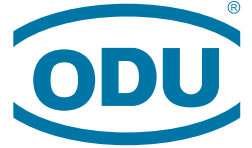


A PERFECT ALLIANCE.



ODU-MAC[®] **White-Line** ZERO

The dynamic hybrid connector

MANUAL MATING

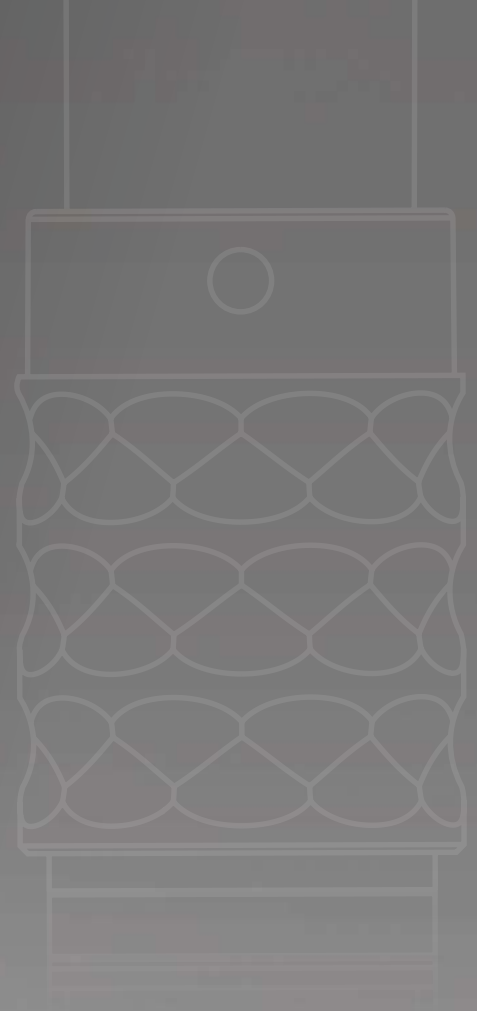


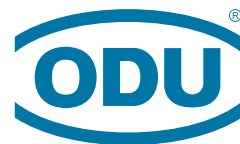
ODU-MAC[®] WHITE-LINE

ODU-MAC[®] SILVER-LINE | ODU DOCK SILVER-LINE ODU-MAC[®] BLUE-LINE

A PERFECT ALLIANCE.

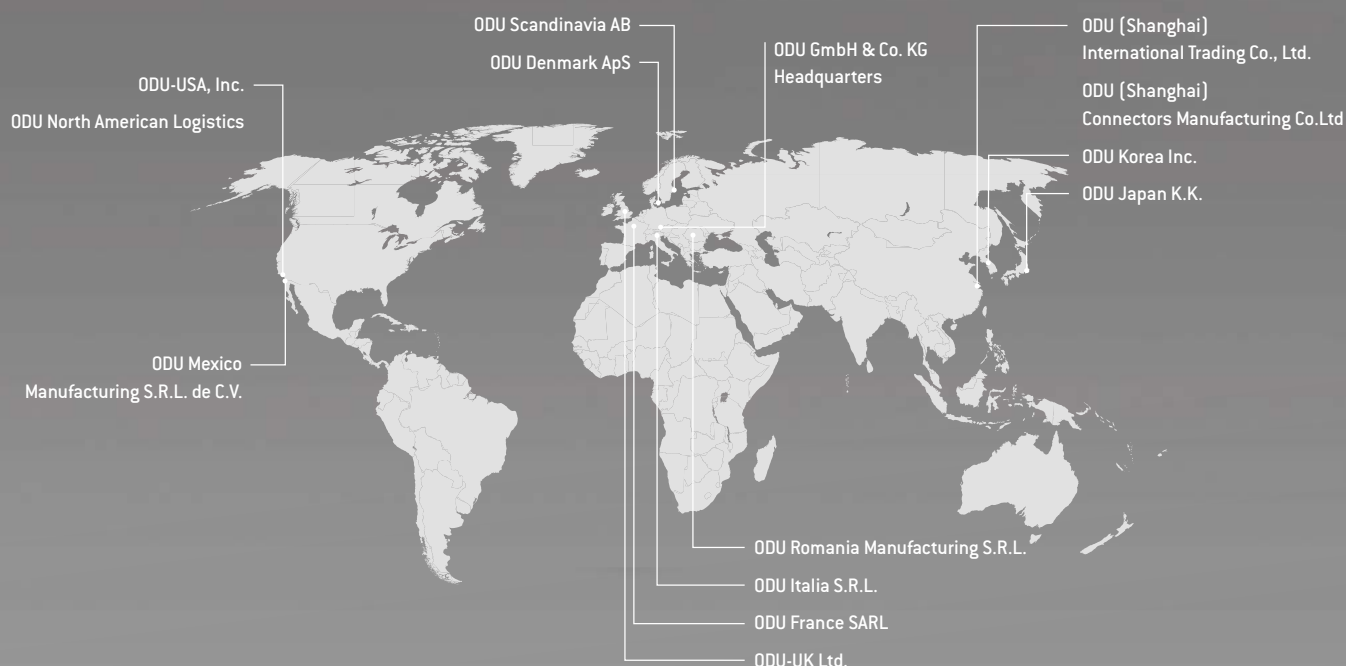
Creating connections, building alliances, collaborating into the future: Whether two technical components come together to form a unit or people come together to strive for great results – the key is to aspire to achieve superb results. This goal drives our work. **Perfect connections that inspire and deliver on the promises.**





A PERFECT ALLIANCE.

” WORLDWIDE CUSTOMER PROXIMITY



ODU GROUP OVERVIEW

- More than 75 years of experience in connector technology
- A turnover of € 200 million
- Over 2,300 employees worldwide
- Sales subsidiaries in China, Denmark, France, Germany, Italy, Japan, Korea, Sweden, 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

As of February 2019

CERTIFICATES & APPROVALS

- ISO 9001
- IATF 16949
- ISO 13485
- ISO 14001
- ISO 50001
- Wide range of UL, CSA, VG and VDE approvals
- UL Wiring Harnesses certified

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

ODU-MAC® ZERO – THE MINI DYNAMIC PLASTIC HOUSING



SOLID GRIP



BLIND MATING



NON-MAGNETIC



SPACE-SAVING



ONE-STOP CONNECTORS
AND CABLE ASSEMBLY

THE ODU-MAC® ZERO – SMALL SIZE, LARGE VARIETY

When it comes to performance, the ODU-MAC® ZERO is nearly on par with its “big brother”. Need a space-saving hybrid connector which can combine several different media? The ZERO from the ODU-MAC® product series is your ideal choice. Its symmetric housing geometry enables a generous range – up to 9 units – of signals, power, data-rate and coax modules. In place of an aluminum frame, the plastic housing parts have integrated rails, making the use of magnetic components no longer necessary.

This light, compact multitasker is the result of significant developmental work, with its stylish design making it an innovative eye-catcher.

IMPRESSIVE – THE ODU-MAC® ZERO

- Suitable for a wide range of ODU-MAC® modules
- Can be fitted with 9 units
- Up to 60,000 mating cycles
- 3 different cable outlets: straight, 45°, 90°
- Compact, dynamic housing design
- Simple, safe housing locking (Break-Away function/emergency release)
- Especially easy to clean
- IP54

THE MODULAR MULTITASKER

This is how a solid, effective, and attractive overall connection is created – one whose functionality simply can't be surpassed. Confusion due to an excessive number of connections?

This challenge belongs to the past – because the customized ODU-MAC® ZERO is today's solution.

PRODUCT FEATURES OVERVIEW

- Housing made of 2 plastic half-shells which also form the frame
- Ergonomic housing design with lateral grip recess
- Coding: by guiding pins (\varnothing 4 mm, length 16 mm), housing geometry, coding modules and color-coded cable bend relief varieties
- Easy cleaning thanks to fewer dirt-collecting edges and additional screw cover
- Integrated guiding pins/bushes
- Low mating/demating forces with approx. 7 N without contacts
- Bio-compatibility upon request
- Black or gray housing upon request



MODULARITY AND ERGONOMIC DESIGN FOR THE SMALLEST OF SPACES

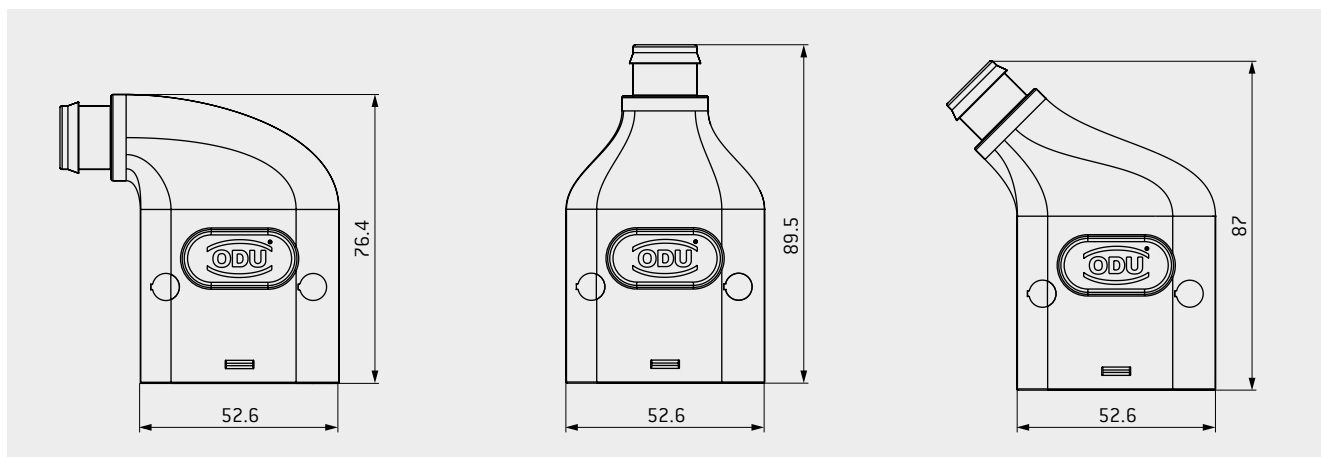





Cable-to-cable hood available upon request.

CONNECTOR HOUSING FOR ASSEMBLY

Connector housing for mounting on the cable with different cable entries.
ODU-MAC[®] rail for installing the insulator is already integrated in the housing.

SNAP-IN LOCKING (BREAK-AWAY FUNCTION)



Part number	Cable exit	Size	Units ¹ 2.54 mm
656.560.004.001.000	90°	ZERO	
656.560.006.001.000	0°	ZERO	
656.560.002.001.000	45°	ZERO	

TECHNICAL DATA

Color of housing	White Black/Gray on request
Locking cycles	60,000
Material	PC Lexan (PEI on request)
Protection class ²	IP54
Operating temperature	-40 °C to +125 °C
Cable-Ø	8 to 14.5 mm

The cable bend relief must be ordered separately.

¹The frame is already permanently integrated and consists of nine units. ² IEC 60529:2013 (VDE 0470-1:2014).

RECEPTACLE

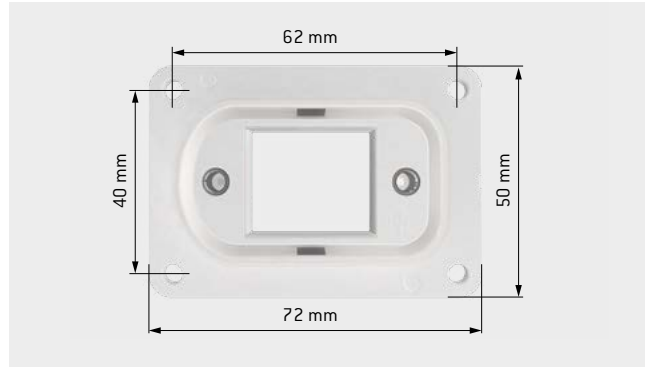
For integration into the device.

SNAP-IN LOCKING (BREAK-AWAY FUNCTION)

CODING AND PACKAGING DIMENSIONS

Slender, light design with easy, safe handling:

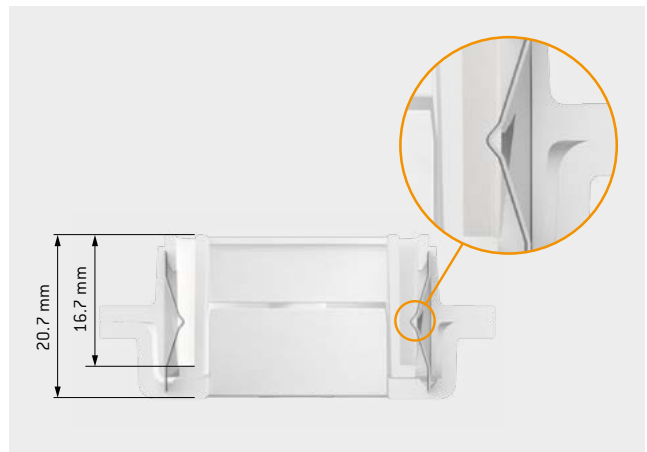
- Maximum mating security through mechanical coding (D-shape)
- Compact, space-saving design with two mounting options



SNAP-IN LOCKING

Easy mating, automatic locking, quick demating option when necessary:

- Quick, reliable housing locking thanks to snap fits and sealing strip (frictional locking principle)
- Low mating/demating forces (approx. 7 N for the housing) guarantee quick connection demating (Break-Away function/emergency release)



AFFIXING MODULES TO DEVICE PARTS

All module varieties can be quickly, easily and securely integrated:

- Insert module and press the 2 half-shells together
- Affix the device part with screws



MOUNTING FROM BELOW

Mounting with standoffs (not included) is preferable.

MOUNTING FROM ABOVE

Cable-to-cable hood available upon request.

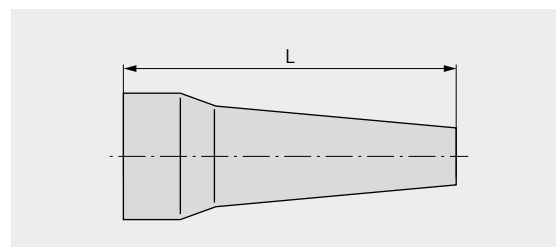
COMPLETE SYSTEMS FROM ONE SOURCE



- + ODU also offers tested and pre-assembled connectors. Our advanced customer benefits include rapid product development, custom connector solution capabilities and manufacturing facilities in Europe, China and the US.

SILICONE BEND RELIEFS

- For cable diameters of 8–14.5 mm (ODU MINI-SNAP® size 4)
- Ideal for color coding
- White, Gray and Black are standard stock – other colors available upon request



Part number	Dim. L mm	Cable jacket (Ø outside)	
		min.	max.
704.023.____.965.080	60	8	10
704.023.____.965.100		10	12
704.023.____.965.120		12	14
704.023.____.965.140		14	16

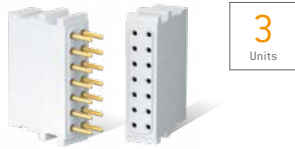
Color code	Color	RAL no. ¹ (similar)
202	Red	3020
203	White ²	9010
204	Yellow	1016
205	Green	6029
206	Blue	5002
207	Gray ²	7005
208	Black ²	9005



¹ Due to variations in raw materials, colors may differ slightly from RAL numbers. ² Standard colors with short delivery period.

OVERVIEW OF ALL MODULES

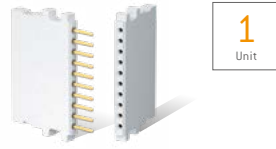
SIGNAL



3
Units

+ 14 contacts / Contact-Ø: 1.02 mm

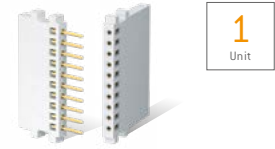
- Operating voltage¹ 320 V
- Rated impulse voltage¹ 2,500 V
- Max. continuous current² 13.5 A at 0.5 mm²
- Mating cycles min. 100,000



1
Unit

+ 10 contacts / Contact-Ø: 0.76 mm

- Operating voltage¹ 250 V
- Rated impulse voltage¹ 1,500 V
- Max. continuous current² 11 A at 0.38 mm²
- Mating cycles min. 100,000



1
Unit

+ 10 contacts / Contact-Ø: 0.7 mm

- Operating voltage¹ 32 V
- Rated impulse voltage¹ 1,500 V
- Max. continuous current² 6 A at 0.38 mm²
- Mating cycles min. 5,000



2
Units

+ 6 contacts / Contact-Ø: 1.02 mm

- Operating voltage¹ 400 V
- Rated impulse voltage¹ 3,000 V
- Max. continuous current² 13.5 A at 0.5 mm²
- Mating cycles min. 100,000



2
Units

+ 5 contacts / Contact-Ø: 1.5 mm

- Operating voltage¹ 500 V
- Rated impulse voltage¹ 2,500 V
- Max. continuous current² 27 A at 1.5 mm²
- Mating cycles min. 100,000

SIGNAL AND POWER



NON-MAGNETIC VERSION FOR SIGNAL AND POWER AVAILABLE UPON REQUEST

POWER



3
Units

+ 4 contacts / Contact-Ø: 2.41 mm

- Operating voltage¹ 500 V
- Rated impulse voltage¹ 3,000 V
- Max. continuous current² 41 A at AWG 12
- Mating cycles min. 100,000



3
Units

+ 3 contacts / Contact-Ø: 3 mm

- Operating voltage¹ 500 V
- Rated impulse voltage¹ 3,000 V
- Max. continuous current² 58 A at 6 mm²
- Mating cycles min. 100,000



4
Units

+ 3 contacts / Contact-Ø: 3 mm

- Operating voltage¹ 2,500 V
- Rated impulse voltage¹ 10,000 V
- Max. continuous current² 58 A at 6 mm²
- Mating cycles min. 100,000

COAX



3
Units

+ 4 contacts / 50 Ω

- Frequency range 0 to 1.3 GHz
- Mating cycles min. 60,000



5
Units

+ 2 contacts / 50 Ω

- Frequency range 0 to 9.0 GHz
- Mating cycles min. 100,000



5
Units

+ 2 contacts / 50 Ω

- Frequency range 0 to 2.4 GHz
- Mating cycles min. 100,000

¹ Acc. to IEC 60664-1:2007 (VDE 0110-1:2008) for degree of pollution: 2. ² See p. 192 of ODU-MAC® Silver-Line | White-Line catalog for definition of max. continuous current.

COAX



+ 2 contacts / 50 Ω

- Frequency range 0 to 2.8 GHz
- Mating cycles min. 100,000



+ 2 contacts / 75 Ω

- Frequency range 0 to 3.0 GHz
- Mating cycles min. 100,000

HIGH-SPEED CONNECTOR/ Shielded implementation/suitable for all common bus systems



5 Units
 USB® 2.0³, USB® 3.2 Gen1x1³,
 FireWire®³, Ethernet³

+ 2 to 10 contacts / size 0

- Mating cycles min. 10,000

Selected inserts are suitable and certified for data rates of up to 5 Gbit/s (USB® 3.2 Gen 1x1).




6 Units
 USB® 2.0³, USB® 3.2 Gen1x1³,
 FireWire®³, Ethernet³

+ 2 to 14 contacts / size 1

- Mating cycles min. 10,000
 with springwire min. 60,000

Selected inserts are suitable and certified for data rates of up to 1 Gbit/s.




5
Units

3
Units

1
Unit

+ Blank modules




5
Units

3
Units

2
Units


1
Unit

+ Spacer modules



1
Unit

+ Coding modules



1
Unit

+ Pin protection modules

ADDITIONAL MODULES



3
Units

+ Lens connector for POF

- Lens with HFBR ferrule
- Cable type: POF 980/1,000
- Insertion loss < 4 dB with polished fiber



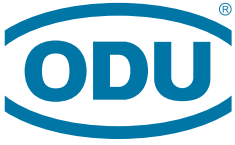
4
Units

+ 8-channel module (coax option)

- Up to 510 MHz
- 100,000 mating cycles
- Easy to assemble

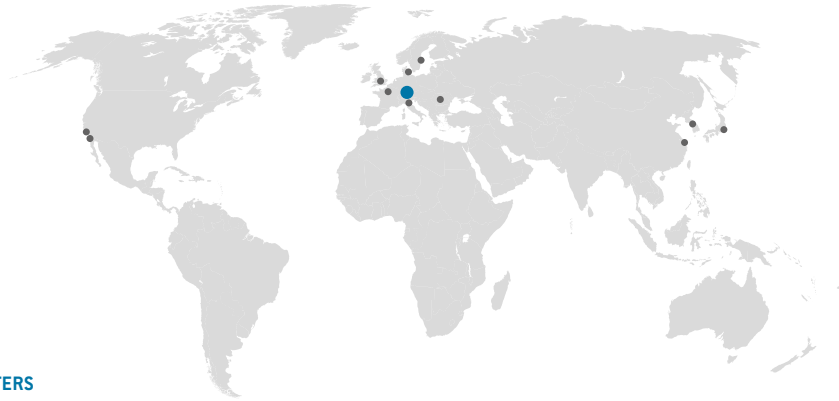
SPECIAL MODULES

³These ODU specific connectors can transmit common data transmission protocols such as USB® 2.0, USB® 3.2 Gen 1x1, FireWire® and Ethernet, but they are not USB®, FireWire®- and Ethernet-standard connectors.



A PERFECT ALLIANCE.

ODU GROUP WORLDWIDE



HEADQUARTERS

ODU GmbH & Co. KG

Pregelstraße 11, 84453 Mühldorf a. Inn, Germany
Phone: +49 8631 6156-0, Fax: +49 8631 6156-49, E-mail: sales@odu.de

SALES LOCATIONS

ODU (Shanghai)

International Trading Co., Ltd.
Phone: +86 21 58347828-0
E-mail: sales@odu.com.cn
www.odu.com.cn

ODU Japan K.K.

Phone: +81 3 6441 3210
E-mail: sales@odu.co.jp
www.odu.co.jp

ODU-UK Ltd.

Phone: +44 330 002 0640
E-mail: sales@odu-uk.co.uk
www.odu-uk.co.uk

ODU Denmark ApS

Phone: +45 2233 5335
E-mail: sales@odu-denmark.dk
www.odu-denmark.dk

ODU Korea Inc.

Phone: +82 2 6964 7181
E-mail: sales@odu-korea.kr
www.odu-korea.kr

ODU-USA, Inc.

Phone: +1 805 484-0540
E-mail: sales@odu-usa.com
www.odu-usa.com

ODU France SARL

Phone: +33 1 3935-4690
E-mail: sales@odu.fr
www.odu.fr

ODU Romania Manufacturing S.R.L.

Phone: +40 269 704638
E-mail: sales@odu-romania.ro
www.odu-romania.ro

Further information and specialized representatives can be found at:

www.odu-connectors.com/contact

ODU Italia S.R.L.

Phone: +39 331 8708847
E-mail: sales@odu-italia.it
www.odu-italia.it

ODU Scandinavia AB

Phone: +46 176 18262
E-mail: sales@odu.se
www.odu.se

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 North American Logistics



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ODU-CK-NUE

ODU-MAC® ZERO

ODU-MAC® ZERO/B/0120/EN