



Transmitters with two universal inputs and communication via EXOline or Modbus.

TPDAxxxxCx

Differential pressure transmitters with communication for HVAC applications

- Uses a sensor technology that offers very high accuracy and excellent long-term stability
- Operating temperature -25...+50°C
- Easy installation
- Expands the controller of up to four I/Os
- Can be mounted vertically or horizontally

TPDA.... range consists of single or dual port pressure transmitters with two universal inputs and an RS485 port for data exchange. The RS485 port can be easily configured for either EXOline or MODBUS-RTU protocols.

The device is especially well suited as a distributed I/O point for air handling unit controllers. It is designed for simple Ready-Steady-Go installation together with Regin's Corrigo or EXOcompact controllers.

Seven different models are available (see table on page 3).

Expands the controller of up to four I/Os

The transmitter operates as a Modbus or EXOline slave, relieving the controller of up to two analogue pressure inputs and two universal inputs. This means that less wiring is required, reducing both material costs as well as the amount of work needed.

You can choose whether flow or volume data will be displayed. A single unit will usually cover half the measuring requirements of one typical air handling unit (fan, filter and two temperatures).

Smart sensor technology

There are two MEMS dual-chip medical grade sensor modules for general use with neutral gases. This technology offers very high accuracy and excellent long-term stability.

Compact design and flexible universal inputs

TPDA.... has a small and compact design and contains two sensors and two universal inputs in one and the same casing. The universal inputs can be individually configured as digital or analogue inputs (PT1000/Ni1000 sensor or 0...10 V).

DIP-switch

The transmitter features DIP-switches for setting up suitable communication parameters. These settings can later be changed by commands sent via Modbus or EXOline.

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Easy installation and wiring

The unit can be mounted either vertically or horizontally. If it is installed in a humid environment, vertical mounting is recommended to allow moisture to escape.

Two separate cable inlets, a large angled terminal and generous space make wiring easy.

Values can be read in E tool©

When connecting TPDA...C to a Corrigo controller, all values can be read in E tool©, Regin's PC-based software that enables comprehensive configuration and supervision of an installation via a graphical interface.

Technical data

SUPPLY VOLTAGE	24 V CA/CC ±15%	
PROTECTION CLASS	IP54	
CALCULATED POWER CONSUMPTION	2 VA (rms) / min. trafo size 7,5 VA	
DATA TRANSMISSION CHANNEL	RS485 not isolated (max 100 m)	
OVERALL ACCURACY, PRESSURE	< ±1% full scale	
ANNUAL DRIFT	Typically ± 4 Pa	
DAMPING (SETTABLE)	1...12 s	
K-FACTOR (SETTABLE)	5...700	
OPERATING TEMPERATURE RANGE	-25...+50 °C *	
OPERATING HUMIDITY	Max 95% RH (non-condensing)	
OVERVOLTAGE ON ANY TERMINAL	Max ±18 V (referenced to Gnd)	
CE	EMC emissions & immunity standards: This product conforms to the requirements of the EMC Directive 2014/30/EU through product standards 60730-1. RoHS: This product conforms to the Directive 2011/65/EU of the European Parliament and of the Council.	
■ UNIVERSAL INPUTS UI1, UI2		
CONFIGURED AS	ACCURACY AT AMBIENT TEMPERATURE	RANGE
PT1000 (FACTORY SETTING)	±1 K at -25...0 °C ±0,5 K at 0...50 °C	-40...+60°C or -40...140°F
NI1000 - 6180 PPM/K	±1 K at -25...0 °C ±0,5 K at 0...50 °C	-40...+60°C or -40...140°F
0...10 V	±1 % at 20 °C	-
DIGITAL INPUT	Potential-free contacts on/off (closed=on)	

* Beginning October 2016, the extended temperature range will be gradually implemented on all models. The actual range can be found on the inside of the TPDA...C cover.

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Models with pressure range (full scale)

MODEL		NUMBER OF SENSORS	Pa (FACTORY SETTINGS)	mbar	mmH ₂ O	inH ₂ O
TPDA-12C	PS1	One (only PS1 is present, reading PS2 related parameters will yield a zero value reading)	0...1250	0...12.5	0...125	0...5
TPDA-25C	PS1		0...2500	0...25	0...250	0...10
TPDA-75C	PS1		0...7500	0...75	0...750	0...30
TPDA-12C2	PS1	Two	0...1250	0...12.5	0...125	0...5
	PS2		0...1250	0...12.5	0...125	0...5
TPDA-1225C2	PS1	Two	0...1250	0...12.5	0...125	0...5
	PS2		0...2500	0...25	0...250	0...10
TPDA-25C2	PS1	Two	0...2500	0...25	0...250	0...10
	PS2		0...2500	0...25	0...250	0...10
TPDA-1275C2	PS1	Two	0...1250	0...12.5	0...125	0...5
	PS2		0...7500	0...75	0...750	0...30

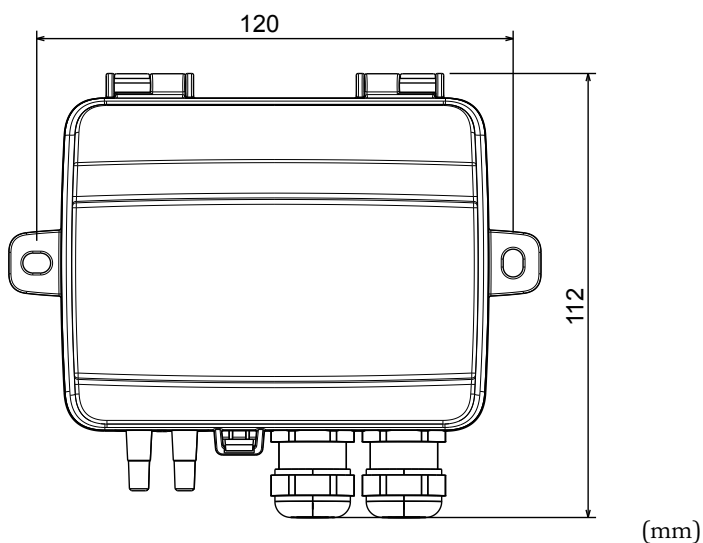
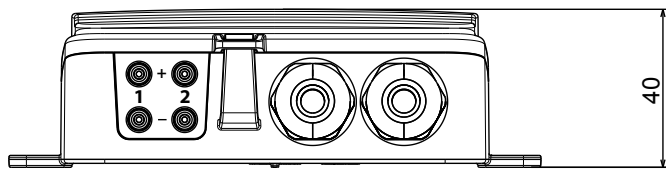
*PS=Pressure sensor

Flow ranges (full scale)

The following flow ranges apply when selecting a unit for flow measurement:

l/s	0...31000
m ³ /h (factory setting)	0...65000
CFM [Ft ³ /min]	0...65000

Dimensions (mm)



(mm)

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Wiring

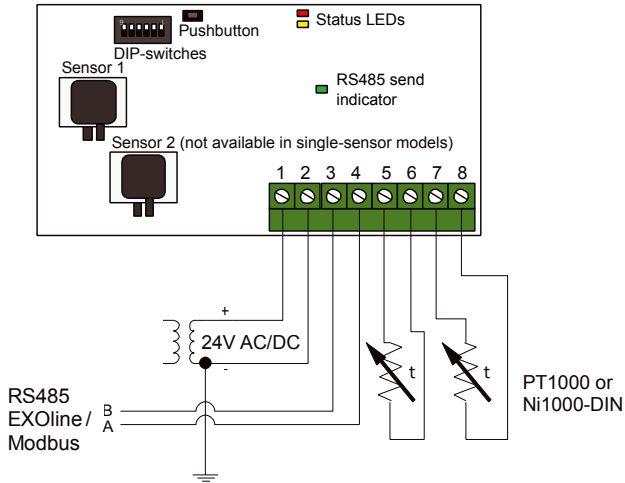


Fig. 1: Wiring with UIx as temperature input

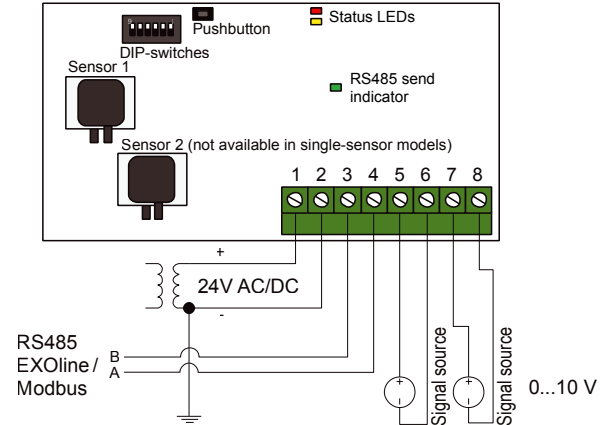


Fig. 2: Wiring with UIx as 0...10 V input

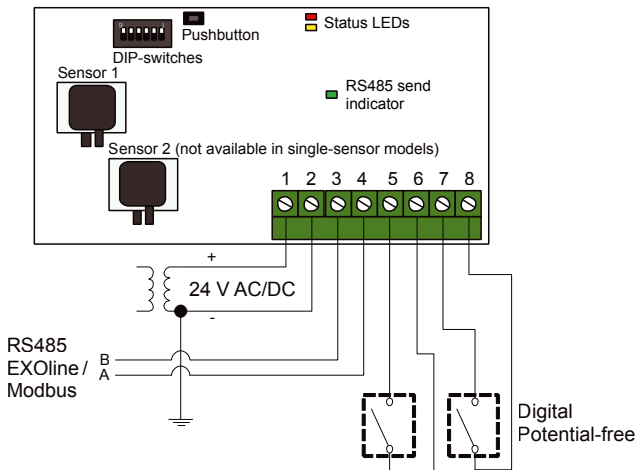


Fig. 3: Wiring with UIx as digital input

Product documentation

DOCUMENT	TYPE
MANUAL TPDAXXXXCx	Manual with complete information on TPDAXXXXCx, including variable list
INSTRUCTION TPDAXXXXCx	Instruction for installation of TPDAXXXXCx

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