

ODU AMC[®]



A perfect alliance.

ODU Advanced Military Connector



Receptacle

Connector type / style

12345678910111213141516171819

Y

R

-

0

-

R

0

0

L

Connector type

Style

G8

For installation from rear of panel – low profile outside the device

Size

12345678910111213141516171819

Y

R

-

0

-

R

0

0

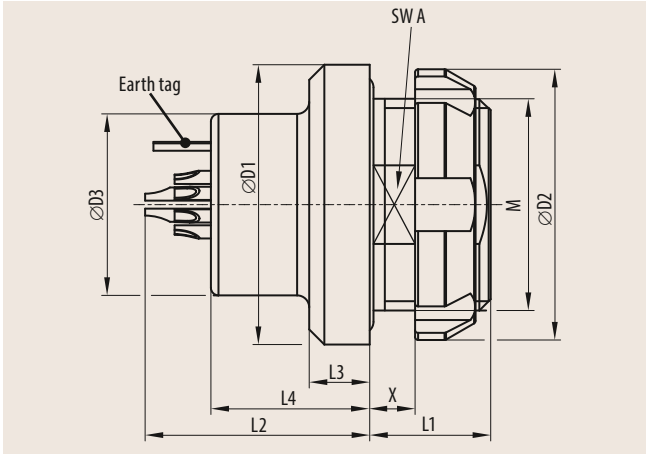
L

Size	Size	Dimensions in mm										Panel cut out	
		L1	L2 max.	L3	L4	X max.	D1	D2	D3	SW A	M	SW	Ø
0	0	6.5	16.3	3.0	11.5	3.0	15.5	15.0	10.0	10	11×0.75	10.1	11.1
1	1	8.0	14.9	4.0	10.5	3.5	18.5	17.9	12.0	13	14×1	13.1	14.1
1.5	A	7.0	17.7	2.5	12.5	3.0	18.9	17.9	14.0	13	14×0.75	13.1	14.1





- Technical data see [page 60](#)
- Contact configuration and PCB layout see [page 46 – 51](#)
- IP 68, also in unmated condition.



Nutdriver for slotted nut		
Size	part number	Torque in Nm
0	700.098.001.000.000	1.0
1	701.098.002.000.000	3.0
1.5 (A)	701.098.002.000.000	3.0

Keying Possibilities

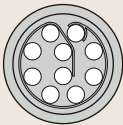
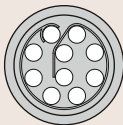
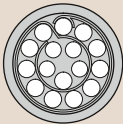
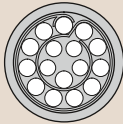
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
				Y	R	-								0	-	R	0	0	
	Keying					Plug front view				Colour keying									
Standard					A									Light brown					
					B									Red					
					C									Blue					
					D									Green					

Housing Material

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
				Y	R	-	P							0	-	R	0	0	
	Housing material																		
					R	Aluminium EN-6023 Ruthenium over electroless Ni													

Contact Configurations

Size 1

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19		
		1	Y		R	-							0	-	R	0	0			
		↑					↑	↑	↑											
		Size					Insulator	Number of contacts ³⁾					Contact diameter	Nominal current load per contact ²⁾	Test voltage acc. SAE 13441	Rated voltage ¹⁾	Termination		View on the termination side	
													mm	A	Contact to contact kV	kV	Solder	Print	Pogo-pin contact side	Flat contact side
		1					P	1	0				0.6	2	0.600	0.200	●	●		
		1					P	1	6				0.6	2	0.600	0.200	●	●		

¹ Maximal operating voltage at sea level up to 2.000 m acc. to SAE 13441. More information see [page 67](#).

² Derating factor see [page 66](#).

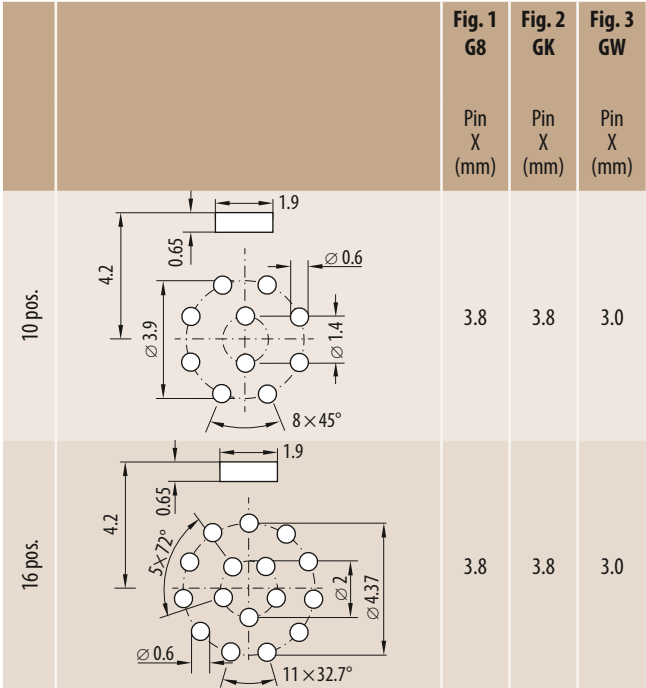
³ Other contact configurations on request.

PCB Layout for Print Contacts Size 1

Contact type

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
			1	Y		R	-	P						0	-	R	0	0

Termination	Contact type	Contact type	Available connector type		
Solder	Flat contact	W	A1	GW	
	Spring load contact	X	G8	GK	K1
Print	Flat contact	U	GW		
	Spring load contact	V	G8	GK	



Contact diameter / termination cross section

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
			1	Y		R	-	P						0	-	R	0	0

Solder contacts

	Contact diameter		Contact diameter		Term. cross section	Termination cross section	Termination diameter
	mm		mm		AWG	mm ²	mm
	0.6		D	D	26	0.15	

Print contacts

	0.6		D	0			0.5
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Fig. 1: Length earth tag and pin G8

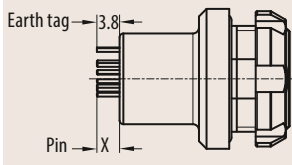


Fig. 2: Length earth tag and pin GK

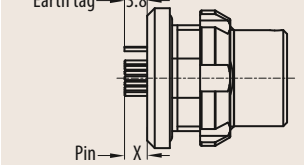
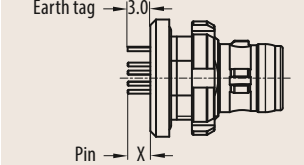


Fig. 3: Length earth tag and pin GW



Technical Data ODU AMC® – Easy-Clean

Environmental and testing

Type	Performance	Standard
Tightness	IP 68 IP 69 K	IEC 60529 / MIL-STD-810F 512.4/5 DIN 40050-9
Sand and dust	Blowing sand and dust, settling dust	MIL-STD-810F 510.4/5 Procedure I / II DIN 40050-9 / IP 6kx
Operating temperature	–51° C up to +125° C	IEC 60512-6-11 i+j
Thermal shock	–65° C up to +150° C	EIA 364-32-E IEC 60068-2-14
Humidity cyclic	85% up to 95 % 28 up to 71° C	MIL-STD-1344A Method 1002.2 Type III IEC 60068-2-38
Low pressure (rapid decompression)	59.1 kPa to 18.8 kPa	AECTP 300, 312 Procedure III (STANAG 4370)
Low pressure	57.2 kPa –55° C	MIL-STD-810F 500.4/5 IEC 60068-2-40
Icing	Rime ice 6 mm	MIL-STD-810F 521.2/3
Corrosion resistance	96 h salt mist, 5 % salt solution, 35° C	EIA-364-26B, STANAG 4370, AECTP 300-309, MIL-STD-810F 509.4/5
Mould growth	European fungus	IEC 60068-2-10
Solar radiation		60068-2-5
Chemical endurance	Several substances ¹⁾	ISO 16750-5

¹⁾ Substances listed at ODU datasheet 009.410.021.000.000

Mechanical data

Type	Performance	Standard
Mechanical endurance	5,000 mating cycles ²⁾	IEC 60512-5-9-a EIA-364-09
Vibration		MIL-STD 1344 Method 2005 EIA-364-28
Shock	300 g amplitude, half sine pulse of 3 ms, no discontinuity > 1 us	MIL-STD 1344 Method 2004 EIA-364-27

Electrical data

Type	Performance	Standard
Contact resistance (fig. 1) over 5,000 mating cycles ²⁾	Contact diameter / resistance Ø 0.6 mm pogo pin < 20 mOhm	IEC 60512-2-1
Shell resistance (fig. 2)	< 10 mOhm	IEC 60512-2-1
Insulation resistance	> 100 MOhm	IEC 60512-3-1

²⁾ 5,000 mating cycles, dependent on the specific application.

Fig. 1
Measurement points

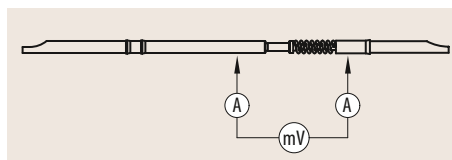
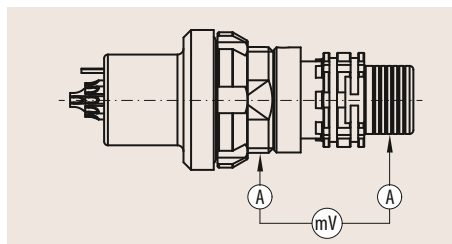


Fig. 2
Measurement points



The Part Number Key

No.	Description	Coding	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
									-								-				
1	Type	S = Push-Pull plug G = Receptacle K = In-line receptacle A = Break-Away plug																			
2	Style	1, 8, K, W																			
3	Size	0, 1, A, 2, 3, E																			
4	Series	Y = ODU AMC																			
5	Keying (colour and mechanical)	A – D																			
6	Material / surface of housing	R = Ruthenium																			
8	Material insulator																				
9	Contact configuration (2 positions)																				
10																					
11	Contact type / surface																				
12	Contact diameter																				
13	Termination cross section																				
14		0																			
16	Locking principle	0 = Standard Version, see page 11 R = Easy-Clean Version, see page 35																			
17	Cover / nut	0 = Standard																			
18		0																			
19	Receptacle earth tag – GK and G8	L																			

Example plug

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
S	1	1	Y	A	R	-	P	0	8	X	F	G	0	-	0	0	0	0

- 1 = Plug
- 2 = Style 1
- 3 = Size 1
- 4 = Series Y = ODU AMC
- 5 = Coding A = light brown
- 6 = Ruthenium over Aluminium
- 8 = Peek insulator
- 9, 10 = 8 positions
- 11 = Solder pin
- 12 = Contact diameter 0.7 mm
- 13 = Cross section AWG 22/0.38 mm²
- 14 = free (0)
- 16 = Locking Push-Pull
- 17 = free (0)
- 18 = free (0)
- 19 = free (0)

Example receptacle

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
G	8	1	Y	A	R	-	P	0	8	W	F	G	0	-	0	0	0	L

- 1 = Receptacle
- 2 = Style 8
- 3 = Size 1
- 4 = Series Y = ODU AMC
- 5 = Coding A = light brown
- 6 = Ruthenium over Aluminium
- 8 = Peek insulator
- 9, 10 = 8 positions
- 11 = Solder pin
- 12 = Contact diameter 0.7 mm
- 13 = Cross section AWG 22/0.38 mm²
- 14 = free (0)
- 16 = Locking Push-Pull / Break-Away
- 17 = free (0)
- 18 = free (0)
- 19 = Earth tag