**Downsizing and upgrading in one: igus Single Pair Ethernet cable for energy chains**

Every day, sensors generate vast amounts of data worldwide and this continues to rise. Single Pair Ethernet (SPE) technology offers completely new opportunities to transmit these data streams reliably even in the most confined areas of the machine. Developed for use in energy chains, igus introduces the chainflex CFBUS.PUR.042 SPE cable.

While a few years ago CAT5 was the standard and CAT5e was a quantum leap, CAT6a and CAT7 are increasingly in demand today. However, all developments so far have ended at the last ‘intelligent’ component of the machine; this is because the size of the cable and the connector were too big to implement connections to the smallest sensors.

“The SPE cable uses only one pair of wires instead of the usual four, reducing the outer diameter of the cable by 25%,” explains Justin Leonard, the-chain director, igus. “Although this reduces the data rate from 10MBit/s to 1GBit/s, it is fast enough for many sensor applications.”

The new cable is designed to fit perfectly with the T1 connector interface, which has been developed specially for SPE. As a result, the durable shielding is retained, resulting in high electromagnetic compatibility (EMC). The combination of cable and connector is extremely robust: igus uses an abrasion-resistant, notch-proof PUR jacket and the connector uses robust metal latches with PCB jack.

The reduction in the size of cable and connector creates the oppoortunity to use the smallest e-chain series. The Single Pair Ethernet technology is also an alternative to standard field buses such as Profibus and CC-Link, as well as Ethernet derivatives such as Profinet and CC-Link IE. The oil resistant and flame-retardant SPE cable comes with a guaranteed service life of 10 million double strokes and 36 months.

For more information about the chainflex SPE cables, please visit: [www.igus.co.uk/chainflex](http://www.igus.co.uk/chainflex) or call on: 01604 677240

**igus resources:**

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**About igus:**

Based in Northampton in the UK and with global headquarters in Cologne, Germany, igus is a leading international manufacturer of energy chain systems and polymer plain bearings. The family-run company is represented in 35 countries and employs 4,150 people around the world. In 2018, igus generated a turnover of 748 million euros with motion plastics, plastic components for moving applications.

With plastic bearing experience since 1964, cable carrier experience since 1971 and continuous-flex cable experience since 1989, igus provides the right solution based on 100,000 products available from stock, with between 1,500 and 2,500 new product introductions each year. 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, ibow, 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.

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