

ATR 401

Controller / Regolatore



Introduction

Thanks for choosing a Pixsys controller.

The ATR401 integrates in a single device all options for sensors reading and actuators control, beside extended range power supply 24...230 Vac/Vdc. Thanks to dual universal analogue input and outputs configurable as relay or SSR, the user or the retailer can reduce stock needs. The series includes also a model with serial communication RS485/Modbus-RTU and analogue output 0-10 V, 0/4-20 mA.

The possibility to copy parameterization is simplified by the Memory Cards with internal battery that do not require power supply for the controller.

1 Safety standards

Carefully read the instructions and safety measures in this manual before using the device. Disconnect power before performing any interventions on the electrical connections or hardware settings.

Only qualified personnel may use/perform maintenance in full respect of the technical data and declared environmental conditions.

Do not dispose of electrical appliances together with household waste.

In compliance with the European Directive 2002/96/EC, waste electrical equipment must be collected separately for eco-compatible reuse or recycling.

2 Model Identification

ATR401 series includes five versions.

Looking at the following table it is possible to find the required model.

Power supply 24...230 Vac/Vdc +/-15% 50/60 Hz – 5,5 VA

ATR401-22ABC	2 Analogue inputs + 2 Relays 8 A + 1 SSR + D.I.
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ATR401-23ABC	2 Analogue inputs + 3 Relays 8 A + 1 SSR + D.I.
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ATR401-24ABC	2 Analogue inputs + 4 Relays 8 A + 1 SSR + D.I.
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ATR401-22ABC-T	2 Analogue inputs + 2 Relays 8 A + 1 SSR 1 Output V / mA + RS485
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ATR401-22ABC-D	2 Analogue inputs + 2 Relays 8 A + 1 SSR 1 Output V / mA + D.I.
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3 Technical data

3.1 General data

Indicators	4 display 0,40 inches - 4 display 0,30 inches
Operating temperature	Temperature 0..45 °C - Humidity 35..95 uR%
Sealing	Front IP54 (IP65 with gasket), box IP30 , terminal blocks IP20
Material	Box: Noryl UL94V1 self-extinguish Front: PC ABS UL94V0 self-extinguish
Weight	Approx 350 g

3.2 Hardware data

Analogue input	<p>AI1 – AI2: Configurable via software.</p> <p>Thermocouples: type K, S, R, J. Automatic compensation of cold junction from 0 ... 50°C.</p> <p>Thermoresistances: PT100, PT500, PT1000, Ni100, PTC 1K, NTC 10K (β 3435K)</p> <p>Input V/mA: 0-10 V, 0-20 o 4-20 mA, 0-40 mV.</p> <p>Input Potentiometer: 6 KΩ, 150 KΩ. ONLY AI2 input T.A.: 50 mA.</p>	<p>Tolerance (25 °C) +/-0.2% ± 1 digit (full scale) for thermocouple, thermoresistance and V / mA. Cold junction accuracy 0.1 °C/°C.</p> <p>Impedance: 0-10 V: Ri>110 KΩ 0-20 mA: Ri<5 Ω 4-20 mA: Ri<5 Ω 0-40 mV: Ri>1 MΩ</p>
Relay outputs	Configurable as control and alarm output.	Contacts: 8 A - 250 V~ for resistive charges.
SSR output	Configurable as control and alarm output.	24 V/25 mA.
Analogue output	Configurable as control output, alarm, retransmission of process or setpoint.	<p>Configurable: 0-10 V 9500 points +/-0.2% (full scale) 0-20 mA 7500 points +/-0.2% (full scale) 4-20 mA 6000 points +/-0.2% (full scale)</p>
Power supply	Extended range 24..230 Vac/Vdc $\pm 15\%$ 50/60 Hz.	Consumption: 5.5 VA.

3.3 Software data

Regulation algorithms	ON - OFF with hysteresis. P, P.I., P.I.D., P.D. proportional time.
Proportional band	0...9999 °C o °F
Integral time	0,0...999,9 sec. (0 excludes integral function)
Derivative time	0,0...999,9 sec. (0 excludes derivative function)
Controller functions	Manual or automatic tuning, selectable alarms, protection of control and alarm setpoints.

4 Dimensions and Installation

