



#### INSTYTUT ENERGETYKI

**Instytut Badawczy** 

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#### CERTIFICATE OF CONFORMITY

No. 086/2020 Issue No. 02 of 11.01.2022

Name and address of

Power Engineering Transformatory Sp. z o.o. the Certificate Holder:

ul. Gdvńska 83

62-004 Czerwonak, Poland

Oil-immersed transformers Name of the product:

6,3 MVA ÷ 63 MVA, 36 kV ÷ 145kV Type:

Power Engineering Transformatory Sp. z o.o. Manufacturer:

ul. Gdvńska 83

62-004 Czerwonak, Poland

Parameters and

application of product: According to the appendix

Transformers to be installed in HV/MV electrical grids

The product meets

IEC 60076-1:2011 (ed. 3.0) in range of type tests, routine tests requirements of the:

and short-circuit withstand calculation

EN 50629:2015 + EN 50629:2015/A1:2016 + EN 50629:2015/A2:2018

Commission Regulation (EU) No 2019/1783 of 1 October 2019 amending

Commission Regulation (EU)548/2014 of 21 May 2014

According to the

Instytut Energetyki report made by:

Number of the

DZC/127c/E/2020 rev. 1 product evaluation report:

from 11<sup>th</sup> January 2022 until 2<sup>nd</sup> November 2023 Period of validity:

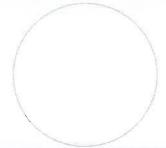
The right to use the certificate of conformity within its validity period applies only to:

- these copies that meet the requirements specified above and have the same characteristics (parameters) as the model / product samples submitted for testing,
- certificate holder or his authorized representative.

The list of evidenced parameters is included in the appendices to the certificate of conformity. Number of appendices: 1

THE SYSTEM OF PRODUCT CERTIFICATION 1a (PN-EN ISO/IEC 17067:2014-01)

(product parameters confirmed by type test)



DIRECTOR OF

dr hab. inż. Tomasz Gałka, prof. IEn

Warsaw, 2022.01.11





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#### APPENDIX TO THE CERTIFICATE OF CONFORMITY No. 086/2020

Issue No. 02 of 2022.01.11

#### LIST OF EVIDENCED PARAMETERS

Rated power	6,3 MVA ÷ 63 MVA				
	36 kV ÷ 145 kV;				
Rated voltage of the HV windings	according to client's requirements				
Data January of the MV and I Variations	≤ 36 kV;				
Rated voltage of the MV and LV windings	according to client's requirements				
Number of phases	3				
Number of windings	2 or 3				
Rated frequency	50 Hz				
Material of windings	Cu				
Rated insulation level of the HV windings	$36 \text{ kV} \le U_m \le 145 \text{ kV};$				
$(U_m / \text{LI } / \text{AC})$	see Note 2.				
Rated insulation level of the LV / MV windings	$U_m = 7,2 \div 36 \text{ kV};$				
$(U_m / LI / AC)$	see Note 3.				
Temperature rise limits of:					
- windings	65 °C				
- oil	60 °C				
Insulating liquid	Mineral oil				
Cooling system	ONAN or / and ONAF				
Vector group	D or Y / d or y				
Clock 1umer notation	any;				
	according to client's requirements				
Short circuit impedance (75°C)	see Note 3.				
Tap changer	on-load (OLTC) or				
	de-energized (DETC)				
Tapping range	up to $\pm$ 16% and up to $\pm$ 12 tappings				
Category of voltage variation	CFVV				
Rated insulation level of the neutral point earthed	Um ≤ 145 kV				
directly, through a resistance or through an	according to client's requirements;				
impedance (U <sub>m</sub> / LI / AC)	see Note 2.				
Load losses – guaranteed (75°C)	see Note 4.				
No-load losses – guaranteed	see Note 4.				
Sound power level L <sub>wA</sub> [dB]	according to client's requirements				
Partial discharge level	see Note 5.				
$- U = 1,58 \times U_r / \sqrt{3}$	≤ 250 pC				
$- U = 1,2 \times U_r / \sqrt{3}$	≤ 100 pC				
	or according to client's requirements				



## APPENDIX TO THE CERTIFICATE OF CONFORMITY No. 086/2020

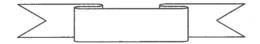
Issue No. 02 of 2022.01.11

#### LIST OF EVIDENCED PARAMETERS

4) Minimum permissible values of the Peak Efficiency Index (PEI) according to EN 50629:2016 + EN 50629:2015 / A1:2016 + EN 50629:2016 / A2:2018 identical to Commission Regulation (EU) No. 2019/1783 amending Commission Regulation (EU) No.548/2014 – Tier II. For given PEI values, the admissible tolerance is '-0%'.

Rated power [MVA]	10	12,5	16	20	25	31,5	40	50	63
PEI [%] – Tier II	99,615	99,640	99,663	99,684	99,700	99,712	99,724	99,734	99,745

5) According to IEC 60076-3:2013, cl. 11.3.5







# CERTIFICATE OF

#### MANAGEMENT SYSTEM

### Power Engineering Transformatory sp. z o.o.

62-004 Czerwonak, ul. Gdyńska 83

ISOCERT sp. z o.o. declares that a certified organisation has implemented and uses a Environmental Management System satisfying the requirements of:

PN-FN ISO 14001:2015-09

#### Scope of certification:

manufacture of transformers; maintenance and repair of electrical power equipment

Certificate No.: 145780/C/7

Date of the certification decision: 24.07.2020 This Certificate is valid from 29.07.2022 to 23.07.2023

Issued on: 29.07.2022

This Certificate cancels and supersedes Certificate No. 145780/C/5 of 20.08.2021

Certificate issued by ISOCERT sp. z o.o.

Tomasz Wycisk Director of certification









# CERTIFICATE OF

#### MANAGEMENT SYSTEM

# Power Engineering Transformatory sp. z o.o.

62-004 Czerwonak, ul. Gdyńska 83

ISOCERT sp. z o.o. declares that a certified organisation has implemented and uses a Quality Management System satisfying the requirements of:

PN-EN ISO 9001:2015-10

#### Scope of certification:

manufacture of transformers; maintenance and repair of electrical power equipment

Certificate No.: 145780/C/6

Date of the certification decision: 24.07.2020

This Certificate is valid from 29.07.2022 to 30.07.2023

Issued on: 29.07.2022

This Certificate cancels and supersedes Certificate No. 145780/C/4 of 20.08.2021

Certificate issued by ISOCERT sp. z o.o.

Tomasz Wycisk Director of certification





