

CIRCULAR CONNECTORS WITH CABLE ASSEMBLY

HDMI   
ODU HIGH-SPEED DATA TRANSMISSION



SHORT OVERVIEW

BIT BY BIT TO THE PERFECT CONNECTION

MECHANICAL CODING



Pin/groove

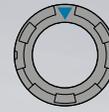


Half-shell

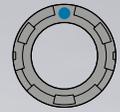
OPTICAL CODING



Color coding



Arrow marking



Dot marking

PUSH-PULL LOCKING



...ensures establishing connections easily in less than a second. It is **self-securing** – this means that an accidental release by pulling on the cable can be precluded. During the mating process, the connector's locking claws will lock into place in the corresponding grooves in the receptacle and form a dependable connection between the connector and the receptacle. Consequently, when the connection is properly established, an unintentional demating of the connection by pulling on the cable cannot take place. The connection can only be released deliberately, by just pulling back the connector's outer sleeve.

BREAK-AWAY FUNCTION



The efficient Break-Away function allows for an easy establishment of connections within fractions of a second just like the Push-Pull locking. But furthermore it also features an **emergency release** which enables demating the connection when needed by pulling on the cable.

During mating, the connector's locking claws will lock into place in the corresponding grooves in the receptacle and form a dependable connection between the connector and the receptacle. The sloping shape of the locking claws ensures the "breaking away" of the connection when the connector or cable is pulled with a defined force.

SCREW-LOCKING



The extremely robust Screw-Lock technology guarantees maximum connection reliability even under the most challenging ambient conditions, such as when used outdoors or in military and security applications. Thanks to a **quick-locking function, triple-start thread and latching mechanism**, the connection is reliably protected against even the strongest vibrations in the mated condition.

CABLE ASSEMBLY

Three central components must be perfectly matched in order to achieve the optimal connection for your application: connectors, termination technology and cable. A connector solution can only fulfill your application requirements if the correct cable is selected and correctly assembled.



Your advantages at a glance:

- One point of contact for a complete system
- High technical expertise in the processing of third-party products
- Standard and customer specific overmoldings
- Custom labeling and cable printing
- Samples, small series and large series production

POSSIBILITIES

+ **DIN EN 13060**
(Autoclavability)

+ **IEC 60601-1**
(Touch proof for medical devices)

+ **IEC 60512**
(Hermetic sealing)

+ **IEC 60664-1**
(Dielectric strength)

+ **UL 1977**
(Certified safety)

+ **VARIOUS MILITARY STANDARDS**

METAL CIRCULAR CONNECTORS – A REAL ALL-ROUNDER

RELIABLE – VERSATILE – COMPACT

ODU MINI-SNAP® is the ideal self-locking circular connector for a wide range of applications. Whether used for transmitting power, signals, data or other media, this circular connector in its robust metal housing convinces with its quality, reliability and handling characteristic.

ODU MINI-SNAP® connectors offer a very high versatility in configuration and termination options, thereby not only giving users great flexibility in design but also reducing installation time and cost. We also offer complete systems consisting of connectors, cables with suitable assembly and optional overmolding.

This makes ODU MINI-SNAP® the connector of choice for a multitude of applications in the medical, test and measurement, industrial, military and security markets.

All ODU MINI-SNAP® connectors are available in the characteristic chrome finish as standard, or with a tin-nickel surface plating on request.

BENEFITS

- Outstanding functional reliability due to robust metal housing
- Ability to withstand challenging environmental conditions, such as ambient temperatures of -40°C to $+120^{\circ}\text{C}$
- Ease of connections – thanks to Push-Pull quick-locking technology, connections are established and released in < 1 second.
- Minimal space requirements thanks to interfaces with diameters of just 6.4 mm
- Available including cable assembly
- Optional silicone-overmolded system solutions

<ul style="list-style-type: none"> • 5,000 mating cycles • Data technology (USB®, HDMI®, Ethernet) • Solder-, Crimp- or PCB connection possible 	IP Class mated	IP Class unmated	Coding	Sizes	Max. number of mechanical codings	Diameter plug (mm)	Max. cable diameter (mm)	Max. number of contacts
 <p>ODU MINI-SNAP® L</p>	IP50	Up to IP68	Pin and groove	00	4	6.4	3.5	04
				0		9.0	5.6	10
				1		11.5	7.7	16
				2		14.5	9.9	26
				3		17.5	11.9	30
				4		25.0	16.0	40
 <p>ODU MINI-SNAP® K</p>	IP68	Up to IP68	Pin and groove	0	8	11.0	5.0	10
				1		13.0	7.0	16
				2		16.0	9.0	26
				3		19.0	10.5	30
				4		25.0	14.0	40
 <p>ODU MINI-SNAP® B</p>	IP68	Up to IP68	Pin and groove	0	8	9.4	5.0	10
				1		12.0	7.0	16
				2		15.0	9.0	26
				3		18.0	10.5	30
 <p>ODU MINI-SNAP® F</p>	Up to IP68	Up to IP68	Half shell	0	3	9.4	5.0	09
				1		12.0	7.5	14
				1.5		13.0	7.5	19
				2		15.0	9.5	19
				3		18.0	11.5	27

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 that are derived from the respective standard data transmission protocol.

CONNECTORS FOR MILITARY AND SECURITY APPLICATIONS

SMALLER – LIGHTER – FASTER

All ODU AMC® series connectors have been designed especially for use under extreme ambient conditions. These incredibly robust series of metal circular connectors leave absolutely nothing to be desired in terms of toughness and transmission reliability. They are in their element under extreme field conditions: rugged, watertight and easy to clean.

Low weight, low light reflection surfaces, excellent EMC properties and a compact construction make these connectors the ideal elements for military and security technology applications. These connectors are available as system solutions with cable assemblies for harsh environments and with straight or right-angled overmolding.

BENEFITS

- Easy installation thanks to Push-Pull, Break-Away or Screw-Locking technology
- Light, small and easy to handle
- Highly resistant to shocks and vibrations
- Customized contact configuration
- Reliable data transmission
- Outstanding shielding performance
- System solution: cable assembly and overmolding
- Optional silicone-overmolded system solutions

• Pin and groove coding (mechanical)		IP Class mated	IP Class unmated ²	Sizes	Max. number of mechanical codings	Diameter plug (mm)	Max. cable diameter plug (mm)	Max. number of contacts	Termination technologies	Shell material	Plating	Operating temperature range	Mating cycles
 ODU AMC® BREAK-AWAY		Up to IP6K9K	IP68	0	4	11.9	5.5	10	Solder, PCB	Aluminium	Ruthenium	-51 °C to +125 °C	5,000
				1		13.9	6.5	16					
				1.5		15.9	8	19					
				2		17.6	10	26					
				3		21.9	11.5	37					
 ODU AMC® PUSH-PULL		Up to IP6K9K	IP68	0	4	14.0	5.5	10	Solder, PCB	Aluminium	Ruthenium	-51 °C to +125 °C	5,000
				1		15.9	6.5	16					
				1.5		16.5	8	19					
				2		19.6	10	26					
				3		23.9	11.5	37					
 ODU AMC® EASY-CLEAN ¹		Up to IP6K9K	IP6K8	0	4	11.9	5.5	7	Solder, PCB	Aluminium	Ruthenium	-51 °C to +125 °C	5,000
				1		13.9	6.5	16					
				1.5		15.9	8	19					
 ODU AMC® HIGH-DENSITY	BREAK-AWAY	Up to IP6K9K	IP68	00	4	9.8	5	7	Solder, PCB	Brass	Ruthenium	-51 °C to +125 °C	5,000
				0		12.8	7	16					
	SCREW-LOCK	Up to IP6K9K	IP68	00	4	9.8	5	7	Solder, PCB	Brass	Ruthenium	-51 °C to +125 °C	5,000
				0		12.8	7	16					
 ODU AMC THREADED		Up to IP6K8	IP68	1.5	2	17.5	8.5	19	Solder, PCB	Aluminium	Tin-Nickel	-51 °C to +125 °C	2,000
				3		24.9	12.8	26					
 ODU AMC® SERIES T	BREAK-AWAY	Up to IP6K9	IP68	9	2	18.5	7.6	20	Solder, Crimp, PCB	Aluminium	Tin-Nickel	-65 °C to +175 °C	500
				12		24.2	14.6	22					
	PUSH-LOCK	Up to IP6K9	IP68	9	4	21	7.6	20	Solder, Crimp, PCB	Aluminium	Tin-Nickel	-65 °C to +175 °C	500
				12		26	14.6	22					
	THREADED	Up to IP6K9	IP68	9	4	18.4	7.6	20	Solder, Crimp, PCB	Aluminium	Tin-Nickel	-65 °C to +175 °C	500
				12		24.9	14.6	22					

¹Additional locking kit on request, ²Contact area not protected

PLASTIC CIRCULAR CONNECTORS – LIGHTWEIGHT, WITH INTUITIVE HANDLING

EFFICIENT – CONVENIENT – CUSTOM-FIT

ODU's plastic connectors have proven themselves in a multitude of application areas. Especially for portable devices or medical applications with strict space constraints, it is essential to have products that are lightweight and make the most efficient use of space. For this reason, plastic in particular is becoming an increasingly important material for connectors.

Available as a complete cable assembly, with or without overmolding, or as a flexible attachable connector – the ODU plastic connector portfolio offers the right connection for a variety of applications.

BENEFITS

- 75 % lighter than metal connectors
- Good grip due to special surface structure
- Highly economical solution
- High chemical and thermal resistance
- Minimal requirements in terms of installation and maintenance
- Space-saving product design
- Totally hygienic – various sterilization methods possible
- Patient & Operator protection levels acc. to IEC 60601-1 (up to 2 MOOP / 2 MOPP)
Working voltage of medical device max. 250 V AC (degree of pollution 2)
- Available including cable assembly
- Optional silicone-overmolded system solutions

• Pin and groove coding (mechanical)	Multiple / Single Use	Locking principle	Size	Mating cycles	Max. no. of contacts	Termination technologies	IP Class mated	Coding options (optical)	Transmission options
 ODU MEDI-SNAP®	Multiple Use	Push-Pull	1	2,000	14	Solder, Crimp, PCB	Up to IP64	Arrow marking, Color coding	Signal, Power, Fluids (liquids and gases)
			2		34				
			3.5	5,000	41	Solder, PCB	Up to IP68		
 ODU MEDI-SNAP®	Multiple Use	Break-Away	1	5,000	14	Solder	Up to IP67	Arrow marking, Color coding	Signal, Power
			2	2,000	26		Up to IP64		
 ODU MEDI-SNAP®	Disposable Receptacle	Push-Pull	2	25	34	PCB	IP50	Arrow marking	Signal
 ODU MINI-MED®	Multiple Use	Break-Away	<1	1,000	6	Solder	IP67	Arrow marking	Signal



Printed on certified
recycled paper.

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.

CIRCULAR CONNECTORS SHORT OVERVIEW / 0V / 0821 / EN

This publication is also available as a PDF file that can be downloaded
from www.odu-connectors.com