

° REG TWIN

Control auto change
over panel for twin fans



USER MANUAL



° REG TWIN

Control auto change over panel for twin fans

WORKING FEATURES

- ° Electronic system designed and developed for automatic control of Twin-fans, like TWIN BOX BD and TWIN BOX BV.
- ° The REG TWIN control can be fitted within the Twin-fan housing or at any desired location of operation within the same building. The MODBUS communication protocol is integrated in the REG TWIN control.
- ° When REG TWIN is set to operate in AUTO mode, each fan will be running for a preset period of time interval (12 hours). In case of failure of any of the fan, REG TWIN automatically starts the Stand-By fan, simultaneously gives signal to the user about the faulty fan.
- ° An other function of REG TWIN is BOTH FANS RUNNING mode, to run both fans consequently to supply twice the normal air volume.
- ° Only suitable for single phase and electric motors (EEC).

CHARACTERISTICS

- ° Power supply: from 80 to 250 V. a.c. or d.c.
- ° Relay contacts current: 1 A 250 V. a.c.
- ° Working temperature: from 0°C to 50°C.
- ° Storage temperature: from -25°C to 85°C.
- ° Relative humidity: max. 95% without condensation
- ° Dimensions: 104 x 93 x 25 mm.

CONNECTION OPTIONS

- ° Inside the unit (not connected).
- ° Attached outside the unit (the IP must be taken into account).
- ° Remote.

APPLICATIONS

This kind of control can be used to commutate a couple of motors to work in auto change over mode or simultaneously.

In case of TWIN BOX BD or TWIN BOX BV, a common application is in high temperatures environments (in the desert for example) where fans run in change over mode to avoid fan overheating problems.



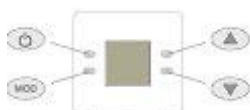


DISPLAY



SYMBOL	MEANING
	Fan A failure
	Fan B failure
	OFF indication
	Fan A running
	Fan B running
	AUTO mode
	MANUAL mode
	TEST mode
	Parameters program mode indication
	Remaining time
	Parameter name
	Parameter value

PUSHBUTTONS



PUSHBUTTON	FUNCTION
 ON / OFF	Equipment ON/OFF. With alarm, ACKNOWLEDGE of it. Exit from parameters mode.
 UP	In AUTO mode, displays remaining time. In MANUAL mode, changes mode. In parameters, increase parameter value.
 DOWN	In AUTO mode, displays remaining time. In MANUAL mode, changes mode. In parameters, decrease parameter value.
 MODE	To change working mode. With continuous pushing, enter parameters mode.

When a push-button is pressed, display switches on. If display is off, first pressing of one push-button only switches on the display.

ATTENTION: If you wish to do any action with push-buttons when display is off, press the push-button to switch on the display, and afterwards release the push-button and press it again to do the operation that you wish.

Equipment ON and OFF:

If equipment displays OFF, to switch it ON, push ON/OFF. Equipment displays working mode. To switch it OFF, push ON/OFF and equipment displays OFF.

If there is any alarm, when pushing ON/OFF, ACKNOWLEDGE of alarm is done.

Working mode change:

To change working mode, push MODE. Equipment goes successively through modes:
AUTO – MANUAL – TEST – AUTO

Manual working mode change:

If equipment is in MANUAL mode, push UP or DOWN and MANUAL working mode is changed:

- ° Fans OFF.
- ° Fan A running.
- ° Fan B running.
- ° Both fans running.



Remaining time display:

When equipment is in AUTO mode, push UP or DOWN and equipment displays remaining time of fan running during 5 seconds.

Working:

AUTO mode: At first, both fans are running during 10 seconds. Afterwards fan A remains running the programmed time, and at the end fan A is changed to fan B, and so on. When a fan is running, if an alarm is produced, fan running is changed.

MANUAL mode: One or both fans run according to selected mode with UP and DOWN.

TEST mode: At first fan A runs, and fan running is changed every minute.

PARAMETERS:

To enter in PARAMETERS mode push MODE and remain it pressed till display shows PA. Password has to be introduced with UP and DOWN, and afterwards push MODE, then parameters are displayed. If password is not right, PARAMETERS display is not possible. From one parameter to the following, push MODE and values are modified with UP and DOWN pushbuttons. To exit from PARAMETERS mode push ON/OFF.

Nº	PARAMETER	DEF.	MIN.	MAX.
1	FAN RUNNING TIME	12 h.	1 h.	48 h.
2	SERIAL COMMUNICATIONS ADDRESS	1	0	255
3	FIRMWARE VERSION	-	-	-
4	PASSWORD	0	0	255

MODBUS REGISTERS

REG0: IDENTIFICATION (143)

REG1: SERIAL COMMUNICATIONS ADDRESS

REG2: STATE: 0-OFF, 1-ON

REG3: WORKING MODE

1-AUTO, 2-MANUAL, 3-TEST

REG4: MANUAL WORKING MODE

0-FANS STOPPED

1-FAN A RUNNING

2-FAN B RUNNING

3-BOTH FANS RUNNING

REG5: FAN RUNNING TIME (Parameter).

REG6: ALARMS

Bit 0: FAN A

Bit 1: FAN B

REG7: FANS STATE (0-OFF,1-ON)

Bit 0: Fan A

Bit 1: Fan B

REG8: REMAINIG TIME

MSB: Horas

LSB: Minutos

REG9: FIRMWARE VERSION

PROGRAMMING

Time and date set:

Press MODE and keep it pressed until TIME appears in the display. Press MODE. Press up or down to set the time. Press MODE and the day of the week will flash. Set and press ON/OFF.

Entry and modification of timer program:

Press MODE and keep it pressed until TIME appears in the display. Press up or down until PROG appears. Press MODE and the day of the week will flash. Press up or down to arrive to the day of the week you want to program. Press MODE. The programming periods appear. Press up or down until the period to be programmed flashes. Press MODE and with up and down set the start time

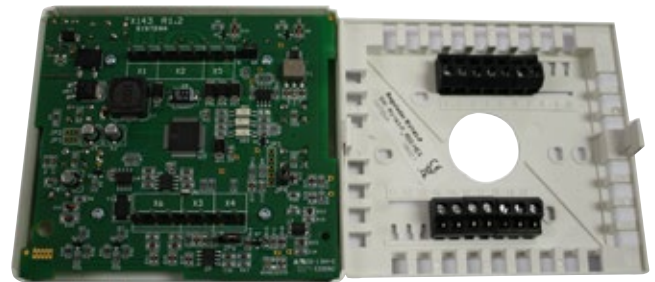
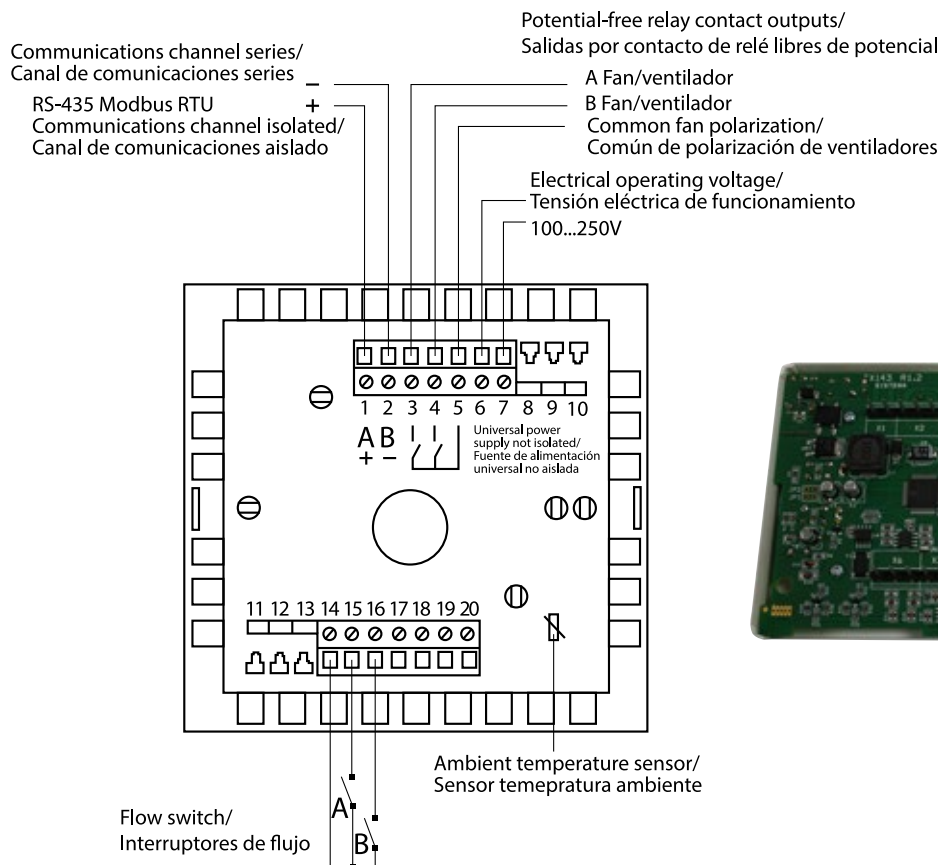


of this period. If the adjusted period is starting, press MODE and it will appear flashing the fan that you want to start in this period. Press up or down to choose the corresponding fan and press MODE. If you don't want to do more programming, press ON/OFF. If you want to do more programming, the day of the week will flash for a new programming.

Copy of the daily program:

Proceed in the same way as for programming, arriving at the day of the week that you want to program. Press MODE and keep it pressed until COPY appears in the display. The programming of the previous day is copied for that day.

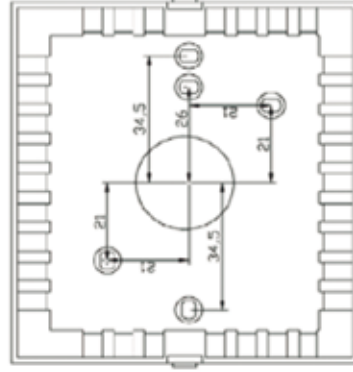
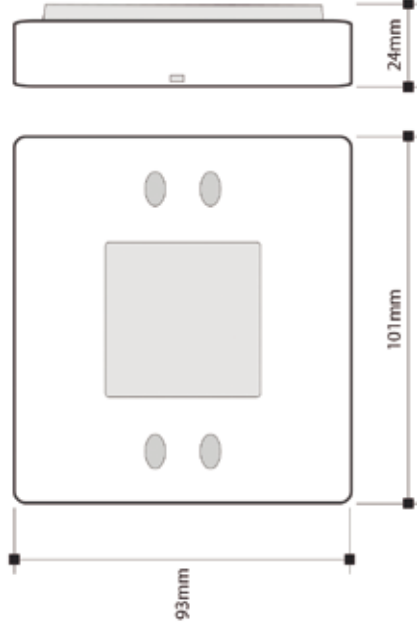
CONNECTIONS



CONTROLLER FEATURES

- Power supply: 100...250V (controller includes universal power supply).
- LCD display with led backlight.
- Pushbuttons for using the controller.
- 2 digital outputs. Dry contact relays to power on/off the fans.
- 2 digital inputs for air flow switches (fan status). Optional connection.
- AUTO mode: Automatic fan switch with adjustable timer.
- MANUAL mode: Manual mode provides the option of running each fan individually or both fans at the same time.
- Adjustable parameters for optimal working.

DIMENSIONS



Air flow switch for fan 1
Dry contact connection

Air flow switch for fan 2
Dry contact connection

Dry contact relays with one common for both relays (connector 5)

Relay 2: On/Off FAN 2

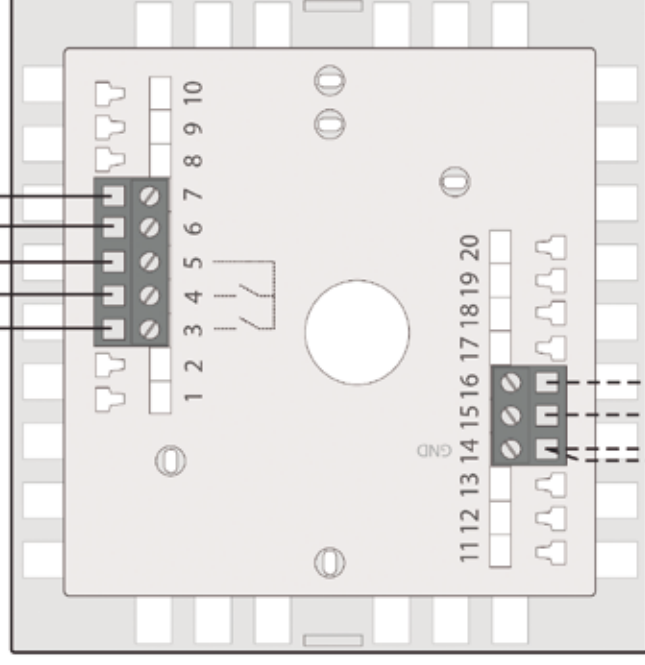
Relay 1: On/Off FAN 1

Common for relays

Phase line
Neutral

100...250V POWER SUPPLY

TWIN BOX BD



ErP

REG TWIN



Casals
soul made fans

Wiring diagram
Features

TWIN BOX BD/BV CONTROLLER

Model

REG TWIN

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