

3D Ethernet cable from igus enables fast robot communication

Tested chainflex cable for torsion angles up to 360 degrees safely transmits data to 6-axis robots

In large-scale manufacturing industrial robots are everywhere. They provide a fast automation of processes and thereby ensure cost-efficiency in companies. igus has now developed a new long-lasting Ethernet cable, the CFROBOT8.PLUS, to ensure that robot communication between the axes, the control system and superordinate systems functions flawlessly, even under extreme stress. The new family of cables has been tested under torsion for several years in the in-house laboratory and is running absolutely fault-free for more than 15 million cycles.

The number of robots used in manufacturing is growing rapidly. According to the estimate of the International Federation of Robotics (IFR), more than 3 million industrial robots will operate worldwide by 2020 just to drive the automation in manufacturing. At the same time the requirements for safe communication between robots, axes, control systems and superordinate systems, are also rising. "The probability that the communication of the future will be dominated by industrial Ethernet is quite high," explains Rainer Rössel, chainflex cables division manager at igus GmbH. For this reason the motion cable specialist has been working for more than five years on the development of Ethernet cables for extreme three-dimensional stress and a safe data transmission between the robot components. At the SPS IPC Drives in Nuremberg, igus presented the CFROBOT8.PLUS cable family to a specialist audience. "With our new robot cable we have become the only manufacturer worldwide to offer a durable and tested torsion cable from stock, with up to +/-360 degrees torsion angle, and thus fill a gap in the market," says Rössel.

Twistable cables, tested and guaranteed

The CFROBOT8.PLUS has been tested for torsion in our in-house 2,750 square metres test laboratory – in the igus triflex e-chain series for three-dimensional motions – with over 15 million cycles. The result is that the electrical features of Ethernet communication work faultlessly. The test series are still ongoing to determine the expected maximum service life. However, we expect the final results in a few years. This is because igus has been developing and testing cables for more than 30 years in the industry's largest laboratory, these cables being specially designed for use in energy chains. With more than 2 billion test cycles and over 1.4 million electrical tests per year, igus is considered the number 1 for motion cables in energy chains. The company igus is the only manufacturer worldwide to provide a guarantee of 36 months for its complete chainflex cable range including the new CFROBOT8.PLUS.

Caption:



Picture PM7618-1

CFROBOT8.PLUS: chainflex Ethernet cable for 15 million torsional movements up to 360 degrees and fast data transmission to 6-axis robots. (Source: igus GmbH)

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ABOUT IGUS:

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igus GmbH is a globally leading manufacturer of energy chain systems and polymer plain bearings. The Cologne-based family business has offices in 35 countries and employs around 4,150 people around the world. In 2018, igus generated a turnover of 748 million euros with motion plastics, plastic components for moving applications. igus operates the largest test laboratories and factories in its sector to offer customers quick turnaround times on innovative products and solutions tailored to their needs.

The terms "igus", "Apiro", "chainflex", "CFRIP", "conprotect", "CTD", "drylin", "dry-tech", "dryspin", "easy chain", "e-chain", "e-chain-systems", "e-ketten", "e-kettensysteme", "e-skin", "flizz", "igear", "iglidur", "igubal", "kineKIT", "manus", "motion plastics", "pikchain", "plastics for longer life", "readychain", "readycable", "ReBeL", "speedigus", "triflex", "robolink", and "xiros" are protected by trademark laws in the Federal Republic of Germany and internationally, where applicable.