Electronic Preset Counter with 2 Presets and Print interface

NE213 Prog. 09

Order designation

Order no.	Interface
3	RS232
	Outputs
1	With relay, batch counter normally closed
2	With relay, batch counter normally open
3	Electronic outputs PNP
4	Electronic outputs NPN
	Supply voltage
1	24 / 48 VAC
2	115 / 230 VAC
3	24 VDC

NE213. 3 □ □ AX09

Decription

The NE213 program 09 is based on the preset counter NE212 with an additional print routine. This print function makes it possible to print several lines of the NE213 as well as texts and any control character with one print instruction. The connected printer can be activated via the function key or the external input.
The programming of the print protocol is done by means of a "print manager program", whereby the data are transmitted via the serial interface RS232. If a print protocol has been programmed, it will be output to the printer. Otherwise the currently displayed value will be printed.

Features

Models	LED-preset counter with 2 presets Batch counter or Tachometer Totalizer, Time meter
Connection	Incremental encoder One-channel, digital sensor 2 one-channel, digital sensors for difference counting
Functions	Start count programmable Scaling factor programmable 0.0001...99.9999 Batch counter with one preset and multiplier (1...99) Print interface RS232 Printout can be activated via F-key or signal input Programmable preset mode: - Step preset - Main preset - Parallel comparison - Drag preset (P1)

Mechanical data

Display	7-segment LED-display 8-digit display of real value, 7.6 mm high Programmable decimal point Display suppression of preceding zeroes - Minus sign for negative values
Operation, keypad	Front membrane with short-stroke keys
Front dimensions	DIN housing, 72 x 72 mm
Mounting	Front panel with U-clips
Weight	AC: approx. 450 g DC: approx. 320 g
Connection	Plug-in screw terminals Grid 5.08 mm
Core cross-section	Max. 1.5 mm^2
Housing material	Macrolon 6485 (PC) black, UL 94V-0
Keypad membrane material	Polyester

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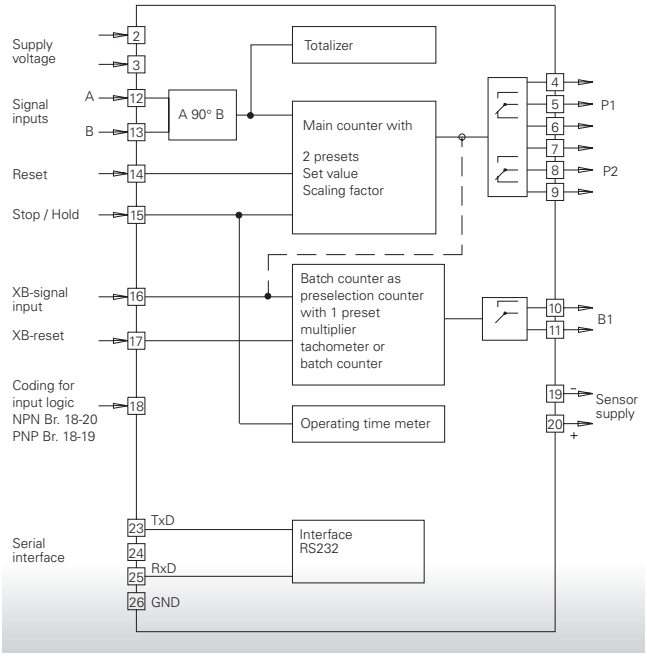
Block diagram



Electrical data

Supply voltage	Choice of two voltages (AC) via switch on device. 115 ±10% / 230 VAC +6 %/ -10 % (50 / 60 Hz) 24 / 48 VAC ±10 % (50 / 60 Hz) 24 VDC ±10 %, 5 % residual ripple
Power consumption	6 VA, 6 W
Sensor supply	12...26 VDC / max. 100 mA
Signal inputs	Optocoupler inputs Count inputs A / B - control current 9...16 mA - breaking current <0.5 mA - input resistance 1.65 kOhm Control inputs - control current 5...8 mA - breaking current <0.5 mA - input resistance 3.3 kOhm PNP-, NPN-logic can be coded via wire jumper to terminal strip
Input counting rate	15 Hz, 25 Hz, 10 kHz programmed
Control inputs	3 control inputs for reset, stop, hold, etc.
Signal outputs	Programmable as momentary or permanent signals; Impulse time can be programmed 0.01...99.99 s
Relay signal outputs	2 floating center-zero relays for main counter 1 floating relay for batch counter, to be programmed as normally open or closed Internal spark quenching Max. switch. voltage 250 VAC Max. switch. power 1 A Max. swit. capacity 150 VA/30 W
Electronic signal outputs	NPN switching transistor - Max. switching voltage +35 V - Max. switching power 50 mA PNP switching transistor - Max. switching voltage 12...24 VDC with AC operation, depending on load - Max. switching power 50 mA, for DC operation - Max. switching power 10 mA, for AC operation
Reset	Manually, electrically or automatically
Data storing	> 10 years via EEPROM

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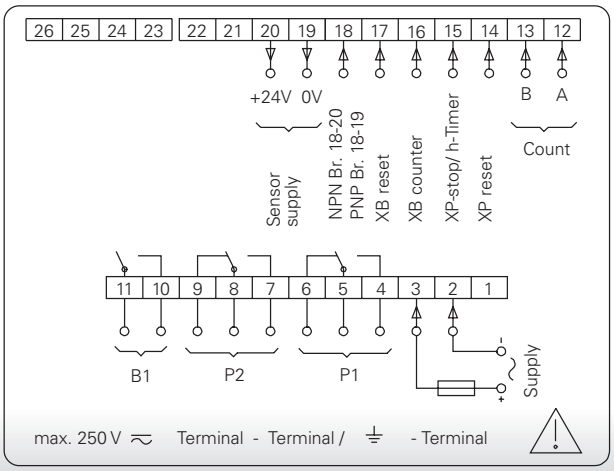
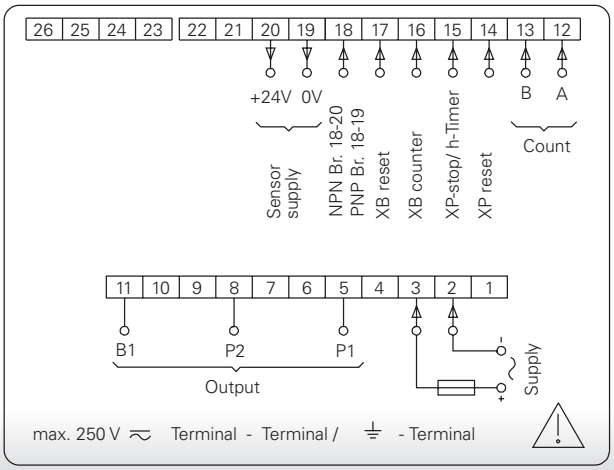
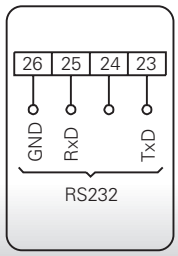
Pin assignments for relay output



Pin assignments for electronic output



Pin assignments for interface applications



Counting mode of signal inputs A / B

– Up/Down
– Difference, A - B
– Total, A + B
– Phase, A 90° B x1
– Phase, A 90° B x2
– Phase, A 90° B x4

Ambient conditions

Ambient temperature	0...+50 °C
Storage temperature	-20...+70 °C
Relative humidity	Max. relative humidity 80 %, at 25 °C, non-condensing
Protection	Front IP 65 to DIN 40050
General rating	EN 61010 Part 1 - Protection standard II - Overvolt. protection categ. II - Contamination factor 2
Interference immunity	EN 50082-2
Emitted interference	EN 50081-1

Contact descriptions programming cable

9-pins, D-SUB	4-pins socket insert	Colour	Function
2	23	brown	TxD
3	25	blue	RxD
5	26	black	GND

Contact descriptions print cable

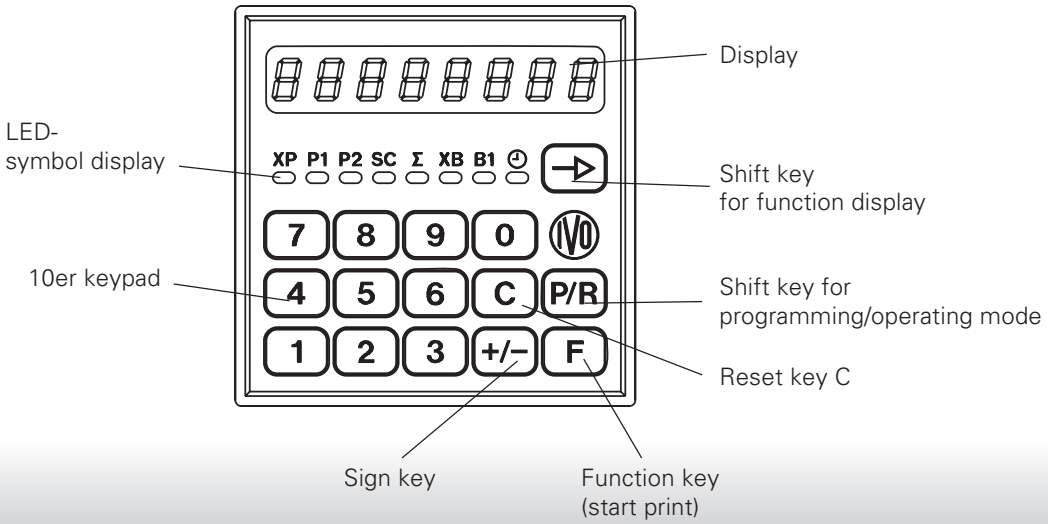
25-pins, D-SUB	4-pins socket insert	Colour	Function
2	25	blue	RxD
3	23	brown	TxD
7	26	black	GND

Accessories

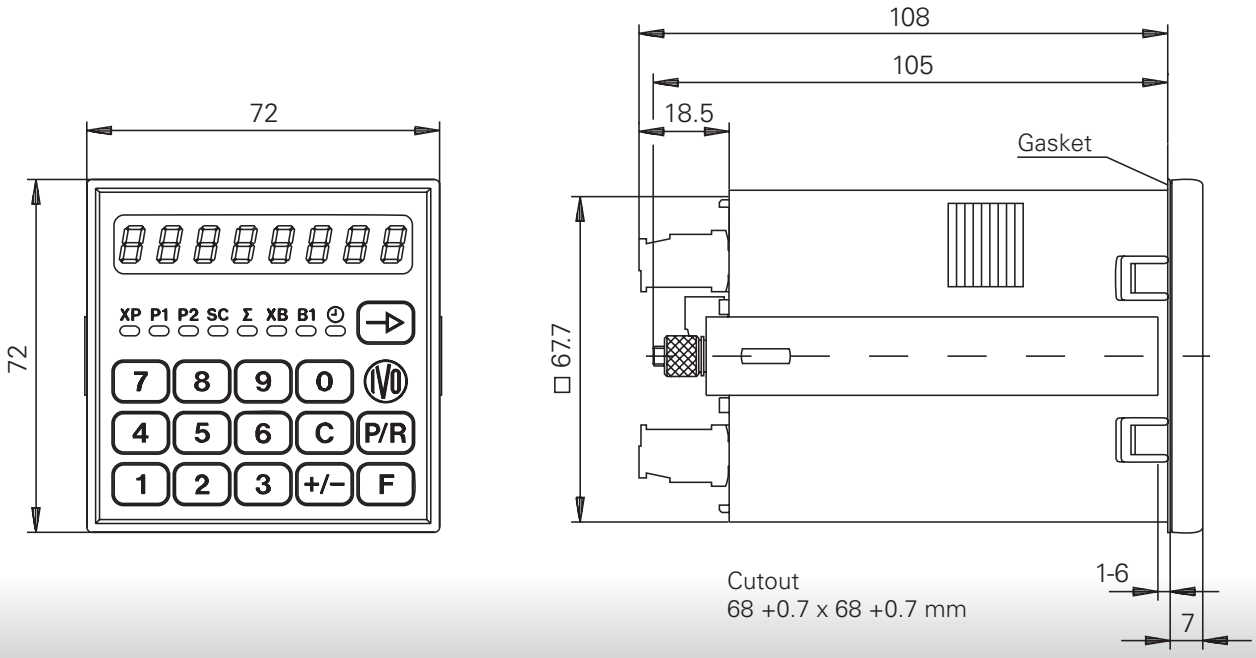
Order no.
Z 118.041 Programming cable
Z 118.042 Print cable
Z 118.043 Print manager program

Incremental encoder (see Encoder catalog)

Display and keypad



Dimensions



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Settings of Dip switch

NE213	Dip no.
Switch ON	2, 7
Switch OFF	1, 3, 4, 5, 6, 8, 9, 10

Print Manager

Description
The print manager enables a print protocol to be created on the PC by means of an editor. The protocol is transmitted via the serial interface RS232 to the NE213 and is stored there. After the transmission of the protocol, the connection to the printer is established at the same interface. The printer can be activated manually via the NE213 or by an electric signal.

Print protocol
A print protocol consists of all characters that are sent to the connected printer by the IVO counter upon activating the print function. These signs are grouped as follows: control characters, text characters, counter data

Control characters
Control characters are all characters that serve to control or to configure the printer, e.g. changing over to condensed type, line feed, paper feed, etc. For further information see printer manual.
Example: 27 87 1 (changing over to expanded type)

Text characters
Text characters are characters that correspond to the input in the editor and that are output in the printout. Text characters are marked by inverted commas.
Example: ‘length=’

Counter data
Counter data are display values of the IVO counter. To select the requested values, one only has to enter the respective line number with curly brackets in the editor.
Example: {02} (preset P2)

Example

27 33 1
└ Control sign

'Ta. length =' {03} 'cm' 10
└ Control sign
└ Text line
└ Counter data
└ Text line

'Length =' {02} 'cm' 10
└ Control sign
└ Text line
└ Counter data
└ Text line

27 11 3
└ Control sign