

# SAC-4P-MINMS/ 0,5-961/MINFSVAL - Bus system cable



1434154  
<https://www.phoenixcontact.com/us/products/1434154>

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Bus system cable, FOUNDATION Fieldbus (31.25 kbps), 3-position, PVC, blue RAL 5015, shielded, Plug straight 7/8"-16UNF, coding: A, on Socket straight 7/8"-16UNF, coding: A, cable length: 0.5 m

## Commercial data

|                                      |                                |
|--------------------------------------|--------------------------------|
| Item number                          | 1434154                        |
| Packing unit                         | 1 pc                           |
| Minimum order quantity               | 1 pc                           |
| Note                                 | Made to order (non-returnable) |
| Product key                          | BF1FCG                         |
| Catalog page                         | Page 421 (C-4-2015)            |
| GTIN                                 | 4046356455862                  |
| Weight per piece (including packing) | 127.8 g                        |
| Weight per piece (excluding packing) | 127.8 g                        |
| Country of origin                    | DE                             |

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## Technical data

### Notes

|         |                                                                                                                   |
|---------|-------------------------------------------------------------------------------------------------------------------|
| General | For applications in circuits of intrinsic safety protection type "i".<br>Electrical values following EN 60079-14. |
|---------|-------------------------------------------------------------------------------------------------------------------|

### Product properties

|                      |                         |
|----------------------|-------------------------|
| Product type         | Data cable preassembled |
| Application          | Process technology      |
| Sensor type          | FOUNDATION Fieldbus     |
| Number of positions  | 3                       |
| No. of cable outlets | 1                       |
| Coding               | A                       |

### Insulation characteristics

|                     |   |
|---------------------|---|
| Degree of pollution | 2 |
|---------------------|---|

### Interfaces

|                      |                                 |
|----------------------|---------------------------------|
| Bus system           | FOUNDATION Fieldbus             |
| Signal type/category | FOUNDATION Fieldbus, 31.25 kbps |

### Signaling

|                |    |
|----------------|----|
| Status display | No |
|----------------|----|

### Electrical properties

|                       |                           |
|-----------------------|---------------------------|
| Insulation resistance | $\geq 10 \text{ M}\Omega$ |
| Nominal voltage $U_N$ | 300 V                     |
| Nominal current $I_N$ | 5.2 A                     |
| Transmission medium   | Copper                    |

### Material specifications

|                               |                 |
|-------------------------------|-----------------|
| Seal material                 | TPU             |
| Material of grip body         | TPU             |
| Contact material              | CuZn            |
| Contact surface material      | Au              |
| Contact carrier material      | PA 66           |
| Material for screw connection | Stainless steel |

### Connection data

#### Pin assignment

|                                                           |                                     |
|-----------------------------------------------------------|-------------------------------------|
| Contact   Color (signal designation)   Contact (optional) | 1 (Plug)   BU (DATA-)   1 (Socket)  |
|                                                           | 2 (Plug)   OG (DATA+)   2 (Socket)  |
|                                                           | 3 (Plug)   SR (shield)   3 (Socket) |

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## Connector

### Connection 1

|                     |                          |
|---------------------|--------------------------|
| Type                | Plug straight 7/8"-16UNF |
| Number of positions | 3                        |
| Coding type         | A (Standard)             |

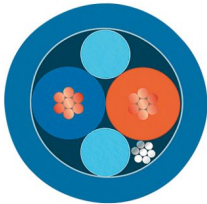
### Connection 2

|                     |                            |
|---------------------|----------------------------|
| Type                | Socket straight 7/8"-16UNF |
| Number of positions | 3                          |
| Coding type         | A (Standard)               |

## Cable/line

|              |       |
|--------------|-------|
| Cable length | 0.5 m |
|--------------|-------|

### Fieldbus FOUNDATION/PROFIBUS PA, blue [961]

|                                 |                                                                                      |
|---------------------------------|--------------------------------------------------------------------------------------|
| Dimensional drawing             |  |
| Cable weight                    | 56.552 kg/km                                                                         |
| Number of positions             | 2                                                                                    |
| Shielded                        | yes                                                                                  |
| Cable type                      | Fieldbus FOUNDATION/PROFIBUS PA, blue [961]                                          |
| Conductor structure             | 2xAWG18/7 + 1xAWG20/7                                                                |
| Signal speed                    | 0.66 c                                                                               |
| Conductor structure signal line | 7x 0.40 mm                                                                           |
| AWG signal line                 | 18                                                                                   |
| Conductor cross section         | 2x 0.75 mm <sup>2</sup> (Signal line)<br>1x 0.5 mm <sup>2</sup> (Drain wire)         |
| Wire diameter incl. insulation  | 2.24 mm ±0.05 mm                                                                     |
| External cable diameter         | 7.50 mm ±0.25 mm                                                                     |
| Outer sheath, material          | PVC                                                                                  |
| External sheath, color          | blue RAL 5015                                                                        |
| Conductor material              | Tin-plated Cu litz wires                                                             |
| Material wire insulation        | PO (Signal line)                                                                     |
| Single wire, color              | blue, orange                                                                         |
| Thickness, insulation           | 0.50 mm                                                                              |
| Thickness, outer sheath         | 1.00 mm                                                                              |
| Twisted pairs                   | 2 cores to the pair                                                                  |

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|                                             |                                                                                               |
|---------------------------------------------|-----------------------------------------------------------------------------------------------|
| Overall twist                               | One pair with one drain wire and fillers for core                                             |
| Optical shield covering                     | 100 %                                                                                         |
| Max. conductor resistance                   | $\leq 19.35 \Omega/\text{km}$ (Signal line)                                                   |
|                                             | $26 \Omega/\text{km}$ (shield)                                                                |
| Cable capacity                              | $147 \text{ pF/m}$ (at 1 kHz, core/shield)                                                    |
|                                             | $\leq 3.94 \text{ pF/m}$ (capacitance unbalance)                                              |
| Working capacitance                         | $78 \text{ nF}$ (at 1 kHz)                                                                    |
| Cable impedance                             | $100 \Omega \pm 20 \%$ (At 31.25 kHz)                                                         |
| Nominal voltage, cable                      | 300 V                                                                                         |
| Smallest bending radius, fixed installation | 75 mm                                                                                         |
| Tensile strength                            | 260 N                                                                                         |
| Shield attenuation                          | $3.00 \text{ dB/km}$ (at 39 kHz)                                                              |
| Flame resistance                            | UL 1685 (CSA FT 4)                                                                            |
|                                             | UL 1685 (vertical tray)                                                                       |
|                                             | UL 1666 (riser)                                                                               |
| Special properties                          | UL standards PLTC-ER and ITC                                                                  |
| Ambient temperature (operation)             | $-40 \text{ }^{\circ}\text{C} \dots 105 \text{ }^{\circ}\text{C}$ (cable, fixed installation) |

## Environmental and real-life conditions

### Ambient conditions

|                                 |                                                                                   |
|---------------------------------|-----------------------------------------------------------------------------------|
| Degree of protection            | IP67                                                                              |
| Enclosure rating (NEMA)         | 1 (NEMA)                                                                          |
|                                 | 3 (NEMA)                                                                          |
|                                 | 4 (NEMA)                                                                          |
|                                 | 6P (NEMA)                                                                         |
| Ambient temperature (operation) | $-40 \text{ }^{\circ}\text{C} \dots 105 \text{ }^{\circ}\text{C}$ (Plug / socket) |

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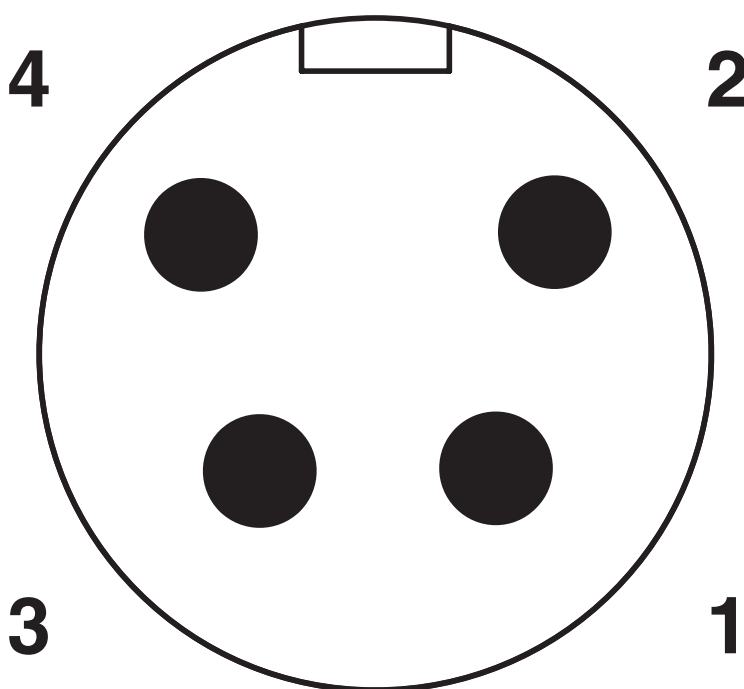


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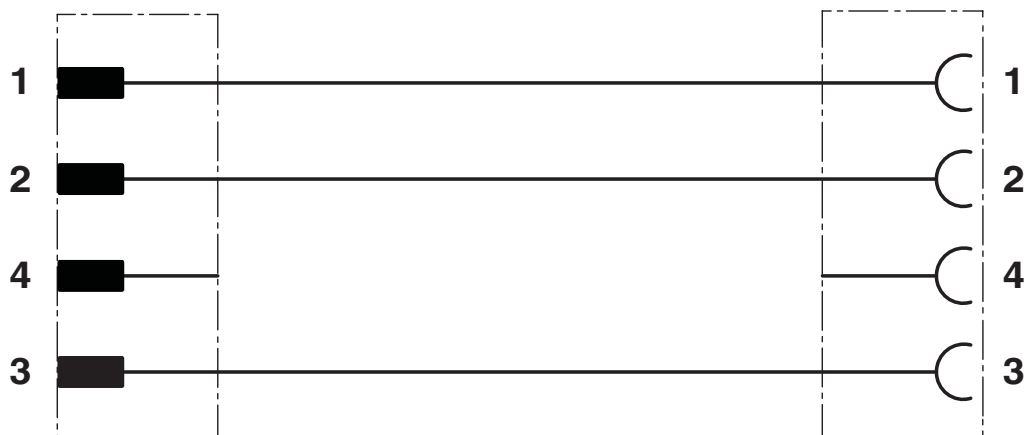
## Drawings

Schematic diagram



Pin assignment, plug, 7/8"-16UNF, 4-pos., view of male side

Circuit diagram



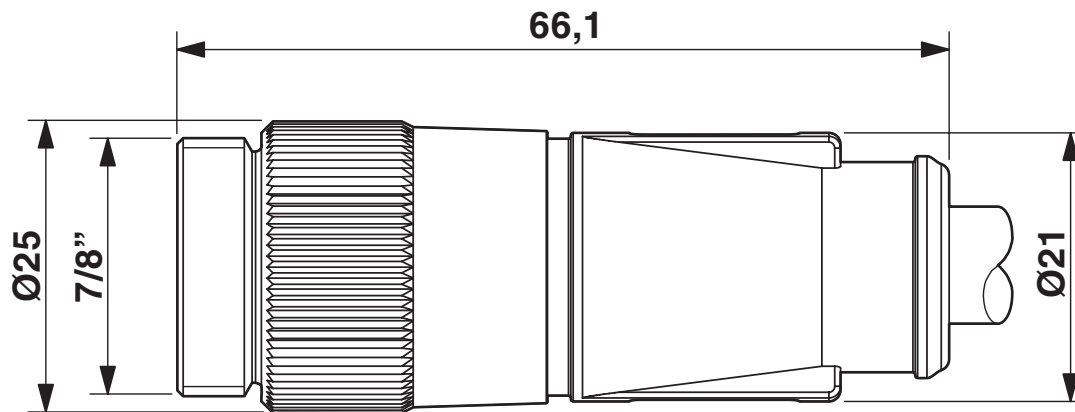
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Dimensional drawing



7/8"-16UNF plug, straight

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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-11.0 | 27060307 |
| ECLASS-13.0 | 27060307 |

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## Environmental product compliance

|                                        |                                                                                                                                                                                                                                   |
|----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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.)    | No substance above 0.1 wt%                                                                                                                                                                                                        |

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