# 1 Instructions to repair a SEC 20 or SEC 15 sensor cable

## 1.1 General

This instruction describes the procedure for cutting and connecting LIST or d-LIST sensor cable. If a cable section is being replaced, this procedure must be performed twice.

## 1.2 Material

LIST- / d-LIST-sleeve-joint consisting of:

- 1 glue lined heat-shrink tubing, approx. 50 cm
- 1 protective tube, approx. 25 cm, heat-resistant
- 2 rubber end-sleeves
- 1 shield-connector with two connectors
- 1 connection cable with two female LIST-connectors
- 2 male LIST-connectors
- 2 strain relief clips for LIST-connectors

## 1.3 Tools

- LIST crimping-tool
- Gas-burner
- LIST cable-cutter
- Cable knife
- Lighter / matches
- Isolation tape
- Marker (pen)

## 1.4 Preparations

Initiate all on-site safety precautions. Use a suitable scaffolding or lifting platform, if the cable is mounted in an elevated position.

> **Attention**
> The minimum bending radius must be observed at all times (also refer to manuals of LISTcontroller **60T107**, LISTcontroller-**RDT 60T215**, **SCU 800-03 60T023**)!
> **SEC 20** = 30 cm
> **SEC 15** = 25 cm

## 1.5 Procedure

- Switch off the **SCU 800** or LISTcontroller.
- Open the two cable clamps to the left and right of the desired cutting-point.
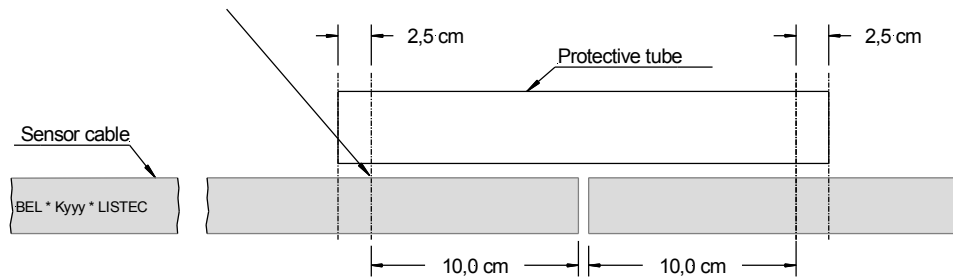- Cut the cable at the desired point, using the LIST cable-cutter.

> **Attention**
> The cutting point should be at least *50 cm* from the nearest sensor imprint.

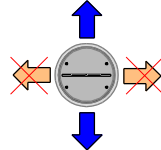- Remove the cable jacket from the sensor cable as shown below:

1.) Use a LIST cable knife to score the **SEC** approximately 10 cm from the end:

2,5 cm     Protective tube     2,5 cm

Sensor cable

BEL * Kyyy * LISTEC

10,0 cm     10,0 cm

2.) Note the orientation of the flat cable in the **SEC**:

3.) Bend the **SEC** on the score, taking into account the orientation of the flat cable:

4.) Strip off the cable jacket and filling material carefully:

BEL * Kyyy * LISTEC

5.) Cut off the Kevlar strands.

- Crimp the male LIST-connectors onto the exposed ends of the flat conductor cable. When crimping, make sure that the contacts line up with the conductors and do not cause a short-circuit.
- Push the heat-shrink tubing and one rubber end-sleeve onto one cable end. Push the second rubber end-sleeve and the protective tube onto the other cable end.
- Use the shield-connector to connect the two cable-shields. Note, that the shield-connectors must be pushed completely up to the cable jacket. The shield-connector fits under the aluminium shield and over the cable jacket.

BEL * Kyyy * LISTEC

BEL * Kyyy * LISTEC

BEL * Kyyy * LISTEC
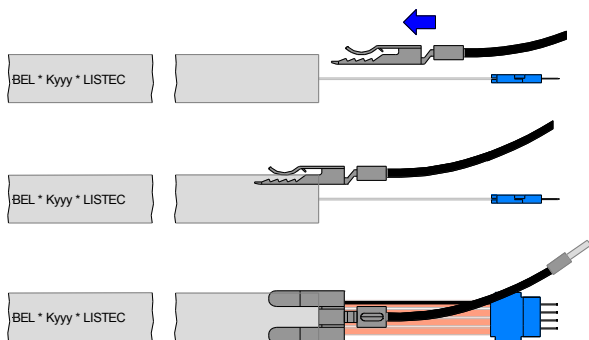
- Connect the flat conductor cables, using the supplied strain relief clips to prevent inadvertent opening of the connection. Note the orientation of the cables when connecting.

BEL * Kyyy * LISTEC

Strain relief

- Switch on **SCU 800** or LISTcontroller and test the cable. If error messages occur, check connections and orientation of the flat conductor cables.
- Switch off **SCU 800** or LISTcontroller.
- If the sensor cable is operating normally, push the protective tube over the connection and press the rubber end-sleeves tightly up against the tube.
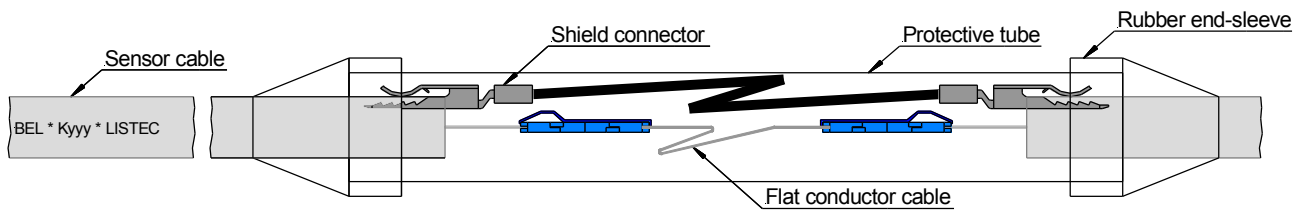
- ◆ Tape the rubber end-sleeves to the tube, so that they cannot be pulled off when pushing the heat-shrink tubing over the connection.
- ◆ Push the heat-shrink tubing over the connection.
- ◆ Use a gas-burner to heat the heat-shrink tubing from the centre toward the outsides, ensuring that no air-pockets are created.
- ◆ Place the cable into the cable-clamps and close them.
- ◆ Switch on the **SCU 800** or LISTcontroller.

# 2       Abbreviations in this manual

| | |
|---|---|
| **SCU 800** | d-LIST sensor control unit |
| **SEC** | Sensor cable |
| **SEC 15** | d-LIST sensor cable |
| **SEC 20** | LIST sensor cable |

Subject to change without prior notice!