



AC 117

INSTYTUT ENERGETYKI
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CERTIFICATE OF CONFORMITY

No. DZC.522.57.2022

Issue No. 02 of 2023.09.11

**Name and address of
the Certificate Holder:**

PROTEKTEL Sp. z o.o.
Piłsudskiego 92 Str.
06-300 Przasnysz, Poland

Name of the product:

Metal-oxide surge arresters without gaps

Type:

PROXAR-IVN AC

Manufacturer:

PROTEKTEL Sp. z o.o.
Piłsudskiego 92 Str.
06-300 Przasnysz, Poland

**Parameters and
application of the product:**

According to appendix
Protection of devices against the effects of atmospheric and
switching overvoltages in MV and HV power systems

**Product meets
requirements of:
According to the evaluation
report made by:**

IEC 60099-4:2014
Instytut Energetyki

**Number of the
evaluation report:**

DZC.522.57.2022

Period of validity:

from 11th of September 2023 until 05th of September 2025

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 PC_1a (Program 1a acc. to PN-EN ISO/IEC 17067:2014-01)
(product parameters confirmed by type test)



**DIRECTOR OF
INSTYTUT ENERGETYKI**

J. Kupecki
dr hab. inż. Jakub Kupecki, prof. IEn

Warsaw, 2023.09.11



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APPENDIX TO THE CERTIFICATE OF CONFORMITY
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LIST OF EVIDENCED PARAMETERS

Rated voltage [U_r]	1 kV ÷ 120 kV
Continuous operating voltage [U_c]	0,8 kV ÷ 96 kV
Residual voltage at nominal discharge current [U_{res}]	2,6 kV ÷ 311 kV
Reduced voltage at switching impulse current [U_{ps}]	2,2 kV ÷ 258 kV
Nominal discharge current [I_n] (8/20 μ s)	20 kA
Switching current impulse (30/60 μ s)	2 kA
Discharge current withstand strength: - high current impulse (4/10 μ s) - long-duration current impulse in 2 ms (based on Q_{rs})	100 kA 1100 A
Short-circuit withstand current (0,2 s)	65 kA
Rated repetitive charge transfer rating [Q_{rs}]	2,4 C
Rated thermal energy [W_{th}]	12 kJ/kV (U_r)
Single impulse energy capability (virtual impulse duration: 2 ÷ 4 ms) applied in Q_{rs} verification test	6,5 kJ/kV (U_r)
Class and designation of the arrester	station – SH
Partial discharge level at $1,05 \times U_c$	$\ll 10$ pC ¹⁾
Mechanical endurance: - 1000 cycles (SLL) - bending moment (SSL)	6000 Nm 2400 Nm
Mechanical strength against torsional load	200 Nm
Power-frequency versus time characteristic (TOV)	positive result
1000 h weather ageing: - in salt mist - resistance of the housing material to UV radiation	positive result positive result

NOTES: -

1) ¹⁾During the initial measurements in the type tests, the results were less than 5 pC.

