DANISH TECHNOLOGICAL INSTITUTE

Evaluation of DanTaet KMP-M

DanTaet Electronics a/s

DANISH TECHNOLOGICAL INSTITUTE

Evaluation of DanTaet KMP-M

DanTaet Electronics a/s

Requester

DanTaet Electronics a/s
Højmevej 36 – 38
5250 Odense SV

Prepared by

Teknologisk Institut - Gregersensvej 1 2630 Taastrup
Energy and Climate
Leon Steen Buhl

Responsible

Leon Steen Buhl
Energy and Climate

September 2025

DANISH TECHNOLOGICAL INSTITUTE

Table of Contents

1 Description of the task

Teknologisk Institut has been tasked to evaluate DanTaet System KMP-M, which comprises a combined leakage protection system for supply water and district heating. The evaluation is based on a technical review of the system undertaken together with the manufacturer, and a subsequent review of User and Factory manuals for the system.

2 Description of the system

DanTaet system KMP-M is a leakage protection system for use in supply water and district heating installations of any size. The system employs pulsing ultrasonic flow meters, possibly accessed via a data interface. The system continually monitors the supply water and district heating installations, issuing alarm in case of seepage or leakage. On leakage alarms, the relevant installation is cut off.

DanTaet System KMP-M comprises the following main components:

	• 1 control unit, model 200 • 1 flow meter for supply water • 2 flow meters for district heating with optional energy calculator • 3 electrically actuated cut-off valves • 1 check valve for district heating return pipe

The system integrates with AERS for alarm propagation, visualization and remote control.
AERS is a system for propagation of alarms and acquisition of consumption data from DanTaet leakage protection systems, and for the remote control thereof. The customer receives alarms as text or e-mail and can access his DanTaet systems in an Internet browser on a smartphone, tablet, laptop or PC. AERS visualizes the build-up to an alarm and permits the customer to restart the system. Likewise, AERS provides access for DanTaet technicians to the system's configuration interface. In addition to leakage

monitoring, the system regularly provides self-testing with subsequent alarm on failure for the following:

- Flow meter error
- Valve error
- Liquid sensor error, if liquid sensor attached
- Communication error (if calculator attached)
- Power supply error
- Mains error (230 V ac error)

The system is factory preset to a standard configuration but is subsequently adapted to the actual installation and its pattern of consumption by DanTaet's technicians by way of AERS.

3 Installation of the system

A complete installation guide for plumbing and electrical installation is provided.

4 Description of operation

The system design emphasizes an uncomplicated user interface to minimize risk of user errors.

The system's user manual explains functions available on the front panel.

The front panel of the KMP-M model 200/300 features a text display which either conveys actual monitor state or error state in case of alarm. The front also features keys for Alarm Reset, manual valve closure, Holiday mode select or Free Discharge.

5 Description of functions

Supply water monitoring can be done in two phases corresponding to property in use vs. property vacated. Phase may be controlled from a burglar alarm system, or (model 200/300) automatically via attached motion sensors. Settings may be adapted to accommodate particular circumstances as required by e.g. authorities.

The district heating section monitors the Forward-Return flow difference, alarming if this exceeds preset values.
A special arrangement allows for the passage of minor air pockets without causing an alarm, thus benefiting reliability.

The system performs the OptiTight test, which examines the installation for minor leaks and seepage. The checking is undertaken at times where consumption and flow are minimal to avoid discomfort and disruption of operation.
When equipped with the pressure sensor option, the system monitors the operating pressure of the district heating utility, cutting off and isolating the installation if the pressure becomes insufficient. This prevents drainage of the installation is case of road works on the distribution pipes, minimizing system restart difficulties.

6 Overall assessment

The view of the Institute is that KMP-M offers a series of integrated functions for alarming, cut-off and user-friendly control, providing optimal leakage protection as well as flexibility in operation and settings.

KMP-M is an advanced leakage protection system, suitable for small and large buildings. It ensures monitoring, error reporting and fast cut-off, and is suitable for integration with building automation.

The system is highly functional on a technical level, offering the customer substantial protection from water damage. The system is further developed for ease of use, even for non-technical personnel, thus avoiding misconceptions.