ATR421
Process controller/Programmer 15 cycles / 45 steps

Process controller 48x96mm (1/8 Din), single loop. It enables the programming of 15 cycles/programs which might include anything up to 45 steps/segments, all free selectable by the operator as rising/dwell/cooling steps. Distinctive feature is the extremely user-friendly programming, easy to handle even for the unskilled operator.

This programmer is specifically conceived for the automation of industrial kilns/environmental chambers/dryers and for the monitoring of thermal processes requiring the programming of cycles/profiles with control of process variables versus time. Special functions like Waiting (useful whenever the process has a delay on the programmed setpoint) and Cycle Recovery (after unexpected power failures) are included.

Universal analogue input, outputs selectable as command/alarm/auxiliary, analogue retransmission, serial communication RS485-ModbusRTU. All options are configurable by keyboard, not requiring any jumpers selection. Useful extended supply range 24...230 Volt ac/dc, galvanically isolated, also between input/outputs.

Programming tools for quick set-up (MEMORY-CARD, programming and monitoring software LABSOFTVIEW).

Ordering codes

ATR421-14ABC	1 Analogue inputs + 1 digital input + 4 Relays 8 A + 1 SSR 12Vdc
ATR421-12ABC-T	1 Analogue inputs+ 2 Relays 8 A + 1 SSR 12Vdc, 1 Output V/mA + RS485

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%
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

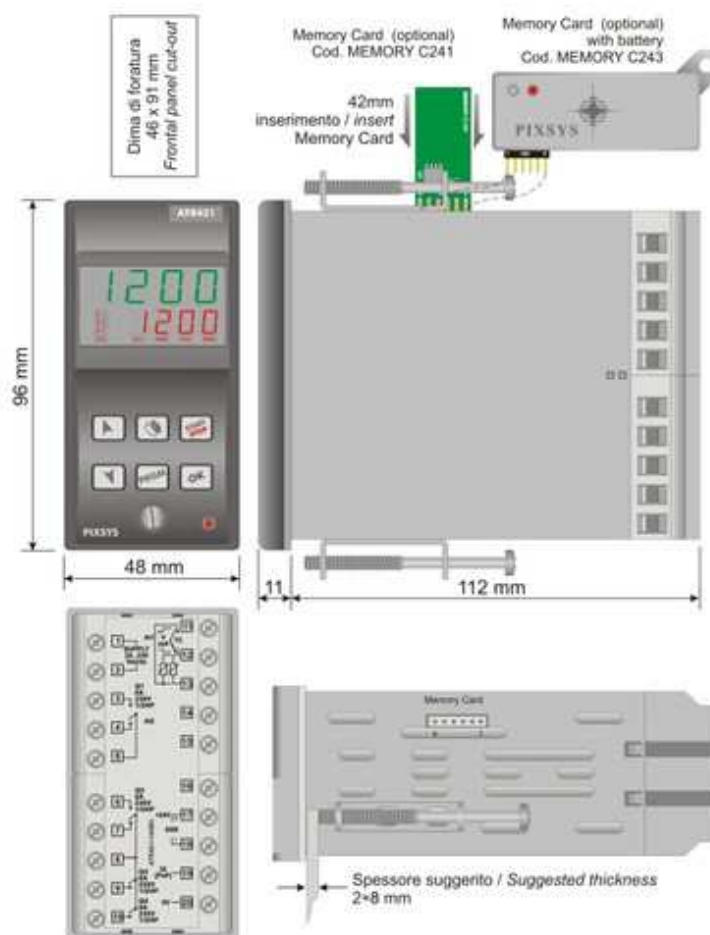| 1 configurable	Selection TC, K, J, S, R, PT100,PT500, PT1000, Ni100, PTC1K, NTC10K (B 3435K), 0/4..20 mA, 0..10 V
1 digital input	1…9 cycle selection, Hold, Run, "Open door" lock (code -14ABC)
1 potentiometer input	Position signal by potentiometer for servo-valves / motorized-valves

Outputs

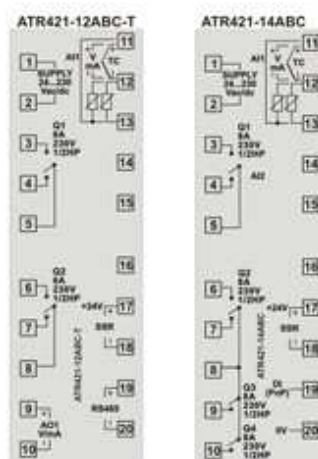| 2…4 Relays	Relay 8 A - 250 Vac resistive charge
1 SSR	24 Vdc - 25 mA max
1 Analogue	Selection SSR 12Vdc - 4…20 mA or 0…10 Vdc for command or retransmission PV/SPV (code -12ABC-T)
Serial communication	RS485 Modbus RTU - Slave (code -12ABC-T)

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

Size and installation

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_last update 12/11/2012

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