

## Lapp Group and KOSTAL Industrie Elektrik guarantee compatibility of

### solar connectors

## **Cooperation equals compatibility**

### Stuttgart, 24th June, 2013

For the first time ever, a solution for combining PV connectors made by different suppliers is coming to the market. By performing in-house testing and aligning their design documentation, two PV connector manufacturers – the Lapp Group and KOSTAL Industrie Elektrik – are able to guarantee their EPIC<sup>®</sup> SOLAR 4 THIN and KOSTAL KSK 4 photovoltaic connectors are fully compatible. The process involved complex testing and function checks in each of the companies' own test centres, and required them to share any information that was relevant for assessing whether the connectors could be combined – such as dimensions, tolerances and surface material specifications.

By participating in this initiative, both companies are responding to a problem that is all too familiar to PV design engineers and installers. Very often, the process of building a solar unit reveals that connectors provided by two different manufacturers do not fit together well, resulting in a connection that is too tight or too loose.

"Both ends of the spectrum can lead to technical problems, like the ability of moisture to get into the system or increased levels of contact resistance – and these in turn can send money spiralling down the drain", explains Jörg

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Schmidt, Head of Sales for PV Module Connection Technology at KOSTAL Industrie Elektrik. "However, most manufacturers do not assume any liability for these cross-connections. It's the installers who lose out, as they are the ones who are liable for any defects."

"It would help if we had uniform standards in this area, but so far the industry hasn't established any specifications that could be applied universally", says Michael Collet, Executive Vice President of Innovation at the Lapp corporate group. "But Lapp and KOSTAL Industrie Elektrik didn't want customers to have to worry about compatibility despite the lack of standardisation, so that is why we decided to launch this cooperation initiative. And we're delighted to have done so, as it has allowed us to make a huge step towards improving customer service and system reliability."

The majority of PV connector manufacturers have always stated that customers should not combine their products with those of other manufacturers. This is because each manufacturer specifies production tolerances for their particular connectors (although generally they do not explicitly say this to customers). Therefore, while customers may be able to combine connectors from different manufacturers securely in some cases, this might be completely impossible in others. What is more, connectors from different manufacturers may give the impression of creating a secure connection when they are combined, while in truth they are unable to meet mechanical strength and permeability requirements under some circumstances. Ultimately, the only way to ensure that connectors can be combined is for the companies who make each connector to willingly share

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their in-house information as a first step. Doing this alone does not guarantee compatibility in all cases, as one party may simply make adjustments on the basis of dimensions and calculated projections taken from the other connector model, without necessarily being aware of any differences in production methods that the other party might have introduced. For this reason, Lapp Kabel and KOSTAL Industrie Elektrik have agreed to inform the other partner promptly if they plan to make any changes in the future – like using new tools, for instance, or changing the material composition.

In the unlikely event that damage does occur when the EPIC<sup>®</sup> SOLAR 4 THIN and KOSTAL KSK 4 are combined (despite all the necessary information having been shared and detailed tests carried out), then the manufacturer whose product caused the defect assumes liability for their components. If, however, the defect analysis cannot conclusively apportion blame to one of the connector types in particular, then both companies assume liability in equal measure. This solution removes the risk of incurring damages from PV installers and system operators – a burden that they often have to bear.

### About the Lapp Group:

Headquartered in Stuttgart, Germany, Germany, the Lapp Group is a leading supplier of integrated solutions and branded products in the field of cable and connection technology. The Lapp Group has remained in continuous family ownership since it was founded in 1959. In the 2012/13 business year, it generated a consolidated turnover of 830 million euros. Lapp currently employs approximately 3,200 people across the world, has 18

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production sites and over 40 sales companies. It also works in cooperation with around 100 foreign representatives.

### Lapp Group North America:

As part of the worldwide Lapp Group, Lapp Group NA offers a complete onestop automation solution for cable and connector needs. Lapp has the broadest range of products, including OLFLEX®, UNITRONIC®, and SILFLEX® flexible and continuous-flex cables, SILVYN® cable track and accessories, EPIC® rectangular, circular, and Pin & Sleeve Connectors, SKINTOP® strain relief cable glands, FLEXIMARK® Cable Marking Systems, remote access ports, and custom harness assemblies. From its state-of-theart manufacturing facilities in Florham Park, NJ, Lapp Cable Works manufactures custom cables for unique applications.

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