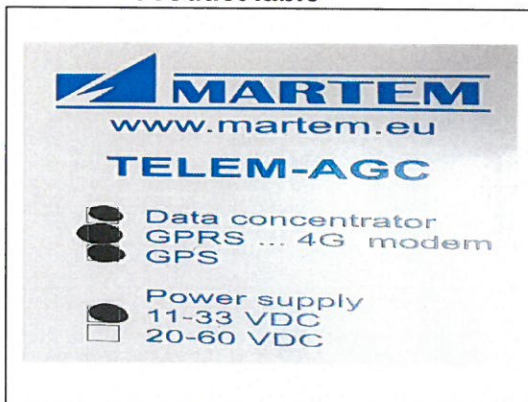


TEST REPORT No KA-167-18-057

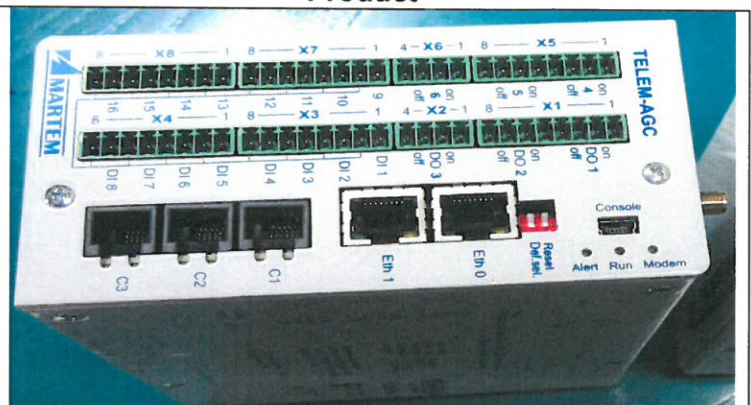
10.12.2018

Product:	Data Concentrator TELEM-AGC
Name and address of the applicant:	Martem AS, Laki 25, 12915 Tallinn, Estonia
Country of the manufacturer:	Estonia
Name and address of the manufacturer:	Martem AS, Laki 25, 12915 Tallinn, Estonia
Rating and principal characteristics:	30 VDC, 2 A
Normative references:	EVS-EN 60068-2-1:2007, EVS-EN 60068-2-2:2007
Test method:	QMW-1305
Date(s) of the test(s)	07.12.2018
Test scope:	Tests according to order 7.1-3/345-18, 28.11.2018
Trade mark (if any):	-
Model/type reference:	TELEM-AGC
Note	The test results relate only to the sample tested.
Additional information:	Appendix 1

Product label



Product



Tested by: Harri Põldsalu
Expert

Confirmed by: Peeter Konjuhhoov
Expert



TEMPERATURE TEST

1. General data

Date of receipt of test item: 28.11.2018
Date of performance of tests: 07.12.2018

ambient temperature: at 20°C to 25°C
relative humidity: 20 % to 60 % RH, not more than 75 %

The test program was agreed the customer's order

2. TEMPERATURE TESTS

Specification for environmental testing EN 60068-2-1/2-2

Test A Cold (one cycle)

Test B Dry heat (one cycle)

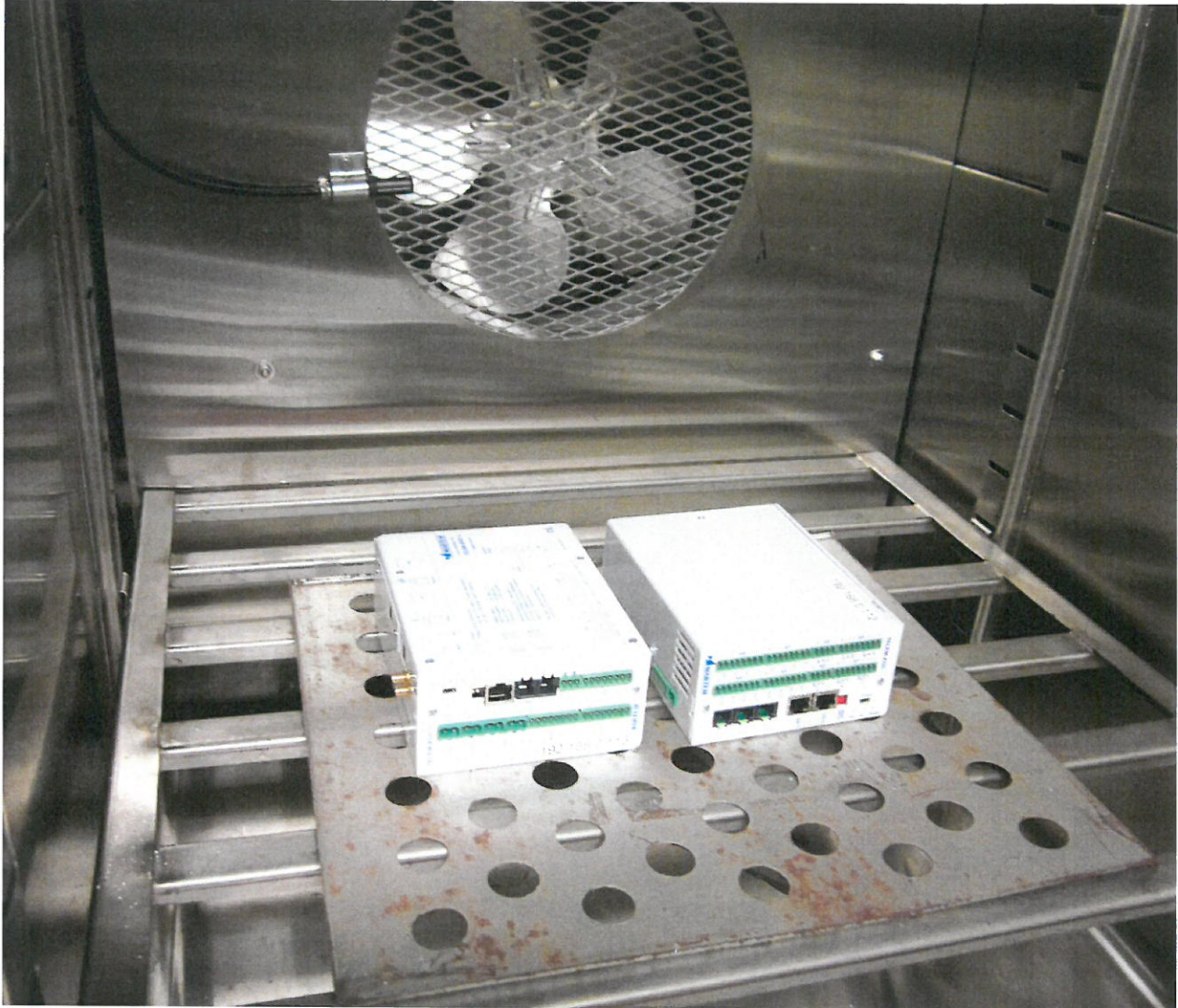
EVS-EN 60068-2-1/2-2	Test conditions
Preconditioning	+22°C ±0,5°C, 0,5 h
Initial measurements	Visual examination
Details of mounting or supports	In Horizontal position. During the test, sample not powered by an external power supply
State of specimen including cooling system during conditioning	No cooling system during conditioning
Severity, temperature and duration of exposure Test A Cold Test B dry heat User test plan	Test A Cold -40 °C, 2 h Test B dry heat 70 °C, 2 h
The rate of change of temperature	Not provided. According to the climate chamber automation
Measurements and/or loading during conditioning	No special requirements
Recovery if non-standard	-
Final measurements	Visual examination, functional test
Any deviation in procedure as agreed upon between customer and supplier	In accordance with user test program
Temperature difference if low air velocity was not established	No special requirements
Initial measurements after tests	Visual examination and Functional test

Test equipment

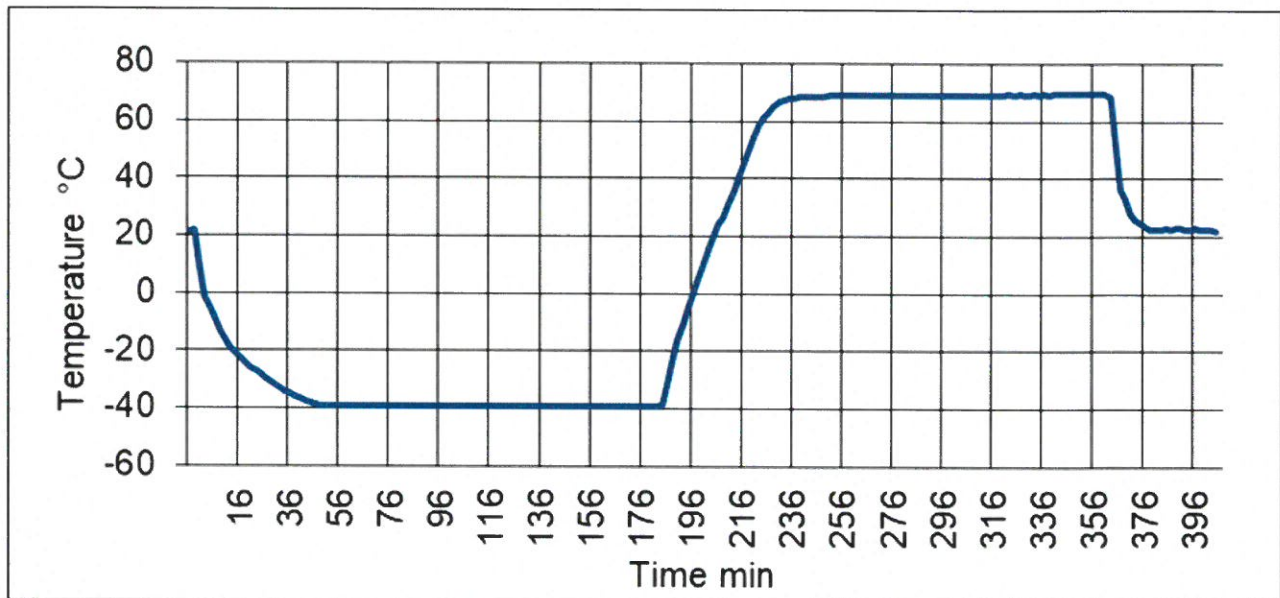
Equipment	Manufacturer	Type	Calibrated
Climate chamber	ARCTEST OY	ARC/500/-40 +100/RH	23.01.2018
Multimeter	Rish	Rish multi18s	30.10.2018
Temperature sensor	-	Pt-100	30.10.2018
Dataloger	Pico	Pico TC-08	08.06.2018

Uncertainty of measurement: : The Dataloger temperature measurements – ± 1 °C
The Multi 18S and Pt100 temperature measurements – ± 0,5 °C

Picture 1. Test set up test A and B



Graphical data of the temperature at 07.12.2018



Examination after Cold and Dry heat test

	Visual examination	No mechanical damages and visual temperature effects.	P
	Functional test	Sample is in working order	P