#### По вопросам продаж и поддержки обращайтесь:

Архангельск (8182)63-90-72 Астана (7172)727-132 Астрахань (8512)99-46-04 Барнаул (3852)73-04-60 Белгород (4722)40-23-64 Брянск (4832)59-03-52 Владивосток (423)249-28-31 Волгоград (844)278-03-48 Вологда (8172)26-41-59 Воронеж (473)204-51-73 Екатеринбург (343)384-55-89 Иваново (4932)77-34-06 Ижевск (3412)26-03-58 Казань (843)206-01-48 Калининград (4012)72-03-81 Калуга (4842)92-23-67 Кемерово (3842)65-04-62 Киров (8332)68-02-04

Краснодар (861)203-40-90 Красноярск (391)204-63-61 Курск (4712)77-13-04 Липецк (4742)52-20-81 Магнитогорск (3519)55-03-13 Москва (495)268-04-70 Мурманск (8152)59-64-93 Набережные Челны (8552)20-53-41 Сургут (3462)77-98-35 Нижний Новгород (831)429-08-12 Новокузнецк (3843)20-46-81 Новосибирск (383)227-86-73 Омск (3812)21-46-40 Орел (4862)44-53-42 Оренбург (3532)37-68-04 Пенза (8412)22-31-16 Пермь (342)205-81-47 Ростов-на-Дону (863)308-18-15 Рязань (4912)46-61-64 Самара (846)206-03-16

Санкт-Петербург (812)309-46-40 Саратов (845)249-38-78 Севастополь (8692)22-31-93 Симферополь (3652)67-13-56 Смоленск (4812)29-41-54 Сочи (862)225-72-31 Ставрополь (8652)20-65-13 Тверь (4822)63-31-35 Томск (3822)98-41-53 Тула (4872)74-02-29 Тюмень (3452)66-21-18 Ульяновск (8422)24-23-59 Уфа (347)229-48-12 Хабаровск (4212)92-98-04 Челябинск (351)202-03-61 Череповец (8202)49-02-64 Ярославль (4852)69-52-93

Единый адрес: psx@nt-rt.ru Веб-сайт: www.pixsys.nt-rt.ru

## Каталог продукции PIXSYS

#### О компании

Established in the early 1990's by the two founding partners, Giulio Buffa and Romano Giacomini, still owners and actively involved in the management of the company, Pixsys is a registered trademark and a manufacturing company, designing and manufacturing instrumentation for process control and industrial automation. The range of products has been constantly expanding over time and currently includes indicators, PID controllers, signal converters, PLCs, HMIs and Panel PC.

The company has chosen to keep the production cycle internal: from hardware and software design to electronic assembly, with production lines, calibration systems and highly automatised test facilities.

The product concept is based on highly **flexiblehardware/software** structures, which include some of the most versatile models available in their market segment and are supported by programming tools that simplify post-sale support and the start-up phase. Investing significantly in innovation and quality, the company achieved **ISO 9001** certification in 2013.

The milestone of the quality policy is the **QR-code** marking system, which ensures the complete traceability of the product throughout its entire life cycle.

Pixsys is active on international markets principally through the distribution channel, which in recent years has been backed up by a network of authorised system integrators who also provide support with the set-up and start-up of the systems.

Relations with customers and suppliers have always been established with a focus on long term partnerships and shared goals.

#### Продукция

## Контроллеры ATR141 PIXSYS.

This **32x74 controller** with a 4-figure display is **highly configurable**, which means it requires a lower number of product codes. The input can be programmed for temperature sensors, registance thermometers and thermoscupies , but also f

for temperature sensors, resistance thermometers and thermocouples, but also for pressure transmitters, humidity and flow sensors.

The algorithm for hot-cold PID control is optimised both for **temperature control** and for **process control** with quick transitory, pressure control and flow control.

The single 4-figure display is optimised for process displays with normalised signals, displays of speed/RPM on inverter, displays of temperature over 1000°C.

The controller's outputs can be selected as command/multiple alarm modes/event. The serial communication option is in RS485 with Modbus/Slave protocol.

User friendly, multimedia support and traceability

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

The interface of the PID **controller ATR141**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 voutube 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

ATR141-AD

1 Analogue Input + 2 Relays 8 A + 1 SSR 12Vdc / Supp. 12...24Vac/Vdc

ATR141-B

1 Analogue Input + 2 Relays 8 A + 1 SSR 12VDC / Supp. 230VAC

Main features

Box

32x74 (front panel) x 53 mm

Power supply



12...24 V AC/ DC or 24Vac/115V AC/ 230VAC ±15% 50/60 Hz- (galvanical isolation 2500V, not for AD-ADT)
Consumption
2,6 VA(code AD,ADT) 4,4 VA(code B), 5,7 VA (code C), 2,4 VA (code AV, ADT)

Display

4 digits, 0,4" red + 3 signaling leds

Operating conditions

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

Material

Box: Polycarbonate; front panel: ABS UL94V0 self-extinguishing

Weight

Approx. 100 g

Sealing

Front panel IP54, Box IP30, Terminal bloks IP20

Quick set-up options

Memory Card with/without battery, software LABSOFTVIEW

Inputs

1 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, (ß 3435K), process signals 0..10V(40000 points), 0/4..20mA (30000points), potentiometer 6K $\Omega$ , 150 K $\Omega$  (40000 points)

Sampling frequency

66ms (frequency 15 Hz)

Outputs

2 Relays

1 Relay 10A/8A - 250 VAC resistive charge + 1 Relay 5A - 250 VAC resistive charge

1 Digital

8 VDC - 20 mA (codes A/B/C) - 12..35 VDC - 30 mA (code AD)

1 Auxiliary

8 VDC - 20 mA (codes A/B/C) - 12..35 VDC - 30 mA (code AD) for sensor supply

Serial communication

RS485 Modbus RTU - Slave (Code ADT) Software features **Control algorithms** ON - OFF with hysteresis, P., P.I., P.I.D., P.D. time proportioned, Dead band Tuning manual or automatic **Operating modes** Visualizer, Single setpoint, Double setpoint (selection by parameter) 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. Double P.I.D. Heating / Cooling P.I.D. Open / Close logic Open / Close logic for motorized valves Setpoint 2 setpoints

# Контроллеры ATR171 PIXSYS.

Configurable PID controller 72 x 72 mm ATR171

Control and alarm functions, timer, digital input, multi-voltage power supply, analogue retransmission options and double programmable input

PID controller 72x72mm, with dual 4-digits display for high visibility in the industrial environment, distinguished by high configurability.

Two inputs can be programmed for a wide range of sensors. The outputs can be set as control, alarm, or analogue retransmission. The serial communication option is RS485 with Modbus RTU/Slave protocol. Power supply range from 24 to 230V AC/DC with galvanic isolation from network and galvanic isolation between inputs and analogue output.

The heating-cooling PID control algorithm can also be used for cascade control through remote setpoint by analogue input.

The digital input allows external activation of various functions, including the Timer for delayed start or timed control.



User friendly, multimedia support and traceability

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

The interface of the PID controller ATR171 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 voutube 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

ATR171-11ABC

1 Analogue Input + 1 Relay + 1 digital PNP - Supp. 24...230 V AC/DC

ATR171-12ABC

1 Analogue Input + 2 Relays + 1 digital PNP - Supp. 24...230 V AC/DC

ATR171-14ABC

1 Analogue Input + 3 Relays + 1 Relay - Supp. 24...230 V AC/DC

ATR171-23ABC-T

```
2 Analogue Inputs + 3 Relays +1 digital PNP / 0...10Volt / 4...20mA + RS485 - Supp. 24...230 V
AC/DC
```

Main features

Вох

72x72 (front panel) x 99 mm

Power supply

24...230V AC/DC ±15% 50/60 Hz (galvanical isoaltion 2500 V)

Consumption

6 VA

Display

4 digits 0,5" green + 4 digits 0,3" red + 6 signaling leds

**Operating conditions** 

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

Material

Box: Noryl UL94V1 self-extinguishing; Front panel: Silicon rubber V0

Weight

Approx. 250 g

Sealing

Front panel IP54 (IP 65 with gasket), Box IP30, Terminal bloks IP20

Quick set-up options

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

Inputs

1 Analogue

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, (ß 3435K), process signals 0..10V(54000 points), 0/4..20mA (40000points), 0..40mV (16000 points), potentiometer 6K $\Omega$ , 150 K $\Omega$  (50000 points)

1 Analogue

Selection TC, K, J, S, R, PT100, PT500, PT1000, Ni100, PTC1K, NTC10K (B 3435K) - (code -23ABC-T)

Sampling time

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

1 Digital input

PNP, 1/2 setpoint selection, Hold, Run Auto/man regulation, tuning start, pre-programmed cycle start (codes -11/12/14ABC)

Outputs

1...3 Relays

1...3 Relays 8A - 250 Vac resistive charge + 1 Relay 5A - 250 Vac resistive charge (code -14ABC)

1 Digital/Analogue

Selection digital PNP 12 VDC - 30 mA / 0...10Volt / 4...20mA as command or retransmission setpoint-process (code -23ABC-T)

Serial communication

RS485 Modbus RTU - Slave (code -23ABC-T)

Software features

Control algorithms

ON - OFF with hysteresis, P., P.I., P.I.D., P.D. time proportioned. Automatic / Manual regulation

Tuning

Manual / Automatic Data protection Lock of command / alarm setpoint - Access to parameters by password Alarm modes Absolute / Threshold, band, High / Low deviation. Alarm with optional manual reset and activation delay. Dead band function Soft-Start Rising gradient expressed as Degrees / Hour Double P.I.D. Heating / Cooling P.I.D. **Programmer function** 3 steps pre-programmed cycle with Start / Stop Timer function Controller function + decremental Timer Remote setpoint Command setpoint corresponding to AI1 4...20 mA / 0...10 V (code -23ABC-T) Double input mode Al1 and Al2 input correlation as mean, difference or addition of process (only for temperature sensors TC - RTD on code -23ABC-T) Setpoint

Up to 4 setpoints

## Контроллеры ATR227 PIXSYS.

PID Temperature Controller 48x48 mm ATR227

Control and alarm functions, Burst-firing and Phase Angle control, multi-voltage power supply



Temperature controller 48x48mm (1/16 DIN), Single process setpoint value, double alarm threshold (example: maximum temperature threshold and minimum temperature threshold).

Input is programmable for different types of temperature sensor RTD/Thermocouple and process, Relay and SSR outputs are available. It features also the extended range power supply 24 to 230V AC/DC with galvanic isolation.

The software functions include SSR Burst-firing and Phase Angle control for inductive loads, resistive loads and infrared lamps (monophase systems).

The digital input allows external activation of various functions, including selection of automatic/manual mode.

User friendly, multimedia support and traceability

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

The interface of the ATR227 thermoregulator 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 voutube 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 ATR227-11ABC 2 relays + 1 Digital PNP + D.I. Main features Box 48x48 (front panel) x 90 mm Power supply 24..230V AC/DC ±15% 50/60 Hz (galvanical isolation 2500V) Power consumption 5,5VA Display 4 digits 0,4" green + 4 digits 0,3" red Operating conditions Temperature 0-45 °C, humidity 35..95 RH% Material Box: Polycarbonate self-extinguishing. Front panel: ABS UL94V0 self-extinguishing Weight Approx. 130 g Sealing

IP65 (Front Panel), IP20 (Box and terminal bloks)

Quick set-up options

Memory Card microUSB, software LabSoftView, EASY-UP codes

Inputs

1 Configurable

Res. 16bit, selectable for K, J, S, R, T, E, N, B (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 (B 3435K), process signals 0/4..20mA (25000 points), 0..10V (22000 points), 0..60mV (16000 points), Potentiometer F.S. 6/150Kohm (50000 ppoints), T.A. (25000 punti)

Sampling time/ Resolution

100 ms (frequency 10 Hz)

1 digital input

1 PNP, PNP, 1/2 setpoint selection , Run, Auto/man regulation, tuning start, exchange Heat / Cool control , reset outputs

Outputs

2 Relays

Relay 2A - 250 V AC resistive charge

1 Digital

PNP 12VDC - 30 mA max synchronized with main power supply (code 12ABC)

Software features

Control algorithms

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

Output control

Phase angle, burst firing and advanced burst firing control

Tuning

Manual o 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

Auto/ Man function

Command output percentage

Soft-Start

Rising gradient expressed as Degrees / Hour

## Контроллеры ATR236 PIXSYS.

PID Temperature Controller

48x48 mm ATR236

Control and alarm functions, Soft-start, multi-voltage power supply



Thermoregulator PID 48x48mm (1/16 DIN) with double 4-figure display. Single control loop.

The analogue input can be configured for different temperature sensors; relay and SSR output can be used as control or alarm. Useful extended range power supply from 24 to 230V AC/DC with galvanic isolation from the network.

The Soft-Start function allows to program a rising gradient as degrees/hour.

User friendly, multimedia support and traceability

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

The interface of the ART236 thermoregulatorensures 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 <u>voutube channel</u>. 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

ATR236-ABC

1 Analogue input + 1 Relay + 1 digital PNP / Alim. 24..230V AC/DC

Main features Box 48x48 (front panel) x 107 mm Power supply 24...230V AC/DC ±15% 50/60 Hz (galvanic insulation)

#### Consumption

5,5 VA Display 4 digits 0,4" green + 4 digits 0,3" red **Operating conditions** Temperature 0-45 °C, humidity 35..95 uR% (non condensing) Material Box: Noryl UL94V1 self-extinguishing, front panel: PC ABS UL94V0 self-extinguishing Weight Approx. 165 g Sealing Front panel: IP54 (IP65 with gasket), Box and terminal bloks: IP20 Quick set-up options Memory Card with / without battery, software LABSOFTVIEW, EASY-UP codes Inputs 1 Analog Res. 16 bit, selectable for TC type K, S, R, J, (automatic compensation of the cold junction 0..50 °C, ± 0,2% F.S. ± 1 Digit F.S.), thermoresistance PT100, PT500, PT1000, Ni100, PTC1K. NTC10K, (ß 3435K) Sampling time 4,1 ms (Frequency from 4,12 Hz to 242 Hz) Outputs 1 Relay Relay 5 A - 250 VAC resistive charge 1 digital PNP 12 VDC - 30 mA max 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 Auto / Man function Command output percentage Soft-Start Rising gradient expressed as Degrees / Hour Setpoint 2 setpoints

# Контроллеры ATR401 PIXSYS.

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 <u>technical support</u> for installation, programming and operation via our <u>online forum</u>and via Skype.

The interface of the controller ATR401ensures 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 voutube 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 ±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 VO Weight Approx. 350 g

Sealing

Front panel: IP54 (IP65 with gasket), Box and Terminal bloks: 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, (ß 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 (acqusition time 100 ms - overlapped to Al2 )

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

Al1 and Al2 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

### Контроллеры DRR227 PIXSYS.

DIN rail PID thermoregulator DRR227

Control and alarm functions, SSR Burst-firing and Phase Angle control options, multi-voltage power supply



DIN rail-mounted thermoregulator 43880 Single process setpoint, dual alarm threshold.

The analogue input can be configured for different types of temperature sensors RTD/Thermocouples and processes, the relay outputs and SSRs can be used as control and alarm. An input is available for a TA current transformer with a maximum current threshold. Useful extended range power supply from 24 to 230V AC/DC with galvanic isolation from the network.

The software's functions include the SSR Burst-firing and Phase Angle control modes for inductive loads, resistive loads and infrared bulbs (monophase and triphase systems).

The digital input allows the external activation of various functions, including selection of automatic/manual mode.

User friendly, multimedia support and traceability

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

The interface of the DRR227 thermoregulator 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

DRR227-12ABC

1 Analogue input + 1 Ing. TA + 2 Relay 5 A + 1 SSR 12 Vdc (with Burst Firing option / Phase angle single phase) / Alim. 24...230Vac/Vdc

Main features

Box

4 modules, DIN43880, DIN EN50022 rail mounted

Power supply

24...230Vac/dc ±15% 50/60 Hz (galvanical isolation)

Consumption

5,0 VA, 4W

Display

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

Operating conditions

Temperature 0-45 °C, humidity 35..95 uR%

Material

Box: Polycarbonate self-extinguishing V2

Weight

Approx. 195 g

Sealing

IP65 (Front panel), IP20 (Box and Terminal bloks)

Quick set-up options

Memory Card micro USB, software LABSOFTVIEW, EASY-UP codes

**Terminal bloks** 

6 + 6 / 2 + 2 extractable

Inputs

Analogue

1 - selection TC, K, J, S, R, E, N, B, PT100,PT500, PT1000, Ni100, PTC1K, NTC10K (B 3435K), Input 0/4...20mA , 0...10Volt , 0...60mV, Potenziometro 6K/160K F.S.

Acquisition time / Resolution

100 ms (Frequency 10 Hz) - 14 bit (20000 punti per 0...10Volt - 20000 punti 4...20mA).

Tolerance

0.3% per °C (a 25°C) - 0.3% per V/mA

Digital

1 - PNP

TA Input

1 - for 50A/50mA amperometric transformer

Outputs

Relays

1/2 - Relay 2 A - 250 Vac resistive charge

Statics

1/3 - SSR 12 Vdc - 30 mA max

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

Auto/ Man function

Command output percentage

Soft-Start

Rising gradient expressed as Degrees / Hour

Command algorithms

Integrated control option for inductive and resistive loads and IR lamps with loop control for SSR. -Burst firing in basic or advanced versions - Phase angle single phase

Heater Break

from TA input with open loop / short-circuit alarm

## Контроллеры DRR245 PIXSYS.

DIN rail PID controller – Signal converter DRR245

Programmable input, isolated analogue output, multi-voltage power supply, current transformer input, digital input, serial communication.



The PID controller DRR245 distinguishes itself from the range of rail-mounted controllers due to its flexibility and configurability that are summed up in a single order code.

The input can be programmed for temperature sensors, resistance thermometers and thermocouples, pressure transmitters, humidity and flow sensors.

The controller's outputs can be selected as command/multiple alarm modes/analogue retransmission. Serial communication is in RS485 with Modbus RTU/Slave protocol. Useful extended range power supply from 24 to 230V AC/DC with galvanic isolation from the network.

In addition to its function as a PID hot-cold controller, the DRR245 controller also serves as a signal convertor thanks to its galvanically isolated analogue output, which can be used in process retransmission/setpoint modes.

User friendly, multimedia support and traceability

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

The interface of thePID controller DRR245ensures 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.

<u>PID tutorial videos on our youtube channel</u> help the user programming the device.

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

DRR245-21ABC-T

1 Analogue input + 2 Relays + 1 Digital PNP / V / mA + RS485 + TA, Supp. 24...230 V AC/DC Main features Box DIN43880, DIN EN50022 rail mounted Power supply 24...230VAC / DC ±15% 50/60 Hz (galvanic insulation 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: Polycarbonate V0; Front panel: Silicon V0 Weight Approx. 195 g Sealing Front panel: IP65, Box and Terminal blocks: IP20 Quick set-up options Memory Card with / without battery, software LABSOFTVIEW, EASY-UP codes Wiring With terminal extension Inputs 1 Analog Res. 16 bit, selectable for TC type K, S, R, J, (automatic compensation of the cold junction 0..50 °C, ± 0,2% F.S. ± 1 Digit F.S.), thermoresistance PT100, PT500, PT1000, Ni100, PTC1K. NTC10K, (ß 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 current transformer

T.A. 50 mA (sampling time 100 ms)

1 Digital

PNP, 1/4 setpoint selection, Hold, Run Auto/man regulation, tuning start, pre-programmed cycle start

Outputs

2 Relays

Relays 5 A - 250 VAC resistive charge

1 Digital

PNP 12 V DC - 30 mA max

1 Analog

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

1 Auxiliary

12 VDC - 30 mAfor external sensor supply

Serial communication

RS485 Modbus RTU - Slave

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 Command / alarm setpoint

Alarm mode

Absolute / Threshold, band, High / Low deviation. Loop Break Alarm function

Auto/Man function

Output percentage command also with automatic change in case of sensor failure

Double P.I.D.

Heating / Cooling P.I.D.

Programmer function

Start/Stop pre-programmed cycle with 2/3 steps

Soft-Start

Rising gradient expressed as Degrees / Hour

Setpoint

up to 3 Setpoints

### Контроллеры DRR450 PIXSYS.

PID temperature controller DRR450

PID thermoregulator integrated into SSR module for multizone systems

The DRR450 thermoregulator has been designed to control temperature and current on multizone systems via RS485 communication standard and Modbus RTU/Slave protocol.



It is extremely compact and features direct plug-in connection to the mono-phase SSR power module, reducing wiring costs and installation time.

The integrated current transformer allows monitoring of current on the load and management of the relative alarm.

In addition to SSR control output, a second output is available on the controller and it is programmable for alarms or heating/cooling PID functions.

For monitoring and controlling systems up to 150 DRR450 units, Pixsys has developed the software SupervisorDRR450 running on Pixsys Panel PC TD850/TD900.

Application fields include plastic extrusion, injection moulding, packaging, furnaces, dryers, textile machineries and generally multizone heat treatment systems.

User friendly, multimedia support and traceability

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

Programming of PID controller DRR450 is supported by LABSOFTVIEW software.

Our voutube channel features video tutorials for initial set-up of SupervisorDRR450.

As for the entire range of PIXSYS products, traceability of the product is guaranteed during its entire life cycle by QR code; information and documentation online can be accessed reading QR CODE by mobile device with immediate visualization of technical data and check of warranty status.

Ordering codes

DRR450-12AD

1 Analogue input + 1 Digital PNP 5V + 1 Digital PNP 24 VDC auxiliary + RS485 + T.A. / Alim 24 VDC

Main features

Box

Module 22,5mm series Celduc ESUC DIN-rail mounting EN50022

Power supply

24VDC ±10% (galvanically isolated from RS485 and input)

Consumption

1 VA

**Operating conditions** 

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

Material

Box: Polycarbonate V0

Weight

Approx. 75 g

Sealing

Box and Terminal blocks: IP20

Quick set-up options

Software LABSOFTVIEW

Wiring

With terminal extension on wiring system, Plug-in module of SSR

Inputs

1 Analogue

Res. 13 bit, Selection TC, K, J, T, E (automatic compensation of the cold junction 0..50 °C,  $\pm$  0,2% F.S.),

1 Current transformer

Integrated T.A. with 50A F.S. - resolution 0,1A

Outputs

1 Digital integrated

5VDC - 20mA max for direct command of SSR Celduc SU series

1 Digital auxiliary

24 VDC - 50 mA max on terminal blocks

Serial communication

RS485 Modbus RTU - Slave (9600...115200 Baud)

Software features

Control algorithms

ON - OFF with hysteresis, P., P.I., P.I.D., P.D. time proportioned. Auto/ man regulation

Tuning

Manual, automatic or syncronized to serial command

Alarm mode

Absolute / Threshold, band, High / Low deviation, parallel to command output. Loop/ Heater Break Alarm function

Soft-start

Gradient setting of the output command in percentage

Double P.I.D.

Double action Heating / Cooling P.I.D.

### Контроллеры DRR460 PIXSYS.

PID temperature controller DRR450

PID thermoregulator integrated into SSR module for multizone systems

The DRR450 thermoregulator has been designed to control temperature and current on multizone systems via RS485 communication standard and Modbus RTU/Slave protocol.



It is extremely compact and features direct plug-in connection to the mono-phase SSR power module, reducing wiring costs and installation time.

The integrated current transformer allows monitoring of current on the load and management of the relative alarm.

In addition to SSR control output, a second output is available on the controller and it is programmable for alarms or heating/cooling PID functions.

For monitoring and controlling systems up to 150 DRR450 units, Pixsys has developed the software SupervisorDRR450 running on Pixsys Panel PC TD850/TD900.

Application fields include plastic extrusion, injection moulding, packaging, furnaces, dryers, textile machineries and generally multizone heat treatment systems.

User friendly, multimedia support and traceability

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

Programming of PID controller DRR450 is supported by LABSOFTVIEW software.

Our <u>voutube</u> channel features video tutorials for initial set-up of SupervisorDRR450.

As for the entire range of PIXSYS products, traceability of the product is guaranteed during its entire life cycle by QR code; information and documentation online can be accessed reading QR CODE by mobile device with immediate visualization of technical data and check of warranty status.

Ordering codes

#### DRR450-12AD

1 Analogue input + 1 Digital PNP 5V + 1 Digital PNP 24 VDC auxiliary + RS485 + T.A. / Alim 24 VDC Main features Box Module 22,5mm series Celduc ESUC DIN-rail mounting EN50022 Power supply 24VDC ±10% (galvanically isolated from RS485 and input) Consumption 1 VA **Operating conditions** Temperature 0-45 °C, humidity 35..95 uR% (non condensing) Material Box: Polycarbonate V0 Weight Approx. 75 g Sealing Box and Terminal blocks: IP20 Quick set-up options Software LABSOFTVIEW Wiring With terminal extension on wiring system, Plug-in module of SSR Inputs 1 Analogue Res. 13 bit, Selection TC, K, J, T, E (automatic compensation of the cold junction 0..50 °C, ± 0,2% F.S.), 1 Current transformer Integrated T.A. with 50A F.S. - resolution 0,1A Outputs 1 Digital integrated 5VDC - 20mA max for direct command of SSR Celduc SU series 1 Digital auxiliary

24 VDC - 50 mA max on terminal blocks Serial communication RS485 Modbus RTU - Slave (9600...115200 Baud) Software features Control algorithms ON - OFF with hysteresis, P., P.I., P.I.D., P.D. time proportioned. Auto/ man regulation Tuning Manual, automatic or syncronized to serial command Alarm mode Absolute / Threshold, band, High / Low deviation, parallel to command output. Loop/ Heater Break Alarm function Soft-start Gradient setting of the output command in percentage Double P.I.D. Double action Heating / Cooling P.I.D.

# Индикаторы STR551 PIXSYS.

96x48 Indicator - panel meter STR551

Visualization, alarm and signal re-transmission functions, programmable input, multi-voltage power supply, digital inputs, serial communication .

### 120000 € @ ■

The indicator STR551 stands out in its market segment for the bright OLED display and the innovative multilingual interface as well for RFID/NFC connectivity. The analogue input can be configured by parameter for a wide range of temperature sensors and process signals in mA and Volts. The monochromatic OLED graphic display supports graphs showing process trend with programmable sampling times and bar graphs with alarm thresholds typically used for level, flow and dosage visualization.

The linearization of input can be customized up to 16 points as required on tanks with irregular profile. Mathematical functions linked to process value are also available, such as Totalizer and Sum. Connectivity is guaranteed by RS485 with Modbus RTU/Slave protocol.

For maximum flexibility of use, it is also possible to choose between horizontal or vertical installation of the same device.

Distinctive feature of the entire STR series is the innovative multilingual interface, with text menus allowing intuitive and quick navigation of parameters and display pages. It is possible to choose

among five languages and the comprehensive menu considerably reduces the need to consult technical manual for initial set-up.

An additional programming tool is the dedicated App MyPixsys relying on RFID/NFC connectivity and allowing straightforward programming without wirings by Android devices.

User friendly, multimedia support and traceability

For the complete range of Pixsys products we provide <u>technical support</u> for installation, programming and operation via our <u>online forum</u> and via Skype.

The interface of the indicator STR551 ensures that the device is user-friendly and the operator is also supported by programming tools such as MEMORY-CARD or LABSOFTVIEW programming software.

Tutorial videos are available on our YouTube channel.

As for the entire range of PIXSYS products, traceability of the product is guaranteed during its entire life cycle by QR code; information and documentation online can be accessed reading QR CODE by mobile device with immediate visualization of product technical data and check of warranty status.

Ordering codes

STR551-12ABC-T128R

1 analogue input + 2 relays 2A + 1 Out 0..10V + 1 Out 0/4..20mA + RS485 Modbus RTU /Slave

Main features

Box

96x48 (Front panel) x 48 mm (1/8Din)

Power supply

24...230VAC/DC ±10% 50/60 Hz (galvanic isolation 2500V)

Consumption

6 VA

Display

OLed (monochromatic yellow)

**Operating conditions** 

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

Material

Box: Polycarbonate V0

Weight

Approx. 165 g

Sealing

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

Quick set-up options

Software LABSOFTVIEW and/or Memorycard

Wiring

extractable terminal blocks, spring lock

Inputs

1 Analogue

Res.16 bit, Selectable for TC type K, S, R, J, T, E, N, B (automatic compensation of the cold junction 0..50 °C,  $\pm$  0,2% F.S.  $\pm$  1 Digit F.S.), thermoresistances PT100, PT500, PT1000, Ni100, PTC1K, NTC10K ( $\beta$  3435K), process signals 0-10 V(54000 points), 0/4-20mA(40000 points), 0-60 mV (16000 points), Potentiometer 6 K $\Omega$ , 150 K $\Omega$  (50000 points) Customizable linear input (max 16 steps)

2 Digital

PNP inputs programmable for Run / Hold / Tare-Zero / Alarms reset/ Peaks reset/ Totalizer reset / Activate-Reset Sum / Parameters-Setpoint Lock

Sampling time

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

Outputs

2 Relays

2A - 250VAC (resistive charge)

2 Analogue

1 output 0...10V (60000 points) - 1 output 0/4...20mA (60000 points)

1 Auxiliary

24 VDC - 30mA for external sensors supply (loop-powered)

Serial communication

RS485 Modbus RTU - Slave (1200...115200 Baud) galvanically isolated from Power supply/Inputs/Outputs

Software features

Alarms regulation

ON - OFF with hysteresis

Alarm mode

Absolute / Threshold, Band with instantaneous/delayed/retentive/by digital input activation, Sensor failure / Activation by serial line

Sum Function

Sum different process measurements over time By digital input or by keyboard

**Totalizer Function** 

Visualisation of instant process value and total value since last reset

Trend visualization

Trend visualisation with selectable time basis 1 to 3600s

Analogue retransmission

Process values / Setpoints

Digital transmission via RS485

Process values / Setpoint / Parameters

Latch-on function

Semi-automatic setting of limits/ calibration values for analogue input

Text menus

English/Italian/German/French/Spanish

Measure unit visualization

Selection of different measuring units

### Индикаторы STR561 PIXSYS.

Indicator with strain-gauge input 96x48 STR561

Visualization, alarm and signal re-transmission functions, multi-voltage power supply, communication serial port.



The indicator with strain-gauge input STR561 is designed as display for load cells and pressure sensors and includes isolated power supply for the strain-gauge. The conversion frequency programmable up to 1.2 KHz and the resolution of up to 24bit ensure high levels of accuracy. Various calibration modes can be selected for the analogue input (sample weight, percentage value on scale base, mV/V value).

Software key functions include multiple options for calibration management, Totalizer and Sum functions, graphic visualization of process trend with programmable time basis or bar- graphs with alarm/event thresholds.

An auto-configuration mode has also been implemented for selected Dynisco melt pressure sensors, simplifying the initial set-up for the user. Connectivity is guaranteed by RS485 with Modbus RTU/Slave protocol.

For maximum flexibility of use, it is also possible to choose between horizontal or vertical installation.

Distinctive feature of the entire STR series is the innovative multilingual interface, with text menus allowing intuitive and quick navigation of parameters and visualization pages.

It is possible to choose among five languages and the comprehensive menu considerably reduces the need to consult technical manual for initial set-up.

User friendly, multimedia support and traceability

For the complete range of Pixsys products we provide <u>technical support</u> for installation, programming and operation via our <u>online forum</u> and via Skype.

The interface of STR561 indicator ensures that the product is user-friendly and the user is also supported by programming tools such as MEMORY-CARD or by the APP MyPixsys (Android devices).

Tutorial videos are available on our YouTube channel.

As for the entire range of PIXSYS products, traceability of the product is guaranteed during its entire life cycle by QR code; information and documentation online can be accessed reading QR CODE by mobile device with immediate visualization of product technical data and check of warranty status.

Ordering codes

STR561-12ABC-T128

1 Strain gauge analogue input + 2 relays 2A + 1 Out 0/4..20mA + RS485 Modbus RTU / Slave + Oled Display (monochromatic yellow)

Main features

Box

96x48 (Front panel) x 48 mm / or 1/8Din

Power supply

24...230V AC/DC ±10% 50/60 Hz (galvanically isolated) 2500V

**Power Consumption** 

6 VA

Display

Oled (monochromatic yellow)

**Operating conditions** 

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

Material Box: Polycarbonate V0 Weight Approx. 165 g Sealing Front panel:IP54 (IP65 with gasket) - Box and Terminal blocks: IP20 Quick set-up options Memory Card microUSB, APP. MyPixsys (Andorid devices) Wiring extractable terminal blocks and spring locking Visualization range -999999 ...+999999

1 Analogue strain gauge

Strain gauge input ADC 23 bit (8000000 points). Max 2 350 $\Omega$  parallel load-cells or max 4 720 $\Omega$  load-cells. Linearity < 0.01 % F.S. -thermal drift < 0.001% F.S. / °C . Max input signal 39 mV Max load-cell sensibility 7 mV/V. Potentiometer: min. 200  $\Omega$  (10000 points). Custom linearization up to 16 steps.

2 Digital

PNP inputs programmable for Run / Hold / Tare-Zero / Alarms manual reset / Peaks reset/ Min. peak reset / Activate-Reset Sum / Parameters lock. Net/gross weight visualization.

Sampling time

Configurable speed conversion from 1 Hz (8000000 points) to 1200 Hz (30000 points)

1 Encoder

Overlapped to digital inputs. Rotative for setpoint modification.

Outputs

2 Relays

2A - 250VAC (resistive charge)

1 analogue

1 Configurable as 0..20mA or 4..20mA. Resolution (16bit 60000 points)

1 strain gauge power supply

5 VDC - 35mA max.

1 Auxiliary
12 VDC - 30mA for digital inputs
Serial communication
RS485 Modbus RTU - Slave (galvanically isolated from Power supply/Inputs/Outputs)
Software features
Alarms regulation
ON - OFF with hysteresis
Alarm mode
Absolute / Threshold, Band with instantaneous/delayed/retentive/by digital input activation, Sensor failure / Activation by serial line
Sum Function
By digital input or by keyboard it is possible to sum different process measurements over time
Totalizer Function
Visualisation of instant process value and total value since last reset
Trend visualization
Trend visualisation with selectable time basis 1 to 3600s
Analogue retransmission
Process values / Setpoints
Digital transmission via RS485
Process values / Setpoint / Parameters
Calibration function
Sampling value, full scale % value, value mV/V
Text menus
English/Italian/Deutsch/French/Spanish
Measure unit visualization
Selection of different measure units
Индикаторы STR571 PIXSYS.

Modbus Remote Display 96x48 STR571

Variables reading/writing, Modbus RTU/Master, digital inputs, alarms management, multi-voltage power supply.



While maintaining the same parametric configuration mode as the other Pixsys STR indicators, the STR571 model is a highly flexible interface and display for sensors, I/O modules, signal converters and generally for Modbus devices.

This indicator allows reading/writing of up to eight variables on Modbus slave devices, with numeric ot text representation of the variables. It is possible to set the description and the measuring units with text or alphanumerical characters for each variable and also to rescale data on display.

The number of variables shown per page can be set from 1 to 4, with auto-rescaling of the character sizes and of the consequent number of pages.

Digital inputs allow the connection of a rotative encoder that further simplifies navigation of the data displayed and the parameters, or connection to panel buttons with programmable functions. In addition to the galvanically isolated master serial port with Modbus RTU/ASCII protocol, a second slave serial port enables polling from another Master device.

Distinctive feature of the entire STR series is the innovative multilingual interface, with text menus allowing intuitive and quick navigation of parameters and visualization pages.

The text menus are available in five languages and considerably reduce the need to consult technical manuals for initial set-up.

User friendly, multimedia support and traceability

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

The interface of the STR571 indicatorensures that the product is user-friendly and the operator is also supported by programming tools such as MEMORY-CARD or by the APP MyPixsys (Android devices).

Tutorial videos are available on our YouTube channel.

As for the entire range of PIXSYS products, traceability of the product is guaranteed during its entire life cycle by QR code; information and documentation online can be accessed reading QR CODE by mobile device with immediate visualization of product technical data and check of warranty status.

Ordering code STR571-1ABC-T128

1 RS485 Modbus master + 1 RS485 Modbus slave + 2 Relè 2A

Main features

Вох

96x48 (front panel) x 48 mm / or (1/8Din)

Power supply

24...230V AC/DC ±10% 50/60 Hz (galvanical isolation) 2500V

Power consumption

6 VA

**Operating conditions** 

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

Material

Box: polycarbonate V0

Sealing

Front panel: IP54 (IP65 with gasket) - Box and terminal blocks: IP20

Weight

Approx. 165 g

Wiring

Extractable terminal blocks and spring locking

Quick set-up options

Memory Card microUSB, APP. MyPixsys (Andorid devices)

Display

OLed (monochromatic yellow)

Inputs

3 Digital

2 digital PNP/NPN inputs programmable to enable outputs, reset alarms, configuration lock, increase/decrease value, front panel encoder for input data. 1 PNP input programmable to select values

1 Potentiometer

1 potentiometer input (min  $1K\Omega$ , 4096 points) to set variable value

Outputs

2 relays

Contacts 2A - 250 VAC (resistive charge)

1 Auxiliary

24 VDC / 30mA for external sensors supply

Communication

2 Serial

1 RS485 Modbus RTU/Ascii master / multimaster galvanically isolated to communicate with slave devices, 1 RS485 Modbus RTU Slave.

1 USB

1 USB Virtual COM port for configuration and firmware upgrade

Software Features

8 Variables

Up to 8 variable data management, programmable visualization from 1 to 4 variables each page, editable text description field for each variable (max 16 characters), editable measure unit for each variable (max 5 characters), 1, 16, or 32 bit data format, mnemonics text visualization (value from 0 to 4), different type of processing visualized data (offset, gain, limits, rescale).

2 Alarms

**ON-OFF** with hysteresis

Alarm mode

Absolute / threshold, band with instantaneous / delayed / retentive / by digital input activation, activation by serial line

Multimaster

Connect up to 16 master devices on the same serial line

Interface

text menus (English/ Italian/ German/ French/ Spanish)

Option

Optional front panel encoder to facilitate input of data

# Таймеры ТСТ101 PIXSYS.

Timer – Counter – Tachometer 32x74 TCT101

Timer - Counter - Tachometer, programmable PNP/NPN inputs, multi-voltage power supply, serial communication port option.



The TCT101 series is available in a range of configurations: Timer, Counter, Tachometer/Frequency counter.

TCT101-1ABC with 5 operating modes: Timer-ON, Timer-OFF, Pause-Work, Oscillator, PWM (proportional time output), all with settings independent of the ON-OFF times. TCT101-2ABC, can be configured as single and double counter, incremental and decremental counter with the option of setting an external potentiometer TCT101-3ABC frequency reader from Encoder Push-Pull/Line-Driver TTL, mono- or bi-directional up to 100kHz.

TCT101-4ABC-T configurable as Timer /Counter/ Tachometer with communication serial port for the transmission of setpoints, Times/Counts/Frequency.

User friendly, multimedia support and traceability

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

The interface of the TIMER TCT101ensures 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 <u>voutube</u> 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 TCT101-1ABC Timer - settable in 5 modes TCT101-2ABC Counter - incremental or decremental TCT101-3ABC Tachometer - for Push-Pull / Line-Driver encoders (mono/bi-directional) TCT101-4ABC-T Timer / Counter / Tachometer - with RS485 Modbus RTU/slave serial communication Main features Box 32x74 (front panel) x 53 mm Power supply 24...230Vac/Vdc ±15% 50/60 Hz Consumption 3 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: PC ABS UL94V0 self-extinguishing Weight Approx. 100 g Sealing Front panel IP65 (with gasket), Box IP30, Terminal blocks IP20 Quick set-up options Memory Card with / without battery Inputs 3 Digital Selectable as NPN - PNP - TTL, both high/low/rising edge level Input I3 Input selection by potentiometer 5/10 KOhm for entering of setpoint value (resolution 1000 points) Outputs 1/2 Relays 2 Relays 5 A - 250 Vac resistive charge (codes -1/2/3) 1 Relay 5 A - 250 Vac resistive charge (codes -4ABC-T) Serial communication RS485 Modbus RTU - Slave (code -4ABC-T) Software features Timer input selection Start, Stop, Hold, Reset, Wait Ranges Programmable time bases (sec/100, sec/10, sec, min, hours) Counter input selection Up, Down, Lock, Hold Counting frequency
Incremental/Decremental up to 100Khz

**Counter functions** 

Count frequency visualization on red display for Flowmeter function

Tachometer input selection

For mono/bi-directional Push/Pull or Line/Driver encoders up to 100Khz

**Tachometer functions** 

Maximum / Minimum peak

Data protection

Parameters protected by password

### Таймеры TCT201 PIXSYS.

Timer – Counter – Tachometer 48x48 TCT201

Timer - Counter - Tachometer, programmable PNP/NPN inputs, multi-voltage power supply.



The TCT201 series is available in a range of configurations: Timer, Counter, Tachometer/Frequency counter.

TCT201-1ABC with 5 operating modes: Timer-ON, Timer-OFF, Pause-Work, Oscillator, PWM (proportional time output), all with settings independent of the ON-OFF times. TCT201-2ABC, can be configured as single/double counter, incremental and decremental counter with the option of setting an external potentiometer.

User friendly, multimedia support and traceability

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

The interface of the TIMER TCT201ensures 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 voutube 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

TCT201-1ABC

Timer - settable in 5 modes

TCT201-2ABC Counter - incremental, decremental or bi-directional (encoder) TCT201-3ABC Tachometer - for Push -Pull /Line-Driver encoders (mono/bi-directional) Main features Box 48x48 (front panel) x 107 mm Power supply 24...230Vac/Vdc ±15% 50/60 Hz Consumption 3 VA Display 4 digits 0,4" green + 4 digits 0,3" red + led **Operating conditions** Temperature 0-45 °C, humidity 35..95 RU% (non condensing) Material Box: Noryl UL94V1 self-extinguishing; Front panel: PC ABS UL94V0 self-extinguishing Weight Approx. 350 g Quick set-up options Memory Card with / without battery Inputs 3 Digital Selectables as NPN - PNP - TTL, both on high/low/rising edge level Input I3 Input selection by potentiometer 5/10 KOhm for setting of setpoint value (resolution 1000 points) Outputs 2 Relays 2 Relays 8 A - 250 Vac resistive charge Software features

Timer inputs selection Start, Stop, Hold, Reset, Wait Ranges programmable Time basis sec/100, sec/10, sec , min , hours Counter inputs selections Up, Down, Lock, Hold Count frequency Incremental / Decremental up to 100Khz Counter functions Counting frequency visualization on red display for flowmeter function Data protection Parameters protected by password

# Контроллеры процессов ATR421 PIXSYS.

ATR421

Programmable controller 15 cycle / 45 step

Programmer 48x96mm (1/8 DIN), single control loop. Allows the programming of 15 cycles/programs that can provide up to 45 steps/segments, all of which can be configured by the user as raise/maintain/lower. Programming mode of the work cycle that is intuitive and simple to use even for inexpert operators.

Step end wait software functions (in case of a delay of the process on the programmed setpoint value) and Cycle Recovery mode (after a power cut-off) are the main features of this programmer that has been specifically designed for the automation of industrial kilns, climatic chambers, dryers and the management of thermal processes in general that require the programming of cycles/curves with control of the process variable in relation to time.

Universal input and outputs that can be set as control, alarm/auxiliary analogue retransmission and/or serial RS485. All options can be configured from the keypad without selecting external Jumpers. Useful power supply range from 24 to 230V AC/DC with galvanic isolation from the power supply and between inputs and outputs.

MEMORY-CARD or parameter setting software help the installer configure the device quickly and easily and LABSOFTVIEW records trends.

Ordering codes

ATR421-14ABC

1 Analogue input + 1 digital input + 4 Relays + 1 digital PNP / Alim. 24..230V AC/DC



ATR421-12ABC-T

1 Analogue input + 2 Relays + 1 digital PNP + 1 Analogue 0/4..20mA / 0..10V + RS485 / Alim. 24..230V AC/DC Main features Box 48x96 (front panel) x 123 mm Power supply 24...230Vac/dc ±15% 50/60 Hz (selection 24 - 110...230Vac with jumper) Consumption 5,5 VA, 4W 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 IP65 (Front panel), IP20 (Box and Terminal bloks) Quick set-up options Memory Card with / without battery, software LABSOFTVIEW Inputs 1 configurable Selection TC, K, J, S, R, PT100, PT500, PT1000, Ni100, PTC1K, NTC10K (B 3435K), 0/4..20 mA, 0..10 V 1 digital input 1...9 cycle selection, Hold, Run, "Open door" lock (code -14ABC) 1 potentiometer input Position signal by potentiometer for servo-valves / motorized-valves Outputs 2...4 Relays

Relay 8 A - 250 Vac resistive charge

1 SSR

24 Vdc - 25 mA max

1 Analogue

Selection SSR 12Vdc - 4...20 mA or 0...10 Vdc for command or retransmission PV/SPV (code - 12ABC-T)

Serial communication

RS485 Modbus RTU - Slave (code -12ABC-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, timed auxiliary programmable for single steps

Gas mode

Open / Close logic for motorize valves, management of burners and fan, GID selection (management of burners during falling steps)

Waiting function

Special function to compensate differences SPV / PV in case of overloaded system

Cycle recovery

Resume the cycle after unexpected power failure

Setpoint controller mode

Regulation on a fixed setpoint (function might be enabled from general menu or during a cycle in progress)

Delayed start

Cycle start delayed by decremental timer

## Контроллеры процессов ATR621 PIXSYS.

#### ATR621

Programmable controller 15 cycle / 45 step



Programmer 72x72mm, single control loop. Allows the programming of 15 cycles/programs that can provide up to 45 steps/segments, all of which can be configured by the user as raise/maintain/lower. Programming mode of the work cycle that is intuitive and simple to use even for inexpert operators.

Step end wait software functions (in case of a delay of the process on the programmed setpoint value) and Cycle Recovery mode (after a power cut-off) are the main features of this programmer that has been specifically designed for the automation of industrial kilns, climatic chambers, dryers and the management of thermal processes in general that require the programming of cycles/curves with control of the process variable in relation to time.

Universal input and outputs that can be set as control, alarm/auxiliary and serial port RS485. All options can be configured from the keypad. MEMORY-CARD auxiliary support for the installer for quick configuration.

Ordering codes ATR621-12ABC 1 Analogue input + 2 Relays 8 A + 1 SSR 12Vdc + 1 Digital input ATR621-13ABC-T 1 Analogue input + 3 Relays 8 A + 1 Output V/mA/SSR + RS485 ATR621-14ABC 1 Analogue input + 3 Relays 8 A + 1 Relay 5A (30V) + 1 Digital input Main features Box 72x72 (front panel) x 99 mm Power supply 24...230Vac/dc ±15% 50/60 Hz Consumption 5,5 VA Display Display 4 digit 0,5" green + Display 4 digit 0,3" red + 9 Leds **Operating conditions** Temperature 0-45 °C, humidity 35..95 RH% (non condensing)

Material							
Box: Noryl UL94V1 self-extinguishing; Front panel: Silicon rubber V0							
Weight							
Approx. 250 g							
Sealing							
Front panel IP54 (with gasket) , Box IP30, Terminal bloks IP20							
Quick set-up options							
Memory Card with/without battery, software LABSOFTVIEW							
Inputs							
1 configurable							
Selection TC, K, J, S, R, N, E, PT100, 0/420 mA, 010 V							
1 digital input							
15 cycle selection, Hold, Run, "open door" lock, Emergency							
Outputs							
Relays							
2 / 3 Relays 8 A - 250 Vac resistive charges							
Relays							
1 Relay 5 A - 30 Vac							
1 Linear							
0/420mA or 010Volt							
1 SSR							
12 Vdc - 30 mA max							
Serial communication							
RS485 Modbus RTU - Master/Slave							
Software features							
Control Algorithms							
ON - OFF with hysteresis, P., P.I., P.I.D., P.D. time proportioned							
Autotune							
Manual/Automatic							
Data protection							

Access to parameters by password

Alarm mode

Absolute/Threshold, band, High/Low deviation, timed auxiliary programmable for single steps.

PV/SPV retransmission

Analogue in Volt/mA or RS485 serial

Waiting function

Special function to compensate differences SPV / PV in case of overloaded system

Cycle recovery function

Resume the cycle in case of unexpected power failure

Setpoint controller mode

Regulation on a fixed setpoint (function might be enabled from general menu or during a cycle in progress)

Delayed start

Cycle start delayed by decremental timer

## Контроллеры процессов ATR902 PIXSYS.

Programmable PDA controller 15 cycle / 18 step

PDA programmer with multui-pole connector, single control loop. Allows the programming of 15 cycles/programs that can provide up to 18 steps/segments, all of which can be configured by the user as raise/maintain/lower. Programming mode and display of the work cycle that is intuitive and simple to use even for inexpert operators.



Specifically designed for the automation of hobby and professional kilns for ceramics, glass or laboratory applications that require the programming of cycles/curves with temperature in relation to time. Software functions for Delayed start, Step end wait (in the case of delay of the process on the programmed setpoint value) and Cycle recovery mode (following a power cut-off). The multi-pole connector compatible with the ATR900/901 series does not require wiring and offers immediate connection/installation.

Universal input for all common thermocouples and two outputs that can be selected as control or alarm/auxiliary, control with increased precision thanks to the new PID-predictive algorithm. All options can be configured from the keypad.

Ordering codes

ATR902-12ABC

1 Analogue inp. + 2 Relays 1A -230 V AC/DC 0400.70.001 Harting connector 8P (optional) 1300.20.043 Wall mounting support (optional) Main features Box 120 x 65 (front panel) x 65 mm Power supply 24...230Vac/Vdc ±15% 50/60 Hz Consumption 4W Display Display 4 digit 0,56" red + 4 digit 0,4" green + Bargraph **Operating conditions** Temperature 0-45 °C, humidity 35..95 uR% (non condensing) Material Box: ABS; Front panel: polycarbonate Weight Approx. 550 gr Sealing IP65 (Front panel), IP20 (Box and Terminal bloks) Accessories Connector 7poles/female (kiln side), Bracket for panel mounting Inputs 1 Configurable TC K, S, R, J, T, E, N selection by parameter Outputs Relays 1 Relays 8A - 250 Vac resistive charge + 1 Relays 8A - 250 Vac for alarm/auxiliary

Software features **Control algorithms** ON - OFF with hysteresis, P., P.I., P.I.D., P.D. time proportioned Tuning Automatic, Automatic predictive Data protection Access to parameters by password, Setpoint modification during cycle only if enabled by parameter Alarm modes Absolute / Threshold, band, High / Low deviation, timed auxiliary programmable on single steps Hold function Hold current setpoint value, with Start / Stop by keyboard Waiting function Special function to compensate differences SPV / PV in case of overloaded system Cycle recovery function Resume the cycle after unexpected power failure Setpoint Controller mode Regulation on a fixed setpoint (function might be enabled from general menu or during a cycle in progress) **Delayed** start Cycle start delayed by parameter

# Контроллеры процессов ATR313 PIXSYS.

### ATR313

Graphic terminal / Process controller 20 cycles/30 step



LCD 251x146mm, Multi-loop graphic terminal Integrated by a variable number of Pixsys PL300 Acquisition/Actuation Modules, it constitutes a complete and flexible control system for managing thermal processes in industrial kilns, dryers and environmental control chambers.

Up to 5 PL300 modules allow control of up to 20 processes, which can be linked to 2 setpoints that can be configured for temperature/pressure/humidity/oxygen percentage levels. Specific software features for gas ovens are also available, including motorised valve management. Double hot/cold PID mode to control environmental control chambers. Wait (system inertia compensation) and

Cycle Recovery (following a power cut off) functions. Analogue retransmission of process/setpoint values. Graphic display of cycle trends and internal recorder to monitor up to 6 traces. Events list with date/time.

Serial communication RS485/RS232/RS422, MODBUS protocol Optional software app DataLogger313 to display cycle trends or for the download/upload of parameters and cycle data on/from Terminal and firmware updates (possible also by Memory Card) on a PC.

Ordering codes

ATR313-1AD

Graphic terminal, LCD display, alphanumeric keyboard

Acquisition modules

See PL300

2100.30.001

Memory card Series TD240 - TD320 - ATR313

Main features

Box

251x146 (front panel) x 66 mm

Power supply

12...24Vac/Vcc ±10% 50/60 Hz

Consumption

10W

Display

Graphic LCD 240x128, monochrome, Reverse option, programmable contrast and backlighting operation

**Operating conditions** 

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

Material

Box: chromed steel; front frame: ABS; Keyboard: polycarbonate

Weight

Approx. 1350 gr

Sealing

IP65 (Front panel), IP20 (Box and Terminal bloks)

Memory Card

Upload/download parameters and cycles, Firmware upgrade Inputs Analogue-digital inputs See PL300 Outputs Analogue/digital outputs See PL300 Serial communication RS485 Modbus RTU - Master, RS232, RS422 Software features **Control algorithms** ON - OFF with hysteresis, P., P.I., P.I.D., P.D. time proportioned Data protection Access to parameter by password, special password to define operator access levels Alarm options Absolute / Threshold, band, High / Low deviation, auxiality functions programmable for each step, programmable type of action on the running cycle, text of alarm messages may be entered by keyboard, alarm source selectable by the user Waiting function Special function to compensate differences SPV / PV in case of overloaded system Cycle recovery function Resume the cycle after unexpected power failure Functions for gas-fired kilns Management of modulanting valves by additional PL250 Visualization options Selection of visualized process values, Selection of menus related to function keys, selectable

Модули расширения EPL101 PIXSYS.

language, optional customer logo loaded at starting

MICRO PLC EPL101

PLC board

11 Inputs / 9 Outputs



Day card programmable with PLC logic. This single device contains a CPU and power supply with double primary from 24V AC or 230V AC, digital inputs and outputs and analogue inputs with output at 0...5V. The Ladder PLprog programming environment is structured in easy-to-use function blocks, with counter, timer and PID controller functions.

This device translates the PLC logic and the advantages of integration and simplified wiring in a single solution is competitive for prototypes and production lines.

Ordering codes

EPL101-1AB-N PLC 4 An. Inp. + 6 Digital PNP + 1 NPN + 6 relays + 2 outputs Open-Collector 20 mA + 1 output 0...5 Volt (8 bit) KIT-MORS-EPL101 Kit Terminal blocks for PLC board EPL101 2100.30.010 M.c. Upgrade Series PL250- PL260- PL300- EPL101 2100.30.011 Expansion memory 32K PL250 EPL101-RTC Clock for EPL 101 SB-TERM5 LED Display for EPL101 (5 Digits, 6 keys, 5 led) 2100.10.006 Programming tool PL250 - PL260 Main features Sizes Power supply 24/230 Vac ±15% 50/60 Hz transformer to double primary Consumption 4W **Operating conditions** Temperature 0-45 °C, humidity 35..95 uR% (non condensing) Weight

Approx. 280 g

Wiring

Extractable terminal blocks or Plug

Connection for DISPLAY

52poles connector for customised displays

Inputs

Analogues

4 selectables for TC, K, J, S, R, T, E, PT100, Ni100, 0/4..20 mA, 0/1..10 V (for more details see technical documentation)

Digitals

6 inputs PNP + 1 input NPN

Inputs for Encoders

2 Digitals (overlapped to input PNP) for bidirectional encoder (1Khz), 1 Digital (overlapped to input NPN) for one-way encoder (2 Khz)

Outputs

Digitals

5 Relays 5A resistive charge + 1 relay 16A resistive charge

Analogues

1 0...5Volt 8 Bit for command

**Open- Collector** 

2 outputs max 20mA

**Communication ports** 

1 serial RS232 on plug + 1 serial RS485 on Plug or on extraible blok

Software features

Programming

Pixsys PLprog software, Ladder diagrams; 128 marker (logic relays), 64 bistables, 96 timer 16 bit, 32 up-down counters, mathematic and logic functions, rescale functions, contacts on bit

Communication protocols

Modbus RTU master / slave; Free-Port mode for Modem protocols or proprietary devices.

Memory

64Kbyte Flash for programming, 400 byte Ram to retention (6 months), 256byte EEprom, external data memory MMC32Kbyte optional

Clock

Real-Time clock with Back-up battery

Analogue input control algorithms

P, PI, PID, PD

# Модули расширения PL110 PIXSYS.

Powerful mini PLC, ideal for integrating sequential control functions, processing and management of data on automatic machines or domotic systems, with control of analogue variables and digital/analogue blocks.

A single device offers digital inputs and relay outputs, analogue inputs for NTC probe (-40...+125°C) and for linear signals (1024 points) and a linear analogue output (256 points). For network connection the device has two multipoint serial ports RS485 up to 57000 Baud.

The Ladder PLprog programming environment is structured in easy-to-use blocks, which alongside the classic counter, timer and control with PID algorithms functions, also implement axis positioning, mathematical functions and 16-bit logics, and checks on bit; the development tool uses a normal USB cable connection to program the device.

Wiring is simplified by an extractable terminal and makes the device suitable for applications with a low number of I/Os, but which can be expanded with <u>MCM260 expansion modules</u>. The option with the OLED screen displays some predefined pages with variables from the program. It shows status of inputs/outputs, as well as the page to set the clock.

Ordering codes

PL110-1A

```
PLC 2 An.Inp. NTC-10K + 1 10Bit (0...10Volt) + 1 10Bit (0/4...20mA)+ 8 Inp. PNP + 8 relay Out 3A + 1
Out 0...10 Volt (8 bit)
```

PL110-2A

PLC 2 An.Inp. NTC-10K + 1 10Bit (0...10Volt) + 1 10Bit (0/4...20mA)+ 8 IInp. PNP + 8 relay Out 3A + 1 Out 0...10 Volt (8 bit) with optional Graphic LCD

2100.30.010

M.c. Upgrade Series PL250 - PL260- PL300 - EPL101- EPL 110

Main features

Вох

Standard DIN43880 108 x 90 x 64 (H) mm, Mounting clips DIN RAIL EN50022

Supply

24Vac/Vdc ±15% 50/60 Hz



Consumption

6W

**Operating conditions** 

Temperature 0-45 °C, humidity35..95 uR% (non condensing)

Material

Noryl V0

Weight

ca.250 g

Sealing

IP20 Box

Terminal blocks

extractable

Inputs

Analogue

An.1 0/4...20mA (1024 points); An.2 0...10Volt (1024 points); An.3 NTC-10K (-40...+125°C accuracy 0,5°C) + An.4 NTC-10K (-40...+125°C accuracy 0,5°C)

Digital

8 PNP

Encoder inputs

2 Encoder bidirectional (overlapped to 4 PNP inp.) 15 KHz / or 25KHz for single Encoder

Outputs

Relays

8 Out 2A/250Vac/30Vdc resistive load ( $cos\phi=1$ ) or 1A/250Vac/30Vdc inductive load ( $cos\phi=0,4$ ) 6A max total current (Q1...Q8)

Analogue

1 0...10Volt (8 Bit/256 points)

Programming port

1 USB type B

Serial ports

2 RS485 on extractable terminal block (max. 57600 Baud) galvanically isolated from supply and inputs (not between themselves)

Software features

Programming

Software Pixsys PLprog, Ladder diagrams; 128 markers (logic relays), 32 bistables, 64 timers 16 bit, 16 up-down counters, mathematical and logic functions, range - rescale, bit contacts, 2 timed interrupts (min. 1 msec)

Scanning cycle

min. 2 msec

Communication protocols

Modbus RTU Master/Slave; Free-Port for Modem or proprietary devices

Memory

64Kbyte Flash for programming, 350 word Ram retentive (accumulator, 6 months), 1000 word EEprom, internal MMC 13000 word data storage

Clock

Real-Time clock, Back-up battery

Control algorithms for analogue inputs

P, PI, PID, PD

# Модули расширения PL250 PIXSYS.

Compact device, ideal for applications that require flexibility and control distributed in a small space and with good calculating power.

A single device accommodates a CPU and power supply, digital relay inputs and outputs (for alternating current systems) and analogue inputs and outputs that do not require external signal converters. It has a multipoint RS485 serial point up to 57000 Baud for network connection.



The Ladder PLprog programming environment is structured in easy-to-use blocks, which alongside the classic counter, timer and control with PID algorithms functions, also implement axis positioning, mathematical functions and 16-bit logics, and checks on bit.

Wiring is simplified by an extractable terminal. The 12...24V AC/DC power supply makes it suitable for installation in electrical control panels or on board vehicles or earth moving machinery. It is also ideal for applications with a low number of I/Os.

Ordering codes

PL250-10AD

PLC with 4 An. Inp. (10 bit) + 12 relays 5A

PL250-11AD

PLC with 4 An. Inp. (16 bit for Tc/RTD) + 12 relays 5A

2100.30.010 M.c. Upgrade Series PL250- PL260- PL300- EPL101 2100.30.011 Expansion Memory 32K PL250 2100.10.006 Programming tool PL250- PL260 Main features Box Standard DIN43880 160 x 90 x 58 (H) mm with DIN RAIL mounting fitting EN50022 Power supply 12...24Vac/Vdc ±15% 50/60 Hz Consumption 4W **Operating conditions** Temperature 0-45 °C, humidity 35..95 uR% (non condensing) Material Noryl V0 Weight Approx. 375 gr. Sealing IP20 Box Inputs Analogue (10bit) 4 inp. 0...10Volt or 2 inp. 0...20mA (code -10AD) Analogue (16bit) 4 selectable for TC, K, J, S, R, T, E, PT100, Ni100, 0/4..20 mA, 0/1..10 V for more details see technical documentation (code -11AD) Digital 16 inputs PNP Inputs for Encoders 2 bidirectional encoders (overlapped to 4 inputs PNP) 15 KHz simultaneously / 30KHz single Auxiliary power supply

Terminal for Encoder power supply 5/12Volt, Terminal for Potentiometer power supply 10,0 Volt

Trimmer

2 for regulations and process variables

Outputs

Digital

12 relay outputs 5A - resistive charge

Analogue

2 0...10Volt, 8 Bit (overlapped to 2 inputs)

Programming port

1 serial RS232 on Plug

Communication port

1 serial RS485 on Plug or on extraible terminal (max. 57600 Baud)

Software features

Programming

Software Pixsys PLprog, Ladder diagrams; 128 markers (logic relays), 64 bistables, 96 timers 16 bit, 32 up-down counters, mathematical and logic functions, range - rescale, contact bits, 2 timed interrupt (min. 1 ms)

Scanning cycle

min. 2 ms

Communication protocols

Modbus RTU master/slave; Free-Port for Modem or proprietary devices

Memory

64Kbyte Flash for programming, non-volatile Ram memory (6months), 1000 words EEprom, optional MMC 13000 words

Clock

Real-Time clock, Back-up battery

Control algorithms

P, PI, PID, PD

## Модули расширения PL260 PIXSYS.

Powerful compact PLC, ideal for integrating sequential control functions, processing and management of data on automatic machines and systems, with control of analogue variables and digital/analogue blocks for axis control.



A single device accommodates a CPU and power supply, digital relay inputs and outputs (for direct current systems) and analogue inputs and outputs that do not require external signal converters. For network connection the device has an RS485 multipoint serial port up to 57000 Baud and for greater speeds a port for CANopen bus up to 1 MBaud.

The <u>ladder PLprog programming environment</u> is structured in easy-to-use blocks, which alongside the classic counter, timer and control with PID algorithms functions, also implement axis positioning, mathematical functions and 16-bit logics, and checks on bit.

Wiring is simplified by an extractable terminal. The 12...24V AC/DC power supply makes it suitable for installation in electrical control panels or on board vehicles or earth moving machinery. It is also ideal for applications with a low number of I/Os which can be expanded with <u>MCM260 PLC</u> <u>expansion module</u>.

User friendly, multimedia support and traceability

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

The interface of this **PLC controller** is user friendly and the user is also supported by auxiliaries for programming such as memory cards or the PLProg programming software.

Programming tutorial videos are available on our voutube 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 PL260-11AD PLC 4 An. Inp. + 16 Digitali PNP + 16 static outputs 700mA + 4 outputs 0...10 Volt (10/12 bit) 2100.30.010 M.c. Upgrade Series PL250- PL260- PL300- EPL101 2100.10.006 Programming tool PL250- PL260 Main features Box

Standard DIN43880 160 x 90 x 58 (H) mm with DIN rail mounting fitting EN50022

Power supply

12...24Vac/Vdc ±15% 50/60 Hz

Consumption

4W

**Operating conditions** 

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

Material

Noryl V0

Weight

Approx. 375 gr.

Sealing

IP20 Box

Inputs

Analogues

4 Selectable for TC, K, J, S, R, T, E, PT100, Ni100, 0/4..20 mA, 0/1..10 V (for more details see technical documentation)

Digitals

16 PNP inputs

Inputs for Encoders

2 Bidirectional encoders (overlapped to 4 PNP inputs) 15 KHz simultaneously / 30KHz single

Outputs

Digital

16 static outputs 700 mA /each output ( 4A max for groups of 8)

Analogue

2 out 0...10Volt - 8 Bit + 2 out 0...12,5Volt - 13 Bit

**Open- Collector** 

2 out max 20mA

Programming port

1 serial RS232 on Plug

Communication port

1 serial RS485 on Plug or onextractable terminal (max. 57600 Baud) + 1 Bus for CANopen (max. 1 MBaud)

Software features

Programming

Pixsys PLprog software, Ladder diagrams; 128 marker (logic relays), 32 bistables, 64 timers 16 bit, 16 up-down counters, mathematic and logic function, Range - rescale function, contact on bit, 2 timed interrupts (min. 1 msec)

Scanning cycle

minimum 2 msec

Communication protocols

Modbus RTU master/slave; Free-Port mode for Modem or proprietary devices; CANopen Master/slave

Memory

64Kbyte Flash for programming, 350 word non-volatile Ram , 1000 word EEprom, memoria dati MMC interna 13000 word opzionale

Clock

Real-Time clock , Back-up battery

Control algorithms for analogue inp.

P, PI, PID, PD

## Модули расширения PL300 PIXSYS.

Powerful compact PLC, ideal for integrating sequential control functions, processing and management of data on automatic machines and systems, with control of analogue variables and digital/analogue blocks for axis control.



A single device accommodates a CPU and power supply, digital relay inputs and outputs (for direct current systems) and analogue inputs and outputs that do not require external signal converters. For network connection the device has an RS485 multipoint serial port up to 57000 Baud and for greater speeds a port for CANopen bus up to 1 MBaud.

The <u>ladder PLprog programming environment</u> is structured in easy-to-use blocks, which alongside the classic counter, timer and control with PID algorithms functions, also implement axis positioning, mathematical functions and 16-bit logics, and checks on bit.

Wiring is simplified by an extractable terminal. The 12...24V AC/DC power supply makes it suitable for installation in electrical control panels or on board vehicles or earth moving machinery. It is also ideal for applications with a low number of I/Os which can be expanded with <u>MCM260 PLC</u> <u>expansion module</u>.

User friendly, multimedia support and traceability

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

The interface of this **PLC controller** is user friendly and the user is also supported by auxiliaries for programming such as memory cards or the PLProg programming software.

Programming tutorial videos are available on our voutube 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 PL260-11AD PLC 4 An. Inp. + 16 Digitali PNP + 16 static outputs 700mA + 4 outputs 0...10 Volt (10/12 bit) 2100.30.010 M.c. Upgrade Series PL250- PL260- PL300- EPL101 2100.10.006 Programming tool PL250- PL260 Main features Box Standard DIN43880 160 x 90 x 58 (H) mm with DIN rail mounting fitting EN50022 Power supply 12...24Vac/Vdc ±15% 50/60 Hz Consumption 4W **Operating conditions** Temperature 0-45 °C, humidity 35..95 uR% (non condensing) Material Noryl V0 Weight Approx. 375 gr. Sealing IP20 Box

Inputs

Analogues

4 Selectable for TC, K, J, S, R, T, E, PT100, Ni100, 0/4..20 mA, 0/1..10 V (for more details see technical documentation)

Digitals

16 PNP inputs

Inputs for Encoders

2 Bidirectional encoders (overlapped to 4 PNP inputs) 15 KHz simultaneously / 30KHz single

Outputs

Digital

16 static outputs 700 mA /each output ( 4A max for groups of 8)

Analogue

2 out 0...10Volt - 8 Bit + 2 out 0...12,5Volt - 13 Bit

**Open- Collector** 

2 out max 20mA

Programming port

1 serial RS232 on Plug

Communication port

1 serial RS485 on Plug or onextractable terminal (max. 57600 Baud) + 1 Bus for CANopen (max. 1 MBaud)

Software features

Programming

Pixsys PLprog software, Ladder diagrams; 128 marker (logic relays), 32 bistables, 64 timers 16 bit, 16 up-down counters, mathematic and logic function, Range - rescale function, contact on bit, 2 timed interrupts (min. 1 msec)

Scanning cycle

minimum 2 msec

Communication protocols

Modbus RTU master/slave; Free-Port mode for Modem or proprietary devices; CANopen Master/slave

Memory

64Kbyte Flash for programming, 350 word non-volatile Ram , 1000 word EEprom, memoria dati MMC interna 13000 word opzionale

Clock

Real-Time clock , Back-up battery

Control algorithms for analogue inp.

P, PI, PID, PD

## Модули расширения MCM260 PIXSYS.

I/O Module, PLC/HMI expansion

These expansion modules are an ideal solution for the acquisition and management of remote I/Os for expanding base architecture in applications that already include PLCs, PCs, or operator terminals. The multipoint serial RS485 with Modbus RTU protocol and CANopen high-speed bus, allow easy integration (including with EDS files for CAN bus) with the components of Pixsys and other manufacturers.

There are 5 product codes available for solutions that offer different input and output combinations, both analogue and digital or relay.

Main features Box Standard DIN43880 90 x 71 x 58 (H) mm with DIN RAIL mounting fitting EN50022 Power supply 12...24V AC/DC ± 15% 50/60 Hz **Power Consumption** 2..4VA Operating conditions Temperature 0-45 °C, humidity 35..95 uR% (non condensing) Material Noryl V0 Weight Approx. 255 g Sealing Box: IP20 Wiring

### Extractable terminal blocks

**Bus Protocol** 

Modbus RTU slave (RS485 max. 57600 Baud) or CAN Open (max 1 Mbit/sec) with EDS file for net configuration

HMI - Operator interface

PL250/ PL260/ TD240/ TD320/ TD430/ TD700/ TD750/ TD850/ TD900/ SCADA for control or supervision of any industrial plants

**Technical feature** 

ORDERING CODES	MCM260-1AD	MCM260- 2AD	MCM260- 3AD	MCM260-4AD	MCM260-5AD
Power supply	1224Vdc±15%	1224Vac/dc ±15%	1224Vdc ±15%	1224Vac/dc ±15%	1224Vdc ±15%
Digital input	-	16 PNP	8 PNP	8 PNP	-
Encoder input	-	1 Enc. 10KHz	1 Enc. 10KHz	1 Enc. 10KHz	-
Counter input	-	2 Count. 2KHz	2 Count. 2KHz	2 Count. 2KHz	-
Analogue input	_	2 over D.I. 2/3 (Res. 10 bit, 5000 points) only 010 V	_	2 over D.I. 2/3 (Res. 10 bit, 5000 points) only 010 V	4 (Res. 16 bit) selectable: TC type K,S,R,J (automatic compensation of the cold unction 050 °C, $\pm$ 0,2% F.S. $\pm$ 1 Digit F.S.), thermoresistances PT100, PT500, PT1000, Ni100, PTC1K, NTC10K, (β 3435K), process signals 010 V (54000 points), 0/420mA (40000 points), 060 mV (16000 points), potentiometer 6 KΩ, 150 KΩ (50000 points)
Digital output	16(700 mA max. 4A Tot.)	-	8 (700 mA max. 4A Tot.)	-	-

Relays	-	-	-	8,5A res. Load	-
Analogue output	-	-	-	-	2 (Res 12 bit) selectable: 420 mA (6000 points ± 0,2% F.S.) or 010 V DC (9500 points ± 0,2% F.S.)
Galvanical isolation	From supply to serial Bus	From supply to serial bus	From supply to serial bus	From supply to serial bus	From supply to analogue input / output to serial Bus

## Панели оператора TD320 PIXSYS.

HMI Panel 5.7" 320x240 TD320

HMI panel with integrated soft-PLC, 5.7" 256-colour display, resistive touchscreen.

In addition to the supervision function, the **operator panel** TD320 integrates a **soft**-**PLC** that **develops the control logics of the system**. The presence of two Bus serials (RS232 and RS485) guarantees connectivity with all devices that have the Modbus RTU protocol.

The integrated soft-PLC can be programmed via the proprietary development environment PLProg with LADDER logic. Graphic integration is provided by the proprietary app TdDesigner, which allows the user to create simple synoptics.

### User friendly, multimedia support and traceability

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

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

TD320-AD

HMI 5,7" with soft-plc + 3 serial ports RS232/RS485/RS422

2100.30.001 M.c. Par Series TD240 - TD320- ATR313 2100.10.009 Programming tool Main features Box 204x170 (front panel) x 48 Power supply 12...24Vac/Vdc ±15% 50/60 Hz Consumption 10W Display Display LCD STN 5,7" - 256 Colours, integrated Touch-screen, (lifetime typ. 30000h @25°C) **Operating conditions** Temperature 0-45 °C, humidity 35..95 uR% (non condensing) Material Front panel: aluminium with polycarbonate coverage; Box: chromed steel Weight Approx. 1430 gr Sealing IP54 (Front panel), IP20 (Box and Terminal bloks) Quick set-up options SLOT Memory Card (MMC) for program download (Ladder+graphics) Expansions Pixsys modules MCM260-1/2/3/4/5 or other Modbus devices Inputs Digital 8 Inputs for external contacts on connector 25poles Outputs Digital

1 General alarm output

Serial ports

1 Programming / Communication port with RS232 interface, 1 communication port with RS485/RS422 interface, galvanic insulation, 1 communication port with RS232/RS485 interface

Software features

Operating logic functioning

Pixsys PLprog software for Ladder diagrams; 10Kword variables VW, 800 marker (logic relays), 128 bistables, 128 timer 16 bit, 64 up-down counters, mathematic and logic functions, rescale function, contact on bit

Graphic interface programming

Software Pixsys TDdesigner

Communication protocols

Modbus RTU Master / slave; Free-Port mode for Modem protocols or proprietary devices

Memory

768 Kbyte Flash for programming, 10k words non-volatile Ram (6 months) 1000 words EEprom, 30K words MMC

Clock

Real-Time clock, Back-up battery

## Панели оператора TD430 PIXSYS.

Panel HMI 4.3" 480x272 TD430

HMI panel with integrated soft-PLC, 4.3" display, resistive touchscreen



TD430 is a touchscreen operator panel featuring Windows CE 6.0 R3 operating system and ARM processor.

The serial Bus (RS485), an ethernet port 10/100 and a CanOpen bus ensure connectivity to the main field buses. It is possible to directly connect digital I/Os (an ETD1644 expansion), creating a complete and compact control system. The USB port, also on the front, provides functions such as data exporting, program updates, and peripheral connections.

The entire range of HMI panels with Windows CE feature a programmable soft-PLC with the LogicLab development environment (compliant with programming standard IEC-61131), which allows the development of control logics in a stand-alone panel, without the support of PLC modules.

The integrated SCADA Movicon 11, developed by Progea, makes it possible to create synoptics and a direct interface with the integrated soft-PLC or with third party PLC.

User friendly, multimedia support and traceability

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

Programming tutorial videos are available on our voutube 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

TD430-AD

HMi 4,3" with soft-plc + 1 serial RS485 + 1 CANopen

2400.35.003

Upgrade to Movicon CE Full + Alarm Dispatcher

ETD1644-AD

4 AI + 16 D I/O + 4 AO

MCM260-1AD

16 DO Modbus RTU/CanOpen

MCM260-2AD

16 DI Modbus RTU/CanOpen

MCM260-3AD

8 DI + 8 DO Modbus RTU/CanOpen

MCM260-4AD

8 DI + 8 DO Relays Modbus RTU/CanOpen

MCM260-5AD

4 AI + 2 AO Modbus RTU/CanOpen

Main features

Вох

140x100 (front panel ) x 38;

Power supply

12..24V AC/DC ±15% 50/60 Hz (galvanic isolation 2500V)

Consumption

4,8W

Display

LCD TFT touch screen 4.3", 480x272 pixel 16 milion colors; (lifetime typ. 50000h@25°C)

**Operating conditions** 

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

Material

Front panel: aluminium with polycarbonate coverage; Box: chromed steel

Weight

Approx. 476 gr

Sealing

IP65 (Front panel), IP20 (Box and Terminal bloks)

Expansion Module on board (opt. max 1)

ETD1644-AD: 4 analogue inputs (res. 16bit) selectable: TC type K, J, S, R (automatic compensation of the cold junction 0..50°C, accuracy @25°C ±0,2% F.S. or ±1 digit), Thermoresistances PT100, PT500, PT1000, Ni100, PTC1K, NTC10K (B 3435K), Linear inputs 0/4..20mA (40000 points), 0..10V (54000 points), 0..40mV (16000 points), potentiometers F.S. 6/150Kohm (50000 points) – 16 programmable digital I/O, outputs PNP- 3 Encoder Push-Pull res. 32 bit max 80 KHz - 4 programmable analogue outputs mA/Volt

Serial Expansions

Pixsys modules MCM260-1/2/3/4/5, Modbus RTU/TCP or CanOpen devices

Hardware features and communication ports

Processor

ARM V4i 200 MHz

Memory

Flash 256 MB

Serial communication

RS485 galvanic isolated

Field bus

CAN galvanic isolated

USB

1 USB 2.0 for programming on frontal + 1 USB 2.0 on back side + 1 USB Device Host

Ethernet

1 Ethernet 10/100 Base-T on RJ45 connector

Memory card

SD/MMC Reader up to 2GB

Software features

Operating system

Windows CE 6.0 R3

Programming of logics

LogicLab, choice of languages according to IEC 61131-3

Programming of graphic interface

Movicon 11

Communication protocols

Third parts I/O Driver supported by Movicon, ModbusRTU Master/Slave, Modbus TCP/IP Master/Slave, CAN Open Master, Free-port mode for modems or proprietary devices

Clock

Real-Time clock, Back-up battery

## Панели оператора TD700 PIXSYS.

Panel HMI 7" 800x480 TD700

HMI panel with integrated soft-PLC, 7" display, resistive touchscreen

The TD700 Operator panel is a touchscreen model running the Windows CE 6.0 R3 operating system. The ARM processor and an integrated solid state memory make it suitable for industrial use, even in environments in which it may be subject to mechanical disturbances, such as vibrations.



The two serial Buses (RS232 and RS485), an ethernet port 10/100/1000 and a CanOpen bus ensure connectivity to the main field buses. It is possible to directly connect digital I/Os (up to two ETD880 expansions), creating a complete and compact control system. The USB port, also on the front, provides functions such as data exporting, program updates, and peripheral connections.

The entire range of HMI panels with Widows CE feature a programmable soft-PLC with the LogicLab development environment (compliant with programming standard IEC-61131), which allows the development of control logics in a stand-alone panel, without the support of PLC modules. The SCADA Movicon 11, produced by Progea and integrated into the Pixsys panels, makes it possible to create synoptics and a direct interface with the integrated soft-PLC or with the third party PLC.

User friendly, multimedia support and traceability

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

Programming tutorial videos are available on our voutube 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 TD700-AD HMi 7,0" with soft-plc + 3 serial RS232/RS485 ETD884-AD Expansion 2 An. 16bit/1msec (loading cells) + 8 Inp. + 8 Statics + 2 outputs Volt/mA ETD880-AD Expansion module 8 digital inputs + 8 digital outputs +2 enc. PNP Resolution 24 bit Main features Box 204 x160 (front panel 5,7") x 38 Power supply 12...24 V AC / V DC ±15% 50/60 Hz **Power Consumption** 3,7W Display LCD TFT touch screen 7", 800x480 pixel 16 milion colors, (lifetime typ. 20,000 hours @25°C) **Operating conditions** Temperature 0-45 °C, humidity 35..95 uR% (non condensing) Material Front panel: aluminium with polycarbonate coverage; Box: chromed steel Weight Approx. 937 gr Sealing

Front panel: IP65, Box and Terminal bloks: IP20

Expansion module (on special connector)

ETD884-AD Expansion: 2 load cell inp. with integrated power supply for the cell, 8 digital inputs, 2 Encoder inputs 24bit PNP/TTL, 8 digital outputs, 2 analogue outputs V/mA, 4 analogue inp. NTC/PTC/V/mA

Serial expansions

Pixsys modules MCM260-1/2/3/4/5 or other Modbus devices

Hardware features and communication ports

Processor

ARM V4i 200 MHz

Memory

Flash 256 MB

Serial communication

RS485/RS232 (1200..115200 Baud) galvanic isolated

Field bus

CAN (70K..1Mbit) galvanic isolated

USB

1 USB 2.0 on frontal + 1 USB 2.0 on black side.

Ethernet

1 Ethernet 10/100 Base-T on RJ45 connector

Memory card

SD/MMC Reader

Software features

Operating system

Windows CE 6.0 R3

Programming of operating logics

Logiclab (Pixsys Suite), optional choice of languages according to IEC 61131-3

Programming of graphic interface

Movicon 11

Communication protocols

Modbus RTU Master/Slave; Modbus TCT/IP Master/Slave; CAN Open Master; Free-port mode for modems or proprietary devices

Clock

Real-Time clock, Back-up battery

## Панели оператора TD710 PIXSYS.

Panel HMI 7" 800x480 TD700

HMI panel with integrated soft-PLC, 7" display, resistive touchscreen

The TD700 Operator panel is a touchscreen model running the Windows CE 6.0 R3 operating system. The ARM processor and an integrated solid state memory make it suitable for industrial use, even in environments in which it may be subject to mechanical disturbances, such as vibrations.

The two serial Buses (RS232 and RS485), an ethernet port 10/100/1000 and a CanOpen bus ensure connectivity to the main field buses. It is possible to directly connect digital I/Os (up to two ETD880 expansions), creating a complete and compact control system. The USB port, also on the front, provides functions such as data exporting, program updates, and peripheral connections.

The entire range of HMI panels with Widows CE feature a programmable soft-PLC with the LogicLab development environment (compliant with programming standard IEC-61131), which allows the development of control logics in a stand-alone panel, without the support of PLC modules. The SCADA Movicon 11, produced by Progea and integrated into the Pixsys panels, makes it possible to create synoptics and a direct interface with the integrated soft-PLC or with the third party PLC.

User friendly, multimedia support and traceability

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

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 TD700-AD HMi 7,0" with soft-plc + 3 serial RS232/RS485 ETD884-AD Expansion 2 An. 16bit/1msec (loading cells) + 8 Inp. + 8 Statics + 2 outputs Volt/mA FTD880-AD



Expansion module 8 digital inputs + 8 digital outputs +2 enc. PNP Resolution 24 bit

Main features

Вох

204 x160 (front panel 5,7") x 38

Power supply

12...24 V AC / V DC ±15% 50/60 Hz

**Power Consumption** 

3,7W

Display

LCD TFT touch screen 7", 800x480 pixel 16 milion colors, (lifetime typ. 20,000 hours @25°C)

**Operating conditions** 

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

Material

Front panel: aluminium with polycarbonate coverage; Box: chromed steel

Weight

Approx. 937 gr

Sealing

Front panel: IP65, Box and Terminal bloks: IP20

Expansion module (on special connector)

ETD884-AD Expansion: 2 load cell inp. with integrated power supply for the cell, 8 digital inputs, 2 Encoder inputs 24bit PNP/TTL, 8 digital outputs, 2 analogue outputs V/mA, 4 analogue inp. NTC/PTC/V/mA

Serial expansions

Pixsys modules MCM260-1/2/3/4/5 or other Modbus devices

Hardware features and communication ports

Processor

ARM V4i 200 MHz

Memory

Flash 256 MB

Serial communication

RS485/RS232 (1200..115200 Baud) galvanic isolated
Field bus CAN (70K..1Mbit) galvanic isolated USB 1 USB 2.0 on frontal + 1 USB 2.0 on black side. Ethernet 1 Ethernet 10/100 Base-T on RJ45 connector Memory card SD/MMC Reader Software features **Operating system** Windows CE 6.0 R3 Programming of operating logics Logiclab (Pixsys Suite), optional choice of languages according to IEC 61131-3 Programming of graphic interface Movicon 11 Communication protocols Modbus RTU Master/Slave; Modbus TCT/IP Master/Slave; CAN Open Master; Free-port mode for modems or proprietary devices

Clock

Real-Time clock, Back-up battery

## Панели оператора TD750 PIXSYS.

Panel PC 7" 800x600 TD750

Industrial PC with integrated soft-PLC, reduced depth casing, fanless system, integrated UPS, 7" display, resistive touchscreen.



The Panel PC TD750 is the most compact in the line of Pixsys industrial PCs. Its size allows it to be installed in small machines that still require the calculating power of a PC. High performance is guaranteed by an Intel Celeron Quad Core processor, an SDD data disk with a data transfer function and temperature range suitable for industrial use, even in environments with particular mechanical stresses. Two serial Buses (RS232 and RS485) and an ethernet port 10/100/1000 ensure connectivity to the main field buses.

Like all models in the Panel PC range, this PC has a heat dissipation system based on an all aluminium casing that makes the panel fanless. If the power is disconnected, an innovative integrated UPS system automatically closes any open applications correctly, saving open files before shutting down the operating system. The condenser technology of this system eliminates the need for ordinary maintenance required for standard battery powered UPS systems.

## Programming

The programmable soft-PLC with the LogicLab development environment (in compliance with IEC-61131 programming standards) allows the development of control logics on board the Panel PC even without the assistance of external PLCs.

The SCADA Movicon 11, produced by Progea and integrated into the Pixsys panels, makes it possible to create synoptics and a direct interface with the integrated soft-PLC or with the third party PLC Connectivity for remote monitoring and maintenance is provided by the TeamViewer software, which is pre-installed on the entire range of Industrial PC.

User friendly, multimedia support and traceability

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

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

TD750-A32

Panel PC 7", Intel® Celeron® J1900 Quad Core @2.0GHz, 2MB Cache, 2GB RAM DDR3, SSD 32 GB

ETD1644-AD

4 AI + 16 D I/O + 4AO

ETDWIF-AD

Optional module Wi-Fi 802.11b,g,n

ETD2RS232-AD

Optional module 2 x UART RS232

ETDLAN1G-AD

Optional module 1 x LAN 10/100/1000T RJ45

Main features and display

Box 160 x 204 (frontal) x 34mm Power supply 24V dc ±10% Consumption Approx. 12W Display Display 7" 800x600 24bit LV

Display 7" 800x600 24bit LVDS with integrated resistive Touch; backlight Led 500cd (lifetime > 50000h )

**Operating conditions** 

Temperature 5 -50 °C, humidity 10-90 %RH (non condensing)

Frontal panel

6mm aluminium alloy, milled, opaque

Weight

Approx. 2 Kg

Sealing

Front panel: IP65, Box and Terminal bloks: IP20

Cooling

Fanless

UPS

Integrated, assisted shut-down

Hardware features

CPU

Intel® Celeron® J1900 Quad Core @2.0GHz, 2MB Cache

**RAM Memory** 

2GB DDR3 SDRAM (up to 4GB DDR3)

Hard Disk

Sata Solid State Disk SSD 2,5" 24h/24h Anti shock 32GB

Ethernet

1 x LAN 10/100 Base-TX Ethernet RJ-45 interface

Serial Interface

1 x RS232, 1 x CAN, 1 x RS485 Optoisolated from power supply USB 1 Front + 2 Rear USB 2.0 Interface Audio 1 Mono 1W Out or 1 Stereo 600 Ohm Out Clock Real-Time clock, Back-up battery Serial ATA 1 X SATA-300 mass storage Interfaces Software features **Operating system** Windows® 7 Embedded Operating logic programming LogicLab, IEC 61131-3 languages Graphic interface programming Movicon 11 Communication protocols

Third parts I/O Driver supported by Movicon, Modbus RTU Master / slave; Free-Port mode for modem protocols or proprietary devices, Modbus TCP/IP Master / Slave. CAN Open Master

# Панели оператора TD850 PIXSYS.

Panel PC 10.4" 800x600 TD850

Industrial PC with integrated soft-PLC, reduced depth casing, fanless system, integrated UPS, 10.4" display, resistive touchscreen.



The Panel PC TD850 is the intermediate size panel in the range of Pixsys industrial PCs. High performance is guaranteed by an Intel Celeron Quad Core processor, an SDD data disk with a data transfer function and temperature range suitable for industrial use, even in environments with particular mechanical stresses. Two serial Buses (RS232 and RS485) and two ethernet ports 10/100/1000 ensure connectivity to the main field buses. Thanks to the Mini-PCI Express port, accessible through an opening in the casing, the PC's hardware can be expanded by inserting additional modules such as Wi-Fi cards, additional network card, native field bus.

### Innovative solutions

Like all models in the Panel PC range, this PC has a heat dissipation system based on an all aluminium casing that makes the panel fanless. If the power is disconnected, an innovative integrated UPS system automatically closes any open applications correctly, saving open files before shutting down the operating system. The condenser technology of this system eliminates the need for ordinary maintenance required for standard battery powered UPS systems.

### Programming

The programmable soft-PLC with the LogicLab development environment (in compliance with IEC-61131 programming standards) allows the development of control logics on board the Panel PC even without the assistance of external PLCs.

The SCADA Movicon 11, produced by Progea and integrated into the Pixsys panels, makes it possible to create synoptics and a direct interface with the integrated soft-PLC or with the third party PLC Connectivity for remote monitoring and maintenance is provided by the TeamViewer software, which is pre-installed on the entire range of Industrial PCs.

Ordering codes

TD850-A64

Panel PC 10.4", Intel<sup>®</sup> Celeron<sup>®</sup> J1900 Quad Core @2.0GHz, 2MB Cache, 2GB RAM DDR3, SSD 64 GB

ETD1644-AD

4 Ai + 16 D I/O + 4AO

ETDWIF

Optional module Wi-Fi 802.11 b,g,n

ETD2RS232

Optional module 2 X UART RS232

ETDLAN1G

Optional module 1 x LAN 10/100/1000T RJ45

Main features and display

Box

325 x 260 (front) x 26mm

Power supply

24 V DC ±10% (galvanic isolation 2500V)

Consumption

18 W

Display Display 10.4" 800x600 24bit LVDS, integrated resistive Touchscreen; backlight Led 320cd ( lifetime> 20000h ) **Operating conditions** Temperature 5 -50 °C, humidity 10-90 %RH (non condensing) Front panel Alluminium alloy 6mm, milled, opaque Weight approx. 3 Kg Sealing Front: IP65, Box and Terminal blocks: IP20 Cooling Fanless UPS Integrated, assisted shut-down Hardware data CPU Intel® Celeron® J1900 Quad Core @2.0GHz, 2MB Cache RAM Memory 2GB RAM DDR3 SDRAM Hard Disk Sata Solid State Disk SSD 2,5" 24h/24h Anti shock 64/128GB Ethernet 2 x LAN 10/100/1000 Base-TX Ethernet RJ-45 interface Serial Interface 1 X RS232, 1 X RS485 Optoisolated from power supply USB 1 Front + 2 USB 2.0 Interfaces on rear panel Audio 1 Stereo Output 600 Ohm Clock

Real-Time clock including Back-up battery ATA Serial 1 X SATA-300 mass storage Interface Expansion modules 2 x Mini PCI Express Software data Operating system Windows® 7 Embedded Operating logic programming LogicLab, IEC 61131-3 Languages Graphic interface programming Movicon 11 Communication protocols

Third parts I/O Driver supported by Movicon, Modbus RTU Master / slave; Free-Port mode for modem protocols or proprietary devices, Modbus TCP/IP Master / Slave, CAN Open Master

# Панели оператора TD860 PIXSYS.

Panel PC 12.1" 1280x800 TD860

Industrial PC with integrated soft-PLC, reduced depth casing, fanless system, integrated UPS, 12.1" display, resistive touchscreen.



The Panel PC TD860 is the intermediate size panel in the range of Pixsys industrial PCs. High performance is guaranteed by an Intel Celeron Quad Core processor, an SDD data disk with a data transfer function and temperature range suitable for industrial use, even in environments with particular mechanical stresses. Two serial Buses (RS232 and RS485) and two ethernet ports 10/100/1000 ensure connectivity to the main field buses. Thanks to the Mini-PCI Express port, accessible through an opening in the casing, the PC's hardware can be expanded by inserting additional modules such as Wi-Fi cards, additional network card, native field bus.

Innovative solutions

Like all models in the Panel PC range, this PC has a heat dissipation system based on an all aluminium casing that makes the panel fanless. If the power is disconnected, an innovative integrated UPS system automatically closes any open applications correctly, saving open files before shutting down the operating system. The condenser technology of this system eliminates the need for ordinary maintenance required for standard battery powered UPS systems.

### Programming

The programmable soft-PLC with the LogicLab development environment (in compliance with IEC-61131 programming standards) allows the development of control logics on board the Panel PC even without the assistance of external PLCs.

The SCADA Movicon 11, produced by Progea and integrated into the Pixsys panels, makes it possible to create synoptics and a direct interface with the integrated soft-PLC or with the third party PLC Connectivity for remote monitoring and maintenance is provided by the TeamViewer software, which is pre-installed on the entire range of Industrial PCs.

User friendly, multimedia support and traceability

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

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

TD860-A64

Panel PC 12.1", Intel<sup>®</sup> Celeron<sup>®</sup> J1900 Quad Core @2.0GHz, 2MB Cache, 2GB RAM DDR3, SSD 64 GB

TD860-A128-4Q

Panel PC 12.1", Intel<sup>®</sup> Celeron<sup>®</sup> J1900 Quad Core @2.0GHz, 2MB Cache, 4GB RAM DDR3, SSD 128 GB

ETD1644-AD

4 AI + 16 D I/O + 4 AO

ETDWIF

Optional module Wi-Fi 802.11 b,g,n

ETD2RS232

Optional module 2 X UART RS232

ETDLAN1G

Optional module 1 x LAN 10/100/1000T RJ45

Main features and display

Box 321 x 254 (front) x 26mm Power supply 24VDC ±10% (galvanic isolation 2500V) Consumption 20 W Display Display 12.1" 1280x800 24bit LVDS, integrated resistive Touchscreen; backlight Led 320cd ( lifetime> 20000h ) **Operating conditions** Temperature 5 -50 °C, humidity 10-90 %RH (non condensing) Front panel Alluminium alloy 6mm, milled, opaque Weight approx. 3 Kg Sealing Front: IP65, Box and Terminal blocks: IP20 Cooling Fanless UPS Integrated, assisted shut-down Hardware data CPU Intel® Celeron® J1900 Quad Core @2.0GHz, 2MB Cache **RAM Memory** 2GB RAM DDR3 SDRAM - 4 GB DDR3 (version -4Q) Hard Disk SSD Sata 2,5" 64GB o 128GB (version -4Q) Ethernet 2 x LAN 10/100/1000 Base-TX Ethernet RJ-45 interface Serial Interface

1 X RS232, 1 X RS485 Optoisolated from power supply USB 1 Front + 2 USB 2.0 Interfaces on rear panel Audio 1 Stereo Output 600 Ohm Clock Real-Time clock including Back-up battery ATA Serial 1 X SATA-300 mass storage Interface **Expansion modules** 2 x Mini PCI Express Software data Operating system Windows® 7 Home Windows® 7 Embedded Pro Operating logic programming LogicLab, IEC 61131-3 languages Graphic interface programming Movicon 11 Communication protocols

Third parts I/O Driver supported by Movicon, Modbus RTU Master / slave; Free-Port mode for modem protocols or proprietary devices, Modbus TCP/IP Master / Slave. CAN Open Master

## Панели оператора TD900 PIXSYS.

Panel PC 15" 1024x768 TD900

Industrial PC with integrated soft-PLC, reduced depth casing, fanless system, integrated UPS, 15" display, resistive touchscreen.

The PC Panel TD900 is the intermediate size panel in the range of Pixsys industrial PCs. High performance is guaranteed by an Intel Celeron Quad Core, by an SDD data disk with a data transfer function and temperature range suitable for industrial use, even in environments with particular mechanical stresses. Two serial Buses (RS232 and RS485) and two ethernet ports 10/100/1000 ensure connectivity to the main field buses. Thanks to the Mini-PCI Express port,

accessible through an opening in the casing, the PC's hardware can be expanded by inserting additional modules such as Wi-Fi cards, additional network card, native field bus.

### Innovative solutions

Like all models in the Panel PC range, this PC has a heat dissipation system based on an all aluminium casing that makes the panel fanless. If the power is disconnected, an innovative integrated UPS system automatically closes any open applications correctly, saving open files before shutting down the operating system. The condenser technology of this system eliminates the need for ordinary maintenance required for standard battery powered UPS systems.

### Programming

The programmable soft-PLC with the LogicLab development environment (in compliance with IEC-61131 programming standards) allows the development of control logics on board the Panel PC even without the assistance of external PLCs.

The SCADA Movicon 11, produced by Progea and integrated into the Pixsys panels, makes it possible to create synoptics and a direct interface with the integrated soft-PLC or with the third party PLC Connectivity for remote monitoring and maintenance is provided by the TeamViewer software, which is pre-installed on the entire range of Industrial PC.

User friendly, multimedia support and traceability

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

Programming tutorial videos are available on our voutube 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 TD900-A64 Panel PC 15", Intel® Celeron® J1900 Quad Core @2.0GHz, 2MB Cache, 2GB RAM DDR3, SSD 64 GB TD900-A64-4Q Panel PC 15", Intel® Celeron® J1900 Quad Core @2.0GHz, 2MB Cache, 4GB RAM DDR3, SSD 128 GB ETD1644-AD 4 AI + 16 D I/O + 4 AO

ETDWIF

Optional module Wi-Fi 802.11 b,g,n ETD2RS232 Optional module 2 x UART RS232 ETDLAN1G Optional module 1 x LAN 10/100/1000T RJ45 Main features and display Box 435 x 330 (front) x 29mm Power supply 24 V DC ±10% (galvanic isolation 2500V) Consumption approx. 14 W / 18 W Display Display 15" 1024x768 24bit LVDS, integrated resistive Touchscreen; Backlight led 500cd (lifetime > 20000h) **Operating conditions** Temperature 5 -50 °C, humidity 10-90 %RH (non condensing) Front panel Alluminium alloy 6mm, milled, opaque Weight approx. 4 Kg Sealing Frontal: IP65 ,Box and terminal blocks: IP20 Cooling Fanless UPS Integrated, assisted shut down Hardware data CPU Intel® Celeron® J1900 Quad Core @2.0GHz (4Q - version) **RAM** memory

2GB DDR3 SDRAM (up to 4Gb RAM DDR3)
Hard Disk
Sata Solid State Disk SSD 2,5" 24h/24h Anti shock 16/64Gb
Ethernet
2 x LAN 10/100 Base-TX Ethernet RJ-45 interface
Serial Interface
1 X RS232, 1 X CAN(optional), 1 X RS485 Optoisolated from power supply
USB
1 Front+ 2 USB 2.0 Interfaceon rear panel
Audio
1 Stereo Output 600 Ohm
Clock
Real-Time clock, Back-up battery
ATA Serial
1 X SATA-300 mass storage Interface
Expansion modules
2x Mini-PCI Express, 1x Pixsys expansion connector
Software data
Operating system
Windows <sup>®</sup> 7 Embedded Pro
Operating logic programming
LogicLab, IEC 61131-3 languages
Graphic interface programming
Movicon 11
Communication protocols

Third parts I/O Driver supported by Movicon, Modbus RTU Master / slave; Free-Port mode for modem protocols or proprietary devices, Modbus TCP/IP Master / Slave, CAN Open Master

# Панели оператора TD910 PIXSYS.

### Panel PC 18.5" 1366x768 TD910

Industrial PC with integrated soft-PLC, reduced depth casing, fanless system, integrated UPS, 18.5" display, resistive touchscreen.



The PC Panel TD910 is the intermediate size panel in the range of Pixsys industrial PCs. High performance is guaranteed by an Intel Celeron Quad Core processor,, by an SDD data disk with a data transfer function and temperature range suitable for industrial use, even in environments with particular mechanical stresses. Two serial Buses (RS232 and RS485) and two ethernet ports 10/100/1000 ensure connectivity to the main field buses. Thanks to the Mini-PCI Express port, accessible through an opening in the casing, the PC's hardware can be expanded by inserting additional modules such as Wi-Fi cards, additional network card, native field bus.

### Innovative solutions

Like all models in the Panel PC range, this PC has a heat dissipation system based on an all aluminium casing that makes the panel fanless. If the power is disconnected, an innovative integrated UPS system automatically closes any open applications correctly, saving open files before shutting down the operating system. The condenser technology of this system eliminates the need for ordinary maintenance required for standard battery powered UPS systems.

### Programming

The programmable soft-PLC with the LogicLab development environment (in compliance with IEC-61131 programming standards) allows the development of control logics on board the Panel PC even without the assistance of external PLCs.

The SCADA Movicon 11, produced by Progea and integrated into the Pixsys panels, makes it possible to create synoptics and a direct interface with the integrated soft-PLC or with the third party PLC Connectivity for remote monitoring and maintenance is provided by the TeamViewer software, which is pre-installed on the entire range of Industrial PC.

### User friendly, multimedia support and traceability

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

Programming tutorial videos are available on our voutube 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

TD910-A128-4Q

Panel PC 18,5", Intel<sup>®</sup> Celeron<sup>®</sup> J1900 Quad Core @2.0GHz, 2MB Cache, 4GB RAM DDR3, SSD 128 GB

ETD1644-AD

4 Ai + 16 D I/O + 4 AO

ETDWIF

Optional module Wi-Fi 802.11 b,g,n

ETD2RS232

Optional module 2 x UART RS232

ETDLAN1G

Optional module 1 x LAN 10/100/1000T RJ45

Main features and display

Box

474 x 310 x 29

Power supply

24 V DC ±10% (galvanic isolation 2500V)

Consumption

28 W

Display

Display 18.5" 1366x768 24bit LVDS, integrated resistive Touchscreen; backlight Led 320cd ( lifetime>20000h )

**Operating conditions** 

Temperature 5 -50 °C, humidity 10-90 %RH (non condensing)

Front panel

Alluminium alloy 6mm, milled, opaque

Weight

approx. 4 Kg

Sealing

Front: IP65, Box and Terminal blocks: IP20

Cooling Fanless UPS Integrated, assisted shut-down Hardware data CPU Intel® Celeron® J1900 Quad Core @2.0GHz, 2MB Cache **RAM** memory 4GB RAM DDR3 SDRAM Hard Disk SSD Sata 2,5" 128GB Ethernet 2 x LAN 10/100/1000 Base-TX Ethernet RJ-45 interface Serial Interface 1 X RS232, 1 X RS485 Optoisolated from power supply USB 1 Front + 2 USB 2.0 Interfaces on rear panel Audio 1 Stereo Output 600 Ohm Clock Real-Time clock including Back-up battery ATA Serial 1 X SATA-300 mass storage Interface **Expansion modules** 2x mini-PCI Express Software data **Operating system** Windows<sup>®</sup> 7 Embedded Pro PROTOCOL LogicLab, IEC 61131-3 Languages

### FANLESS (0-45°C op. temperature)

Movicon 11

### Communication protocols

Third parts I/O Driver supported by Movicon, Modbus RTU Master / slave; Free-Port mode for modem protocols or proprietary devices, Modbus TCP/IP Master / Slave, CAN Open Master

## Панели оператора TD920 PIXSYS.

Panel PC 21.5" 1920x1020 TD920

Industrial PC with integrated soft-PLC, reduced depth casing, fanless system, integrated UPS, 21.5" display, resistive touchscreen.



The PC Panel TD920 is the top of the range for Pixsys industrial PCs. High performance is guaranteed by an Intel Celeron Quad Core processor, by an SDD data disk with a data transfer function and temperature range suitable for industrial use, even in environments with particular mechanical stresses. Two serial Buses (RS232 and RS485) and two ethernet ports 10/100/1000 ensure connectivity to the main field buses. Thanks to the Mini-PCI Express port, accessible through an opening in the casing, the PC's hardware can be expanded by inserting additional modules such as Wi-Fi cards, additional network card, native field bus.

### Innovative solutions

Like all models in the Panel PC range, this PC has a heat dissipation system based on an all aluminium casing that makes the panel fanless. If the power is disconnected, an innovative integrated UPS system automatically closes any open applications correctly, saving open files before shutting down the operating system. The condenser technology of this system eliminates the need for ordinary maintenance required for standard battery powered UPS systems.

### Programming

The programmable soft-PLC with the LogicLab development environment (in compliance with IEC-61131 programming standards) allows the development of control logics on board the Panel PC even without the assistance of external PLCs.

The SCADA Movicon 11, produced by Progea and integrated into the Pixsys panels, makes it possible to create synoptics and a direct interface with the integrated soft-PLC or with the third party PLC Connectivity for remote monitoring and maintenance is provided by the TeamViewer software, which is pre-installed on the entire range of Industrial PC.

User friendly, multimedia support and traceability

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

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

TD920-A128-4Q

Panel PC 21,5", Intel<sup>®</sup> Celeron<sup>®</sup> J1900 Quad Core @2.0GHz, 2MB Cache, 4GB RAM DDR3, SSD 128 GB

ETD1644-AD

4 Ai + 16 D I/O + 4 AO

ETDWIF

Optional module Wi-Fi 802.11 b,g,n

ETD2RS232

Optional module 2 x UART RS232

ETDLAN1G

Optional module 1 x LAN 10/100/1000T RJ45

Main features and display

Вох

540 x 353 x 29

Power supply

24 V DC ±10% (galvanic isolation 2500V)

Consumption

28 W

Display

Display 21.5" 1366x768 24bit LVDS, integrated resistive Touchscreen; Backlight led 500cd (lifetime >20000h)

**Operating conditions** 

Temperature 5 -50 °C, humidity 10-90 %RH (non condensing)

Front panel

Alluminium alloy 6mm, milled, opaque Weight approx. 5 Kg Sealing Frontal: IP65 ,Box and terminal blocks: IP20 Cooling Fanless UPS Integrated, assisted shut down Hardware data CPU Intel® Celeron® J1900 Quad Core @2.0GHz, 2MB Cache **RAM** memory 4GB RAM DDR3 SDRAM Hard Disk SSD Sata 2,5" 128GB Ethernet 2 x LAN 10/100/1000 Base-TX Ethernet RJ-45 interface Serial Interface 1 X RS232, 1 X RS485 Optoisolated from power supply USB 1 Front + 2 USB 2.0 Interfaces on rear panel Audio 1 Stereo Output 600 Ohm Clock Real-Time clock including Back-up battery ATA Serial 1 X SATA-300 mass storage Interface **Expansion modules** 2x mini-PCI Express

Software data Operating system Windows® 7 Embedded Pro PROTOCOL LogicLab, IEC 61131-3 languages FANLESS (0-45°C op. temperature) Movicon 11 Communication protocols

Third parts I/O Driver supported by Movicon, Modbus RTU Master / slave; Free-Port mode for modem protocols or proprietary devices, Modbus TCP/IP Master / Slave, CAN Open Master

## Карты памяти PIXSYS.

Memory Card

Memory with and without battery



Memory cards have been designed to simplify the configuration procedure in series of the range of Pixsys controllers, programmers and timers/counters.

The model with the internal battery (1000 programmings before needing to replace the battery) ensures quick and safe configuration of the parameters and duplication of the functions without the need to connect the devices to an external power source.

Models with the flash memory with more capacity allow the update of the firmware of the controllers for the upgrade of already installed instruments. The USB port allows connection to the PC for interfacing with the LABSOFTVIEW software.

Ordering codes

2100.30.002

M.c. Par Series ATR171- ATR236-ATR243-ATR401-DRR245

2100.30.003

M.c. Par/Upgrade-Batt. Series ATR121-ATR141-ATR142-ATR171-ATR236-ATR243-ATR401-DRR132-DRR245

2100.30.005

M.c. Par Series ATR121-ATR141-ATR142-TCT101-TCT201

2100.30.006

M.c. Par Series ATR421-ATR621

2100.30.007

M.c. Par/ Upgrade-Batt. Series ATR421-ATR621
2100.30.008
M.c. Par Series ATR620
2100.30.009
M.c. Upgrade Series ATR500-ATR620
2100.30.013
M.c. Upgrade with Micro-USB Series ATR227-DRR227-STR560-STR561-STR571

# Адаптеры PIXSYS.

ADAPTERS

### Adapters and plugs for the front panel

Adapters are useful when replacing instruments of different sizes on the panel.

Panel mounting with plastic wings and screws.

Ordering codes

1300.20.099

Adapter 72x72 to 48x48

1300.20.059

Adapter 96x96 to 48x48

1300.20.058

Adapter 96x96 to 48x96

1300.20.029

Adapter 96x96 to 72x72

1300.20.063

Adapter 48x96 to 32x74

1300.20.169

Cover plate 32x74

1300.20.064

Cover plate 48x48

1300.20.065



Cover plate 48x96 1300.20.070 Cover plate 96x96 1300.20.066 Cover plate 72x72 1300.20.217 Adapter 48x96 to 48x48 1600.00.082 External gasket 32x74 1600.00.097 External gasket 48x48 1600.00.099 External gasket 72x72

## Адаптеры DIN PIXSYS.

Adapters for mounting on DIN rail

Accessory for mounting on electrical panels of instruments in 32x74mm and 48x48mm formats.

Ordering codes 1300.50.001 Din Rail adapter for controller 32x74mm 1300.50.003 Din Rail adapter for controller 48x48mm (1/16 DIN) 1300.50.004 DIN Rail adapter for controller 48x96mm (1/8 DIN) 1300.50.005 Din Rail adapter for RFID converters



# Программное обеспечение Labsoftview PIXSYS.

Software and Hardware Kit

The software app for the configuration and monitoring of Pixsys instruments is available for Windows and is simple to install and use.

Labsoftview allows you to configure the parameters on Pixsys controllers and produces graphs that show the characteristic trends of the input and setpoint values to simplify calibration of the control algorithm.

The package includes the CD with the software, a Memory Card with a battery that functions as a serial-USB converter and the connection cable.

Ordering codes

2100.20.009

LabSoftView

# Программное обеспечение Movicon RT11 SCADA PIXSYS.

Movicon<sup>™</sup> 11 is the secure and reliable solution to develop and maintain supervisory, control and data acquisition software applications with operator interface where data can be accessed remotely or from mobile systems. Movicon<sup>™</sup> 11 offers a comprehensive development environment for managing HMI, SCADA, Logic and statistical production data analysis applications enabling design engineers to minimize development time and provide users with powerful, open, flexible and easy to maintain solutions.

Movicon<sup>™</sup> 11 is one of a kind, completely based on XML standards and well established technologies such as Web Services, SVG graphics, OPC, SQL, ODBC, .Net as well as Java technology and APPs for Web Client solutions. A standard software for industrial automation, remote control, utilities and building automation. A truly universal Scada/HMI platform, independent from hardware, adaptable and deployable absolutely anywhere. Movicon<sup>™</sup> offers an all-in-one platform that can be used at any level whether HMI operator panels and/or mobile devices based on WinCE, or personal computers in large industrial plant systems with client/server redundancy architecture and connectivity to any PLC, network and industrial or civil fieldbus.

# Программное обеспечение RFid Programmer PIXSYS.

Software for configuring temperature converters/4..20 mA

For configuring, calibrating and data reading operations in temperature/power converters, Pixsys developed an user friendly Windows software, the RFid programmer.

With the programmer USB > NFC (cod. 2000.35.012) the software allows the parameterization of converters and the graph design related to the stored record.







Thanks to the NFC technology there is no need to power the converter: simply put it next to the USB programmer.

# Программное обеспечение LogicLab PIXSYS.

### Development environment for Pixsys PLC, HMI and Panel PC

LogicLab

Development environment for the programming of PLC logic. In compliance with IEC 61131-3 standards, it allows choice of 5 programming languages: Instruction list, Structured text, Function blocks diagram, Ladder diagram, Sequential Function chart.

Supported devices: TD430, TD700, TD710, TD750, TD850, TD860, TD900, TD910

Function libraries of LogicLab integrate counters, timers, mathematical operations, rescale, PID functions, datalogger, recipes, alarms, functions for files on PLC memory.

Transfer between LogicLab and PLC devices is completed via Ethernet connection and standard cable.

Code debug is possible without connected PLC (simulation on PC) and allows to visualize active logics and real-time value of variables.

# Последовательные преобразователи NET200 PIXSYS.

Serial converter RS232/RS485/USB

Converter with automatic configuration for serial communication USB/RS232 Pc side and RS232/RS485/RS422 instrument side. The 4-layer circuit has galvanic isolation from the power supply at 12...24V AC/DC and between serial inputs and serial output.

The device also works with power from USB cable, further simplifying the wiring. The installation drivers are provided on a CD.

Ordering codes NET200-1AD RS232/USB > RS232/RS422/RS485 Main features Box

71x101 (front panel) x 28 mm

Power supply

12...24Vac/Vdc ±15% 50/60 Hz or via USB port

Consumption





Connection Terminal block 10poles - 3,81 instrumentation side - USB-B connector + DB 9 poles PC side Operating conditions Temperature 0-45 °C, humidity 35..95 uR% (non condensing) Material Polycarbonate self-extinguishing Weight Approx. 120 g Fixing Din Rail EN50022 Software features Baud Rate Automatic selection up to 115000 Baud

Wireless receiver and transmitter



The pair of NET250 devices has been designed to solve problems with cables in industrial or domestic networks with a wireless solution. It allows the transmission of data with the RS232 and RS485 interfaces for telediagnostic applications, remote maintenance and programming, and alarm signals. It is particularly suited to use on systems with Pixsys controllers, PLCs and HMIs.

For safe operating in industrial environments with EMC interference, the unit features high quality galvanic isolation and built-in protection against overloads. The device is activated with a Plug and practical connection to the power terminal at 12...24V AC/DC.

The radio channels are configured using the software provided.

A range of antennas are available for different installation requirements.

Ordering codes NET250-1AD Antenna > RS485, RS232 NET250-2AD USB-B > Antenna

#### 2 W

Main features

Box 101mm x 71mm x 28mm (H) Power supply

12...24 Vac/Vdc  $\pm 15\%$  50/60 Hz for NET250-1AD / From USB for NET250-2AD

Consumption

5,5 VA

Galvanic insulation

Between power supply and serial on NET250-1AD

**Operating conditions** 

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

Material

Polycarbonate V0

Weight

Approx. 120 g

Fixing

Din Rail EN50022

Software features

Baud-Rate

9600, 19200 and 38400 bit/s selectable from dip-switch

Radio channels setting

Possibility to select (1..7) wireless transmission channel through Hyper-Terminal

## Преобразователи температуры PIXSYS.

The transmitters for DIN/B head convert a signal acquired by temperature probes PT100, PT1000 or Ni100 (with 2-, 3- and 4-wire connections) or Thermocouples into a 4..20 mA signal (2-wire technology), current-loop. These converters ensure high accuracy on the reading scale with 16-bit conversion and possibility to rescale the output 4..20mA basing on input range.



Available also the version with galvanical isolation (cod. 2000.35.015).

### Quick and simple programming

The programming procedure uses the RFid (NFC) function with a dedicated programmer that allows you to perform all settings and any calibrations quickly without the need power and connect up the converter. An App for mobile and Android devices equipped with an NFC antenna makes it possible to program, modify and see data directly in the field or on the move.

2.8K Word non volatile (circular buffer) memory are dedicated to a data-logging function with a sampling time that can be set by the user.

The RF-Programmer software (available to download from the reserved access area of the website) allows you to download, view on the PC and print the temperature-time curve.

Ordering codes
2000.35.010
RTD (PT100/NI100/PT1000) > 420mA Loop Powered
2000.35.015
RTD (PT100/NI100) + TC (K-S-R-J-T-N-B-E)> 420mA Loop Powered - isolated version
2000.35.012
Programmer RF/RFID > USB
Main features
Box
23 mm, Ø 45 mm
Power supply
Loop Power (2 wires connection) operating range 6-32 Vdc
Connection
Screw pins
Fixing
On DIN/B head
Operating conditions
Temperature -40+85 °C, humidity 3090 uR% (non condensing)
Material
Nylon (PA66)

Weight Approx. 30 g Sealing IP 20 According to CE, EN 61000-6-4, EN 61000-6-2, UL 61010-1 Programming Wireless with RFid technology (NFC) Technical data **Output resolution** 1 μΑ Over-range output f.s. + 5°C Under-range output f.s. - 5°C Error output Selectable between 21,5mA or 3,8mA Current output protection Approx. 30 mA Rejection 50-60 Hz Max. transmission error Greater between 0,1% f.s. or 0,2°C Sampling/response time 300msec / 600 msec Cable resistance Max 20Ω Temperature coefficient < 100 ppm

## Преобразователи температуры DIN PIXSYS.

DIN rail mounted signal converter - RFid / NFC

The signal transmitter from DIN rail converts a signal received through probes PT100, Ni100 (with 2-, 3- and 4-wire connections), thermocouples or process signals (0/4..20mA, 0..10V) into a normalised current signal 4..20 mA (2-wire power loop). The characteristics of these converters ensure high precision on the reading scale with 16 bit conversion and the possibility to rescale the analogue output 4..20 mA according to the input set. The RTD/TC input is galvanically isolated at 2500 V from the analogue output, which ensure safer cables in environment where they may be disturbed or in cases where there different voltages in the same system.

Ordering codes 2000.35.016 RTD (PT100/NI100)+ TC (K-S-R-J-T-N-B-E) to 4..20 mA Loop Powered - isolated version 2000.35.017 0..20 mA / 4..20 mA / 0..10V / resistance to 4..20 mA loop powered - isolated version Main features Box DIN43880, Din rail mounted 1 module Current output 4..20 mA Loop Power (2 wires), operating range 6-32 V DC Connection Screw pins Operating temperature -40+85 °C, humidity 30..90 RH% (non condensing) Material Box: polycarbonate V0; Front panel: silicon V0 Weight Approx. 30 g Set-up Programmable by RFid (NFC) Technical data

Selectable analogue input

PT100 (2/3/4 wires), Ni100, TC K-S-R-J-T-N-B-E, 0..20 mA, 4..20 mA, 0..10V, 0..4000Ω

**Digital Input** Button for calibration functions Isolation Galvanic isolation input/output **Output resolution** 1μA Failure output selectable 21,5 mA or 3,8 mA Current output protection 30 mA approx. Rejection 50-60 Hz Sampling/response time 300ms / approx. 600 ms Cable resistance Max 20Ω Temperature coefficient < 100 ppm

## Преобразователи тока PIXSYS.

Signal converter from Current transformer to 4...20mA / RS485



The 2000.35.013 is a direct and alternating current transformer, galvanically isolated from the measuring circuit. The device is functionally and aesthetically similar to a standard active TA, but is able to measure the TRMS direct and alternating component. The transformer is powered in loop with current 4-20mA and thus does not require a direct power supply. It is the first Hall loop-powered transformer with a precision of 0.5% on the market.

On the version with serial output RS485 Modbus (2000.35.014) and analogue output 0-10V, the span and zero can be freely configured and a Modbus address assigned; it is easy to configure using the library in the development tools of Pixsys HMIs.

Ordering codes

2000.35.013

Current transformer >4...20mA Loop Powered 2000.35.014 Current transformer >RS485 Modbus /slave + 0...10Volt Main features Dimensions 46,1 x 63 x 26,4 mm (terminal block excluded) Power supply Loop-powered (2 wires) operating range 11-30 Vdc 12...35Vdc on version with RS485 Connection screw terminal 5,08mm Fixing DIN-rail (horizontal/vertical) **Operating conditions** Temperature -40+85 °C, humidity 10..90 uR% (non condensing) Material Gray PBT, epoxy resin filling Weight Approx. 72 g **Dip-switch** 2/8 poles Conformity standards CE, EN 61000-6-4, EN 61000-6-2, EN 61010-1 Technical data Measure type TRMS Resolution and accuracy 12 Bit - 0,5% full scale Capacity 50 Arms or 25 Arms selectable by Dip-Switch, bipolar (+/-50A dc or +/-25A dc) Output

4...20mA or 0...10Volt + RS485 Passband -3dB DC or 20...2000Hz Response speed 1000 ms Isolation 3 Kv on bare cable Overload 2 kA impulsive, 300 continuous Crest factor 2 Hysteresis on measured value

0,15% full scale

# Сетевой анализатор PIXSYS.

The 2000.35.021 is a monophase Energy / Power Meter that can measure current and voltage AC/DC TRMS.

Isolation for the input voltage is 4kV.

Available via the RS485 Modbus output are: Irms, Vrms, Watt, Var, Va, Vpk, Ipk, Frequency, Coso, Bidirectional Energy, THD.

The device can be configured via the RS485 port.

Can be mounted on the DIN rail.

Ordering code

2000.35.021

Energy meter >Modbus RTU RS485

Main features

Dimension

46,1x 63x 26,4 mm

Power supply

9..30 V DC

Connection screw

Terminal 5,08mm



Fixing DIN-rail (horizontal/vertical) Operating conditions Temperature -15..+65 °C RH 10..90% not condensing Condizioni ambientali Temperatura -15 +65 °C, umidità 10..90 uR% Material PBT, grey Weight Approx. 80g Overvoltage category Cat III up to 600V; Cat II up to 1000V Confirmity standards EN61000-6-4/2006 + A1 2011; EN64000-6-2/2005; EN61010-1/2010 Technical data Current range Up to 50 A AC/DC Voltage range Up to 800 V AC or 1000 V DC Measurement Irms, Vrms, Watt, Var, Va, Vpk, Ipk, Frequency, Coso, Energy bidirectional, THD Accuracy Voltage, Current, Active Power, Reactive Power, Apparent power:< 0,5% F.S. Frequency: +/- 0,1 HZ. ENERGY: +/- 1% of reading. Vpeak, I peak: +/- 5% f.s. Sampling rate 11k Samples per Second Input impedence  $1 M \Omega + / -1\%$ Hysteresis 0,15 % f.s. Output

Modbus RTU RS485

Ordering codes

# Датчики температуры PT100 PIXSYS.

Temperature probe - 6mm diameter with 3-wire cable

Temperature measurement by resistance thermometers relies on a property common to all conductors and semiconductors, which is the variation in their electrical resistance in relation to temperature change. PT100 sensor has a resistance of 100 ohms at 0 °C and the coefficient of variation is 0.00385 ohm per degree centigrade. The technology made to meet modern demands in accuracy is based on thin platinum layers on a ceramic substrate (thin-film resistors).

Since the resistance of the sensor is the total of the resistance of the connecting cables (variable with temperature), a three-wire system is used to cancel out the error.

The PT100 Easy-up probes are assigned a numeric code that once inserted allows the Pixsys controllers to automatically set the main operating parameters.

2000.90.039 BLI-PT100B-6X50-A304-0000-3 m GSC cable 2000.90.001 BLI-PT100B-6X100-A304-0000-3 m GSC cable 2000.90.153 BLI-PT100B-6X50-A304-0000-3 m TTS cable 2000.90.520 BLI-PT100B-6X80-A304-0000-2 m TTS cable 2000.90.036 BLI-PT100B-6X100-A304-0000-3 m TTS cable 2000.90.521 BLI-PT100B-6X130-A304-0000-2 m TTS cable 2000.90.522 BLI-PT100B-6X230-A304-0000-2 m TTS cable Sliding junction ordering codes 2000.30.003 Sliding junction Ø 6x1/8" GAS 2000.30.006



Sliding junction Ø 6x1/4" GAS 2000.30.027 Sliding junction Ø 6x1/4" NPT 2000.30.009 Sliding junction Ø 6x1/2" GAS Main features Stem diameter 6mm Immersion material Steel AISI 304 Internal insulation MgO Magnesium oxide >20Mohm at 25°C (500Vdc) Sensor PT100 class B (+/- 0,3°C at 25°C) GSC cable Silicon rubber, operating temperature -40 ... 250°C TTS cable Glass fiber, operating temperature -200 ... 500°C Sealing 40mm bend proof spring between cable and stem **Response time** 6,5 seconds (normative BS 1904/1984/CEI60751)

### 6mm diameter for air with 3-wire cable

Temperature measurement by resistance thermometers relies on a property common to all conductors and semiconductors, which is the variation in their electrical resistance in relation to temperature change. PT100 sensor has a resistance of 100 ohms at 0 °C and the coefficient of variation is 0.00385 ohm per degree centigrade. The technology made to meet modern demands in accuracy is based on thin platinum layers on a ceramic substrate (thin-film resistors).

Since the resistance of the sensor is the total of the resistance of the connecting cables (variable with temperature), a three-wire system is used to cancel out the error.

The PT100 Easy-up probes are assigned a numeric code that once inserted allows the Pixsys controllers to automatically set the main operating parameters.

Air holes in the protective casing allows the sensor to respond more quickly to temperature changes.

Ordering codes 2000.90.091 BLI-PT100B-AR/6X100-A304-0000-3 m GSC cable 2000.90.395 BLI-PT100B-AR/6X100-A304-0000-3 m TTS cable Sliding junction ordering codes 2000.30.003 Sliding junction Ø 6x1/8" GAS 2000.30.006 Sliding junction Ø 6x1/4" GAS 2000.30.027 Sliding junction Ø 6x1/4" NPT 2000.30.009 Sliding junction Ø 6x1/2" GAS Main features Stem diameter 6mm (special holes on the protective sheath) Immersion material Steel AISI 304 Internal insulation Not present Sensor PT100 class B (+/- 0,3°C up to 25°C) GSC cable Silicon rubber, operating temperature -40 ... 250°C TTS cable Glass fiber, operating temperature -200 ... 500°C
Sealing 40mm bend proof spring between cable and stem Response time 0.9 seconds (BS 1904/1984/CEI60751) Easy-Up code 2301

Diameter 6mm with DIN 3-wire head

Temperature measurement by resistance thermometers relies on a property common to all conductors and semiconductors, which is the variation in their electrical resistance in relation to temperature change. PT100 sensor has a resistance of 100 ohms at 0 °C and the coefficient of variation is 0.00385 ohm per degree centigrade. The technology made to meet modern demands in accuracy is based on thin platinum layers on a ceramic substrate (thin-film resistors).

Since the resistance of the sensor is the total of the resistance of the connecting cables (variable with temperature), a three-wire system is used to cancel out the error.

The PT100 Easy-up probes are assigned a numeric code that once inserted allows the Pixsys controllers to automatically set the main operating parameters.

 Ordering codes

 2000.90.530

 BOX-PT100B-6X30-MGO-1/4"/F-DIN/B

 2000.90.515

 BOX-PT100B-6X100-MGO-0000-DIN/B

 2000.95.515

 BOX-PT100B-6X100-MGO-0000-DIN/B with thermowell

 2000.90.516

 BOX-PT100B-6X200-MGO-0000-DIN/B

 2000.95.516

 BOX-PT100B-6X200-MGO-0000-DIN/B with thermowell

 2000.95.516

 BOX-PT100B-6X200-MGO-0000-DIN/B with thermowell

 2000.95.517

 BOX-PT100B-6X300-MGO-0000-DIN/B

 BOX-PT100B-6X300-MGO-0000-DIN/B

2000.90.518 BOX-PT100B-6X400-MGO-0000-DIN/B 2000.95.518 BOX-PT100B-6X400-MGO-0000-DIN/B with thermowell Sliding junction ordering codes 2000.30.003 Sliding junction Ø 6x1/8" GAS 2000.30.006 Sliding junction Ø 6x1/4" GAS 2000.30.027 Sliding junction Ø 6x1/4" NPT 2000.30.009 Sliding junction Ø 6x1/2" GAS Main features Stem diameter 6mm Immersion material Steel AISI 304 or 316 Internal insulation MgO Magnesium oxide >20mOhm at 25°C (500Vdc) Sensor PT100 class B (+/- 0,3°C up to 25°C) **Response time** 6,5 seconds (BS 1904/1984/CEI60751) Head DIN/B aluminium alloy, red epoxidic painting Sealing IP66 Operating temperature -100 ... +500°C

#### **Diameter 6mm with DIN head**

Temperature measurement by resistance thermometers relies on a property common to all conductors and semiconductors, which is the variation in their electrical resistance in relation to temperature change. The PT100 sensor has an ohmic value of 100 at a temperature of 0°C and its variation coefficient is 0.00385 Ohm per degree centigrade.



The technology adapts to meet modern requirements and is designed to provide more precise measurements by using fine sheets of platinum on a ceramic substratum (thin film resistors).

The converter in the head of the probe converts the signal to 4...20mA in order to transmit the temperature value to the process instruments with a pre-selected scale.

The PT100 Easy-up probes are assigned a numeric code that once inserted allows the Pixsys controllers to automatically set the main operating parameters.

Ordering codes 2000.90.494 BOX-PT100B-6X200-MGO-1/2"/F-DIN/B Transmitter 0..100°C --> 4...20mA Sliding junction ordering codes 2000.30.003 Sliding junction Ø 6x1/8" GAS 2000.30.006 Sliding junction Ø 6x1/4" GAS 2000.30.027 Sliding junction Ø 6x1/4" NPT 2000.30.009 Sliding junction Ø 6x1/2" GAS Main features Stem diameter 6mm Immersion material Steel AISI 304 or 316 Internal insulation MgO Magnesium oxide >20Mohm @ 25°C (500Vdc) Sensor

PT100 class B (+/- 0,3°C up to 25°C) Response time 6,5 seconds according to normative BS 1904/1984/CEI60751 Head DIN/B aluminium league, red epoxidic painting Sealing degree IP66 Operating temperature -100 ... +500°C Transmitter Calibrated at 0...100°C >4...20mA **Датчики температуры РТ1000 PIXSYS.** 

Temperature probe - diameter 4-5-6mm

Temperature measurement by resistance thermometers relies on a property common to all conductors and semiconductors, which is the variation in their electrical resistance in relation to temperature change.



The PT1000 sensor has an ohmic value of 1000 at a temperature of 0°C.

Differing from the more common **PT100 sensor**, the stronger signal of the **PT1000** provides greater accuracy and eliminates the presence of the third wire necessary to compensate the ohmic value of the cable. The reading range and construction of this sensor make it suitable for air conditioning or industrial process systems with decimal precision.

Ordering codes 2000.90.232 BLI-PT1000B-4X40-A304-0000-2 m GSC cable 2000.90.233 BLI-PT1000B-5X20-COST-0000-2 m GPT cable 2000.90.234 BLI-PT1000B-6X50-A304-0000-2 m TTS cable Main features Stem diameter 4-5-6mm

Immersion material Steel AISI 304 / Thermoplastic rubber Sensor PT1000B 0,12% 1000 Ohm up to 0°C (-50°C ...+500°C) **Response time** 15 seconds Strength 2000 Vac with resin Insulation 20 Mohm 500 Vcc TTS cable Glass fiber, operating temperature -200 ... 500°C GSC cable Silicon rubber, operating temperature -40 ... 250°C GOT cable Thermoplastic rubber -30 ... +105°C Sealing IP44 with cable TTS / IP67 with resin

# Датчики температуры TCJ PIXSYS.

6mm Diameter

The thermocouple is an electric circuit consisting of two metal conductors made of different materials welded at one end. Due to the Seedbeck effect, when there is a difference in temperature between the hot joint (welding point) and the cold joint at the other end of the conductors, an electromotive force is generated, which depends on the type of the two metals. To measure temperature with a thermocouple, the cold joint needs to be at a known temperature, so that the electomotive force generated depends solely on the hot joint.

The type J thermocouple consists of a positive conductor made of iron and a negative conductor made of constantan (copper-nickel). Suitable for measuring at medium temperatures in non-oxidising atmospheres due to the iron components.

Ordering codes

2000.90.523

BLI-TCJ-6X80-A304-0000-2 m TTS cable

2000.90.524 BLI-TCJ-6X130-A304-0000-2 m TTS cable 2000.90.525 BLI-TCJ-6X230-A304-0000-2 m TTS cable Sliding junction ordering codes 2000.30.003 Sliding junction Ø 6x1/8" GAS 2000.30.006 Sliding junction Ø 6x1/4" GAS 2000.30.027 Sliding junction Ø 6x1/4" NPT 2000.30.009 Sliding junction Ø 6x1/2" GAS Main features Sheath diameter 6mm Immersion material Steel AISI 304 Internal insulation MgO Magnesium oxide >20Mohm at 25°C (500Vdc) Sensor Thermocouple J (Fe-CuNi / iron-constantan), Wire 1,02mm, insulated junction GSC cable Silicon rubber, operating temperature -40 ... 250°C TTS cable Glass fiber, operating temperature -200 ... 500°C Sealing 40mm bend proof spring between cable and stem Response time 3,9 seconds (BS 1904/1984/CEI60751)

Operating range -200...+400°C Easy-Up code 2301

### With eyelet aperture Ø 5

The thermocouple is an electric circuit consisting of two metal conductors made of different materials welded at one end. Due to the Seedbeck effect, when there is a difference in temperature between the hot joint (welding point) and the cold joint at the other end of the conductors, an electromotive force is generated, which depends on the type of the two metals. To measure temperature with a thermocouple, the cold joint needs to be at a known temperature, so that the electomotive force generated depends solely on the hot joint.

The type J thermocouple consists of an iron positive conductor and constantan (copper-nickel) negative conductor. It is suitable for measuring medium temperatures in non-oxidising environments due to the iron components. The eyelet makes this version easy to mount to a specific reading point with screws.

Ordering codes 2000.90.077 BLI-TCJ-OC/5x10-COPPER-1,5 TTS cable-IS-0,25 Main features Sheath diameter Washer ext. Ø 10mm / Hole Ø 5 mm Contact material Stagnated copper Sensor Thermocouple J (Fe-CuNi / iron-constantan), Wire 0,25mm, grounded hot junction TTS cable Glass fiber, operating temperature -200 ... 500°C **Response time** 4,5 seconds (BS 1904/1984/CEI60751) Operating range -200...+400°C Easy-Up code

## Датчики температуры TCK PIXSYS.

6mm Diameter

The thermocouple is an electric circuit consisting of two metal conductors made of different materials welded at one end. Due to the Seedbeck effect, when there is a difference in temperature between the hot joint (welding point) and the cold joint at the other end of the conductors, an electromotive force is generated, which depends on the type of the two metals. To measure temperature with a thermocouple, the cold joint needs to be at a known temperature, so that the electomotive force generated depends solely on the hot joint.

The type K thermocouple consists of a positive conductor in Nickel-Chrome alloy and a negative conductor in Nickel-Aluminium. Suitable for measuring at high temperatures in oxidising environments.

Ordering codes 2000.90.537 BLI-TCK-6X100-A316-0000-3 m TTS cable 2000.90.068 BLI-TCK-6X100-I600-0000-3 m TTS cable 2000.90.538 BLI-TCK-6X200-A316-0000-5 m TTS cable 2000.90.025 BLI-TCK-6X200-I600-0000-5 m TTS cable Sliding junction ordering codes 2000.30.003 Sliding junction Ø 6x1/8" GAS 2000.30.006 Sliding junction Ø 6x1/4" GAS 2000.30.027 Sliding junction Ø 6x1/4" NPT 2000.30.009 Sliding junction Ø 6x1/2" GAS Main features Sheath diameter

6mm
Immersion material
Steel AISI 304 / AISI 316 / Inconel 600
Internal insulation
MgO Magnesium oxide >20Mohm @ 25°C (500Vdc)
Sensor
Thermocouple K (NiCr-NiAl / Cromel-Alumen), Wire 1,02mm, insulated junction
GSC cable
Silicon rubber, operating temperature -40 250°C
TTS cable
Glass fiber, operating temperature -200 500°C
Sealing
40mm bend proof spring between cable and stem
Response time
1,9 seconds (BS 1904/1984/CEI60751)
Operating range
A316 -100+600°C / I600 -100+800°C.
Easy-Up code
Code 2352 (-100+600°C - A316) , Code2351 (-100+800°C - I600)

### Diameter 15mm with DIN head

The thermocouple is an electric circuit consisting of two metal conductors made of different materials welded at one end. Due to the Seedbeck effect, when there is a difference in temperature between the hot joint (welding point) and the cold joint at the other end of the conductors, an electromotive force is generated, which depends on the type of the two metals. To measure temperature with a thermocouple, the cold joint needs to be at a known temperature, so that the electomotive force generated depends solely on the hot joint.

The type K thermocouple consists of a positive conductor in Nickel-Chrome alloy and a negative conductor in Nickel-Aluminium. The aluminia stem version is ideal for use in ovens/systems with high temperatures of up to 1250°C.

Ordering codes

2000.00.083



TCK-15x250-KER1-MN/INOX-DIN/B-IS2,30 2000.00.015 TCK-15x300-KER1-MN/INOX-DIN/B-IS2,30 2000.00.008 TCK-15x400-KER1-MN/INOX-DIN/B-IS2,30 2000.00.009 TCK-15x500-KER1-MN/INOX-DIN/B-IS2,30 2000.00.056 TCK-15x600-KER1-MN/INOX-DIN/B-IS2,30 Main features Stem diameter 15mm Immersion material Alumina 610 max 1500°C + Coupling steel AISI 316 Internal insulation Ceramic insulator Sensor Thermocouple K (NiCr-Ni), Wire Ø3.20mm, Insulated junction **Response time** 120 seconds Head DIN/B aluminium alloy, epoxodic painting Sealing IP66 Operating temperature 0°...+1250°C

# Датчики температуры РТС 1К PIXSYS.

6mm Diameter



The PTC thermoresistors are used to measure temperature for refrigeration, air conditioning, and heating applications. They consist of a cable, a sensor, and a steel or resinated polypropylene capsule.

The PTC Easy-up probes are assigned a numeric code that once inserted allows the Pixsys controllers to automatically set the main operating parameters.

Ordering codes 2000.90.042 BLI-PTC1K-6X30-A304-0000-3 m PVC cable 2000.90.147 BLI-PTC1K-6X30-A304-0000-3 m GSC cable 2000.90.136 BLI-PTC1K-6X40-A304-0000-3 m GSC cable 2000.90.198 BLI-PTC1K-6X40-A304-0000-6 m GSC cable Main features Stem diameter 6mm Immersion material Steel AISI 304 Sensor PTC KTY 82 - 121 1K 1% Range -55°C ...+150°C Accuracy 1% GSC cable Silicon rubber, operating temperature -40 ... 250°C PVC cable PVC -30 ... +105°C Sealing IP55 / IP67 with resin **Response time** K (constant)= 10sec. Water flow speed =2m/s

Strength
2000Vac with resin
Insulation
20 Mohm 500Vcc

# Датчики температуры NTC 10К PIXSYS.

6mm diameter

The NTC thermoresistors are used to measure temperature for refrigeration, air conditioning, and heating applications. They consist of a cable, a sensor, and a steel or resinated polypropylene capsule.

The NTC Easy-up probes are assigned a numeric code that once inserted allows the Pixsys controllers to automatically set the main operating parameters.

Ordering codes 2000.90.200 BLI-NTC10K-1%-6X15-COST-0000-1,5 m GOT cable 2000.90.316 BLI-NTC10K-6X50-A304-0000-1,5 m GSC cable Main features Stem diameter 6mm Immersion material Steel AISI 304 / Thermoplastic rubber Sensor NTC10K Range -50°C ...+120°C Accuracy +/-1% beta 3435 GSC cable Silicon rubber, operating temperature -40 ... 250°C GOT cable Thermoplastic rubber, -30 ... +105°C



Sealing IP55 / IP67 with resin Response time 10" V=2m/sec (liquid) K (constant)= 10sec. Water flow speed =2m/s Strength 1500Vac with resin Insulation 20 Mohm 500Vcc

## Тензодатчики ULC2 PIXSYS.

Dynamic load cell 200Kg F.S.



The ULC2 high dynamicity load cell is designed to detect force/tension typically in applications with cylinders. In its different configurations, it can also be used for measurements on cantilever beams, platforms, or traction compression control applications.

The ULC2 is unique thanks to its high precision, speed, and repeat measurement function.

In the dynamic applications on cylinders, thanks to the use of our electronic PID controls, speeds of 100m/min have been reached with constant tension on belts, plastic films and fabrics. The jaw system for rapid cylinder/bearing extraction is available with a wide range of accessories for a highly flexible modular construction.

1000Kg F.S. version available with grey/red anodized aluminium or stainless steel body, 2m isolated cable in PUR, with electrical connection markings.

Ordering codes 5000.00.030 ULC2 cell unit - 200Kg F.S. accuracy 0,2% 5000.00.031 Clamp support for oscillating bearing 22205 5000.00.032 Adapter flange - for quick fixing and regulation 5000.00.033 Adapter plate M40x1,5mm centraggio 50mm 5000.00.034 Rear cover 50mm

Main features Nominal charge 200Kg F. S. Nominal sensitivity to the F.S. 2 mV / Volt Nominal power-supply tension 10 Vdc Nominal resistance 350 ohm Output cable PUR 4 wires + shielded 2 mt **Technical details** Total error < +/- 0,2% FS Tolerance on sensitivity < +/- 0,1% FS Zero unbalancement < +/- 0,5% FS Temperature influence on the zero < 0,01% FS / °C Temperature influence on F.S. < 0,02% FS / °C Insulation resistance >10 Gohm Compensated temperature field -10...+40°C Max. applicable load 150% F.S. Max. lateral load 100% F.S.

## Инфракрасные датчики PC21-151-301 PIXSYS.

Non-contact temperature transmitters

For measuring temperatures without contact, this range of small infrared sensors is suitable for industrial applications. Within the steel casing, they can operate with good accuracy and linearity in ambient temperatures of up to 50°C. A range of spots (reading areas) are available as well as two temperature scales with normalised output 4...20mA.

Accessories include air purge collars to keep the lens clean and fixed or adjustable brackets. The addition of the power terminal available on Pixsys instruments simplifies wiring and allows direct 2-wire connection.

Ordering codes 2000.20.018 PC21MT-0 sensor spot 2:1 out 4...20mA/0...250°C 2000.20.019 PC151MT-0 sensor spot 15:1 out 4...20mA/0...250°C 2000.20.022 PC151HT-0 sensor spot 15:1 out 4...20mA/0...500°C 2000.20.024 PC301MT-0 sensor spot 30:1 out 4...20mA/0...250°C 2000.20.021 PC301HT-0 sensor spot 30:1 out 4...20mA/0...500°C 2000.20.012 AIR PURGE COLLAR, accessory for the cleaning of reading optics. Main features Measuring ranges Low(L) -20...100°C; Medium(M) 0...250°C; High(H) 0....500°C Emissivity Fixed at 0,95 (modifiable on controller OFFSET parameter) **Optical resolution** PC21 2:1; PC151 15:1; PC301 30:1 Accuracy

+/- 1% of reading or +/- 1°C whichever greater Response time
240 ms (90% response)
Spectral range
8 to 14 um
Power supply
24Vdc (min. 9Vdc max. 28 Vdc)
Cable
1 m, two wires plus display
Operating temperature
0...50°C
Material
Stainless Steel AISI304

#### Non-contact temperature sensor with cooling sleeve

For measuring temperatures without contact, this range of small infrared sensors is suitable for industrial applications. The steel housing complete with cooling sleeves can operate with high precision and linearity at ambient temperatures of between 140°C to 250°C. Different spots (reading areas) and temperature scales are available with output normalised at 4...20mA.



Accessories include air purge collars to keep the lens clean and fixed or adjustable brackets. The addition of the power terminal available on Pixsys instruments simplifies wiring and allows direct 2-wire connection.

Ordering codes

2000.20.023

PC151HT-0 sensor spot 15:1 out 4...20mA/0...500°C with cooled housing

2000.20.025

PC301HT-0 sensor spot 30:1 out 4...20mA/0...500°C with cooled housing

2000.20.012

AIR PURGE COLLAR, accessory for the cleaning of reading optics

Main features Measuring ranges Low(L) -20...100°C; Medium(M) 0...250°C; High(H) 0....500°C Emissivity Fixed at 0,95 (modifiable on controller OFFSET parameter) **Optical resolution** PC21 2:1; PC151 15:1; PC301 30:1 Accuracy +/- 1% of reading or +/- 1°C whichever is greater Response time 240 ms (90% response) Spectral response 8 to 14 um Power supply 24Vdc (min. 9Vdc max. 28 Vdc) Cable 1 m two wires plus display Operating temperature with cooled housing 0...170°C (air cooling); 0...250°C (water cooling) Material Stainless Steel AISI304

## Инфракрасные датчики PU151 PIXSYS.

Non-contact temperature transmitters with USB



For measuring temperatures without contact, this range of small infrared sensors is suitable for industrial applications. In the PyroUSB version, all programming of the parameters can be managed via USB with a special software. The reading scale can be set from -40 to 1000°C, set the coefficient of the emission of the material being measured and show the trace of the process value in a graph.

Accessories include air purge collars to keep the lens clean and fixed or adjustable brackets. The addition of the power terminal available on Pixsys instruments simplifies wiring and allows direct 2-wire connection.

Ordering codes 2000.20.020 PU151USB sensor spot 15:1 out 4...20mA/-40...1000°C with USB Main features Measuring ranges -40....1000°C (free setting by CalexSoft software) Emissivity Free setting by CalexSoft software **Optical resolution** 15:1; Accuracy +/- 1% of reading or +/- 0,5°C whichever is greater Response time 240 ms (90% response) Spectral response 8 to 14 um Power supply 24Vdc (min. 9Vdc max. 28 Vdc) Cable 1 m, two wires plus display Operating temperature with cooled housing 0...70°C Material Stainless Steel AISI304 Outputs Temperature 4...20mA on range -40...1000°C **Communication port** USB for connection to PC with "Calexsoft" software

## Инфракрасные датчики PB151 PIXSYS.

IR temperature sensor with RS485 Modbus output

The PyroBus series is a range of compact IR sensors measuring temperatures from - 20°C to 500°C with a response time of 240ms.



Two-way digital communication via a built-in RS485 Modbus RTU interface enables the user to adjust the emissivity setting, compensate for reflected energy, apply filtering, select maximun/minimum/average or instantaneous readings and peak or valley hold processing.

The PyroBus may be installed as a standalone network of sensors, or integrated into an existing Modbus network.

There are applications for the PyroBus in a wide range of industries including food processing, plastics thermoforming, automotive, power industry, gas cylinder filling.

Ordering codes 2000.20.031 PB151 sensor spot 15:1 RS485 Modbus-RTU Outputs Communication port RS485, Modbus RTU / Slave Main features **Temperature Range** - 20 to 500°C Interface RS485 Modbus RTU Accuracy ±1% of reading or ±1°C whichever is greater Repeatability ± 0.5% of reading or ± 0.5°C whichever is greater Emissivity 0.2 to 1.0 **Response Time** t90 240 ms (90% response) Spectral Range

8 to 14 µm Supply Voltage 12 V DC nominal (6 to 13 V DC) Supply Current 50 mA max **Baud Rate** 9600 baud (Other configurations available on request) Modbus Data Format 8 data bits, no parity, 1 stop bit Housing Stainless Steel Dimensions 18 mm diameter x 103 mm long Thread Mounting M16 x 1 mm pitch Cable Length 1m (longer lengths available to order)

## Инфракрасные датчики EXTEMP PIXSYS.

Intrinsically safe infrared temperature sensor, ATEX and IECEx certified

**Ex** 

These sensors are designed primarily for use in hazardous areas in conjunction with a suitable safety barrier or isolator. All models have been certified Intrinsically Safe for use in gas and dust hazardous Areas. They comply with the European ATEX Directive 94/9/EC.

ExTemp intrinsically safe non-contact infrared temperature sensors measure the temperature of an area of the surface of a solid or liquid, and transmit this as a twowire, linear 4-20 mA output.

Temperature ranges from -20°C to 1000°C are available. Models are available with a fixed or adjustable emissivity setting, and may be used to measure a wide variety of target materials, including food, paper,textiles, plastics, leather, tobacco, pharmaceuticals, chemicals, rubber, coal, asphalt and paint.

A choice of precision optics is available to measure small or large targets at short or long distances.

The optional USB adapter and included software allow configurable models to be connected to a PC for temperature indication, sensor configuration and data acquisition.

Ordering codes

2000.20.049

Ex301-LT-C-5 Sensor Spot 30:1 Out 4..20mA / -20..100°C

2000.20.050

Ex301-HT-C-5 Sensor Spot 30:1 Out 4..20mA/ 0..500°C

## Инфракрасные датчики PYROMINI PIXSYS.

Fixed infrared temperature sensor with remote sensing head

The PyroMini Series is a range of miniature **non-contact infrared temperature sensors** with separate electronics modules.

All models have an adjustable emissivity setting and are capable of measuring a wide variety of target materials, including food, paper, textiles, plastics, leather, tobacco, pharmaceuticals, chemicals, rubber, coal and asphalt.

The optional touch screen interface provides temperature indication, alarms, sensor configuration and data logging to MicroSD Card.

The optional high-temperature sensing head may be used in ambient temperatures of up to 180°C without cooling.

The low-noise cable on high ambient temperature models is resistant to interference from movement, so it is ideal for mounting on moving objects such as robot arms.

A choice of optics are available to measure small or large targets at short or long distances, and there is a choice of 4-20 mA, RS485 Modbus and alarm relay outputs.

Main features

Measuring ranges

(L) -20..100 °C; (M) 0..250 °C ; (H) O..500°C, CT configurable up 1000 °C

**Emissivity setting** 

Adjustable via rotary switch or touch-screen

**Optical resolution** 

2:1 - 15:1 - 30:1

Accuracy

± 1% of reading or ± 1 °C whichever is greater

Response time

240 ms (90% response)

Spectral range

8 to 14 µm

Power supply

24 V DC ± 5 %



Cable

1 m, two wires plus shield

**Operating temperature** 

0..60 °C, optional sensing head up to 180 °C (no cooling required)

Output

4..20 mA or RS485

Touchscreen (optional)

2.83", resistive TFT, 320x420 pixel Configuration of sensor, temperature visualization, graph view.

Datalogging

Optional via touchscreen, slot for MicroSD Card 2Gb (not included) 28.4 milion readings, .CSV format

Ordering codes

2000.20.036

PM-MA-151-CT-CRT spot 15:1 out 4..20mA / -40..1000 °C Touchscreen

2000.20.037

PM-MA-151-HT-CB spot 15:1 out 4..20mA / 500°C

2000.20.038

PM-MA-151-XT-CB spot 15: out 4..20mA / 0..1000°C

2000.20.039

PM-MA-301-HT-CB spot 30:1 out 4..20mA / 0..500°C

2000.20.040

PM-MA-301-XT-CB spot 30:1 out 4..20mA / 0..1000°C

## Инфракрасные датчики PyroNFC PIXSYS.

Smartphone Configurable Infrared Temperature Sensor

The PyroNFC is a general-purpose infrared temperature sensor. It measures non-reflective non-metals straight out of the box using default settings.



The surface temperature of materials including paper, thick plastics, wood and manufactured board, painted surfaces, tarmac, bulk materials, food, pharmaceuticals and organic materials is measured accurately and easily.

The sensor is fully configurable for emissivity setting, averaging, peak or valley hold processing, reflected energy compensation, alarm and more, via NFC (Near Field Communications) with the free PyroNFC app for Android.

Ordering codes 2000.20.069 PN151 sensor spot 15:1 NFC out 0-10V/ 0...1000°C Main features Measuring ranges 0 to 1000°C Emissivity Adjustable via app **Optical resolution** 15:1 Accuracy ± 1.5% of reading or ± 1.5°C, whichever is greater Response time 125 ms (90% response) Spectral range 8-14 μm Power supply 24Vdc (min. 9Vdc max. 28 Vdc) Cable 1 metre standard (longer lengths available to order) Operating temperature 0°C to 80°C Material Black anodised aluminium and ABS Configuration Via Android app using NFC-equipped device (e.g. smartphone or tablet)

## Датчики давления ECT PIXSYS.

Low ranges Pressure Transmitter



Ideal for use with oleodynamic or hydraulic systems with low pressures requiring high precision and repeatability.

Ordering codes 2000.40.088 ECT0.1A range 0...100 mBar, Ceramic 2000.40.089 ECT0.2A range 0...200 mBar, Ceramic 2000.40.090 ECT0.4A range 0...400 mBar, Ceramic 2000.40.091 ECT0.6A range 0...600 mBar, Ceramic Main features Sensor Thick film on ceramic (Al2/O3) Output 4...20 mA Power supply - 9...30Vdc 2 wires connection Process temperature -25...+85°C Accuracy at 25°C +/-0,5% on full scale (typ.) Electrical connection DIN43650-A Process connection 1/4" G



Housing AISI316L EMC emissivity EN/IEC 61000-6-3/2 Sealing IP65

**Pressure transmitter** 

Relative pressure transmitter with thick film on ceramic base technology. Output signal 4...20mA or 0...10Volt. The transmitter can be powered by the Pixsys controller. The steel housing, the 1/4"G or 1/4" NPT thread and the DIN pipette connector make installation in the field quick and easy.



Ideal for use with oleodynamic or hydraulic systems with pressures of up to 100 Bar that require high precision and repeatability. For pressures greater than 100 Bar, the NAT series is more suitable as it doesn't use O-ring seals and offers excellent resistance to system over-pressure or pressure peaks with a wide range of fluids.

Ordering codes 2000.40.100 ECT1.0A range 0...1 Bar ; 4...20mA 2000.40.101 ECT2.5 range 0...2,5 Bar ; 4...20mA 2000.40.103 ECT6.0A range 0...6 Bar ; 4...20mA 2000.40.104 ECT10.0A range 0...10 Bar ; 4...20mA 2000.40.105 ECT16.0A range 0...16 Bar ; 4...20mA 2000.40.106 ECT25.0A range 0...25 Bar ; 4...20mA 2000.40.107 ECT40.0A range 0...40 Bar ; 4...20mA 2000.40.108

ECT100.0A range 0...100 Bar ; 4...20mA 2000.40.119 ECT-1.3A range -1...3 Bar ; 4...20mA 2000.40.122 ECT-1.0A range -1...0 Bar ; 4...20mA Ordering codes 2000.40.033 NAT400.0A range 0...400 Bar ; Out. 4...20mA Available ranges (NAT) 2,5 to 1000 Bar Main features Sensor Thick film on ceramic (Al2/O3) Output 4...20 mA (options at 0...10Volt) Power supply - 9...30Vdc 2 wires connection Operating temperature -25...+85°C Accuracy at 25°C +/- 0,3% on full scale (typ.) Electrical connection DIN43650-A **Process connection** 1/4" G Housing material AISI316L **EMC** emissivity EN/IEC 61000-6-3/2 Sealing

#### IP65

## Датчики давления FPT PIXSYS.

Pressure transmitter with flush membrane



Flush membrane Transmitter FPT is based on thin-film-on-steel technology and high performance ASIC chip electronics. It therefore ensure a high level of accuracy over a wide temperature range and excellent long-term stability in combination with an extraordinary smooth diaphragm surface.

The AISI316L steel housing, the 1/2"G thread and the DIN43650-A connector make installation on site quick and easy.

The transmitter can be powered by Pixsys controller series ATR/STR.

Ideal for oleodynamic or hydraulic applications at a wide range of pressures with good precision and repeatability. This flush membrane series is suitable for food processing technologies.

On request, linearisation in meters of water column is available for reading on tank levels.

Ordering codes

2000.40.138

FPT1.0A 0...1 Bar Flush membrane

2000.40.139

FPT4.0A 0...4 Bar Flush membrane

2000.40.140

FPT6.0A 0...6 Bar Flush membrane

2000.40.141

FPT10.0A 0...10 Bar Flush membrane

2000.40.144

FPT25.0A 0...25 Bar Flush membrane

2000.40.143

FPT100.0A 0...100 Bar Flush membrane

Main data

Sensor

Thin film on steel

Output

4...20 mA

Supply 2 wires 24Vdc (9...32Vdc) Media temperature -40...+125°C Accuracy @ 25°C +/- 0,3% FS typ., Long term stability 1 year = +/-0,2% FS typ. Electrical connector DIN43650-A (EN175301-803A) Pressure connection 1/2" G male, flush membrane Housing AISI316L Sealing IP65 Measuring range 0...0,2Bar; 0...100Bar

# Датчики давления Dynisco PIXSYS.

Pressure transmitter with flush membrane



Flush membrane Transmitter FPT is based on thin-film-on-steel technology and high performance ASIC chip electronics. It therefore ensure a high level of accuracy over a wide temperature range and excellent long-term stability in combination with an extraordinary smooth diaphragm surface.

The AISI316L steel housing, the 1/2"G thread and the DIN43650-A connector make installation on site quick and easy.

The transmitter can be powered by Pixsys controller series ATR/STR.

Ideal for oleodynamic or hydraulic applications at a wide range of pressures with good precision and repeatability. This flush membrane series is suitable for food processing technologies.

On request, linearisation in meters of water column is available for reading on tank levels.

Ordering codes

2000.40.138

FPT1.0A 0...1 Bar Flush membrane

2000.40.139

FPT4.0A 0...4 Bar Flush membrane

2000.40.140

FPT6.0A 0...6 Bar Flush membrane

2000.40.141

FPT10.0A 0...10 Bar Flush membrane

2000.40.144

FPT25.0A 0...25 Bar Flush membrane

2000.40.143

FPT100.0A 0...100 Bar Flush membrane

Main data

Sensor

Thin film on steel

Output

4...20 mA

Supply

2 wires 24Vdc (9...32Vdc)

Media temperature

-40...+125°C

Accuracy @ 25°C

+/- 0,3% FS typ., Long term stability 1 year = +/-0,2% FS typ.

Electrical connector

DIN43650-A (EN175301-803A)

Pressure connection

1/2" G male, flush membrane

Housing

AISI316L

Sealing

IP65

Measuring range

## Датчики давления ECL PIXSYS.

Submersible Pressure transmitter

Relative pressure transmitter with piezoresistive sensor suitable for low and high pressure ranges.

Body in steel and titanium for strength and suitable for measuring levels of wells, groundwater, tanks, purification systems, lakes and rivers, with measurements in mBar/Bar and in m/H2O. The PUR connection cable is particularly durable and suitable for the harshest conditions, with a tube for air compensation.

A longer

Ordering codes

2000.40.149

ECL-Sens. Press. Immergible 0..200 mBar 2mt Cable 10m, OUT 4..20 mA

2000.40.150

ECL-Sens. Press. Immergible 0..400 mBar 4mt Cable 10m, OUT 4..20 mA

2000.40.151

ECL-Sens. Press. Immergible 0..500 mBar 5mt Cable 10m, OUT 4..20mA

2000.40.152

ECL-Sens. Press. Immergible 0.600 mBar 6mt Cable 10m, OUT 4..20 mA

Main features

Sensor

Ceramic film

Output

4...20 mA (reverse polarity and short circuit protected)

Power supply

9...30 V DC, 2 Wires connection

Operating temperature

-25...+80°C

Accuracy at 25°C

+/- 0,3% on full scale

Range

from 0..0,1 Bar to 0..25 Bar

Sealing

IP68

Housing material

AISI 316 L - DIN 1.4435

Immunity

EN61000-4-2/-3/-4/-5/-6, Naval certification GL

Weight

Approx. 200 gr.

## Датчики влажности RH96 PIXSYS.

Relative humidity and temperature transmitter



Due to the intrinsic precision of the sensor and the adjustment time of the measurement, this compact transmitter is ideal for low-cost applications for monitoring and control in industrial or domotic environments.

There is a choice of 2 protective hoods and two output signals, 0...10Volt or 4...20mA. A wall bracket is included in the package.

Ordering codes

2000.50.018

RH96-3GA - Sens. RH 4...20mA Metal grid filter

2000.50.019

RH96-3BA - Sens. RH 4...20mA Sintered filter

2000.50.020

RH96-3GVP - Sens. RH 0...10Volt + PT100 Metal grid filter

2000.50.021

RH96-3BVP - Sens. RH 0...10Volt + PT100 Sintered filter

Main features

Size

Stem 126mm x 20mm

Power supply

12...30Vdc

Consumption 3,5 mA max on version 0...10Volt Operating temperature -10°C ... +60°C Working range 6...100% RH Accuracy at 25°C +/- 5% RH (15...90% RH) **Response time** Approx. 15 min Cable 3 m EASY-UP (HR+T) code Code 6600 (for ATR401 and ATR171) EASY-UP (HR) code Code 2401 (all controllers) Outputs RH 0...1Volt , 4...20mA Temperature PT100 3 wires

## Датчики влажности EE060-EE061 PIXSYS.

Humidity and temperature transmitter

EE060/EE061 series are compact transmitters for humidity and combined humidity / temperature measurement with excellent price/performance ratio, optimized for OEM applications.

The EE060 has a voltage output (0-1/5/10V) and an active humidity and temperature signal. The EE061 has a current output (4-20mA) and an active humidity and a passive temperature signal.



Wide temperature and supply voltage ranges, excellent long term stability and the optional sensor coating allow the use in many applications

Ordering codes

2000.50.023

EE061-FP6A1K300 Sens. RH 4..20mA + PT100

2000.50.026

EE061-F61K300 Sens. RH 4..20mA

2000.50.035

EE060-HT1xPNEB Sens RH 0..1V

Main features

Size

Stem 116mm x 12mm (version with output 0...1Volt) , Stem 159mm x 12mm (version with output 4...20mA)

Power supply

4,5...30 V DC (version with output 0...10 V) , 9...28 V DC (version with output 4...20mA)

Power Consumption

1,5 mA (typ. on version 0...10 V)

Operating temperature

-40°C ... +60°C

Working range

0...100% RH

Accuracy at 20°C

+/- 3% RH (10...90% RH), +/- 5% RH (<10%...>90% RH)

**Response time** 

3 sec (typ.)

Cable

2 m

Filter type )

Metal grid, Stainless sintered steel, Sintered teflon

EASY-UP code

(HR in 4..20mA)

Code 2401 (all controllers) Output RH 0...1V , 4...20mA Temperature PT100 3 wires

# Датчики влажности EE071 PIXSYS.

Humidity and temperature transmitter with RS485 - Modbus

The digital humidity / temperature transmitter EE071 is optimized for the flexible use in bus applications. The standard modbus RTU protocol is implemented on the RS485 interface. The modbus transmitter EE071 is extremely energy efficient and also ideal for use in battery-powered devices.

Calibration data and all other measurement features like linearization and temperature compensation are stored in the electronic inside the probe. By this EE071 is interchangeable and the plug connection allows replacement within seconds. The humidity and temperature measured values as well as the calculated variables dew point and mixing ratio is available on the bus interface.

Ordering codes 2000.50.027 EE71-HTPB - Sens. RH/T RS485, Metal grid 2000.55.015 Connector M12x1 - Sens. EE71 Main features Size Stem 75mm x 12mm Power supply 4...22Vdc Consumption typ. 0.2mA (with sampling time 1 sec. and without communication) Operating temperature -40°C ... +80°C Working range 0...100% RH Accuracy at 20°C +/- 2% RH ( 0...90% RH), +/- 3% RH (90%...100% RH) Response time 1 sec (typ.) Output RS485 Modbus RTU / Slave - 9600Baud, 8+1, even parity Filter Metal grid (typical), sintered Teflon Connector M12x1, 4 wires+shield

# Датчики влажности EE210/EE160 PIXSYS.

Humidity and temperature transmitter

The EE210 is the ideal transmitter for high accuracy measurement of relative humidity and temperature in demanding climate control applications. With encapsulated measurement electronics inside the sensing probe and coating protection of the humidity sensor, EE210 can be employed even in harsh and aggressive environment.

Specially designed for HVAC, the EE160 is a cost-effective and still highly accurate transmitter for relative humidity and temperature. With encapsulated measurement electronics inside the sensing probe and coating protection of the humidity sensor, EE160 offer outstanding long term stability and reliability.

Ordering codes

2000.50.033

EE210 HT6XPAXBUWTX024M Out RH 4..20mA + Temp. 4..20 mA - wall mounting

2000.50.034

EE210 HT6XPBXBUWTX024M Out RH 4..20mA + Temp 4..20 mA - duc mounting

2000.50.037

EE210 HT3XPBXBUWTX024M Out RH 0..10 V + Temp 0..10 V - duct mounting

2000.50.029

EE160.HT6XXPAB-TX0024 - Sens. RH 4..20mA + Temp. 4..20mA, wall mounting

2000.50.030

EE160-HTX3XPAB-1BN1M - Sens. RH + Temp. 4..20mA, Modbus RTU RS485, wall mounting

Main features

Size

Box 80mm x 80mm Stem 50mm/200mm x 20mm (diameter)

Power supply

15...35 V DC, 15..28 V AC

Power consumption

2 mA max on version 0..10 V

Operating temperature

-40°C ... +60°C

Working range

0..100% RH

Accuracy at 25 °C

+/- 2% RH (0..90% RH); +/-3% RH (90..100% RH)

Response time

<15s

Mounting

wall or duct, with connection terminals and cable glends

Filter type

Metal grid, Stainless sintered steel, Sintered teflon

EASY-UP code

Code 2401 (ATR controllers)

Outputs

RH

0..1 V, 4..20mA, 0..10V

Temperature

4..20mA, 0..10V

Датчики влажности EE23 PIXSYS.
Humidity and temperature transmitter for measurements up to 120°C



The EE23 series stands for multifunctionality, highest accuracy, easy mounting and service. The new IP65 water proof housing concept is based on three modules: back module with connectors, middle module which accommodates the electronics, cover module with optional display

It offers easy installation and the possibility for fast replacement of the sensor unit for service purposes.

For use in harsh industrial environments all models of the EE23 are available in a robust metal housing.

Different combinations of housing are available: A and B version for wall or duct mounting, C version with remote sensing probe allowing a working range -40...120 °C, H version with remote miniature probe for concealed mounting (eg. museums) or tight spaces.

Ordering codes

2000.50.010

EE23-FTC3025HC01AB6T12 - Sens. RH+Temp. 2 outputs 0...10V/4...20mA Stainless sintered steel filter

2000.50.014

EE23-FTC6025HC01AB6T12 - Sens. RH+Temp. 2 outputs 0...10V/4...20mA Metal grid filter

2000.50.012

EE23-FTC3025HC01AB6T12 - Sens. RH+Temp. 2 outputs 0...10V/4...20mA Stainless sintered steel filter + Display

2000.50.013

EE23-FTC3025HC01AB6T12 - Sens. RH+Temp. 2 outputs 0...10V/4...20mA Stainless sintered steel filter + Display, Cable 10m

Main features

Вох

Box 90mm x 135mm x 66mm, steel stem 200mm x 12mm (diameter)

Power supply

15...35Vdc , 15...28Vac

Consumption

110 mA (version 4...20mA), 60 mA (version 0...10Volt)

Operating temperature

-40°C ... +120°C (option up to 180°C with EE31 code)

Working range

0...100% RH Accuracy at 25°C +/- 1,3% RH (0...90% RH); +/- 2,3% RH (> 90% RH) **Response time** < 15 sec with metal grid filter and couting on sensor Mounting Panel mounting box IP66, stainless steel probe Filter type Metal grid, Stainless sintered steel, PTFE EASY-UP code (HR 4...20mA) Code 2401 (all controllers) Outputs RH Selection 4...20mA / 0...10 Volt Temperature Selection 4...20mA / 0...10 Volt Connection cable Standard 2 m, option 10 m

## Датчики влажности EE354 PIXSYS.

Miniature Dew point meter

The EE354 was developed for monitoring dew point up to -20 °C Td (-4 °F Td). The high measurement accuracy of  $\pm 1$  °C Td ( $\pm 1.8$  °F Td) in the typical working range of a refrigeration dryer makes the EE354 the ideal solution for OEM manufacturers.

Integration into the measurement task is considerably simplified thanks to its highly compact design and exceptional robust stainless steel housing. The measurement values are issued on an analog 4-20 mA and a digital Modbus RTU output. Furthermore, excellent long-term stability and

temperature compensation across the entire measurement range are important features of the EE354.

Using the free EE-PCS configuration software and the Modbus USB converter (available as an accessory), the scaling of the analog output can be modified. This also permits one and two-point adjustments by the user.

Ordering codes

2000.50.039

EE354-T63EA-Dew-point temperature transmitter

Main features

Size

100mm x 54mm x 40mm with process connection 1/2"G

Power supply

21...28 V DC

Consumption at 24 V DC

40 mA typ. on version 4..20 mA (140mA during auto-calibration)

Operating temperature

-20..50 °C

Pressure range

0...20 Bar (max)

Accuracy at 20°C

< 2°C (up to -60°C)

Response time

t90 < 30s

Serial interface

RS485 Modbus RTU

Sensor protection

Stainless steel sintered filter

Electromagnetic compatibility

EN61326-1, EN61326-2-3

Твердотельные реле OKPAK PIXSYS.

Zero-Crossing solid state relays are devices that activate when voltage in the output circuit passes near 0 and deactivate when the current is 0. They are particularly useful in applications with resistive load.



For temperature dissipation when the current in the circuit is high, a wide range of dissipaters is available with bracket for DIN rail mounting.

Ordering codes 2200.00.051 SSR 25A / 12-280Vac / Ctrl 7-30Vdc Led 2200.00.053 SSR 50A / 24-600Vac / Ctrl 8-30Vdc Led 2200.00.054 SSR 75A / 24-600Vac / Ctrl 8-30Vdc Led 2200.00.055 SSR 95A / 24-510Vac / Ctrl 3,5-30Vdc Led 2200.00.056 SSR 125A / 24-510Vac / Ctrl 3,5-30Vdc Led Main features Technology Zero-Crossing with low zero-crossing level, for applications with resistive charge Control voltage 8...30Vdc to 3,5...30Vdc Switching voltage 12...280Vac(25A) to 24...510Vac(125A) Signaling Led Signaling Led on input circuit Protection Against short-circuit on output Sealing Protection cover IP20 on screw connection

Easy-up code Code 4400 for the whole range

# Твердотельные реле SAL/SU/SUL PIXSYS.

Currents 25A to 125A

Zero-Crossing solid state relays are devices that activate when voltage in the output circuit passes near 0 and deactivate when the current is 0. They are particularly useful in applications with resistive load.

For temperature dissipation when the current in the circuit is high, a wide range of dissipaters is available with bracket for DIN rail mounting.

Ordering codes 2200.00.051 SSR 25A / 12-280Vac / Ctrl 7-30Vdc Led 2200.00.053 SSR 50A / 24-600Vac / Ctrl 8-30Vdc Led 2200.00.054 SSR 75A / 24-600Vac / Ctrl 8-30Vdc Led 2200.00.055 SSR 95A / 24-510Vac / Ctrl 3,5-30Vdc Led 2200.00.056 SSR 125A / 24-510Vac / Ctrl 3,5-30Vdc Led Main features Technology Zero-Crossing with low zero-crossing level, for applications with resistive charge Control voltage 8...30Vdc to 3,5...30Vdc Switching voltage 12...280Vac(25A) to 24...510Vac(125A) Signaling Led Signaling Led on input circuit Protection



Against short-circuit on output

Sealing

Protection cover IP20 on screw connection

Easy-up code

Code 4400 for the whole range

# Твердотельные реле SIT PIXSYS.

Current 50A triphase

Zero-Crossing solid state relays are devices that activate when voltage in the output circuit passes through 0 and deactivate when the current is 0. They are particularly useful in applications with resistive loads.



The SIT series features an integrated dissipater with a DIN-bar mount, and is notable for its minimal size.

Ordering codes

2200.00.081

SSR 50A (3ph) / 24-520 V AC / Ctrl 90-240 V AC led and heatsink

2200.00.075

SSR 50A (3ph) / 24-520 V AC / Ctrl 10-30 V DC led and heatsink

Main features

Technology

Zero-Cross with low zero-crossing level, for applications with resistive charge

Control voltage

90...240Vac

Switching voltage

24...520Vac

Signaling Led

Signaling Led on input circuit

Protection

Against short-circuit on output

Sealing

IP20

Easy-up code Code 4400 for the whole range EMC Immunity EN60947-4-3 (IEC947-4-3) and EN60950/VDE0805 (Reinforced Insulation) -UL-CUL Connection Screw terminals for input signal and load control Mounting DINrail EN50022

# Твердотельные реле SGT PIXSYS.

Current 50A triphase



Zero-Crossing solid state relays are devices that activate when voltage in the output circuit passes near 0 and deactivate when the current is 0. They are particularly useful in applications with resistive load.

The SGT series has various dissipaters with a DIN rail mount for different current values.

Ordering codes

2200.00.073

SSR 50A (3ph) / 24-600Vac / Ctrl 8,5-32Vdc led

Main features

Technology

Zero-Cross with low zero-crossing level, for applications with resistive charge

Control voltage

8...30Vdc

Switching voltage

24...600Vac

Signaling led

Signaling Led on input circuit

Protection

Against shor-circuit on output

Sealing

Protection cover IP20 on screw terminals

Easy-up code Code 4400 Connection Screw terminals for input signal and load control EMC immunity IEC 1000-4-4 (burst) Weight 370 gr

# Адаптеры для реле PIXSYS.

DIN rail adapters for Celduc static blocks and Relays

Bases with integrated terminal for Relays with amperage from 8 to 16A and static blocks with load current up to 4A. Useful for electrical panels where process instruments require interface actuators towards the load.

DIN rail mounting and terminals with screw block.

Ordering codes

1200.10.004

Sockets DIN EN50022 (ESD05000)

1200.00.032

Relay 24V 16A 250Vac 1 C/O

2200.00.103

SSR Inp. 24V AC/DC / out 230V 4A AC

2200.00.104

SSR Inp. 24V AC/DC / out 230V 2A AC

## Система iModView PIXSYS.

TD700 with monitoring software up to 30 zones

iModViewCE software has been developed to monitor and control **Pixsys controllers** via RS485 interface and is only available pre-installed on HMI WinCE model TD700-AD.

Via ModbusRTU connection it is possible to monitor up to 30 zones.



The software also allows to instantly set the same setpoint value for all zones or to control the setpoint value of the selected individual zone .

A specific function enables recording of process and setpoint values in a .csv file and export via USB key or Ethernet connection. It is possible to see the process and setpoint trend for each individual zone also as graph.

The software can display texts in 5 languages (English, Italian, German, French and Spanish). The **HMI panel TD700 and the controllers** communicate via Modbust Rtu protocol on RS485 serial with BaudRate 19200 bit/s (Pixsys default setting) and format 8,N,1.

Ordering codes

2100.20.010

Runtime iModViewCE30 zone (TD700-AD)

2100.20.016

Runtime iModviewX86 60 zone (TD900-A)

Software features

Trend

Single trend for each zone with historical of 5 last hours

Setpoint

Possibility of change single setpoint or global setpoint

Alarms

Alarm active for each zone, historical alarms (100 records).

Export file

By USB key or by Ethernet connection.

Languages

Italian, English, German, French and Spanish.

## Система Extrusion Kit PIXSYS.

Control system for extruders up to 8 zones

The Pixsys Extrusion Kit is designed to monitor and control extruders, with a maximum number of 8 zones. The application has been developed for the HMI panel mod. TD700, and for the DRR450 controller via the RS485 connection with RTU Modbus communication protocol.

The app's graph can configured in the number of zones to show and their layout. This allows for a quick and intuitive representation of the operating data such as process, setpoint values, current instantly absorbed for each individual zone, the program selected and alerts for alarm events via



pop-up messages.

The program also allows the creation and selection of programs with dedicated pages, and the exportation and importation of programs via USB key or ethernet connection.

The dedicated pages show active alarms and the alarm history as well as the parameter settings of the thermoregulators, the Tune function start, the self-addressing of the Modbus nodes in the network. The graphic settings can be modified in dedicated password-protected areas. Via ethernet connection and use of the VNC viewer software it is possible control the entire system remotely from a PC, tablet or smartphone.

Ordering codes

2100.20.011

Runtime software for TD700 > DRR450 Multizone-Modbus RTU

## Большой дисплей PIXSYS.

display with integrated PLC



The standard solution offers the possibility to control the display via serial RS485 - Modbus RTU.

If requested by the customer, we can create apps that integrate Counter / Tachimeter / RTD and TC display or analogue signals 0...10Volt - 4...20ma display functions.

Ordering codes 9017.00.003 DGVIEW 3-127-Modbus RTU 9017.00.004 DGVIEW 6-127-Modbus RTU Features Dimensions 220mm x 370mm x 100mm (deph) Power supply 24Vdc/ca 5 VA Connection Screw clamps Mounting 4 M5 threads Operating conditions Temperature 0...45 °C, humidity 30..90 uR% Material Black anodized aluminum Weight Approx. 4 Kg Sealing IP 20 Conformity standards CE, EN 61000-6-4, EN 61000-6-2 Programming Pixsys PLPROG tool

## Источники питания MDR PIXSYS.

DIN rail mounted monophase power supply

Compact and reliable monophase power supplies, which can be mounted on the DIN rain in electrical panels.



Ordering codes

2700.10.008

ALM-MDR-20-24 (20W) Monophase

2700.10.009

ALM-MDR-40-24 (40W) Monophase

2700.10.012

ALM-MDR-60-24 (60W) Monophase

Main features

Sizes

22,5 x 90 x 100(20W); 40 x 90 x 100 (40-60W)



Control voltage

85...264 Vac Surcharge protection 105...120% (160%) constant , current limiter **Overtension protection** 115...135%, 125...135% according to output tension Setup 500 ms full charge, 230 Vac Rise 30 ms full charge, 230 Vac Hold up Time 50 ms full charge, 230 Vac **Operating temperature** -20...55°C Standard EMC EN55022 class B; EN61000-6-2 Level heavy industry Wirings 3/6 screw terminals Output Relay 1 Alarm relay

## Источники питания DR PIXSYS.

DIN rail mounted monophase/triphase power supply

Compact and reliable power supplies with monophase or triphase input, which can be mounted on the DIN rain in electrical panels.



230Vac input, 24Vdc output with galvanic isolation, various powers available. Ideal for use with Pixsys PLCs, HMIs and controllers.

Ordering codes

2700.10.010

ALM-DR-30-24 (30W) Monophase

2700.10.003

ALM-DR-45-24 (45W) Monophase

2700.10.011

ALM-DR-60-24 (60W) Monophase

2700.10.004

ALM-DR-120-24 (120W) Monophase

2700.10.005

ALM-DRP-240-24 (240W) Monophase

2700.10.006

ALM-DRT-240-24 (240W) Three-phase

2700.10.013

ALM-DRT-480-24 (480W) Three-phase

2700.10.014

ALM-DRT-960-24 (960W) Three-phase

Main features

Sizes

55,5x125x100 (75w); 65,5x125x100 (120w)

Control voltage

85...264 Vac; 90...132/180...264Vac (selection by switch) 1Ph/3Ph

Surcharge protection

105...120% (160%) costant , current limiter

Overtension protection

115...135% , 125...135% according to output tension

Over-temperature protection

Output shut down and restart

DC output correction

+/-10% 24...28Vdc

Operating temperature

-10...55°C/-20...70°C

Standard EMC

EN55022 class B; EN61000-6-2 Level ind. pes.

Wirings

3/4 screw terminals

#### 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 Веб-сайт: www.pixsys.nt-rt.ru