modify the terminal bloo         |   |                 | ige.                         |           |  |
|---|---|-----------------|------------------------------|-----------|--|
| Description   | Туре  | Order Code      | Pack <sup>(ing)</sup> Weight |           |  |
| •   | 7.  |                 | pieces                       | g (1 pce) |  |
| 1 Terminal Block Markers                              | MG-CPM 13   | 1SNB041791R0612 | 1680                         | 0.273     |  |
|   | MC812   | 1SNK160000R0000 | 22                           | 10.00     |  |
|   | MC812-YL  | 1SNK160004R0000 | 22                           | 10.00     |  |
|   | MC812PA   | 1SNK169999R0000 | 20                           | 14.00     |  |
|   | UMH   | 1SNK900611R0000 | 10                           | 0.20      |  |
|   | PROCAP8   | 1SNK900613R0000 | 20                           | 1.00      |  |
|   | SAT8  | 1SNK900616R0000 | 5                            | 6.00      |  |
| 2 Mounting Rails                                      | PR3.G2  | 1SNA164800R0300 | 2                            | 718.00    |  |
| ounung rano   | PR4   | 1SNA168500R1200 | 2                            | 915.00    |  |
|   | PR5   | 1SNA168700R2200 | 2                            | 700       |  |
|   | PR30  | 1SNA173220R0500 | 2                            | 328.00    |  |
|   | PR3.Z2  | 1SNA174300R1700 | 2                            | 718.00    |  |
| 3 End Stops   | BAZH1   | 1SNK900102R0000 | 20                           | 24.00     |  |
| 4 Circuit Separators                                  | CS-R1   | 1SNK900103R0000 | 20                           | 5.20      |  |
| 5 Protecting Covers                                   | СО  | 1SNK900604R0000 | 1                            | 300.00    |  |
| 6 Protecting Cover Kits                               | ксо   | 1SNK900624R0000 | 1                            | 47.80     |  |
|   |   |                 |                              |           |  |
|   |   |                 |                              |           |  |
|   |   |                 |                              |           |  |
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