

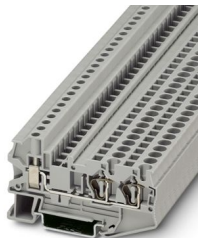
# STU 4-TWIN - Feed-through terminal block



3033058

<https://www.phoenixcontact.com/us/products/3033058>

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Feed-through terminal block, nom. voltage: 800 V, nominal current: 32 A, connection method: Spring-cage connection, Rated cross section: 4 mm<sup>2</sup>, cross section: 0.08 mm<sup>2</sup> - 6 mm<sup>2</sup>, connection method: Screw connection, Rated cross section: 4 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

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 3033058       |
| Packing unit                         | 50 pc         |
| Minimum order quantity               | 50 pc         |
| Sales key                            | BE02          |
| Product key                          | BE2119        |
| GTIN                                 | 4046356052597 |
| Weight per piece (including packing) | 13.256 g      |
| Weight per piece (excluding packing) | 12.5 g        |
| Customs tariff number                | 85369010      |
| Country of origin                    | PL            |

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## Technical data

### Product properties

|                       |                       |
|-----------------------|-----------------------|
| Product type          | Hybrid terminal block |
| Number of connections | 3                     |
| Number of rows        | 1                     |
| Potentials            | 1                     |

### Insulation characteristics

|                      |     |
|----------------------|-----|
| Overvoltage category | III |
| Degree of pollution  | 3   |

### Electrical properties

|                                                 |        |
|-------------------------------------------------|--------|
| Rated surge voltage                             | 8 kV   |
| Maximum power dissipation for nominal condition | 1.02 W |

### Connection data

|                                 |                   |
|---------------------------------|-------------------|
| Number of connections per level | 3                 |
| Nominal cross section           | 4 mm <sup>2</sup> |

#### Level 1 above 1+2

|                                                                                                                   |                                                                                                        |
|-------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|
| Connection method                                                                                                 | Spring-cage connection                                                                                 |
| Stripping length                                                                                                  | 8 mm ... 10 mm                                                                                         |
| Connection in acc. with standard                                                                                  | IEC 60947-7-1                                                                                          |
| Conductor cross-section rigid                                                                                     | 0.08 mm <sup>2</sup> ... 6 mm <sup>2</sup>                                                             |
| Cross section AWG                                                                                                 | 26 ... 10 (converted acc. to IEC)                                                                      |
| Conductor cross-section flexible                                                                                  | 0.08 mm <sup>2</sup> ... 4 mm <sup>2</sup>                                                             |
| Conductor cross-section, flexible [AWG]                                                                           | 28 ... 12 (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>                                                             |
| Conductor cross-section flexible (2 conductors with the same cross-section, with TWIN ferrule and plastic sleeve) | 0.14 mm <sup>2</sup> ... 1 mm <sup>2</sup>                                                             |
| 2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve                         | 0.5 mm <sup>2</sup> ... 1 mm <sup>2</sup>                                                              |
| Nominal current                                                                                                   | 32 A                                                                                                   |
| Maximum load current                                                                                              | 38 A (The maximum load current must not be exceeded by the total current of all connected conductors.) |
| Nominal voltage                                                                                                   | 800 V                                                                                                  |
| Nominal cross section                                                                                             | 4 mm <sup>2</sup>                                                                                      |

#### Level 1 below 1

|                                  |                                            |
|----------------------------------|--------------------------------------------|
| Connection method                | Screw connection                           |
| Screw thread                     | M3                                         |
| Tightening torque                | 0.6 ... 0.8 Nm                             |
| Connection in acc. with standard | IEC 60947-7-1                              |
| Conductor cross-section rigid    | 0.14 mm <sup>2</sup> ... 6 mm <sup>2</sup> |

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|                                                                                                                   |                                                       |
|-------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|
| 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 (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>            |
| Conductor cross-section flexible (2 conductors with the same cross-section, with TWIN ferrule and plastic sleeve) | 0.5 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> ... 1 mm <sup>2</sup>             |
| Nominal current                                                                                                   | 32 A                                                  |
| Maximum load current                                                                                              | 38 A (with 6 mm <sup>2</sup> conductor cross-section) |
| Nominal voltage                                                                                                   | 800 V                                                 |
| Nominal cross section                                                                                             | 4 mm <sup>2</sup>                                     |

## Dimensions

|                    |         |
|--------------------|---------|
| Width              | 6.2 mm  |
| End cover width    | 2.2 mm  |
| Height             | 74.4 mm |
| Depth on NS 35/7,5 | 42.8 mm |
| Depth on NS 35/15  | 50.3 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)) | 130 °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)                        | 28 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

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3033058

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|                       |             |
|-----------------------|-------------|
| Test voltage setpoint | 9.8 kV      |
| Result                | Test passed |

## Temperature-rise test

|                                                |                                     |
|------------------------------------------------|-------------------------------------|
| Requirement temperature-rise test              | Increase in temperature $\leq 45$ K |
| Result                                         | Test passed                         |
| Short-time withstand current 4 mm <sup>2</sup> | 0.48 kA                             |
| Short-time withstand current 6 mm <sup>2</sup> | 0.72 kA                             |
| Result                                         | Test passed                         |

## Power-frequency withstand voltage

|                       |             |
|-----------------------|-------------|
| Test voltage setpoint | 2 kV        |
| Result                | Test passed |

## Mechanical properties

### Mechanical data

|                 |     |
|-----------------|-----|
| Open side panel | Yes |
|-----------------|-----|

## 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 | 0.08 mm <sup>2</sup> / 0.1 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

### Aging

|                    |             |
|--------------------|-------------|
| Temperature cycles | 192         |
| Result             | Test passed |

### Needle-flame test

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

### Oscillation/broadband noise

|               |                                     |
|---------------|-------------------------------------|
| Specification | DIN EN 50155 (VDE 0115-200):2008-03 |
|---------------|-------------------------------------|

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3033058

<https://www.phoenixcontact.com/us/products/3033058>

|                        |                                                |
|------------------------|------------------------------------------------|
| Spectrum               | Long life test category 2, bogie-mounted       |
| Frequency              | $f_1 = 5 \text{ Hz}$ to $f_2 = 250 \text{ Hz}$ |
| ASD level              | $6.12 \text{ (m/s}^2\text{)}^2\text{/Hz}$      |
| Acceleration           | 3.12g                                          |
| Test duration per axis | 5 h                                            |
| Test directions        | X-, Y- and Z-axis                              |
| Result                 | Test passed                                    |

## Shocks

|                                |                                     |
|--------------------------------|-------------------------------------|
| Specification                  | DIN EN 50155 (VDE 0115-200):2008-03 |
| Acceleration                   | 30g                                 |
| Shock duration                 | 18 ms                               |
| Number of shocks per direction | 3                                   |
| Test directions                | X-, Y- and Z-axis (pos. and neg.)   |
| 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 |
|                                  | IEC 60947-7-1 |

## Mounting

|               |           |
|---------------|-----------|
| Mounting type | 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/3033058>

|  <b>CSA</b><br>Approval ID: 13631 |                       |                       |                   |                             |
|--------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------|-------------------|-----------------------------|
|                                                                                                                    | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
| B                                                                                                                  |                       |                       |                   |                             |
|                                                                                                                    | 600 V                 | 30 A                  | 28 - 10           | -                           |
| C                                                                                                                  |                       |                       |                   |                             |
|                                                                                                                    | 600 V                 | 30 A                  | 28 - 10           | -                           |

|  <b>EAC</b><br>Approval ID: RU C-DE.BL08.B.00644 |  |  |  |  |
|-----------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|
|-----------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|

|  <b>cULus Recognized</b><br>Approval ID: E60425 |                       |                       |                   |                             |
|------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------|-------------------|-----------------------------|
|                                                                                                                                    | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
| B                                                                                                                                  |                       |                       |                   |                             |
| Spring-cage connection                                                                                                             | 600 V                 | 30 A                  | 28 - 10           | -                           |
| Screw connection                                                                                                                   | 600 V                 | 30 A                  | 26 - 10           | -                           |
| C                                                                                                                                  |                       |                       |                   |                             |
| Spring-cage connection                                                                                                             | 600 V                 | 30 A                  | 28 - 10           | -                           |
| Screw connection                                                                                                                   | 600 V                 | 30 A                  | 26 - 10           | -                           |

|  <b>EAC</b><br>Approval ID: KZ7500651131219505 |  |  |  |  |
|-----------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|
|-----------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|

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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-13.0 | 27250201 |
|-------------|----------|

### ETIM

|          |          |
|----------|----------|
| ETIM 9.0 | EC000897 |
|----------|----------|

### 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                                | bb37a836-e5a8-4660-b3d9-fc25cad57db8 |

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Phoenix Contact USA  
586 Fulling Mill Road  
Middletown, PA 17057, United States  
(+717) 944-1300  
[info@phoenixcon.com](mailto:info@phoenixcon.com)