



VT7S12E is the most advanced & Compact Vibration Transmitter. It accepts input directly from ICP type Accelerometer, processes the signal and gives analog output in the form of standard current or voltage; the vibration measurement range is field configurable for acceleration, velocity or displacement. The output signal is usually interfaced with PLC or DCS for monitoring and protection.

VT7S12E Transmitter has two Relay outputs per channel for Alarm, Trip. Also has additional outputs like Buffered output on BNC connector for analysis purpose, and optional RS485 serial port for direct interface with PLC, DCS or SCADA.

INSTALLATION

Mounting method: DIN Rail mounting

To install the Transmitter, select a location where:

- ❖ no one may accidentally touch the terminals
- ❖ mechanical vibrations are minimal
- ❖ corrosive gas is minimal
- ❖ no direct radiant heat is present
- ❖ no magnetic disturbances are caused
- ❖ no wind blows against the terminal board
- ❖ no water splashed
- ❖ no flammable materials are around

Turn off the power to the transmitter before installing it on the Din Rail because there is a possibility of electric shock.

How to connect wires:

Before carrying out wiring, turn off the power to the transmitter and check that the cables to be connected are not alive with a tester or the like because there is a possibility of electric shock.

NOTE:

- ❖ All wiring must confirm to appropriate standards of good practice and local codes and regulations. Wiring must be suitable for Voltage, Current and temperature rating of the system.
- ❖ Provide power from a single-phase instrument power supply. If there is a lot of noise in the power line, insert an insulating transformer into the primary side of the line and use a line filter on the secondary side. Do not place the primary and secondary power cables close to each other.
- ❖ Unused terminals should not be used as jumper points as they may be internally connected, which may cause damage to the unit.

CAUTION:

High voltage transients may occur when switching inductive loads such as some contactors or solenoid valves. Through the internal contacts, these transients may introduce disturbances which could affect the performance of the instrument.

For this type of load, it is highly recommended that a “snubber” is connected across the normally open contact of the relay switching though load. The snubber recommended consists of a series connected resistor/capacitor (typically **15nF/100 Ohms**). A snubber will also prolong the life of the relay contacts. A snubber should also be connected across the output of a trip output to prevent false triggering under line transient conditions

SPECIFICATION DETAIL

Input Specification	
No. of Input channel	1 or 2 (Factory Set)
Accelerometer Input	Remote ICP piezoelectric Accelerometer Sensitivity: 100 mV/g ±10% Dynamic range: 80 g pk
Sensor Excitation Current	4 mA, Voltage: 21 VDC
-3 dB Cut-off frequency	High Pass Filter: 2.5Hz, 5 Hz, 10Hz Low Pass Filter: 1KHz, 2.5KHz, 10KHz
Filter Accuracy	± 10% of Cut-off Frequency
Measuring parameter	Acceleration, Velocity, Displacement
Measuring Range	1) Acceleration 0-50 g, RMS/peak(derived) 2) Velocity 0-100 mm/sec, RMS/peak (derived) 3) Displacement 0–2000-micron, peak to peak (derived)

Power supply specification

Rated Voltage	85 - 265VAC 50/60 Hz Or 18-36VDC
Power Consumption	Max 12VA (85-265VAC) and Max.7VA (18-36VDC)

Mechanical Specification

Mounting	35mm DIN Rail
Dimensions	75 mm(H) x 70 mm(W) x 110 mm(D)
Material	ABS Plastic
Weight	350 gm
Terminal Cable Size	2.5mm ²
Protection	IP20

Environmental Specification

Ambient Temperature	0 to 55 °C
Humidity	30 to 95% RH non-condensing
Storage Temperature	0 to 85°C
Warm-Up Time of Instrument	15 Min.

Output Relay Specification

No of Relays	4 nos (2 nos per channel)
Purpose	Alarm or trip
Type	C, NO, NC
Delay for relay	05 - 50 sec to avoid false tripping.
Rating	2A @250VAC/30VDC & 5A @250VAC (optional)

Analog Output Specification

No. of Analog Output	One per Channel
Output Type	4-20mA (standard range) Optional : 0-20mA, 1-5VDC, 0-5VDC, 0-10VDC
Load Resistance	500Ω Max (For current o/p) 3000Ω Min (For voltage o/p)
Accuracy	±0.25% of Full Scale (Display to Output)

Rs-485 communication Specification (Optional)

No. of Communication Port	1- RS485
Protocol	Modbus RTU
Baud Rate	9600,19200

Buffer output Specification

No. of output	2 nos.
Output Impedance	<100 Ohms
Frequency Range	0.5 Hz to 10KHz
Accuracy	0.25% of Full Range

KEY FUNCTION DESCRIPTION

 **MENU/ENTER KEY:**

It is used to enter in the sub menu (various levels) and save the parameters to non-volatile memory, when user setting a proper data by Increment and shift key for parameter configuration.

 **ESCAPE KEY / AUTO-MANUAL KEY:**

It is used to come out from any sub menu (various levels) to the run mode. It is used for come out of the manual mode to auto mode too.

 **INCREMENT KEY:**

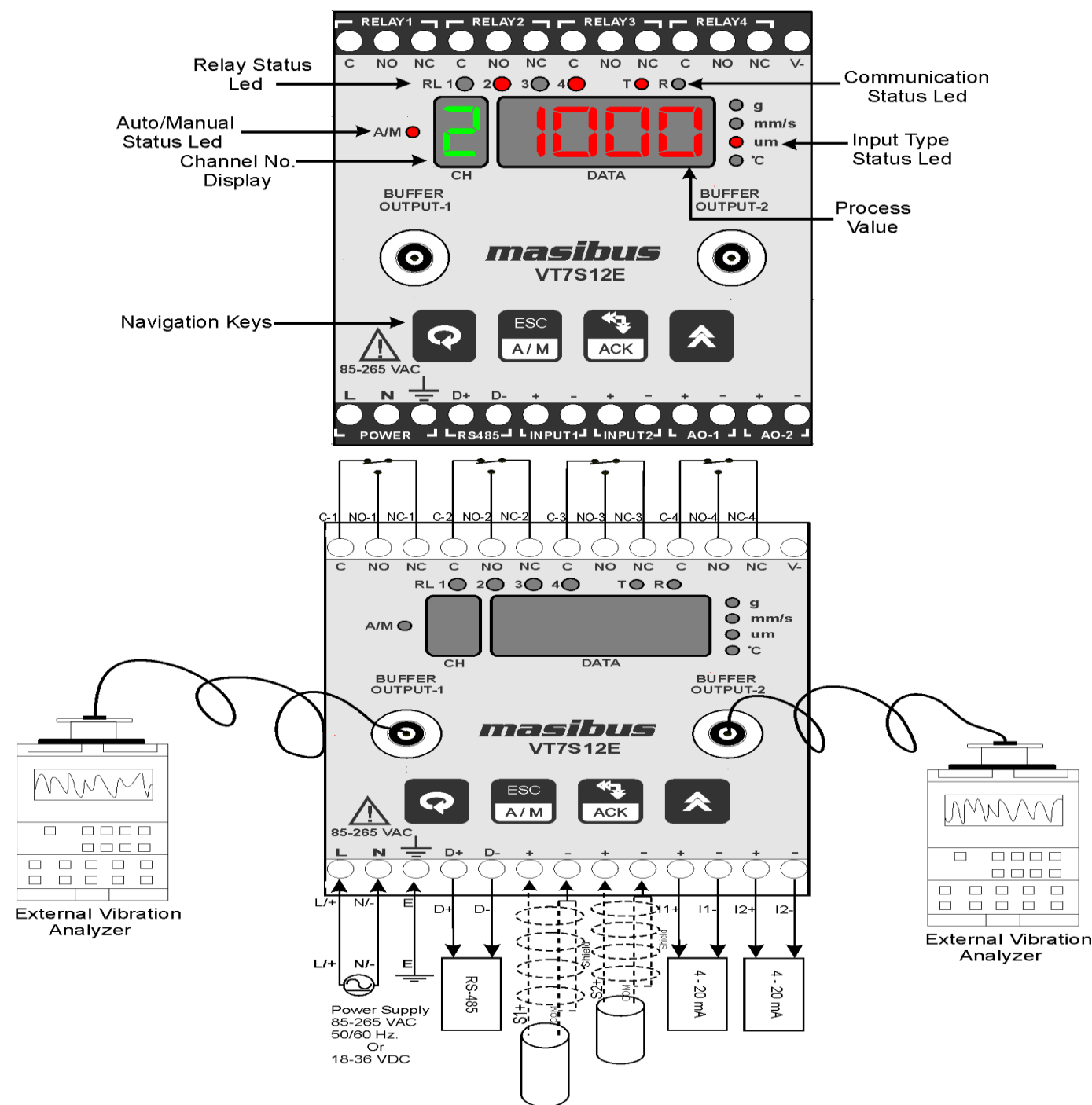
It is used to increment the parameter for selection. Value of parameter can be incremented by pressing this key. When first time increment key is pressed, DP (decimal point) in PV display blink, so user can modify the value with increment key. It is used to increment the value in particular digit. Value can be incremented from 0- 9 and from ‘9’ again it rollovers to ‘0’. The function Auto/Manual is integrated with this key. This key is used to enter into manual mode while the unit is in run mode.

 **SHIFT KEY/DECREMENT KEY:**

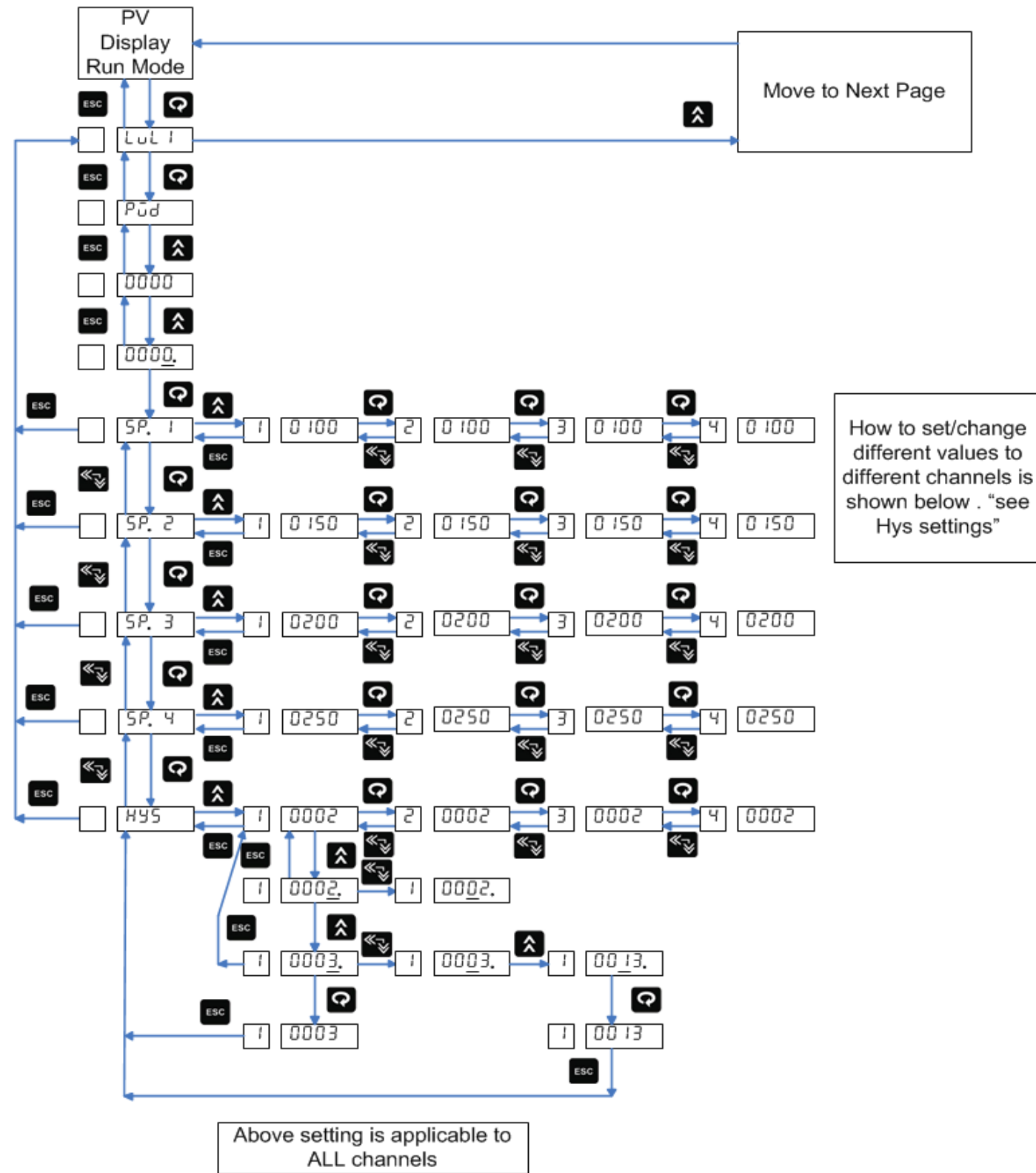
It is used to Shift the digit to set the parameter as describe in increment key when DP (decimal point) started to blink. Menu key is used to go forward to show next parameter and Shift key is used to go backward to show previous parameter. It is also used to acknowledge the trip relay.

FRONT PANEL CONNETION DIAGRAM DESCRIPTION

Name of Part	Function
Process Value Display(DATA window)	Displays Process Value. Display Parameter Name When user is Setting Parameter. Displays Error Message When An Error Occurs.
Channel No. Display (CHANNEL window)	Displays Channel Number in run mode. Also it will display relay number (01 – 04) in set mode (i.e.R.1,R.2,R.3,R.4) It will also display Group no(GP 1,GP 2/GP 1,GP 2,GP 3,GP 4) in set mode
Relay Status LED (RL1, RL2, RL3, & RL4) OR Open Sensor Indicator LED	OR When Channel is OPEN (Channel no. is corresponding to Relay no.)
Auto/Manual status LED (A/M)	If LED is on, it indicates Manual mode and if LED is off Auto Mode.
Communication Status LEDs (T,R)	When Communication on, two LEDs (In Red) blink.
Input Type Status LEDs (A, V, D, T)	Depending upon the channel Input type LED is on.



LAYOUT



For operation manual please visit www.masibus.com
Specifications are subject to change without notice due to Continuous improvements.

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MENU

