

## **CELLFLEX®** Coaxial Cable

#### Installation Instruction 1000006020-04 LCF12-50 Cables & RCF12-50 cables OMNI FIT<sup>™</sup> D01 Connectors

These instructions are written for qualified and experienced personnel. Please study them carefully before starting any work. Any liability or responsibility for the results of improper or unsafe installation practices is disclaimed. Please respect valid environmental regulations for assembly and waste disposal. Always make sure to use appropriate personal protection!







## Manual installation method with standard hand tools

Straighten the cleaned cable front part in over a length of min. 200 mm (8 in). Keep the cable end downwards in order to prevent particles from entering during preparation.

- Remove a short piece of jacket (~ 10-20 mm / ~ 0.4-0.8 in). 1.
- Cut the cable with a fine toothed hacksaw in a corrugation valley in a 2. right angle to cable axis to prepare a reference length for the inner conductor.
- Remove the jacket to the dimension shown with a knife. Do not 3. damage the outer conductor!
- 4. Cut the outer conductor only with a fine toothed hacksaw just forward to the crest of the second corrugation. Continue to cut the dielectric with a knife. Do not cut or damage the inner conductor.
- Remove the outer conductor. Carefully cut the dielectric lengthwise 5 and remove it. Make a chamfer on the inner conductor with a fine file. It is imperative to achieve a pure metallic contact surface on the protruding length of the inner conductor. This may be realized by scraping away completely all foam and adhesive (thin layer may appear transparent) from the inner conductor manually (fingernail) or with a dedicated tool (e.g. CC200EUR). Take care not to damage the copper cladding, also make sure not to bend the inner conductor out of the straight line. Remove all particles with a brush.

- 6. Push the back-nut of the connector onto cable until claws falls into first corrugation valley as shown.
- 7. Keep the back-nut in position while running the tip of a screw driver (rounded edges) around the outer conductor to separate the foam and create an outer conductor flare. Flare diameter has to be evenly round and concentrically to the cable axis.
- The flared area (cone) has to be free of any dielectric material, if 8. necessary bend the dielectric back to the centre. Clean the prepared cable end; remove any particles very carefully with a brush. It is not recommended to use steel or similar hard brushes, because these can deeply press particles inside the dielectric. Adhesive tape can be used additionally for removing the finest particles.
- 9 Check the complete preparation. Careful preparation is the key to good VSWR and especially to proper PIM performance!
- 10. Push connector front part onto prepared cable end; do never turn the front part! Pay attention that the connector parts are well aligned while tightening them by turning the back-nut only (first by hand).
- 11. Keep the connector body steady and tighten the back-nut of the connector by use of open end wrenches. Tighten properly to mechanical stop (no visible gap between body and back-nut).
- Keep the interface of the connector clean! 12
- Important Remarks Weatherproofing: A heat shrink sleeve with adhesive lining (e.g. HEAT-328-018) must be used for RCF cables!



TO SERVE YOU BETTER Any questions comments or suggestions that would help us impro



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- 2. Cut the cable with a fine toothed hacksaw in a corrugation valley in a right angle to cable axis.
- Press the Automated trimming tool over the cable again and strip the 3. cable by turning with medium speed (approx. 300 rpm) until mechanical stop.
- 4. Check the stripping dimensions.
- 5. It is imperative to achieve a pure metallic contact surface on the protruding length of the inner conductor. This may be realized by scraping away completely all foam and adhesive (thin layer may appear transparent) from the inner conductor manually (fingernail) or with a dedicated tool (e.g. CC200EUR). Take care not to damage the copper cladding, also make sure not to bend the inner conductor out of the straight line. Remove all particles with a brush.
- 6. Push the back-nut of the connector onto cable until claws falls into first corrugation valley as shown.
- 7. Insert the tip of a knife between the outer conductor and foam rotating the knife 360° around the foam, at the same time pressing the foam inward to the center conductor. This process allows the

- 9. The flared area (cone) has to be free of any dielectric material, if necessary bend the dielectric back to the centre. Clean the prepared cable end; remove any particles very carefully with a brush. It is not recommended to use steel or similar hard brushes, because these can deeply press particles inside the dielectric. Adhesive tape can be used additionally for removing the finest particles.
- 10. Check the complete preparation. Carefull preparation is the key to good VSWR and especially to proper PIM performance!
- Push connector front part onto prepared cable end; do never turn the 11. front part! Pay attention that the connector parts are well aligned while tightening them by turning the back-nut only (first by hand).
- 12. Keep the connector body steady and tighten the back-nut of the connector by use of open end wrenches. Tighten properly to mechanical stop (no visible gap between body and back-nut).
  - Keep the interface of the connector clean!
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# Installation method with Universal Trimming Tool



## Please refer to the instruction of the Universal Trimming Tool in addition!

Keep the cable end downwards in order to prevent particles from entering during preparation.

- 1. Straighten the cleaned cable front part in over a length of min. 200mm / 8 in. Remove the jacket with a knife in the length as shown (it is recommended to use the stripping tool JSTRIP-12-3). Do not damage the outer conductor!
- Cut the cable with a fine toothed hacksaw in a corrugation valley in a right angle to cable axis to prepare a 2. reference length for the inner conductor. Leave 3 or 4 tops of corrugations dismantled.
- 3. Insert cable into trimming tool, so that the collet guide is placed in the second corrugation valley from the frontend. The main blade is located on the second crest (top) of corrugation. The cable also fits properly to the complete base of the tool. Close blade housing of the tool.
- Rotate trimming tool clockwise around the cable as indicated by the arrow on the tool by touching tool turning 4. points T1 and T2 only. Do not use any additional force greater than the preset trimming tool spring tension. Once the outer conductor is cut, continue turning the tool whereby the tool can be touched on tool turning points T1, T2 and T3 until the dielectric and jacket is cut. Then open blade housing and remove the tool.
- Remove the trimmed outer conductor. Carefully cut the dielectric lengthwise and remove it. Carefully cut the jacket 5. lengthwise with a knife and remove. Do not damage the outer conductor.
- Provide the cable inner conductor with a chamfer using the deburrer of the tool. For this purpose insert cable inner 6. conductor into the chamfer tool, then press carefully and rotate the Trimming Tool clockwise several times.
- Inspect the cable preparation dimensions. 7.
- It is imperative to achieve a pure metallic contact surface on the protruding length of the inner conductor. 8. This may be realized by scraping away completely all foam and adhesive (thin layer may appear transparent) from the inner conductor manually (fingernail) or with a dedicated tool (e.g. CC200EUR). Take care not to damage the copper cladding, also make sure not to bend the inner conductor out of the straight line.
- 9. Remove all particles with a brush.
- **10.** Push the back-nut of the connector onto cable until claws falls into first corrugation valley as shown.
- 11. Push a bit of dielectric to the centre in order to have a free space to insert the flaring pin of the tool as required for the next step.
- **12.** Insert the inner conductor into the corresponding hole of the flare tool (marking 1/2", do not use the position marked 1/2"-C02), make sure that the flaring pin is located between outer conductor and foam/dielectric (in the free space made before). Keep pushing the back nut to the front while pressing the tool slightly and turn it a few times clockwise to flare the outer conductor. Flare diameter has to be evenly round and concentrically to the cable axis.
- **13.** The flared area (cone) has to be free of any dielectric material, if necessary bend the dielectric back to the centre. Clean the prepared cable end, remove any particles very carefully with a brush. It is not recommended to use steel or similar hard brushes, because these can deeply press particles inside the dielectric. Adhesive tape can be used additionally for removing the finest particles.
- 14. Check the complete preparation. Carefull preparation is the key to good VSWR and especially to proper PIM performance.
- 15. Push connector front part onto prepared cable end; do never turn the front part! Pay attention that the connector parts are well aligned while tightening them by turning the back-nut only (first by hand). Never turn the front part of the connector!
- 16. Keep the connector body steady and tighten the back nut of the connector by use of open end wrenches. Tighten properly to mechanical stop (no visible gap between body and back nut).

Keep the interface of the connector clean!

17. Important Remarks – Weatherproofing: A heat shrink sleeve with adhesive lining (e.g. HEAT-328-018) must be used for RCF cables!

