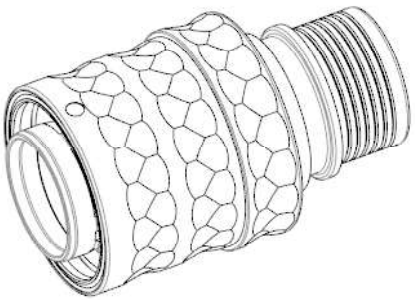
ASSEMBLY INSTRUCTION

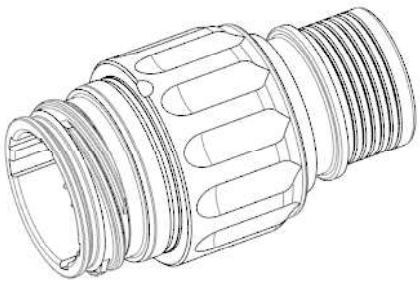
ODU AMC® SERIES T CONNECTORS

CONNECTOR TYPES

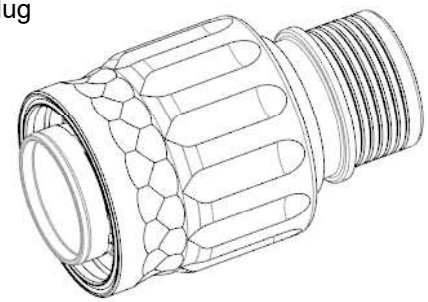
CONNECTORS WITH ODU INTEGRATED SHIELD-TERMINATION PLATFORM.



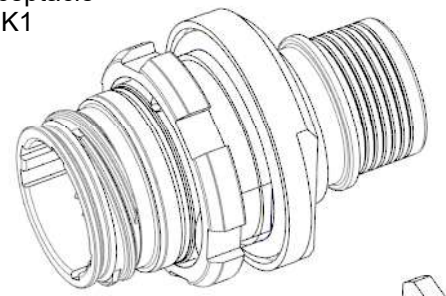
Break-Away Plug
Style A1



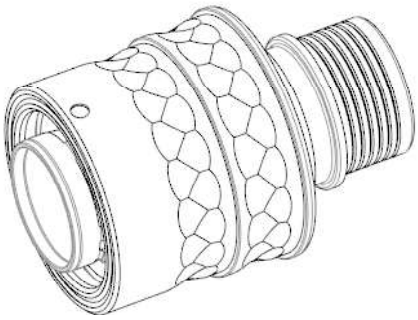
In-Line Receptacle
Style K1



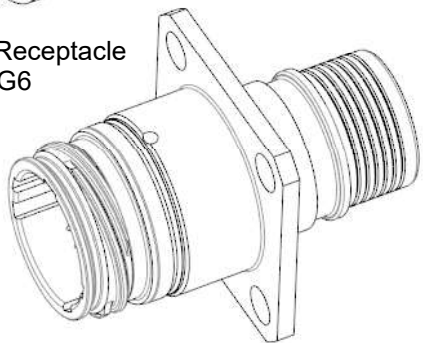
Threaded Plug
Style C1



Panel-Mount Receptacle
Style G6



Push-Pull Plug
Style S1



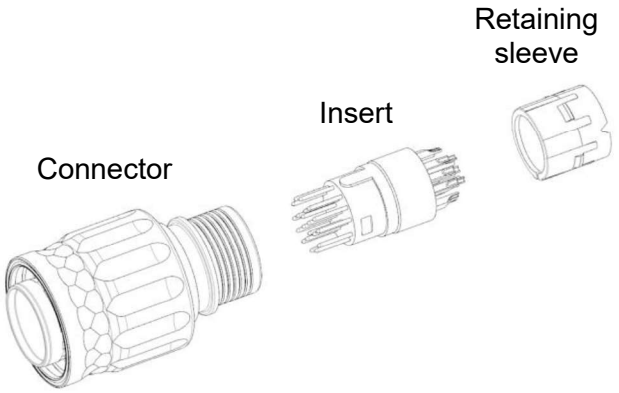
Panel-Mount Receptacle
Style GU

D00027284 / Index: A
010.655.001.000.011

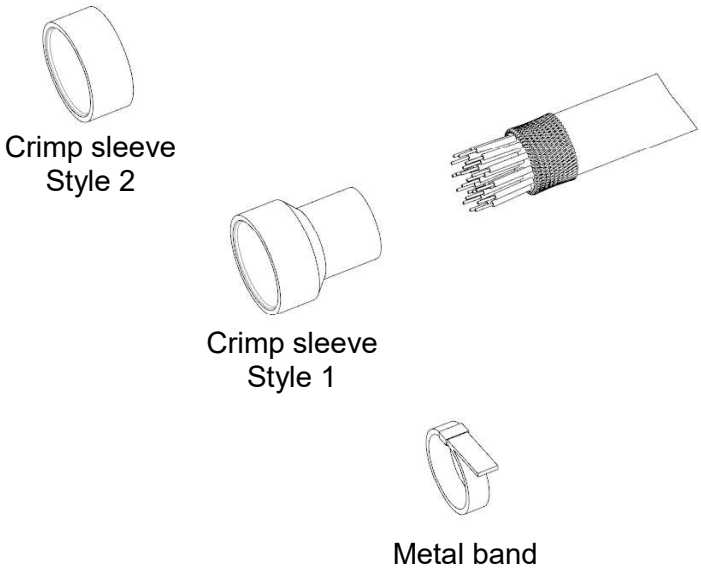
ASSEMBLY INSTRUCTION

ODU AMC® SERIES T CONNECTORS

1 ASSEMBLY



delivery condition



order separately

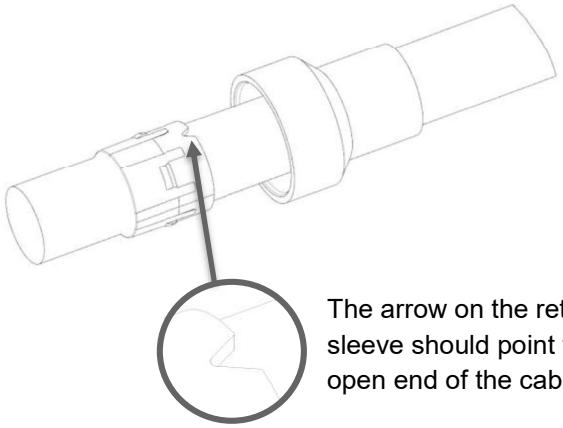
D00027284 / Index: A
010.655.001.000.011

ASSEMBLY INSTRUCTION

ODU AMC® SERIES T CONNECTORS

STEP 1

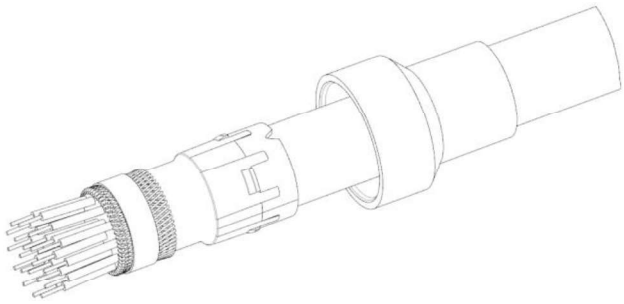
Slide crimp sleeve and retaining sleeve (Pay attention to the direction of the arrow) over the cable.
The crimp sleeve is not needed if a metal band is used for fastening the shield to the crimp area.
The crimp sleeve had to be ordered seperately.
More information on that on page 7.



The arrow on the retaining sleeve should point to the open end of the cable

STEP 2

Strip cable and conductors.
Fold back the shield and use fastening tape (e.g. Würth: 09920019) to fasten it temporarily to the cable jacket.

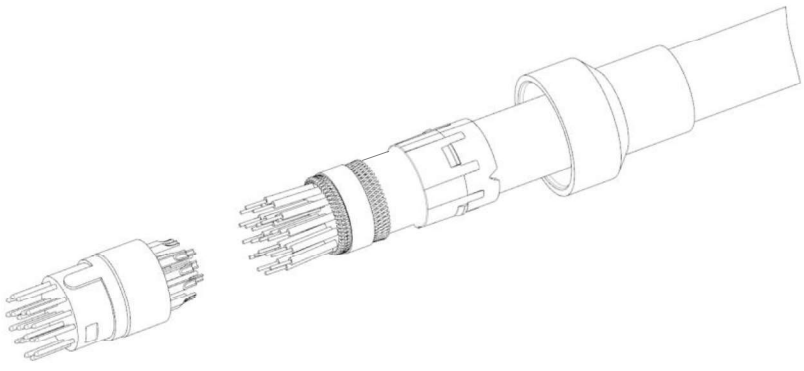


For more information on cable preparation of standard assemblies such as stripping lengths see 2 and following.

Further information on cable preparation of data transmission protocols can be found in the applicable documents (see 7).

STEP 3

Solder the wires to the solder cups of the contacts according to the connection diagram.
Try to get the twisting of the twisted pairs as close as possible to the contacts.



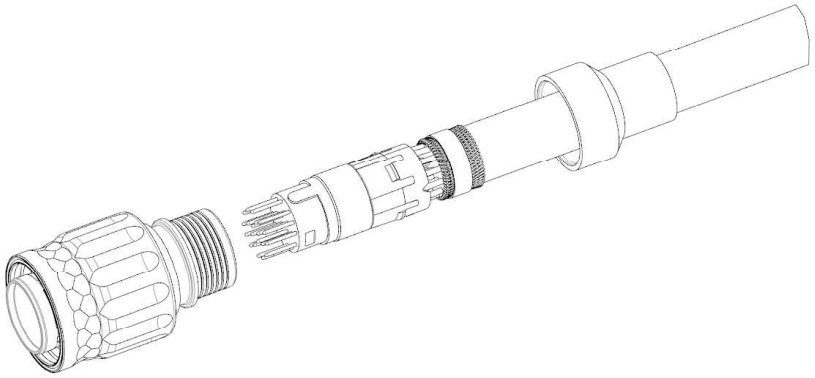
The wiring charts for data transmission protocols are shown in the relevant applicable documents (see 7).

ASSEMBLY INSTRUCTION

ODU AMC® SERIES T CONNECTORS

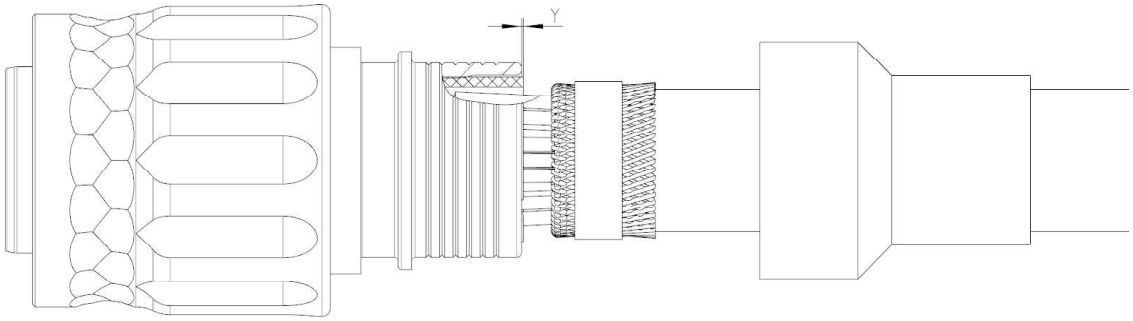
STEP 4

Align the outer groove of the insert with the inner groove of the connector. Push the insert into the connector housing and slide the retaining sleeve onto it.
The insert with the retaining sleeve is properly inserted when an audible "click" is heard.



The individual styles have different lengths of retaining sleeves and therefore different installation dimensions Y, as shown in following table:

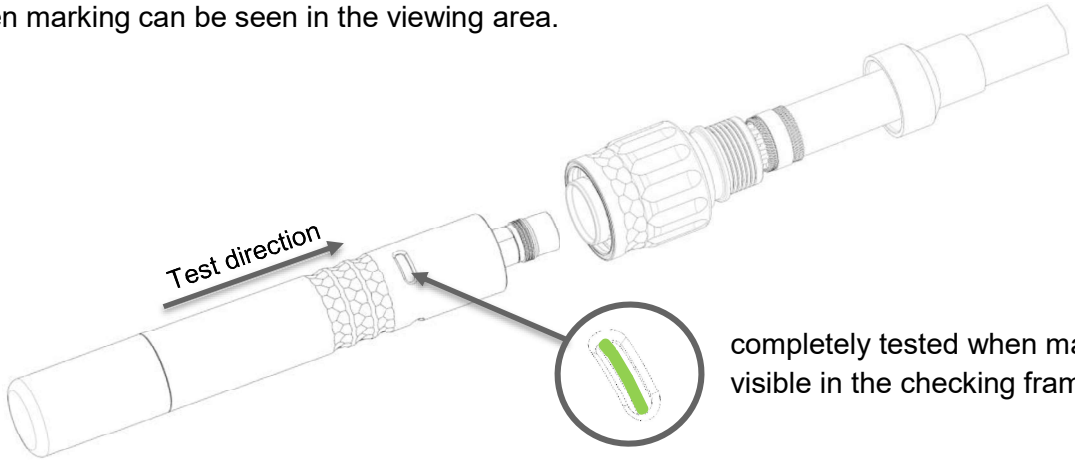
ShellSize	ODU AMC® Serie T Style	Y
09	G6	~0.15
	GU	~0.15
	K1	~0.15
	S1	~0.1
	A1	~0.1
	C1	~0.1



ASSEMBLY INSTRUCTION

ODU AMC® SERIES T CONNECTORS

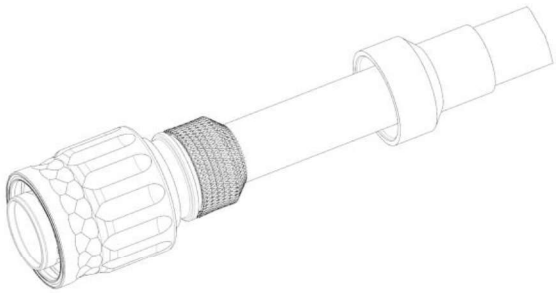
The Insert Retention Tool can be used to check if the insert is fully engaged.
For this, the corresponding adapter (see 6) must be pressed against the insert from the front until the green marking can be seen in the viewing area.



completely tested when marker is visible in the checking frame

STEP 5

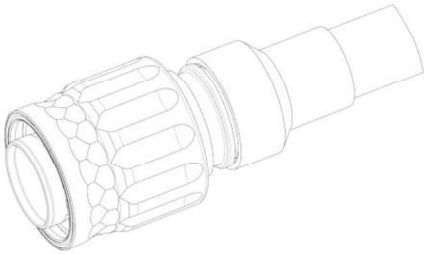
Remove the fastening tape and lay the shield braid on to the shield termination platform.



STEP 6

Fasten the shield braid to the crimp area by means of crimping or by using a metal band. More information see 3.

Optional: For additional sealing or to prepare for overmolding, the interior of the crimp sleeve may need to be potted. (ODU recommends WEVO-2K-casting resin PU552FL, depending on the application).

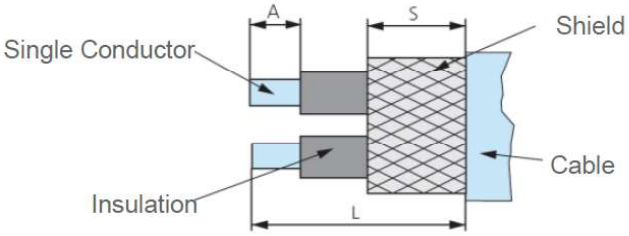


STEP 7

Bend relief: This can be implemented by means of overmolding or by using shrink boot. More information on page 8 and following.

2 GENERAL NOTES
RECOMMENDED STRIPPING LENGTH

The following table provides recommended guidelines for cable preparation.



A = Stripping length single conductor
L = Stripping length cable jacket
S = Stripping length braided shield

Shell Size	Insert Arrangement	Contact	Straight cable assembly			Right angle cable assembly		
			L	A	S	L	A	S
9	20 way	0.5	13	2.5	13	18	2.5	18
9	08 way	0.67	12	3	12	tbd	tbd	tbd

Exceptions are noted on special instructions.

Recommended stripping length on cable preparation of data transmission protocols can be found in the applicable documents (see 7).

Note for data rate connectors:
Before solding, twist the strands back slightly in the original direction. If a shield is available for the separately pairs of wires (e.g. STP-Cables), warp it around the pairs as far as possible.

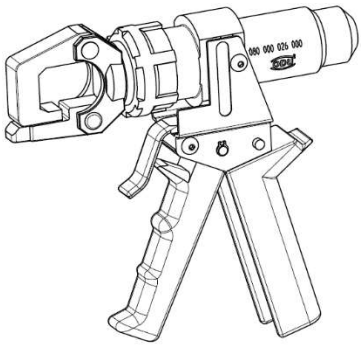
Stripping lengths cable jacket (L)	
Length in mm	Tolerance in mm
< 20	± 1
> 20 - 50	± 2
> 50 - 100	± 3

Stripping length braided shield (S)	
Length in mm	Tolerance in mm
< 10	± 1
> 10 - 20	± 2

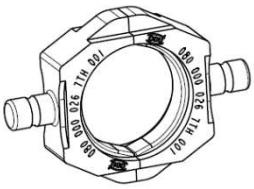
Stripping lengths single conductor (A)	
Length in mm	Tolerance in mm
< 5	± 0.5
> 5 - 10	± 1
> 10 - 20	± 2

ASSEMBLY INSTRUCTION
ODU AMC® SERIES T CONNECTORS

3 SHIELD TERMINATION
CRIMP SLEEVE

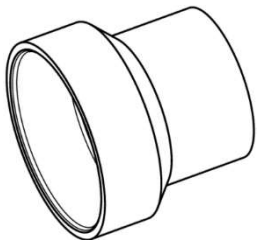


Crimp tool		
Shell Size	Material number	ODU number
all	50231527	080.000.026.000.000



Crimp die		
Shell Size	Material number	ODU number
9	50281524	080.000.026.7TE.001
12	50286858	080.000.026.7TH.001

Crimp sleeve			
ShellSize	Material number	ODU number	Style
9	50269982	7TE.440.101.304.000	1
	50291239	7TE.440.101.304.001	2
12	50270266	7TH.440.101.304.000	1
	50291232	7TH.440.101.304.001	2



Style 1

Style 2

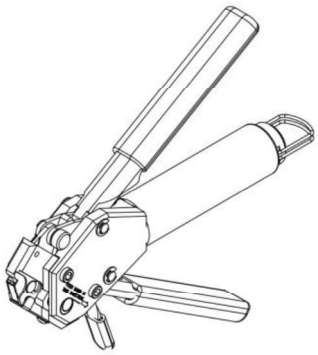
Style 1 is needed for a 20 meter submersible cable assembly.
Style 2 is needed for a cable assembly with right-angle overmolding.

ASSEMBLY INSTRUCTION

ODU AMC® SERIES T CONNECTORS

METAL BANDS

Crimp tool		
ShellSize	Material number	ODU number
all	50035716	080.000.058.000.000



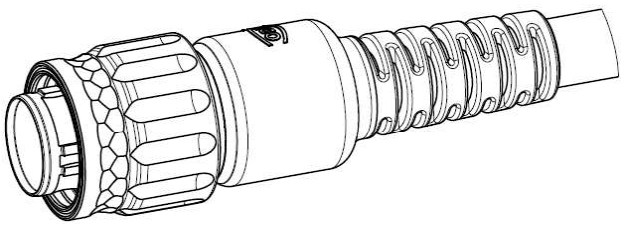
Tie-Dex Micro Bands		
ShellSize	Material number	ODU number
all	50156242	921.000.004.000.248

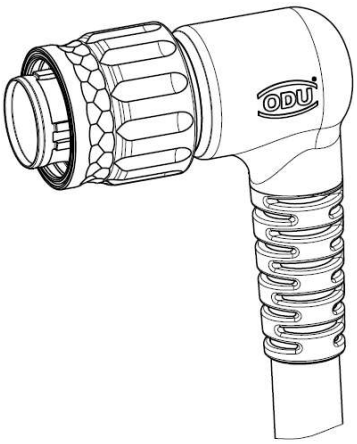
4 CABLE INTERFACE

ODU connectors are designed for overmolding. A heatshrinkable bend relief is also possible.

ODU OVERMOLDING

We provide complete solution with straight and right-angle overmolding on request.





ASSEMBLY INSTRUCTION

ODU AMC® SERIES T CONNECTORS

STRAIGHT HEAT SHRINK BOOT OPTION

ShellSize	Material number	ODU number	Hellermann	TE Connectivity
all	50157036	921.000.010.008.084	**401-52880**	202D121-3-60

ODU stock parts are the bold numbers.

RIGHT ANGLE HEAT SHRINK BOOT OPTION

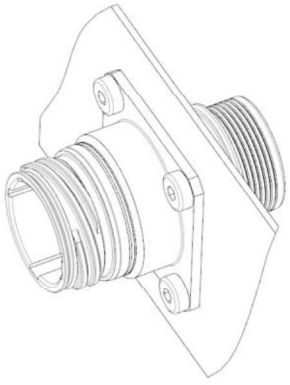
ShellSize	Material number	ODU number	Hellermann
all	50157039	921.000.010.008.087	411-52480

For better adhesion of the heatshrink boots on housing and cable, ODU recommend to work with an epoxyd-adhesion e.g. Hellermann V9500, TE Connectivity S1125.
(Take care of Hellermann/TE Connectivity work instruction)

5 SQUARE FLANGE SOLUTION

TIGHTENING TORQUE

Tightening torque for standard thread in Nm						
Thread size	Strength class					
	4.6	5.6	6.8	8.8	10.9	12.9
M3	0,48	0,60	0,96	1,28	1,80	2,16



The use of a torque wrench is recommended.

ASSEMBLY INSTRUCTION
ODU AMC® SERIES T CONNECTORS

6 INSERT RETENTION TOOL

Insert Retention Tool		
Shell Size	Material number	ODU number
09 / 12	50304551	7TH.098.003.000.000
14	50521283	7TM.098.003.000.000

Adapter							
Shell Size	Material number	ODU number	Connector type	Contact type	Color 1	Color 2	Color 3
09	50508311	7TH.098.003.E00.000	Plug	Socket	Black	Green	Red
			Plug	Pin	Black	Green	Yellow
			Receptacle	Socket	Black	Blue	Red
			Receptacle	Pin	Black	Blue	Yellow
12	50508323	7TH.098.003.H00.000	Plug	Socket	Red	Green	Red
			Plug	Pin	Red	Green	Yellow
			Receptacle	Socket	Red	Blue	Red
			Receptacle	Pin	Red	Blue	Yellow
14	50522310	7TM.098.003.K00.000	Plug	Socket	Yellow	Green	Red
			Plug	Pin	Yellow	Green	Yellow
			Receptacle	Socket	Yellow	Blue	Red
			Receptacle	Pin	Yellow	Blue	Yellow

7 APPLICABLE DOCUMENTS

In order to ensure the best possible data transmission, assembly steps 2 and 3 are explained in more detail and the wiring charts are given in separate documents.

Shell Size	Number of contacts	Data transmission protocols	Applicable document
09	20	DisplayPort 2.0	D00028933
09	20	HDMI 2.0	D00034894
09	08	tbd	D00037413