EN

Strobe controller
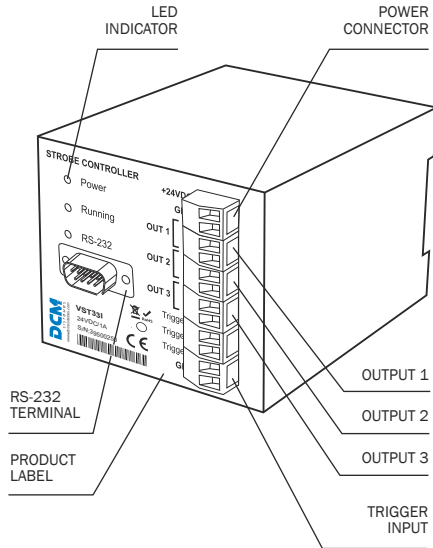# quickguide
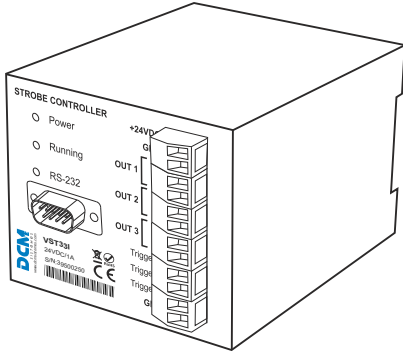
Ref. VST33I

Doc No.M026A06

COMPONENTS

LED INDICATOR
POWER CONNECTOR

RS-232 TERMINAL
PRODUCT LABEL
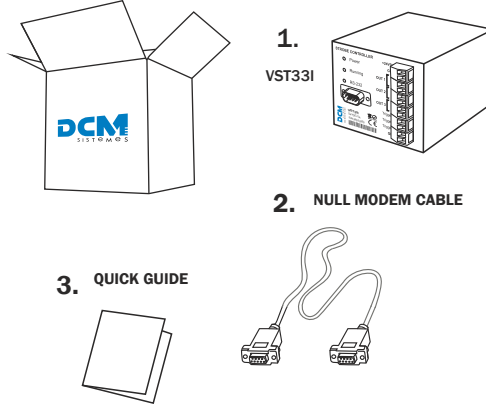OUTPUT 1
OUTPUT 2
OUTPUT 3
TRIGGER INPUT

VST33I 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:

1. VST33I

2. NULL MODEM CABLE

3. QUICK GUIDE

- 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.dcmsistemes.com**

⚙ Step 1. WIRING

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

○ POWER INDICATOR
ON when the power is switched on.
○ RUNNING INDICATOR
Blinks when the system is operative.
○ RS-232 TERMINAL*
Communication ON/OFF indicator.

NC RX TX   NC GND
NC NC   NC NC

+ — +24V DC
- — GND (Power ground 0V)
+ — LAMP 1, *Output 1*
- —
+ — LAMP 2, *Output 2*
- —
+ — LAMP 3, *Output 3*
- —
+ — Trigger Input 1
+ — Trigger Input 2
+ — Trigger Input 3
- — Common GND for trigger inputs

📝 **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:*

1 2 3   4 5
6 7   8 9

PIN	FUNCTION
2	RT
3	TX
5	GND
Others	Not Connected

- Null modem cable (SUBD-9 FEMALE):

5 4 3   2 1
9 8   7 6

Connector 1	Connector 2
2	3
3	2
5	5

Connector 1   Connector 2

QUICK START

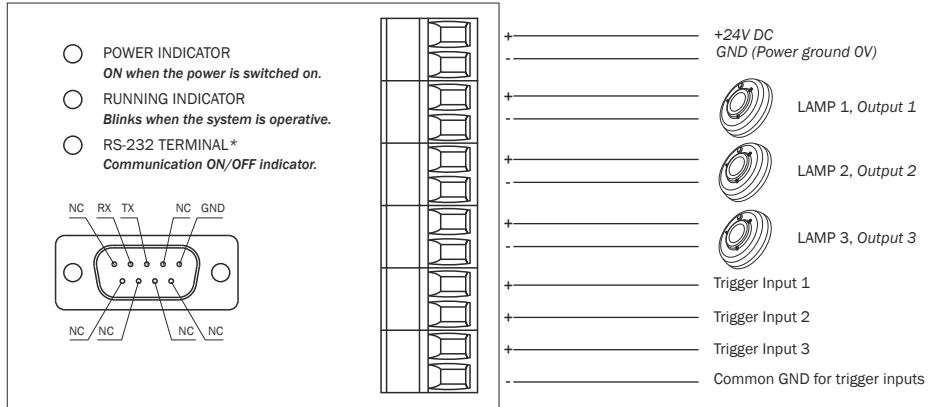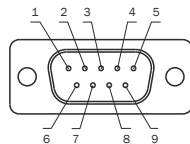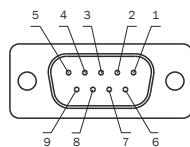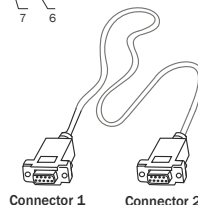The proceeding for using VST33I for the first time is the following:

⚠ **CAUTION**
Please, we recommend that you read carefully the instructions before installing the VST33I.

Step 1. Wire up VST33I strobe controller.

Step 2. Connect the PC through Null Modem DB9 cable to VST33I 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 VST33I.

📝 **Note:** Before installing a new lamp after first usage follow these steps from the beginning.

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

WARRANTY CONDITIONS

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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 VST33I strobe controller and write '**mode**'. You will receive the following command Menu:

STROBE CONTROLLER ©2013 Copyright DCM SISTEMES™.
Model VST33I – 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.*

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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 configurating 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.
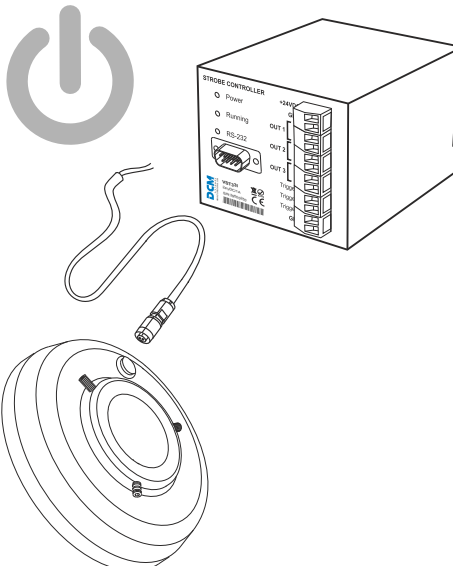

⚙ Step 4. READY TO USE

After configuration, **connect the lamps and start using VST33I.**

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.

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