

Bus system cable - SAC-5P-M12MSB/ 1,0-900/M12FSB - 1507188


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Bus system cable, INTERBUS (16 Mbps), 5-position, PUR halogen-free, may green RAL 6017, shielded, Plug straight M12, coding: B, on Socket straight M12, coding: B, cable length: 1 m



Key Commercial Data

| | |
|--------------|---|
| Packing unit | 1 pc |
| GTIN |  4 017918 900038 |
| GTIN | 4017918900038 |

Technical data

Dimensions

| | |
|-----------------|-----|
| Length of cable | 1 m |
|-----------------|-----|

Ambient conditions

| | |
|---------------------------------|----------------------------------|
| Ambient temperature (operation) | -25 °C ... 90 °C (Plug / socket) |
| Degree of protection | IP65 |
| | IP67 |

General

| | |
|-----------------------|---|
| Note | Further products with variable cable type and variable cable length can be found in the accessories section |
| Rated current at 40°C | 4 A |
| Rated voltage | 48 V AC 60 V DC |
| Number of positions | 5 |
| Insulation resistance | ≥ 100 MΩ |
| Coding | B - inverse |
| Signal type/category | INTERBUS, 16 Mbps |
| Status display | No |
| Overvoltage category | II |

Bus system cable - SAC-5P-M12MSB/ 1,0-900/M12FSB - 1507188

Technical data

General

| | |
|-----------------------------|------------------------|
| Degree of pollution | 3 |
| Insertion/withdrawal cycles | ≥ 100 |
| Torque | 0.4 Nm (M12 connector) |

Material

| | |
|--|---|
| Flammability rating according to UL 94 | V0 |
| Contact material | CuSn |
| Contact surface material | Ni/Au |
| Contact carrier material | PA 6.6 |
| Material of grip body | TPU, hardly inflammable, self-extinguishing |
| Material, knurls | Zinc die-cast, nickel-plated |
| Sealing material | NBR |

Pin assignment

| | |
|---|----------------------------------|
| Contact Color (signal designation) Contact (optional) | 1 (Plug) YE (DO) 1 (Socket) |
| | 2 (Plug) GN (DO) 2 (Socket) |
| | 3 (Plug) GY (DI) 3 (Socket) |
| | 4 (Plug) PK (DI) 4 (Socket) |
| | 5 (Plug) BN (GND) 5 (Socket) |

Standards and Regulations

| | |
|--|----|
| Flammability rating according to UL 94 | V0 |
|--|----|

Cable

| | |
|---|--------------------------------------|
| Cable type | INTERBUS |
| Cable type (abbreviation) | 900 |
| Cable structure | 3 x 2 x 0.22 mm ² |
| Conductor cross section | 3x 2x 0.22 mm ² |
| AWG signal line | 24 |
| Conductor structure signal line | 32x 0.10 mm |
| Wire colors | Green-yellow, white-brown, gray-pink |
| Twisted pairs | 2 cores to the pair |
| Overall twist | 3 pairs to the core |
| Shielding | Braided copper wires |
| External sheath, color | may green RAL 6017 |
| External cable diameter D | 8 mm |
| Minimum bending radius, fixed installation | 7.5 x D |
| Minimum bending radius, flexible installation | 15 x D |
| Number of bending cycles | 5000000 |
| Bending radius | 120 mm |
| Traversing path | 10 m |
| Traversing rate | 1.6 m/s |
| Acceleration | 3.2 m/s ² |

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Technical data

Cable

| | |
|---------------------------------------|---|
| Cable weight | 70 kg/km |
| Outer sheath, material | PUR |
| Material conductor insulation | PE |
| Conductor material | Bare Cu litz wires |
| Insulation resistance | ≥ 5 GΩ*km |
| Loop resistance | ≤ 159.80 Ω/km |
| Cable capacity | ≤ 60 nF/km (At 800 Hz) |
| Wave impedance | 120 Ω ±20 % (at 64 kHz) |
| | 100 Ω ±15 % (with 1 MHz) |
| Near end crosstalk attenuation (NEXT) | ≥ 61 dB (at 772 kHz) |
| | ≥ 59 dB (with 1 MHz) |
| | ≥ 55 dB (at 2 MHz) |
| | ≥ 50 dB (at 4 MHz) |
| | ≥ 46 dB (at 8 MHz) |
| | ≥ 44 dB (at 10 MHz) |
| | ≥ 41 dB (at 16 MHz) |
| | ≥ 40 dB (at 20 MHz) |
| Attenuation | ≤ 15 dB/km (at 256 kHz) |
| | ≤ 24 dB/km (at 772 kHz) |
| | ≤ 27 dB/km (with 1 MHz) |
| | ≤ 52 dB/km (at 4 MHz) |
| | ≤ 84 dB/km (at 10 MHz) |
| | ≤ 112 dB/km (at 16 MHz) |
| | ≤ 119 dB/km (at 20 MHz) |
| Signal speed | 0.66 c |
| Coupling resistance | < 250.00 mΩ/m (at 30 MHz) |
| Nominal voltage, cable | 250 V (Peak value, not for high-power applications) |
| Test voltage Core/Core | 1500 V _{rms} |
| Test voltage Core/Shield | 1000 V _{rms} |
| Flame resistance | according to VDE 0472, Part 4, test type B |
| | according to IEC 60332-1 |
| Ambient temperature (operation) | -40 °C ... 80 °C (cable, fixed installation) |
| | -30 °C ... 70 °C (cable, flexible installation) |

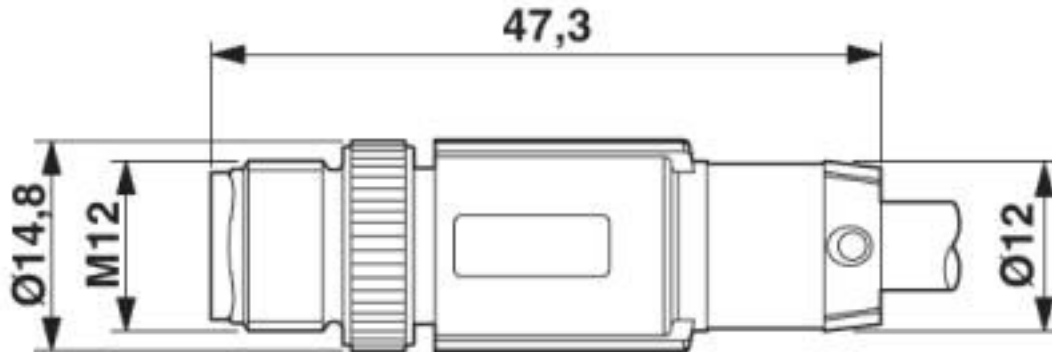
Environmental Product Compliance

| | |
|------------|---|
| China RoHS | Environmentally friendly use period: unlimited = EFUP-e |
| | No hazardous substances above threshold values |

Drawings

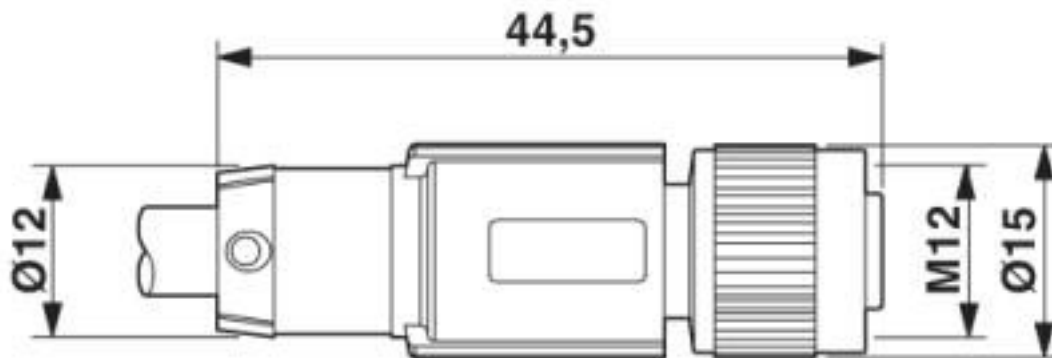
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Dimensional drawing



Plug, M12 x 1, straight, shielded

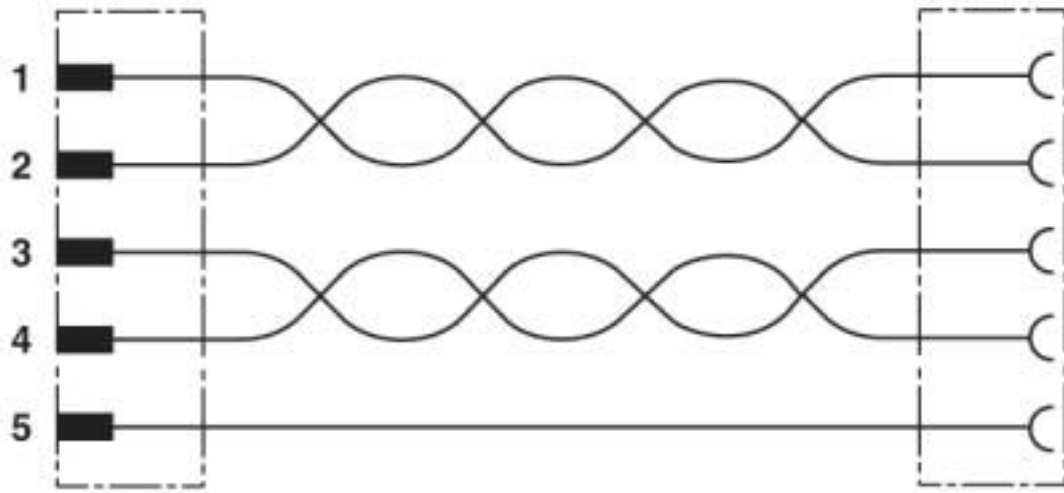
Dimensional drawing



M12 x 1 socket, straight, shielded

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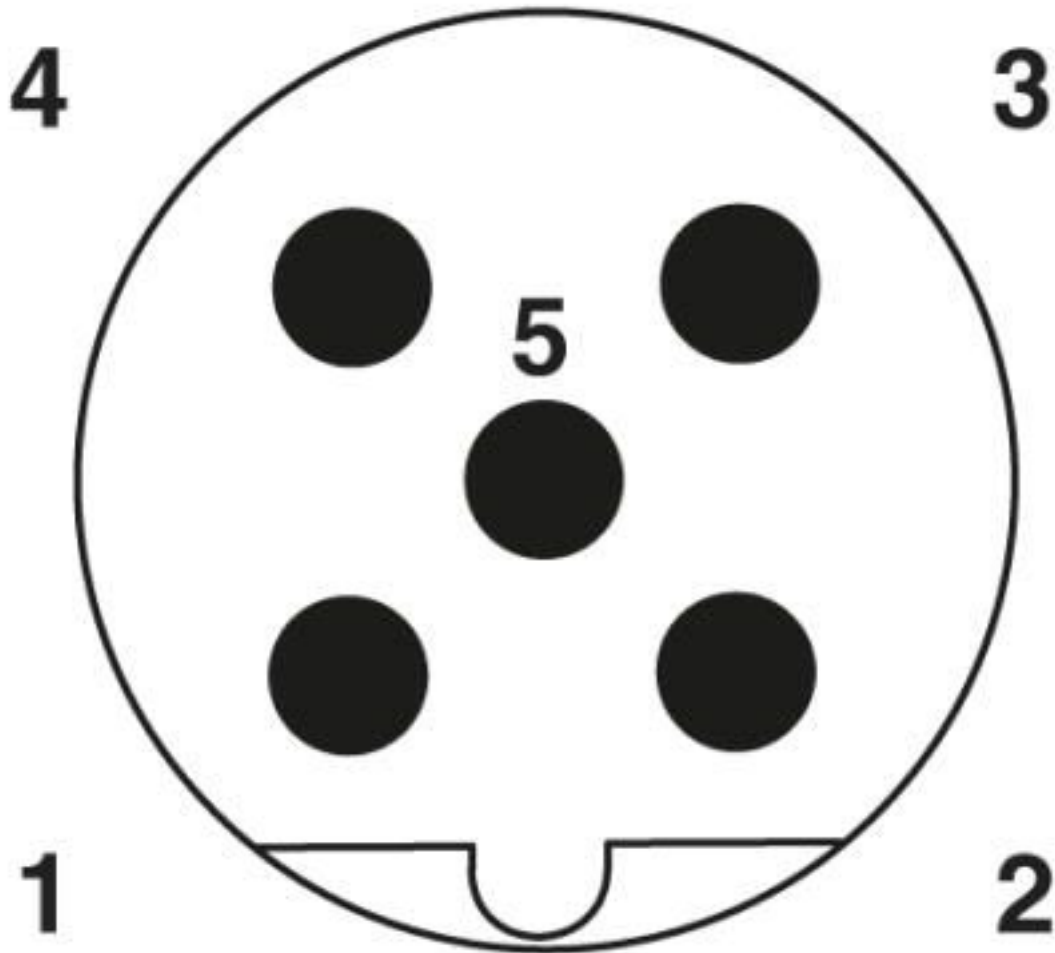
Circuit diagram



Contact assignment of the M12 connector and the M12 socket

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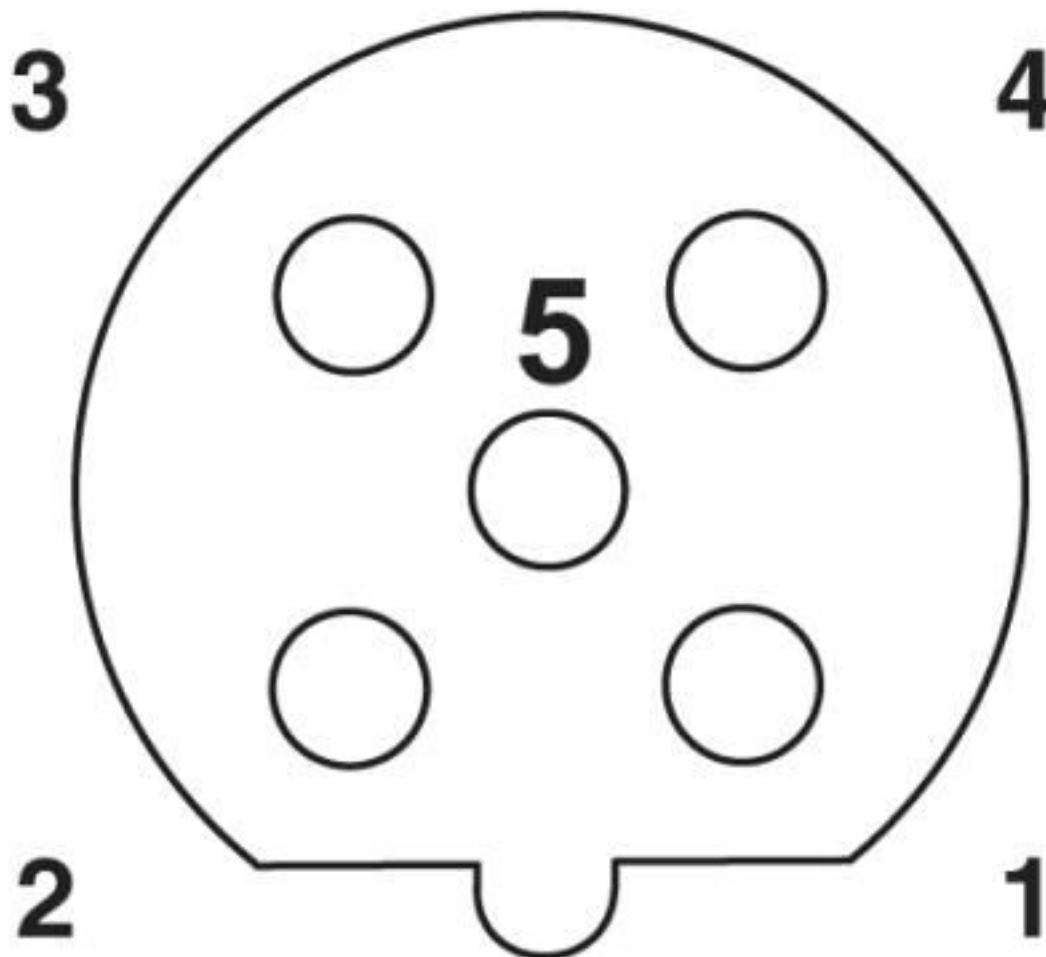
Schematic diagram



Pin assignment M12 male connector, 5-pos., B-coded, male side

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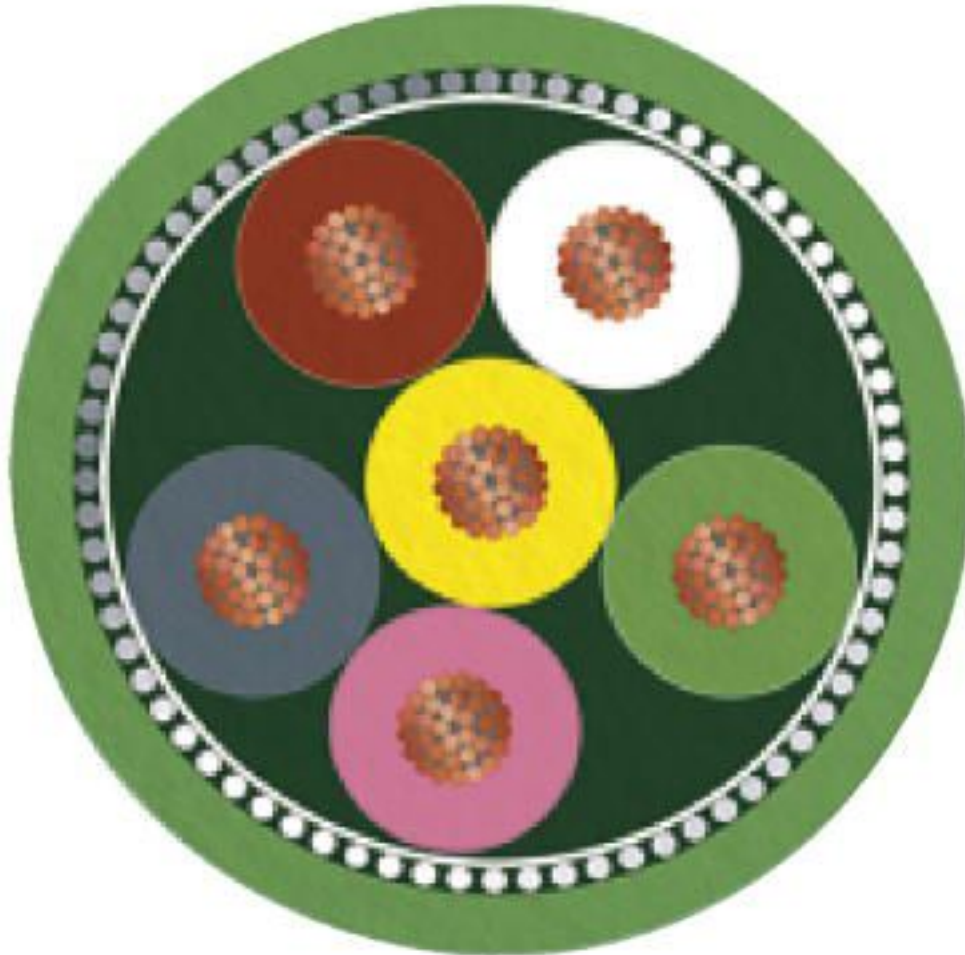
Schematic diagram



Pin assignment M12 socket, 5-pos., B-coded, female side

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Cable cross section



INTERBUS [900]

Classifications

eCl@ss

| | |
|---------------|----------|
| eCl@ss 10.0.1 | 27060308 |
| eCl@ss 4.0 | 27060300 |
| eCl@ss 4.1 | 27060300 |
| eCl@ss 5.0 | 27061800 |
| eCl@ss 5.1 | 27061800 |
| eCl@ss 6.0 | 27279200 |
| eCl@ss 7.0 | 27279218 |
| eCl@ss 8.0 | 27279218 |
| eCl@ss 9.0 | 27060308 |

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Classifications

ETIM

| | |
|----------|----------|
| ETIM 2.0 | EC000830 |
| ETIM 3.0 | EC001855 |
| ETIM 4.0 | EC001855 |
| ETIM 5.0 | EC002599 |
| ETIM 6.0 | EC001262 |
| ETIM 7.0 | EC001262 |

UNSPSC

| | |
|---------------|----------|
| UNSPSC 6.01 | 31251501 |
| UNSPSC 7.0901 | 31251501 |
| UNSPSC 11 | 31251501 |
| UNSPSC 12.01 | 31251501 |
| UNSPSC 13.2 | 31251501 |
| UNSPSC 18.0 | 26121604 |
| UNSPSC 19.0 | 26121604 |
| UNSPSC 20.0 | 26121604 |
| UNSPSC 21.0 | 26121604 |

Approvals

Approvals

Approvals

EAC / EAC-RoHS / EAC

Ex Approvals

Approval details

| | | |
|-----|--|--------------------------|
| EAC | | RU C- DE.BL08.B.00286 |
|-----|--|--------------------------|

| | | |
|----------|--|--------------------------|
| EAC-RoHS | | RU D- DE.HB35.B.00387 |
|----------|--|--------------------------|

| | | |
|-----|--|---------------|
| EAC | | EAC-Zulassung |
|-----|--|---------------|

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Accessories

Accessories

Data cable preassembled

Bus system cable - SAC-5P-M12MSB/900/... - 1537983



Bus system cable, INTERBUS (16 Mbps), 5-position, PUR halogen-free, may green RAL 6017, shielded, Plug straight M12, coding: B, on free cable end, cable length: Free input (0.2 ... 40.0 m)

Bus system cable - SAC-5P-M12FSB/900/... - 1538005



Bus system cable, INTERBUS (16 Mbps), 5-position, PUR halogen-free, may green RAL 6017, shielded, free cable end, on Socket straight M12, coding: B, cable length: Free input (0.2 ... 40.0 m)

Bus system cable - SAC-5P-M12MSB-M12FSB/900/... - 1538021



Bus system cable, INTERBUS (16 Mbps), 5-position, PUR halogen-free, may green RAL 6017, shielded, Plug straight M12, coding: B, on Socket straight M12, coding: B, cable length: Free input (0.2 ... 40.0 m)

Plug for cable screw gland

Screw plug - PROT-M12 MS-PA-CHAIN - 1430899

M12 sealing cap with fixing band, for sensor cables, for free M12 sockets



Protective cap

Sealing cap - PROT-M12 FS-PA-CHAIN - 1430873

M12 sealing cap made of plastic with fixing band, for sensor cables, for free M12 plugs



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Accessories

Safety locking

Locking clip - SAC-M12-EXCLIP-M - 1558988



Locking clip for the pin side of sensor/actuator cables with M12 connector and M12 connectors for assembly, for knurl diameter: 15 mm or for Allen key with a wrench size of 14 mm, prevents the disconnection of plug-in connections without tools

Locking clip - SAC-M12-EXCLIP-F - 1558991



Locking clip for the socket side of sensor/actuator cables with M12 connector and M12 connectors for assembly, for knurl diameter: 15 mm or for Allen key with a wrench size of 14 mm, prevents the disconnection of plug-in connections without tools

Screwdriver tools

Adapter insert - TSD-M SAC-BIT ADAPTER - 1212600



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

Tool - SAC BIT M12-D15 - 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

Torque tool

Torque screwdriver - TSD 04 SAC - 1208429



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

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Accessories

Torque screwdriver - TSD-M 1,2NM - 1212224



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

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