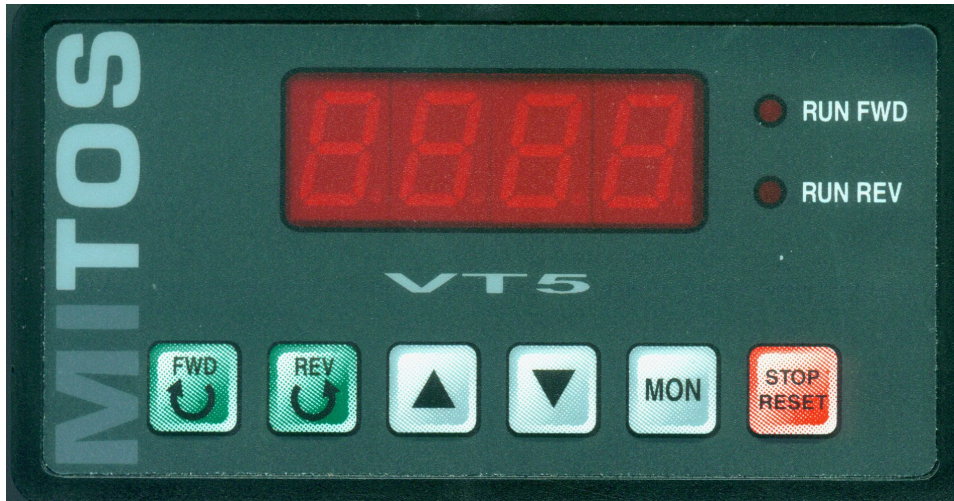


MITOS VT5

(Version.1.2)

Remote Keypad

for TOSHIBA Inverter VF S9 / nC1 / A7 / P7 / S11



- Compact remote Keypad
- Simple installation
- Simple connection (patch cable to the TTL-Interface of the Inverter)
- LED Display with 4 signs (*signal/mark*)
- 6 buttons
- Complete operation of the inverter:
 - Start / Stop
 - Increase frequency / decrease frequency
 - Reset
 - Show the operation status
 - Show trip messages

Remote Keypad MITOS VT5



Mandatory

Please read this instruction manual before starting connection and operation of MITOS-VT5



Warning

Please supply this manual to the end user of the MITOS-VT5 panel.



Mandatory

MITOS-VT5 remote keypad can directly START, STOP, change the frequency and the direction of the motor connected to the inverter. ALWAYS use safety devices to STOP the motor in emergency conditions.



Danger

Every time that a command is transferred from MITOS-VT5 panel to the Inverter, it is automatically stored into Inverter memory. If the connection cable between Mitos-VT5 and the inverter is damaged, it will be impossible to control the inverter (e.g. stop the motor). ALWAYS use safety devices to STOP the motor in emergency conditions.



General Cautions

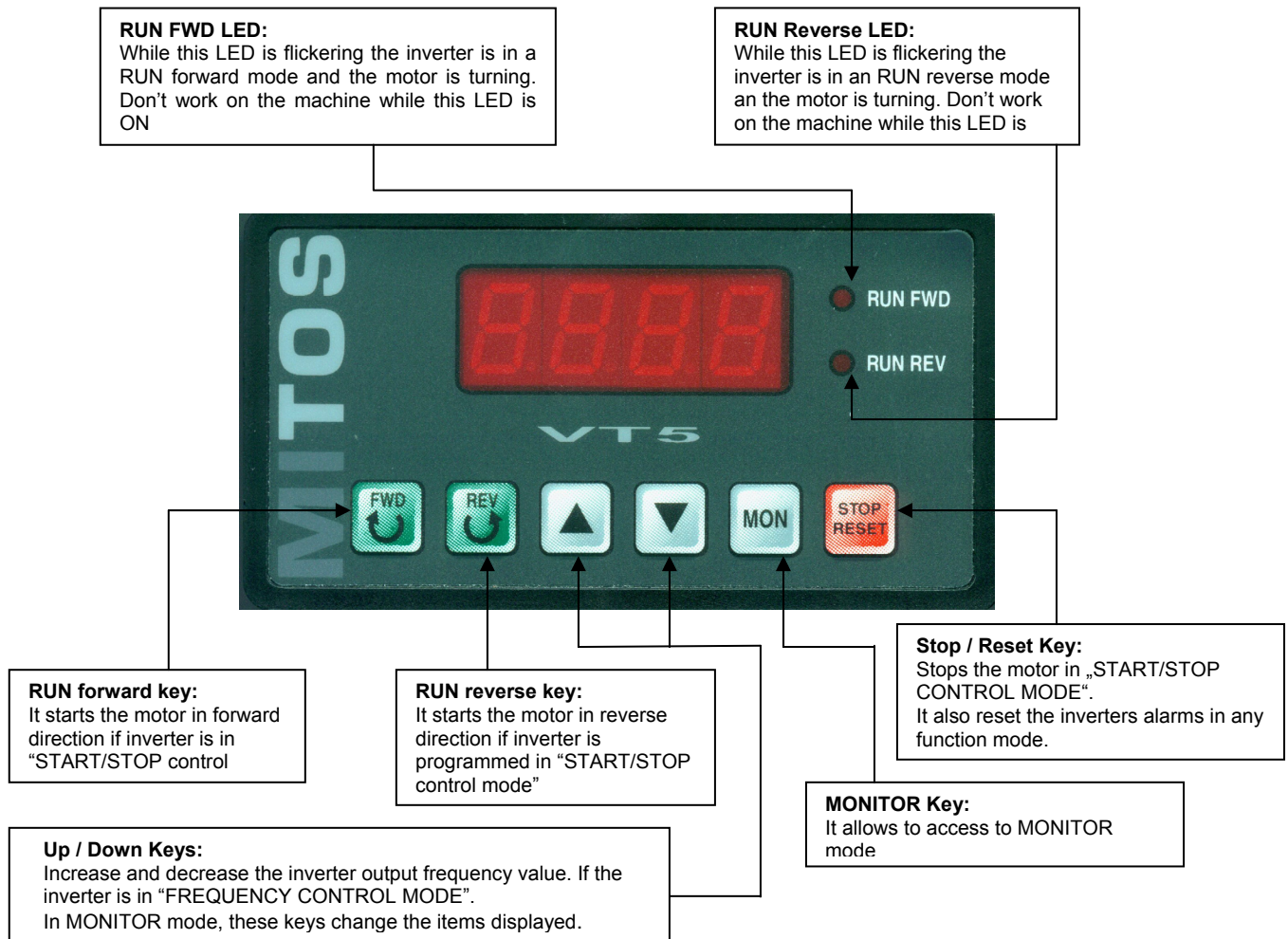
MITOS-VT5 keypad cannot be used in any application that could be dangerous to the human body or from which malfunction or incorrect operation would present direct threat to human life.

MITOS-VT5 keypad has been manufactured under strict quality controls. Anyway, if it is used in critical equipments, where an error or a malfunction would cause serious accidents to the persons or to the machine, safety devices MUST be installed on the equipment.



This manual could be subject to modifications without prior notice.

Explanation of the operation keys



| Control Mode | VF-nC1 | VF-S9 | VF-S11 | VF-A7/P7 |
|--|----------------------|----------------------|----------------------|----------------------|
| Inverter START/STOP control | CMod = 1 FMod ≠ 3 | CMod = 1 FMod ≠ 1 | CMod = 1 FMod ≠ 4 | CMod = 1 FMod ≠ 5 |
| Frequency control mode | CMod ≠ 1 FMod = 3 | CMod ≠ 1 FMod = 1 | CMod ≠ 1 FMod = 4 | CMod ≠ 1 FMod = 5 |
| Full Inverter control START/STOP/FREQ. | CMod = 1 FMod = 3 | CMod = 1 FMod = 1 | CMod = 1 FMod = 4 | CMod = 1 FMod = 5 |

Standard monitor display selection at turning ON

Through inverter parameter F710 is possible to choose which inverter variable should be displayed on MITOS-VT5 as standard.

| F710 parameter value | Displayed Item on VF-S9, VF-nC1 | Displayed Item on VF-S11, VF-A7, VF-P7 |
|----------------------|---------------------------------|--|
| 0 | Output frequency | Output frequency |
| 1 | Output current | Frequency reference |
| 2 | Frequency reference | Output current |

Multiplying Factor (Motor speed indication)

Using F702 inverter parameter it is possible to set a multiplying factor, useful to display on MITOS-VT5 a value proportional to the output frequency, such like motor speed or line speed.

For example, when output frequency is 50 Hz and we need to display 1500 (example RPM) set parameter F702 = 30 (because 30 x 50 = 1500).

Monitor

In MITOS-VT5 monitor mode is possible to display many inverter's data and the alarm history for the past 4 errors. To enter the monitor mode, press MON key and then using ↑ ↓ keys choose the variable to be displayed. A further pressing of MON key exit this mode.

Items that can be shown in MONITOR mode:

| | |
|----------|-----------------------------------|
| F 0 . 0 | Output frequency (Hz) |
| F 50 . 0 | Reference frequency (Hz) |
| C 17 . 2 | Output current* |
| V 220 | Input voltage* |
| P 170 | Output voltage* |
| aL1 | Memory alarm N° 1 |
| aL2 | Memory alarm N° 2 |
| Err5 | Memory alarm N° 3 |
| nErr | Memory alarm N° 4 |
| t 0 . 0 | Cumulative operation time (hours) |

* displayed in absolute values on recent models, on older ones displayed in %.

Special Functions

The new MITOS-VT5 keypad offers a number of special features which were not available on the older MITOS-VT4 version. These new functions can be selected at MITOS-VT5 turning on (plugging into the inverter) with contemporary pressing of two keys. These keys are indicated below:



“Transparent” Mode

In Transparent Mode, MITOS-VT5 can be used as a simple display panel. Parameters $\text{C}\text{F}\text{r}\text{d}$ and Frd Status is ignored and MITOS-VT5 cannot control any inverter function, start/stop mode and/or frequency change. Pressing REV key, the transparent mode is not selected (on), pressing FWD key (oFF) transparent mode is selected.



Individual FWD/REV key enabling or disabling

By contemporary pressing of MON and DOWN keys at start up, the FWD/REV keys enabling/disabling menu is entered. Pressing the FWD or REV key is possible to select if the key should be enabled or disabled. To exit this menu a store the new configuration, press STOP/RESET key. Below are possible configurations:

F 1 r 1

1 = ON
F = FWD key

F 1 r 0

0 = OFF
R = REV key

F 0 r 1



F 0 r 0

Stored frequency reset

When MITOS-VT5 panel controls the inverter frequency reference, normally the last reference value is automatically stored and maintained even after power off. With this new function it is possible to clear the MITOS-VT5 frequency memory after each power off/power on cycle. By pressing REV key the function is not selected (on). By pressing the FWD key the function is selected (oFF).



Software release display

By pressing above keys contemporary at power on, the software release of MITOS-VT5 displayed.

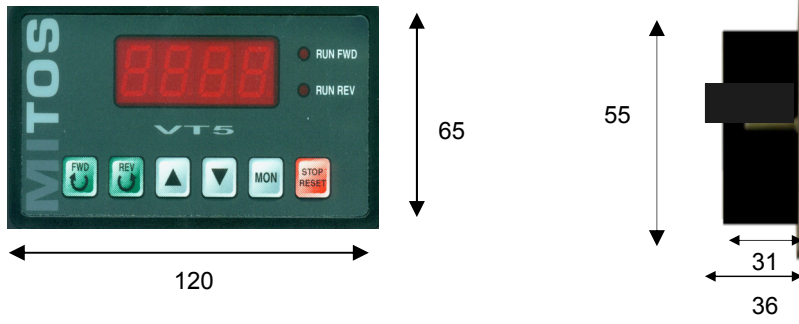
Alarms

MITOS-VT5 can display all the main alarms for TOSHIBA inverters. If the alarm code is not recognized, a generic error code Err is displayed. ComE is shown in case of communications problems between MITOS-VT5 and inverter, while, if communications between MITOS-VT5 and inverter is interrupted, an Err5 alarm is automatically generated on the inverter.

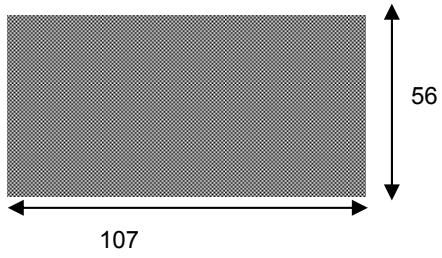
Communications parameters settings

To allow MITOS-VT5 serial communication with inverter, the communication parameters must be at their default values, particularly $\text{F800} = 3$, $\text{F801} = 1e$, $\text{F802} = 0$. If these parameters are modified, MITOS-VT5 panel will show ComE .

OUTLINE DRAWING (mm)



PANEL CUT DIMENSIONS (mm)



Panel cut dimensions are indicative only.