

Installation guide

DEVI EasyConnect

Self-limiting heating cable connection kits



Make it easy,
make it DEVI



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1 Introduction

The following installation procedures are suggested guidelines for the installation of **DEVI EasyConnect Kits**. These connection kits can be used for the following self-limiting heating cables **DEVIpipeline™ LSZH 10/25/33**, **DEVIceguard™ 18 (T)**.

Type	Value
Nominal voltage, max.	250 V~
Max. current	16 A
Max. permissible use temperature	100 °C
Min. permissible use temperature	-40 °C
Power cable	3 x 2,5 mm ²
Outer sheath	thermoplastic, PA66
Protection class	IP68 (2 hours in water 3 meters deep)
Seal	NBR (Nitrile Butadiene Rubber)

Product codes:

Item no.	Type	Resistance	EAN no.
98300870	DEVI EasyConnect EC-1	Power supply connection set	5703466214503
98300871	DEVI EasyConnect EC-T1	Connection set for 2 heating cables	5703466214510
98300872	DEVI EasyConnect EC-ETK	End plug set	5703466214527
98300873	DEVI EasyConnect EC-1+ETK	Power supply connection set with an end plug	5703466214534
98300874	DEVI EasyConnect EC-T2	Set for heating cable branching – 1 to 2	5703466214541
98300875	DEVI EasyConnect EC-2	Power supply connection set for 2 cables	5703466214558
98300876	DEVI EasyConnect EC-3	Power supply connection set for 3 cables	5703466214565

2 Connection kit components

Item	Description		Item	Description	
1	Ground Shrink Tube		8	Male Connector	
2	Large Crimp		9	Distributor end cap	
3	Small Crimp		10	End Cap, 60 mm	
4	Power Cable Compression Nut		11	Shrink tube for end termination, 120 mm	
5	Heating Cable Compression Nut		12	Heating Cable Housing	
6	Heating Cable Grommet		13	Power Cable Housing	
7	Female Connector		14	Distributor	

NOTE: Items shown above are a comprehensive overview of DEVI EasyConnect fittings. Refer to individual kits below for items included.



DEVI EasyConnect EC-1 (98300870)
Power supply connection set



DEVI EasyConnect EC-2 (98300875)
Power supply connection set for 2 cables



DEVI EasyConnect EC-3 (98300876)
Power supply connection set for 3 cables



DEVI EasyConnect EC-1+ETK (98300873)
Power supply connection set with an end termination



DEVI EasyConnect EC-T1 (98300871)
Connection set for 2 heating cables



DEVI EasyConnect EC-T2 (98300874)
Set for heating cable branching – 1 to 2



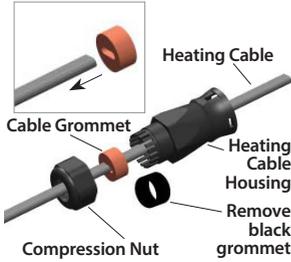
DEVI EasyConnect EC-ETK (98300872)
End termination set



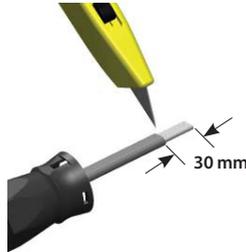
Tools Required

3 Installation Procedures

3.1 Heating Cable Fabrication



1. Slide the Heating Cable compression nut over the cable. Slide the cable grommet over the cable with the small opening facing the compression nut. Remove the black Heating Cable grommet and discard. Slide Heating Cable Housing on to the cable.

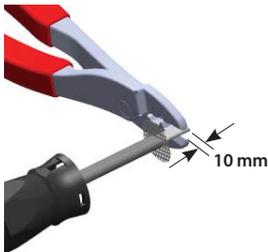


2. Remove 30 mm of the outer jacket. Do not cut the ground braid under the outer insulation jacket.

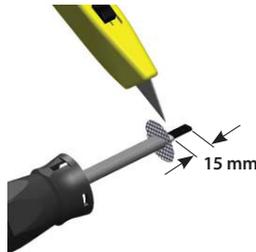
 Do not cut or damage the ground braid.



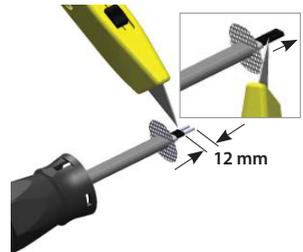
3. Pull back the ground braid to allow for further fabrication.



4. Remove 10 mm of the exposed cable.

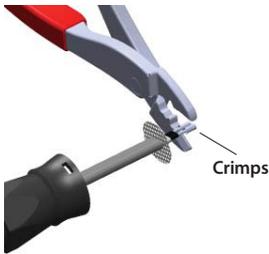


5. Remove 15 mm of the primary insulation jacket to expose the conductive matrix.

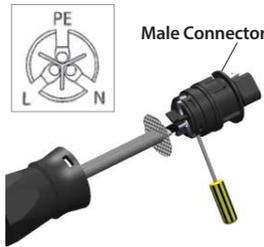


6. Remove 12 mm of the conductive matrix. Start by skiving the sides of the matrix to expose the bus wires. Pull bus wires from matrix. Remove matrix carefully. Do not cut bus wire strands.

 Do not cut or damage the bus wire strands.



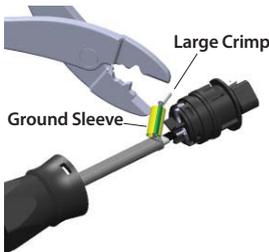
7. Slide a small crimp over the exposed bus wires. Crimp towards the inner edge to hold in place. Use caution to not deform the outer end of the bus wire crimps as they will need to fit into the electrical terminals.



8. Insert the crimped bus wires into the designated male connector terminals (L and N) and fasten tightly. Make sure the connector is aligned properly with the Heating Cable Housing latch holes. Rotate the connector if alignment is needed. The crimp will flatten as the terminal screw is tightened. To prevent arcing, make sure all wire strands are securely fastened.



9. Twist the ground braid to form a single strand. Make sure the strand is located on the same side of the ground terminal to allow for sufficient length to be inserted into the terminal.



10. Slide a large crimp over the twisted ground braid. Crimp towards the inner edge to hold in place. Slide the ground sleeve over the crimped ground strand.

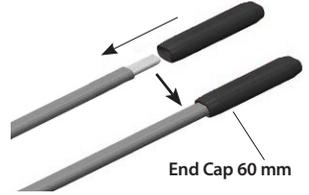
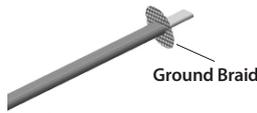


11. Insert the crimped and sleeved ground braid into the designated terminal. Tighten until the terminal screw bottoms out. The crimp will flatten as the terminal screw is tightened. To prevent arcing, make sure all wire strands are securely fastened.



12. Slide the Heating Cable Housing toward the connector and connect making sure the latches click into position. Slide the compression nut forward and engage the threads. Tighten securely.

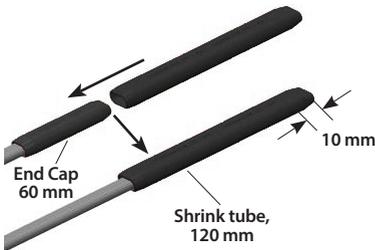
3.2 End Termination Fabrication



1. Remove 30 mm of the outer jacket. Do not cut the ground braid under the outer insulation jacket.
2. Cut off the ground braid to allow for further fabrication.
3. Slide the End Cap, 60 mm over the end of the heating cable.

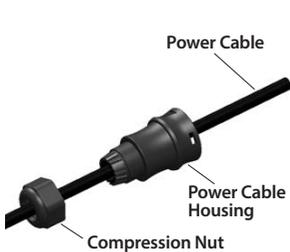


Do not cut or damage the ground braid.

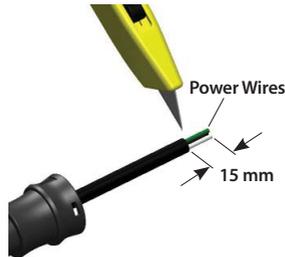


4. Shrink tube 120 mm is squeezed while still hot. Press flat with a pair of pliers (10 mm). The Shrink tube, 120 mm, should overlap the 60 mm End cap by min 20 mm after the shrinkage process.

3.3 Power Cable Fabrication

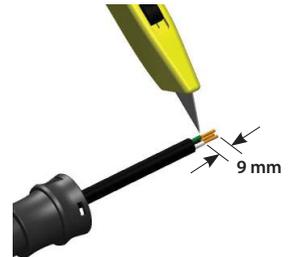


1. Slide the Power Cable compression nut and Power Cable Housing onto the power cable. Proper orientation is required to allow for assembly after electrical connections are made.



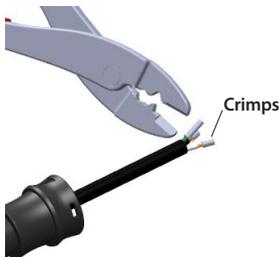
2. Remove 15 mm of the outer jacket. Do not cut the power wires under the outer insulation jacket.

 Do not cut or damage the power wires.

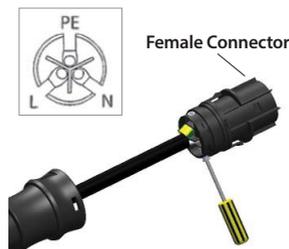


3. Remove 9 mm of the power wire insulation.

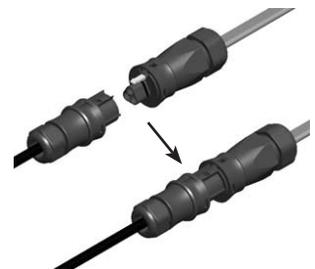
 Do not cut or damage the wire strands.



4. Slide small crimps over the exposed black and white wires and a large crimp over the green ground wire. Crimp towards the inner edge to hold in place. Use caution to not deform the outer end of the wire crimps as they will need to fit into the electrical terminals.



5. Insert the crimped power wires into the designated female connector terminals (L and N) and fasten tightly. Make sure the connector is aligned properly with the Power Cable Housing latch holes. Rotate the connector if alignment is needed. The crimp will flatten as the terminal screw is tightened. To prevent arcing, make sure all wire strands are securely fastened.

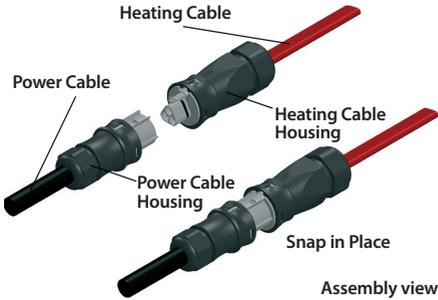


6. Slide the Power Cable Housing toward the connector and connect making sure the latches click into position. Slide the compression nut forward and engage the threads. Tighten securely. Connect the Heating Cable Housing to the Power Cable Housing. Make sure the latches click into position.

 Do not separate when energized.

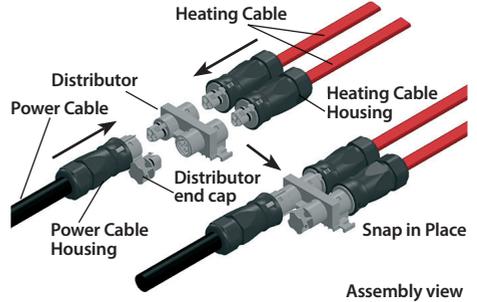
4 Kit Configurations

Model: DEVI EasyConnect EC-1



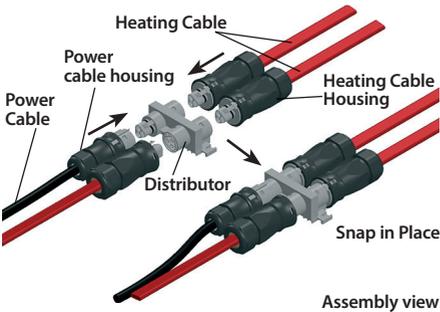
DEVI EasyConnect EC-1 (98300870)
Power supply connection set

Model: DEVI EasyConnect EC-2



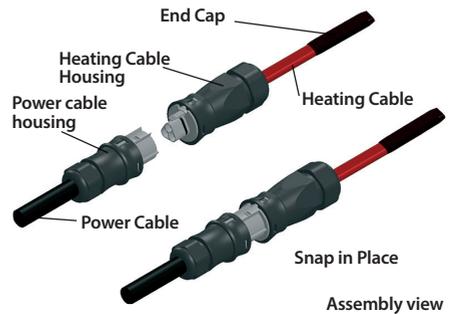
DEVI EasyConnect EC-2 (98300875)
Power supply connection set for 2 cables

Model: DEVI EasyConnect EC-3



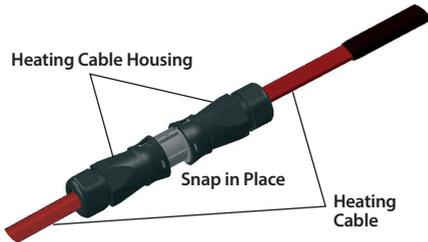
DEVI EasyConnect EC-3 (98300876)
Power supply connection set for 3 cables

Model: DEVI EasyConnect EC-1 + ETK



DEVI EasyConnect EC-1+ETK (98300873)
Power supply connection set with an end termination

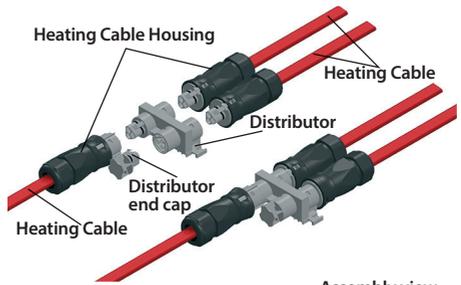
Model: DEVI EasyConnect EC-T1



Assembly view

DEVI EasyConnect EC-T1 (98300871)
Connection set for 2 heating cables

Model: DEVI EasyConnect EC-T2



Assembly view

DEVI EasyConnect EC-T2 (98300874)
Set for heating cable branching – 1 to 2

Model: DEVI EasyConnect EC-ETK



DEVI EasyConnect EC-ETK (98300872)
End termination set

5 Standard compliance

DIN VDE 0606 T200, DIN EN 61984 (VDE 0627), VDE 0110 IEC 60999;

CSA: C22.2 N. 182.2-M1987; LR Type Approval System

DEVI EasyConnect enables you to modify your heat tracing circuit in 1 click. You can use the DEVI EasyConnect indoors as well as outdoors. The connectors are IP 68 rated by VDE and CE marked. This 3 pole Connector is rated for max 250 Volt and 16 Amps and can be used within a temperature range of -40° to 100°C. These Installation Instructions will give you details about connecting the product to power and heat tracing cables as well as a few design tips.

6 Warnings

- To prevent electrical shock, short-circuit or sparks please read the installation manual of the connector and the heat tracing cable carefully before installation.
- Connect DEVI EasyConnect to the heat tracing cable and power cable only with the power switched off.
- Do not use this connector without using an earth leakage circuit breaker.
- Do not connect the two bus wires of the heat tracing cable together. This will cause a short circuit.
- Use for end termination the DEVI EasyConnect EC-ETK set, do not leave the end of the heat tracer unterminated.
- Avoid contact with water during the installation of the DEVI EasyConnect.
- Avoid contact with water during the installation of the heat tracing cable.
- Make sure that the connection is not immersed in water after installation.
- Use only 2,5 square non stranded power cable for the power connector.



7 **Warranty**



A 2-year product warranty is valid for:

- accessories: DEVI EasyConnect.

Should you, against all expectations, experience a problem with your DEVI product, you will find that Danfoss offers DEVIwarranty valid from the **date of purchase** on the following conditions: During the warranty period Danfoss shall offer a new comparable product or repair the product if the product is found to be faulty by reason of defective design, materials or workmanship. The repair or replacement.

The decision to either repair or replace will be solely at the discretion of Danfoss. Danfoss shall not be liable for any consequential or incidental damages including, but not limited to, damages to property or extra utility expenses. No extension of the warranty period following repairs undertaken is granted.

The warranty shall be valid only if the WARRANTY CERTIFICATE is completed correctly and in accordance with the instructions, the fault is submitted to the installer or the seller without undue delay and proof of purchase is provided. Please note that the WARRANTY CERTIFICATE

must be filled in, stamped and signed by the authorized installer performing the installation (Installation date must be indicated). After the installation is performed, store and keep the WARRANTY CERTIFICATE and purchase documents (invoice, receipt or similar) during the whole warranty period.

DEVIwarranty shall not cover any damage caused by incorrect conditions of use, incorrect installation or if installation has been carried out by non-authorized electricians. All work will be invoiced in full if Danfoss is required to inspect or repair faults that have arisen as a result of any of the above. The DEVIwarranty shall not extend to products which have not been paid in full. Danfoss will, at all times, provide a rapid and effective response to all complaints and inquiries from our customers.

The warranty explicitly excludes all claims exceeding the above conditions.

For full warranty text visit www.devi.com.devi.danfoss.com/en/warranty

WARRANTY CERTIFICATE

The DEVIwarranty is granted to:

Address _____ Stamp _____

Purchase date _____

Product _____ Art. No. _____

Installation Date & Signature _____ Connection Date & Signature _____

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