

# TBUS8-20,0-PPPPPPPS-7035 - DIN rail bus connector



2202894

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DIN rail bus connector, color: light gray, nominal current: 6 A, 4 A (parallel contacts) (Serial contacts), rated voltage (III/2): 32 V, number of positions: 8, product range: TBUS8-20..., pitch: 2.54 mm, mounting: DIN rail mounting, locking: without, mounting method: without, type of packaging: packed in cardboard, Item with gold-plated contacts, bus connectors for connecting with electronics housings, 7 parallel contacts/1 serial contact

## Your advantages

- Space-saving installation under the housing in the DIN rail
- Contact design enables electronics modules to be easily snapped on
- Power supply and communication without additional wiring
- Parallel and serial contacts for efficient signal and data transmission
- Fast module-to-module communication without additional wiring effort
- Efficient connection between the individual housings of the ICS and ME-IO series

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 2202894       |
| Packing unit                         | 10 pc         |
| Minimum order quantity               | 10 pc         |
| Sales key                            | AC09          |
| Product key                          | ACHAGA        |
| GTIN                                 | 4055626382159 |
| Weight per piece (including packing) | 6.1 g         |
| Weight per piece (excluding packing) | 4.64 g        |
| Customs tariff number                | 85366990      |
| Country of origin                    | PL            |

## Technical data

### Notes

|                |   |
|----------------|---|
| Recommendation | Material of contact pads for bus connector, galvanic gold (hard gold) |
|----------------|---|

### Product properties

|                     |                        |
|---------------------|------------------------|
| Product type        | DIN rail bus connector |
| Product family      | TBUS8-20..             |
| Number of positions | 8                      |
| Pitch               | 2.54 mm                |

### Electrical properties

#### Properties

|                             |                         |
|-----------------------------|-------------------------|
| Nominal current $I_N$       | 6 A (parallel contacts) |
| Nominal voltage $U_N$       | 32 V                    |
| Contact resistance          | 3.7 m $\Omega$          |
| Rated voltage (III/2)       | 32 V                    |
| Rated surge voltage (III/2) | 1.5 kV                  |
| Rated voltage (II/2)        | 32 V                    |
| Rated surge voltage (II/2)  | 1.5 kV                  |

### Material specifications

#### Material data - contact

|                         |             |
|-------------------------|-------------|
| Contact material        | Cu alloy    |
| Surface characteristics | gold-plated |

#### Material data - housing

|  |                   |
|--|-------------------|
| Color (Housing)                        | light gray (7035) |
| Insulating material                    | PA                |
| Insulating material group              | I                 |
| CTI according to IEC 60112             | 600               |
| Flammability rating according to UL 94 | V0                |

#### material specifications - connector

|           |     |
|-----------|-----|
| Color ( ) | ( ) |
|-----------|-----|

### Dimensions

|            |          |
|------------|----------|
| Pitch      | 2.54 mm  |
| Width [w]  | 24.3 mm  |
| Height [h] | 37.15 mm |
| Length [l] | 16.3 mm  |

### Mounting

|               |                   |
|---------------|-------------------|
| Mounting type | DIN rail mounting |
|---------------|-------------------|

## Mechanical tests

### Insertion and withdrawal forces

|                                     |             |
|-------------------------------------|-------------|
| Result                              | Test passed |
| No. of cycles                       | 25          |
| Insertion strength per pos. approx. | 2.8 N       |
| Withdraw strength per pos. approx.  | 2.5 N       |

### Contact holder in insert

|  |                        |
|--|------------------------|
| Specification                                  | IEC 60512-15-1:2008-05 |
| Contact holder in insert<br>Requirements >20 N | Test passed            |

### Polarization and coding

|               |                        |
|---------------|------------------------|
| Specification | IEC 60512-13-5:2006-02 |
| Result        | Test passed            |

### Visual inspection

|               |                       |
|---------------|-----------------------|
| Specification | IEC 60512-1-1:2002-02 |
| Result        | Test passed           |

### Dimension check

|               |                       |
|---------------|-----------------------|
| Specification | IEC 60512-1-2:2002-02 |
| Result        | Test passed           |

## Environmental and real-life conditions

### Durability test

|  |                       |
|--|-----------------------|
| Specification                          | IEC 60512-9-1:2010-03 |
| Impulse withstand voltage at sea level | 1.75 kV               |
| Contact resistance $R_1$               | 3.7 m $\Omega$        |
| Contact resistance $R_2$               | 3.85 m $\Omega$       |
| Insertion/withdrawal cycles            | 25                    |

### Climatic test

|                                   |   |
|-----------------------------------|---|
| Specification                     | DIN 50018:2013-05   |
| Corrosive stress                  | 0.2 dm <sup>3</sup> SO <sub>2</sub> on 300 dm <sup>3</sup> /40 °C/1 cycle |
| Thermal stress                    | 100 °C/168 h  |
| Power-frequency withstand voltage | 0.84 kV   |

### Vibration test

|               |                             |
|---------------|-----------------------------|
| Specification | IEC 60068-2-6:2007-12       |
| Frequency     | 10 - 150 - 10 Hz            |
| Sweep speed   | 1 octave/min                |
| Amplitude     | 0.15 mm (10 Hz ... 58.1 Hz) |
| Acceleration  | 2g (58.1 Hz ... 150 Hz)     |

|                        |                                   |
|------------------------|-----------------------------------|
| Test duration per axis | 2.5 h                             |
| Test directions        | X-, Y- and Z-axis (pos. and neg.) |

### Shocks

|                 |                                   |
|-----------------|-----------------------------------|
| Specification   | IEC 60068-2-27:2008-02            |
| Pulse shape     | Semi-sinusoidal                   |
| Acceleration    | 15g                               |
| Shock duration  | 11 ms                             |
| Test directions | X-, Y- and Z-axis (pos. and neg.) |

### Glow-wire test

|                  |                        |
|------------------|------------------------|
| Specification    | IEC 60695-2-10:2013-04 |
| Temperature      | 850 °C                 |
| Time of exposure | 30 s                   |

### Ambient conditions

|   |   |
|---|---|
| Ambient temperature (storage/transport) | -40 °C ... 55 °C                                    |
| Relative humidity (storage/transport)   | 30 % ... 70 %                                       |
| Ambient temperature (assembly)          | -5 °C ... 100 °C                                    |
| Ambient temperature (operation)         | -40 °C ... 105 °C (dependent on the derating curve) |

### Ambient conditions

|   |   |
|---|---|
| Ambient temperature (operation)         | -40 °C ... 105 °C (dependent on the derating curve) |
| Ambient temperature (storage/transport) | -40 °C ... 55 °C                                    |
| Relative humidity (storage/transport)   | 30 % ... 70 %                                       |
| Ambient temperature (assembly)          | -5 °C ... 100 °C                                    |

## Electrical tests

### Thermal test | Test group C

|                            |                       |
|----------------------------|-----------------------|
| Specification              | IEC 60512-5-1:2002-02 |
| Tested number of positions | 8                     |

### Air clearances and creepage distances |

|  |                     |
|--|---------------------|
| Specification  | IEC 60664-1:2007-04 |
| Insulating material group                              | I                   |
| Rated insulation voltage (III/2)                       | 32 V                |
| Rated surge voltage (III/2)                            | 1.5 kV              |
| minimum clearance value - non-homogenous field (III/2) | 0.5 mm              |
| minimum creepage distance (III/2)                      | 0.53 mm             |
| Rated insulation voltage (II/2)                        | 32 V                |
| Rated surge voltage (II/2)                             | 1.5 kV              |
| minimum clearance value - non-homogenous field (II/2)  | 0.5 mm              |
| minimum creepage distance (II/2)                       | 0.53 mm             |

## Packaging specifications

|                   |                     |
|-------------------|---------------------|
| Type of packaging | packed in cardboard |
|-------------------|---------------------|

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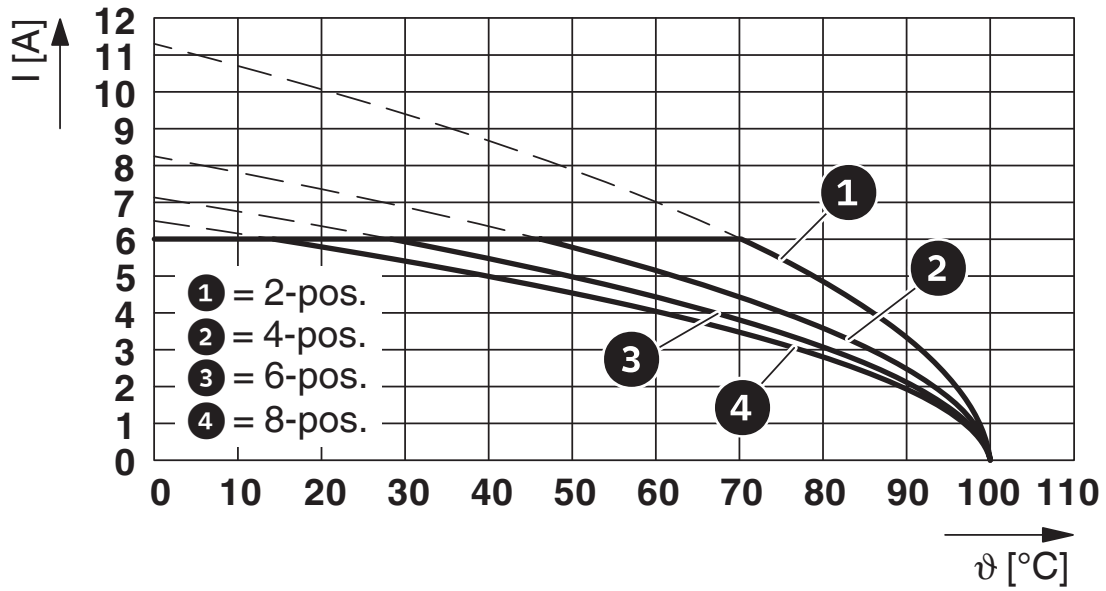
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|                      |        |
|----------------------|--------|
| Outer packaging type | Carton |
|----------------------|--------|

Drawings

Diagram



Type: TBUS8-20,0(25,0)-...

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## Approvals

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|  <b>cUL Recognized</b><br>Approval ID: E118976-20151204 |                       |                       |                   |                             |
|--|-----------------------|-----------------------|-------------------|-----------------------------|
|  | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
| keine  |                       |                       |                   |                             |
| Power  | 29.9 V                | 4 A                   | -                 | -                           |
| Signal   | 29.9 V                | 4 A                   | -                 | -                           |

|  <b>UL Recognized</b><br>Approval ID: E118976-20151204 |                       |                       |                   |                             |
|---|-----------------------|-----------------------|-------------------|-----------------------------|
|   | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
| keine   |                       |                       |                   |                             |
| Power   | 29.9 V                | 6 A                   | -                 | -                           |
| Signal  | 29.9 V                | 4 A                   | -                 | -                           |

|  <b>VDE approval of drawings</b><br>Approval ID: 40050612 |                       |                       |                   |                             |
|--|-----------------------|-----------------------|-------------------|-----------------------------|
|  | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
| keine  |                       |                       |                   |                             |
| Power  | 32 V                  | 6 A                   | -                 | -                           |
| Signal   | 32 V                  | 4 A                   | -                 | -                           |

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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-13.0 | 27460201 |
| ECLASS-15.0 | 27460201 |

### ETIM

|           |          |
|-----------|----------|
| ETIM 10.0 | EC002637 |
|-----------|----------|

### 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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