



*Saves Your Energy*

**INSTALLATION INSTRUCTION PEM1377ENG  
2012-03**

**ENGLISH**



**HEAT SHRINK JOINT FOR ONE CORE CABLE HJ11.1201 10-95 mm<sup>2</sup>**

## GENERAL INFORMATION

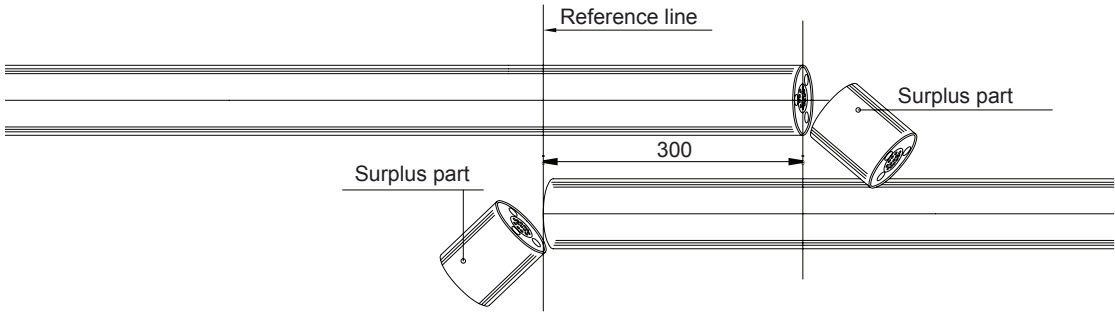
- Check that the kit is suitable for the cable type.
- Check the materials listed in the bill of materials for completeness.
- Read the installation instructions carefully before starting the installation.
- Install carefully and make sure the materials are clean during the installation.
- Clean the working place after the installation.

## GENERAL INSTRUCTIONS FOR HEAT SHRINKING

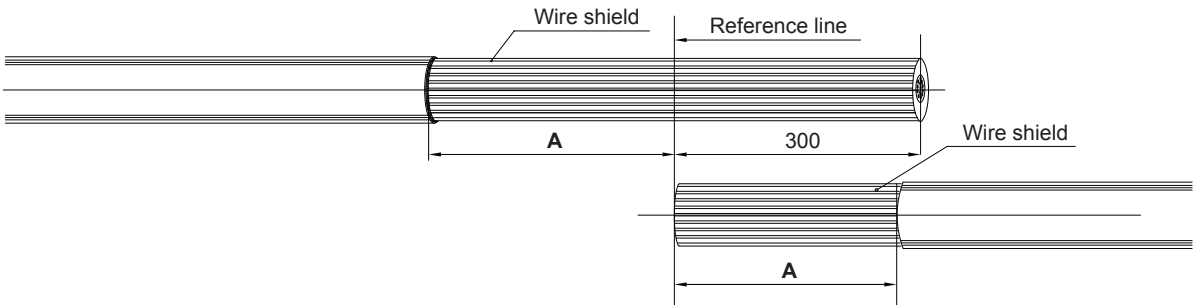
- Please note that in some working places a hot work permit is needed.
- Use a propane burner with a flame length of approx. 20-30 cm. Do not use too large or sharp flame.
- Move the flame all around the cable on the shrinking direction. Move the flame continuously to avoid overheating.
- Make sure that the ventilation is good and there are no flammable materials around.
- Clean the cable surfaces before shrinking.
- When shrinking, always follow the installation instructions and the relevant sequence to avoid trapped air.
- Check that the tube has shrunk evenly around the cable before you continue shrinking.
- If the tube turns around at the end of shrinking, straighten the tube by directing the flame inside the tube from the opposite direction.
- After shrinking the tubes should be smooth and even following the shape inside.

## LEGAL NOTICE

- The product must be installed only by a competent person with sufficient training in installation practices and with sufficient knowledge of good safety and installation practices in respect of electrical equipment. If local legislation contains provisions in respect of such training or sufficient knowledge in respect of installation of electrical equipment such provisions shall be fulfilled by the said person.
- Ensto accepts no liability concerning claims resulting from misuse, incorrect installation or ignored national safety regulations or other national provisions.
- WARNING: Failure to follow the installation instructions may result in damage to the product and serious or fatal injury.



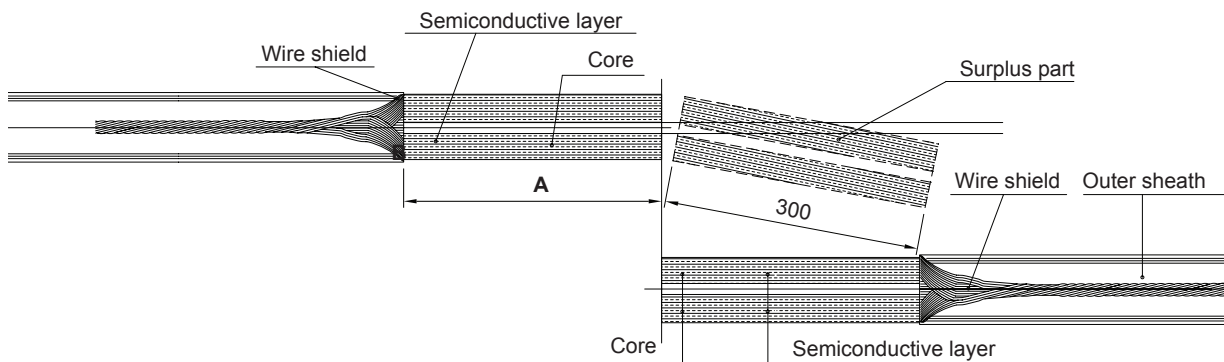
1. Overlap the cables for approximately 1 m. Mark the cables in the middle of the overlap (reference line). Cut the other cable end from the marked reference line. To ensure the shield wires are long enough, cut the other end of the cable 300 mm away from the reference line mark towards the end of the cable.



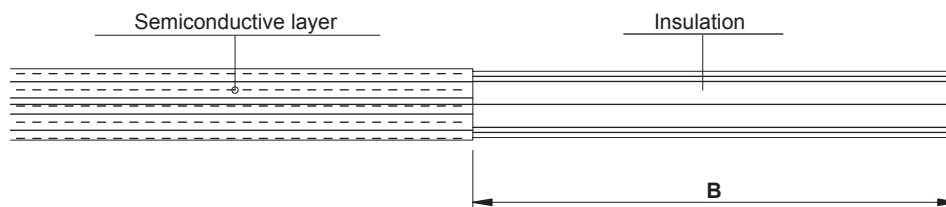
2. Cut and remove the outer sheath according to the dimension shown in table 1. Use **A** for the other side of the joint and **A+300 mm** for the other. Clean the outer sheath for 1.5 m to keep the internal surface of the heat shrink tubes free of dirt.

Table 1.  
CABLE PREPARATION DIMENSIONS

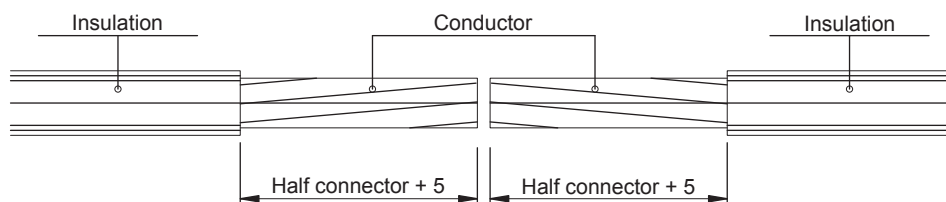
Kit	Um kV	Cable size mm <sup>2</sup>	Outer sheath removal A mm	Semiconductive layer removal B mm	Max. connector dimensions	
					length mm	diameter mm
HJ11.1201	12	10-95	240	150	130	25



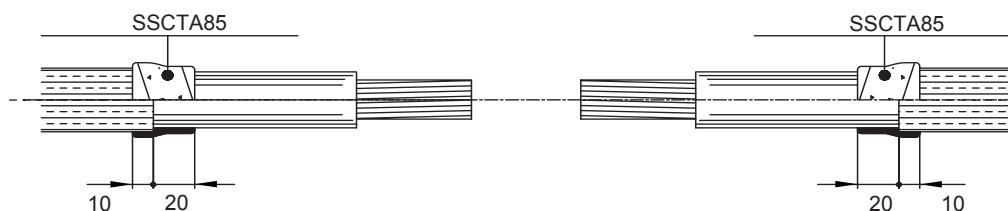
3. Do not cut the copper shield wires. Fold them over the outer sheath and fix them temporarily with PVC tape. Cut away 300 mm of the cores on the longer side.



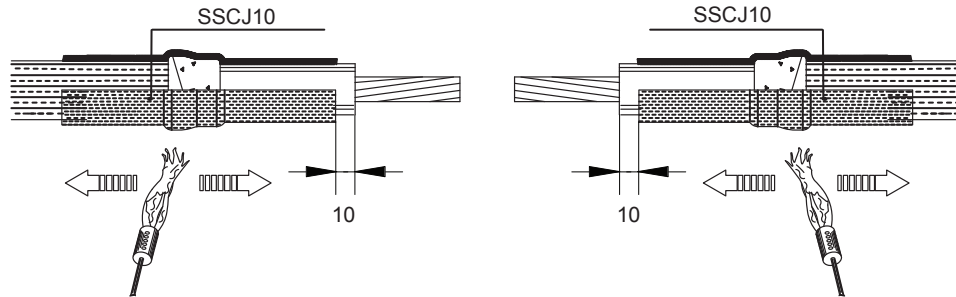
4. Remove B mm (see table 1) of the semiconductive layer measured from the end of the conductor. If the semiconductive layer is not strippable by hand, use a suitable tool. If necessary, remove any remainings of the semiconductive layer with a piece of glass. Use the grinding paper included in the kit to smooth the insulation.



5. Remove half of the bolt connector length + 5 mm from the insulation of the cable. Be careful not to nick the conductor. If you use compression connectors, remove the insulation according to connector manufacturer's instructions. Clean the conductors. Wrap a couple layers of PVC tape around the end of the conductors.

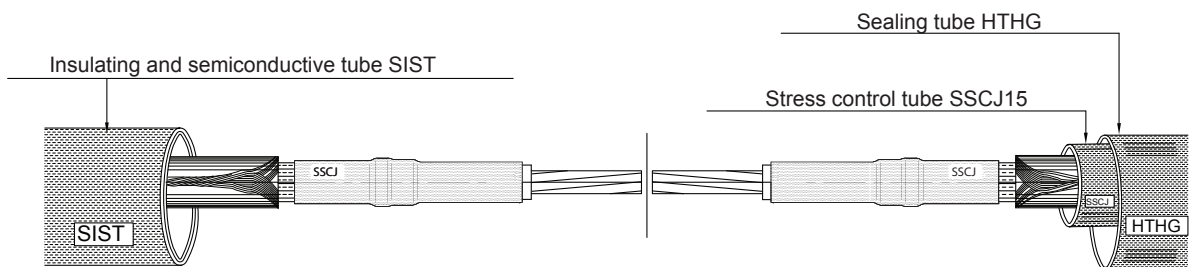


6. Wrap two layers of stress control mastic SSCTA85 over the edge of the semiconductive layer. Wrap SSCTA85 for 10 mm on the semiconductive layer and for 20 mm on the insulation. Start from the semiconductive side. SSCTA85 must be wrapped with a 50% overlap and by stretching it to half of its original width.

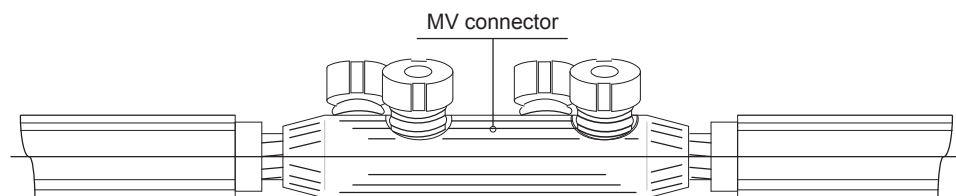


- 7.** Place the possible SSCJ10 stress control tubes 10 mm from the end of the insulation. Start shrinking from the middle and move towards the ends. Clean the tube after shrinking.

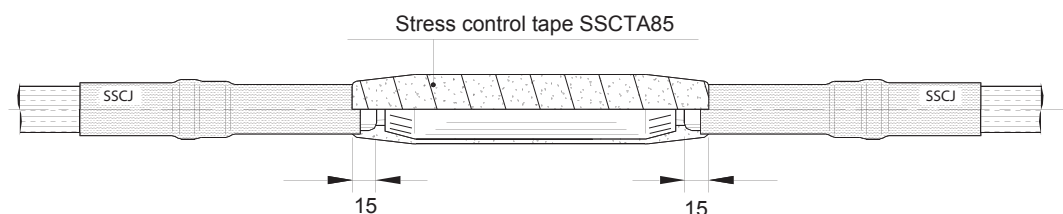
If the conductor size is 35 mm<sup>2</sup> or over, the SSCJ10 stress control tube is not needed on that side of the joint.



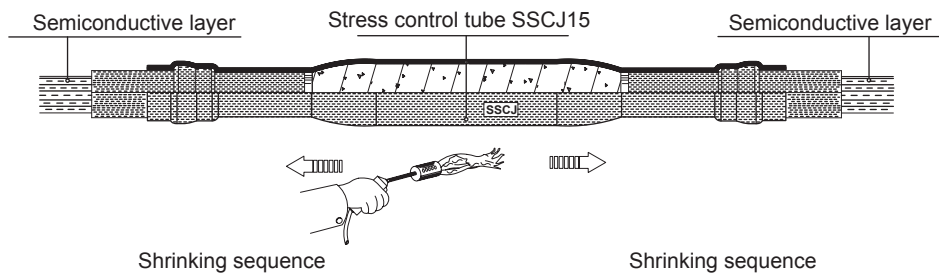
- 8.** Slip the insulating and semiconductive tube SIST, the SSCJ15 stress control tube and sealing tube HTHG on the cables. Protect the tubes from dirt.



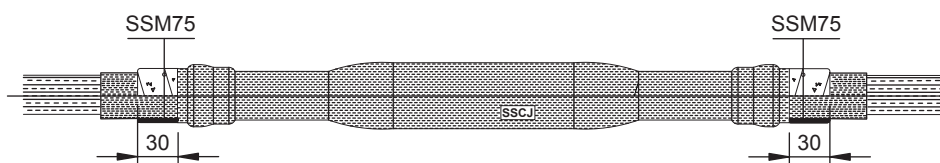
- 9.** Remove the PVC tape from the ends of the conductors and install a MV connector following the manufacturer's instructions. Remove any sharp edges. Fill any holes left in the connector with grey mastic.



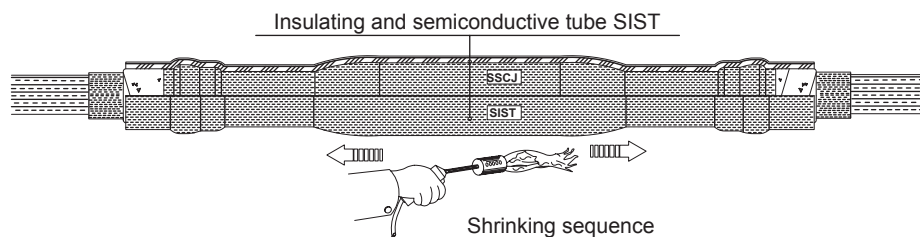
- 10.** Fill the gap between the end of the connector and the insulation with stress control tape SSCTA85. Then wrap two layers of SSCTA85 to cover the connector. Continue up to 15 mm from the insulation edge on both sides. SSCTA85 must be wrapped with a 50% overlap and by stretching it to half of its original width.



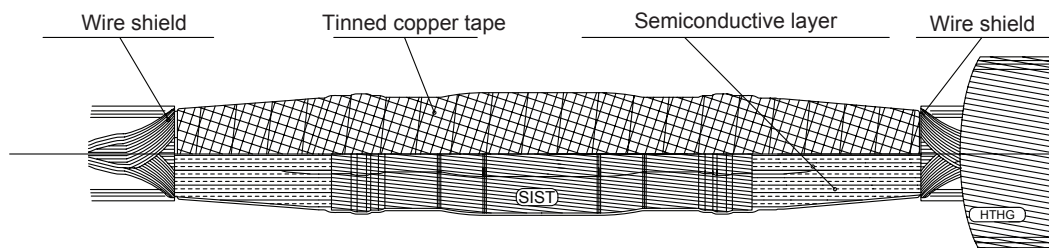
- 11.** Centre the long stress control tube SSCJ15 on the connector. Start shrinking the tube from the middle and move towards the ends. Clean the surface of the stress control tube with a cleaning tissue after shrinking.



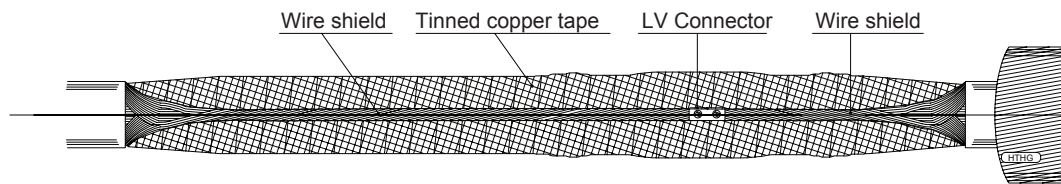
- 12.** Wrap two layers of sealing mastic SSM75 for 30 mm length on the semiconductive layer starting from the end of the stress control tube on the both sides of the tube.



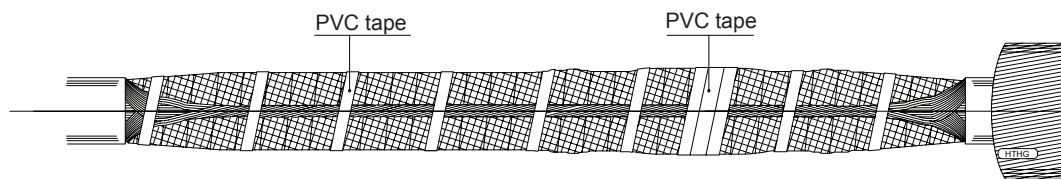
- 13.** Centre the insulating and semiconductive tube SIST on top of the stress control tube. Start shrinking it from the middle and move towards the ends.



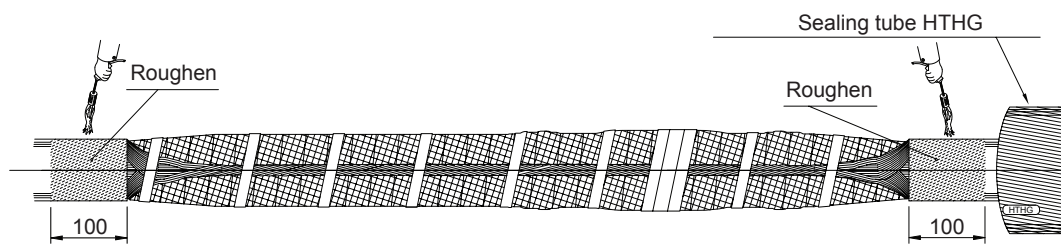
- 14.** Wrap the core with tinned copper tape. Go from the exposed semiconductive layer on one side to the other side. Tinned copper tape must be applied with a 20% overlap. Fix the copper tape with PVC tape.



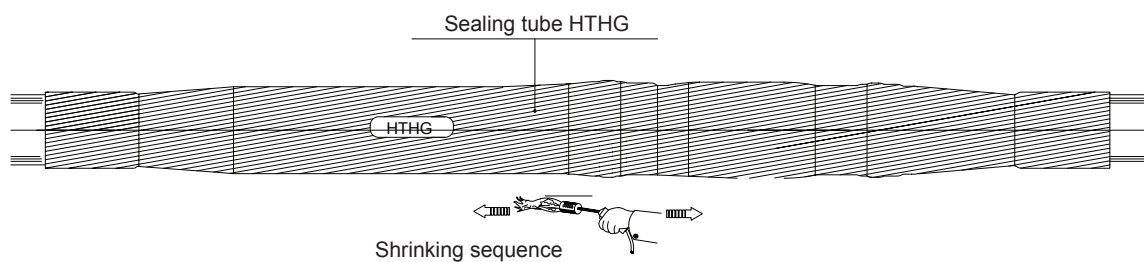
- 15.** Twist the copper shield wires into stranded conductors and join them with a suitable connector following the manufacturer's instructions.



- 16.** Fix the copper shield wires to the copper tape by wrapping some PVC tape around them.



- 17.** Roughen around 100 mm of the outer sheath on both sides of the joint with grinding paper. Treat the roughened parts gently with flame.



- 18.** Centre the sealing tube HTHG on the joint. Start shrinking the tube from the middle and move towards the ends. The tube is properly shrunk when the adhesive starts to come out from the ends.

- 19.** The joint is finished and ready to use, but let it cool down before loading it mechanically.



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ENSTO FINLAND OY  
ENSIO MIETTISEN KATU 2, P.O.BOX 77  
06101 PORVOO, FINLAND  
TEL. +358 204 76 21  
FAX +358 204 762 770  
UTILITY.NETWORKS@ENSTO.COM

WWW.ENSTO.COM