

# SACB-6/12-L- 5,0PUR SCO P - Distributor box



1452660

<https://www.phoenixcontact.com/us/products/1452660>

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Distributor box, application: Standard, connection method: M12-SPEEDCON-socket Plastic, number of slots: 6, number of positions: 5, coding: A, slot assignment: Double, status display: Yes, pnp; master cable connection: Fixed connection 180°, PUR/PVC, cable length: 5 m, shielding: no

## Your advantages

- Safety in the field, thanks to molded housing and high degree of protection
- Convenient: increased machine availability thanks to quick and easy diagnostics
- Save space: distributor box with double occupancy for two sensors in one slot
- Save time, thanks to installation with SPEEDCON fast locking system

## Commercial data

|                                      |                     |
|--------------------------------------|---------------------|
| Item number                          | 1452660             |
| Packing unit                         | 1 pc                |
| Minimum order quantity               | 1 pc                |
| Sales key                            | BF41                |
| Product key                          | BF3CBA              |
| Catalog page                         | Page 262 (C-2-2019) |
| GTIN                                 | 4046356553964       |
| Weight per piece (including packing) | 999.3 g             |
| Weight per piece (excluding packing) | 999.3 g             |
| Customs tariff number                | 85444290            |
| Country of origin                    | DE                  |

## Technical data

### Notes

|                     |                                                                                                                                                                                                                                                      |
|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Assembly note       | <b>NOTE:</b> Observe the permissible bending radii when laying conductors, since the degree of protection may be put in jeopardy if the bending forces are too high. Alleviate mechanical loads upstream of the connector, e.g. by using cable ties. |
| Note on application | Unused slots are to be sealed off prior to commissioning. Suitable sealing elements are to be found under "Accessories".                                                                                                                             |

### Product properties

|                     |                 |
|---------------------|-----------------|
| Product type        | Distributor box |
| Application         | Standard        |
| Number of positions | 5               |
| Number of slots     | 6               |
| Coding              | A               |
| LED                 | yes             |

### System properties

|                        |                |
|------------------------|----------------|
| Local diagnostics      |                |
| Monitored function     | Supply voltage |
| Optical representation | Green LED      |

### Electrical properties

|                                         |                               |
|-----------------------------------------|-------------------------------|
| Max. operating voltage $U_{max}$        | 30 V DC                       |
| Local diagnostics                       | Supply voltage Green LED      |
|                                         | Status display I/O Yellow LED |
| Nominal voltage $U_N$                   | 24 V DC                       |
| Rated current, total                    | 12 A                          |
| Max. current carrying capacity per path | 2 A                           |
| Current carrying capacity per slot      | 4 A                           |

### Connection data

|                                                            |                     |
|------------------------------------------------------------|---------------------|
| Conductor connection                                       |                     |
| Sensor/actuator connection system                          | M12-SPEEDCON-socket |
| Tightening torque slot sensor/actuator cable               | 0.4 Nm              |
| Tightening torque of mounting screw for fixing the housing | 0.5 Nm              |

### Pin assignment

|                                          |                  |
|------------------------------------------|------------------|
| Slot/position = Wire color or connection | 1 / 4 (A) = WH   |
|                                          | 1 / 2 (B) = GYPK |
|                                          | 2 / 4 (A) = GN   |
|                                          | 2 / 2 (B) = RDBU |
|                                          | 3 / 4 (A) = YE   |

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|  |                       |
|--|-----------------------|
|  | 3 / 2 (B) = WHGN      |
|  | 4 / 4 (A) = GY        |
|  | 4 / 2 (B) = BNGN      |
|  | 5 / 4 (A) = PK        |
|  | 5 / 2 (B) = WHYE      |
|  | 6 / 4 (A) = RD        |
|  | 6 / 2 (B) = YEBN      |
|  | 1-6 / 1 (+ 24 V) = BN |
|  | 1-6 / 3 (0 V) = BU    |
|  | 1-6 / 5 (PE) = GNYE   |

## Signaling

|                        |     |
|------------------------|-----|
| Status display present | Yes |
|------------------------|-----|

## Dimensions

| Dimensional drawing |        |
|---------------------|--------|
|                     |        |
| Width               | 54 mm  |
| Height              | 23 mm  |
| Length              | 123 mm |

## Material specifications

|                                        |             |
|----------------------------------------|-------------|
| Material Threaded sleeve               | PBT         |
| Material Housing                       | PBT         |
| Material Molding compound              | PUR         |
| Flammability rating according to UL 94 | V0          |
| Seal material O-ring                   | NBR         |
| Contact material                       | Cu alloy    |
| Contact surface material               | gold-plated |
| Contact carrier material               | PA          |

## Cable/line

|              |     |
|--------------|-----|
| Cable length | 5 m |
|--------------|-----|

PUR/PVC black [PUR]

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|                                               |                                                                                                                                             |
|-----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| Dimensional drawing                           |                                                           |
| Cable weight                                  | 150.9 kg/km                                                                                                                                 |
| UL AWM Style                                  | 20549                                                                                                                                       |
| Number of positions                           | 15                                                                                                                                          |
| Shielded                                      | no                                                                                                                                          |
| Cable type                                    | PUR/PVC black [PUR]                                                                                                                         |
| Conductor structure signal line               | 28x 0.15 mm                                                                                                                                 |
| AWG signal line                               | 20                                                                                                                                          |
| Conductor cross section                       | 12x 0.5 mm <sup>2</sup> (Signal line)                                                                                                       |
|                                               | 3x 1 mm <sup>2</sup> (power line)                                                                                                           |
| Wire diameter incl. insulation                | 1.5 mm ±0.1 mm (Signal line)                                                                                                                |
|                                               | 2.1 mm ±0.1 mm (power line)                                                                                                                 |
| External cable diameter                       | 9.40 mm ±0.2 mm                                                                                                                             |
| Outer sheath, material                        | PUR                                                                                                                                         |
| External sheath, color                        | black RAL 9005                                                                                                                              |
| Conductor material                            | Bare Cu litz wires                                                                                                                          |
| Material wire insulation                      | PVC                                                                                                                                         |
| Single wire, color                            | brown, blue, green/yellow, white, green, yellow, gray, pink, red, gray/pink, red/blue, white/green, brown/green, white/yellow, yellow/brown |
| Thickness, insulation                         | ≥ 0.15 mm (Inner sheath)                                                                                                                    |
|                                               | ≥ 0.76 mm (Outer cable sheath)                                                                                                              |
| Overall twist                                 | Wires twisted in layers                                                                                                                     |
| Nominal voltage, cable                        | 300 V                                                                                                                                       |
| Test voltage                                  | 2000 V                                                                                                                                      |
| Minimum bending radius, fixed installation    | 7.5 x D                                                                                                                                     |
| Minimum bending radius, flexible installation | 10 x D                                                                                                                                      |
| Smallest bending radius, fixed installation   | 71 mm                                                                                                                                       |
| Smallest bending radius, movable installation | 94 mm                                                                                                                                       |
| Max. bending cycles                           | 1500000                                                                                                                                     |
| Bending radius                                | 94 mm                                                                                                                                       |
| Traversing path                               | 2 m                                                                                                                                         |
| Traversing rate                               | 2 m/s                                                                                                                                       |
| Flame resistance                              | DIN EN 50265                                                                                                                                |
| Resistance to oil                             | according to VDE 0472 Part 803                                                                                                              |
| Other resistance                              | Highly resistant to acids, alkaline solutions and solvents                                                                                  |
| Special properties                            | Silicone-free                                                                                                                               |

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|                                 |                                                |
|---------------------------------|------------------------------------------------|
| Ambient temperature (operation) | -40 °C ... 90 °C (cable, fixed installation)   |
|                                 | -5 °C ... 80 °C (Cable, flexible installation) |
|                                 | 80 °C (in acc. with UL)                        |

## Environmental and real-life conditions

### Ambient conditions

|                                 |                  |
|---------------------------------|------------------|
| Degree of protection            | IP65             |
|                                 | IP67             |
| Ambient temperature (operation) | -25 °C ... 80 °C |

## Standards and regulations

|                          |                 |
|--------------------------|-----------------|
| Standard designation     | M12 connector   |
| Standards/specifications | IEC 61076-2-101 |

# SACB-6/12-L- 5,0PUR SCO P - Distributor box

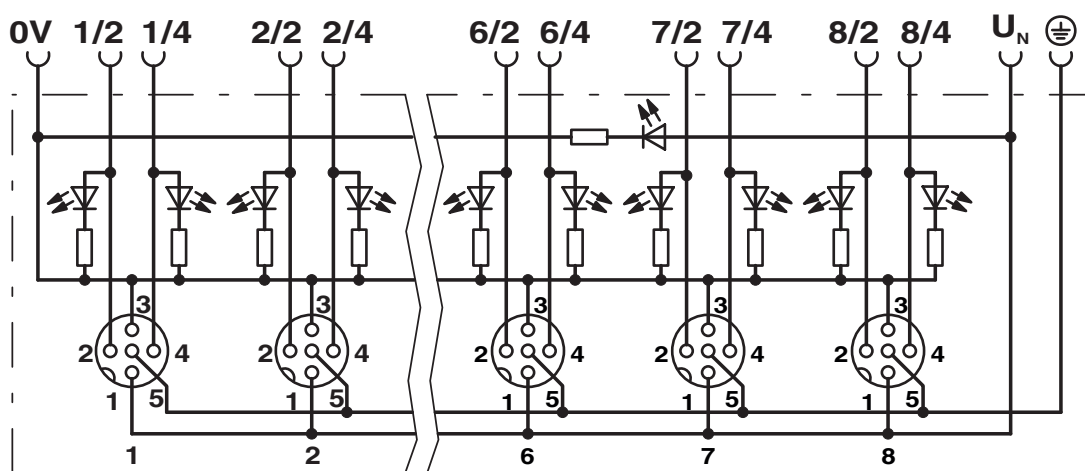


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## Drawings

Circuit diagram



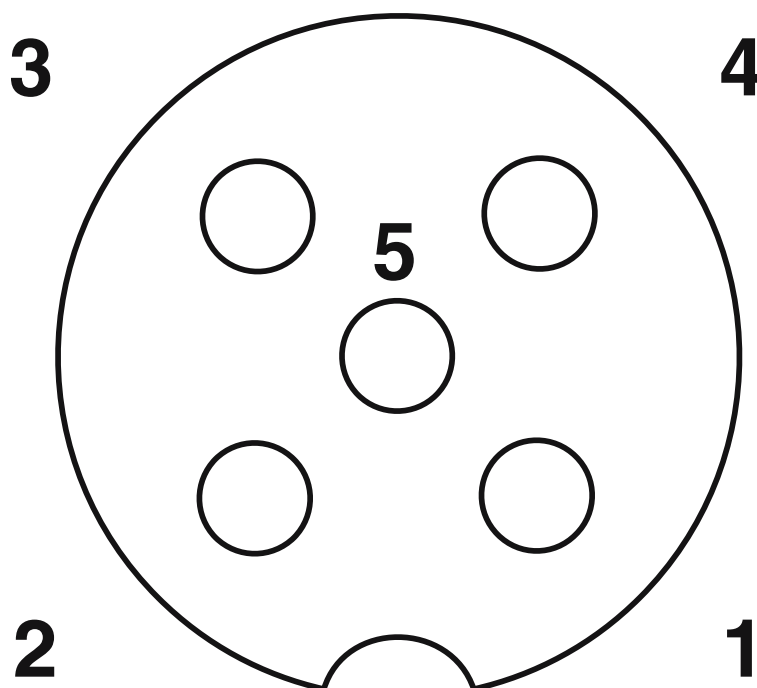
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Schematic diagram



M12 slot, socket, 5-pos.

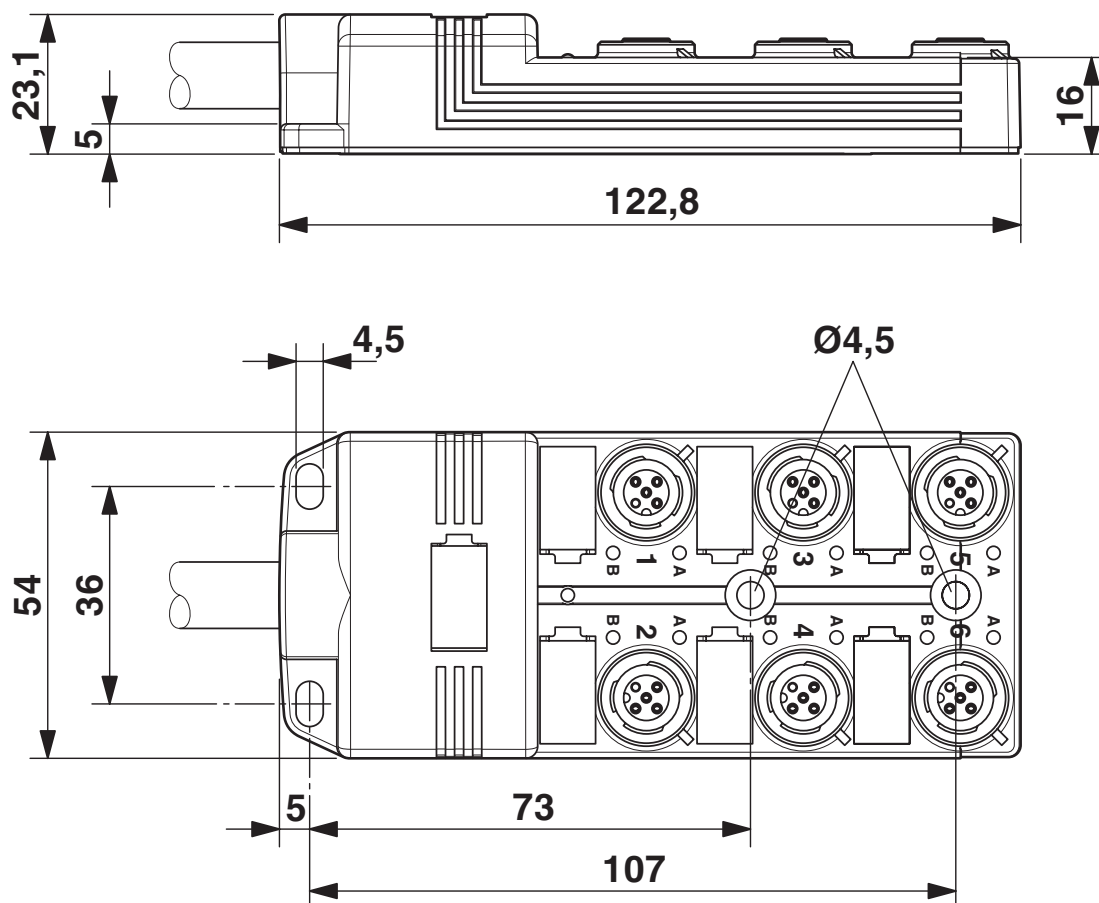
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Dimensional drawing





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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1452660>

|                                                                                                                                       |                       |                       |                   |                             |
|---------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------|-------------------|-----------------------------|
|  <b>cUL Recognized</b><br>Approval ID: FILE E 118976 |                       |                       |                   |                             |
|                                                                                                                                       | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
|                                                                                                                                       | 24 V                  | -                     | -                 | -                           |

|                                                                                                                                      |                       |                       |                   |                             |
|--------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------|-------------------|-----------------------------|
|  <b>UL Recognized</b><br>Approval ID: FILE E 118976 |                       |                       |                   |                             |
|                                                                                                                                      | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
| Signal                                                                                                                               | -                     | 2 A                   | -                 | -                           |
|                                                                                                                                      | 24 V                  | 4 A                   | -                 | -                           |

|                                                                                                                                     |  |  |  |  |
|-------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|
|  <b>EAC</b><br>Approval ID: RU C-DE.BL08.B.00511 |  |  |  |  |
|-------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|

|                         |  |  |  |  |
|-------------------------|--|--|--|--|
| <b>cULus Recognized</b> |  |  |  |  |
|-------------------------|--|--|--|--|

# SACB-6/12-L- 5,0PUR SCO P - Distributor box



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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-11.0 | 27440108 |
| ECLASS-12.0 | 27440108 |
| ECLASS-13.0 | 27440108 |

### ETIM

|          |          |
|----------|----------|
| ETIM 9.0 | EC002585 |
|----------|----------|

### UNSPSC

|             |          |
|-------------|----------|
| UNSPSC 21.0 | 31251500 |
|-------------|----------|

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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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## Accessories

### PROT-MS SCO - Screw plug

1553129

<https://www.phoenixcontact.com/us/products/1553129>



M12 screw plug with fast-locking system for unoccupied M12 female connectors of sensor/actuator cables, boxes, and flush-type connectors

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### UC-EM (17,5X9) - Snap-in markers

0827490

<https://www.phoenixcontact.com/us/products/0827490>



Snap-in markers, Sheet, white, unlabeled, can be labeled with: BLUEMARK ID, BLUEMARK ID COLOR, BLUEMARK CLED, BLUEMARK LED, CMS-P1-PLOTTER, PLOTMARK, mounting type: snapped, lettering field size: 17.5 x 9 mm, Number of individual labels: 20

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## UC-EM (17,5X9) CUS - Snap-in markers

0828238

<https://www.phoenixcontact.com/us/products/0828238>



Snap-in markers, can be ordered: by sheet, white, labeled according to customer specifications, mounting type: snapped into marker carrier, lettering field size: 17.5 x 9 mm, Number of individual labels: 20

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## UCT-EM (17,5X9) - Snap-in markers

0801491

<https://www.phoenixcontact.com/us/products/0801491>



Snap-in markers, Sheet, white, unlabeled, can be labeled with: TOPMARK NEO, TOPMARK LASER, BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, THERMOMARK PRIME, THERMOMARK CARD 2.0, THERMOMARK CARD, mounting type: snapped, lettering field size: 17.5 x 9 mm, Number of individual labels: 24

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## UCT-EM (17,5X9) CUS - Snap-in markers

0801575

<https://www.phoenixcontact.com/us/products/0801575>

UniCard sheet, for labeling devices from other manufacturers, for overview table see download area, labeled according to customer specifications



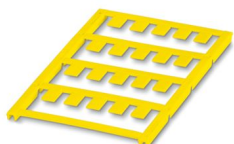
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## UC-EM (17,5X9) YE - Snap-in markers

0827494

<https://www.phoenixcontact.com/us/products/0827494>

Snap-in markers, Sheet, yellow, unlabeled, can be labeled with: BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, PLOTMARK, CMS-P1-PLOTTER, mounting type: snapped, lettering field size: 17.5 x 9 mm, Number of individual labels: 20



# SACB-6/12-L- 5,0PUR SCO P - Distributor box



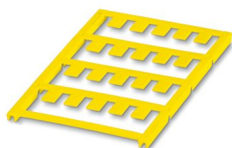
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## UC-EM (17,5X9) YE CUS - Snap-in markers

0828239

<https://www.phoenixcontact.com/us/products/0828239>



Snap-in markers, can be ordered: by sheet, yellow, labeled according to customer specifications, mounting type: snapped into marker carrier, lettering field size: 17.5 x 9 mm, Number of individual labels: 20

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## UCT-EM (17,5X9) YE - Snap-in markers

0801492

<https://www.phoenixcontact.com/us/products/0801492>



Snap-in markers, Sheet, yellow, unlabeled, can be labeled with: TOPMARK NEO, TOPMARK LASER, BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, THERMOMARK PRIME, THERMOMARK CARD 2.0, THERMOMARK CARD, mounting type: snapped, lettering field size: 17.5 x 9 mm, Number of individual labels: 24

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## UCT-EM (17,5X9) YE CUS - Snap-in markers

0801576

<https://www.phoenixcontact.com/us/products/0801576>

UniCard sheet, for labeling devices from other manufacturers, for overview table  
see download area, labeled according to customer specifications



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## UTA 107 - DIN rail adapter

2853983

<https://www.phoenixcontact.com/us/products/2853983>

Universal DIN rail adapter, for screwing on switchgear





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## TSD 04 SAC - Torque screwdriver

1208429

<https://www.phoenixcontact.com/us/products/1208429>



Torque screwdriver, with preset torque of 0.4 Nm and 4 mm hexagonal drive for M12 connectors

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## TSD-M 1,2NM - Torque screwdriver

1212224

<https://www.phoenixcontact.com/us/products/1212224>



Torque screw driver, accuracy as per EN ISO 6789 standard, adjustable from 0.3 - 1.2 Nm

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## TSD-M SAC-BIT ADAPTER - Adapter insert

1212600

<https://www.phoenixcontact.com/us/products/1212600>



Adapter bit for TSD-M...torque tools, E6.3-1/4" drive with 4 mm hexagon to accommodate SAC bits

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## SAC BIT M12-D15 - Tool

1208432

<https://www.phoenixcontact.com/us/products/1208432>



Nut for assembling sensor/actuator cables with M12 connector and M12 connectors for assembly, with a knurl diameter of 15 mm, for 4 mm hexagonal drive

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<https://www.phoenixcontact.com/us/products/1452660>

## SACC BIT M12-D20 - Tool

1208445

<https://www.phoenixcontact.com/us/products/1208445>

Nut for assembling M12 connectors for assembly with a knurl diameter of 20 mm, for 4 mm hexagonal drive



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