

Nexans' Keylios® Photovoltaic Harness cuts solar farm LV DC cabling costs by up to 15 percent

- *Cabling of photovoltaic modules is a key area that offers substantial potential for developers, installers and operators to achieve CAPEX and OPEX savings*
- *Bespoke harness is delivered as a factory-made, ready-to-fit solution that reduces the installation time, wastage and risk associated with cutting cables to length and assembling them on site.*

Paris La Défense, May 25, 2020 – Nexans has designed the new Keylios® Photovoltaic Harness to help developers, installers and operators of utility-scale solar farms cut the low-voltage (LV) direct-current (DC) cabling costs for their photovoltaic modules. Specifying a harness removes the need for cables to be cut to length on site, as the complete assembly of cables and connectors is manufactured under controlled factory conditions and delivered ready to fit. This offers both improved quality and reliability by reducing the number of connection points, while the very significant reduction in installation time and material wastage can reduce the overall cost of LV DC cabling by up to 15 percent.

“Nexans is fully committed to the global energy transition. That’s why we continue to work closely with developers, installers and operators as we build our expanding portfolio of Keylios® solar cabling solutions,” said Olivier Dervout, Nexans Global Market Director Power Generation. *“50 percent of faults on solar farms are due to cabling and connectors. To decrease those risks, we have developed new solutions like the Keylios®PV harness. Easy installation and decreasing the risks on-site offer substantial CAPEX and OPEX savings.”*

Nexans engineers considered three main factors: First, there was a need for high-quality, ready to connect products, so that strings of photovoltaic modules can be hooked up quickly without the quality risks associated with cable preparation on site.

Second, long lasting and reliable cabling solutions were created to eliminate risks such as connection faults and fires which account for 50 percent of failures.

Finally, there was the need for developers to reduce the amount of cable and components they use during installation. This is important because a solar farm can require huge amounts of LV DC cable, more than 4,000 kilometers on the largest installations.

The result is the Keylios® Photovoltaic Harness. Each harness is sized and manufactured on a bespoke basis and delivered as an easy to handle kit that ensures it will be a perfect match for the customer’s installation. It is also ready to connect, with no cutting or crimping required on site.

In a typical solar farm installation of 370 megawatt (MW), using a harness reduces the length of LV DC cable required from 4,200 kilometers to 2,800 kilometers. This reduces the LV DC capital cost by 15 percent. Less cabling also makes it possible to reduce the size and cost of components, such as connection boxes. Smarter use of materials also limits the overall environmental impact of the installation.

To ensure maximum quality and reliability, Keylios® Photovoltaic Harnesses are manufactured under factory controlled conditions using Nexans’ Energyflex® cables designed specifically for use in solar plants.

The cables are precision cut and joints ultrasonically welded, decreasing potential defects significantly. Junctions and inline fuses are overmolded to meet the IP67 rating.

Nexans' global footprint means that Keylios® Photovoltaic Harnesses can be delivered for any project worldwide. The harnesses can also be manufactured in-country for customers who need to maximize the local content of their projects.

The Photovoltaic Harnesses are part of the expanding Nexans Keylios® solar products portfolio that provides full end-to-end energy and data cabling solutions. This includes solar copper cable, LV DC underground aluminum cable, medium-voltage (MV) AC cables for grid connections, pre-connected jumpers and trackers – all supported by a dedicated Services & Solutions team.

About Nexans

Nexans is a key driver for the world's transition to a more connected and sustainable energy future. For over 120 years, the Group has brought energy to life by providing customers with advanced cable technologies for power and data transmission. Today, Nexans goes beyond cables to offer customers a complete service that leverages digital technology to maximize the performance and efficiency of their critical assets. The Group designs solutions and services along the entire value chain in four main business areas: Building & Territories (including utilities and e-mobility), High Voltage & Projects (covering offshore wind farms, subsea interconnections, land high voltage), Telecom & Data (covering data transmission, telecom networks, hyperscale data centers, LAN), and Industry & Solutions (including renewables, transportation, oil and gas, automation, and others).

Corporate Social Responsibility is a guiding principle of Nexans' business activities and internal practices. In 2013 Nexans was the first cable provider to create a Foundation supporting sustainable initiatives bringing access to energy to disadvantaged communities worldwide. The Group's commitment to developing ethical, sustainable and high-quality cables also drives its active involvement within leading industry associations, including Europacable, the NEMA, ICF and CIGRE.

Nexans employs nearly 26,000 people with an industrial footprint in 34 countries and commercial activities worldwide. In 2019, the Group generated 6.7 billion euros in sales.

Nexans is listed on Euronext Paris, compartment A.

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