



AC 117

INSTYTUT ENERGETYKI

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CERTIFICATE OF CONFORMITY

No. DZC.522.71.2022

Issue No. 01 of 2022.06.30

Name and address of the certificate holder:

Zakład Aparatury Elektrycznej ERGOM Sp. z o.o.
10 Nowe Sady Str.,
94-102 Łódź, Poland

Name of the product:

Terminal lugs

Type:

K45D 10-240, K90D 10-240

Manufacturer:

Zakład Aparatury Elektrycznej ERGOM Sp. z o.o.
10 Nowe Sady Str.,
94-102 Łódź, Poland

Parameters and application of the product:

According to appendix
Termination of copper cables with class 2 conductors with
parameters according to appendix

The product meets requirements of:

EN IEC 61238-1-1:2019, EN IEC 61238-1-3:2019

According to the reports made by:

SEP-BBJ; Instytut Energetyki; ZAE ERGOM

Number of the test reports:

LA-19.023/1, LA-19.023/2; EWP/35/E/2018-19, EWP/35/E/2019-23,
EWP/35/E/2018-20, EWP/35/E/2018-21; ERGOM/18/05/2019,
ERGOM/22/02/2020, ERGOM/20/06/2019, ERGOM/19/06/2019

Period of validity:

from 30th of June 2022 until 29th of June 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

dr hab. inż. Tomasz Gałka prof. IEn

Warsaw, 2022.06.30



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APPENDIX TO CERTIFICATE OF CONFORMITY
No. DZC.522.71.2022
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LIST OF EVIDENCED PARAMETERS

| Cu terminal lugs ¹⁾ of type | K45D 10-240 | K90D 10-240 |
|---|-------------------------------------|-------------------------------------|
| Class | | |
| - electrical | A | A |
| - mechanical | 1 | 1 |
| Construction / cross-section of Cu cables / conductors [mm ²] | RMC ²⁾ , RM, SM / 10÷240 | RMC ²⁾ , RM, SM / 10÷240 |
| Initial scatter $\delta^3)$ | $\leq 0,30$ | $\leq 0,30$ |
| Mean scatter $\beta^4)$ | $\leq 0,30$ | $\leq 0,30$ |
| Resistance factor ratio $\lambda^5)$ | $\leq 2,0$ | $\leq 2,0$ |
| Change in resistance factor D ⁶⁾ | $\leq 0,15$ | $\leq 0,15$ |
| Maximum temperature $\theta_{max}^7)$ | $\leq \theta_{ref}$ | $\leq \theta_{ref}$ |
| Permissible tensile force [N] | $\leq 60 \times A^8) \text{ Cu}$ | $\leq 60 \times A^8) \text{ Cu}$ |

NOTES:

- 1) Terminal lugs of type K45D 10-240 and K90D 10-240 has common name of: Tubular angle terminals, K45D type and K90D type
- 2) In the technical documentation of cable and wire manufacturers, the RMC designation is also known as RMV
- 3) The average value of the resistance factors of six connectors (lugs) before the first heating cycle.
- 4) The average value of the resistance factors of six connectors (lugs) calculated from last 11 measurements readings. It specifies if all connectors (lugs) of given type are characterized by similar changes in resistance during the heat cycles.
- 5) Resistance factor ratio of tested connector (lug) during the heat cycle test in relation to the initial resistance factor.
- 6) The value specifies the size of the resistance factor change based on last 11 measurements readings.
- 7) Temperature of the connector (lug) referenced to the temperature of the reference section.
- 8) Nominal cross-sectional area

