

# NBC-D5DM/1,5-920/D5DF E01 - Cable



1415756

<https://www.phoenixcontact.com/us/products/1415756>

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Cable, degree of protection: IP20, number of positions: 9, cable outlet: straight, color: Bare metallic, CAN Bus/DeviceNet

## Your advantages

- Perfect for industrial applications
- Perfect for office, building, and protected industrial applications (e.g., in control cabinets)
- Compact angle

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 1415756       |
| Packing unit                         | 1 pc          |
| Minimum order quantity               | 1 pc          |
| Product key                          | ABNCAS        |
| GTIN                                 | 4055626052090 |
| Weight per piece (including packing) | 137.3 g       |
| Weight per piece (excluding packing) | 134 g         |
| Country of origin                    | HU            |

## Technical data

### Product properties

|                     |                         |
|---------------------|-------------------------|
| Product type        | Data cable preassembled |
| Sensor type         | CAN Bus/DeviceNet™      |
| Number of positions | 9                       |
| Connection profile  | D-SUB 9                 |
| Shielded            | yes                     |
| Cable outlet        | straight                |

### Insulation characteristics

|                      |     |
|----------------------|-----|
| Overvoltage category | III |
| Degree of pollution  | 2   |

### Electrical properties

|                           |           |
|---------------------------|-----------|
| Transmission medium       | Copper    |
| Max. conductor resistance | 78.4 Ω/km |

### Mechanical properties

#### Mechanical data

|                             |         |
|-----------------------------|---------|
| Insertion/withdrawal cycles | ≥ 200   |
| Max. bending cycles         | 5000000 |

### Material specifications

|                                        |                          |
|----------------------------------------|--------------------------|
| Color                                  | Bare metallic            |
| Flammability rating according to UL 94 | V0                       |
| Outer sheath, material                 | PUR                      |
| Conductor material                     | Tin-plated Cu litz wires |

### Connector

#### Connection 1

|                      |               |
|----------------------|---------------|
| Type                 | Plug straight |
| Degree of protection | IP20          |

#### Connection 2

|                      |                 |
|----------------------|-----------------|
| Type                 | Socket straight |
| Degree of protection | IP20            |

### Cable/line

CANopen®/DeviceNet™, PUR, violet [920]

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|                                     |                                                                                    |
|-------------------------------------|------------------------------------------------------------------------------------|
| Dimensional drawing                 |  |
| Shielded                            | yes                                                                                |
| UL AWM Style                        | 21198 (80°C/300 V)                                                                 |
| Cable weight                        | 90 kg/km                                                                           |
| Cable type                          | CANopen®/DeviceNet™, PUR, violet                                                   |
| Cable type (abbreviation)           | 920                                                                                |
| Signal type/category                | CANopen®<br>DeviceNet™                                                             |
| Cable structure                     | 2xAWG24/19+2xAWG22/19                                                              |
| External cable diameter             | 6.70 mm ±0.3 mm                                                                    |
| Outer sheath, material              | PUR                                                                                |
| External sheath, color              | red lilac RAL 4001                                                                 |
| Conductor material                  | Tin-plated Cu litz wires                                                           |
| Conductor structure signal line     | 19x 0.13 mm                                                                        |
| AWG signal line                     | 24                                                                                 |
| Conductor structure, voltage supply | 19x 0.15 mm                                                                        |
| Conductor cross section             | 2x 0.25 mm² (Data cable)                                                           |
| AWG power supply                    | 22                                                                                 |
| Material wire insulation            | Foamed PE (Data cable)<br>PE (Power supply)                                        |
| Wire diameter incl. insulation      | 1.95 mm ±0.05 mm (Data cable)<br>1.4 mm ±0.05 mm (Power supply)                    |
| Single wire, color                  | red-black, blue-white                                                              |
| Twisted pairs                       | 2 cores to the pair                                                                |
| Type of pair shielding              | Plastic-coated aluminum foil, aluminum side outside                                |
| Overall twist                       | 2 pairs around a drain wire in the center to the core                              |
| Shielding                           | Tinned copper braided shield                                                       |
| Optical shield covering             | 80 %                                                                               |
| Nominal voltage, cable              | ≤ 300 V (Peak value, not for high-power applications)                              |
| Test voltage Core/Core              | 2000 V (50 Hz, 1 min.)                                                             |
| Test voltage Core/Shield            | 2000.00 V (50 Hz, 1 min.)                                                          |
| Cable insulation resistance         | ≥ 5 GΩ*km (Data cable)<br>≥ 5 GΩ*km (Power supply)                                 |
| Wave impedance                      | 120 Ω ±10 % (with 1 MHz)                                                           |
| Loop resistance                     | ≤ 181.80 Ω/km (Data cable)<br>≤ 114.80 Ω/km (Power supply)                         |
| Cable capacity                      | nom. 40 nF/km (Data cable)                                                         |

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|                                                 |                                                                                                                                                                                           |
|-------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Minimum bending radius, fixed installation      | 5 x D                                                                                                                                                                                     |
| Minimum bending radius, flexible installation   | 10 x D                                                                                                                                                                                    |
| Number of bending cycles                        | 5000000                                                                                                                                                                                   |
| Minimum bending radius, drag chain applications | 10 x D                                                                                                                                                                                    |
| Bending radius                                  | 70 mm                                                                                                                                                                                     |
| Traversing path                                 | 4.5 m                                                                                                                                                                                     |
| Traversing rate                                 | 3 m/s                                                                                                                                                                                     |
| Acceleration                                    | 3 m/s <sup>2</sup>                                                                                                                                                                        |
| Ambient temperature (operation)                 | -20 °C ... 60 °C (cable, drag chain applications)                                                                                                                                         |
| Halogen-free                                    | in accordance with DIN VDE 0472 part 815<br>according to IEC 60754-1                                                                                                                      |
| Flame resistance                                | UL 1581, Section 1060 and UL 2556, Section 9.3 (FT1)<br>UL 1581, Section 1100 and UL 2556, Section 9.1 (HFT/FT2)<br>IEC 60332-1-2<br>in accordance with ISO 6722-1 5.22 (UN ECE-R 118.01) |
| Other resistance                                | Low adhesion                                                                                                                                                                              |
| Ambient temperature (operation)                 | -30 °C ... 70 °C (Cable, flexible installation)<br>-30 °C ... 70 °C (Cable, flexible installation)<br>-40 °C ... 80 °C (cable, fixed installation)                                        |

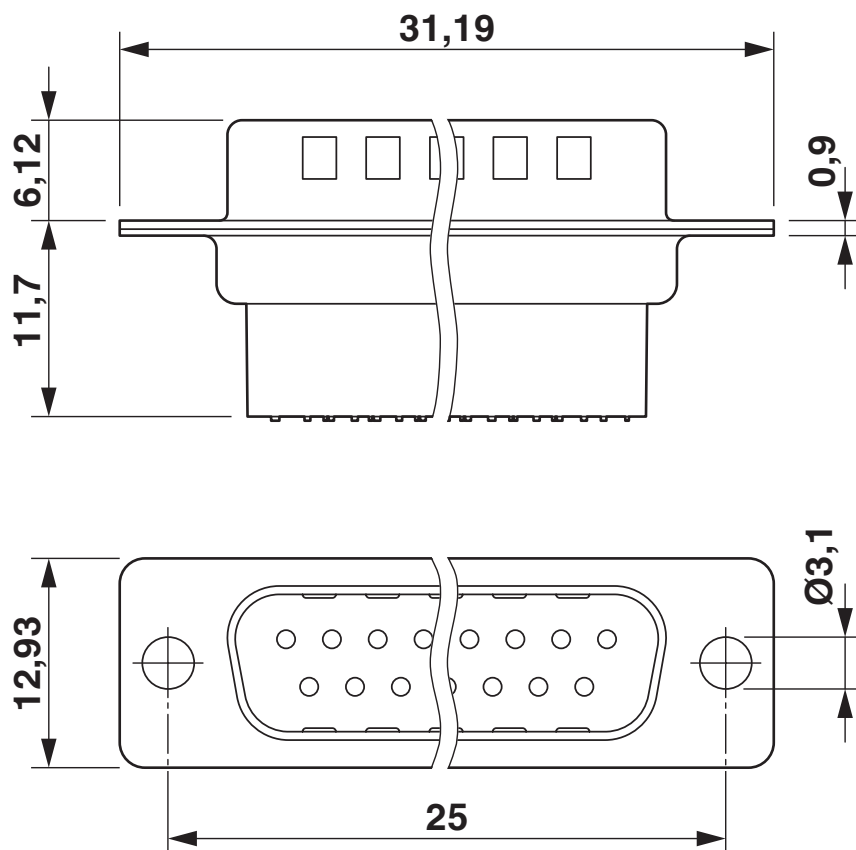
## Environmental and real-life conditions

### Ambient conditions

|                                                                |                  |
|----------------------------------------------------------------|------------------|
| Degree of protection                                           | IP20             |
| Ambient temperature (operation) (Cable, fixed installation)    | -40 °C ... 80 °C |
| Ambient temperature (operation) (Cable, flexible installation) | -20 °C ... 75 °C |

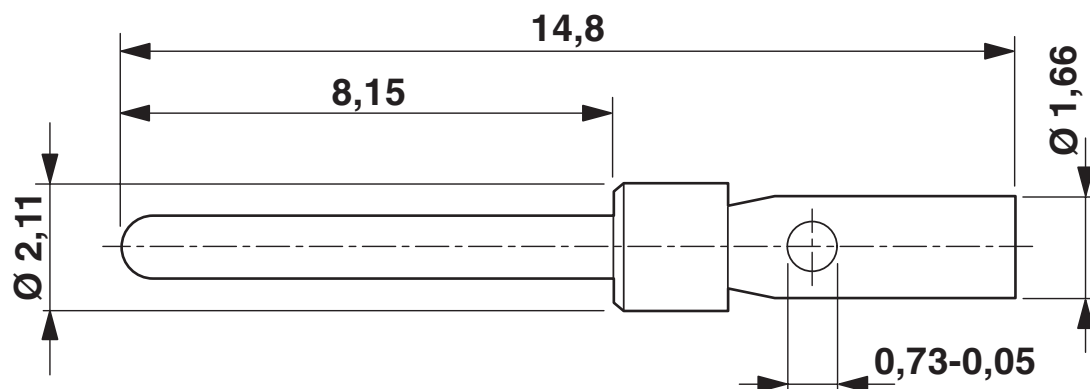
## Drawings

Dimensional drawing



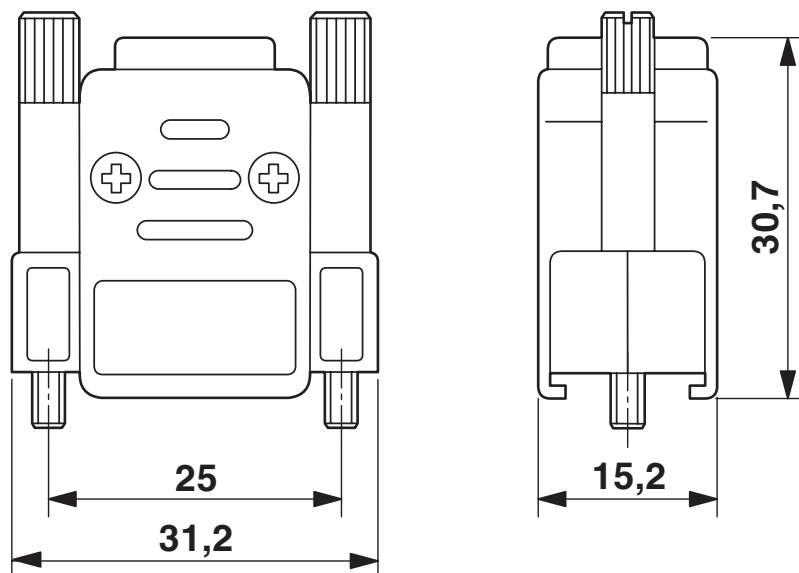
D-SUB contact carrier

Dimensional drawing



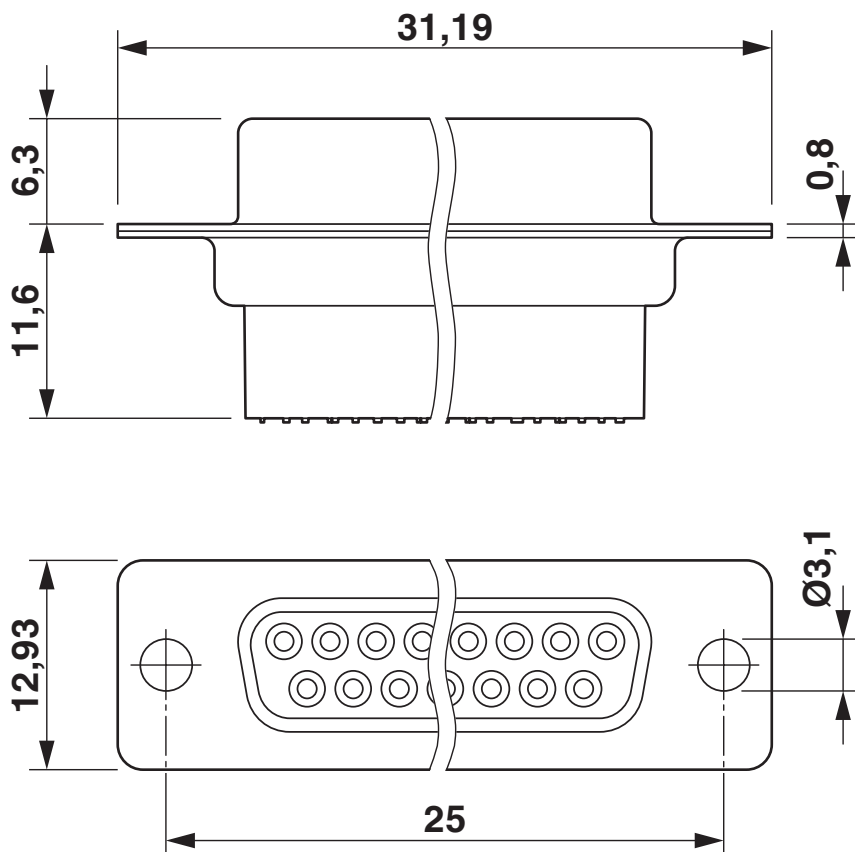
D-SUB crimp contact pin

Dimensional drawing



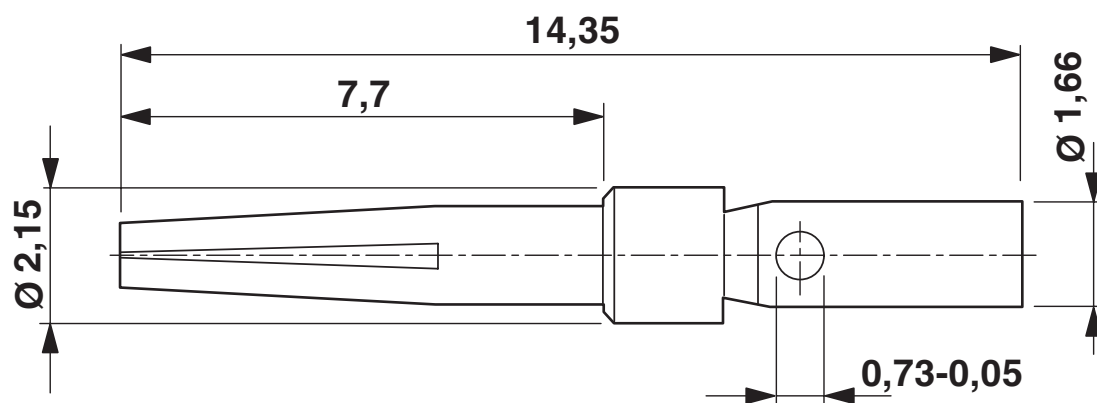
Mounting cutout

Dimensional drawing



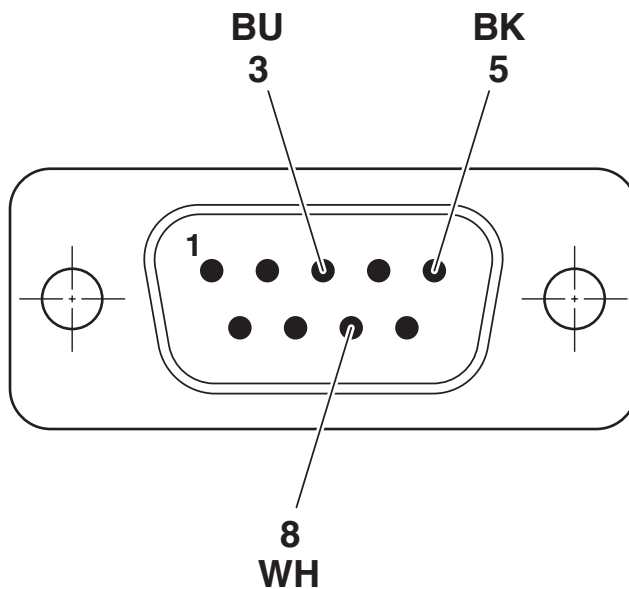
D-SUB contact carrier

Dimensional drawing



D-SUB crimp contact socket

Schematic diagram



# NBC-D5DM/1,5-920/D5DF E01 - Cable



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## Approvals

🔗 To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1415756>



**EAC**

Approval ID: 19060508

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Classifications

ECLASS

|             |          |
|-------------|----------|
| ECLASS-13.0 | 27060307 |
| ECLASS-15.0 | 27060307 |

ETIM

|          |          |
|----------|----------|
| ETIM 9.0 | EC001855 |
|----------|----------|

UNSPSC

|             |          |
|-------------|----------|
| UNSPSC 21.0 | 26121600 |
|-------------|----------|

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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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