CLOSED JOINT STOCK COMPANY "SUPEROX"

CJSC «SuperOx»
CEO

_____ Mikhail Moyzykh
(signature)

«15» December 2023

SUPERCONDUCTING FAULT CURRENT LIMITER
SFCL 220/1200/3/RUL-6.6

TECHNICAL SPECIFICATION

Ver. 7

1. GENERAL INFORMATION

This document describes technical specifications for superconducting fault current limiter (SFCL) made by SuperOx LLC. The SFCL is designed to protect power grids during faults by limiting fault current running through the SFCL.

For more information please visit www.superox.ru or contact via email info@superox.ru.

2. TECHNICAL SPECIFICATION

№	Characteristic	Value
1.	Designation	SFCL 220/1200/3/RUL-6.6
2.	Design	Single phase
3.	Type (class)	Resistive
4.	Rated voltage, kV	220
5.	Maximum operating voltage, kV	252
6.	Power frequency withstand voltage, kV	440
7.	Lightning impulse withstand voltage, kV	950
8.	Rated current, A	1000
9.	Rated network frequency, Hz	50
10.	Impedance in nominal mode (less than), Ohm	0.1
11.	Active resistance at short circuit 50 ms, Ohm	6.6 (see fig. 2 for more info)
12.	Maximum active resistance, Ohm	13 (see fig.1 for more info)
13.	Thermal withstand current*, kA	11
14.	Peak withstand current*, kA	29
15.	Thermal withstand time*, s	3
16.	Recovery time under rated current (less than), s	650 (see fig. 3 for more info)
17.	Insulating medium	Liquid nitrogen (non-flammable liquid dielectric)
18.	Operating temperatures	-45 - +40°C
19.	Weight (per phase), kg - full - transport - mass of liquid nitrogen	 42840 20400 21840
20.	Dimensions (per phase), mm - length - width - height	 10700 2905 6662
21.	Maximum power consumption (per 3 phases), kW	122
22.	Power supply voltage, V	3 phases, 380/220

*complies with PAO Rosseti organization standard 56947007-29.180.04165-2014

3. STANDARDS COMPLIANCE

The device is made in accordance with the following standards:

1. IEEE C37.302-2015
2. IEC 60076-6
3. PAO Rosseti organization standard 56947007-29.180.04165-2014

4. ADDITIONAL INFORMATION

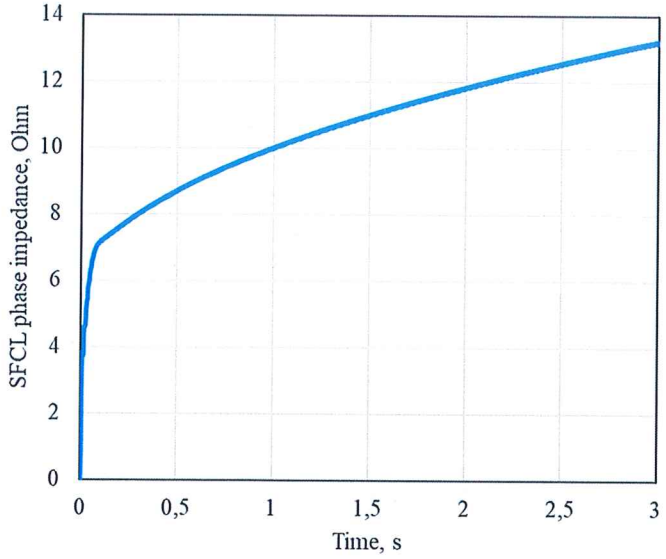

Fig. 1. SFCL resistance vs. short-circuit current duration (full load)

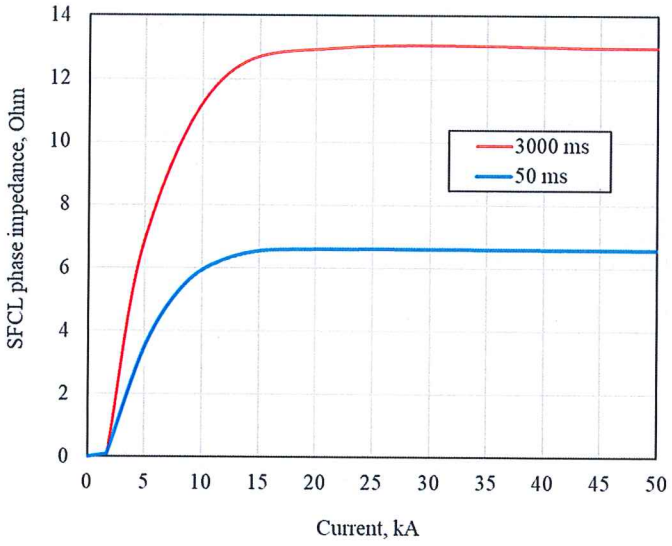

Fig. 2. SFCL resistance vs. short-circuit current (estimated current)

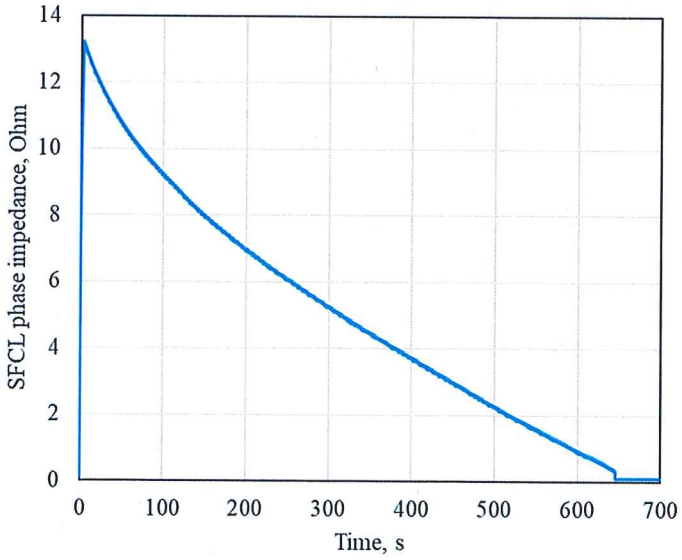

Fig. 3. SFCL resistance vs. recovery time after a short circuit (3000 ms, full load) under rated current