

## Summary of the LUMEL ND45 power network analyzer parameters measured in class A according to IEC 61000-4-30 IEC 61000-4-30 Ed. 2

230V, 50/60 Hz, L-N  $U_{din}$  for all parameters

Measured value	Aggregation	Measurement range	Measurement error (PN-EN-61000-4-3) <sup>1</sup>	Remarks
<b>RMS voltage</b>				
Urms L1	3s	$U_n = U_{din} = 230 \text{ V}$ 23,0...345,0 V ( $K_u = 1$ ) ...1,38 MV ( $K_u \neq 1$ ) <sup>2</sup> $U_n = U_{din} = 57,7 \text{ V}$ 5,7...86,5 V ( $K_u = 1$ ) ...280 kV ( $K_u \neq 1$ ) <sup>2</sup>	$\pm 0,1\% U_{din}$	Class A
Urms L2				
Urms L3				
Uavg L123				
<b>Half-wave voltage value</b>				
Uhalf1 L1 ... Uhalf24 L1	200ms	$U_n = U_{din} = 230 \text{ V}$ 23,0...345,0 V ( $K_u = 1$ ) ...1,38 MV ( $K_u \neq 1$ ) <sup>2</sup> $U_n = U_{din} = 57,7 \text{ V}$ 5,7...86,5 V ( $K_u = 1$ ) ...280 kV ( $K_u \neq 1$ ) <sup>2</sup>	$\pm 0,2\% U_{din}$	Class A
Uhalf1 L2 ... Uhalf24 L2				
Uhalf1 L3 ... Uhalf24 L3				
<b>Voltage harmonics</b>				
Har1 UL1 ... Har51 UL1	1s	0,00...100,00%	$U_m \geq 1\% U_{nom} \pm 5\% U_m$ $U_m < 1\% U_{nom} \pm 0,05\% U_n$	Class I
Har1 UL2 ... Har51 UL2				
Har1 UL2 ... Har51 UL2				
Har1 UL3 ... Har51 UL3				
<b>RMS current</b>				
Irms L1	3s	$I_n = 5 \text{ A} : 0,050...7,5 \text{ A} (K_i = 1)^2$ ...150,0 kA ( $K_i \neq 1$ ) <sup>2</sup> $I_n = 1 \text{ A} : 0,010...1,5 \text{ A} (K_i = 1)$ ...30,0 kA ( $K_i \neq 1$ ) <sup>2</sup>	$\pm 0,1\% I_n$	Class A
Irms L2				
Irms L3				
Iavg L123				
<b>Current harmonics</b>				
Har1 IL1 ... Har51 IL1	1s	0,00...100,00%	$I_m \geq 3\% I_{nom} \pm 5\% I_m$ $I_m < 3\% I_{nom} \pm 0,15\% I_n$	Class I
Har1 IL2 ... Har51 IL2				
Har1 IL3 ... Har51 IL3				

1. Basic error with respect to the  $U_{din}$  value acc.to **EN-61000-4-30**.
2. Range  $K_u = 1 \dots 4000,0$  and  $K_i = 1 \dots 20000,0$ .
3.  $U_{din}$  - value obtained from the declared supply voltage  $U_c = U_n$  by the transformer ratio, according to **EN-61000-4-30**.
4.  $I_m, U_m$  – measured values of currents and voltages according to **EN-61000-4-7**.
5.  $I_{nom}, U_{nom}$  – nominal values of currents and voltages according to **EN-61000-4-7**.
6.  $I_n, U_n$  – nominal values of currents and voltages according to **EN-61000-4-30**.

This summary is an extract from the results of the ND45 test type, document no. 01/2020 12/03/2020.

LUMEL has tested the following product sample ND45-2411P01 no. 19100001. The manufacturer states that the product sample is the actual representative of the product series ND45.

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