ARKY outdoor cabinet

QUALITY REPORT

CORE PLUS

PINLOCK
MET CODE

WATER- EN
STOFBESTENDIG

TEMPERATUUR VAN
-30 TOT +50

IP testing

What is an IP rating?

IP rating is also known as Ingress Protection or International Protection ratings which are defined by the international standard of IEC 60529 (British BS EN 60529:1992). This standard is used to define the levels of sealing effectiveness of electrical enclosures against intrusion from foreign bodies such as tools, dirt and moisture.

Explanation IP rating

The numbers that follow IP each have a specific meaning. The first indicates the degree of protection from moving parts, as well as the protection of enclosed equipment from foreign bodies. The second defines the protection level that the enclosure enjoys from various forms of moisture.

Why is an IP rating important for AED cabinets?

When it comes to AED cabinets, a malfunction could cost a life so it is very important that AED cabinets are tested and given a clear IP rating. The cabinet should protect the AED against all types of weather to guarantee a proper functioning of the AED in case of an emergency.

IP rate ARKY Core cabinet

The ARKY Core cabinet has an IP55 rating, meaning it is protected from limited dust ingress and protected from low pressure water jets from any direction.

IP testing

Test procedure IPX5

An IPX5 test in accordance with the IEC 60529 standard is conducted. This test determines the degree of protection provided by enclosures with respect to harmful effects on the equipment inside due to the ingress of water. The test is carried out with fresh water.

Test conditions

Category	II
Dust type	Talcum
Granule size	50 – 75 [µm]
Amount of dust	2 [kg/m^3]
Duration	Up to 8 [hours]
Electrical status	Not operational

The conclusion was that the ARKY Core cabinet passed the IPX5 test.

Test procedure IP5X

There is performed a degrees of protection test for the ARKY Core outdoor cabinet. The degrees of protection test is performed according the IEC 60529-A1, IP5X.

Test conditions

Nozzle diameter	6.3 mm
Spraying distance	2.5 to 3 m
Water flow	12.5 l/min ± 5%
Spraying time	3 min (exposed sample surface is ± 0.6 m^2
Air temperature	15 to 16°C

The results of the degrees of protection test are:
IEC 60529-A1, IP5X: Visual inspection and functional tests showed no failures.
The ARKY Core cabinet has passed the executed IP5X test.

Temperature testing

Why is temperature testing important?

Temperature testing reduces the risk of product failure in the field by simulating the temperature conditions that products are exposed to during their lifetime. The test specification defines the applied temperatures and test conditions, these may be to test the equipment's operational limits or to test the equipment's survivability at more extreme storage temperatures.

Temperature test ARKY Core cabinet

The request concerns three functional tests and to checks to be performed during a 3-stage temperature cycle as described in test protocol "operational temperature test".

Test results

During test	Pass/fail criteria	Pass	Fail
Warming up (heaters+ 4 small fans)	Switch on so Taed ≥ 5 ˚C (Tambient = -30 ˚C)	✓	
Ventilating (fan)	Switch on so Taed ≤ 50 ˚C (Tambient = +45 ˚C)	✓	
Cabinet opens after pressing code	Green box moves down Alarm buzzer sounds	✓	

Conclusion

The cabinet passes the functional tests and checks, meeting the temperature requirements (+45˚C and -30˚C) during and after the temperature cycle.

Electromagnetic compatibility (EMC) testing

What is an EMC test?

Electromagnetic compatibility (EMC) testing measures the ability of equipment or systems to function satisfactorily in their electromagnetic environment without introducing intolerable electromagnetic disturbance to anything in that environment.

Why is an EMC test important?

EMC testing helps minimize the possibility that radiated or conducted emissions produced by your device will interfere with other electronic products in its vicinity.

EMC test ARKY Core cabinet

The EMC evaluation is carried out in order to find out whether the product complies with the harmonised electric safety standards under the EMC directive 2014/30/EU.

Standards used

- EN55011: Industrial, scientific and medical equipment - Radio-frequency disturbance characteristics - Limits and methods of measurement
- EN61000-6-1: Generic standards – Immunity for residential, commercial and light industrial environments

Climatic conditions

During all tests the following climatic conditions are met:

- Ambient temperature (°C) : 18 - 30
- Relative humidity (%) : 30 - 60
- Air pressure (kPa) : 86 – 106

Electromagnetic compatibility (EMC) testing

Test results

Standard	Description	Criteria	Class/Level	Result
EN55011	Power Line Conducted Emissions	N/A	Class B 150kHz – 30MHz	Pass
EN55011	Radiated Emissions	N/A	Class B 80MHz – 1 GHz	Pass
EN61000-3-2	Power Line Harmonics Emissions	A	-	Pass
EN61000-3-3	Flicker Emissions	N/A	-	Pass
EN61000-4-2	Electro Static Discharge	B	± 4kV Contact ± 8kV Air	Pass
EN61000-4-3	Radiated Field Immunity	A	3V/m 80MHz – 1 GHz	Pass
EN61000-4-4	Electrical Fast Transients (Bursts)	B	±1kV – Power Port	Pass
EN61000-4-5	Surge Immunity	B	±1kV – line -line ±2kV – line -PE	Pass
EN61000-4-6	Conducted RF Immunity	A	3V/m 150kHz - 80MHz	Pass
EN61000-4-11	Voltage Dips and Interrupts	B/C	0%, 70%, 0%	Pass
Overall Result				**Pass**

Conclusion

The performed tests according the applicable standards mentioned were passed.

QUALITY REPORT

Standard(s)

- EN55011 Industrial, scientific and medical equipment - Radio-frequency disturbance characteristics - Limits and methods of measurement

- EN61000-6-1 Generic standards – Immunity for residential, commercial and lightindustrial environments

The performed tests according the applicable standard(s) mentioned above were Passed.