

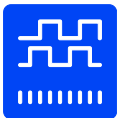
PD-INC

Process Display for sensors with
incremental output



- **Counting rate up to 250 kHz
(<1 MHz edge frequency)**
- **Integrated sensor power supply**
- **6-digit LED display**
- **RS-232 interface**

prodis®-INC is designed for use with incremental position sensors to display angles and displacements. The fast counter processes 90° phase shifted A, B signals (quadrature signals) for direction and counting information. Sensor excitation is supplied from the meter. With four membrane keys all parameters can be programmed for the special application. A zero signal and a reference signal can be used for calibration of the measurement system. Optional comparator functions with 4 NPN open-collector outputs are available, additional 2 of them have relay output.



PD-INC - Digital Process Display for sensors with incremental output

Specifications

		Order options
Display	6-digit, 7-segment LED, height 14 mm, decimal point programmable	
Counting frequency	250 kHz max., 1 MHz edge frequency	
Excitation voltage/current	24 V DC $\pm 10\%$ /150 mA, residual ripple 1% _{SS} ; 85-250 V AC, 50-60 Hz/180 mA max.	1 24VDC 230VAC
Sensor excitation	24 V DC/300 mA 5V DC/500 mA	2 G24V G5V
Sensor signal	HTL level with excitation voltage G24V TTL level with excitation voltage G5V or G24V	3 HTL TTL
Inputs	A, B, Z, T (reference signal)	
Comparator outputs (option)	Relay: 250 V AC/5 A, 30 V DC/5 A NPN: 24 V max./50 mA to GND	
Options	Comparator Desktop version	4 REL2 DT
Connection	Terminal strip 12 pole, excitation 3 pole	
Temperature coefficient	$\pm 20 \times 10^{-6} / ^\circ\text{C}$	
Operating temperature	-10...+40°C	
Storage temperature	-20...+85°C	
Weight	24 V DC: approx. 250 g; 230 V AC: approx. 400 g	
Protection class	Front IP60, rear IP40	
Humidity	Max. 80% R.H., non condensing	
Safety of equipment	Directive 2014/35/EU: EN 61010-1:2010	
EMC	Directive 2014/30/EU: EN 61326-1:2013	

Programmable parameters / value range

Value range display, offset, limit values	-999999 to +999999
Divisor, Multiplier	0 to 999999
Other programmable parameters	Counting direction, decimal point position, last-value memory, Z signal evaluation, display brightness
Signal T	Manual zero, key lock, display value hold, Z release, relative measurement activation

RS-232 interface

Level	RS-232: ± 8 V, galvanically isolated
Data format	1 start bit, 8 data bits, 1 stop bit, no parity
Transmission rate	4800 / 9600 / ... / 115200 Baud

Order code

PD-INC – **1** – **2** – **3** – **4**

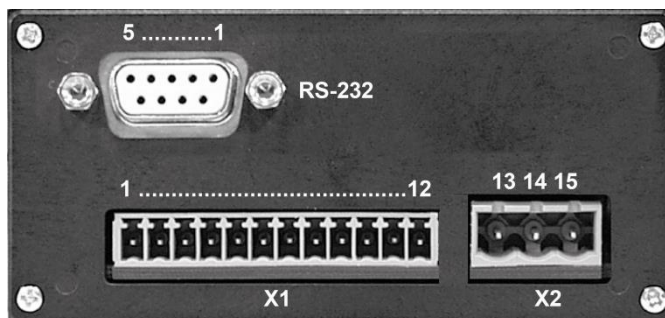
Order example: PD-INC – 24VDC – G24V – HTL – REL2

Wiring basic unit without comparator output

Signals	Connector X1 Pin no.	Connector X2 Pin no.
Sensor excitation +U _B	1	
Sensor excitation 0 V (GND)	2	
Signal A	4	
Signal \bar{A}	5	
Signal B	6	
Signal \bar{B}	7	
Signal Z (zero signal)	8	
Signal \bar{Z} (zero signal)	9	
Signal T (reference signal)	10	
Signal \bar{T} (reference signal)	11	
GND	12	
PD-INC-24VDC		
Excitation +24 V		13
Excitation 0 V (GND)		14
PD-INC-230VAC		
Excitation		13, 15
Protective ground		14

Signals	D-Sub pin no.
TxD	2
RxD	3
GND	5

Rear view without comparator output

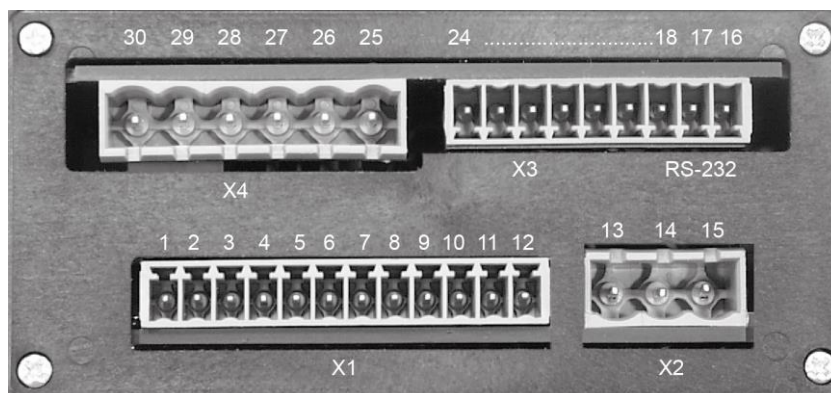


Wiring basic unit with comparator output

Signals	Connector X1 Pin no.	Connector X2 Pin no.
Sensor excitation +U _B	1	
Sensor excitation 0 V (GND)	2	
Signal A	4	
Signal \bar{A}	5	
Signal B	6	
Signal \bar{B}	7	
Signal Z (zero signal)	8	
Signal \bar{Z} (zero signal)	9	
Signal T (reference signal)	10	
Signal \bar{T} (reference signal)	11	
GND	12	
PD-ADC-24VDC Excitation +24 V Excitation 0 V (GND)		13 14
PD-ADC-230VAC Excitation +24 V Protective ground		13, 15 14

Signals	Connector X3 Pin no.
TxD	17
RxD	16
GND	18

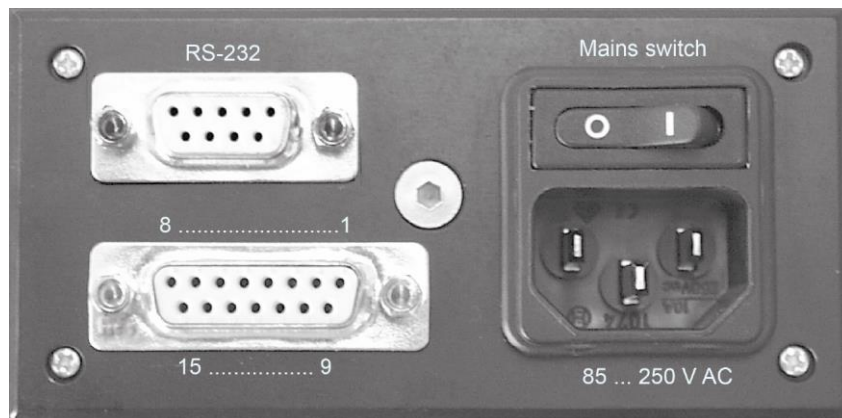
Rear view with comparator output (option „REL2“)



Comparator function (option)

Comparator	Comparator output				
	NPN collector	Connector X3 Pin no.	Relay	Connector X4 Pin no.	LED
Comparator 1	NPN1	20	Relay 1 NO NC Common	25 27 26	LED1
Comparator 2	NPN2	21	Relay 2 NO NC Common	28 30 29	LED2
Comparator 3	NPN3	22			
Comparator 4	NPN4	23			
	NPN GND	24			
	NPN U ₈ (+24V)	19			

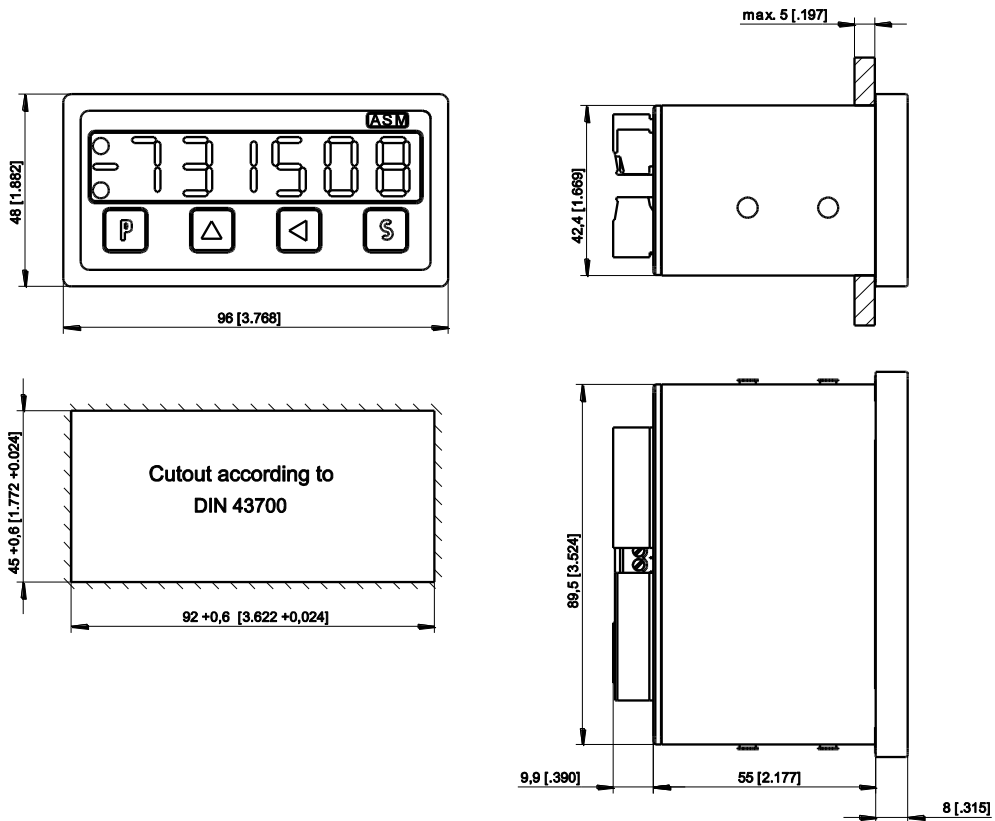
Desktop version (option „DT”)



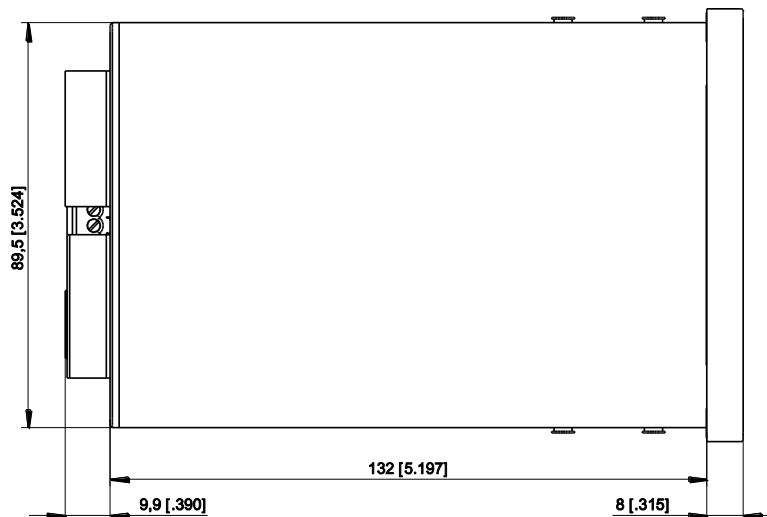
Wiring of connector X1 see table "Wiring basic unit".

Dimensions

PD-INC-24VDC



PD-INC-230VAC



Dimensions in mm [inch]

Dimensions informative only.

For guaranteed dimensions consult factory.