

## TEST REPORT

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**Document No.:** Test report No. 1/99

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**Test object:** Indoor Termination for belted 3-core MIND paper insulated cable

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**Type:** CHEP – 3I 10

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**Rated characteristics:**

Rated voltage $U_0/U$	6/10 kV
Rated voltage $U_m$	12 kV
Rated cross-section range	150 mm <sup>2</sup>

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**Normative document:** CENELEC Harmonization Document HD 628 S1  
November 1996

CENELEC Harmonization Document HD 629.2 S1  
August 1997

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**Test performed:** Test series A1 and A2

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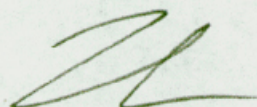
**Period of test:** January to April 1999

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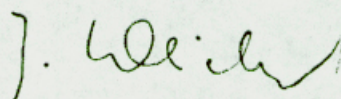
**Test result:** Test series A1 and A2 have been PASSED.

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Zittau, 26/04/99



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## 1. Technical data and characteristics

Test object: Indoor termination for belted 3-core MIND paper insulated cable  
 Type: CHEP – 3I 10/2  
 Manufacturer: CELLPACK GmbH  
 Serial No.: 2 test samples  
 Year of manufacture: 1999

Rated characteristics: Rated voltage  $U_0/U$  6/10 kV  
 Maximum value of the highest system  
 Voltage  $U_m$  12 kV  
 Rated cross-section range of the conductor 95 - 150 mm<sup>2</sup>

Design: Termination heat-shrink type  
 Cable belted 3-core paper insulated lead sheath cable  
 Cable marking VGP LKz - 3 x 150 svs 6/10 kV  
 Material conductor Cu

## 2. Results of test series A1

Test No.	Type of test	Required test parameters	Test result
1	DC voltage dry withstand test	Test voltage $6 \times U_0$ : 36 kV Duration of test: 15 min	PASSED
2	AC voltage dry withstand test	Test voltage $4.5 \times U_0$ : 27 kV Test frequency: 50 Hz Duration of test: 5 min	PASSED
3	Impulse voltage test at elevated temperature	Front time: 1.2 $\mu$ s Virtual time to half value: 50 $\mu$ s Test voltage: 75 kV Number of impulses: 10 Polarity: pos./neg. Conductor temperature: 65-70 °C	PASSED
4	Electrical heat cycling test in air	Continuous AC voltage Test voltage $1.5 \times U_0$ : 9 kV Test frequency: 50 Hz Duration of test: 42 day  Loading cycles Number of loading cycles: 126 Cycle (8 h): 5 h heating + 3 h cooling Conductor temperature during last 2 hours of heating cycle: 65-70 °C	PASSED
5	AC voltage dry withstand test	Test voltage $3 \times U_0$ : 18 kV Test frequency: 50 Hz Duration of test: 4 h	PASSED
6	Impulse withstand voltage test at ambient temperature	See test No. 3. except Conductor temperature: $\square_u$	PASSED



## 2. Results of test series A1

7	AC voltage dry withstand test	Test voltage $2.5 \times U_0$ : Test frequency: Duration of test:	15 kV 50 Hz 15 min	PASSED
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## 3. Results of test series A2

Test No.	Type of test	Required test parameters		Test result
1	DC voltage dry withstand test	Test voltage $6 \times U_0$ : Duration of test:	36 kV 15 min	PASSED
2	AC voltage dry withstand test	Test voltage $4.5 \times U_0$ : Test frequency: Duration of test:	27 kV 50 Hz 5 min	PASSED
3	Thermal short-circuit test of the conductor	Short-circuit conductor final temperature: Short-circuit current: Duration of short-circuits: Number of short-circuits:	170 °C 23 kA 1 s 2	PASSED
4	Impulse voltage test at ambient temperature	Front time: Virtual time to half value: Test voltage: Number of impulses: Polarity: Conductor temperature:	1.2 μs 50 μs 75 kV 10 pos./neg. <input type="checkbox"/> <sub>u</sub>	PASSED
5	AC voltage dry withstand test	Test voltage $2.5 \times U_0$ : Test frequency: Duration of test:	15 kV 50 Hz 15 min	PASSED