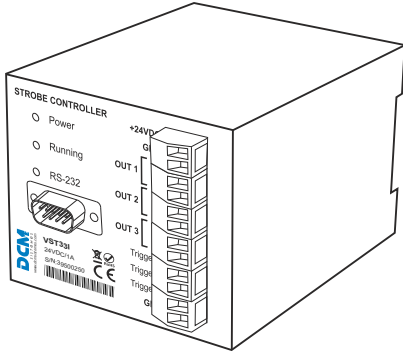


## Strobe controller quickguide

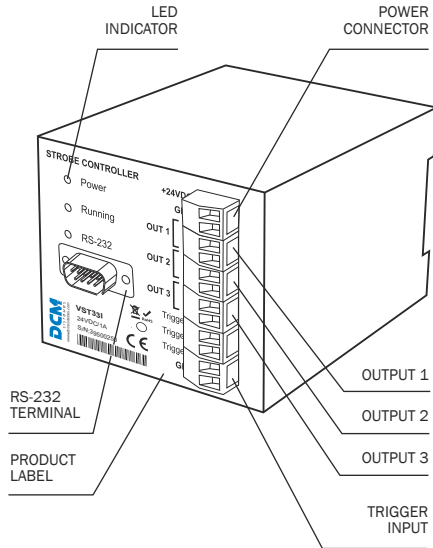


Doc No.M026A06

### Ref. VST331

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### COMPONENTS

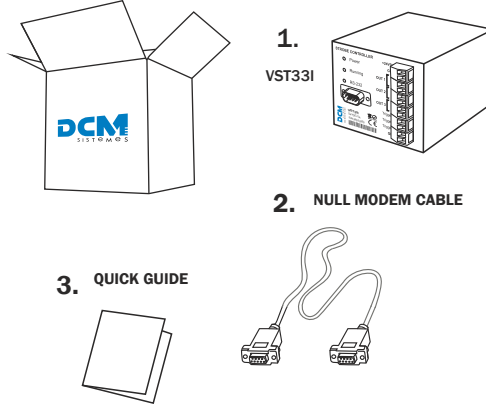


### VST331 SPECIFICATIONS

- Dimensions (mm): 90x75x103.
- Power: +24VDC. 3A
- Large capacity of condensers, which are able to store enough power to give the output pulses.
- Outputs: 3
- Type of outputs: Open drain MOSFET, +24VDC common.
- Up to 6A per output.
- Inputs: 3, common ground, NPN or PNP with pull down resistor.
- Voltage range from 0VDC to +24VDC. Negative or Positive edge trigger.
- Input impedance: 60K ohms
- Up to 2500 triggers per second.
- Pulse width range: 0µs...10mS.
- Minimum step for pulse width: 4µs.
- Adjustment of initial delay
- Configuration and independent trigger per output.
- Low dissipation
- PC or PLC connection Serial Communication.
- Housing material: Polycarbonate PC-F fiber reinforced. Inflammability class V0 (UL94). Color: black.
- Anchorage for 35mm DIN type rail mount regulator.

### CONTENT

- From DCM SISTEMES box, you will get the following items:



- Controller of three outputs of 6A each one, with independent inputs of pulse wide and programmable pulse from 0µS to 10mS in steps of 4µS. Programming via RS-232 stored in non-volatile memory.
- System requirements: Computer with serial Port.
- A User's Manual is available on [www.dcmsistemas.com](http://www.dcmsistemas.com)

### QUICK START

The proceeding for using VST331 for the first time is the following:

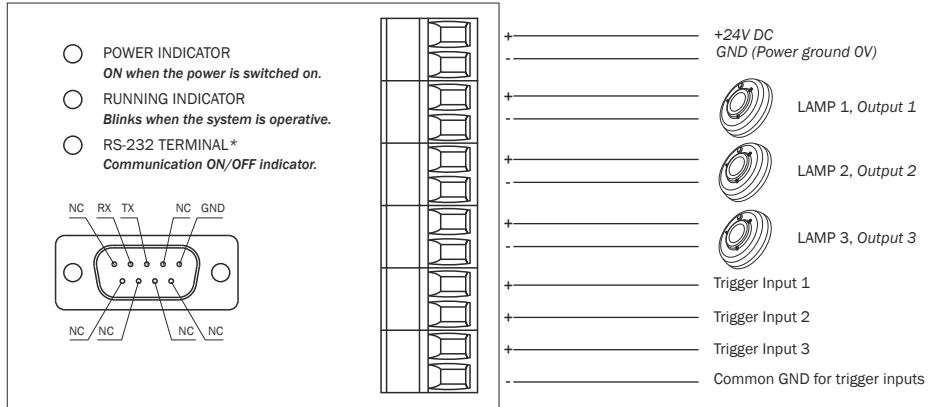
#### ⚠ CAUTION

Please, we recommend that you read carefully the instructions before installing the VST331.

- Step 1.** Wire up VST331 strobe controller.
- Step 2.** Connect the PC through Null Modem DB9 cable to VST331 and assure the strobe controller is powered on.
- Step 3.** Configure parameters of the strobe (Pulse Width recommended). Two options allowed: Hyperterminal mode or programming mode.
  - ⚠ Note: Programming mode set by default. To change it into the hyperterminal mode, you must send the text string 'mode' to access the command menu.
- Step 4.** Connect lamps and start using VST331.
  - ⚠ Note: Before installing a new lamp after first usage follow these steps from the beginning.

### ⚙ Step 1. WIRING

⚠ CAUTION: For your own safety, ensure the power is off.



⚠ Note: Outputs OUT+ are permanently supplying +24VDC. Outputs OUT- are put to ground (GND) when activated, being in high impedance when deactivated.

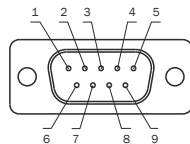
⚠ Note: Connectors' pinout is also on the strobe controller label.

#### ⚠ CAUTION

Do NOT put together the grounds of the power supply and the trigger supply. It could produce false triggers.

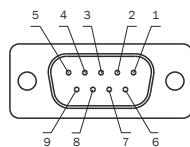
### ⚙ Step 2. PC CONNECTION

- VST RS-232 Terminal Cable (SUBD-9 MALE): PIN Signal description:

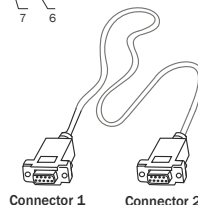


PIN	FUNCTION
2	RT
3	TX
5	GND
Others	Not Connected

- Null modem cable (SUBD-9 FEMALE):



Connector 1	Connector 2
2	3
3	2
5	5



Every time you start the strobe controller, communications are by default in short mode (programming mode), suitable for communication with PLCs or specific programs such as in VB. In this mode, the strobe only returns an echo of the received and the programmed value.

To change this into a more friendly control mode for a person from a terminal emulator, you must send the text string 'mode' to enter in a menu that gives more information on each available command. Extended information on both modes on reverse.



- Programming mode (by default)
- HyperTerminal mode

## DECLARATION OF CONFORMITY

DCM SISTEMES, declares under our responsibility the conformity of the following DCM SISTEMES **iBlueDrive Box**,

is in conformity with the following European Directives:  
 - 2014/35/EU (LVD) - Low Voltage Directive  
 - 2014/30/EU (EMC) - Electromagnetic Compatibility Directive  
 - 2011/65/EU (RoHS) - Restriction of Hazardous Substances  
 - 2012/19/UE (WEEE) - Waste electrical and electronic equipment directive

The conformity of the designated product(s) with the provisions of the European Directives is given by the compliance with the following European Standard(s) or other specifications.  
 If not elsewhere/otherwise indicated the edition/amendment as referenced below applies:  
 - EN 62471:2008  
 - EN 61000-3-3:2013  
 - EN IEC 55015:2019  
 - EN 61000-3-2:2014

  
 José Murcia Rubio  
 Engineering Manager

  
 José M. Raldúa Peris  
 QC Manager



Valencia, January 2021.

## WARRANTY CONDITIONS

The Manufacturer's Guarantee is a separate, additional guarantee which does not affect the consumer's legal rights and is specifically issued for the customer and the appliance which it accompanies.  
 The Manufacturer's Guarantee is valid for one year from the date of receipt of the appliance, and covers all repairs which may be carried out by the Official Technical Assistance Service.  
 In the cases covered by this guarantee, the holder will be entitled to the repair of any original flaws or defects free of charge. If the repairs carried out are not satisfactory, and the appliance is not in optimum condition for the use for which it is intended, the holder of the guarantee shall be entitled to replacement of the appliance acquired by another of identical characteristics. The replacement appliance will be covered by the remaining guarantee on the original appliance, in any case this shall be **six months**.

### EXCLUSIONS FROM THE GUARANTEE

The following are excluded from this Guarantee. In these cases the total repair cost will correspond to the user:  
 a) Breakdown caused by improper use of the appliance by the consumer.  
 b) Breakdown caused by unforeseeable circumstances, force major. (atmospheric or geological conditions) or natural disaster.  
 c) Interventions deriving from improper installation or lack of maintenance.  
 d) Periodical maintenance operations carried out on the product.  
 e) Wear or deterioration of the appliance caused by use.

### CANCELLATION OF THE GUARANTEE.

This Guarantee shall be null and void and without effect if the appliance has been interfered with, modified or repaired by any unauthorized person or technical service other than the Official Technical Assistance Service.

**Very important:** to benefit from this guarantee, it is absolutely essential for the user to provide the authorized technical service with an official receipt giving evidence of the date of purchase. All our service technicians carry the corresponding identification accrediting them as Official Brand Technicians.  
 It is in your own interest to ask to see this identification. Consult your distributor or check in the enclosed documentation for the address of the nearest technical service. This Guarantee shall only be valid within the European Union and shall refer exclusively to the appliance referred to and supplied by DCM Sistemas. In other countries, the guarantee shall be issued in accordance with the laws in force in each case.



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## Step 3. CONFIGURATING: HyperTerminal & programming mode

### HyperTerminal mode

This mode allows usage from any software able to establish a serial communication in text mode.

- Configure your hyperterminal window with the next parameters:

Flow control	None	Data Bits	8
Communication speed	9600 bps	Parity Bits	None
Starting Bits	1	Stop Bits	1

- Connect VST331 strobe controller and write 'mode'. You will receive the following command Menu:

STROBE CONTROLLER ©2013 Copyright DCM SISTEMES™.  
 Model VST331 - SW v1.90

s.-	Select Output	p.-	Set new Pulse Width
r.-	Show Selected Output	t.-	Set delay Time
v.-	Show Selected Pulse Width	e.-	Show delay Time
u.-	To increase Pulse Width	c.-	Set trigger edge
d.-	To decrease Pulse Width	f.-	Show trigger edge
?.-	Command Menu		

#### s.- SELECTED OUTPUT

Outputs available [1,2,3]. Write **s1**, **s2** or **s3** and then [ENTER]

#### r.- SHOW SELECTED OUTPUT

Output Selected = **x\*** *x is the previously selected output.*

#### v.- SHOW SELECTED PULSE WIDTH

Pulse width = **(x\*4)uS** *x is therefore the value between 0 and 2500 of the output.*

#### u.- INCREASE PULSE WIDTH / d.- DECREASE PULSE WIDTH

Up/Down the pulse width in steps of 1.

New pulse width = **(x\*4)uS**

*x is therefore the value between 0 and 2500 of the output.*

#### p.- SET PULSE WIDTH

New value [0...2500] & press [ENTER].

#### t.- SET DELAY TIME

Used to change the initial time of delay in steps of 410uS. Range between 0-27s.

New value [0...65535] & press [ENTER].

#### e.- SHOW DELAY TIME

Show the time of delay set.

Delay time = **(x\*410)uS** *x is therefore the value between 0 and 65535.*

#### c.- SET TRIGGER EDGE

Allows the trigger edge to be changed when there is a rise or a fall in power level.

Set trigger edge (rise/fall) (a/b)\* =

*\*Introduce a for an increase in the input trigger and b for activating the trigger when the input falls.*

#### f.- SHOW TRIGGER EDGE

Show the status of the edge in the selected output.

Rise edge (1) if it is ascent  
 Fall edge (0) if it is descent.

#### ?.- COMMAND MENU: Shows the command menu.

- The procedure for configuring the lamps via hyperterminal mode is the following:

#### Step 1. SELECT OUTPUT

Go inside **s.- Select Output**, write 's1' for output 1, 's2' for output 2 or 's3' for output 3 and press [ENTER]

Note: To see selected output go inside **r.- Show selected output**.

#### Step 2. SET THE DESIRED PULSE WIDTH

Go inside **p.- Set the new pulse width**, where the following will appear: **New value [0...2500]**. Introduce the new value and press [ENTER].

Note: To program a width of 16ms write **p1000** and press [ENTER] To see which is the previously selected pulse width, go inside **v.- Show selected pulse width**.

Note: For directly increasing the pulse width in steps of 1uS, go inside **u.- Increase pulse width**. For directly decreasing do the proper with **d.- Decrease pulse width**.

#### Step 3. SET THE DELAY TIME

Used to change the initial time of delay in steps of 410uS. Range between 0-27s.

Go inside **t.- Set delay time**, where the following will appear: **New value [0...65535]**. Introduce the new value and press [ENTER]

Note: To remove the delay time, write **t0** and press [ENTER]. To see the programmed delay time, go inside **e.- Show delay time**

#### Step 4. CHOOSE THE DESIRED TRIGGER EDGE

Go inside **c.- Set trigger edge**, where the following will appear: **'Set trigger edge (rise/fall) (a/b)?'**. Introduce **a** for selecting the rise edge and **b** for activating the trigger when the input falls. Press [ENTER]

Note: To see the status of the edge in the selected output, go inside **f.- Show trigger edge**. If it is ascent 'Rise edge (1)' will appear and 'Fall edge (0)' if it is descent.

## Programming mode (by default)

This mode of configuring is used to program devices.

The usage is the same as the HyperTerminal mode, with the same commands but without the strings requesting or replying the value.

i.e.: If the **u** command is introduced, the system will respond with an **x**, where **x** is the value of the device pulse width.

Note: Programming mode is set by default. To change it into the hyperterminal mode, you must send the text string 'mode' to access the command menu.

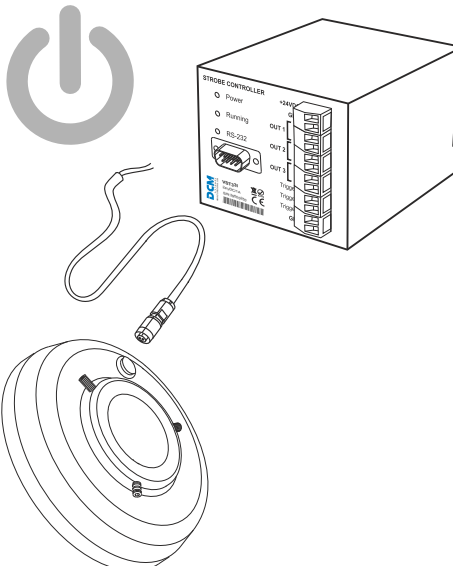
## TROUBLESHOOTING

This information is to help you quickly solve a problem. Before requesting service, please check the list below.

STATUS	POSSIBLE PROBLEM	SOLUTION
Running LED indicator stopped blinking.	PC Serial Port is wrong.	Try with another Serial Port.
Running LED indicator stopped blinking.	Serial Wire is wrong.	Try with another Serial Wire (discarded).
Running LED indicator stopped blinking.	Serial input transceiver of the strobe controller is wrong (burned by some electrical shock).	Send it to us for repairing. Try with another Strobe controller.

## Step 4. READY TO USE

After configuration, connect the lamps and start using VST331.





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