A PERFECT ALLIANCE.

# ODU AMC® HIGH-DENSITY

## Innovation in a Compact Package

MINIATURE CONNECTORS

AUGUST 2018 EDITION

ODU AMC® HIGH-DENSITY

ODU AMC®

odu-usa.com

# A PERFECT ALLIANCE.

A PERFECT ALLIANCE.

## ODU GROUP OVERVIEW

- More than 75 years of experience in connector technology
- Over 1,900 employees worldwide
- 9 sales subsidiaries in China, Denmark, France, Germany, Italy, Japan, Sweden, the UK and the US as well as 5 production and logistics sites
- All technologies under one roof: Design and development, machine tool and special machine construction, injection, stamping, turning, surface technology, assembly and cable assembly
- We operate in the following markets: medical, military and security, test & measurement, industrial, energy, and emobility

As of February 2018

## CUSTOMER-SPECIFIC SOLUTIONS

Contacts, connectors and integrated cable assembly solutions meeting the most demanding technical market requirements – ODU's connector solutions and value-added services are characterized by their exclusive focus on meeting the customer's needs.

- Precise implementation of application-specific requirements regarding design, functionality, cost and exclusivity
- Custom connector solutions derived from standard products
- One-to-one local expertise and fair, friendly consulting
- Quick prototyping and production turnaround

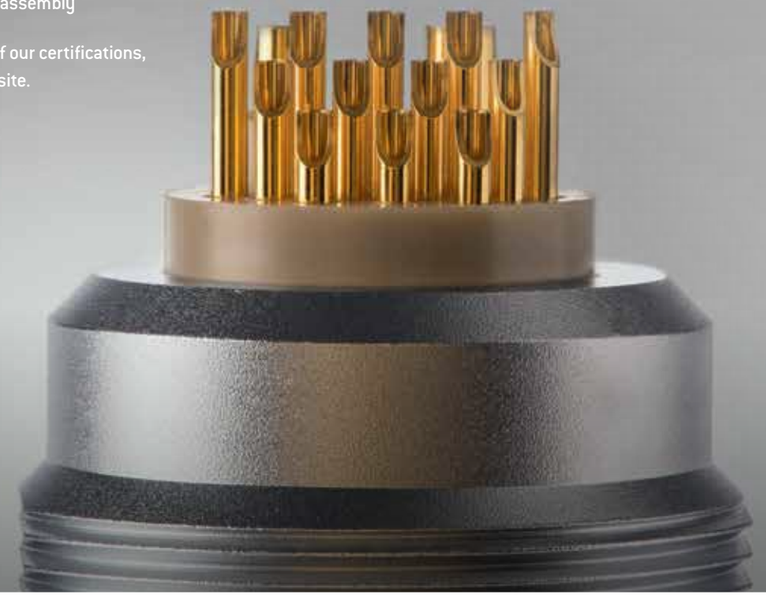
## CERTIFIED QUALITY

- DIN EN ISO 9001
- IATF 16949
- DIN EN ISO 14001
- ISO 13485
- Wide range of UL, CSA, VG and DVA licenses
- UL certified cable assembly

For a complete list of our certifications, please visit our website.

All dimensions are in mm. Some figures are for illustrative purposes only.
Subject to change without notice. Errors and omissions excepted.
We reserve the right to change our products and their technical specifications at any time in the interest of technical improvement.
This publication supersedes all prior publications. This publication is also available as a PDF file that can be downloaded from **www.odu-usa.com**.

**Data transmission protocols**
These ODU specific connectors can transmit common data transmission protocols such as HDMI® 2.0, USB® 3.1 Gen1, Ethernet, and Ethernet CAT5, but they are not HDMI®-, USB®-, Ethernet- and Ethernet CAT5- standard connectors.



**www.odu-usa.com**



# CREATING CONNECTIONS, BUILDING ALLIANCES, COLLABORATING INTO THE FUTURE


### TECHNOLOGY THAT UNITES – CONNECTIONS THAT INSPIRE

For over 75 years, this commitment has enabled us to innovate and provide solutions that respond to continuously changing market needs. We provide high-quality electrical connectors that create added value for our customers and any market player seeking a reliable connector solution to enable the transmission of power, signals, media and data transmission.

A PERFECT ALLIANCE is our guiding principle. It represents the synergy between our high-quality connector solutions and the strong partnerships we build with our staff and business partners across the globe –
partnerships based on trust, reliability and mutual respect.

ODU is one of the world's leading suppliers of connector systems today, employing over 1,900 people worldwide and generating approximately €170 million in sales. To ensure the very highest quality standards in our cutting-edge products, we continuously invest in their development and production – and ultimately, in our very unique expertise. Over the past few years, our development of customer- and application-specific connectors has led to the sustained growth of our standard product range so that today, we cover a broad range of application areas. A balance between project-specific business, including customized developments, and standard connector design will continue to shape our business into the future. This holds true for emerging and future markets, such as medical, military and security, and energy, as well as for the special requirements of measurement and testing, eMobility and industrial electronics.

A PERFECT ALLIANCE – The future of ODU will continue to find solid ground for growth: in our focus on providing reliable connector solutions for a variety of challenging applications and in our commitment to continuously expanding our technology portfolio. It's what we do and who we are – around the globe. This brochure is an invitation for you to become even better acquainted with ODU, an internationally active technology company devoted to creating high-quality customized connector solutions.

We are actively shaping the future of our company with creativity, imagination and innovation in order to serve our valued customers around the world.

ODU – A PERFECT ALLIANCE.

The Managing Directors:
**Dr.-Ing. Kurt Woelfl** and **Denis Giba**

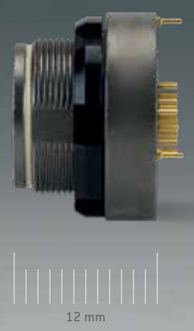
ODU AMC® HIGH-DENSITY

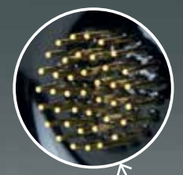
# ODU AMC® HIGH-DENSITY

**INNOVATION IN A COMPACT PACKAGE**

### COMPACT DESIGN

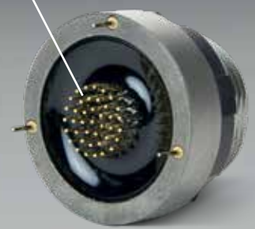
Reliability as well as electrical and mechanical robustness in spite of the compact design



### HIGH CONTACT DENSITY

Contact density up to 40 contacts in a minimum design



### SYSTEM SOLUTION

Innovative options for assembly and extrusion for the cable strain relief

From medical technology to consumer electronics to automotive technology: the trend towards miniaturization continues. High-Density connectors provide the highest possible number of contacts in the most compact space. They offer new possibilities and solutions while simultaneously challenging the manufacturer. At all time the connectors' reliability and electrical and mechanical robustness must remain intact despite its compact size.

ODU AMC® product portfolio was created to improve the capabilities of the next generation military systems. ODU AMC® and ODU AMC® High-Density are advanced miniature connector solution for military applications that require significant weight and space reduction such as: helmet mounted-cameras, group voice and data radios, headsets, GPS antennas and navigation modules, battery packs, computer/PAN, wrist –worn displays or rifle mounted systems and vehicle adaptations.

The ODU AMC® High-Density connector series offer high performance data transmission, high reliability and easy handling. The product portfolio includes a USB® 3.1 Gen 1[1], USB® 2.0[1], Ethernet[1] and an HDMI®[1] option.

Providing significantly reduced weight up to 70% and fully integrated cable assembly solutions, and in shell diameters as small as 10mm up to 18.5mm (40 contacts), the ODU AMC® High-Density includes numerous high density signal configurations and tailored versions for power (up to 15A) and data transfer ( USB® 3.1 Gen 1[1] with 5A power) in a very compact package.

The shells are keyed and color-coded to ensure reliable and simple handling. Other product features include watertight protection class IP 68 (up to 20 meters), 5000 mating cycles durability, a Break-Away function for maximum safety, rugged & non-reflective surfaces, salt spray resistance, high-speed data transfer capability and an operating temperature range of -51° C (-60° F) to +125° C (+257° F).

ODU provides the full suite of complementary products and services including innovative options for cable assembly, rapid prototyping and product development, local engineering support, as well as overmolding and turn-key system solutions.

## THE EVOLUTION OF MINIATURIZATION

### 2000

**ODU MINI-SNAP® Series K**

Size 0/7 contacts/IP 68



### 2010

**ODU AMC® Series**

Size 0/7 contacts/IP 68

45% smaller than ODU MINI-SNAP series K



### 2014

**ODU AMC® High-Density**

Size 00/7 contacts/IP 68

35% smaller than ODU AMC series



 [1]Concerning data transfer protocols please note page 2

# ODU AMC® HIGH-DENSITY AT A GLANCE

Salt Spray resistance

Tested according MIL Standards

watertight IP 68 up to 20m

Power up to 15A

Rugged solid construction

Break-Away for maximum safety

Up to 5,000 mating cycles

Up to 40 Contacts (size 1.5)

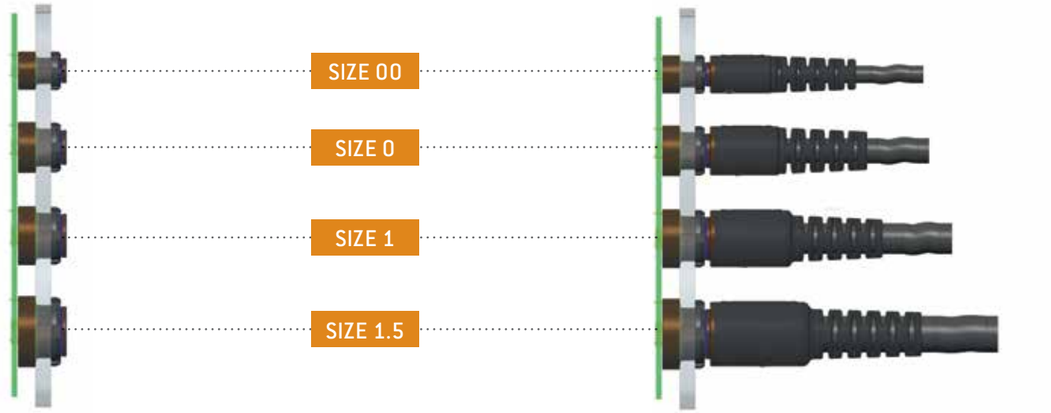
Mechanical Keying with matched color code



# ONE PC-BOARD FOR ALL SIZES

All standard sizes can be processed at the same connection level.

This allows us to place signals, data and power in various connector sizes on one PCB height – as a basic requirement for a compact system design.




# FOUR SHELL SIZES FOR MAXIMUM FLEXIBILITY

**SIZE 00**
- 2 way
- 4 way
- 7 way
- 4 way USB® 2.0[1]

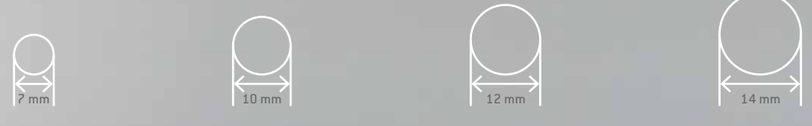
**SIZE 0**
- 9 way (15A Power + USB® 2.0)
- 12 way (USB® 3.1 Gen 1[1] + 5A Power)
- 16 way (Signal + Data)

**SIZE 1**
- 27 way (Signal + Data)

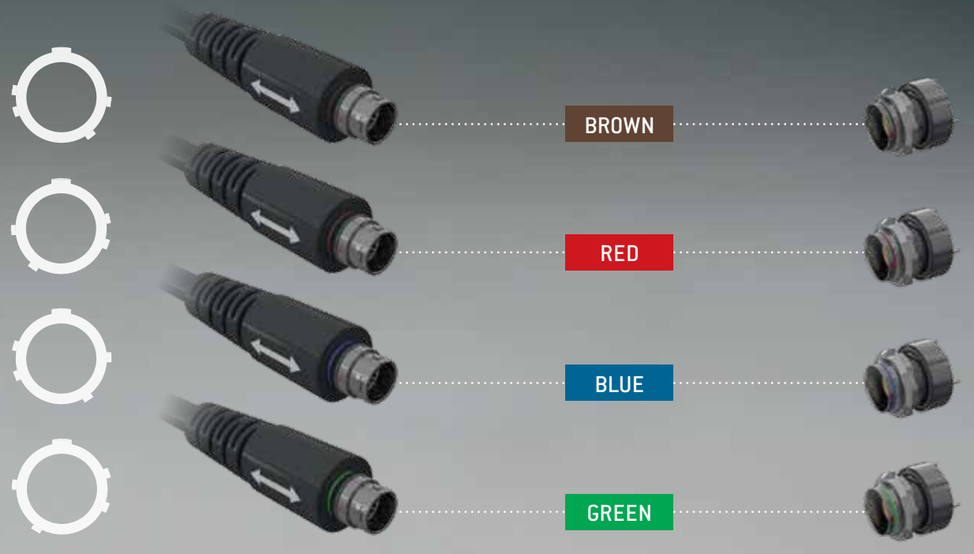
**SIZE 1.5**
- 40 way
- Multi I/O (Signal + Data)

fig. approx. 1:1

**PANEL CUT-OUT DIAMETER**




# RELIABLE AND ROBUST CODING

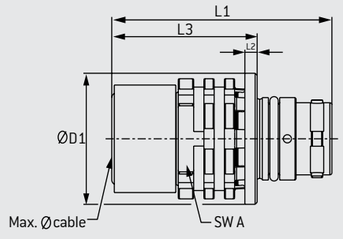





[1]Concerning data transfer protocols please note page 2


## DIMENSIONS AND DETAILS

**A1: Break-Away-Plug**



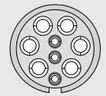
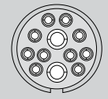
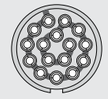
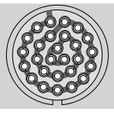
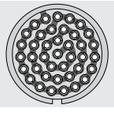

Dimensions in mm

| Size | L1 | L2 | L3 | D1 | SW A | Max. Ø cable |
|---|---|---|---|---|---|---|
| 00 | 20.0 | 1.2 | 12.8 | 9.8 | 8.0 | 5.0 |
| 0 | 21.5 | 1.2 | 14.2 | 12.8 | 10.0 | 7.0 |
| 1 | 25.2 | 1.2 | 18.0 | 14.8 | 12.0 | 8.5 |
| 1.5 | 29.2 | 1.2 | 22.0 | 16.8 | 14.0 | 10.5 |





## CONTACT CONFIGURATIONS

| Shell size | Part number | Layout | Number of contacts | Max. current[2] Single contact load | Max. wire size Soldercup | Suitable for |
|---|---|---|---|---|---|---|
| 00 | A1CW*M-P02XCE0-0000 |  | 02 | 3 A | 2 x AWG 24 (Power) | Power |
| | A1CW*M-P04XBC0-0000 |  | 04 | 1 A | 4 x AWG 28 | Signal |
| | A1CW*M-PU4XBM0-0000 |  | 04 | 1 A | 2 x AWG 28 (Signal Lines) | USB® 2.0[1] |
| | | | | 3 A | 2 x AWG 24 (Power) | |
| | A1CW*M-P07XBC0-0000 |  | 07 | 1 A | 7 x AWG 28 | Signal |
| 0 | A10W*M-P09XMM0-0000 |  | 09 | 1 A | 3 x AWG 28 (Signal Lines) | USB® 2.0[1] + Power |
| | | | | 5 A | 6 x AWG 22 (Power) | |
| | A10W*M-P12XMM0-0000 |  | 12 | 1 A | 10 x AWG 28 (Signal Lines) | USB® 3.1 Gen 1[1] + Power |
| | | | | 5 A | 2 x AWG 22 (Power) | |
| | A10W*M-P16XBC0-0000 |  | 16 | 1 A | 16 x AWG 28 | Signal |
| 1 | A11W*M-P27XBC0-0000 |  | 27 | 1 A | 27 x AWG 28 | Signal |
| 1.5 | A1AW*M-P40XBC0-0000 |  | 40 | 1 A | 40 x AWG 28 | Signal |

Notes:
Substitute "*" for desired keying/color-coding option: A, B, C or D (see key to right)
Consult factory for availability.

All connectors meet or exceed 750V AC test / 250V AC operational voltage when tested according to SAE 13441.
Maximum operating voltage at sea level up to 2000m acc. to SAE 13441.
For various application the safety requirement regarding the operating voltage is even more severe. This must be evaluated during the time of equipment engineering

Consult factory for additional information and options.

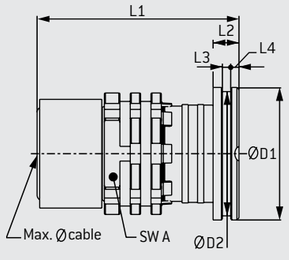
| | |
|---|---|
| A | BROWN |
| B | RED |
| C | BLUE |
| D | GREEN |

[1]Concerning data transfer protocols please note page 2

# K1: IN-LINE RECEPTACLE

## DIMENSIONS AND DETAILS

**K1: In-Line Receptacle**



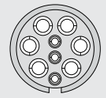
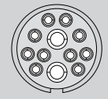
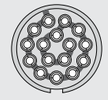
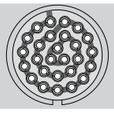
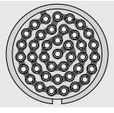

Dimensions in mm

| Size | L1 | L2 | L3 | L4 | D1 | D2 | SW A | Max. Ø cable |
|---|---|---|---|---|---|---|---|---|
| 00 | 18.7 | 2.5 | 0.8 | 0.8 | 9.8 | 9.0 | 8.0 | 5.0 |
| 0 | 19.5 | 2.5 | 0.8 | 0.8 | 12.8 | 12.0 | 10.0 | 7.0 |
| 1 | 23.5 | 2.5 | 0.8 | 0.8 | 14.8 | 14.0 | 12.0 | 8.5 |
| 1.5 | 27.5 | 2.5 | 0.8 | 0.8 | 16.8 | 16.0 | 14.0 | 10.5 |





## CONTACT CONFIGURATIONS

| Shell size | Part number | Layout | Number of contacts | Max. current[2] Single contact load | Max. wire size Soldercup | Suitable for |
|---|---|---|---|---|---|---|
| 00 | K1CW*M-P02WCE0-0000 |  | 02 | 3 A | 2 x AWG 24 (Power) | Power |
| | K1CW*M-P04WBC0-0000 |  | 04 | 1 A | 4 x AWG 28 | Signal |
| | K1CW*M-PU4WBM0 · 0000 |  | 04 | 1 A | 2 x AWG 28 (Signal Lines) | USB® 2.0[1] |
| | | | | 3 A | 2 x AWG 24 (Power) | |
| | K1CW*M-P07WBC0-0000 |  | 07 | 1 A | 7 x AWG 28 | Signal |
| 0 | K10W*M-P09WMM0-0000 |  | 09 | 1 A | 3 x AWG 28 (Signal Lines) | USB® 2.0[1] + Power |
| | | | | 5 A | 6 x AWG 22 (Power) | |
| | K10W*M-P12WM M0-0000 |  | 12 | 1 A | 10 x AWG 28 (Signal Lines) | USB® 3.1 Gen 1[1] + Power |
| | | | | 5 A | 2 x AWG 22 (Power) | |
| | K10W*M-P16WBC0-0000 |  | 16 | 1 A | 16 x AWG 28 | Signal |
| 1 | K11W*M-P27WBC0-0000 |  | 27 | 1 A | 27 x AWG 28 | Signal |
| 1.5 | K1AW*M-P40WBC0-0000 |  | 40 | 1 A | 40 x AWG 28 | Signal |

Notes:
Substitute "*" for desired keying/color-coding option: A, B, C or D (see key to right)
Consult factory for availability.

All connectors meet or exceed 750V AC test / 250V AC operational voltage when tested according to SAE 13441.
Maximum operating voltage at sea level up to 2000m acc. to SAE 13441.
For various application the safety requirement regarding the operating voltage is even more severe. This must be evaluated during the time of equipment engineering
Consult factory for additional information and options.

A BROWN
B RED
C BLUE
D GREEN

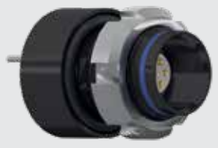
[1]Concerning data transfer protocols please note page 2

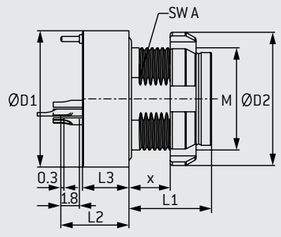
# GK: PANEL MOUNT RECEPTACLE

## FOR WIRE TERMINATION

## DIMENSIONS AND DETAILS

**GK: Receptacle**






Dimensions in mm

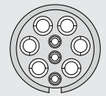
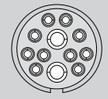
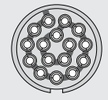
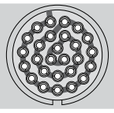
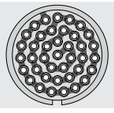
PANEL CUT-OUT


| Size | L1 | L2[1] | L3 | X max. | D1 | D2 | SW A | M | Panel cut-out SW | Panel cut-out Ø |
|---|---|---|---|---|---|---|---|---|---|---|
| 00 | 8.0 | 6.6 | 4.5 | 4.0 | 10.0 | 10.0 | 6.5 | 7 x 0.5 | 6.6 | 7.1 |
| 0 | 8.0 | 6.6 | 4.5 | 4.0 | 13.2 | 13.0 | 9.0 | 10 x 0.5 | 9.1 | 10.1 |
| 1 | 8.0 | 6.6 | 4.5 | 4.0 | 15.3 | 15.0 | 11.5 | 12 x 0.5 | 11.6 | 12.1 |
| 1.5 | 8.0 | 6.6 | 4.5 | 4.0 | 18.5 | 18.0 | 13.0 | 14 x 0.5 | 13.1 | 14.1 |





## CONTACT CONFIGURATIONS

| Shell size | Part number | Layout | Number of contacts | Max. current[2] Single contact load | Max. wire size Soldercup | Suitable for |
|---|---|---|---|---|---|---|
| 00 | GKCW*M-P02WCE0-000L |  | 02 | 3 A | 2 x AWG 24 (Power) | Power |
| | GKCW*M-P04WBC0-000L |  | 04 | 1 A | 4 x AWG 28 | Signal |
| | GKCW*M-PU4WBM0-000L |  | 04 | 1 A | 2 x AWG 28 (Signal Lines) | USB® 2.0[1] |
| | | | | 3 A | 2 x AWG 24 (Power) | |
| | GKCW*M-P07WBC0-000L |  | 07 | 1 A | 7 x AWG 28 | Signal |
| 0 | GK0W*M-P09WMM0-000L |  | 09 | 1 A | 3 x AWG 28 (Signal Lines) | USB® 2.0[1] + Power |
| | | | | 5 A | 6 x AWG 22 (Power) | |
| | GK0W*M-P12WMM0-000L |  | 12 | 1 A | 10 x AWG 28 (Signal Lines) | USB® 3.1 Gen 1[1] + Power |
| | | | | 5 A | 2 x AWG 22 (Power) | |
| | GK0W*M-P16WBC0-000L |  | 16 | 1 A | 16 x AWG 28 | Signal |
| 1 | GK1W*M-P27WBC0-000L |  | 27 | 1 A | 27 x AWG 28 | Signal |
| 1.5 | GKAW*M-P40WBC0-000L |  | 40 | 1 A | 40 x AWG 28 | Signal |

Notes:
Substitute "*" for desired keying/color-coding option: A, B, C or D (see key to right)
Consult factory for availability.

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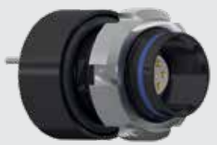
| | |
|---|---|
| A | BROWN |
| B | RED |
| C | BLUE |
| D | GREEN |

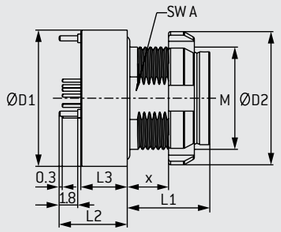
[1]Concerning data transfer protocols please note page 2

# GK: PANEL MOUNT RECEPTACLE
## FOR PCB TERMINATION

## DIMENSIONS AND DETAILS

**GK: Receptacle**






Dimensions in mm

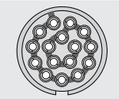
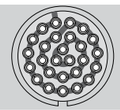
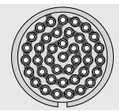
PANEL CUT-OUT


| Size | L1 | L2[1] | L3 | X max. | D1 | D2 | SW A | M | Panel cut-out SW | Panel cut-out Ø |
|---|---|---|---|---|---|---|---|---|---|---|
| 00 | 8.0 | 6.6 | 4.5 | 4.0 | 10.0 | 10.0 | 6.5 | 7 x 0.5 | 6.6 | 7.1 |
| 0 | 8.0 | 6.6 | 4.5 | 4.0 | 13.2 | 13.0 | 9.0 | 10 x 0.5 | 9.1 | 10.1 |
| 1 | 8.0 | 6.6 | 4.5 | 4.0 | 15.3 | 15.0 | 11.5 | 12 x 0.5 | 11.6 | 12.1 |
| 1.5 | 8.0 | 6.6 | 4.5 | 4.0 | 18.5 | 18.0 | 13.0 | 14 x 0.5 | 13.1 | 14.1 |





## CONTACT CONFIGURATIONS

| Shell size | Part number | Layout | Number of contacts | Max. current[2] Single contact load | Suitable for |
|---|---|---|---|---|---|
| 00 | GKCW*M-P02UC00-000L |  | 02 | 3 A | Power |
| | GKCW*M-P04UB00-000L |  | 04 | 1 A | Signal |
| | GKCW*M-PU4UB00-000L |  | 04 | 1 A<br>3 A | USB® 2.0[1] |
| | GKCW*M-P07UB00-000L |  | 07 | 1 A | Signal |
| 0 | GK0W*M-P09UM00-000L |  | 09 | 1 A<br>5 A | USB® 2.0[1] + Power |
| | GK0W*M-P12UM00-000L |  | 12 | 1 A<br>5 A | USB® 3.1 Gen 1[1] + Power |
| | GK0W*M-P16UB00-000L |  | 16 | 1 A | Signal |
| 1 | GK1W*M-P27UB00-000L |  | 27 | 1 A | Signal |
| 1.5 | GKAW*M-P40UB00-000L |  | 40 | 1 A | Signal |

Notes:
Substitute "*" for desired keying/color-coding option: A, B, C or D (see key to right)
Consult factory for availability.

All connectors meet or exceed 750V AC test / 250V AC operational voltage when tested according to SAE 13441.
Maximum operating voltage at sea level up to 2000m acc. to SAE 13441.
For various application the safety requirement regarding the operating voltage is even more severe. This must be evaluated during the time of equipment engineering
Consult factory for additional information and options.

A BROWN
B RED
C BLUE
D GREEN

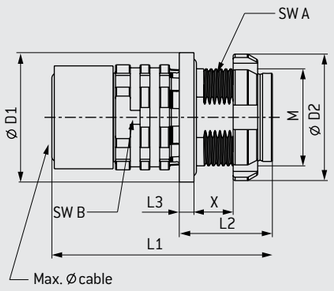
[1]Concerning data transfer protocols please note page 2

# G6: PANEL MOUNT RECEPTACLE

## FOR CABLE TERMINATION

## DIMENSIONS AND DETAILS

**G6: Receptacle**




Dimensions in mm

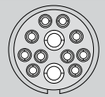
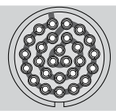
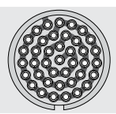
PANEL CUT-OUT


| Size | L1 | L2[1] | L3 | X max. | D1 | D2 | SW A | SW B | M | MAX Ø CABLE | Panel cut-out SW | Panel cut-out Ø |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 00 | 21 | 1.5 | 8 | 4 | 9.9 | 10 | 6.5 | 8 | 7 x 0.5 | 5 | 6.6 | 7.1 |
| 0 | 22.5 | 1.5 | 8 | 4 | 13.2 | 12.9 | 9 | 10 | 10 x 0.5 | 7 | 9.1 | 10.1 |
| 1 | 26.5 | 1.5 | 8 | 4 | 15.3 | 14.9 | 11.5 | 12 | 12 x 0.5 | 8.5 | 11.6 | 12.1 |
| 1.5 | 30.5 | 1.5 | 8 | 4 | 18.5 | 17.9 | 13 | 14 | 14 x 0.5 | 10.5 | 13.1 | 14.1 |





## CONTACT CONFIGURATIONS

| Shell size | Part number | Layout | Number of contacts | Max. current[2] Single contact load | Max. wire size Soldercup | Suitable for |
|---|---|---|---|---|---|---|
| 00 | G6CW*M-P02WCE0-0000 |  | 02 | 3 A | 2 x AWG 24 (Power) | Power |
| | G6CW*M-P04WBC0-0000 |  | 04 | 1 A | 4 x AWG 28 | Signal |
| | G6CW*M-PU4WBM0-0000 |  | 04 | 1 A | 2 x AWG 28 (Signal Lines) | USB® 2.0[1] |
| | | | | 3A | 2 x AWG 24 (Power) | |
| | G6CW*M-P07WBC0-0000 |  | 07 | 1 A | 7 x AWG 28 | Signal |
| 0 | G60W*M-P09WMM0-0000 |  | 09 | 1 A | 3 x AWG 28 (Signal Lines) | USB® 2.0[1] + Power |
| | | | | 5A | 6 x AWG 22 (Power) | |
| | G60W*M-P12WMM0-0000 |  | 12 | 1 A | 10 x AWG 28 (Signal Lines) | USB® 3.1 Gen 1[1] + Power |
| | | | | 5 A | 2 x AWG 22 (Power) | |
| | G60W*M-P16WBC0-0000 |  | 16 | 1 A | 16 x AWG 28 | Signal |
| 1 | G61W*M-P27WBC0-0000 |  | 27 | 1 A | 27 x AWG 28 | Signal |
| 1.5 | G6AW*M-P40WBC0-0000 |  | 40 | 1 A | 40 x AWG 28 | Signal |

Notes:
Substitute "*" for desired keying/color-coding option: A, B, C or D (see key to right)
Consult factory for availability.

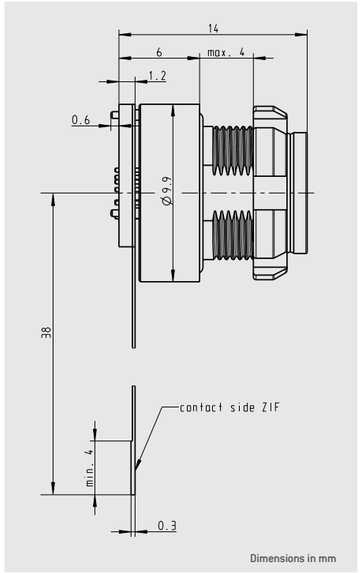
All connectors meet or exceed 750V AC test / 250V AC operational voltage when tested according to SAE 13441.
Maximum operating voltage at sea level up to 2000m acc. to SAE 13441.
For various application the safety requirement regarding the operating voltage is even more severe. This must be evaluated during the time of equipment engineering
Consult factory for additional information and options.

| | |
|---|---|
| A | BROWN |
| B | RED |
| C | BLUE |
| D | GREEN |

[1]Concerning data transfer protocols please note page 2

# FACTORY-TERMINATED FLEX ASSEMBLIES

## DIMENSIONS AND DETAILS




Dimensions in mm

| Part number | AMC High Density Connector (Included) | Number of contacts | Connector Shell Size | Connector Keying |
|---|---|---|---|---|
| C00.71C.100.040.001 | GKCWAM-P04UB00-000L | 04 | 00 | A |
| C00.71C.100.070.001 | GKCWAM-P07UB00-000L | 07 | 00 | A |
| C00.701.100.160.001 | GK0WAM-P16UB00-000L | 16 | 0 | A |
| C00.716.100.400.001 | GKAWAM-P40UB00-000L | 40 | 1.5 | A |
| C00.711.100.270.001 | GK1WAM-P27UB00-000L | 27 | 1 | A |

Notes:
Additional lengths, configurations and keyings available on request.
Contact ODU for more information.

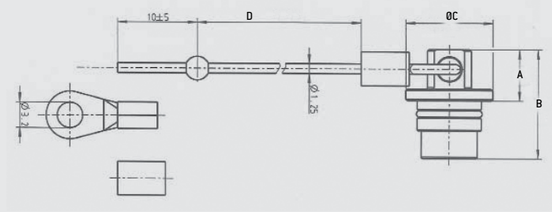
Flex is designed to work with suitable ZIF connector (not supplied).
Contact ODU for more information.



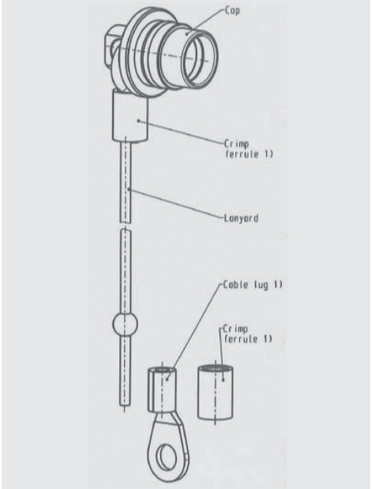


# PROTECTIVE CAPS

## FOR RECEPTACLE GK AND IN-LINE RECEPTACLE

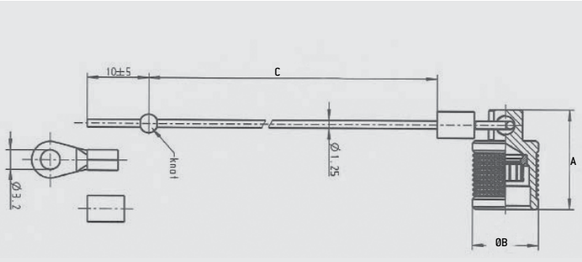



Crimp ferrule and crimp lug are included.

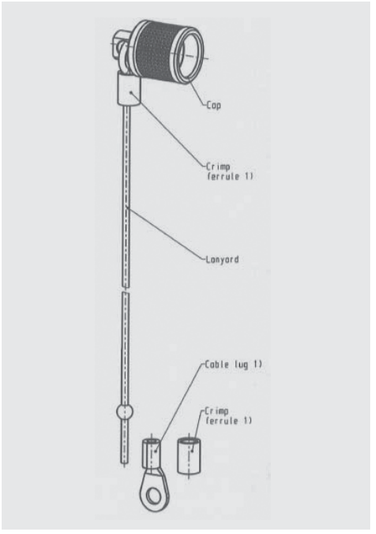



| Size | Part Number | Dimensions in mm A | B | C | D |
|---|---|---|---|---|---|
| 00 | 713.650.097.002.359 | 6.5 | 13.8 | 8.5 | 200 |
| 0 | 700.650.097.002.359 | 6.5 | 13.8 | 10.9 | 200 |
| 1 | 701.650.097.002.359 | 6.5 | 13.8 | 13.5 | 200 |
| 1.5 | 715.650.097.002.359 | 6.5 | 13.8 | 14.9 | 200 |

## FOR BREAK-AWAY PLUG




Crimp ferrule and crimp lug are included.




| Size | Part Number | Dimensions in mm A | B | C |
|---|---|---|---|---|
| 00 | 713.650.097.001.359 | 16.2 | 8.6 | 200 |
| 0 | 700.650.097.001.359 | 16.2 | 10.7 | 200 |
| 1 | 701.650.097.001.359 | 16.2 | 13.5 | 200 |
| 1.5 | 715.650.097.001.359 | 16.2 | 14.8 | 200 |

## MATERIALS

| Part | Material |
|---|---|
| Cap | Brass / ruthenium coated nickel |
| Lanyard | Aramid / black |
| Crimp ferrule, cable lug | Brass, copper / zinc-nickel, black |
| Shrinktube | FPO (RNF-100) / black |

## ENVIRONMENTAL AND ELECTRICAL CHARACTERISTICS

| Type | Performance |
|---|---|
| Tightness | IP68 (20 m) |

# HIGH SPEED DATA TRANSMISSION AT A GLANCE

SIZE 00
USB® 2.0[1]
480 MBit/s

USB® 2.0[1]

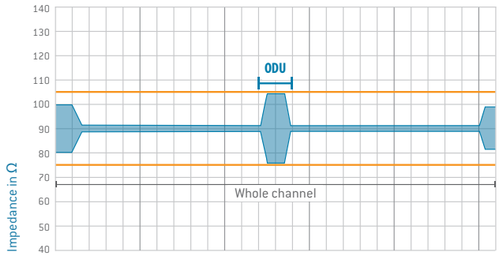
Size 0
USB® 3.1 Gen 1[1]
5 GBit/s

USB® 3.1 Gen 1[1]

- USB® 3.1 Gen 1[1] data transfer rates up to 5 Gbit/s
- USB® 2.0[1] data transfer rates up to 480 Mbit/s
- Ethernet[1] CAT5[1] data transfer rates up to 1 Gbit/s
- HDMI® 2.0[1] data transfer rates up to 8.16 Gbit/s

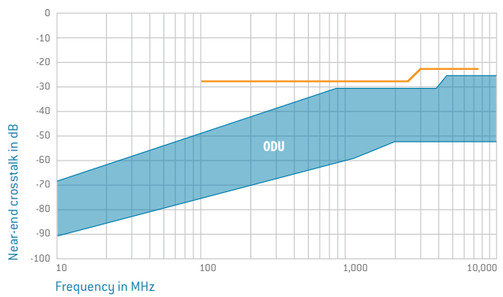
## CHARACTERISTIC IMPEDANCE

ODU AMC® High-Density connector with 3 m cable in total and 2x USB® 3.1 Gen 1[1] Type A connector




limits

## NEAR-END CROSSTALK



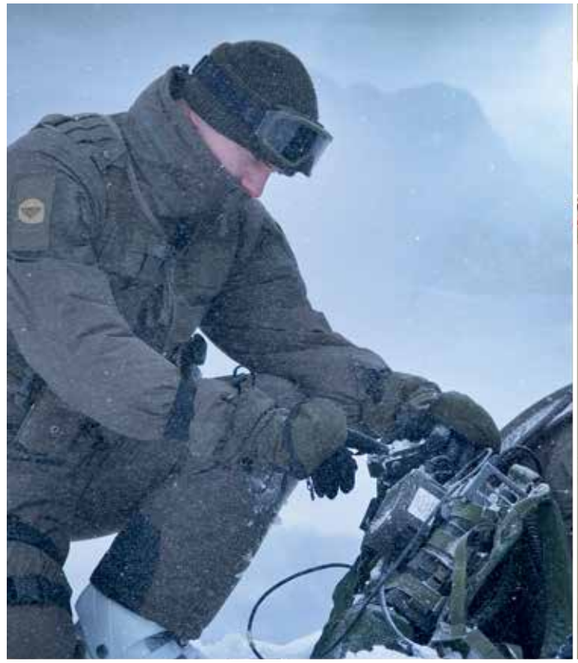

limits

 [1]Concerning data transfer protocols please note page 2



# SPECIAL APPLICATIONS NEED SPECIAL SYSTEM SOLUTIONS

Every connector also needs its cable. In addition to high quality connectors, ODU offers a comprehensive assembly service from one supplier which translates into innovative options for assembly and extrusion for the cable bend relief, as well as connections to flex and PCB solutions on the device side.



# ADVANCED CONNECTOR SOLUTION APPLICABILITY

## ODU ADVANCED PRODUCT PORTFOLIO:

ODU AMC® Break-Away

ODU AMC® Push-Pull

ODU AMC® High-Density

ODU AMC® Easy-Clean

### PERSONAL COMPUTER

- Small and light

### VEHICLE ADAPTION

- Robust and reliable

### GROUP VOICE AND DATA RADIO

- Excellent shielding and data transmission up to 10 GBit

### RIGHT-ANGLED CONNECTOR

- Compact design

### NAVIGATION MODULE

- Easy-Clean version

### SOLDIER CONTROL UNIT

- Cable-to-cable connection


## ODU MINI-SNAP®

ODU MINI-SNAP® Series F

ODU MINI-SNAP® Series K

ODU MINI-SNAP® Series B Super-Shorty





# ADVANCED CUSTOMER BENEFITS

- Close cooperation with our customers to find the optimal solution
- ODU handles the complete processing, from procuring the cable and assembly up to individual potting or overmolding
- 100% inspection
- Connectors can be assembled by the customer – ODU expertise available for assistance

A PERFECT ALLIANCE.

ODU AMC®

# ODU GROUP WORLDWIDE

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Fax: +49 8631 6156-49
E-mail: zentral@odu.de
www.odu.de

## PRODUCTION AND LOGISTICS SITES

| | |
|---|---|
| **Germany** | Otto Dunkel GmbH |
| **China** | ODU (Shanghai) Connectors Manufacturing Co.Ltd |
| **Mexico** | ODU Mexico Manufacturing S.R.L. de C.V. |
| **Romania** | ODU Romania Manufacturing S.R.L. |
| **USA** | ODU-USA, Inc. ODU North American Logistics |

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**Further information and specialized representatives can be found at:**
www.odu-usa.com/contact

Learn more about ODU.