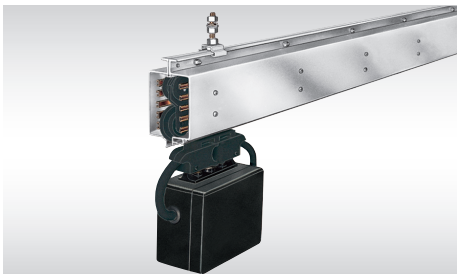
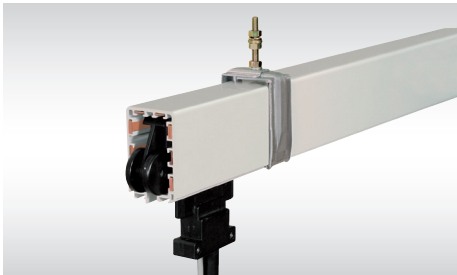
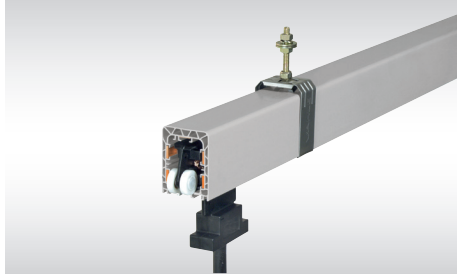
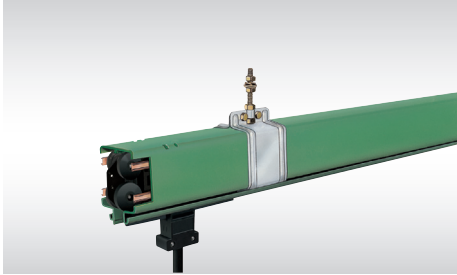


SYSTEMS IN MOTION



VAHLE 
Mobilizing electricity!



FAQ

Safety conductor systems


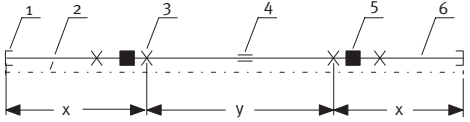
Illustration	Fault	Possible cause check	Measure
	<p>Warpage or deformation of individual sections or track parts</p>	<p>Exceedance of the maximum permissible support distance of the sliding hangers and fixpoint hangers acc. to the mounting instructions or installation drawing</p>	<p>Reduce support distance by the installation of additional hangers:</p> <p>Plastic housing:</p> <ul style="list-style-type: none"> - Indoor installations with ambient temp. < 35 °C: max. 2 m. - Outdoor and indoor installations with ambient temp. > 35 °C: max. 1.33m - Place additional hangers on sections with superstructures (feeds, expansion sections etc.) <p>Sections with permanent plastic deformations must be replaced.</p> <p>Aluminium housing:</p> <p>LSV(G) with sandwich plates: max. 3 m LSV(G) without sandwich plates: max. 2 m</p>
 <p>max. lengths acc. to the mounting instructions</p>		<p>Fixpoint hangers and expansion joints are not installed in accordance with the specifications of the mounting instructions or the general installation drawing</p>	<p>Check correct position of fixpoint hangers and expansion sections.</p> <p>Air gaps of expansion joints must be adjusted for KSL and LSV(G) depending on the temperature in accordance with the general installation drawing or the mounting instructions.</p>



Illustration	Fault	Possible cause check	Measure
	<p>Warpage or deformation of individual sections or track parts</p>	<p>Conductor line is not sliding through the hangers without resistance:</p> <ul style="list-style-type: none"> - Incorrect horizontal and / or vertical alignment of the hangers - Sliding hangers are twisted -> This impairs free expansion in case of temperature fluctuations. 	<ul style="list-style-type: none"> - Align in vertical and horizontal direction parallel to the machinery track / runway. - Mount hangers at a right angle. <p>Test possibility: Lift the conductor line – it must easily slide down.</p>
		<p>Distance of the sliding hangers to superstructures such as the joint cover caps, feeds, end caps, stiffener clamps or other parts of the assembly is too low or too high.</p> <p>Measure too low: Impairment of expansion behaviour.</p> <p>Measure too high: Conductor line is sagging in the joint area</p>	<p>Check correct position of fixpoint hangers and expansion sections.</p> <p>Air gaps of expansion joints must be adjusted for KSL and LSV(G) depending on the temperature in accordance with the general installation drawing or the mounting instructions.</p>



Illustration	Fault	Possible cause check	Measure
	<p>Connecting cable loose at the feeds or conductor line warped</p>	<p>Connecting cables are impairing free length expansion</p>	<p>Install connecting cables to the sub-distribution such that they are flexible/movable at feeds that are not installed near a fixed point.</p>
	<p>No positive-locking fit of the cover caps to the conductor line (visible air gap)</p>	<p>Joint caps are not engaged at the top, side or bottom</p>	<p>Careful installation and inspection work</p>

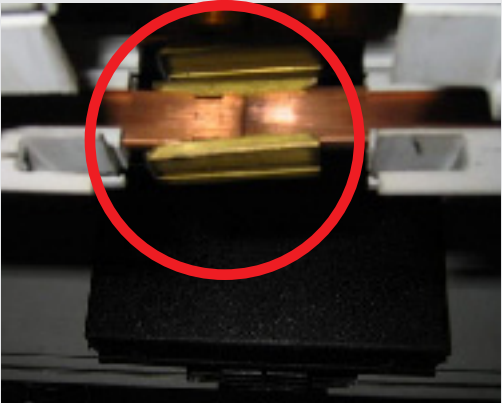
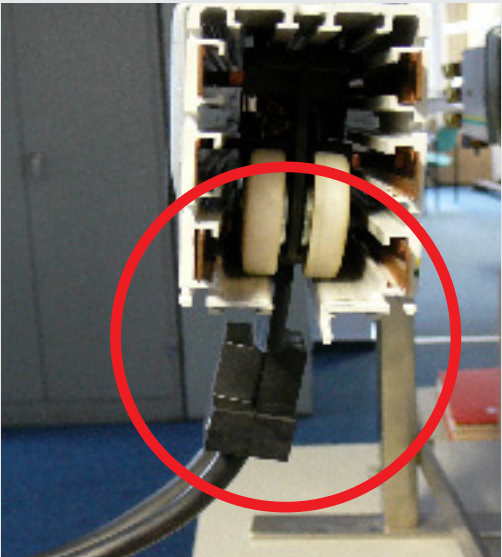
Illustration	Fault	Possible cause check	Measure
	<p>Contact interruptions, noise development when crossing joints</p>	<p>Joint connection (plug-in connector/bolted joint) incorrectly mounted</p>	<p>Careful installation; generally pass through each joint with a current collector by hand during installation.</p>
	<p>Contact problems Increased wear of the carbon brushes and slot guides.</p>	<p>Oblique pull on the current collector due to too small bending radius of the connecting cable or too short hanging cable to the fixed point on the vehicle.</p> <ul style="list-style-type: none"> ▶ This results in the current collector running tilted in the system - the consequences are increased wear and possible contact problems 	<p>Bending radius of the connecting cable at least 10-15 x cable diameter. At least 500 mm freely movable connecting cable.</p> <p>In the case of double current collectors, guide the cables individually to the fixed point on the consumer. In case of confined installation space, insert the current collector with the cable outlet in travel direction.</p>

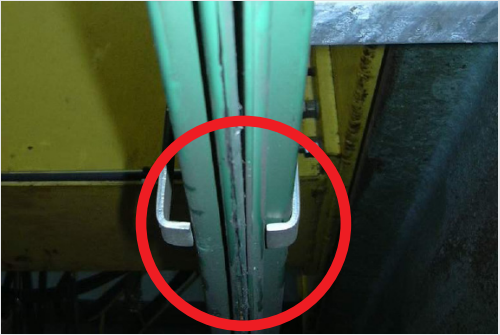
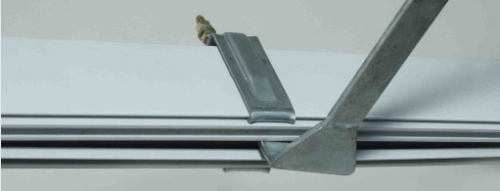

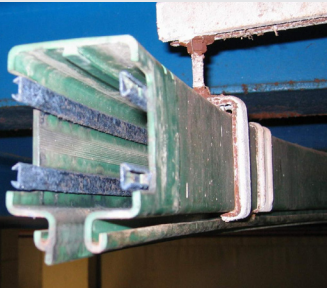


Illustration	Fault	Possible cause check	Measure
 	<p>Contact problems</p> <p>High degree of wear at the slot guides</p>	<ul style="list-style-type: none"> ▶ Slot width too large ▶ Slot width too small 	<p>Check slot dimension over the entire installation length:</p> <p>KSL family : 10.5 - 11.5 mm MKL : 10.0 - 11.0 mm LSV (G) : 10.5 - 11.0 mm KBH : 9.0 - 9.5 mm</p> <p>If required, set fixpoint and sliding hangers by means of widths in the slot area and /or position stiffener clamps. In the case of the KBH, no correction is possible/necessary</p>
	<p>Contact problems due to soiling</p>	<p>Deposits on the copper rails due to e.g.</p> <ul style="list-style-type: none"> ▶ volatile substances ▶ splashes of concrete or similar. 	<ul style="list-style-type: none"> ▶ Perform a basic cleaning process of the conductor line ▶ Use of Vahle cleaning trolley <p>Detailed information can be taken from the technical data sheet TI - No. 11.</p>
	<p>Contact problems due to oxidation</p>	<p>Patina formation on the copper rails due to e.g.</p> <ul style="list-style-type: none"> ▶ chem. influences, close proximity to the sea ▶ long non-operation periods 	

Illustration	Fault	Possible cause check	Measure
 <p data-bbox="232 560 427 632"> Montageanleitung - Wartung KBH Mounting instructions - Maintenance KBH </p> 	<p>General malfunctions</p> <p>Increased component wear</p>	<ul style="list-style-type: none"> ▶ Installation faults ▶ Maintenance cycles not adhered to 	<p>Correct mounting of all components in accordance with the mounting instructions and optional general installation drawing.</p> <p>Perform maintenance work acc. to the mounting instructions and /or installation-specific documentation</p>