RKI FlexDetect® Sensor Cable
# Network Monitoring system for FibreFlex® and FibreFlex® Pro

FibreFlex®Pro pipe system, made by high temperature aramid fibre mesh, can be used up to maximum operating temperature **of 115°C** and a pressure up to 10 bars. Because of that, FibreFlex®Pro pipe system is approaching to the application of steel service pipe systems. Our customers and partners, which work with steel service pipes, used to work with the fact that pipe networks should be controlled by a network monitoring system. Having such requests, we can offer our FibreFlex®Pro pipe system (on projects as well FibreFlex®) with alarm wires for monitoring system equipment. This consists of two RKI FlexDetect sensor cables, connected in the pipe network to form a monitoring loop –see sketch below – and the appropriate TDR monitoring devices. The RATMON monitoring device offers requested security and control for your district heating network surveillance.

The use of the RKI FlexDetect sensor cables makes the network monitoring system functional even with plastic medium pipes, since the monitoring measurement is carried out between the wires of each sensor cable, thus replacing the steel pipe as grounding. The monitoring measurement is based on TDR technology (Impulse reflection technology) and can therefore detect and localize moisture in the insulation in the event of a fault with precision. The RATMON monitoring device "ila1.0" or "RAT-Combo" are perfectly matches to a flexible pipe system made with plastic service pipe in combination with the RKI FlexDetect sensor cable and are designed for recording and evaluating the network monitoring it in 24h/7 days mode.

Sketch:

Key:
WB – Wiring Box
RC – RAT-Combo
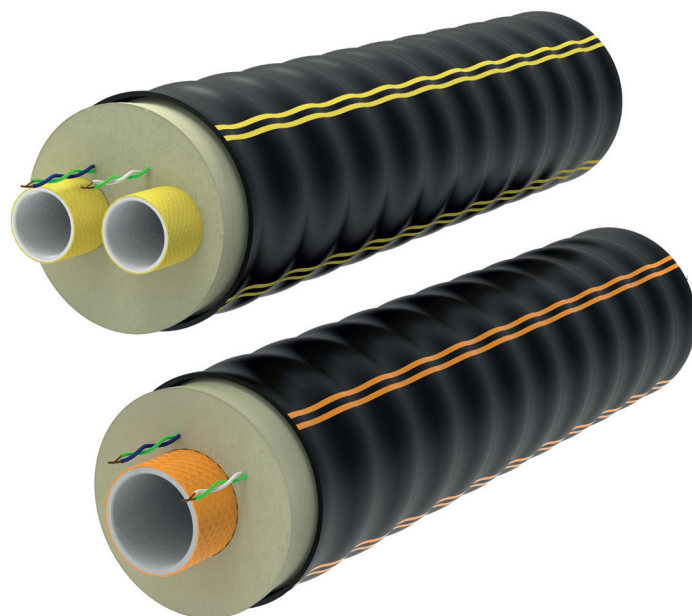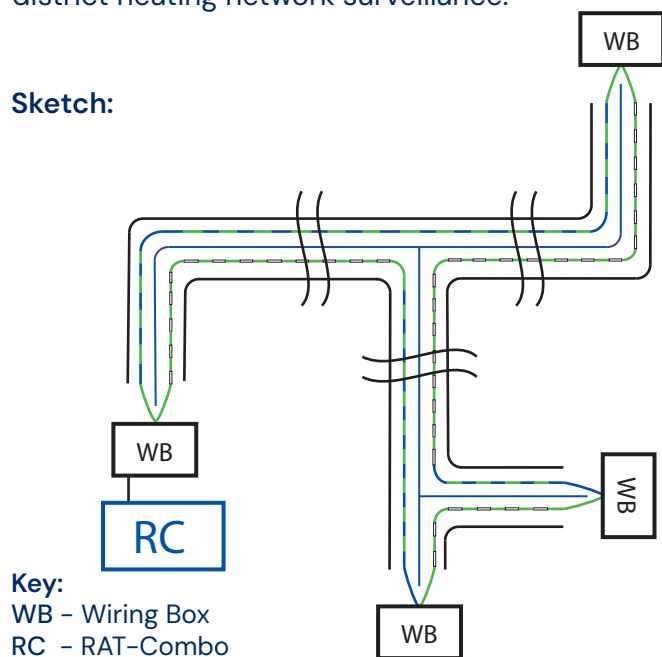
Applikation	FibreFlex®Pro (on projects FibreFlex®)
Cabel:	2 twisted copper wires 2 x 1,5², insaulted with TPE-S
Colors:	Green/White and Green/Blue
Loop resistance:	25 Ω / 1000m Cable
Monitoring system:	ila 1.0 / RAT COMBO
Working principle:	TDR (Impulse reflection technology)
Measuring range:	Up to 1500m of pipe length / 3000m Cable
Control unit input:	2 channel system
Cable measurement accuracy:	± 0,1% on length / ± 2m