

### По вопросам продаж и поддержки обращайтесь:

|                             |                                 |                                |
|-----------------------------|---------------------------------|--------------------------------|
| Архангельск (8182)63-90-72  | Краснодар (861)203-40-90        | Санкт-Петербург (812)309-46-40 |
| Астана (7172)727-132        | Красноярск (391)204-63-61       | Саратов (845)249-38-78         |
| Астрахань (8512)99-46-04    | Курск (4712)77-13-04            | Севастополь (8692)22-31-93     |
| Барнаул (3852)73-04-60      | Липецк (4742)52-20-81           | Симферополь (3652)67-13-56     |
| Белгород (4722)40-23-64     | Магнитогорск (3519)55-03-13     | Смоленск (4812)29-41-54        |
| Брянск (4832)59-03-52       | Москва (495)268-04-70           | Сочи (862)225-72-31            |
| Владивосток (423)249-28-31  | Мурманск (8152)59-64-93         | Ставрополь (8652)20-65-13      |
| Волгоград (844)278-03-48    | Набережные Челны (8552)20-53-41 | Сургут (3462)77-98-35          |
| Вологда (8172)26-41-59      | Нижний Новгород (831)429-08-12  | Тверь (4822)63-31-35           |
| Воронеж (473)204-51-73      | Новокузнецк (3843)20-46-81      | Томск (3822)98-41-53           |
| Екатеринбург (343)384-55-89 | Новосибирск (383)227-86-73      | Тула (4872)74-02-29            |
| Иваново (4932)77-34-06      | Омск (3812)21-46-40             | Тюмень (3452)66-21-18          |
| Ижевск (3412)26-03-58       | Орел (4862)44-53-42             | Ульяновск (8422)24-23-59       |
| Казань (843)206-01-48       | Оренбург (3532)37-68-04         | Уфа (347)229-48-12             |
| Калининград (4012)72-03-81  | Пенза (8412)22-31-16            | Хабаровск (4212)92-98-04       |
| Калуга (4842)92-23-67       | Пермь (342)205-81-47            | Челябинск (351)202-03-61       |
| Кемерово (3842)65-04-62     | Ростов-на-Дону (863)308-18-15   | Череповец (8202)49-02-64       |
| Киров (8332)68-02-04        | Рязань (4912)46-61-64           | Ярославль (4852)69-52-93       |
|                             | Самара (846)206-03-16           |                                |

Единый адрес: [psx@nt-rt.ru](mailto:psx@nt-rt.ru) Веб-сайт: [www.pixsys.nt-rt.ru](http://www.pixsys.nt-rt.ru)

## Контроллеры ATR401 PIXSYS. Техническое описание

PID Controller 48x96 mm **ATR401**

Control and alarm functions, double analogue input, multi-voltage power supply, analogue output, RS485 serial.

Controller 48x96mm(1/8 DIN), Single/Double Control loop, characterised by high configurability of the inputs and outputs.

The two analogue inputs can be configured for a vast range of sensors with the option of controlling two distinct processes or managing mathematical operations (sum, difference, average) between the two processes. Power supply range from 24 to 230V AC/DC. Outputs can be selected as control, alarm, analogue retransmission. Useful power supply range from 24 to 230V AC/DC with galvanic isolation from the network, galvanic isolation between inputs and outputs and isolated serial RS485.

The PID hot-cold control algorithm can also be used on systems with cascading control (remote setpoint) through image input.

The functions of the ATR401 software include open-close logic for valve control, Soft-Start function with control of the climb gradient (degrees/hour), TA input with maximum current threshold alarm, external activation from digital input of programmable functions.

User friendly, multimedia support and traceability

For the entire range of Pixsys products we provide technical support for installation, programming and operation via our online forum and via Skype.



The interface of the controller ATR401 ensures that the product is easy to use and that the user is also supported by auxiliaries for programming such as MEMORY-CARD or the LABSOFTVIEW programming software

Programming tutorial videos are available on our [youtube channel](#).

As for the entire range of PIXSYS products, thanks to the QR code the traceability of the product is guaranteed for its entire life cycle; the information and documentation online can be also be accessed by reading the QR CODE that directs your mobile device to the product's technical specifications and verifies its warranty conditions.

#### Ordering codes

ATR401-22ABC

2 Analogue inputs + 2 Relays + 1 Digital PNP, Supp. 24...230 V AC/DC

ATR401-23ABC

2 Analogue inputs + 3 Relays + 1 Digital PNP, Supp. 24...230 V AC/DC

ATR401-24ABC

2 Analogue inputs + 4 Relays + 1 Digital PNP, Supp. 24...230 V AC/DC

ATR401-22ABC-T

2 Analogue inputs + 2 Relays + 1 Digital PNP Output V/mA + RS485, Supp. 24...230 V AC/DC1

ATR401-22ABC-D

2 Analogue inputs + 2 Relays + 1 Digital PNP + 1 Output V/mA + 1 Digital input , Supp. 24...230 V AC/DC

#### Main features

##### Box

48x96 (front panel) x 123 mm

##### Power supply

24...230V AC/DC  $\pm 15\%$  50/60 Hz (with Jumper 24 - 110...230Vac), galvanical isolation 2500V

##### Consumption

5,5 VA

##### Display

4 digits 0,4 " green + 4 digits 0,3 " red

##### Operating conditions

Temperature 0-45 °C, humidity 35..95 RU% (non condensing)

## Material

Box: Noryl UL94V1 self-extinguishing, front panel: Silicon rubber V0

## Weight

Approx. 350 g

## Sealing

Front panel: IP54 (IP65 with gasket), Box and Terminal blocks: IP20

## Quick set-up options

Memory Card with /without battery, software LABSOFTVIEW, EASY-UP codes

## Inputs

### 2 Analog

Res. 16 bit, selectable for TC type K, S, R, J, (automatic compensation of the cold junction 0..50 °C,  $\pm 0,2\%$  F.S.  $\pm 1$  Digit F.S.), thermoresistance PT100, PT500, PT1000, Ni100, PTC1K. NTC10K, ( $\beta$  3435K), process signals 0..10V(54000 points), 0/4..20mA (40000points), 0..40mV (16000 points), potentiometer 6K $\Omega$ , 150 K $\Omega$  (50000 points)

### Sampling time

4,1 ms (Frequency from 4,12 Hz to 242 Hz)

### 1 Digital

PNP, 1...4 setpoints selection, Hold, Run, Tuning launch, automatic / manual selection, pre programmed cycle start, heating / cooling regulation, local / remote setpoint switch

### 1 current transformer

T.A. 50 mA (acquisition time 100 ms - overlapped to AI2 )

## Outputs

### 2...4 Relays

Relay 8 A - 250 Vac resistive charge

### 1 Digital

PNP 24 VDC - 25 mA max

### 1 Analog

Selection 4...20 mA or 0...10 VDC for command or retransmission PV/SPV

## Serial communication

RS485 Modbus RTU - Slave (code-T)

## Software features

## Control algorithms

ON - OFF with hysteresis, P., P.I., P.I.D., P.D. time proportioned

Tuning

Manual or automatic

Data protection

Lock of control / alarm setpoint, Access to parameters by password

Alarm modes

Absolute / Threshold, band, High / Low deviation. Alarm with optional manual reset. Loop Break

Alarm function

Remote setpoint

Comman setpoint corresponding to AI2 (4...20 mA / 0...10 V)

Double P.I.D.

Heating / Cooling P.I.D.

Double input mode

AI1 and AI2 inputs correlation as mean, difference or addition of process values

Soft-Start

Rising gradient expressed as Degrees / Hour

Open / Close logic

Open / Close logic for motorized valves

Setpoint

up to 4 setpoints

**По вопросам продаж и поддержки обращайтесь:**

|                             |                                 |                                |
|-----------------------------|---------------------------------|--------------------------------|
| Архангельск (8182)63-90-72  | Краснодар (861)203-40-90        | Санкт-Петербург (812)309-46-40 |
| Астана (7172)727-132        | Красноярск (391)204-63-61       | Саратов (845)249-38-78         |
| Астрахань (8512)99-46-04    | Курск (4712)77-13-04            | Севастополь (8692)22-31-93     |
| Барнаул (3852)73-04-60      | Липецк (4742)52-20-81           | Симферополь (3652)67-13-56     |
| Белгород (4722)40-23-64     | Магнитогорск (3519)55-03-13     | Смоленск (4812)29-41-54        |
| Брянск (4832)59-03-52       | Москва (495)268-04-70           | Сочи (862)225-72-31            |
| Владивосток (423)249-28-31  | Мурманск (8152)59-64-93         | Ставрополь (8652)20-65-13      |
| Волгоград (844)278-03-48    | Набережные Челны (8552)20-53-41 | Сургут (3462)77-98-35          |
| Вологда (8172)26-41-59      | Нижний Новгород (831)429-08-12  | Тверь (4822)63-31-35           |
| Воронеж (473)204-51-73      | Новокузнецк (3843)20-46-81      | Томск (3822)98-41-53           |
| Екатеринбург (343)384-55-89 | Новосибирск (383)227-86-73      | Тула (4872)74-02-29            |
| Иваново (4932)77-34-06      | Омск (3812)21-46-40             | Тюмень (3452)66-21-18          |
| Ижевск (3412)26-03-58       | Орел (4862)44-53-42             | Ульяновск (8422)24-23-59       |
| Казань (843)206-01-48       | Оренбург (3532)37-68-04         | Уфа (347)229-48-12             |
| Калининград (4012)72-03-81  | Пенза (8412)22-31-16            | Хабаровск (4212)92-98-04       |
| Калуга (4842)92-23-67       | Пермь (342)205-81-47            | Челябинск (351)202-03-61       |
| Кемерово (3842)65-04-62     | Ростов-на-Дону (863)308-18-15   | Череповец (8202)49-02-64       |
| Киров (8332)68-02-04        | Рязань (4912)46-61-64           | Ярославль (4852)69-52-93       |
|                             | Самара (846)206-03-16           |                                |

**Единый адрес:** [psx@nt-rt.ru](mailto:psx@nt-rt.ru) **Веб-сайт:** [www.pixsys.nt-rt.ru](http://www.pixsys.nt-rt.ru)