

3056022

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Knife-disconnect terminal block, With test socket screws for insertion of test plugs, nom. voltage: 500 V, nominal current: 16 A, 1 level, connection method: Screw connection, Rated cross section: 2.5 mm<sup>2</sup>, cross section: 0.2 mm<sup>2</sup> - 6 mm<sup>2</sup>, mounting: NS 32, NS 35/7,5, NS 35/15, color: white

### Your advantages

- · High current carrying capacity of up to 16 A
- · Space-saving design

#### Commercial data

| Item number                          | 3056022       |
|--------------------------------------|---------------|
| Packing unit                         | 50 pc         |
| Minimum order quantity               | 50 pc         |
| Product key                          | BE1231        |
| GTIN                                 | 4046356300612 |
| Weight per piece (including packing) | 13.4 g        |
| Weight per piece (excluding packing) | 12.48 g       |
| Country of origin                    | CN            |



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### Technical data

### Product properties

| 1<br>2<br>1 |
|-------------|
| 2<br>1      |
| 1           |
|             |
| 1           |
|             |
| III         |
| 3           |
|             |

### Electrical properties

| Rated surge voltage                             | 6 kV   |
|---|--------|
| Maximum power dissipation for nominal condition | 1.02 W |

### Connection data

| Number of connections per level | 2     |
|---------------------------------|-------|
| Nominal cross section           | 4 mm² |

### 1 level

| Connection method Screw thread M3 Tightening torque 0.5 0.6 Nm Stripping length 8 mm Internal cylindrical gage A3 Connection in acc. with standard IEC 60947-7-1 Conductor cross-section rigid 0.2 mm² 6 mm² Cross section AWG 24 10 (converted acc. to IEC) Conductor cross-section flexible 0.2 mm² 4 mm² Conductor cross-section flexible Conductor cross-section flexible (ferrule without plastic sleeve) Conductor cross-section flexible (ferrule with plastic sleeve) Flexible conductor cross-section (ferrule with plastic sleeve) Cross-section with insertion bridge, rigid 4 mm² Cross-section with insertion bridge, flexible 2 conductors with same cross section, solid 2 conductors with same cross section, flexible 2 conductors with same cross section, flexible 3 conductors with same cross section, flexible 2 conductors with same cross section, flexible 3 conductors with same cross section, flexible 4 conductors with same cross section, flexible 5 conductors with same cross section, flexible 7 conductors with same cross section, flexible 8 conductors with same cross section, flexible, with ferrule 8 without plastic sleeve  Nominal current 16 A Maximum load current 16 A (with 4 mm² conductor cross-section) Nominal voltage 500 V   | 1 level   |   |
|--|---|---|
| Tightening torque  Stripping length  Internal cylindrical gage  Connection in acc. with standard  EEC 60947-7-1  Conductor cross-section rigid  Cross section AWG  Conductor cross-section flexible  Conductor cross-section, flexible [AWG]  Conductor cross-section flexible (ferrule without plastic sleeve)  Flexible conductor cross-section (ferrule with plastic sleeve)  Cross-section with insertion bridge, rigid  Cross-section with insertion bridge, flexible  2 conductors with same cross section, solid  2 conductors with same cross section, flexible, with ferrule without plastic sleeve)  Cross-section with same cross section, solid  Conductors with same cross section, flexible, with ferrule with plastic sleeve  Conductors with same cross section, flexible, with ferrule with plastic sleeve  Conductors with same cross section, flexible, with ferrule with plastic sleeve  Conductors with same cross section, flexible, with TWIN ferrule with plastic sleeve  Conductors with plastic sleeve  Conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve  Nominal current  Maximum load current  Conductors with same cross-section)  | Connection method   | Screw connection                          |
| Stripping length Internal cylindrical gage A3 Connection in acc. with standard IEC 60947-7-1 Conductor cross-section rigid 0.2 mm² 6 mm² Cross section AWG 24 10 (converted acc. to IEC) Conductor cross-section, flexible Conductor cross-section, flexible [AWG] Conductor cross-section flexible (ferrule without plastic sleeve) Conductor cross-section flexible (ferrule with plastic sleeve) Conductor cross-section with insertion bridge, rigid 4 mm² Cross-section with insertion bridge, flexible 2 conductors with same cross section, solid 2 conductors with same cross section, flexible 2 conductors with same cross section, flexible 2 conductors with same cross section, flexible 2 conductors with same cross section, flexible, with ferrule without plastic sleeve 2 conductors with same cross section, flexible, with ferrule with plastic sleeve 2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve  Nominal current 16 A Maximum load current 16 A (with 4 mm² conductor cross-section)  | Screw thread  | M3  |
| Internal cylindrical gage  Connection in acc. with standard  IEC 60947-7-1  Conductor cross-section rigid  0.2 mm² 6 mm²  Cross section AWG  24 10 (converted acc. to IEC)  Conductor cross-section flexible  Conductor cross-section, flexible [AWG]  Conductor cross-section flexible (ferrule without plastic sleeve)  Conductor cross-section flexible (ferrule with plastic sleeve)  Conductor cross-section (ferrule with plastic sleeve)  Flexible conductor cross-section (ferrule with plastic sleeve)  Cross-section with insertion bridge, rigid  4 mm²  Cross-section with insertion bridge, flexible  2 conductors with same cross section, solid  2 conductors with same cross section, flexible  2 conductors with same cross section, flexible  2 conductors with same cross section, flexible, with ferrule without plastic sleeve  2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve  Nominal current  16 A  Maximum load current  16 A (with 4 mm² conductor cross-section)   | Tightening torque   | 0.5 0.6 Nm                                |
| Connection in acc. with standard  Conductor cross-section rigid  Cross section AWG  Conductor cross-section flexible  Conductor cross-section flexible  Conductor cross-section, flexible [AWG]  Conductor cross-section flexible (ferrule without plastic sleeve)  Conductor cross-section flexible (ferrule with plastic sleeve)  Conductor cross-section flexible (ferrule with plastic sleeve)  Conductor cross-section flexible (ferrule with plastic sleeve)  Cross-section with insertion bridge, rigid  Cross-section with insertion bridge, flexible  Cross-section with insertion bridge, flexible  Conductors with same cross section, solid  Conductors with same cross section, flexible  Conductors with same cross section, flexible, with ferrule without plastic sleeve  Conductors with the same cross section, flexible, with ferrule with plastic sleeve  Conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve  Conductors with plastic sleeve  Nominal current  16 A  Maximum load current   | Stripping length  | 8 mm                                      |
| Conductor cross-section rigid  Cross section AWG  24 10 (converted acc. to IEC)  Conductor cross-section flexible  Conductor cross-section, flexible [AWG]  Conductor cross-section flexible (ferrule without plastic sleeve)  Conductor cross-section flexible (ferrule with plastic sleeve)  Conductor cross-section flexible (ferrule with plastic sleeve)  Flexible conductor cross-section (ferrule with plastic sleeve)  Cross-section with insertion bridge, rigid  4 mm²  Cross-section with insertion bridge, flexible  4 mm²  2 conductors with same cross section, solid  0.2 mm² 1.5 mm²  2 conductors with same cross section, flexible  2 conductors with same cross section, flexible  2 conductors with same cross section, flexible, with ferrule without plastic sleeve  2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve  Nominal current  16 A  Maximum load current  | Internal cylindrical gage   | A3  |
| Cross section AWG  Conductor cross-section flexible  Conductor cross-section, flexible [AWG]  Conductor cross-section flexible (ferrule without plastic sleeve)  Flexible conductor cross-section (ferrule with plastic sleeve)  Cross-section with insertion bridge, rigid  Cross-section with insertion bridge, flexible  Cross-section with insertion bridge, flexible  Cross-section with same cross section, solid  Conductors with same cross section, flexible  Conductors with same cross section, flexible  Conductors with same cross section, flexible  Conductors with same cross section, flexible, with ferrule without plastic sleeve  Conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve  Nominal current  16 A  Maximum load current  Maximum load current  Maximum load current  (16 A (with 4 mm² conductor cross-section)   | Connection in acc. with standard                                  | IEC 60947-7-1                             |
| Conductor cross-section flexible [AWG] 24 12 (converted acc. to IEC)  Conductor cross-section flexible (ferrule without plastic sleeve) 0.25 mm² 4 mm²  Flexible conductor cross-section (ferrule with plastic sleeve) 0.25 mm² 2.5 mm²  Cross-section with insertion bridge, rigid 4 mm²  Cross-section with insertion bridge, flexible 4 mm²  2 conductors with same cross section, solid 0.2 mm² 1.5 mm²  2 conductors with same cross section, flexible 0.2 mm² 1.5 mm²  2 conductors with same cross section, flexible, with ferrule without plastic sleeve 0.25 mm² 1.5 mm²  2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve 16 A  Maximum load current 16 A  Maximum load current 16 A (with 4 mm² conductor cross-section)   | Conductor cross-section rigid                                     | 0.2 mm² 6 mm²                             |
| Conductor cross-section, flexible [AWG]  Conductor cross-section flexible (ferrule without plastic sleeve)  Flexible conductor cross-section (ferrule with plastic sleeve)  Cross-section with insertion bridge, rigid  Cross-section with insertion bridge, flexible  4 mm²  Cross-section with same cross section, solid  2 conductors with same cross section, solid  2 conductors with same cross section, flexible  2 conductors with same cross section, flexible, with ferrule without plastic sleeve  2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve  Nominal current  16 A  Maximum load current  16 A (with 4 mm² conductor cross-section)  | Cross section AWG   | 24 10 (converted acc. to IEC)             |
| Conductor cross-section flexible (ferrule without plastic sleeve)  Flexible conductor cross-section (ferrule with plastic sleeve)  Cross-section with insertion bridge, rigid  4 mm²  Cross-section with insertion bridge, flexible  2 conductors with same cross section, solid  2 conductors with same cross section, flexible  2 conductors with same cross section, flexible  2 conductors with same cross section, flexible, with ferrule without plastic sleeve  2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve  Nominal current  16 A  Maximum load current  16 A (with 4 mm² conductor cross-section)   | Conductor cross-section flexible                                  | 0.2 mm² 4 mm²                             |
| Flexible conductor cross-section (ferrule with plastic sleeve)  Cross-section with insertion bridge, rigid  4 mm²  Cross-section with insertion bridge, flexible  2 conductors with same cross section, solid  2 conductors with same cross section, flexible  2 conductors with same cross section, flexible  2 conductors with same cross section, flexible, with ferrule without plastic sleeve  2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve  Nominal current  16 A  Maximum load current  16 A (with 4 mm² conductor cross-section)  | Conductor cross-section, flexible [AWG]                           | 24 12 (converted acc. to IEC)             |
| Cross-section with insertion bridge, rigid  4 mm²  Cross-section with insertion bridge, flexible  4 mm²  2 conductors with same cross section, solid  0.2 mm² 1.5 mm²  2 conductors with same cross section, flexible  2 conductors with same cross section, flexible, with ferrule without plastic sleeve  2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve  Nominal current  16 A  Maximum load current  16 A (with 4 mm² conductor cross-section)  | Conductor cross-section flexible (ferrule without plastic sleeve) | 0.25 mm² 4 mm²                            |
| Cross-section with insertion bridge, flexible  2 conductors with same cross section, solid  2 conductors with same cross section, flexible  2 conductors with same cross section, flexible  2 conductors with same cross section, flexible, with ferrule without plastic sleeve  2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve  Nominal current  16 A  Maximum load current  4 mm²  0.2 mm² 1.5 mm²  0.25 mm² 1.5 mm²  1.6 mm²  1.7 mm²  1.7 mm²  1.8 mm²  1.8 mm²  1.9 | Flexible conductor cross-section (ferrule with plastic sleeve)    | 0.25 mm² 2.5 mm²                          |
| 2 conductors with same cross section, solid  2 conductors with same cross section, flexible  2 conductors with same cross section, flexible, with ferrule without plastic sleeve  2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve  Nominal current  16 A  Maximum load current  0.2 mm² 1.5 mm²  0.25 mm² 1.5 mm²  0.5 mm² 2.5 mm²  16 A  Maximum load current  16 A   | Cross-section with insertion bridge, rigid                        | 4 mm²                                     |
| 2 conductors with same cross section, flexible  2 conductors with same cross section, flexible, with ferrule without plastic sleeve  2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve  Nominal current  16 A  Maximum load current  0.2 mm² 1.5 mm²  0.25 mm² 1.5 mm²  1.5 mm²  1.5 mm²  1.5 mm²  1.5 mm²  1.5 mm²  1.6 Mm² 1.5 mm²  1.7 mm²  1.8 mm²  1.9 mm² 1.5 mm²  1.9 mm²  | Cross-section with insertion bridge, flexible                     | 4 mm²                                     |
| 2 conductors with same cross section, flexible, with ferrule without plastic sleeve  2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve  Nominal current  16 A  Maximum load current  0.25 mm² 1.5 mm²  0.5 mm² 2.5 mm²  16 A   | 2 conductors with same cross section, solid                       | 0.2 mm <sup>2</sup> 1.5 mm <sup>2</sup>   |
| without plastic sleeve  2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve  Nominal current  16 A  Maximum load current  16 A (with 4 mm² conductor cross-section)  | 2 conductors with same cross section, flexible                    | 0.2 mm² 1.5 mm²                           |
| ferrule with plastic sleeve  Nominal current  16 A  Maximum load current  16 A (with 4 mm² conductor cross-section)  |   | 0.25 mm² 1.5 mm²                          |
| Maximum load current 16 A (with 4 mm² conductor cross-section)   | ·   | 0.5 mm² 2.5 mm²                           |
|  | Nominal current   | 16 A                                      |
| Nominal voltage 500 V  | Maximum load current  | 16 A (with 4 mm² conductor cross-section) |
|  | Nominal voltage   | 500 V                                     |



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| Nominal cross section  | 2.5 mm²                        |
|--|--------------------------------|
| ensions  |                                |
| Width  | 6.2 mm                         |
| Height   | 51 mm                          |
| Depth on NS 32   | 63.5 mm                        |
| Depth on NS 35/7,5   | 58.5 mm                        |
| Depth on NS 35/15  | 66 mm                          |
| terial specifications  |                                |
| Color  | white (RAL 9010)               |
| Flammability rating according to UL 94                           | V0                             |
| Insulating material group  | 1                              |
| Insulating material  | PA                             |
| Static insulating material application in cold                   | -60 °C                         |
| Relative insulation material temperature index (Elec., UL 746 B) | 130 °C                         |
| Fire protection for rail vehicles (DIN EN 45545-2) R22           | HL 1 - HL 3                    |
| Fire protection for rail vehicles (DIN EN 45545-2) R23           | HL 1 - HL 3                    |
| Fire protection for rail vehicles (DIN EN 45545-2) R24           | HL 1 - HL 3                    |
| Fire protection for rail vehicles (DIN EN 45545-2) R26           | HL 1 - HL 3                    |
| Surface flammability NFPA 130 (ASTM E 162)                       | passed                         |
| Specific optical density of smoke NFPA 130 (ASTM E 662)          | passed                         |
| Smoke gas toxicity NFPA 130 (SMP 800C)                           | passed                         |
| ctrical tests  urge voltage test  Test voltage setpoint          | 7.3 kV                         |
| Result   | Test passed                    |
| emperature-rise test   |                                |
| Requirement temperature-rise test                                | Increase in temperature ≤ 45 K |
| Result   | Test passed                    |
| Short-time withstand current 1.5 mm²                             | 0.18 kA                        |
| Result   | Test passed                    |
|  |                                |
| Power-frequency withstand voltage                                |                                |
| Power-frequency withstand voltage Test voltage setpoint          | 1.89 kV                        |
|  | 1.89 kV<br>Test passed         |
| <u> </u>   |                                |
| Test voltage setpoint  Result  echanical properties              |                                |
| Test voltage setpoint Result                                     |                                |

#### Mechanical tests



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| Result  | Test passed  |
|---|--|
| Attachment on the carrier                       |  |
| DIN rail/fixing support                         | NS 32/NS 35  |
| Result  | Test passed  |
|   | Test passed  |
| est for conductor damage and slackening         | 40.4.4.0   |
| Rotation speed                                  | 10 (+/- 2) rpm   |
| Revolutions                                     | 135  |
| Conductor cross-section/weight                  | 0.2 mm² / 0.2 kg   |
|   | 4 mm² / 0.9 kg   |
| Dec. II   | 6 mm² / 1.4 kg   |
| Result  | Test passed  |
| Needle-flame test  Time of exposure             | 30 s   |
| Result  | Test passed  |
|   |  |
| Oscillation/broadband noise                     | DIN EN 50455 (4/DE 0445 000) 0000 00   |
| Specification                                   | DIN EN 50155 (VDE 0115-200):2022-06  |
| Spectrum  | Long life test category 2, bogie-mounted   |
| Frequency ASD level                             | $f_1 = 5 \text{ Hz to } f_2 = 250 \text{ Hz}$<br>6.12 (m/s²)²/Hz   |
| Acceleration                                    | 3.12g  |
| Test duration per axis                          | 5.129<br>5 h   |
| Test directions                                 | X-, Y- and Z-axis  |
| Result  | Test passed  |
|   |  |
| Shocks  | 11.6   |
| Pulse shape                                     | Half-sine  |
| Acceleration Shock duration                     | 30g<br>18 ms   |
|   | 3  |
| Number of shocks per direction  Test directions | X-, Y- and Z-axis (pos. and neg.)  |
| Result  | Test passed  |
| Nesun   | rest passed  |
| Ambient conditions                              |  |
| Ambient temperature (operation)                 | -60 °C 110 °C (Operating temperature range incl. self-heatin for max. short-term operating temperature, see RTI Elec.) |
| Ambient temperature (storage/transport)         | -25 °C 60 °C (for a short time, not exceeding 24 h, -60 °C to +70 °C)  |
| Ambient temperature (assembly)                  | -5 °C 70 °C  |
| Ambient temperature (actuation)                 | -5 °C 70 °C  |
| . , ,   |  |



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| Permissible humidity (storage/transport) | 30 % 70 %     |  |  |
|--|---------------|--|--|
| Standards and regulations                |               |  |  |
| Connection in acc. with standard         | IEC 60947-7-1 |  |  |
| Mounting                                 |               |  |  |
| Mounting type                            | NS 32         |  |  |
|  | NS 35/7,5     |  |  |
|  | NS 35/15      |  |  |

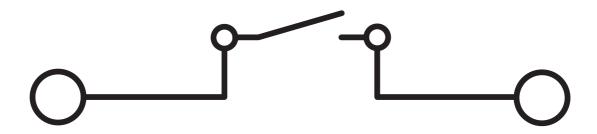


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## Drawings

Circuit diagram





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### **Approvals**

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/3056022

| • | CSA<br>Approval ID: 13631 |                                |                                |                   |                               |
|---|---------------------------|--------------------------------|--------------------------------|-------------------|-------------------------------|
|   |                           | Nominal voltage U <sub>N</sub> | Nominal current I <sub>N</sub> | Cross section AWG | Cross section mm <sup>2</sup> |
| В |                           |                                |                                |                   |                               |
|   |                           | 600 V                          | 15 A                           | 22 - 14           | -                             |
| С |                           |                                |                                |                   |                               |
|   |                           | 600 V                          | 15 A                           | 22 - 14           | -                             |

EAC Approval ID: KZ7500651131219505

| cULus Recogn<br>Approval ID: E6042 |                       |                                |                   |                               |
|------------------------------------|-----------------------|--------------------------------|-------------------|-------------------------------|
|                                    | Nominal voltage $U_N$ | Nominal current I <sub>N</sub> | Cross section AWG | Cross section mm <sup>2</sup> |
| В                                  |                       |                                |                   |                               |
|                                    | 300 V                 | 15 A                           | 22 - 12           | -                             |
| С                                  |                       |                                |                   |                               |
|                                    | 300 V                 | 15 A                           | 22 - 12           | -                             |
| F                                  |                       |                                |                   |                               |
|                                    | 500 V                 | 15 A                           | 22 - 12           | -                             |
| D                                  |                       |                                |                   |                               |
|                                    | 600 V                 | 5 A                            | 22 - 12           | -                             |



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### Classifications

| ECLASS |             |          |
|--------|-------------|----------|
|        | ECLASS-13.0 | 27250108 |
| E      | ГІМ         |          |
|        | ETIM 9.0    | EC000902 |
| UI     | NSPSC       |          |
|        | UNSPSC 21.0 | 39121400 |



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### Environmental product compliance

#### EU RoHS

| Fulfills EU RoHS substance requirements | Yes   |  |
|---|---|--|
| Exemption                               | 6(c)  |  |
| China RoHS                              |   |  |
| Environment friendly use period (EFUP)  | EFUP-50   |  |
|   | An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required. |  |
| EU REACH SVHC                           |   |  |
| REACH candidate substance (CAS No.)     | Lead(CAS: 7439-92-1)  |  |
|   |   |  |

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