

# UT 4-MTL-P/P KNIFE-RD - Knife-disconnect terminal block



3046154

<https://www.phoenixcontact.com/us/products/3046154>

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Knife-disconnect terminal block, with actuation latch, red disconnect knife, and test socket screws for insertion of test plugs, nom. voltage: 500 V, nominal current: 20 A, connection method: Screw connection, Rated cross section: 2.5 mm<sup>2</sup>, cross section: 0.14 mm<sup>2</sup> - 6 mm<sup>2</sup>, mounting: NS 35/7,5, NS 35/15, color: gray

## Your advantages

- Compact design and high current carrying capacity of 20 A

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 3046154       |
| Packing unit                         | 50 pc         |
| Minimum order quantity               | 50 pc         |
| Sales key                            | BE01          |
| Product key                          | BE1131        |
| GTIN                                 | 4055626063454 |
| Weight per piece (including packing) | 13.92 g       |
| Weight per piece (excluding packing) | 13.92 g       |
| Customs tariff number                | 85369010      |
| Country of origin                    | PL            |

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## Technical data

### Product properties

|                       |                           |
|-----------------------|---------------------------|
| Product type          | Disconnect terminal block |
| Area of application   | Machine building          |
|                       | Plant engineering         |
| Number of connections | 2                         |
| Number of rows        | 1                         |
| Potentials            | 1                         |

### Insulation characteristics

|                      |     |
|----------------------|-----|
| Overvoltage category | III |
| Degree of pollution  | 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 mm <sup>2</sup> |

### Level 1 above 1 below 1

|   |   |
|---|---|
| Connection method   | Screw connection                                      |
| Screw thread  | M3  |
| Tightening torque   | 0.6 ... 0.8 Nm  |
| Stripping length  | 9 mm  |
| Internal cylindrical gage   | A4  |
| Connection in acc. with standard  | IEC 60947-7-1   |
| Conductor cross-section rigid   | 0.14 mm <sup>2</sup> ... 6 mm <sup>2</sup>            |
| Cross section AWG   | 26 ... 10 (converted acc. to IEC)                     |
| Conductor cross-section flexible  | 0.14 mm <sup>2</sup> ... 6 mm <sup>2</sup>            |
| Conductor cross-section, flexible [AWG]   | 26 ... 10 (converted acc. to IEC)                     |
| Conductor cross-section flexible ultrasound-compressed                                    | 0.34 mm <sup>2</sup> ... 6 mm <sup>2</sup>            |
| Conductor cross-section, flexible [AWG] ultrasound-compressed                             | 22 ... 10 (converted acc. to IEC)                     |
| Conductor cross-section flexible (ferrule without plastic sleeve)                         | 0.14 mm <sup>2</sup> ... 4 mm <sup>2</sup>            |
| Flexible conductor cross-section (ferrule with plastic sleeve)                            | 0.14 mm <sup>2</sup> ... 4 mm <sup>2</sup>            |
| 2 conductors with same cross section, solid   | 0.14 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>          |
| 2 conductors with same cross section, flexible  | 0.14 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>          |
| 2 conductors with same cross section, flexible, with ferrule without plastic sleeve       | 0.14 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>          |
| 2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve | 0.5 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>           |
| Nominal current   | 20 A  |
| Maximum load current  | 20 A (with 6 mm <sup>2</sup> conductor cross-section) |

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|                       |                     |
|-----------------------|---------------------|
| Nominal voltage       | 500 V               |
| Nominal cross section | 2.5 mm <sup>2</sup> |

## Dimensions

|                    |         |
|--------------------|---------|
| Width              | 6.2 mm  |
| Height             | 57.8 mm |
| Depth on NS 35/7,5 | 49.1 mm |
| Depth on NS 35/15  | 56.6 mm |

## Material specifications

|   |                 |
|---|-----------------|
| Color   | gray (RAL 7042) |
| Flammability rating according to UL 94                                  | V0              |
| Insulating material group   | I               |
| Insulating material   | PA              |
| Static insulating material application in cold                          | -60 °C          |
| Temperature index of insulation material (DIN EN 60216-1 (VDE 0304-21)) | 125 °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     |
| Calorimetric heat release NFPA 130 (ASTM E 1354)                        | 27,5 MJ/kg      |
| 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          |

## Electrical tests

|                       |             |
|-----------------------|-------------|
| Surge voltage test    |             |
| Test voltage setpoint | 7.3 kV      |
| Result                | Test passed |

|  |                                |
|--|--------------------------------|
| Temperature-rise test                            |                                |
| Requirement temperature-rise test                | Increase in temperature ≤ 45 K |
| Result   | Test passed                    |
| Short-time withstand current 2.5 mm <sup>2</sup> | 0.3 kA                         |

|                                   |             |
|-----------------------------------|-------------|
| Power-frequency withstand voltage |             |
| Test voltage setpoint             | 1.89 kV     |
| Result                            | Test passed |

## Mechanical properties

|                 |    |
|-----------------|----|
| Mechanical data |    |
| Open side panel | No |

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## Mechanical tests

### Mechanical strength

| Result | Test passed |
|--------|-------------|
|--------|-------------|

### Attachment on the carrier

|                         |             |
|-------------------------|-------------|
| DIN rail/fixing support | NS 35       |
| Test force setpoint     | 1 N         |
| Result                  | Test passed |

### Test for conductor damage and slackening

|                                |                               |
|--------------------------------|-------------------------------|
| Rotation speed                 | 10 rpm                        |
| Revolutions                    | 135                           |
| Conductor cross-section/weight | 0.14 mm <sup>2</sup> / 0.2 kg |
|                                | 4 mm <sup>2</sup> / 0.9 kg    |
|                                | 6 mm <sup>2</sup> / 1.4 kg    |
| Result                         | Test passed                   |

## Environmental and real-life conditions

### Needle-flame test

|                  |             |
|------------------|-------------|
| Time of exposure | 30 s        |
| Result           | Test passed |

### Ambient conditions

|  |  |
|--|--|
| Ambient temperature (operation)          | -60 °C ... 110 °C (Operating temperature range incl. self-heating; 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  |
| Permissible humidity (operation)         | 20 % ... 90 %  |
| Permissible humidity (storage/transport) | 30 % ... 70 %  |

## Standards and regulations

|                                  |               |
|----------------------------------|---------------|
| Connection in acc. with standard | IEC 60947-7-1 |
|----------------------------------|---------------|

## Mounting

|               |           |
|---------------|-----------|
| Mounting type | NS 35/7,5 |
|               | NS 35/15  |

# UT 4-MTL-P/P KNIFE-RD - Knife-disconnect terminal block

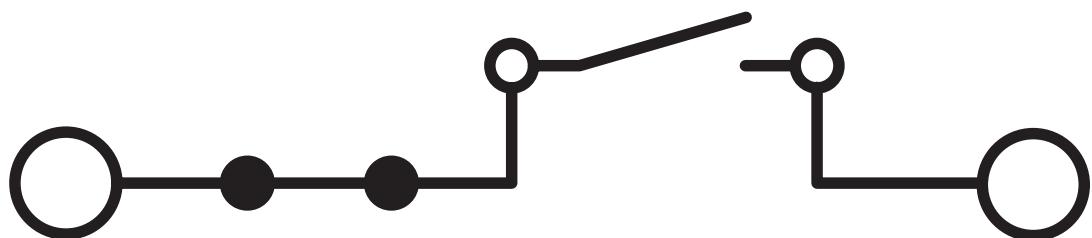


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## Drawings

Circuit diagram



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## Approvals

ⓘ To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/3046154>

| cULus Recognized |                            | Approval ID: E60425   |                       |                   |
|------------------|----------------------------|-----------------------|-----------------------|-------------------|
|                  |                            | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG |
| B                |                            | 300 V                 | 16 A                  | 26 - 10           |
|                  | Multi-conductor connection | 300 V                 | 16 A                  | 26 - 14           |
| C                |                            | 300 V                 | 16 A                  | 26 - 10           |
|                  | Multi-conductor connection | 300 V                 | 16 A                  | 26 - 14           |

| CSA |  | Approval ID: 13631 |  |
|-----|--|--------------------|--|
|-----|--|--------------------|--|

| EAC |  | Approval ID: KZ7500651131219505 |  |
|-----|--|---------------------------------|--|
|-----|--|---------------------------------|--|

| CSA |  | Approval ID: 13631 |  |
|-----|--|--------------------|--|
|-----|--|--------------------|--|

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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-13.0 | 27250108 |
|-------------|----------|

### ETIM

|          |          |
|----------|----------|
| ETIM 9.0 | EC000902 |
|----------|----------|

### UNSPSC

|             |          |
|-------------|----------|
| 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)                 |
| SCIP                                | 42b4520c-8ea1-4acd-ae45-b11550b87253 |

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