

## Summary of the LUMEL ND40 power network analyzer parameters measured in class A according to IEC 61000-4-30

**IEC 61000-4-30 Ed. 2**

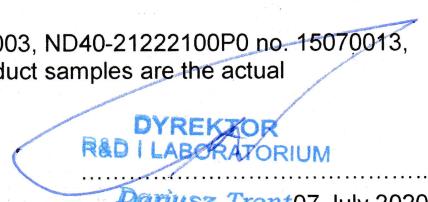
230V, 50/60 Hz, L-N  $U_{\text{din}}$  for all parameters

Measured value	Aggregation	Measurement range	Measurement error (PN-EN-61000-4-3) <sup>1</sup>	Remarks
<b>RMS voltage</b>				
Urms L1	3s	$U_n = U_{\text{din}} = 230 \text{ V}$ : $23,0 \dots 345,0 \text{ V} (\text{Ku} = 1)$ $\dots 1,38 \text{ MV} (\text{Ku} \neq 1)^2$ $U_n = U_{\text{din}} = 57,7 \text{ V}$ : $5,7 \dots 70 \text{ V} (\text{Ku} = 1)$ $\dots 280 \text{ kV} (\text{Ku} \neq 1)^2$	$\pm 0,1\% U_{\text{din}}$	Class A
Urms L2				
Urms L3				
Uavg L123				
<b>Half-wave voltage value</b>				
Uhalf1 L1 ... Uhalf24 L1	200ms	$U_n = U_{\text{din}} = 230 \text{ V}$ : $23,0 \dots 345,0 \text{ V} (\text{Ku} = 1)$ $\dots 1,38 \text{ MV} (\text{Ku} \neq 1)^2$ $U_n = U_{\text{din}} = 57,7 \text{ V}$ : $5,7 \dots 70 \text{ V} (\text{Ku} = 1)$ $\dots 280 \text{ kV} (\text{Ku} \neq 1)^2$	$\pm 0,2\% U_{\text{din}}$	Class A
Uhalf1 L2 ... Uhalf24 L2				
Uhalf1 L3 ... Uhalf24 L3				
<b>Voltage harmonics</b>				
Har1 UL1 ... Har51 UL1	1s	0,00...100,00%	$U_m \geq 1\% U_{\text{nom}} \pm 5\% U_m$ $U_m < 1\% U_{\text{nom}} \pm 0,05\% U_n$	Class I
Har1 UL2 ... Har51 UL2				
Har1 UL2 ... Har51 UL2				
Har1 UL3 ... Har51 UL3				
<b>RMS current</b>				
Irms L1	3s	$I_n = 5 \text{ A} : 0,050 \dots 7,5 \text{ A} (\text{Ki} = 1)^2$ $\dots 150,0 \text{ kA} (\text{Ki} \neq 1)^2$ $I_n = 1 \text{ A} : 0,010 \dots 1,5 \text{ A} (\text{Ki} = 1)$ $\dots 30,0 \text{ kA} (\text{Ki} \neq 1)^2$	$\pm 0,1\% I_n$	Class A
Irms L2				
Irms L3				
Iavg L123				
<b>Current harmonics</b>				
Har1 IL1 ... Har51 IL1	1s	0,00...100,00%	$I_m \geq 3\% I_{\text{nom}} \pm 5\% I_m$ $I_m < 3\% I_{\text{nom}} \pm 0,15\% I_n$	Class I
Har1 IL2 ... Har51 IL2				
Har1 IL3 ... Har51 IL3				

1. Basic error with respect to the  $U_{\text{din}}$  value acc.to EN-61000-4-30.
2. Range  $\text{Ku} = 1 \dots 4000,0$  and  $\text{Ki} = 1 \dots 20000,0$ .
3.  $U_{\text{din}}$  - 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.  $I_{\text{nom}}$ ,  $U_{\text{nom}}$  – 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 ND40 test type, document no. 08/2016 29/07/2016.

LUMEL has tested the following product samples ND40-22111100P0 no. 15070003, ND40-21222100P0 no. 15070013, ND40-21211100P0 no. 15070006. The manufacturer states that these three product samples are the actual representatives of the product series ND40.



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