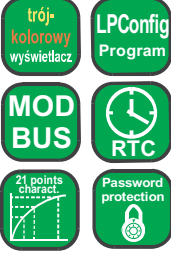


# N30U DIGITAL PANEL METER

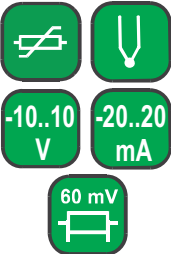


## FEATURES:

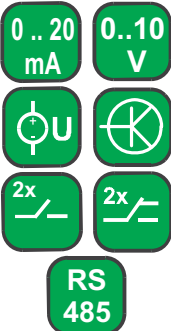


IP65

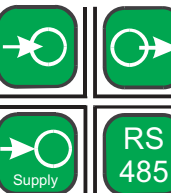
## INPUTS:



## OUTPUTS:



## GALVANIC ISOLATION:



### Contact Details:

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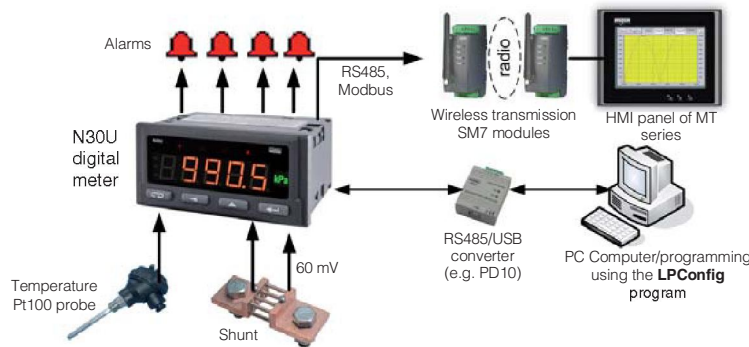
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- Measurement: temperature, resistance, standard signals.
- 3-colour display (14 mm high), programmable in 3 ranges of the measured value.
- Meter programming from keyboard or through the RS-485 interface by means of the free LPConfig program.
- 4 alarm outputs with signalling on LED diodes, working in 6 different modes.
- Conversion of any measured value into an analog signal 0/4...20 mA or 0...10 V.
- Storage of minimal and maximal values for all measured quantities.
- Supply of object transducers (option).
- 21-point individual characteristic for the measured value.

## EXAMPLE OF APPLICATION



Measurement and visualization of analog standard signals: Pt100, TC, 20 mA, 60 mV, 10 V. Measured parameters are transmitted to the HMI operator panel through radio modules.

## INPUT

Input kind	Maximal measuring range	Class	Additional error
Pt100	-205...855°C (-200...850°C)	0.1	Additional error of: • thermocouple cold junction temperature compensation: <b>0.1% of measuring range</b> • wire resistance compensation: <b>0.1% of the 400 Ω range</b>
Pt500			
Pt1000			
400 Ω	0...410 Ω (0...400 Ω)		
4000 Ω	0...4100 Ω (0...4000 Ω)		
Thermocouple of J type	-220...1210°C (-200...1200°C)		
Thermocouple of K type	-280...1382°C (-270...1300°C)		
Thermocouple of N type	-250...1310°C (-240...1200°C)		
Thermocouple of E type	-280...1010°C (-270...1000°C)		
Thermocouple of R type	-55...1775°C (-50...1770°C)		
Thermocouple of S type	-55...1775°C (-50...1770°C)		
Voltage input 0...10 V	-13...13 V (-10...10 V)	0.5 sek./ 24h	
Current input	-24...24 mA (-20...20 mA)		
Voltage input	-10...63 mV (0...60 mV)		
Current time	00.00...23.59		

## OUTPUTS

Output kind	Properties	Remarks
Relay output	<ul style="list-style-type: none"> <li>• 2 x relays, voltageless NOC contacts load-carrying capacity 250 V a.c./ 0.5 A a.c.</li> <li>• 2 x relays, voltageless switched contacts load-carrying capacity 250 V a.c./ 0.5 A a.c.</li> </ul>	
Analog output	<ul style="list-style-type: none"> <li>• current programmable 0/4...20mA, load resistance ≤ 500 Ω</li> <li>• voltage programmable 0...10 V load resistance ≥ 500 Ω</li> </ul>	Error of analog output: <b>0.2% of the set range</b> Additional error from temperature changes: <b>50% of the class/10K</b>
OC output	• typu OC, passive npn, 30 V d.c./30 mA	Voltageless output
Auxiliary supply	• 24 V d.c./ 30mA	

## DIGITAL INTERFACE

Interface type	transmission protocol	modes	baud rates
RS-485	MODBUS RTU	8N2, 8E1, 8O1, 8N1	4.8, 9.6, 19.2, 38.4, 57.6, 115.2 kbit/s

## EXTERNAL FEATURES

Readout field	5 digit LED display - indication range -19999...99999 digit height: 14 mm	three-color display (colour changes depending on displayed value): red, green, orange
Weight	< 0.2 kg	
Dimensions	96 × 48 × 93 mm	Panel cut-out: 92 <sup>+0.6</sup> × 45 <sup>+0.6</sup> mm
Protection grade (acc. to EN 60529)	from frontal side: IP65	from rear side: IP 10

## RATED OPERATING CONDITIONS

Supply voltage	85...253 V a.c. (40...400 Hz) or d.c., 20...40 V a.c. (40...400 Hz) or d.c.	power consumption < 6 VA
Temperature	ambient: -25...23...55°C	storage: -30...70°C
Relative humidity	25...95%	condensation inadmissible
Operating position	any	
External magnetic field	0...400 A/m	

## SAFETY AND COMPATIBILITY REQUIREMENTS

Electromagnetic compatibility	Noise immunity	acc. to EN 61000-6-2
	Noise emissions	acc. to EN 61000-6-4
Isolation between circuits	basic	
Pollution grade	2	
Installation category	III	acc. to EN 61010-1
Maximal phase-to-earth operating voltage	for the supply circuit: 300 V for remaining circuits: 50 V	
Altitude above sea level	< 2000 m	

## CONNECTION DIAGRAMS

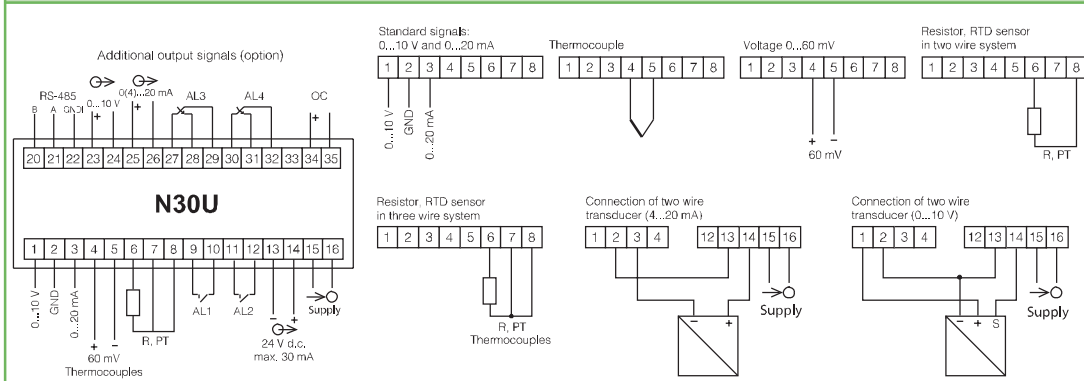


Fig. 1 Description of signals on connection strips.

Fig. 2 Ways of the meter connection.

## ORDERING

TABLE 1. ORDERING CODES:

N30U -		X	X	XX	XX	X	X
<b>Supply:</b>							
85...253 V a.c./d.c.		1					
20...40 V a.c./d.c.		2					
<b>Additional outputs:</b>							
lack		0					
OC output, RS-485, analog outputs		1					
OC output, RS-485, analog outputs switched-over relay outputs		2					
<b>Unit:</b>							
unit code acc. to the table 2				XX			
<b>Version:</b>							
standard						00	
custom-made*						XX	
<b>Language:</b>							
Polish							P
English							E
other*							X
<b>Acceptance tests:</b>							
without extra requirements							0
with an extra quality inspection certificate							1
acc. to customer's request*							X

Order example: The code N30U - 1 0 26 00 E 0 means

- N30U - programmable N30U digital panel meter
- 1 - supply: 85...253 V a.c./d.c.
- 0 - lack of additional outputs
- 26 - unit "°C" acc. to table 2
- 00 - standard option
- E - English language
- 0 - without extra requirements

TABLE 2. CODES OF HIGHLIGHTED UNIT:

Code	Unit	Code	Unit	Code	Unit
00	lack of unit	20	kVAh	40	pcs
01	V	21	MVAh	41	imp
02	A	22	Hz	42	rps
03	mV	23	kHz	43	m/s
04	kV	24	Ω	44	l/s
05	mA	25	kΩ	45	turns/min
06	kA	26	°C	46	rpm
07	W	27	°F	47	mm/min
08	kW	28	K	48	m/min
09	MW	29	%	49	l/min
10	var	30	%RH	50	m <sup>3</sup> /min
11	kvar	31	pH	51	pcs/h
12	Mvar	32	kg	52	m/h
13	VA	33	bar	53	km/h
14	kVA	34	m	54	m <sup>3</sup> /h
15	MVA	35	l	55	kg/h
16	kWh	36	s	56	l/h
17	MWh	37	h		
18	kvarh	38	m <sup>3</sup>	XX	on order*
19	Mvarh	39	turns		

\* - after agreeing with the manufacturer

## SEE ALSO:



Free LPConfig software for easy programming of RISHABH - products Available on our website



KD7 recorder with MODBUS master protocol for recording data measured by N30U.



Shunts for measurement DC current from 5A up to 15 kA. For more details see our ANALOG METERS catalogue.

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For more information about RISHABH products please visit our website: [www.rishabh.co.in](http://www.rishabh.co.in)

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# N300 DIGITAL PANEL METER



## FEATURES:

three-colour display  
LPConfig Program

MOD BUS  
RTC

21 points character  
Password protection

IP65

## INPUTS:

Hz

Waveform icons

## OUTPUTS:

0..20 mA  
0..10 V

Relay symbols

2x symbols

RS 485

## GALVANIC ISOLATION:

Isolation symbols

Supply  
RS 485

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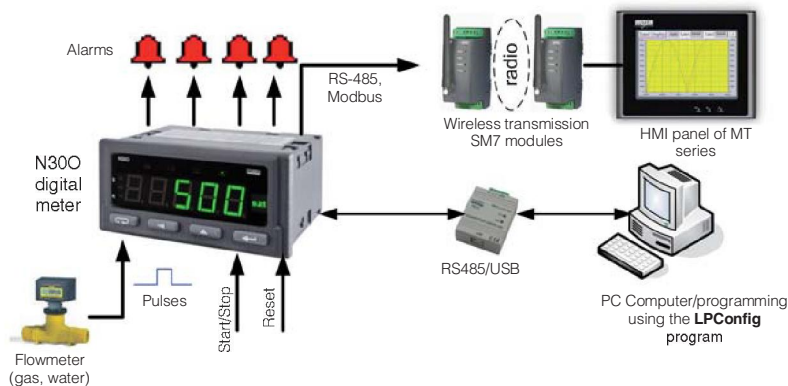
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- Measurement: number of pulses, frequency, rotational speed, period, worktime counter.
- Two impulse counters, co-operation with encoders.
- Counter of actual and total values.
- 3-colour display (14 mm high), programmable in 3 ranges of the measured value.
- Meter programming from keyboard or through the RS-485 interface by means of the free LPConfig program.
- 4 alarm outputs with signalling on LED diodes, working in 6 different modes.
- Conversion of any measured value into an analog signal 0/4...20 mA or 0...10 V.
- Storage of minimal and maximal values for all measured quantities.
- Supply of object transducers (option).
- 21-point individual characteristic for the measured value.
- Mathematical function.
- Firmware updating (option).

## EXAMPLE OF APPLICATION



Measurement and visualization of the water/gas flow. The measured value is transmitted to the operating panel via radio modules

## INPUTS

Input signal:	Input kind	Indication range	Maximal frequency of input	Class	Remarks
Voltage 5...36 V d.c.	Number of pulses IN1/IN2	-19 999..99 999	10 kHz/ 8 kHz	-	with signal filtering 2 kHz
	Frequency < 10 kHz	0.05..99 999 Hz	100 kHz	0,1	with signal filtering 100 Hz
	Frequency > 10 kHz	1...99 999 Hz (measuring range up to 1 MHz)	1 MHz	0,1	
	Rotational speed	0.05...99 999 [rpm]		0,1	
	Period t < 10 s	0.0001...11 [s]	100 kHz	0,1	
	Period t < 10 s	0.0001...3600 [s]		0,1	
	Worktime counter	0...99 999 [h]			0,5 sek./ 24 h
	Encoder	-19 999...99 999	10 kHz		with signal filtering 2 kHz
	Current time	00.00...23.59			0,5 sek./ 24 h

## OUTPUTS

Output kind	Properties	Remarks
Relay output	<ul style="list-style-type: none"> <li>• 2 x relays, voltageless NOC contacts load-carrying capacity 250 V a.c./ 0.5 A a.c.</li> <li>• 2 x relays, voltageless switched contacts load-carrying capacity 250 V a.c./ 0.5 A a.c.</li> </ul>	
Analog output	<ul style="list-style-type: none"> <li>• current programmable 0/4...20mA, load resistance ≤ 500 Ω</li> <li>• voltage programmable 0...10 V load resistance ≥ 500 Ω</li> </ul>	Error of analog output: <b>0.2% of the set range</b> Additional error from temperature changes: <b>50% of the class/10K</b>
OC output	• typu OC, passive npn, 30 V d.c./30 mA	
Auxiliary supply	• 24 V d.c./ 30mA	

## DIGITAL INTERFACE

Interface type	transmission protocol	modes	baud rates
RS-485	MODBUS RTU	8N2, 8E1, 8O1, 8N1	4.8, 9.6, 19.2, 38.4, 57.6, 115.2 kbit/s

## EXTERNAL FEATURES

Readout field	5-digit LED display - indication range -19999..99999 digit height: 14 mm	three-colour display (color changes depending on displayed value): red, green, orange
Weight	< 0.2 kg	
Overall dimensions	96 × 48 × 93 mm	Panel cut-out: 92 <sup>+0,6</sup> × 45 <sup>+0,6</sup> mm
Protection grade (acc. to EN 60529)	from frontal side: IP65	from rear side: IP 10

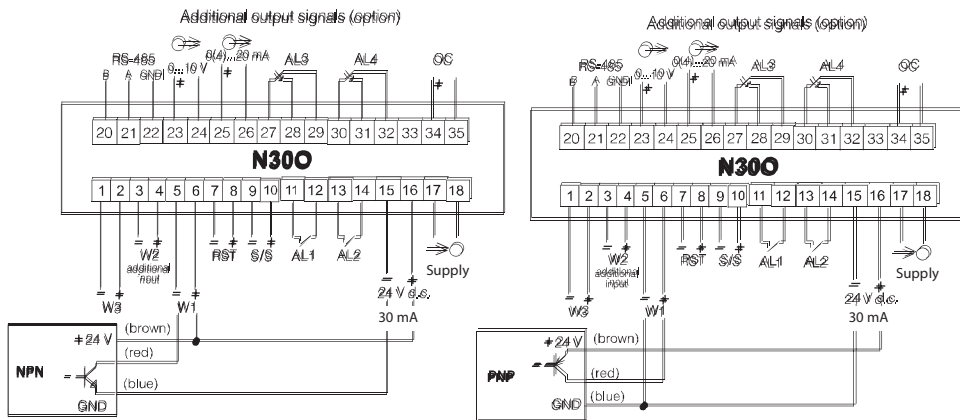
## RATED OPERATING CONDITIONS

Supply voltage	85...253 V a.c. (40...400 Hz) or d.c., 20...40 V a.c. (40...400 Hz) or d.c.	power input < 6 VA
Temperature	ambient: -25...23...55°C	storage: -30...70°C
Relative humidity	25...95%	condensation inadmissible
Operating position	any	
External magnetic field	0...400 A/m	

## SAFETY AND COMPATIBILITY REQUIREMENTS

Electromagnetic compatibility	Noise immunity	acc. to EN 61000-6-2
	Noise emissions	acc. to EN 61000-6-4
Isolation between circuits	basic	
Pollution grade	2	
Installation category	III	acc. to EN 61010-1
Maximal phase-to-earth operating voltage	for the supply circuit: 300 V for remaining circuits: 50 V	
Altitude above sea level	< 2000 m	

## CONNECTION DIAGRAMS



Connections of the transducer with the OC output of NPN and PNP type.

## ORDERING

TABLE 1. ORDERING CODES:

	N300 -	X	X	XX	XX	X	X
<b>Supply:</b>							
85...253 V a.c.(40...400 Hz) or d.c.		1					
20...40 V a.c. (40...400 Hz) or d.c.d.c.		2					
<b>Additional outputs:</b>							
lack		0					
OC output, RS-485, analog outputs		1					
OC output, RS-485, analog outputs switched-over relay outputs		2					
<b>Unit:</b>							
unit code acc. to the table 2			XX				
<b>Version:</b>							
standard				00			
custom-made*				XX			
<b>Language:</b>							
Polish						P	
English						E	
other*						X	
<b>Acceptance tests:</b>							
without extra requirements							0
with an extra quality inspection certificate							1

**Order example:** The code **N300 - 1 0 01 00 E 0** means:  
**N300** - programmable N300 digital panel meter  
**1** - supply: 85...253 V a.c./d.c.  
**0** - lack of additional outputs  
**01** - unit "V" acc. to table 2  
**00** - standard option  
**E** - English language  
**0** - without extra requirements

TABLE 2. CODES OF HIGHLIGHTED UNIT:

Code	Unit	Code	Unit	Code	Unit
00	lack of unit	20	kVAh	40	sz.
01	V	21	MVAh	41	imp
02	A	22	Hz	42	rps
03	mV	23	kHz	43	m/s
04	kV	24	Ω	44	l/s
05	mA	25	kΩ	45	obr/min
06	kA	26	°C	46	rpm
07	W	27	°F	47	mm/min
08	kW	28	K	48	m/min
09	MW	29	%	49	l/min
10	var	30	%RH	50	m <sup>3</sup> /min
11	kvar	31	pH	51	sz./h
12	Mvar	32	kg	52	m/h
13	VA	33	bar	53	km/h
14	kVA	34	m	54	m <sup>3</sup> /h
15	MVA	35	l	55	kg/h
16	kWh	36	s	56	l/h
17	MWh	37	h		
18	kvarh	38	m <sup>3</sup>	XX	on order*
19	Mvarh	39	obr		

\* - after agreeing with the manufacturer

## SEE ALSO:



Free LPConfig software for easy programming of RISHABH - process Available on our website



KD7 recorder with MODBUS master protocol for recording data measured by N300 meter.



SM3 binary inputs module. For readout of binary states and pulses through RS-485 protocol.

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# N30P DIGITAL PANEL METER



## FEATURES:

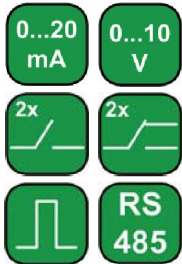


- Measurement of single-phase network parameters: voltage, current, active, reactive and apparent power,  $\cos\phi$ ,  $\tan\phi$ ,  $\phi$ , frequency, active, reactive and apparent energy, 15 minutes' active power, 10 minutes' voltage, 10 seconds' frequency.
- Three-colour display (14 mm high), in three intervals of the measured value.
- Meter programming from the keyboard or through the RS-485 interface by means of the free delivered LPCONFIG program.
- Four alarm outputs with signalling by LED diodes, operating in 6 different modes.
- Storage of minimal and maximal values for all measured quantities.
- Conversion of any measured value into a 0/4...20 mA or 0...10 V analog signal.
- Storage of minimal and maximal values for all measured quantities.

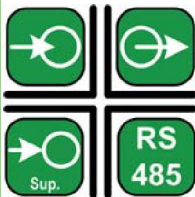
## INPUTS:



## OUTPUTS:



## GALVANIC ISOLATION:



### Contact Details:

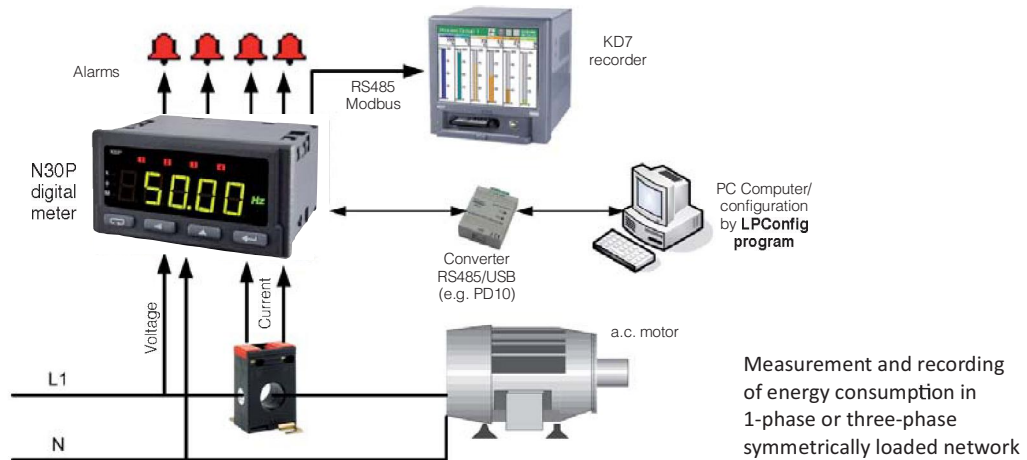
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## EXAMPLE OF APPLICATION



## INPUTS

Input kind	Measuring range	Rated operating conditions	Ratio values
Voltage input	0...100 V or 0...400 V	0.05...1.2 $U_n$	0.1...4000.0
Current input	0...1 A or 0...5 A	0.005...1.2 $I_n$	1...10000

## MEASURING RANGES

Input kind	Indication range	Measuring range	Basic error
Current 1 A/5 A	0.000...60 kA	0.02...6 A a.c.	$\pm 0.2\%$
Voltage 100 V/400 V	0.0...192 MV	1...480 V a.c.	$\pm 0.2\%$
Frequency	45.00...100.00 Hz	45.00...66.00...100.00 Hz	$\pm 0.2\%$
Active power	-19999...99999 MW	-2.88 kW...1.40 W...2.88 kW	$\pm 0.5\%$
Reactive power	-19999...99999 Mvar	-2.88 kvar...1.40 var...2.88 kvar	$\pm 0.5\%$
Apparent power	0.00...99999 MVA	1.40 VA...2.88 kVA	$\pm 0.5\%$
Cos $\phi$	-1...1	-1...0...1	$\pm 0.5\%$
Tangens $\phi$	-1.2...1.2	-1.2...0...1.2	$\pm 1\%$
$\phi$	0...359	0...359	$\pm 1\%$
Active energy	0...9 999 999.9 kWh	0...9 999 999.9 kWh	$\pm 0.5\%$
Reactive energy	0...9 999 999.9 kVarh	0...9 999 999.9 kVarh	$\pm 0.5\%$
Apparent energy	0...9 999 999.9 kVA	0...9 999 999.9 kVA	$\pm 0.5\%$
Current time	0.00...23.59	0.00...23.59	1 sec/ 24 h

## OUTPUTS

Output kind	Properties
Relay output	<ul style="list-style-type: none"> <li>• 2 x relays, voltageless NO contacts, load-carrying capacity 250 V a.c./ 0.5 A a.c.</li> <li>• 2 x relays, voltageless change-over contacts, load-carrying capacity 250 V a.c./ 0.5 A a.c.</li> </ul>
Analog output	<ul style="list-style-type: none"> <li>• current programmable 0/4...20 mA, load resistance <math>\leq 500 \Omega</math></li> <li>• voltage programmable 0...10 V, load resistance <math>\geq 500 \Omega</math></li> <li>• resolution 0.01% of the range</li> </ul>
Energy pulse output	<ul style="list-style-type: none"> <li>• OC type output, passive of class A, acc. to EN 62053-31, supply voltage 18...27 V, current 10...27 mA.</li> <li>• Output pulse constant: 5000 imp./kWh, independently of <math>K_u</math> and <math>K_i</math> settings.</li> </ul>

## DIGITAL INTERFACES

Interface type	Transmission protocol	Mode	Baud rates
RS-485	MODBUS RTU	8N2, 8E1, 8O1, 8N1	4.8; 9.6; 19.2; 38.4 kbit/s

## EXTERNAL FEATURES

Readout field	5 digit LED display - indication range -19999..99999 digit height: 14 mm	three-colour display (colour changes depending on displayed value): red, green, orange
Weight	< 0.2 kg	
Overall dimensions	96 × 48 × 93 mm	Panel cut-out: 92 <sup>+0,6</sup> × 45 <sup>+0,6</sup> mm
Protection grade (acc. to EN 60529)	from frontal side: IP65	from rear side: IP 10

## RATED OPERATING CONDITIONS

Supply voltage	85...253 V a.c. (40...400 Hz) or d.c., 20...40 V a.c. (40...400 Hz) or d.c.	Power consumption < 6 VA
Temperature	ambient: -25...23...55°C	storage: -30...70°C
Relative humidity	25...95%	condensation inadmissible
Operating position	any	
External magnetic field	0...400 A/m	
Short duration overload (5 s)	voltage input: 2Un (max. 1000 V)	current input: 10 In

## SAFETY AND COMPATIBILITY REQUIREMENTS

Electromagnetic compatibility	Noise immunity	acc. to EN 61000-6-2
	Noise emissions	acc. to EN 61000-6-4
Safety requirements		acc. to EN 61010-1

## CONNECTION DIAGRAMS

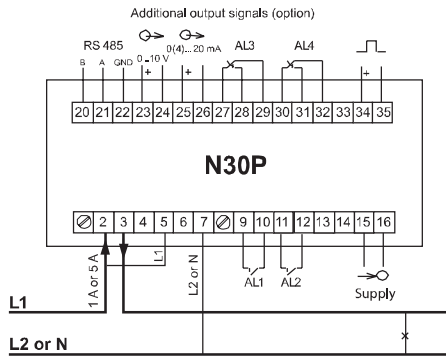


Fig. 1 Electrical connections of the N30P meter for direct measurements.

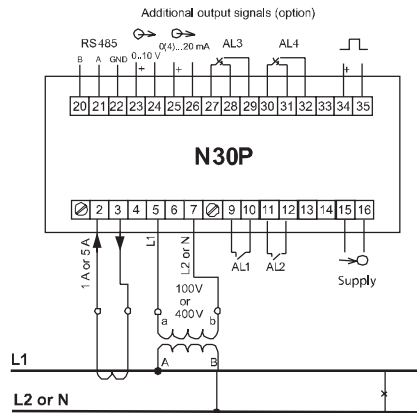


Fig. 2 Electrical connections of the N30P meter for indirect measurements.

## ORDERING

TABLE 1. ORDERING CODES:

	N30P -	X	X	XX	XX	X	X
<b>Supply:</b>							
85...253 V a.c./d.c.		1					
20...40 V a.c./d.c.		2					
<b>Additional outputs:</b>							
lack			0				
pulse output, RS-485, analog outputs			1				
pulse output, RS-485, analog outputs				1			
switched-over relay outputs				2			
<b>Unit:</b>							
unit code acc. to the table 2				XX			
<b>Version:</b>							
standard							00
custom-made*							XX
<b>Language:</b>							
Polish							P
English							E
other*							X
<b>Acceptance tests:</b>							
without extra requirements							0
with an extra quality inspection certificate							1
acc. to customer's request*							X

**Order example:** The code **N30P - 1 0 01 00 E 0** means:  
**N30P** - programmable N30P panel digital meter  
**1** - supply: 85...253 V AC/DC  
**0** - lack of additional outputs  
**01** - unit "V" acc. to codes tabel 2  
**00** - standard execution  
**E** - English language  
**0** - without extra requirements

TABLE 2. CODES OF HIGHLIGHTED UNIT:

Code	Unit	Code	Unit	Code	Unit
00	lack of unit	20	kVAh	40	sz.
01	V	21	MVAh	41	imp
02	A	22	Hz	42	rps
03	mV	23	kHz	43	m/s
04	kV	24	Ω	44	l/s
05	mA	25	kΩ	45	obr/min
06	kA	26	°C	46	rpm
07	W	27	°F	47	mm/min
08	kW	28	K	48	m/min
09	MW	29	%	49	l/min
10	var	30	%RH	50	m <sup>3</sup> /min
11	kvar	31	pH	51	obr/h
12	Mvar	32	kg	52	m/h
13	VA	33	bar	53	km/h
14	kVA	34	m	54	m <sup>3</sup> /h
15	MVA	35	l	55	kg/h
16	kWh	36	s	56	l/h
17	MWh	37	h		
18	kvarh	38	m <sup>3</sup>	XX	on order*
19	Mvarh	39	obr		

\* - after agreeing with the manufacturer

## SEE ALSO:



Free LPConfig software for easy programming. Available on our website



Current transformers with inputs from 5 A up to 6 kA.



N14 meter for measurement of three-phase network parameters.

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For more information about RISHABH products please visit our website: [www.rishabh.co.in](http://www.rishabh.co.in)

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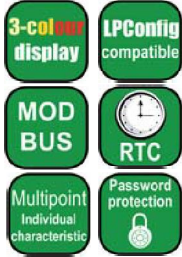
[exp.marketing@rishabh.co.in](mailto:exp.marketing@rishabh.co.in)  
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# N30H DIGITAL PANEL METER



## FEATURES:

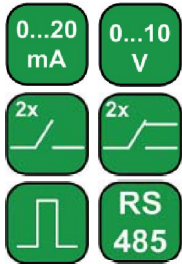


IP65

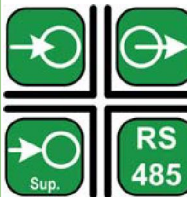
## INPUTS:



## OUTPUTS:



## GALVANIC ISOLATION:



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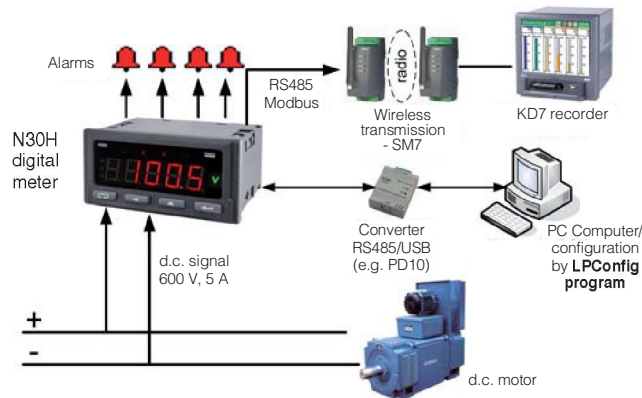
exp.marketing@rishabh.co.in  
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- Measurement: current and d.c. voltage up to 5 A and 600 V.
- Three-colour display (14 mm high), programmed in three intervals of the measured value.
- Meter programming from the keyboard or through the RS-485 interface by means of the free delivered LPCONFIG program.
- Four alarm outputs with signalling by LED diodes, operating in 6 different modes.
- Conversion of any measured value into a 0/4...20 mA, or 0...10 V analog signal.
- Storage of minimal and maximal values for all measured quantities.
- 21-point individual characteristic for the measured value.

## EXAMPLE OF APPLICATION



Measurement and recording of d.c. motor voltage and current. Measured data are transmitted to the recorder via radio modules.

## INPUTS

Input kind	Maximal measuring range	Class
+/- 500 V d.c.	-600...600 V d.c.	0.1
+/- 100 V d.c.	-200...200 V d.c.	0.1
+/- 5 A d.c.	-6...6 A d.c.	0.1
+/- 1 A d.c.	-1.2...+1.2 A d.c.	0.1
Current time	00.00..23.59	0.5 second/h

## OUTPUTS

Output kind	Properties	Remarks
Relay output	<ul style="list-style-type: none"> <li>• 2 x relays, voltageless NO contacts, load-carrying capacity 250 V a.c./ 0.5 A a.c.</li> <li>• 2 x relays, voltageless switched contacts, load-carrying capacity 250 V a.c./ 0.5 A a.c.</li> </ul>	
Analog output	<ul style="list-style-type: none"> <li>• current programmable 0/4...20 mA, load resistance <math>\leq 500 \Omega</math></li> <li>• voltage programmable 0...10 V, load resistance <math>\geq 500 \Omega</math></li> <li>• Error of output: 0.2% of the set range</li> </ul>	Additional error from temperature changes: <b>50% of class/10K</b>
OC output	• OC type, passive npn, 30 V d.c./30 mA	voltage output
Auxiliary supply	• 24 V d.c./ 30mA	

## DIGITAL INTERFACES

Interface type	Transmission protocol	Modes	Baud rates
RS-485	MODBUS RTU	8N2, 8E1, 8O1, 8N1	4.8; 9.6; 19.2; 38.4, 57.6, 115.2 kbit/s

## EXTERNAL FEATURES

Readout field	5-digit LED display - indication range -19999...99999 digit height: 14 mm	three-colour display (colour changes depending on displayed value): red, green, orange
Weight	< 0.2 kg	
Overall dimensions	96 x 48 x 93 mm	Panel cut-out: 92 <sup>+0.6</sup> x 45 <sup>+0.6</sup> mm
Protection grade (acc. to EN 60529)	from frontal side: IP65	from terminal side: IP 10

## RATED OPERATING CONDITIONS

Supply voltage	85...253 V a.c. (40...400 Hz) or d.c., 20...40 V a.c. (40...400 Hz) or d.c.	
Temperature	ambient: -25...23...55°C	storage: -30...70°C
Relative humidity	25...95%	condensation inadmissible
Operating position	any	
External magnetic field	0...400 A/m	

## SAFETY AND COMPATIBILITY REQUIREMENTS

Electromagnetic compatibility	Noise immunity	acc. to EN 61000-6-2
	Noise emissions	acc. to EN 61000-6-4
Isolation between circuits	basic	acc. to EN 61010-1
Pollution grade	2	
Installation category	III	
Maximal phase-to-earth working voltage	for the supply circuit: 300 V for remaining circuit: 50 V	
Altitude above sea level	< 2000 m	

## CONNECTION DIAGRAMS

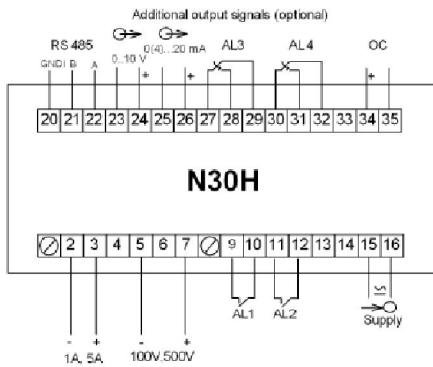


Fig. 1. Description of signals on connection strips

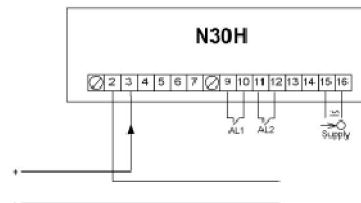


Fig. 2. Meter connection in the configuration for current measurement

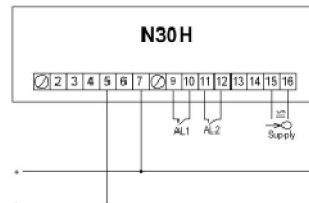


Fig. 3. Meter connection in the configuration for voltage measurement

## ORDERING

TABLE 1. ORDERING CODES:

	N30H -	X	X	XX	XX	X	X
<b>Supply:</b>							
85...253 V a.c./d.c.		1					
20...40 V a.c./d.c.		2					
<b>Additional outputs:</b>							
lack			0				
OC output, RS-485, analog outputs			1				
OC output, RS-485, analog outputs switched-over relay outputs			2				
<b>Unit:</b>					XX		
unit code acc. to the table 2					XX		
<b>Version:</b>							
standard						00	
custom-made*						XX	
<b>Language:</b>							
Polish							P
English							E
other*							X
<b>Acceptance tests:</b>							
without extra requirements							0
with an extra quality inspection certificate							1
acc. to customer's request*							X

### Order example:

The code **N30H - 1 0 01 00 E 0** means

- N30H** - programmable N30H panel digital meter
- 1** - supply: 85...253 V a.c./d.c.
- 0** - lack of additional outputs
- 01** - unit "V" acc. to the table 2
- 00** - standard option
- E** - English language
- 0** - without extra requirements

TABLE 2. CODES OF HIGHLIGHTED UNIT:

Code	Unit	Code	Unit	Code	Unit
00	lack of unit	20	kVAh	40	sz.
01	V	21	MVAh	41	imp
02	A	22	Hz	42	rps
03	mV	23	kHz	43	m/s
04	kV	24	Ω	44	l/s
05	mA	25	kΩ	45	obr/min
06	kA	26	°C	46	rpm
07	W	27	°F	47	mm/min
08	kW	28	K	48	m/min
09	MW	29	%	49	l/min
10	var	30	%RH	50	m³/min
11	kvar	31	pH	51	szt./h
12	Mvar	32	kg	52	m/h
13	VA	33	bar	53	km/h
14	kVA	34	m	54	m³/h
15	MVA	35	l	55	kg/h
16	kWh	36	s	56	l/h
17	MWh	37	h		
18	kvarh	38	m³	XX	on order*
19	Mvarh	39	obr		

\* - after agreeing with the manufacturer

## SEE ALSO:



Free LPConfig software for easy programming of RISHABH - PRODUCTS Available on our website



KD7 recorder with MODBUS master protocol for recording data measured by N30H meter.



SM7 communication module for RS485 interface. Enables wireless connection on distance up to 300 meters.

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