

TEST REPORT

Document No.: Test report No. 3/99

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

Type: CHEP – 3F 10

Rated characteristics:

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

Normative document:

CENELEC Harmonization Document HD 628 S1
November 1996

CENELEC Harmonization Document HD 629.2 S1
August 1997

Test performed: Test series A1 and A2

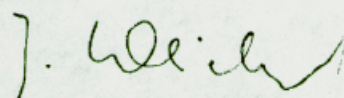
Period of test: January to April 1999

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

Zittau, 03/05/99



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1. Technical data and characteristics

Test object: Outdoor termination for belted 3-core MIND paper insulated cable
 Type: CHEP – 3F10/2
 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 mm²

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 μ s Virtual time to half value: 50 μ 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: 116 Cycle (8 h): 5 h heating + 3 h cooling Conductor temperature during last 2 hours of heating cycle: 65-70 °C	PASSED
5	Test of water tightness combined with loading cycles	Number of loading cycles: 10 Cycle (8 h): 5 h heating + 3 h cooling Conductor temperature during last 2 hours of heating cycle: 65-70 °C	PASSED

2. Results of test series A1

6	AC voltage dry withstand test	Test voltage $3 \times U_0$: Test frequency: Duration of test:	18 kV 50 Hz 4 h	PASSED
7	Impulse withstand voltage test at ambient temperature	See test No. 3. except Conductor temperature:	<input type="checkbox"/> _u	PASSED
8	AC voltage dry withstand test	Test voltage $2.5 \times U_0$: Test frequency: Duration of test:	15 kV 50 Hz 15 min	PASSED

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"/> _u	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