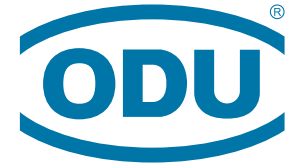


ODU-MAC[®] Blue-Line



Universal solution – fast, modular and flexible in a small installation space.

OVERVIEW

↔ min. 10,000 mating cycles 🔒 Manual mating, automatic docking

HDMI USB Ethernet D
ODU HIGH SPEED DATA TECHNOLOGY

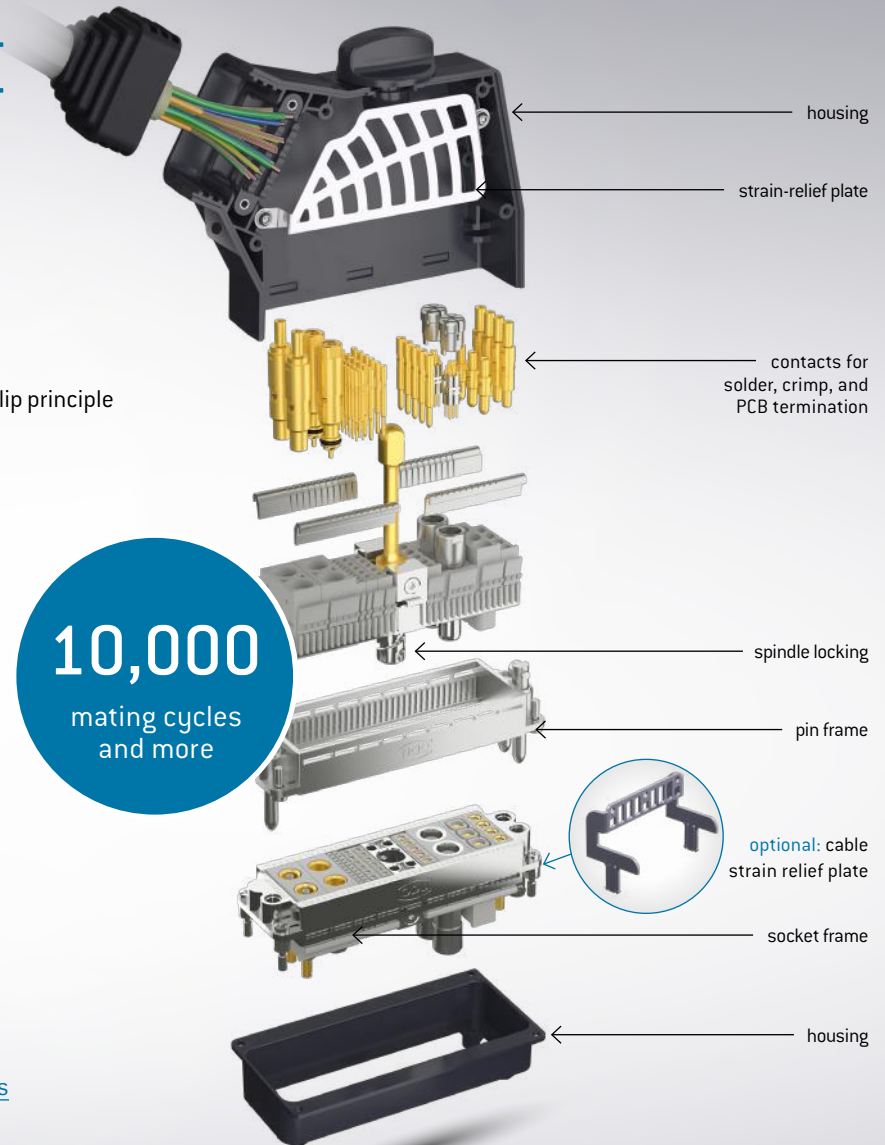


THE MODULAR PRINCIPLE

CONVINCING – ODU-MAC® BLUE-LINE

- + Manual connector solution with a variety of housing variants
- + Various locking options
- + Space saving with very high packing density
- + Easy handling: toolless assembly and removal of the modules with clip principle
- + Fast change of the crimp-clip contact (when already assembled)
- + Including cable assembly
- + Numerous data transmission modules

10,000
mating cycles
and more



For further information please visit: www.odu-connectors.com/downloads

MODULARITY – YOUR BENEFITS

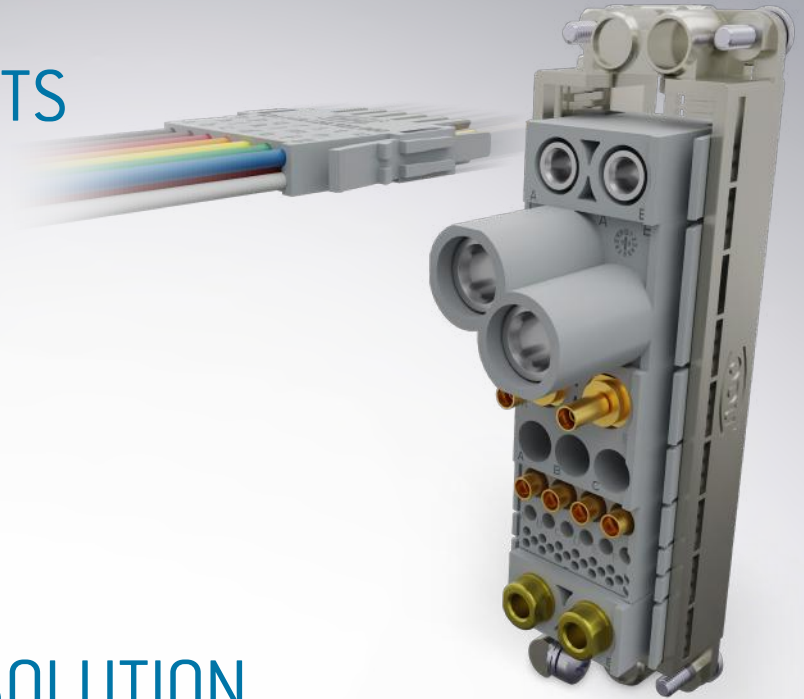
- + Individual connection: wide variety of modules to choose from
- + **Tool-free clip assembly and disassembly of the modules** in the frame
- + Ready-to-use solution including cable assembly
- + **Easy disassembly of crimp clip contacts**, also pre-assembled

MANY APPLICATIONS – ONE SOLUTION

X-Ray machines

Measuring and testing technology

Automotive testing,
including cable assembly



YOUR HYBRID CONNECTION

MANUAL MATING

+ 4 TYPES OF LOCKING

First, select your locking type by choosing between **spindle, lever, transverse or push-pull locking**.

+ DIFFERENT CONNECTOR HOUSINGS

Then select the plastic or metal housing best suited to your requirements: **cable hood, cable hood XXL, cable hood wide, RAPID or PUSH-LOCK housing**.

+ RECEPTACLE SELECTION

Depending on your requirements you choose between **bulkhead mounted housing, surface mounted housing, cable-to-cable hood, PUSH-LOCK receptacles or recessed mounting (RAPID)**.

+ CABLE ASSEMBLY

Get your connector ready for use **including cable assembly**.

AUTOMATIC DOCKING

+ 4 DOCKING FRAMES TO CHOOSE FROM

Size	Units*
1	12
2	18
3	26
4	37

*1 Unit = 2.4 mm

Tolerance compensation radial: ± 0.6 mm

Tolerance compensation axial: min. $\emptyset 0.1$ mm

VARIOUS LOCKING OPTIONS

+ SPINDLE LOCKING



+ LEVER LOCKING

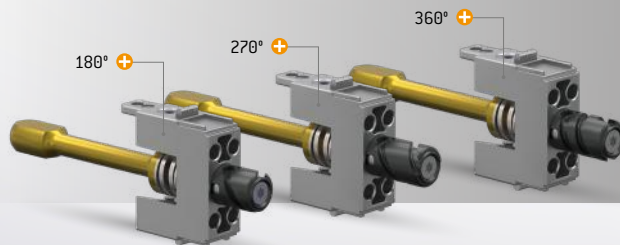
+ TRANSVERSE LOCKING



+ PUSH-PULL LOCKING (for ODU-MAC® PUSH-LOCK housing)

SPINDLE LOCKING

Quick-action locking system with **10,000 locking cycles**. If required, the simple front replacement set (spindle exchange set) enables a simple adjustment of the spindle geometry. Module for installation in ODU-MAC® Blue-Line frames for housings.



FUNCTIONALITY








HOUSING SELECTION – PLASTIC

Connector housing								
ODU-MAC® PUSH-LOCK							ODU-MAC® RAPID	
Locking		Push-Pull		Transverse		Spindle		
Size / Type	Units*							
PUSH-LOCK	7	•						
1	12		•	•				
2	18		•	•	•	•	•	•
3	26		•	•	•	•	•	•
4	37		•	•	•	•	•	•
5	54							
6	74							
Protective cover available (for connector & receptacle)		•	•	•	•	•	•	•
Receptacle		 <p>In-line receptacle coming soon</p>						

*1 Unit = 2.4 mm









HOUSING SELECTION – METAL

Connector housing															
Locking		Lever					Lever		Lever		Spindle				
Size / Type	Units*														
PUSH-LOCK	7														
1	12	•	•	•	•	•						•	•	•	
2	18	•	•	•	•	•						•	•	•	
3	26	•	•	•	•	•						•	•	•	
4	37	•	•	•	•	•	•	•				•	•	•	•
5	54								•	•					
6	74								•	•					
Protective cover available (for connector & receptacle)		•	•	•	•	•	•	•	only receptacle		only Gray				
Receptacle															

*1 Unit = 2.4 mm

MODULE OVERVIEW

All modules are available pre-assembled.

Modules	Description	Units / width	Features
	20 contacts Contact-Ø: 0.7 mm	 Units 4.8 mm	Operating voltage ¹ 200 V Rated surge voltage ¹ 2,000 V Max. continuous current ² 11 A for 0.14 mm ² Pollution degree ¹ 2 Mating cycles min. 10,000 + Maximum contact density and pin protection
	10 contacts Contact-Ø: 0.7 mm	 Unit 2.4 mm	Operating voltage ¹ 320 V Rated surge voltage ¹ 2,500 V Max. continuous current ² 11 A for 0.14 mm ² Pollution degree ¹ 2 Mating cycles min. 10,000 + Maximum contact density
	6 contacts Contact-Ø: 1.3 mm	 Units 4.8 mm	Operating voltage ¹ 400 V Rated surge voltage ¹ 3,000 V Max. continuous current ² 19.5 A for 1 mm ² Pollution degree ¹ 2 Mating cycles min. 10,000
	5 contacts Contact-Ø: 2 mm	 Units 7.2 mm	Operating voltage ¹ 630 V Rated surge voltage ¹ 3,000 V Max. continuous current ² 33 A for 2.5 mm ² Pollution degree ¹ 2 Mating cycles min. 10,000

SIGNAL

All modules available with **cable assembly!**



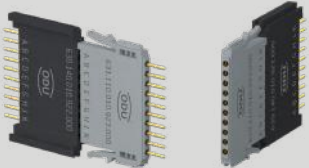







¹ According to IEC 60664-1:2007 (VDE 0110-1:2008-01) for pollution degree 2

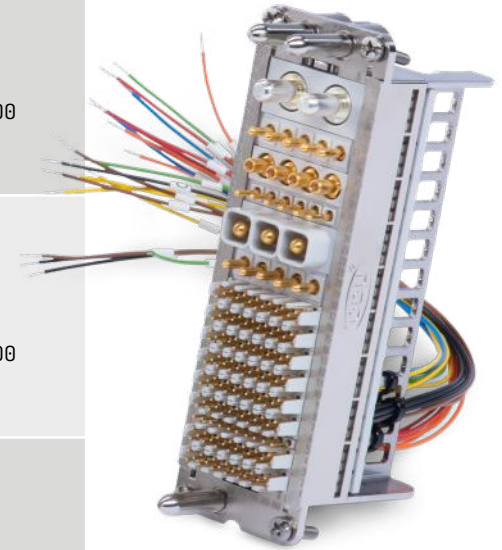
² For a definition of max. continuous current, see [ODU-MAC® Blue-Line catalog](#)

MODULE OVERVIEW

All modules are available pre-assembled.

Modules	Description	Units / width	Features
	20 contacts Contact-Ø: 0.7 mm	 4.8 mm	Operating voltage ¹ 200 V Rated surge voltage ¹ 2,000 V Max. continuous current ² 7 A Pollution degree ¹ 2 Mating cycles min. 10,000 + Maximum contact density and pin protection
	10 contacts Contact-Ø: 0.7 mm	 2.4 mm	Operating voltage ¹ 320 V Rated surge voltage ¹ 2,500 V Max. continuous current ² 7 A Pollution degree ¹ 2 Mating cycles min. 10,000 + Maximum contact density
	6 contacts Contact-Ø: 1.3 mm	 4.8 mm	Operating voltage ¹ 400 V Rated surge voltage ¹ 3,000 V Max. continuous current ² 13 A Pollution degree ¹ 2 Mating cycles min. 10,000
	5 contacts Contact-Ø: 2 mm	 7.2 mm	Operating voltage ¹ 550 V Rated surge voltage ¹ 3,000 V Max. continuous current ² 25 A Pollution degree ¹ 2 Mating cycles min. 10,000

SIGNAL PCB TERMINATION



¹ According to IEC 60664-1:2007 (VDE 0110-1:2008-01) for pollution degree 2

² For a definition of max. continuous current, see [ODU-MAC® Blue-Line catalog](#)

MODULE OVERVIEW

All modules are available pre-assembled.

Modules	Description	Units / width	Features
	4 contacts for 50 Ω coax contacts	<div style="border: 1px solid black; padding: 2px; display: inline-block;">3 Units</div> 7.2 mm	Frequency range 0–2.8 GHz Mating cycles min. 10,000 + High contact density
	2 contacts for 50 Ω coax contacts	<div style="border: 1px solid black; padding: 2px; display: inline-block;">5 Units</div> 12 mm	Frequency range 0–4 GHz Mating cycles min. 10,000
	2 contacts for 50 Ω coax contacts SMA termination	<div style="border: 1px solid black; padding: 2px; display: inline-block;">5 Units</div> 12 mm	Frequency range 0–12 GHz Mating cycles min. 10,000 + 12 GHz
	2 contacts for 75 Ω coax contacts	<div style="border: 1px solid black; padding: 2px; display: inline-block;">5 Units</div> 12 mm	Frequency range 0–2.7 GHz Mating cycles min. 10,000

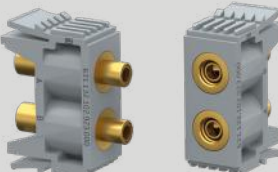

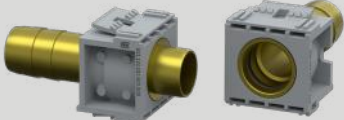


¹ According to IEC 60664-1:2007 (VDE 0110-1:2008-01) for pollution degree 2

² For a definition of max. continuous current, see [ODU-MAC® Blue-Line catalog](#)

MODULE OVERVIEW

All modules are available pre-assembled.







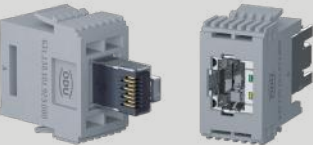

Modules	Description	Units / width	Features
	2 contacts	<div style="border: 1px solid black; padding: 2px; display: inline-block;">5 Units</div> 12 mm	Tube-Ø Mating cycles <div style="background-color: #f96; border-radius: 10px; padding: 2px 5px; display: inline-block;">+ 12 bar</div>
	2 contacts	<div style="border: 1px solid black; padding: 2px; display: inline-block;">5 Units</div> 12 mm	Tube-Ø Mating cycles <div style="background-color: #f96; border-radius: 10px; padding: 2px 5px; display: inline-block;">+ 10 bar</div>
	2 contacts	<div style="border: 1px solid black; padding: 2px; display: inline-block;">5 Units</div> 12 mm	Tube-Ø Mating cycles <div style="background-color: #f96; border-radius: 10px; padding: 2px 5px; display: inline-block;">+ 10 bar</div>
	1 contact	<div style="border: 1px solid black; padding: 2px; display: inline-block;">12 Units</div> 28.8 mm	Tube inner-Ø Mating cycles <div style="background-color: #f96; border-radius: 10px; padding: 2px 5px; display: inline-block;">+ -0.8 bar</div>

COMPRESSED AIR / FLUID / VACUUM COUPLING



MODULE OVERVIEW

All modules are available pre-assembled.

Modules	Description	Units / width	Features	
SHIELDED FEEDTHROUGH / HIGH-SPEED CONNECTOR		2 to 14 contacts for 2 insert size 1	 14.4 mm	Mating cycles min. 10,000 Suitable for all common bus systems CAT 5, USB [®] 2.0 ¹ , USB [®] 3.2 Gen 1x1 ¹ , FireWire ^{®1} , Ethernet, SPE 1000BASE-T1 ²
		2 to 14 contacts for 1 insert size 1	 14.4 mm	Mating cycles min. 10,000 Suitable for all common bus systems CAT 5, USB [®] 2.0 ¹ , USB [®] 3.2 Gen 1x1 ¹ , FireWire ^{®1} , Ethernet, SPE 1000BASE-T1 ²
		3 to 22 contacts for 1 insert size 2	 16.8 mm	Mating cycles min. 10,000 Suitable for all common bus systems CAT 5, CAT 6 _A , USB [®] 3.2 Gen 1x2 ¹ , Ethernet, HDMI ^{®1} 2.0/2.1, DisplayPort ^{®1} 2.0
		1 contact RJ45 insert	 16.8 mm	Mating cycles min. 5,000 10 gigabit Ethernet ¹ according to IEEE 802.3 an CAT 6 according to ANSI/TIA/EIA-568-C.2 CAT 6 _A according to ANSI/TIA-568.2-D

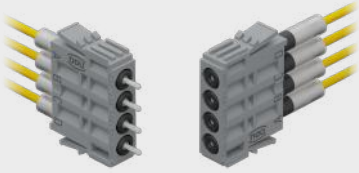
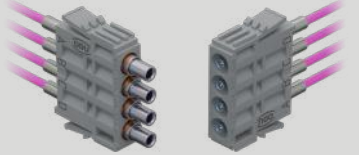
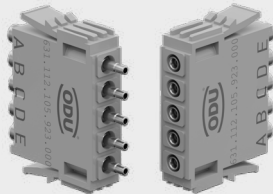



¹ The contact arrangement of an ODU data transmission connector differs from a standard data transmission connector due to the robust ODU specific design. However, the ODU design meets the electrical specifications of the respective standard data transmission protocol.

² Single Pair Ethernet according to IEC 63171-6:2020 (IEEE 802.3bp)

MODULE OVERVIEW





All modules are available pre-assembled.

	Modules	Description	Units / width	Features								
FIBER OPTIC (ON REQUEST)		4 contacts for fiber optic only pre-assembled Physical Contact	<div style="border: 1px solid black; padding: 2px; display: inline-block;">3 Units</div> 7.2 mm	<table border="0"> <tr> <td>Mating cycles</td> <td>min. 1,000</td> </tr> <tr> <td>max. Insertion loss</td> <td>0.5 dB</td> </tr> <tr> <td>Single mode</td> <td>9 / 125 μm</td> </tr> <tr> <td>Multi mode</td> <td>50 / 125 μm</td> </tr> </table>	Mating cycles	min. 1,000	max. Insertion loss	0.5 dB	Single mode	9 / 125 μm	Multi mode	50 / 125 μm
	Mating cycles	min. 1,000										
	max. Insertion loss	0.5 dB										
Single mode	9 / 125 μm											
Multi mode	50 / 125 μm											
	4 contacts for fiber optic only pre-assembled Expanded Beam	<div style="border: 1px solid black; padding: 2px; display: inline-block;">3 Units</div> 7.2 mm	<table border="0"> <tr> <td>Mating cycles</td> <td>min. 100,000</td> </tr> <tr> <td>Max. Insertion loss</td> <td>1.5 dB</td> </tr> <tr> <td>Multi mode</td> <td>50 / 125 μm</td> </tr> </table>	Mating cycles	min. 100,000	Max. Insertion loss	1.5 dB	Multi mode	50 / 125 μm			
Mating cycles	min. 100,000											
Max. Insertion loss	1.5 dB											
Multi mode	50 / 125 μm											
	5 contacts for fiber optic PDF	<div style="border: 1px solid black; padding: 2px; display: inline-block;">3 Units</div> 7.2 mm	<table border="0"> <tr> <td>Mating cycles</td> <td>min. 10,000</td> </tr> <tr> <td>Insertion loss typical</td> <td>1,5 dB for 670 nm</td> </tr> </table>	Mating cycles	min. 10,000	Insertion loss typical	1,5 dB for 670 nm					
Mating cycles	min. 10,000											
Insertion loss typical	1,5 dB for 670 nm											
BLANK		Blank modules	<div style="border: 1px solid black; padding: 2px; display: inline-block;">1</div> 2.4 mm <div style="border: 1px solid black; padding: 2px; display: inline-block;">3</div> 7.2 mm <div style="border: 1px solid black; padding: 2px; display: inline-block;">5</div> 12 mm	Used to fill incomplete frames.								



MODULE OVERVIEW

All modules are available pre-assembled.

Modules	Description	Units / width	Features
	<p>2 contacts for turned contacts with ODU LAMTAC^{®3}</p> <p>Contact-Ø: 5 mm</p>	<div style="border: 1px solid black; padding: 2px; display: inline-block;">5 Units</div> 12 mm	<p>Operating voltage¹ 400 V</p> <p>Rated surge voltage¹ 4,000 V</p> <p>Max. continuous current² 108 A for 16 mm²</p> <p>Pollution degree¹ 2</p> <p>Mating cycles min. 10,000</p>
	<p>2 contacts for turned contacts with ODU LAMTAC^{®3}</p> <p>Contact-Ø: 8 mm</p>	<div style="border: 1px solid black; padding: 2px; display: inline-block;">9 Units</div> 21.6 mm	<p>Operating voltage¹ 400 V</p> <p>Rated surge voltage¹ 3,000 V</p> <p>Max. continuous current² 154 A for 25 mm²</p> <p>Pollution degree¹ 2</p> <p>Mating cycles min. 10,000</p>
	<p>1 contact for turned contacts with ODU LAMTAC^{®3}</p> <p>Contact-Ø: 12 mm</p>	<div style="border: 1px solid black; padding: 2px; display: inline-block;">8 Units</div> 19.2 mm	<p>Operating voltage¹ 2,500 V</p> <p>Rated surge voltage¹ 10,000 V</p> <p>Max. continuous current² 225 A for 50 mm²</p> <p>Pollution degree¹ 2</p> <p>Mating cycles min. 10,000</p> <p>+ High-voltage</p>
	<p>3 contacts</p> <p>Contact-Ø: 3.5 mm</p>	<div style="border: 1px solid black; padding: 2px; display: inline-block;">4 Units</div> 9.6 mm	<p>Operating voltage¹ 2,500 V</p> <p>Rated surge voltage¹ 10,000 V</p> <p>Max. continuous current² 58 A for 6 mm²</p> <p>Pollution degree¹ 2</p> <p>Mating cycles min. 10,000</p> <p>+ High-voltage</p>



¹ According to IEC 60664-1:2007 (VDE 0110-1:2008-01) for pollution degree 2

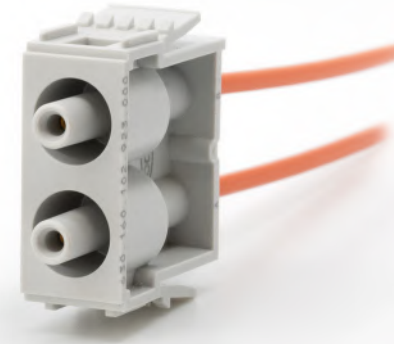
² For a definition of max. continuous current, see [ODU-MAC® Blue-Line catalog](#)

³ Contact with lamella technology

MODULE OVERVIEW

All modules are available pre-assembled.

	Modules	Description	Units / width	Features
PE		1 contact with ODU LAMTAC ^{®3} Contact-Ø: 8 mm	 12 mm	Mating cycles min. 10,000 Conduct cross-section 10 / 16 / 25 mm ²
HIGH-VOLTAGE		2 contacts Contact-Ø: 1.3 mm	 12 mm	Operating voltage ¹ 4,000 V Rated surge voltage ¹ 12,000 V Pollution degree ¹ 2 Mating cycles min. 10,000  High-voltage
COMBINATION		2 contacts High-speed & coax	 14.4 mm	Mating cycles min. 10,000 Coax 50 Ω/4 GHz or 75 Ω/2.2 GHz Selected inserts are suitable and qualified for data rates up to 5 Gbit/s. Suitable for CAT 5, USB [®] 2.0 ⁴ , USB [®] 3.2 Gen 1x1 ⁴ , FireWire ^{®4} , Ethernet, SPE 1000BASE-T1 ⁵
		2 contacts High-speed & compressed air	 14.4 mm	Mating cycles min. 10,000 Compressed air 12 bar Selected inserts are suitable and qualified for data rates up to 5 Gbit/s. Suitable for CAT 5, USB [®] 2.0 ⁴ , USB [®] 3.2 Gen 1x1 ⁴ , FireWire ^{®4} , Ethernet, SPE 1000BASE-T1 ⁵



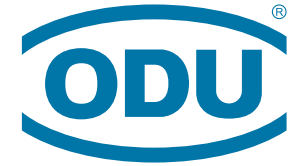
¹ According to IEC 60664-1:2007 (VDE 0110-1:2008-01) for pollution degree 2

² For a definition of max. continuous current, see [ODU-MAC® Blue-Line catalog](#)

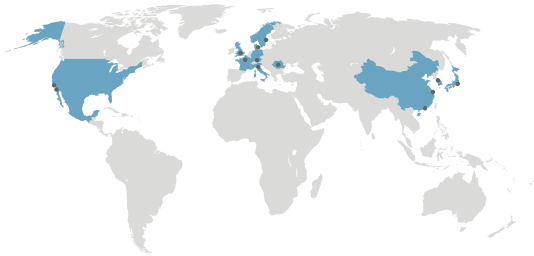
³ Contact with lamella technology

⁴ The contact arrangement of an ODU data transmission connector differs from a standard data transmission connector due to the robust ODU specific design. However, the ODU design meets the electrical specifications of the respective standard data transmission protocol.

⁵ Single Pair Ethernet according to IEC 63171-6:2020 (IEEE 802.3bp)



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

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