

CASE STUDY

FTTH MICRO CABLE FOR LONG LINKS

Thurgau's cantonal energy supply company is being commissioned by EW Dussnang to create an FTTH network. Datwyler has developed a thin blown cable of high fibre density to fit the bill.

Some of the towns and villages in the commune of Dussnang are widely scattered, so to connect them to the fibre optic network EKT AG, Thurgau's cantonal energy company, planned to use an innovative fibre optic cable for the duct system in the Elektrizitätswerk Dussnang FTTH project.

Up till then the electricity companies had Datwyler's "FO Outdoor wbKT S-Micro" (216 fibres and an external diameter of 8.4 millimetres) blown into the microducts in their supply area. Datwyler was commissioned to develop a new cable which would provide sufficient fibres for those using the expansion project.

Datwyler and EKT AG implemented the FTTH solution together. The development project is special in that more fibres allow each utilisation unit to be connected to two fibres during fine distribution.

The cable also had to fit into the existing duct system and be capable of being blown over a distance of 1500 metres so as to reach even the remotest households.

10.4 millimetres, 288 fibres

Datwyler introduced the "FO Outdoor wbKT S-Micro 12x24" in the spring. This product provides 288 type E9/125 G.652.D fibres. With an external diameter of only 10.4 millimetres it fitted into EKT's 12 mm (internal diameter) microducts.

EKT had constructed the duct system with other partners in the summer of 2015. If cost effective, the duct



blocks were routed under the road. If this appeared too expensive, a civil engineering company buried the microducts in the soil using two tractors and a plough.

Blown for 1500 metres

In May 2016 the new cable was blown into the microducts. The first section of the link dropped sharply and towards the end numerous curves had to be negotiated.

Despite this, the fibre optic cable was inserted into the 1500 metre section without any breakpoints.

Gerhard Glükler, Head of Telecom Service Management at EKT, explained that the contract was awarded to Datwyler because the two companies had a long history of collaboration in the fibre optic cable sector. This proved

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to be the right choice once again: “This solution meant that we were able to access more buildings and at the same time, thanks to the small diameter of the new cable, do so without installing additional ducts,” said the expert.

Each end customer can have two fibres routed into the home against a contribution towards the cost. Eventually EKT wants to connect all the buildings in the region to the information highway.

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