

# PRODIS<sup>®</sup>

Digital Process Meters

PD-ADC  
Digital Process Meter for analog Sensors

Datasheet



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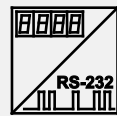
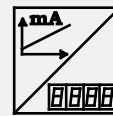
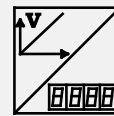
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## PRODIS-ADC



### Digital Process Meter for sensors with analog output

- Voltage (e.g. 0 ... 10 V)  
Current (e.g. 4 ... 20 mA)  
Voltage divider (Potentiometer)
- Integrated sensor supply
- 6-digit LED display
- RS-232-interface



### Description and specifications

PRODIS®-ADC is designed for use with analog position sensors to display angles and -displacements. A high resolution A/D converter processes signals from sensors with voltage or current output. The meter is programmable to display values within preset start/end range or values in units as inches, mm or degrees. A tare function or programming lock can be activated with two control terminals. Sensor excitation is supplied by the meter. With four membrane keys all parameters can be programmed for the special applications. Optional comparator functions with 4 NPN open-collector output are available, additional 2 of them have relay output.

### Specifications

<b>Display</b>	6-digit, 7-segment LED, height 14 mm,
<b>Counting rate</b>	decimal point programmable
<b>Measurement accuracy</b>	1 ... 25/s programmable
<b>Excitation voltage/current</b>	24 V DC $\pm 10\%$ /150 mA, residual ripple 1%SS; 85-250 V AC, 50-60 Hz/180 mA max.
<b>Sensor excitation</b>	24 V DC/300 mA / voltage divider 5 V, 10 mA
<b>Input</b>	Two channels each for: Voltage: 0 ... 10 V; 0.5 ... 4.5 V, 0.5 ... 10 V, max. 24V, Current: 0...20 mA 3 wires; 4 ... 20 mA 2 wires/3 wires Voltage divider $R_{min}=500\Omega$ , 0 ... 5 V Load 100 $\Omega$ , $I_{max}<30$ mA One input or the difference between both inputs can be chosen by programming.
<b>Control input</b>	2 control inputs 24 V, active low
<b>Comparator output (option)</b>	Relay: 250 V AC/5 A, 30 V DC/5 A NPN: 24 V max./50 mA to GND
<b>Connection</b>	Terminal strip 12 pole, excitation 3 pole
<b>Temperature coefficient</b>	$\pm 20 \times 10^{-6} / ^\circ\text{C}$

<b>Operating temperature</b>	-10...+40 °C
<b>Storage temperature</b>	-20...+85 °C
<b>Weight</b>	24 V DC: approx. 250 g 230 V AC: approx. 400 g
<b>Protection class</b>	Front IP60, rear IP40
<b>Humidity</b>	Max. 80 % R. H., non-condensing
<b>Safety of equipment</b>	Directive 2014/35/EU: EN 61010-1:2010
<b>EMC</b>	Directive 2014/30/EU: EN 61326-1:2013

**Programmable parameters / value range**

<b>Value range offset</b>	-999999 to +999999
<b>Divisor, multiplier</b>	0 to 999999
<b>Other programmable parameters</b>	Decimal point position, display brightness
<b>Control input terminals</b>	Key lock, display value hold, tare function

**Interface RS-232**

<b>Level</b>	RS-232: $\pm 8$ V, galvanically isolated
<b>Data format</b>	1 start bit, 8 data bits, 1 stop bit, no parity
<b>Transmission rate</b>	9600 Baud

Order code

PD-ADC – 1 – 2

**1** Excitation voltage

24VDC = 24 V DC  
230VAC = 85 ... 230 V AC

**2** Options

REL2 = Comparator  
DT = Desktop version

Order example

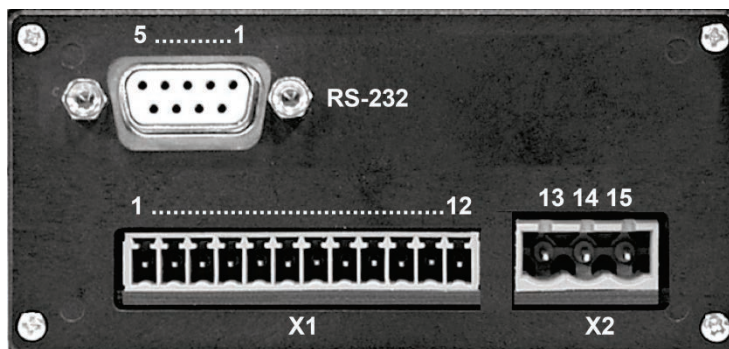
PD – ADC – 24VDC – REL2

**Wiring basic unit**

Signals	Connector X1 Pin no.	Connector X2 Pin no.
Sensor excitation +UB 24 V	1	
Sensor excitation 0 V (GND)	2	
Control input terminal 1: tare function	3	
Control input terminal 2: programming lock	4	
Voltage input terminal (e.g. 0 ... 10 V), channel 1	5	
Voltage input terminal (e.g. 0 ... 10 V), channel 2	6	
Current input terminal (e.g. 0 ... 20 mA), channel 1	7	
Current input terminal (e.g. 0 ... 20 mA), channel 2	8	
Voltage divider input terminal, channel 1	9	
Voltage divider input terminal, channel 2	10	
Reference voltage 5 V for voltage divider	11	
GND	12	
PD-ADC-24VDC Excitation +24 V Excitation 0 V (GND)		13 14
PD-ADC-230VAC Excitation Protective ground		13, 15 14

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

**Rear view without comparator output**



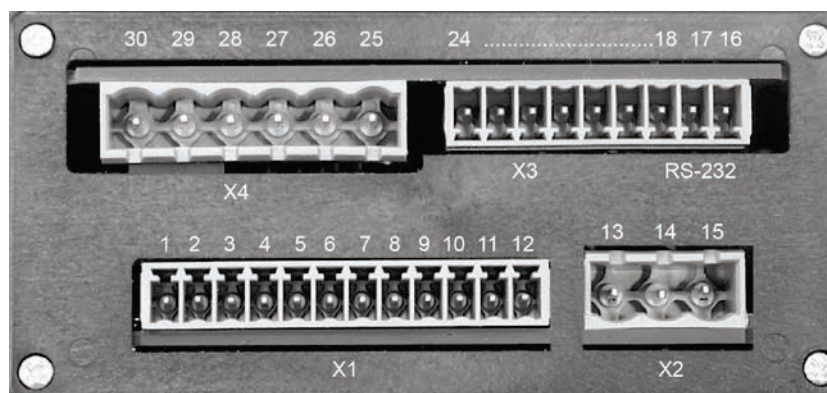
**Wiring basic unit**

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Reference voltage 5 V for voltage divider	11	
GND	12	
PD-ADC-24VDC Excitation +24 V Excitation 0 V (GND)		13 14
PD-ADC-230VAC Excitation Protective ground		13, 15 14

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

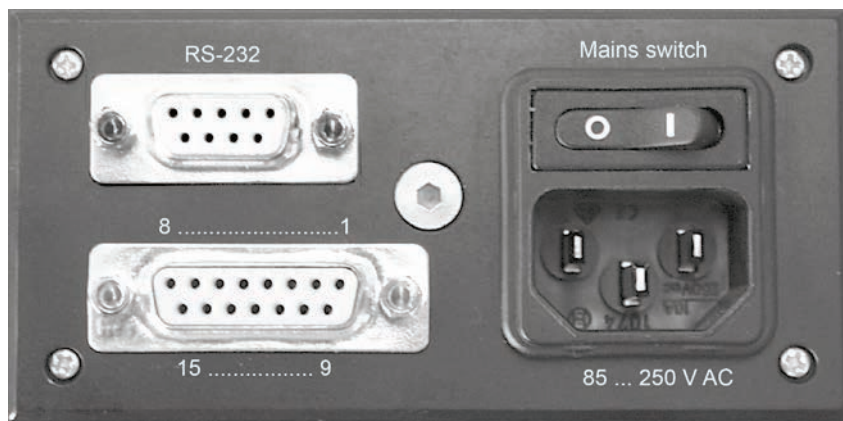
**Rear view with comparator output (option „REL2“)**



**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 <sub>8</sub> (+24V)	19			

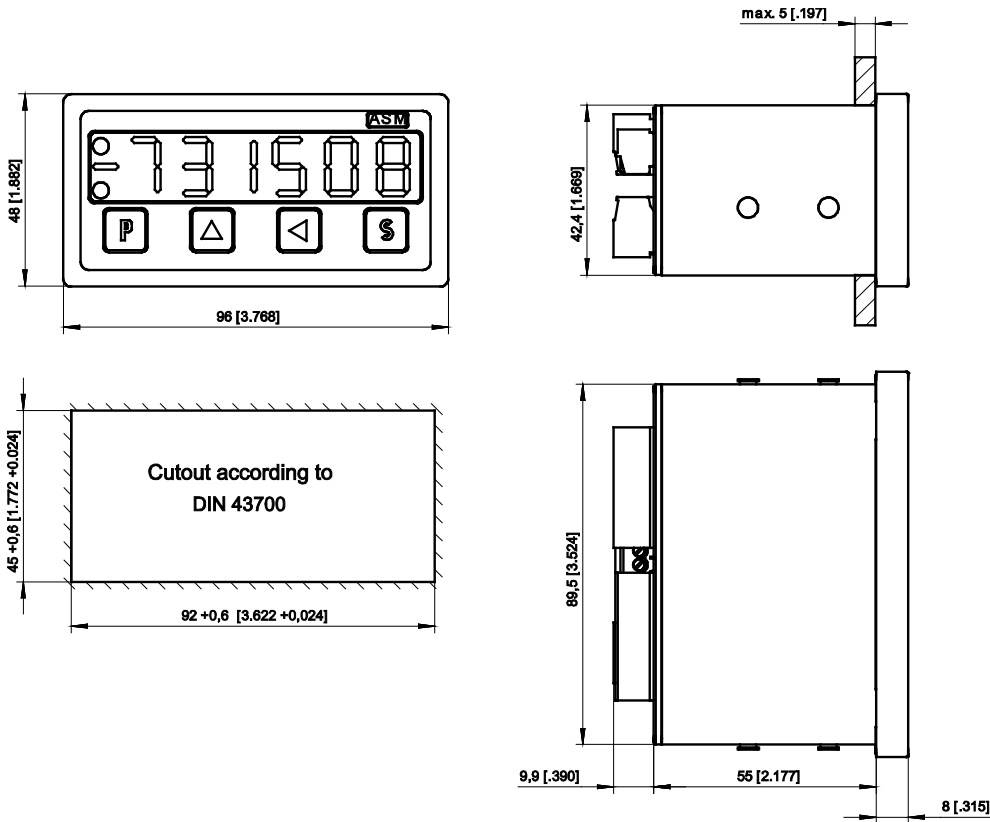
**Desktop version (option „DT”)**



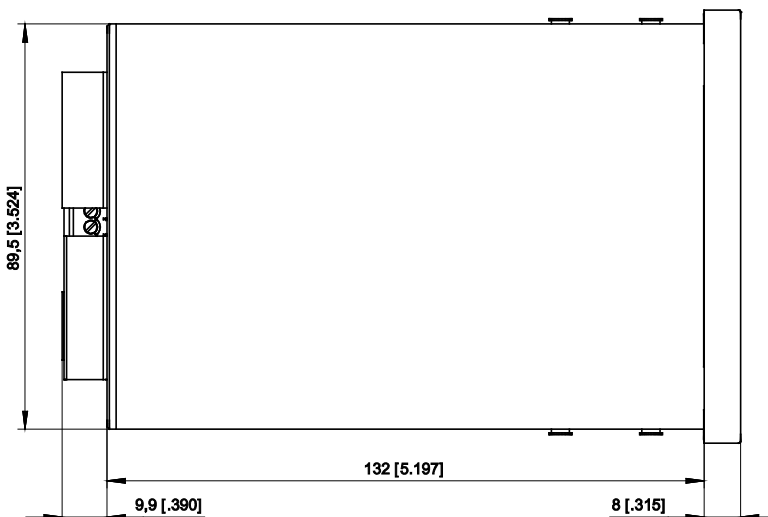
Wiring of connector X1 see table "Wiring basic unit".

## Dimensions

### PD-ADC-24VDC



### PD-ADC-230VAC



Dimensions in mm [inch]

Dimensions informative only. For guaranteed dimensions consult factory.