

# ST 2,5-TWIN-R100 OG - Component terminal block



3035603

<https://www.phoenixcontact.com/us/products/3035603>

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Component terminal block, with disconnected current bar and resistor, nom. voltage: 2 V, nominal current: 0.05 A, number of connections: 3, connection method: Spring-cage connection, Rated cross section: 2.5 mm<sup>2</sup>, 1 level, cross section: 0.08 mm<sup>2</sup> - 4 mm<sup>2</sup>, mounting type: NS 35/7,5, NS 35/15, color: orange

## Your advantages

- The consistent double function shaft offers every opportunity for time-saving potential distribution and accommodating test accessories
- User-friendly implementation of all potential branching tasks
- Space-saving and practical multi-conductor connection without additional bridges

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 3035603       |
| Packing unit                         | 50 pc         |
| Minimum order quantity               | 1 pc          |
| Product key                          | BE2173        |
| GTIN                                 | 4046356554503 |
| Weight per piece (including packing) | 7.824 g       |
| Weight per piece (excluding packing) | 7.824 g       |
| Country of origin                    | PL            |

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## Technical data

### Product properties

|                       |                                |
|-----------------------|--------------------------------|
| Product type          | Multi-conductor 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 | 0.77 W |

### Connection data

|                                 |                     |
|---------------------------------|---------------------|
| Number of connections per level | 3                   |
| Nominal cross section           | 2.5 mm <sup>2</sup> |

#### 1 level

|                                                                                           |                                              |
|-------------------------------------------------------------------------------------------|----------------------------------------------|
| Connection method                                                                         | Spring-cage connection                       |
| Stripping length                                                                          | 8 mm ... 10 mm                               |
| Internal cylindrical gage                                                                 | A3                                           |
| Connection in acc. with standard                                                          | IEC 60947-7-1                                |
| Conductor cross-section rigid                                                             | 0.08 mm <sup>2</sup> ... 4 mm <sup>2</sup>   |
| Cross section AWG                                                                         | 28 ... 12 (converted acc. to IEC)            |
| Conductor cross-section flexible                                                          | 0.08 mm <sup>2</sup> ... 2.5 mm <sup>2</sup> |
| Conductor cross-section, flexible [AWG]                                                   | 28 ... 14 (converted acc. to IEC)            |
| Conductor cross-section flexible (ferrule without plastic sleeve)                         | 0.14 mm <sup>2</sup> ... 2.5 mm <sup>2</sup> |
| Flexible conductor cross-section (ferrule with plastic sleeve)                            | 0.14 mm <sup>2</sup> ... 2.5 mm <sup>2</sup> |
| 2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve | 0.5 mm <sup>2</sup>                          |
| Nominal current                                                                           | 50 mA (due to the built-in resistor)         |
| Maximum load current                                                                      | 50 mA                                        |
| Nominal voltage                                                                           | 2 V DC                                       |
| Nominal cross section                                                                     | 2.5 mm <sup>2</sup>                          |

### Dimensions

|                 |        |
|-----------------|--------|
| Width           | 5.2 mm |
| End cover width | 2.2 mm |

### Material specifications

|                                        |                   |
|----------------------------------------|-------------------|
| Color                                  | orange (RAL 2003) |
| Flammability rating according to UL 94 | V0                |

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|                                                                         |             |
|-------------------------------------------------------------------------|-------------|
| 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

|                                                  |             |
|--------------------------------------------------|-------------|
| Test voltage setpoint                            | 9.8 kV      |
| Result                                           | Test passed |
| Short-time withstand current 2.5 mm <sup>2</sup> | 0.3 kA      |
| Short-time withstand current 4 mm <sup>2</sup>   | 0.48 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                           |
|                | 0.08 mm <sup>2</sup> / 0.1 kg |

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|                                |                              |
|--------------------------------|------------------------------|
| Conductor cross-section/weight | 2.5 mm <sup>2</sup> / 0.7 kg |
|                                | 4 mm <sup>2</sup> / 0.9 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            |
| Spectrum               | Long life test category 2, bogie-mounted       |
| Frequency              | $f_1 = 5 \text{ Hz}$ to $f_2 = 250 \text{ Hz}$ |
| ASD level              | 6.12 (m/s <sup>2</sup> ) <sup>2</sup> /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 |
| Pulse shape                    | Half-sine                           |
| 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 (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 (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  |

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## Classifications

### ETIM

|          |          |
|----------|----------|
| ETIM 8.0 | EC000903 |
|----------|----------|

### UNSPSC

|             |          |
|-------------|----------|
| UNSPSC 21.0 | 39121400 |
|-------------|----------|

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## Environmental product compliance

### EU RoHS

|                                         |                    |
|-----------------------------------------|--------------------|
| Fulfills EU RoHS substance requirements | Yes, No exemptions |
|-----------------------------------------|--------------------|

### China RoHS

|                                        |                                          |
|----------------------------------------|------------------------------------------|
| Environment friendly use period (EFUP) | EFUP-E                                   |
|                                        | No hazardous substances above the limits |

### EU REACH SVHC

|                                     |                            |
|-------------------------------------|----------------------------|
| REACH candidate substance (CAS No.) | No substance above 0.1 wt% |
|-------------------------------------|----------------------------|

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