

# N30B DIGITAL PANEL RECORDER

## FEATURES:

- Password protection
- 21 points character
- MEM
- SD 4GB
- three-colour display
- IP65



- Data readout and recording from devices with RS485 interface and Modbus RTU protocol.
- 2 x RS485 interface with Modbus RTU protocol (Master and Slave).
- 3-colour display (14 mm height), programmable in 3 ranges of the displayed value.
- 21-point individual characteristic (indication rescaling).
- Internal memory (308000 records).
- Data archiving on MMC/SD card with capacity up to 4 GB.
- Data archiving on PC in MySQL database.
- Conversion into an analog signal (0...10V or 0/4...20mA).
- Indication of capacity exceeding of MMC/SD card.
- RTC with daylight saving time (DST) automatic adjustment.

## INPUTS:

- 2x RS 485
- MOD BUS

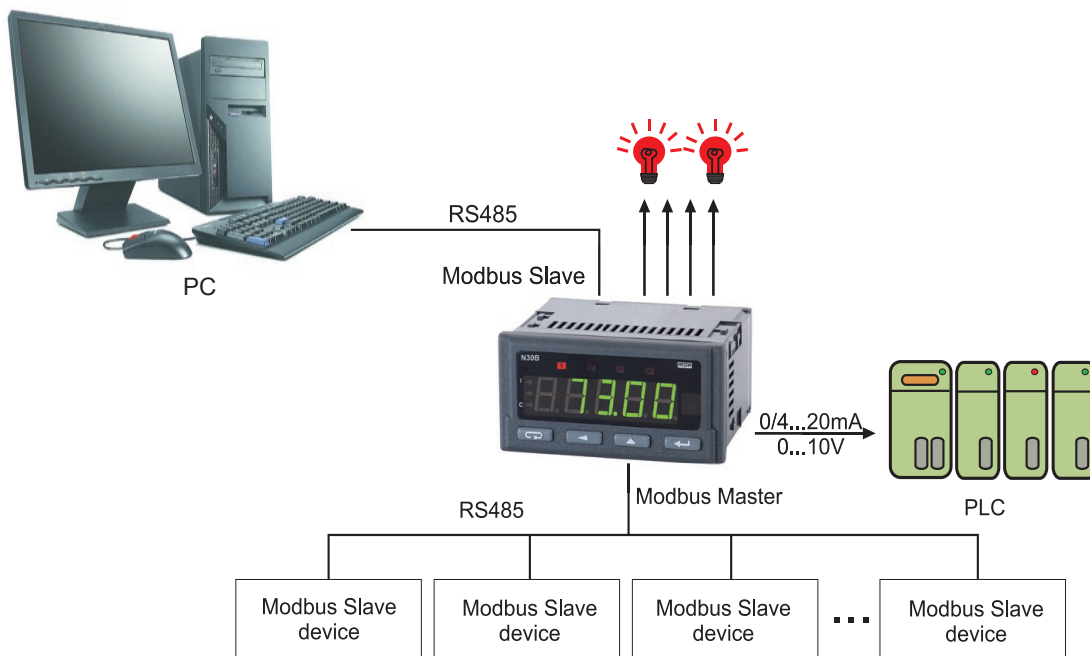
## OUTPUTS:

- 0..20 mA
- 0..10 V
- Relay output symbols
- Relay output symbol
- RS 485
- MOD BUS

## GALVANIC ISOLATION:

- RS 485
- RS 485
- Supply
- Supply

## EXAMPLE OF APPLICATION



Data presentation and recording from control-measurement devices.

### MEMORY

Memory type	Storage capacity	Remarks
Internal	308000 records	
Memory card	up to 4 GB (512MB card - ca. 34 560 000 records)	MMC / SD card

### OUTPUTS

Output type	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 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...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

### DIGITAL INTERFACE

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

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### 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

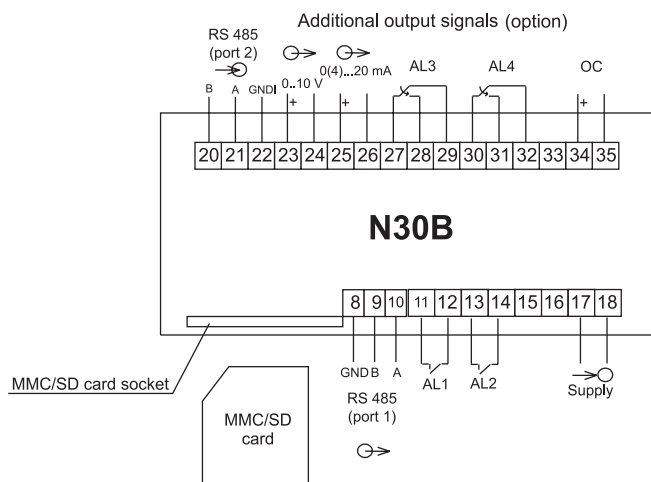
### RATED OPERATING CONDITIONS

Supply voltage	85...253 V a.c. (40...400 Hz); 90 ... 320 V d.c. 20...40 V a.c. (40...400 Hz); 20 .. 60 V 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 operating voltage	for the supply circuit: 300 V for remaining circuits: 50 V	
Altitude above sea level	< 2000 m	

### CONNECTION DIAGRAMS



### ORDERING

TABLE 1. ORDERING CODES:

N30B -	X	X	XX	XX	X	X
<b>Supply:</b>						
85...253 V a.c. (40 ... 400 Hz); 90...320 V d.c.	1					
20...40 V a.c. (40 ... 400 Hz); 20...60 V d.c.	2					
<b>Additional outputs:</b>						
lack	0					
OC output, RS485 (port 2), analog outputs	1					
OC output, RS485 (port 2), 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

\* - after agreeing with the manufacturer

#### Order example:

The code: **N30B - 1-0-29-00-E-0** means: digital panel recorder N30B, supply: 85...253 V a.c./d.c., lack of additional outputs; unit "%" acc. to table 2; standard version; English language, 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	sz/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		

### SEE ALSO:



HMI operator panels.



I/O modules SM series.



Programmable logic controller SMC.



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