



AC 117

**INSTYTUT ENERGETYKI**

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# **CERTIFICATE OF CONFORMITY**

**No. 076/2020**

**Issue No. 02 from 2022.09.20**

*Name and address of  
the Certificate Holder:*

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

*Name of the product:*

**Copper connectors / lugs, for stranded compacted copper cable  
conductors**

*Type:*

**CKOR 25 - 240 / CKL 25 - 240**

*Manufacturer:*

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

*Parameters and  
application of product:*

**According to appendix  
For connection and termination of copper cables with stranded,  
compacted "RMC", class 2 conductors**

*The product meets  
requirements of the:*

**IEC 61238-1-1:2018 (ed. 1.0), IEC 61238-1-3:2018 (ed. 1.0)**

*According to the  
reports made by:*

**Instytut Energetyki, ZAE ERGOM**

*Number of the  
evaluation report:*

**DZC.522.85.2022**

*Number of the test reports:*

**EWP/35/E/2017-1, EWP/35/E/2017-2, EWP/35/E/2017-3,  
EWP/35/E/2017-5, ERGOM/02/01/2017, ERGOM/03/01/2017,  
ERGOM/04/01/2017, ERGOM/05/01/2017**

*Period of validity:*

**from 20<sup>th</sup> of September 2022 until 21<sup>st</sup> of September 2023**

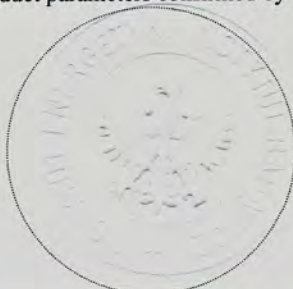
The right to use the certificate of conformity within its validity period applies only to:

- 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 1 acc. to PN-EN ISO/IEC 17067:2014-01)**  
(product parameters confirmed by type tests)



**DIRECTOR OF  
INSTYTUT ENERGETYKI**

*[Signature]*  
**dr hab. inż. Tomasz Gałka, prof. IEn**

**Warsaw, 2022.09.20**





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**APPENDIX TO THE CERTIFICATE OF CONFORMITY****No. 076/2020****Issue No. 02 of 2022.09.20****LIST OF EVIDENCED PARAMETERS**

| Element type                                      | CKOR 25 - 240                      | CKL 25 - 240                       |
|---------------------------------------------------|------------------------------------|------------------------------------|
| Class                                             |                                    |                                    |
| - electrical                                      | A                                  | A                                  |
| - mechanical                                      | 1                                  | 1                                  |
| Shape of Cu cables /conductors [mm <sup>2</sup> ] | RMC <sup>1)</sup> / 25 ÷ 240       | RMC <sup>1)</sup> / 25 ÷ 240       |
| Initial scatter $\delta^{2)}$                     | $\leq 0,30$                        | $\leq 0,30$                        |
| Mean scatter $\beta^{3)}$                         | $\leq 0,30$                        | $\leq 0,30$                        |
| Resistance factor ratio $\lambda^{4)}$            | $\leq 2,0$                         | $\leq 2,0$                         |
| Change in resistance factor $D^{5)}$              | $\leq 0,15$                        | $\leq 0,15$                        |
| Maximum temperature $\theta_{\max}^{6)}$          | $\leq \theta_{\text{ref}}$         | $\leq \theta_{\text{ref}}$         |
| Permissible tensile force [N]                     | $\leq 60 \times A^{7}) \text{ Cu}$ | $\leq 60 \times A^{7}) \text{ Cu}$ |

**NOTES:**

- <sup>1)</sup> In the technical documentation of cable and wire manufacturers, the designation of copper cables with stranded, compacted class 2 conductors is also known as RMV.
- <sup>2)</sup> The average value of the resistance factors of six connectors (lugs) before the first heating cycle.
- <sup>3)</sup> 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.
- <sup>4)</sup> Resistance factor ratio of tested connector (lug) during the heat cycle test in relation to the initial resistance factor.
- <sup>5)</sup> The value specifies the size of the resistance factor change based on last 11 measurements readings.
- <sup>6)</sup> Temperature of the connector (lug) referenced to the temperature of the reference section.
- <sup>7)</sup> Nominal cross-sectional area.

