Press release

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**Automated connector assembly with laser profile scanners**

**The scanCONTROL 3010-200 laser profile scanners allow robots to precisely detect and handle flexible cables in real time. Software synchronizes the data from the Micro-Epsilon sensors with the movement of the robot for precise positioning of the cables on the cable harness, thus providing an efficient and economical application solution.**

In modern production, process automation plays a crucial role in creating cost-efficient and high-quality products. High precision is particularly important when assembling complex and flexible components such as cable harnesses. The precise handling of flexible components is extremely challenging, as they are easily deformed and their position can change. To make this process efficient and reliable, non-contact position detection is required so that robots can precisely detect cables and insert them into the connector housing.

High-resolution laser profile scanners from Micro-Epsilon's scanCONTROL 3010-200 series have proven effective for these tasks. The sensors measure the position and geometry of the cables in real time so that the robot can grip them securely and fit them in the designated slots. Another building block for successful implementation is software, which processes the measurement data and synchronizes it immediately with the movement of the robot. In this way, the manufacturer can ensure that the robot determines the exact pick-up point and inserts the cables precisely into the intended connectors – a decisive advantage for cable harness assembly automation.

Real-time synchronization between the sensor and the robot ensures precise position detection and reliable processing. It is also a flexible automation cell that can be reprogrammed at any time without the need for complex mechanical modifications. The combination of standard components creates an economical solution that replaces cost-intensive, rigid special machines and significantly increases production efficiency.

approx. 2,300 characters

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