

# PTIO-IN 2,5/3-LED 24 GN - Initiator/actuator terminal block



3244561

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2,5 mm<sup>2</sup>



Push-in



13,5 A

IEC



24 V

IEC



Initiator/actuator terminal block, Power terminal, nom. voltage: 24 V, nominal current: 13.5 A, number of connections: 2, connection method: Push-in connection, Rated cross section: 2.5 mm<sup>2</sup>, cross section: 0.2 mm<sup>2</sup> - 4 mm<sup>2</sup>, mounting type: NS 35/7,5, NS 35/15, color: orange

## Your advantages

- The Push-in connection terminal blocks are characterized by the system features of the CLIPLINE complete system and by easy and tool-free wiring of conductors with ferrules or solid conductors
- The compact design and front connection enable wiring in a confined space

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 3244561       |
| Packing unit                         | 10 pc         |
| Minimum order quantity               | 10 pc         |
| Sales key                            | BE22          |
| Product key                          | BE2217        |
| GTIN                                 | 4055626014425 |
| Weight per piece (including packing) | 12.8 g        |
| Weight per piece (excluding packing) | 12.7 g        |
| Customs tariff number                | 85369010      |
| Country of origin                    | PL            |

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## Technical data

### Notes

#### General

|      |                                                                               |
|------|-------------------------------------------------------------------------------|
| Note | Current and voltage are determined by the resistance and the light indicator. |
|------|-------------------------------------------------------------------------------|

### Product properties

|                       |                                |
|-----------------------|--------------------------------|
| Product type          | Sensor/actuator terminal block |
| Number of connections | 2                              |
| Number of rows        | 3                              |
| Potentials            | 2                              |

#### Insulation characteristics

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

### Electrical properties

|                     |      |
|---------------------|------|
| Rated surge voltage | 4 kV |
|---------------------|------|

### Connection data

|                                                                                           |                                                                |
|-------------------------------------------------------------------------------------------|----------------------------------------------------------------|
| Number of connections per level                                                           | 2                                                              |
| Nominal cross section                                                                     | 2.5 mm <sup>2</sup>                                            |
| Connection method                                                                         | Push-in connection                                             |
| Note                                                                                      | Please observe the current carrying capacity of the DIN rails. |
| Stripping length                                                                          | 8 mm ... 10 mm                                                 |
| Internal cylindrical gage                                                                 | A3                                                             |
| Connection in acc. with standard                                                          | IEC 60947-7-1                                                  |
| Conductor cross-section rigid                                                             | 0.2 mm <sup>2</sup> ... 4 mm <sup>2</sup>                      |
| Cross section AWG                                                                         | 24 ... 12 (converted acc. to IEC)                              |
| Conductor cross-section flexible                                                          | 0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>                    |
| Conductor cross-section, flexible [AWG]                                                   | 24 ... 14 (converted acc. to IEC)                              |
| Conductor cross-section flexible (ferrule without plastic sleeve)                         | 0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>                    |
| Flexible conductor cross-section (ferrule with plastic sleeve)                            | 0.2 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 cross section                                                                     | 2.5 mm <sup>2</sup>                                            |
| Nominal current                                                                           | 13.5 A                                                         |
| Maximum load current                                                                      | 13.5 A                                                         |
| Nominal voltage                                                                           | 24 V                                                           |

#### Connection cross sections directly pluggable

|                                                                   |                                              |
|-------------------------------------------------------------------|----------------------------------------------|
| Conductor cross-section rigid                                     | 0.34 mm <sup>2</sup> ... 4 mm <sup>2</sup>   |
| Conductor cross-section flexible (ferrule without plastic sleeve) | 0.34 mm <sup>2</sup> ... 2.5 mm <sup>2</sup> |

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|                                                                |                                              |
|----------------------------------------------------------------|----------------------------------------------|
| Flexible conductor cross-section (ferrule with plastic sleeve) | 0.34 mm <sup>2</sup> ... 2.5 mm <sup>2</sup> |
|----------------------------------------------------------------|----------------------------------------------|

## Dimensions

|                    |         |
|--------------------|---------|
| Width              | 7 mm    |
| End cover width    | 2.2 mm  |
| Height             | 74.4 mm |
| Depth on NS 35/7,5 | 41.5 mm |
| Depth on NS 35/15  | 49 mm   |

## Material specifications

|                                                                         |                   |
|-------------------------------------------------------------------------|-------------------|
| Color                                                                   | orange (RAL 2003) |
| 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            |

## Electrical tests

### Surge voltage test

|                       |             |
|-----------------------|-------------|
| Test voltage setpoint | 4.8 kV      |
| Result                | Test passed |

### Temperature-rise test

|                                                |                                |
|------------------------------------------------|--------------------------------|
| Requirement temperature-rise test              | Increase in temperature ≤ 45 K |
| Result                                         | Test passed                    |
| Short-time withstand current 4 mm <sup>2</sup> | 0.36 kA                        |
| Result                                         | Test passed                    |

### Power-frequency withstand voltage

|                       |             |
|-----------------------|-------------|
| Test voltage setpoint | 1.5 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   |

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

## Test for conductor damage and slackening

|                                |                              |
|--------------------------------|------------------------------|
| Rotation speed                 | 10 rpm                       |
| Revolutions                    | 135                          |
| Conductor cross-section/weight | 0.2 mm <sup>2</sup> / 0.2 kg |
|                                | 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 (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 %                                                                                                                |

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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 35/7,5 |
|-----------|

|          |
|----------|
| NS 35/15 |
|----------|

# PTIO-IN 2,5/3-LED 24 GN - Initiator/actuator terminal block

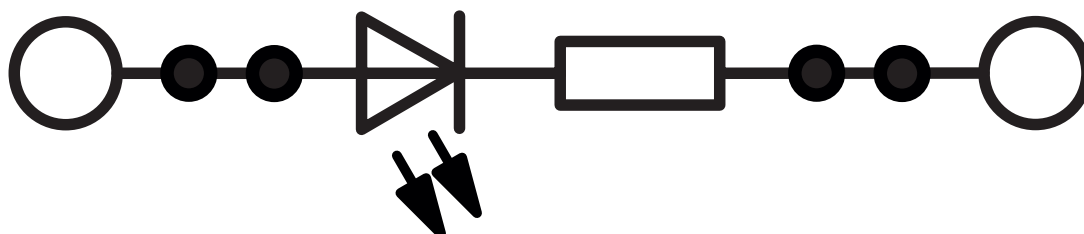


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## Drawings

Circuit diagram



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## Approvals

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|  <b>CSA</b><br>Approval ID: 13631 |                       |                       |                   |                             |
|--------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------|-------------------|-----------------------------|
|                                                                                                                    | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
| B                                                                                                                  | 300 V                 | 10 A                  | 24 - 12           | -                           |
| C                                                                                                                  | 150 V                 | 16 A                  | 24 - 12           | -                           |
| D                                                                                                                  | 300 V                 | 10 A                  | 24 - 12           | -                           |

|  <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                                                                                                                                  | 300 V                 | 10 A                  | 24 - 12           | -                           |
| C                                                                                                                                  | 150 V                 | 16 A                  | 24 - 12           | -                           |
| D                                                                                                                                  | 300 V                 | 10 A                  | 24 - 12           | -                           |

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

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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-13.0 | 27250112 |
| ECLASS-15.0 | 27250112 |

### ETIM

|           |          |
|-----------|----------|
| ETIM 10.0 | EC000900 |
|-----------|----------|

### 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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