

S Series

Description

These control instruments series "S" are among the most modern and complete available today on the market. They have been built to command membrane solenoids on dust removal filters. A large back lighted liquid crystal display clearly shows cleaning system status. It has a fast-flow setting menu with intuitive operation that allows the operator to choose one of six different languages offered. The recognition of the valves connected and the post-washing function are all automatic.

What makes this "S" Series totally innovative is the software installed in the powerful microprocessor, which directs the full-automatic operation.



DEVICE PERFORMANCES

- LCD Display with backlight and friendly menu in six languages
- Operating time in seconds and minutes with selectable range for any application
- No selection jumpers required for the voltages of the valve
- Multi-selectable power supply without removing the panel or the card from enclosures
- Post-cleaning function with selectable number of cycles up to 255 cycles
- Hours counter and pulses counter
- Up two programmable alarm relays
- Pilot not working alarm
- Power down
- External input to start/stop cleaning from remote
- External input to start/stop cleaning from air tank sensor
- Zero crossing switching pilot valves
- Pilot manual activation
- Selection of pulse-jet cleaning systems or rotating nozzle with self-selection of optimal parameters
- Protection from current overload for device and pilot valves

CONNECTION LAYOUT



VALVES

Terminal	signal	Terminal	signal
1	EV1 Solenoid valve 1	9	EV9 Solenoid valve 9
2	EV2 Solenoid valve 2	10	EV10 Solenoid valve 10
3	EV3 Solenoid valve 3	11	EV11 Solenoid valve 11
4	EV4 Solenoid valve 4	12	EV12 Solenoid valve 12
5	EV5 Solenoid valve 5	13	EV13 Solenoid valve 13
6	EV6 Solenoid valve 6	14	EV14 Solenoid valve 14
7	EV7 Solenoid valve 7	15	EV15 Solenoid valve 15
8	EV8 Solenoid valve 8	16	EV16 Solenoid valve 16

The common of solenoid valves must be connected to the type of pilot according to the following table:

Terminal	LEGEND	Voltages
17	230V	230VAC 50Hz
18	115V	115VAC 50Hz
19	24DC	24VDC
20	24AC	24VAC 50Hz

NOTE: THE TERMINAL 31 IS THE GROUND OF DEVICE AND PULSE VALVES

ELECTRICAL CHARACTERISTICS

Power

- 230VAC ±10% 50 Hz
- 115VAC ±10% 50 Hz
- 24VAC ±10% 50 Hz
- 24VDC ±10%

Output

- 24VAC (MAX 20VA @ Ton Max 5s)
- 24VDC (MAX 20W@ Ton Max 5s)
- 230VAC (MAX 20VA@ Ton=10s)
- 115VAC (MAX 20VA@ Ton=10s)

Fuses

1 x 2 Ampere

Working temperature

-15°C÷50°C

Storage temperature

-20°C÷60°C

Timing

Pause time

5 s ÷ 50 min

Working time (air pulse)

50 ms ÷ 10 s (step 10 ms)

POWER

Power Supply 230-115-24/50hz

Terminal 30 L phase

Terminal 33 N Neutral

Terminal 31 PE Ground

Power Supply 24 VDC

Terminal 32 DC +

Terminal 25 GND Negative

Terminal 31 PE ground

(internally connect to 25)

CE DIRECTIVES



This product is compliant with the following directives:

Machine Directive 2006/42/EC 'Electromagnetic compatibility' related to the European Standard EN61000-6-2:2005 class B of the rule EN61000-6-4:2001. Low Voltage Directive 2006/95/CE related to the European Standard EN60947-1:2004

PA PA4 / PA8 / PA12 / PA16 Series - Multiple output voltage
Up to 144 outputs available upon request with different enclosures

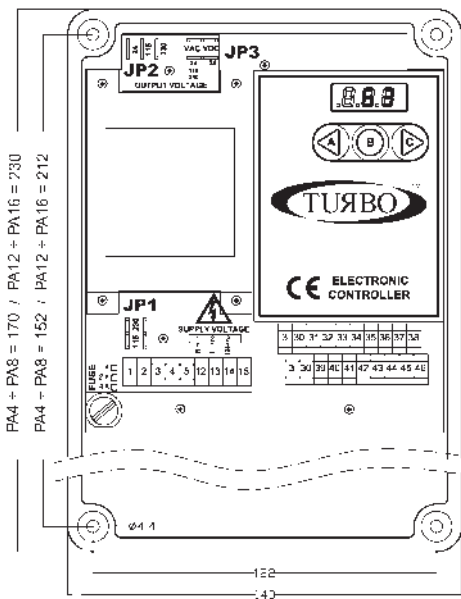


DESCRIPTION

Sequencer for dedusting plant cleaning cycle. Microprocessor-operated device with electrical zero connected to ground which ensures high immunity to external interference and low field emissions.

Max 1 output relay. Max 2 volt free digital inputs.

- PA4** to control 4 solenoid valves
- PA8** to control 8 solenoid valves
- PA12** to control 12 solenoid valves
- PA16** to control 16 solenoid valves



TECHNICAL CHARACTERISTICS

Standard supply voltage	230 VAC / 115 VAC
Supply voltage available upon request	24 VAC / 24 VDC
Output voltage	230/115 / 24VAC - 24VDC
Working temperature range	-10°C ÷ +50°C
Absorbed power	10 VA (Stand by)
Protection level	IP65
Max no. of outputs	16
Dimensions	140x170x95 (PA4 - PA8)
Dimensions	140x230x95 (PA12 - PA16)
Material	ABS / RAL 7035

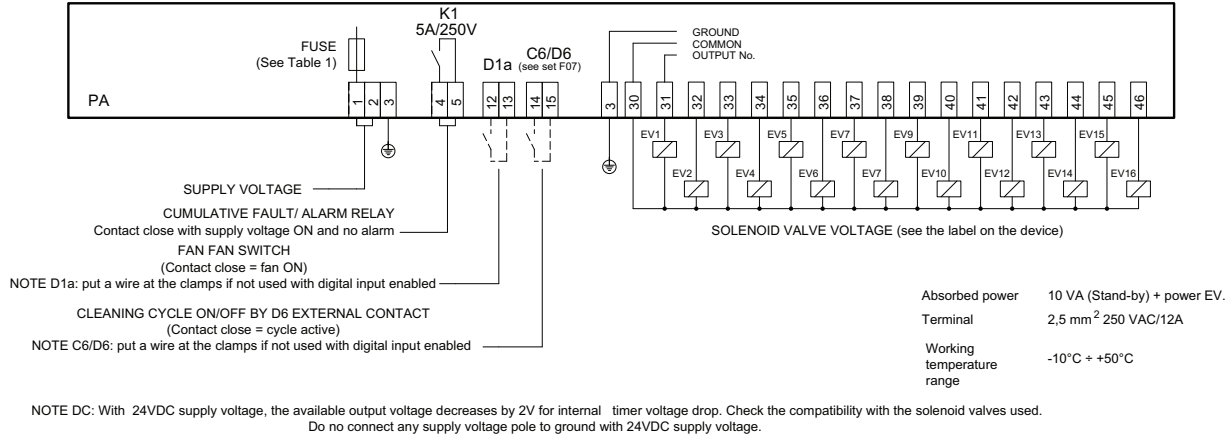
STANDARD FEATURES

- Manual selection of output number / Autoselection
- Adjustable activation time per each output from 0.05 to 5 sec.
- Adjustable interval time between two activations from 1 to 999 sec.
- Short circuit output protection
- Manual activation of each single output
- Cleaning cycle ON/OFF with external pressure controller by volt free contact
- Additional post-cleaning cycle after fan stop
- Cleaning cycle ON/OFF by volt free external contact
- Max 25W load power per each output
- Input and output selection by JP1, JP2 and JP3 jumpers on the board

PA4 / PA8 / PA12 / PA16 Series - Multiple output voltage
Up to 144 outputs available upon request with different enclosures



WIRING DIAGRAM



PARAMETER SETTING IN SET MODE

In Run Mode press key C to enter the function menu

F01	Digital input use	0 = included 1 = excluded
F02	Pulse time	0,05 ÷ 5,00 sec
F03	Interval time between events	1 ÷ 999 sec (see B3x)
F04	Number of outputs	0 ÷ 16 (see B1 b)
F05	Cycles after fan stop	0 ÷ 99
F06	Manual activation	C = Selection/ A = output activation
F07	Digital input	0 = C6, 1=D6 (see C6, D6)
F08	Output voltage	24V, 115V, 230V (see HV)

Key A = Access to the selected function	Key A = Parameter decrement in Set
Key B = Exit from Set Up	Key B = Return to function menu
Key C = Function selection	Key C = Parameter increase in Set

OPERATION

When power is supplied, the cleaning cycle starts if all the conditions required for operation are present

OFF	Cycle stopped due to cleaning consent missing (D6 open)
- 0 -	Cycle stopped due to fan OFF
1,00/P	Cycle stopped due to low dP (Blinking display)
A01	No. of activated EV
...	Cycles active after fan stop (Blinking points)
1,23	ΔP reading (kPa)
E	ΔP reading over 9.99kPa
Key B	Alarm Rest
Key C	Access to Set Up

NOTE

The device will automatically switch from Set Mode to Run Mode if no key is pressed for 5 minutes

ALARM DESCRIPTION

3,00/H= Maximum ΔP alarm
(Blinking display)

example: E1/05 = : E1/05=05 output overload
(Blinking display)

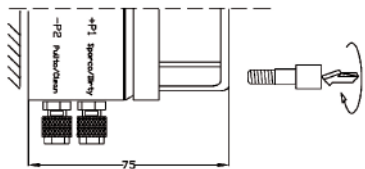
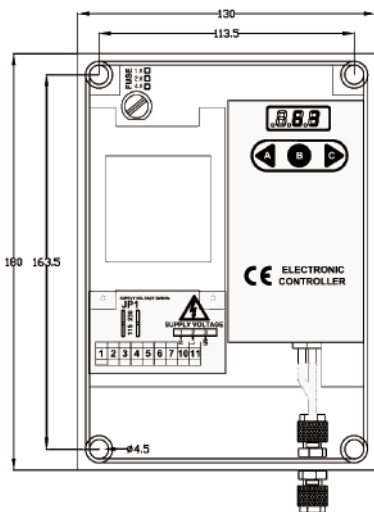
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DESCRIPTION

Digital differential pressure controller between two points with microprocessor.

Maximum 2 output relays.

TECHNICAL CHARACTERISTICS

Standard supply voltage	230 VAC / 115 VAC
Supply voltage available upon request	24 VAC / 24 VDC
Operating temperature range	-10°C ÷ +50°C
Absorbed power	5 VA
Protection level	IP65
Dimensions (mm)	180x130x75

STANDARD FEATURES

- Minimum (K2) and maximum (K1) ΔP alarms on separate relays
- Differential pressure reading by internal transducer (max 10kPa)
- Minimum ΔP alarm with alarmed contact open and automatic reset
- Maximum ΔP alarm with alarmed contact open and automatic reset
- Zero ΔP reading adjustment

PARAMETER SETTING IN SET MODE

In Run Mode press key C to enter the function menu

F01	Zero ΔP adjustment	0,00 (see C8)
F02	Min. ΔP alarm threshold	0,01 ÷ 9,99 kPa (E=disabled)
F03	Max ΔP alarm threshold	0,01 ÷ 9,99 kPa

Key A = Access to the selected function	Key A = Parameter decrement in Set
Key B = Exit from Set Up	Key B = Return to function menu
Key C = Function selection	Key C = Parameter increase in Set

NOTE: The device will automatically switch from Set Mode to Run Mode if no key is pressed for 5 minutes

OPERATION

When power is supplied, dP control starts immediately

1,23	ΔP reading (kPa)
E	ΔP reading over 9.99kPa
Key B	Alarm reset
Key C	Access to Set Up

ALARM DESCRIPTION

3,00/H	Max dP alarm (Blinking display)
0,50/L	Min ΔP alarm (Blinking display)

