

## Reference report

### tde implements high speed data transmission

for a house boat in Amsterdam



**In 2007, the project "Fibre-to-the-Boat" was started in Amsterdam. In the context of this project, house boats were integrated into the public high-speed fibre optic infrastructure. tde – trans data elektronik GmbH and their cooperation partner Draka succeeded in providing highest performance in a seawater resistant system by using extremely valuable Expanded Beam Connectors as well as highly robust fibre optics.**

One part of Amsterdam's 710 000 inhabitants lives on the approximately 2500 house boats, which line the riversides of the canals. These house boats had to be connected to the local high-speed fibre optic infrastructure. Special requirements had to be taken into consideration regarding the technical implementation: on the one hand, the individual components had to be absolutely resistant to seawater; on the other hand, extremely robust and multiplexing capable plug-in connectors had to be used. Besides fulfilling the high quality and resilience requirements, the integration of the house boats had to provide a high level performance. Many companies regarded this problem as insoluble.

tde – trans data elektronik GmbH located in Dortmund and their cooperation partner Draka accepted the challenge and developed a solution which enabled the integration into the fibre optic system. An optimised and extensively automated production process as well as the use of valuable Expanded Beam Connectors and appropriate cables made the provision of highest performance in an ingenious seawater resistant system possible.

For the Fibre-to-the-Boat project valuable HMA plugs and special MilTac cables were used. As low as two metres the HMA plugs are absolutely waterproof and shock resistant and their ultimate tensile strength is ten to 20 times higher compared to conventional connectors. The plugs are equipped with one to four fibre optic channels in multi and single mode. Due to their hermaphroditic connection the plugs can be conveniently appointed without adapter. tde used multi-fibrous multi-mode MilTac cable with extremely robust and absolutely firm cover material as the cables are also exposed to extreme conditions.