

the **sensor** people

Connection technology for optical electronic sensors



Contents:


Connector technology - Overview and advantages


Features of the connection technology

Connection technology - Selection table


Data sheets


Connection technology Overview and advantages


 Cables with integrally extruded connectors and user-configurable connectors


 Optimal adaptation to the application:


- PVC cable sheathing
- PUR cable sheathing
- Versions for the food and beverage industries
- IP 67/IP 69K

 M8 or M12 connector with 3, 4, 5 or 8 pins in axial or angular version

 Standard cable lengths: 2m, 5m or 10m, many special lengths available

- 
- Ultra-Lock™ fast locking
 - Self-locking screw fittings

 Versions with integrated LEDs for fast status control of sensors which are covered when installed

 User-configurable connectors with screw or insulation displacement connections



Features of the connection technology a broad portfolio - optimised for your application

Always the right solution

- Robust connection technology for rough industrial operating conditions
- Models with fast locking and insulation displacement technology ensure fast commissioning



PVC - the economical solution for standard applications

- ✓ **Advantage 1:** Good chemical resistance
- ✓ **Advantage 2:** Easy stripping of sheathing for fast wiring



PUR - for demanding applications

- ✓ **Advantage 1:** Very good resistance against oil, cooling agents, and lubricants
- ✓ **Advantage 2:** Suitable for drag chains
- ✓ **Advantage 3:** High abrasion resistance
- ✓ **Advantage 4:** Resistance against hydrolysis and UV light



FAB - for the food and beverage industries

- ✓ **Advantage 1:** Screwed cable glands made of V4A
- ✓ **Advantage 2:** Hygienic design
- ✓ **Advantage 3:** Good resistance against chemicals, acids and bases



User-configurable connectors

- ✓ **Advantage 1:** Models with insulation displacement technology for fast wiring
- ✓ **Advantage 2:** Suitable for a wide range of sheathing and conductor cross sections



Ultra-Lock™ fast locking

- ✓ **Advantage 1:** Locks for secure contacts
- ✓ **Advantage 2:** Fast commissioning, even in installation situations with limited space



Integrated LEDs

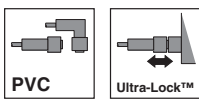
- ✓ **Advantage 1:** Visualisation of operational readiness and switching state, even for sensors which are covered when installed

| Part No. | Designation | Connection | No. of pins | Cable length | Plug connection | | Cable sheathing | Design | | | Special features | | | | | |
|-----------|-----------------------|------------|-------------|--------------|-----------------|---------|-----------------|---|---|-------------------|---|------------------------------------|-----------------|--------------------------|----------|--|
| | | | | | Axial | Angular | | Integrally extruded connector on one end, open cable on the other | Integrally extruded connectors on both ends | User-configurable | For the food and beverage industries (IP 69K) | Free of halogen, silicone, and PVC | Integrated LEDs | Ultra-Lock™ fast locking | Shielded | |
| 501 04520 | K-D M8A-3P-2m-PVC | M8 | 3 | 2m | • | | PVC | • | | | | | | | | |
| 501 04521 | K-D M8W-3P-2m-PVC | M8 | 3 | 2m | | • | PVC | • | | | | | | | | |
| 501 04522 | K-D M8A-3P-5m-PVC | M8 | 3 | 5m | • | | PVC | • | | | | | | | | |
| 501 04523 | K-D M8W-3P-5m-PVC | M8 | 3 | 5m | | • | PVC | • | | | | | | | | |
| 501 04524 | K-D M8A-4P-2m-PVC | M8 | 4 | 2m | • | | PVC | • | | | | | | | | |
| 501 04525 | K-D M8W-4P-2m-PVC | M8 | 4 | 2m | | • | PVC | • | | | | | | | | |
| 501 04526 | K-D M8A-4P-5m-PVC | M8 | 4 | 5m | • | | PVC | • | | | | | | | | |
| 501 04527 | K-D M8W-4P-5m-PVC | M8 | 4 | 5m | | • | PVC | • | | | | | | | | |
| 501 04528 | K-D M8A-4P-10m-PVC | M8 | 4 | 10m | • | | PVC | • | | | | | | | | |
| 501 04529 | K-D M8W-4P-10m-PVC | M8 | 4 | 10m | | • | PVC | • | | | | | | | | |
| 501 06691 | K-D M8A-3P-5m-PUR | M8 | 3 | 5m | • | | PUR | • | | | | • | | | | |
| 501 06692 | K-D M8W-3P-5m-PUR | M8 | 3 | 5m | | • | PUR | • | | | | • | | | | |
| 501 06693 | K-D M8A-3P-10m-PUR | M8 | 3 | 10m | • | | PUR | • | | | | • | | | | |
| 501 04530 | K-D M8A-4P-2m-PUR | M8 | 4 | 2m | • | | PUR | • | | | | • | | | | |
| 501 04531 | K-D M8W-4P-2m-PUR | M8 | 4 | 2m | | • | PUR | • | | | | • | | | | |
| 501 04535 | K-D M8W-4P-2m-DP-PUR | M8 | 4 | 2m | | • | PUR | • | | | | • | • | | | |
| 501 04532 | K-D M8A-4P-5m-PUR | M8 | 4 | 5m | • | | PUR | • | | | | • | | | | |
| 501 04761 | K-D M8W-4P-5m-PUR | M8 | 4 | 5m | | • | PUR | • | | | | • | | | | |
| 501 04536 | K-D M8W-4P-5m-DP-PUR | M8 | 4 | 5m | | • | PUR | • | | | | • | • | | | |
| 501 04533 | K-D M8A-4P-10m-PUR | M8 | 4 | 10m | • | | PUR | • | | | | • | | | | |
| 501 04534 | K-D M8W-4P-10m-PUR | M8 | 4 | 10m | | • | PUR | • | | | | • | | | | |
| 501 06152 | K-D M8A-4P-2m-FAB | M8 | 4 | 2m | • | | PVC | • | | | • | | | | | |
| 501 06154 | K-D M8W-4P-2m-FAB | M8 | 4 | 2m | | • | PVC | • | | | • | | | | | |
| 501 06153 | K-D M8A-4P-5m-FAB | M8 | 4 | 5m | • | | PVC | • | | | • | | | | | |
| 501 06155 | K-D M8W-4P-5m-FAB | M8 | 4 | 5m | | • | PVC | • | | | • | | | | | |
| 501 04538 | K-D M12A-3P-2m-PVC | M12 | 3 | 2m | • | | PVC | • | | | | | | | | |
| 501 04539 | K-D M12W-3P-2m-PVC | M12 | 3 | 2m | | • | PVC | • | | | | | | | | |
| 501 04540 | K-D M12A-3P-5m-PVC | M12 | 3 | 5m | • | | PVC | • | | | | | | | | |
| 501 04541 | K-D M12W-3P-5m-PVC | M12 | 3 | 5m | | • | PVC | • | | | | | | | | |
| 500 24748 | KB-095-1000-3AW | M12 | 3 | 1m | • | • | PVC | | • | | | | | | | |
| 500 24749 | KB-095-2000-3AW | M12 | 3 | 2m | • | • | PVC | | • | | | | | | | |
| 500 81151 | KB-095-5000-3AW | M12 | 3 | 5m | • | • | PVC | | • | | | | | | | |
| 501 04542 | K-D M12A-4P-2m-PVC | M12 | 4 | 2m | • | | PVC | • | | | | | | | | |
| 501 04543 | K-D M12W-4P-2m-PVC | M12 | 4 | 2m | | • | PVC | • | | | | | | | | |
| 501 04262 | K-D M12AS-4P-2m-PVC | M12 | 4 | 2m | • | | PVC | • | | | | | | • | | |
| 501 04263 | K-D M12WS-4P-2m-PVC | M12 | 4 | 2m | | • | PVC | • | | | | | | • | | |
| 501 04544 | K-D M12A-4P-5m-PVC | M12 | 4 | 5m | • | | PVC | • | | | | | | | | |
| 501 04545 | K-D M12W-4P-5m-PVC | M12 | 4 | 5m | | • | PVC | • | | | | | | | | |
| 501 04264 | K-D M12AS-4P-5m-PVC | M12 | 4 | 5m | • | | PVC | • | | | | | | • | | |
| 501 04265 | K-D M12WS-4P-5m-PVC | M12 | 4 | 5m | | • | PVC | • | | | | | | • | | |
| 501 04546 | K-D M12A-4P-10m-PVC | M12 | 4 | 10m | • | | PVC | • | | | | | | | | |
| 501 04547 | K-D M12W-4P-10m-PVC | M12 | 4 | 10m | | • | PVC | • | | | | | | | | |
| 501 04753 | K-D M12A-4P-20m-PVC | M12 | 4 | 20m | • | | PVC | • | | | | | | | | |
| 501 04561 | K-D M12A-4P-2m-PUR | M12 | 4 | 2m | • | | PUR | • | | | | • | | | | |
| 501 04562 | K-D M12W-4P-2m-PUR | M12 | 4 | 2m | | • | PUR | • | | | | • | | | | |
| 501 04548 | K-D M12A-4P-2m-DP-PUR | M12 | 4 | 2m | • | | PUR | • | | | | • | • | | | |
| 501 04549 | K-D M12W-4P-2m-DP-PUR | M12 | 4 | 2m | | • | PUR | • | | | | • | • | | | |

| Part No. | Designation | Connection | No. of pins | Cable length | Plug connection | | Cable sheathing | Design | | | Special features | | | | | |
|-----------|------------------------|------------|-------------|--------------|-----------------|---------|-----------------|---|---|-------------------|---|------------------------------------|-----------------|--------------------------|----------|---|
| | | | | | Axial | Angular | | Integrally extruded connector on one end, open cable on the other | Integrally extruded connectors on both ends | User-configurable | For the food and beverage industries (IP 69K) | Free of halogen, silicone, and PVC | Integrated LEDs | Ultra-Lock™ fast locking | Shielded | Blue sheathing for intrinsically safe circuits in potentially explosive areas |
| 501 04563 | K-D M12A-4P-5m-PUR | M12 | 4 | 5m | • | | PUR | • | | | | • | | | | |
| 501 04564 | K-D M12W-4P-5m-PUR | M12 | 4 | 5m | | • | PUR | • | | | | • | | | | |
| 501 04550 | K-D M12A-4P-5m-DP-PUR | M12 | 4 | 5m | • | | PUR | • | | | | • | • | | | |
| 501 04551 | K-D M12W-4P-5m-DP-PUR | M12 | 4 | 5m | | • | PUR | • | | | | • | • | | | |
| 501 04565 | K-D M12A-4P-10m-PUR | M12 | 4 | 10m | • | | PUR | • | | | | • | | | | |
| 501 04566 | K-D M12W-4P-10m-PUR | M12 | 4 | 10m | | • | PUR | • | | | | • | | | | |
| 501 04552 | K-D M12A-4P-10m-DP-PUR | M12 | 4 | 10m | • | | PUR | • | | | | • | • | | | |
| 501 04553 | K-D M12W-4P-10m-DP-PUR | M12 | 4 | 10m | | • | PUR | • | | | | • | • | | | |
| 501 04570 | K-D M12A-4P-2m-FAB | M12 | 4 | 2m | • | | PVC | • | | | • | | | | | |
| 501 04571 | K-D M12W-4P-2m-FAB | M12 | 4 | 2m | | • | PVC | • | | | • | | | | | |
| 501 04572 | K-D M12A-4P-5m-FAB | M12 | 4 | 5m | • | | PVC | • | | | • | | | | | |
| 501 04573 | K-D M12W-4P-5m-FAB | M12 | 4 | 5m | | • | PVC | • | | | • | | | | | |
| 501 04555 | K-D M12A-5P-2m-PVC | M12 | 5 | 2m | • | | PVC | • | | | | | | | | |
| 501 04556 | K-D M12W-5P-2m-PVC | M12 | 5 | 2m | | • | PVC | • | | | | | | | | |
| 501 04557 | K-D M12A-5P-5m-PVC | M12 | 5 | 5m | • | | PVC | • | | | | | | | | |
| 501 04558 | K-D M12W-5P-5m-PVC | M12 | 5 | 5m | | • | PVC | • | | | | | | | | |
| 501 04559 | K-D M12A-5P-10m-PVC | M12 | 5 | 10m | • | | PVC | • | | | | | | | | |
| 501 04560 | K-D M12W-5P-10m-PVC | M12 | 5 | 10m | | • | PVC | • | | | | | | | | |
| 501 04567 | K-D M12A-5P-2m-PUR | M12 | 5 | 2m | • | | PUR | • | | | | • | | | | |
| 501 04568 | K-D M12W-5P-2m-PUR | M12 | 5 | 2m | | • | PUR | • | | | | • | | | | |
| 501 04569 | K-D M12A-5P-5m-PUR | M12 | 5 | 5m | • | | PUR | • | | | | • | | | | |
| 501 04762 | K-D M12W-5P-5m-PUR | M12 | 5 | 5m | | • | PUR | • | | | | • | | | | |
| 501 04574 | K-D M12A-5P-2m-FAB | M12 | 5 | 2m | • | | PVC | • | | | • | | | | | |
| 501 04575 | K-D M12W-5P-2m-FAB | M12 | 5 | 2m | | • | PVC | • | | | • | | | | | |
| 501 04576 | K-D M12A-5P-5m-FAB | M12 | 5 | 5m | • | | PVC | • | | | • | | | | | |
| 501 04577 | K-D M12W-5P-5m-FAB | M12 | 5 | 5m | | • | PVC | • | | | • | | | | | |
| 501 04591 | K-D M12A-8P-2m-PUR | M12 | 8 | 2m | • | | PUR | • | | | | • | | | • | |
| 501 04590 | K-D M12A-8P-5m-PUR | M12 | 8 | 5m | • | | PUR | • | | | | • | | | • | |
| 501 06882 | K-D M12A-8P-10m-PUR | M12 | 8 | 10m | • | | PUR | • | | | | • | | | • | |
| 500 37783 | BK7 KB-092-5000-4AEx | M12 | 4 | 5m | • | | PUR | • | | | | | | | | • |
| 500 37784 | BK7 KB-092-5000-4Ex | M12 | 4 | 5m | | • | PUR | • | | | | | | | | • |
| 678031 | K2-CB-1000 [1m] | M12 | 5 | 1m | • • | | PVC | | • | | | | | | • | |
| 678033 | K2-CB-2500 [2.5m] | M12 | 5 | 2.5m | • • | | PVC | | • | | | | | | • | |
| 678035 | K2-CB-5000 [5m] | M12 | 5 | 5m | • • | | PVC | | • | | | | | | • | |
| 678040 | K2-CB-10000 [10m] | M12 | 5 | 10m | • • | | PVC | | • | | | | | | • | |
| 678045 | K2-CB-15000 [15m] | M12 | 5 | 15m | • • | | PVC | | • | | | | | | • | |
| 678032 | K2-CB-20000 [20m] | M12 | 5 | 20m | • • | | PVC | | • | | | | | | • | |
| 501 04582 | D M8A-3P-SK | M8 | 3 | - | • | | - | | | • | | | | | | |
| 501 04583 | D M8A-4P-SK | M8 | 4 | - | • | | - | | | • | | | | | | |
| 500 31323 | KD 095-4A | M12 | 4 | - | • | | - | | | • | | | | | | |
| 500 31324 | KD 095-4 | M12 | 4 | - | | • | - | | | • | | | | | | |
| 500 40155 | KS 095-4A | M12 | 4 | - | • | | - | | | • | | | | | | |
| 500 20501 | KD 095-5A | M12 | 5 | - | • | | - | | | • | | | | | | |
| 500 20502 | KD 095-5 | M12 | 5 | - | | • | - | | | • | | | | | | |
| 500 81461 | KD 095-5A-PG9 | M12 | 5 | - | • | | - | | | • | | | | | | |

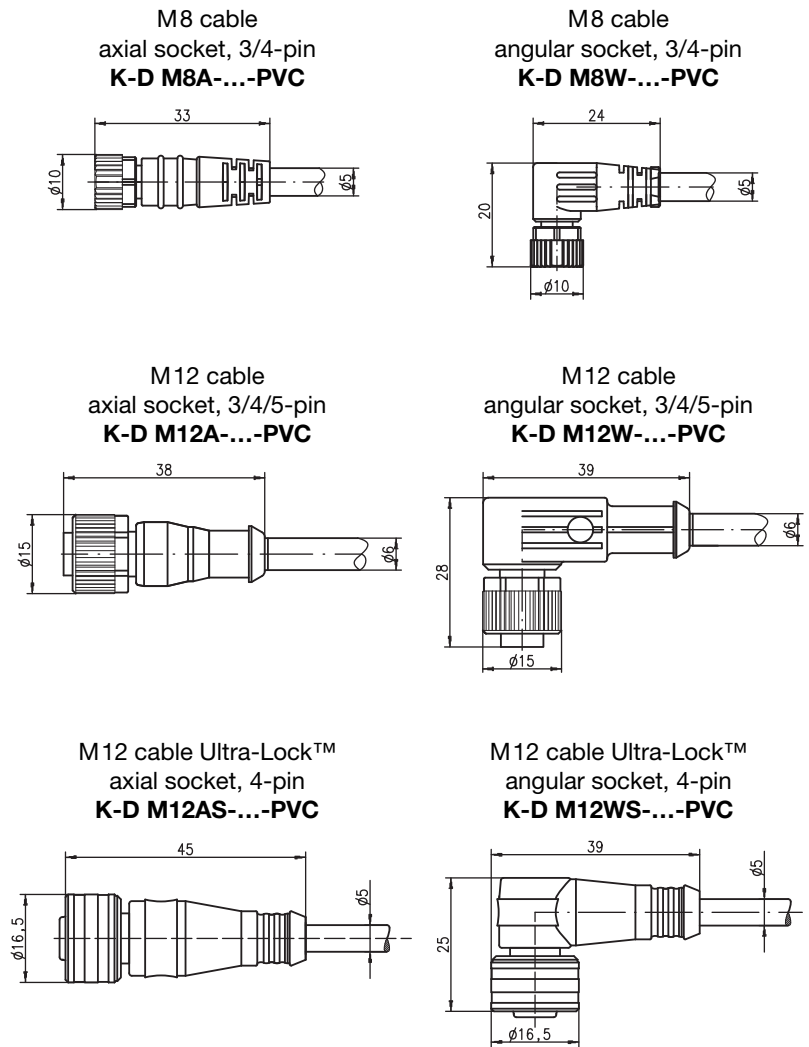
Connection cable PVC

K-D ...-PVC

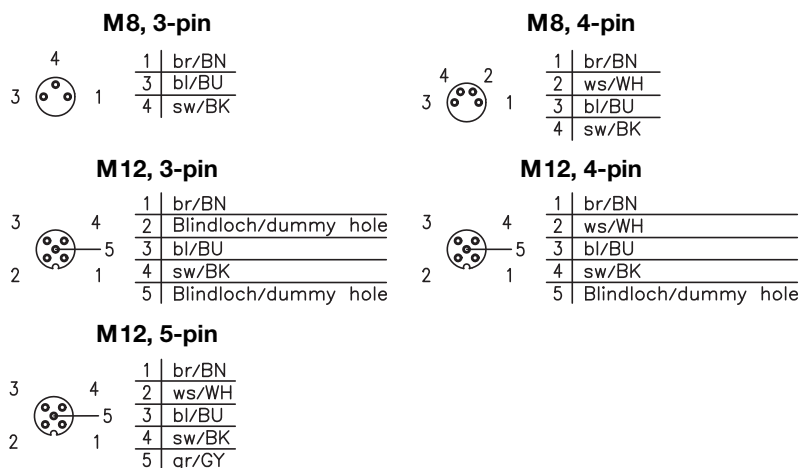


- Good resistance against chemicals
- Self-locking screw top
- Outer cover strips off easily
- Ultra-Lock™ fast locking
- Knurl with integrated spanner flat
- Silicone-free
- Cable for static use

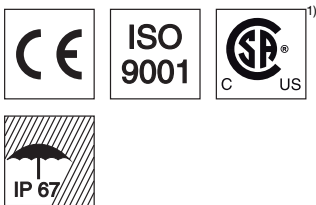
Dimensioned drawing



Contact arrangement / colour code



We reserve the right to make changes • kb_pvc_gb_fm



1) all PVC cables except for cables with Ultra-Lock™ fast locking

Specifications

Electrical data

Operating voltage

Operating current
Insulation grade

Mechanical data

Cable
Handle body
Lock

Conductor cross-section
Sheath diameter
Bending radius

Environmental data

Operating temperature range

M8 cable

≤ 60VAC/DC

≤ 4A per contact
category II acc. to IEC 60664-1

integral, PVC, black
black, TPU
screw fitting, diecast zinc nickel-plated, recommended torque 0.6Nm, self-locking

0.25mm²
4.2 ... 4.9mm
≥ 10 • sheath diameter

fixed wiring: -30°C ... +70°C
flexible wiring: -5°C ... +70°C

M12/Ultra-Lock™ cable

3/4-pin: ≤ 250VAC/DC

5-pin: ≤ 125VAC/DC
≤ 4A per contact
category II acc. to IEC 60664-1

integral, PVC, black
black, TPU
screw fitting, diecast zinc nickel-plated, recommended torque 0.6Nm, self-locking.
Ultra-Lock™: brass nickel-plated, snap-in with snap lock
0.34mm²
4.7 ... 5.7mm

Order guide

Connection cable M8

| Designation | Part No. | Design | Contacts | Cable length | Other features |
|--------------------|-----------|----------------|----------|--------------|----------------|
| K-D M8A-3P-2m-PVC | 501 04520 | Axial socket | 3 | 2m | |
| K-D M8W-3P-2m-PVC | 501 04521 | Angular socket | 3 | 2m | |
| K-D M8A-3P-5m-PVC | 501 04522 | Axial socket | 3 | 5m | |
| K-D M8W-3P-5m-PVC | 501 04523 | Angular socket | 3 | 5m | |
| K-D M8A-4P-2m-PVC | 501 04524 | Axial socket | 4 | 2m | |
| K-D M8W-4P-2m-PVC | 501 04525 | Angular socket | 4 | 2m | |
| K-D M8A-4P-5m-PVC | 501 04526 | Axial socket | 4 | 5m | |
| K-D M8W-4P-5m-PVC | 501 04527 | Angular socket | 4 | 5m | |
| K-D M8A-4P-10m-PVC | 501 04528 | Axial socket | 4 | 10m | |
| K-D M8W-4P-10m-PVC | 501 04529 | Angular socket | 4 | 10m | |

Connection cable M12

| Designation | Part No. | Design | Contacts | Cable length | Other features |
|---------------------|-----------|----------------|----------|--------------|----------------|
| K-D M12A-3P-2m-PVC | 501 04538 | Axial socket | 3 | 2m | |
| K-D M12W-3P-2m-PVC | 501 04539 | Angular socket | 3 | 2m | |
| K-D M12A-3P-5m-PVC | 501 04540 | Axial socket | 3 | 5m | |
| K-D M12W-3P-5m-PVC | 501 04541 | Angular socket | 3 | 5m | |
| K-D M12A-4P-2m-PVC | 501 04542 | Axial socket | 4 | 2m | |
| K-D M12W-4P-2m-PVC | 501 04543 | Angular socket | 4 | 2m | |
| K-D M12A-4P-5m-PVC | 501 04544 | Axial socket | 4 | 5m | |
| K-D M12W-4P-5m-PVC | 501 04545 | Angular socket | 4 | 5m | |
| K-D M12A-4P-10m-PVC | 501 04546 | Axial socket | 4 | 10m | |
| K-D M12W-4P-10m-PVC | 501 04547 | Angular socket | 4 | 10m | |
| K-D M12A-4P-20m-PVC | 501 04753 | Axial socket | 4 | 20m | |
| K-D M12A-5P-2m-PVC | 501 04555 | Axial socket | 5 | 2m | |
| K-D M12W-5P-2m-PVC | 501 04556 | Angular socket | 5 | 2m | |
| K-D M12A-5P-5m-PVC | 501 04557 | Axial socket | 5 | 5m | |
| K-D M12W-5P-5m-PVC | 501 04558 | Angular socket | 5 | 5m | |
| K-D M12A-5P-10m-PVC | 501 04559 | Axial socket | 5 | 10m | |
| K-D M12W-5P-10m-PVC | 501 04560 | Angular socket | 5 | 10m | |

Connection cable M12 Ultra-Lock™-fast locking 1)

| Designation | Part No. | Design | Contacts | Cable length | Other features |
|---------------------|-----------|----------------|----------|--------------|----------------|
| K-D M12AS-4P-2m-PVC | 501 04262 | Axial socket | 4 | 2m | Ultra-Lock™ |
| K-D M12WS-4P-2m-PVC | 501 04263 | Angular socket | 4 | 2m | Ultra-Lock™ |
| K-D M12AS-4P-5m-PVC | 501 04264 | Axial socket | 4 | 5m | Ultra-Lock™ |
| K-D M12WS-4P-5m-PVC | 501 04265 | Angular socket | 4 | 5m | Ultra-Lock™ |

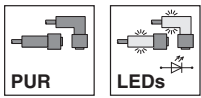
1) Cables with Ultra-Lock™ fast locking can only be used with sensors intended for this purpose, e.g., PRK 46B/66-S12!

Tables

Remarks

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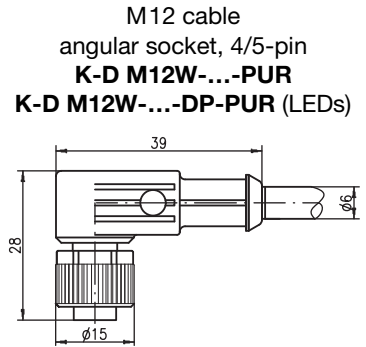
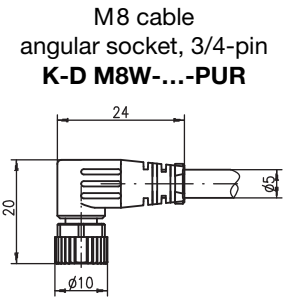
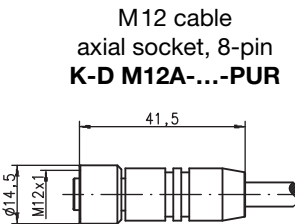
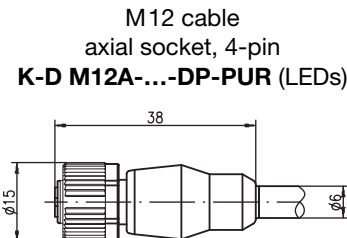
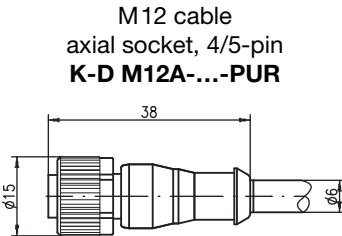
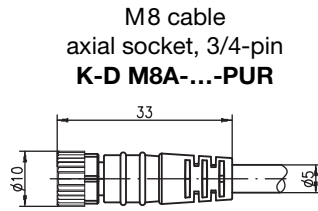
| K-D | M12AS | - xP | - ym | - PVC |
|----------------------|------------------------------|-----------------|----------------------|--------------------|
| Cable with connector | M8 or M12 connector | x - No. of pins | y - Cable length [m] | Cable material PVC |
| | A - axial type | | | |
| | W - angular type | | | |
| | S - Ultra-Lock™ fast locking | | | |



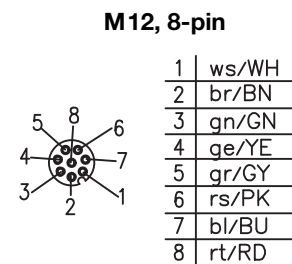
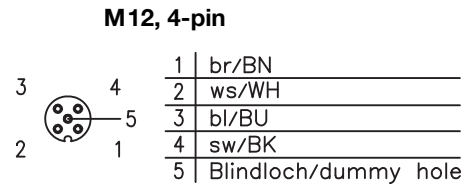
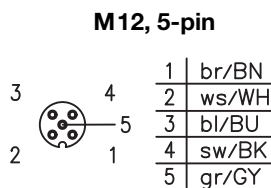
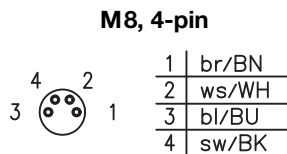
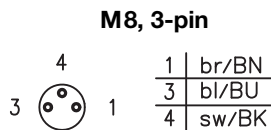
- Very good resistance against oil, cooling agents, and lubricants
- Suitable for drag chains
- High mechanical robustness
- Resistance against hydrolysis and UV light
- Free of halogen, silicone, and PVC
- Self-locking screw top
- Knurl with integrated spanner flat
- Injection-moulded display LEDs
- Flame-retardant according to VDE 0472



Dimensioned drawing



Contact arrangement / colour code



We reserve the right to make changes • kb_pur_gb_fm

Specifications

| | | |
|-----------------------------|--|---|
| Electrical data | M8 cable | M12 cable |
| Operating voltage | ≤ 60VAC/DC | 4-pin: ≤ 250VAC/DC 5-pin: ≤ 125VAC/DC 8-pin: ≤ 36VAC/DC |
| Operating current | ≤ 4A per contact | ≤ 4A per contact |
| Insulation grade | category II acc. to IEC 60664-1 | category II acc. to IEC 60664-1 |
| Mechanical data | | |
| Cable | integral, PUR, black | integral, PUR, black |
| Handle body | black, TPU | black, TPU |
| Lock | screw fitting, diecast zinc nickel-plated | 8-pin: orange, TPU |
| | recommended torque 0.6Nm, self-locking | |
| Conductor cross-section | 0.25 mm ² | 0.34 mm ² , 8-pin: 0.25 mm ² |
| Sheath diameter | 3.9 ... 4.6 mm | 4.5 ... 6.6 mm |
| Drag chain data | | |
| Bending radius | ≥ 10 • sheath diameter | |
| Speed of movement | ≤ 3.3 m/s for a 5m horizontal movement distance and max 5 m/s ² | |
| Number of bending cycles | > 2 • 10 ⁶ | |
| Environmental data | | |
| Operating temperature range | fixed wiring: -40°C ... +80°C flexible wiring: -25°C ... +80°C | |

Tables

Diagrams

Order guide

Connection cable M8

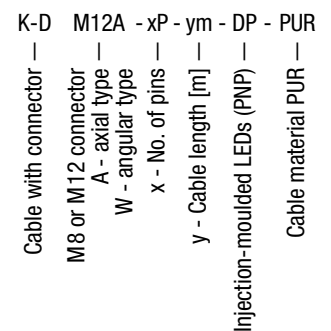
| Designation | Part No. | Design | Contacts | Cable length | Other features |
|----------------------|-----------|----------------|----------|--------------|----------------|
| K-D M8A-3P-5m-PUR | 501 06691 | Axial socket | 3 | 5m | |
| K-D M8W-3P-5m-PUR | 501 06692 | Angular socket | 3 | 5m | |
| K-D M8A-3P-10m-PUR | 501 06693 | Axial socket | 3 | 10m | |
| K-D M8A-4P-2m-PUR | 501 04530 | Axial socket | 4 | 2m | |
| K-D M8W-4P-2m-PUR | 501 04531 | Angular socket | 4 | 2m | |
| K-D M8A-4P-5m-PUR | 501 04532 | Axial socket | 4 | 5m | |
| K-D M8W-4P-5m-PUR | 501 04761 | Angular socket | 4 | 5m | |
| K-D M8A-4P-10m-PUR | 501 04533 | Axial socket | 4 | 10m | |
| K-D M8W-4P-10m-PUR | 501 04534 | Angular socket | 4 | 10m | |
| K-D M8W-4P-2m-DP-PUR | 501 04535 | Angular socket | 4 | 2m | 2 LEDs (PNP) |
| K-D M8W-4P-5m-DP-PUR | 501 04536 | Angular socket | 4 | 5m | 2 LEDs (PNP) |

Connection cable M12

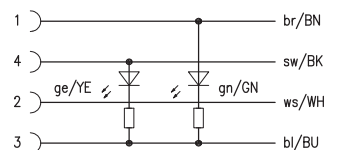
| Designation | Part No. | Design | Contacts | Cable length | Other features |
|------------------------|-----------|----------------|----------|--------------|----------------|
| K-D M12A-4P-2m-PUR | 501 04561 | Axial socket | 4 | 2m | |
| K-D M12W-4P-2m-PUR | 501 04562 | Angular socket | 4 | 2m | |
| K-D M12A-4P-5m-PUR | 501 04563 | Axial socket | 4 | 5m | |
| K-D M12W-4P-5m-PUR | 501 04564 | Angular socket | 4 | 5m | |
| K-D M12A-4P-10m-PUR | 501 04565 | Axial socket | 4 | 10m | |
| K-D M12W-4P-10m-PUR | 501 04566 | Angular socket | 4 | 10m | |
| K-D M12A-4P-2m-DP-PUR | 501 04548 | Axial socket | 4 | 2m | 2 LEDs (PNP) |
| K-D M12W-4P-2m-DP-PUR | 501 04549 | Angular socket | 4 | 2m | 2 LEDs (PNP) |
| K-D M12A-4P-5m-DP-PUR | 501 04550 | Axial socket | 4 | 5m | 2 LEDs (PNP) |
| K-D M12W-4P-5m-DP-PUR | 501 04551 | Angular socket | 4 | 5m | 2 LEDs (PNP) |
| K-D M12A-4P-10m-DP-PUR | 501 04552 | Axial socket | 4 | 10m | 2 LEDs (PNP) |
| K-D M12W-4P-10m-DP-PUR | 501 04553 | Angular socket | 4 | 10m | 2 LEDs (PNP) |
| K-D M12A-5P-2m-PUR | 501 04567 | Axial socket | 5 | 2m | |
| K-D M12W-5P-2m-PUR | 501 04568 | Angular socket | 5 | 2m | |
| K-D M12A-5P-5m-PUR | 501 04569 | Axial socket | 5 | 5m | |
| K-D M12W-5P-5m-PUR | 501 04762 | Angular socket | 5 | 5m | |
| K-D M12A-8P-2m-PUR | 501 04591 | Axial socket | 8 | 2m | Shielded |
| K-D M12A-8P-5m-PUR | 501 04590 | Axial socket | 8 | 5m | Shielded |
| K-D M12A-8P-10m-PUR | 501 06882 | Axial socket | 8 | 10m | Shielded |

Remarks

Type code:



Circuit diagram LEDs:

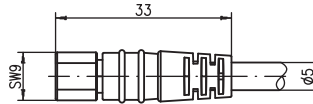




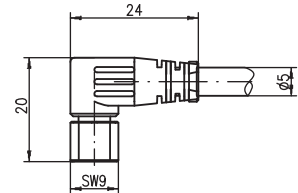
- Optimised for food industry applications
- Resistant to chemicals, acids, bases, and cleaning agents
- Hygienic design
- Protection classes IP 67 and IP 69K
- V4A screw fitting
- Silicone-free
- Self-locking screw top
- Outer cover strips off easily
- Cable for static use

Dimensioned drawing

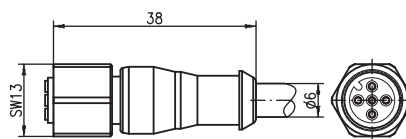
M8 cable
axial socket, 4-pin
K-D M8A-...-FAB



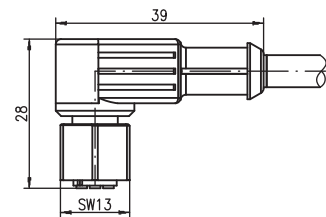
M8 cable
angular socket, 4-pin
K-D M8W-...-FAB



M12 cable
axial socket, 4/5-pin
K-D M12A-...-FAB

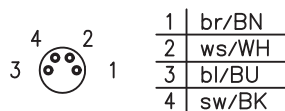


M12 cable
angular socket, 4/5-pin
K-D M12W-...-FAB



Contact arrangement / colour code

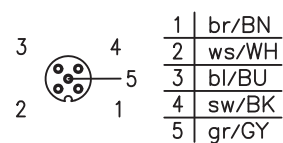
M8, 4-pin



M12, 4-pin



M12, 5-pin



We reserve the right to make changes • kb_fab_gb_fm



Connection cable FOOD & BEVERAGE

Specifications

Electrical data

Operating voltage

M8 cable

4-pin: ≤ 60VAC/DC

M12 cable

4-pin: ≤ 250VAC/DC

Operating current

≤ 4A per contact

5-pin: ≤ 125VAC/DC

Insulation grade

category II acc. to IEC 60664-1

≤ 4A per contact
category II acc. to IEC 60664-1

Mechanical data

Cable

integral, PVC, black

integral, PVC, black

Handle body

black, TPU

black, TPU

Lock

screw fitting V4A nut, recommended
torque 0.6Nm, self-locking

screw fitting V4A nut, recommended
torque 0.6Nm, self-locking

Conductor cross-section

0.25mm²

0.34mm²

Sheath diameter

approx. 4.7mm

4.7 ... 5.7mm

Bending radius

≥ 10 • sheath diameter

≥ 10 • sheath diameter

Environmental data

Operating temperature range

fixed wiring: -30°C ... +70°C
flexible wiring: -5°C ... +70°C

fixed wiring: -30°C ... +70°C
flexible wiring: -5°C ... +70°C

Tables

Order guide

Connection cable M8

| Designation | Part No. | Design | Contacts | Cable length | Other features |
|-------------------|-----------|----------------|----------|--------------|----------------|
| K-D M8A-4P-2m-FAB | 501 06152 | Axial socket | 4 | 2m | |
| K-D M8W-4P-2m-FAB | 501 06154 | Angular socket | 4 | 2m | |
| K-D M8A-4P-5m-FAB | 501 06153 | Axial socket | 4 | 5m | |
| K-D M8W-4P-5m-FAB | 501 06155 | Angular socket | 4 | 5m | |

Connection cable M12

| Designation | Part No. | Design | Contacts | Cable length | Other features |
|--------------------|-----------|----------------|----------|--------------|----------------|
| K-D M12A-4P-2m-FAB | 501 04570 | Axial socket | 4 | 2m | |
| K-D M12W-4P-2m-FAB | 501 04571 | Angular socket | 4 | 2m | |
| K-D M12A-4P-5m-FAB | 501 04572 | Axial socket | 4 | 5m | |
| K-D M12W-4P-5m-FAB | 501 04573 | Angular socket | 4 | 5m | |
| K-D M12A-5P-2m-FAB | 501 04574 | Axial socket | 5 | 2m | |
| K-D M12W-5P-2m-FAB | 501 04575 | Angular socket | 5 | 2m | |
| K-D M12A-5P-5m-FAB | 501 04576 | Axial socket | 5 | 5m | |
| K-D M12W-5P-5m-FAB | 501 04577 | Angular socket | 5 | 5m | |

K-D ...-FAB - 04

Remarks

Type code:

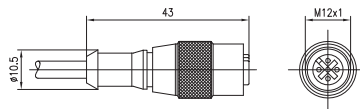
K-D M12A - xP - ym - FAB
 |
 Cable with connector
 |
 M8 or M12 connector
 |
 A - axial type
 |
 W - angular type
 |
 x - No. of pins
 |
 y - Cable length [m]
 |
 FAB
 |
 FOOD & BEVERAGE version



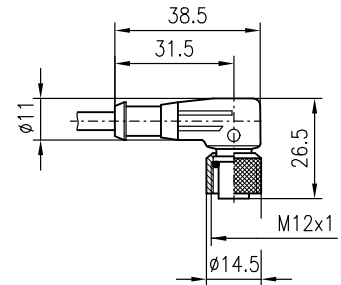
- For intrinsically safe Namur sensors with M12 connector
- With blue sheathing
- Protection class IP 67

Dimensioned drawing

M12 cable
axial socket, 4-pin
BK7 KB-092-5000-4AEx



M12 cable
angular socket, 4-pin
BK7 KB-092-5000-4Ex



Contact arrangement / colour code

| | | | | |
|---|--|---|---|-------|
| 3 | | 4 | 1 | br/BN |
| | | 2 | 2 | ws/WH |
| | | 3 | 3 | bl/BU |
| 2 | | 4 | 4 | sw/BK |

We reserve the right to make changes • kb_Ex_gb_fm



Connection cable for intrinsically safe circuits

Specifications

Electrical data

| | |
|----------------------|---------|
| Operating voltage | ≤ 15VDC |
| Internal capacitance | 0.49nF |
| Internal inductance | 10µH |
| Strand resistance | 56Ω/km |

Mechanical data

| | |
|-------------------------|--|
| Cable | integral, PUR/PVC, blue, 5m |
| Handle body | TPU |
| Lock | screw fitting - brass nut, nickel-plated, recommended torque 0.5Nm |
| Conductor cross-section | 0.34mm ² |
| Sheath diameter | 5mm |
| Protection class | IP 67 |

Environmental data

| | |
|-----------------------------|-----------------|
| Operating temperature range | -25°C ... +90°C |
|-----------------------------|-----------------|

Tables

Order guide

Connection cable M12

| Designation | Part No. | Design | Contacts | Cable length | Other features |
|----------------------|----------|----------------|----------|--------------|----------------|
| BK7 KB-092-5000-4AEx | 50037783 | Axial socket | 4 | 5m | |
| BK7 KB-092-5000-4Ex | 50037784 | Angular socket | 4 | 5m | |

Remarks

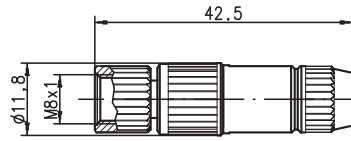
When wiring intrinsically safe circuits in potentially explosive areas, the applicable, national regulations for the installation of electrical equipment must be observed.



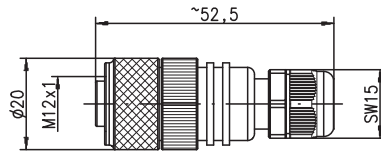
- Configurable with screw terminals or insulation displacement technology
- Very good resistance against oil, cooling agents, lubricants, and chemicals
- Protection class IP 67

Dimensioned drawing

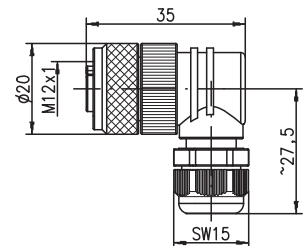
M8 connector, axial, 3/4-pin
D M8A-3P-SK
D M8A-4P-SK



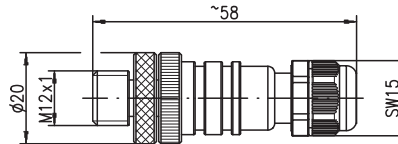
M12 connector, axial, 4-pin
KD 095-4A



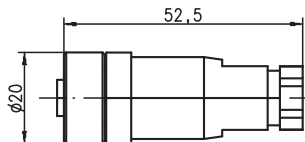
M12 connector, angular, 4-pin
KD 095-4



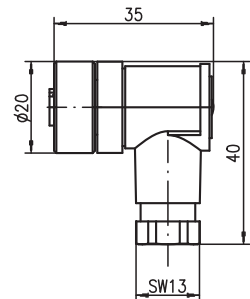
M12 cable plug, axial, 4-pin
KS 095-4A



M12 connector, axial, 5-pin
KD 095-5A, KD 095-5A-PG9

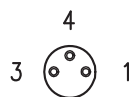


M12 connector, angular, 5-pin
KD 095-5

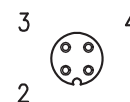


Contact arrangement

M8 connector, 3-pin



M12 connector, 4-pin



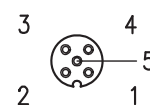
M12 cable plug, 4-pin



M8 connector, 4-pin



M12 connector, 5-pin



We reserve the right to make changes•kd_ks_gb_fm



1) 4-pin M12 connector only

Specifications

Electrical data

Operating voltage

M8 connector

≤ 32VAC/DC

M12 connector

4-pin: ≤ 250VAC/DC

Operating current

≤ 4A per contact

5-pin: ≤ 125VAC/DC

Insulation grade

category II acc. to IEC 60664-1

≤ 4A per contact
category II acc. to IEC 60664-1

Mechanical data

Connection type

insulation displacement technology

screw connection

Conductor cross-section

0.14 ... 0.34mm²

0.14 ... 0.75mm²

Sheath diameter

black seal: 3.2 ... 4.4mm

3.0 ... 6.5mm

transp. seal: 4.2 ... 5.4mm

PG9: 4.0 ... 8.0mm

Environmental data

Operating temperature range

-25°C ... +85°C

Tables

Diagrams

Order guide

M8 connector

| Designation | Part No. | Design | Contacts | Connection type | Other features |
|-------------|-----------|--------------|----------|------------------------------------|----------------|
| D M8A-3P-SK | 501 04582 | Axial socket | 3 | Insulation displacement technology | |
| D M8A-4P-SK | 501 04583 | Axial socket | 4 | Insulation displacement technology | |

M12 connector

| Designation | Part No. | Design | Contacts | Connection type | Other features |
|---------------|-----------|----------------|----------|------------------|---------------------------|
| KD 095-4A | 500 31323 | Axial socket | 4 | Screw connection | cU _L |
| KD 095-4 | 500 31324 | Angular socket | 4 | Screw connection | cU _L |
| KS 095-4A | 500 40155 | Axial plug | 4 | Screw connection | cU _L |
| KD 095-5A | 500 20501 | Axial socket | 5 | Screw connection | |
| KD 095-5 | 500 20502 | Angular socket | 5 | Screw connection | |
| KD 095-5A-PG9 | 500 81461 | Axial socket | 5 | Screw connection | For cables Ø 4 ... 8mm |

Remarks

Optoelectronic Sensors

Cubic Series
Cylindrical Sensors, Mini Sensors, Fibre Optic Amplifiers
Measuring Sensors
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Safety Systems

Safety Services

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Transceivers and Multiple Light Beam Safety Devices
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Safety Switches and Safety Locking Devices
Safety Relays and Safety Interfaces
Sensor Accessories and Signal Devices
Safety Engineering Software
Machine Safety Services

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