



TMAS™

TMN-50T Hardware User Manual



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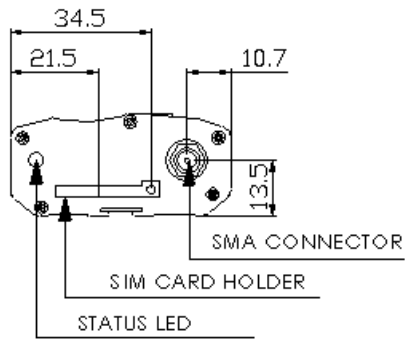
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1. TMN-50T Specifications

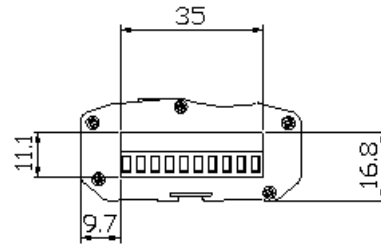
Physical Specification	
Dimension	86mm x 54mm x 24mm
Weight	105g (Approx)
Casing Material	Extruded Aluminum
Installation method	Rack or Wall-mount (2 side mounting plate provided)
Electrical Specification	
Voltage Input (Vin)	DC 6-40V
Current (@Vin 5V)	500mA max (communication) 150mA max (standby)
	Note: Not include external driving devices
Environment Specification	
Temperature	0 to +55 °C (during operation)
Hardware Features	
Inputs	4 x digital inputs with surge, voltage and current protection (Internal pull-up to +3.7V)
Outputs	1 x open collector output (with high current driver, sink 0.5A max and 50Vdc max)
Max no of mobile phone for SMS alert	16 (plus 1 for Data Center)
GSM modem	On Board Cinterion/Siemens TC35i GSM module
PC configuration port	Via TX , RX and GND terminal connection
Firmware Features	
Max no of mobile hand-phones for SMS alert	16 (plus 1 for data center)
Types of languages support for SMS	All supported languages in SMS (16bit PDU format)
Configurations of nodes, inputs and outputs	Yes
Selectable for NC or NO input sensor	Yes
Pre-Defined/User defined alert messages	Yes (40 chars max)
Un-used inputs and outputs to be disabled	Yes

TMAS telemetry unit is using the latest state-of-the-art technology in the system design. It is designed for remote installation such that it can operate in standalone mode without a PC or networked to a PC or data center via the GSM wireless network.

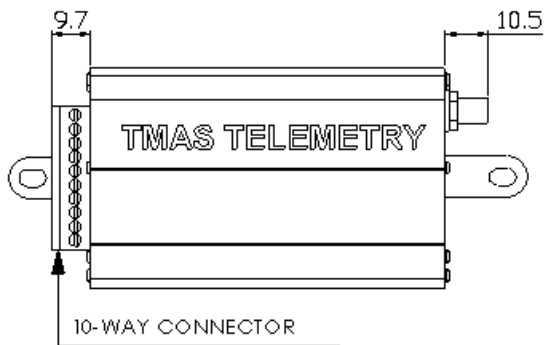
2. TMN-50T Mechanical Details



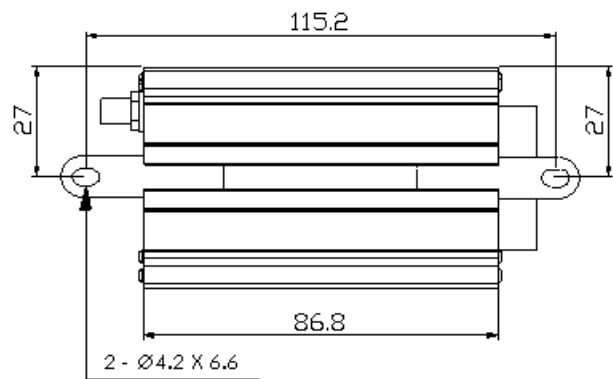
FRONT



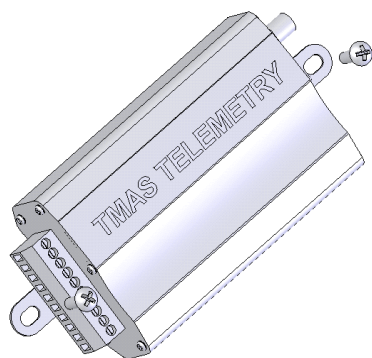
BACK



TOP



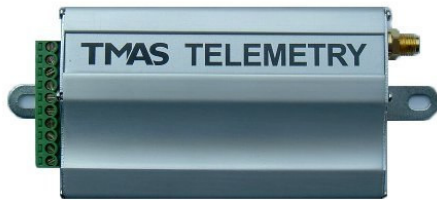
BOTTOM



Note:
TMN-50T includes 2 detachable side
mounting plate. TMN-50T can be
mounted using 2 x M4 screws

3. Product Information

TMN-50T Telemetry Terminal Unit



TMN-50 Starter Kit



TMN-50T Terminal



Programming Cable



GSM Antenna



TMAS PC Manager Lite



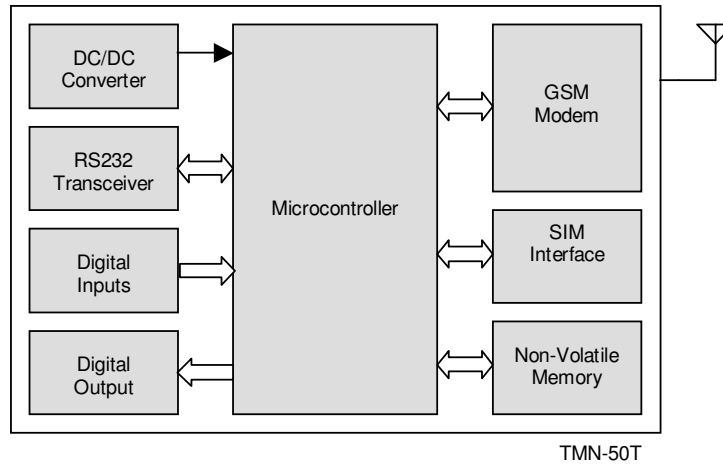
AC/DC Adaptor

TMN-50 Starter Kit Packing List

1. TMN-50T x 1
2. GSM Antenna (TMA-003A)
Dual-Band A: 890~960MHz, B:1710~1990MHz;
Gain: 2dBi; VSWR: <=2 to 2.5;
Nominal Impedance: 50 ohms
Polarization: Vertical
Max Power: 50W
Antenna Connector: SMA Male
3. AC/DC Adaptor x 1
Input: 110-240VAC
Output: 6VDC, 1A, plug 2.1mm, center positive
4. Programming cable x 1
DB9 socket for PC comm. Port connection
DC socket for AC/DC adaptor
Factory pre-wired into 10 ways pluggable terminal block
5. TMAS PC Manager Lite CD
Support single TMN-50T, full features.
Include software and hardware user guide

4. System Descriptions

Hardware Block Diagram



Alarm Monitoring and Output Control

Port Descriptions

IN0 – IN3 4 alarm digital inputs. Each input can be interfaced to dry contact or TTL active voltage of sensor. Each input can be configured to Normally Open or Normally Closed (NC/NO). Default NO state is pull-up to +3.7V and includes low pass RC filter to remove glitches.

OUT0 1 output with open collector driver, with freewheel diode protection for inductive load. The output is capable of sink current 0.5A max and 50VDC max.

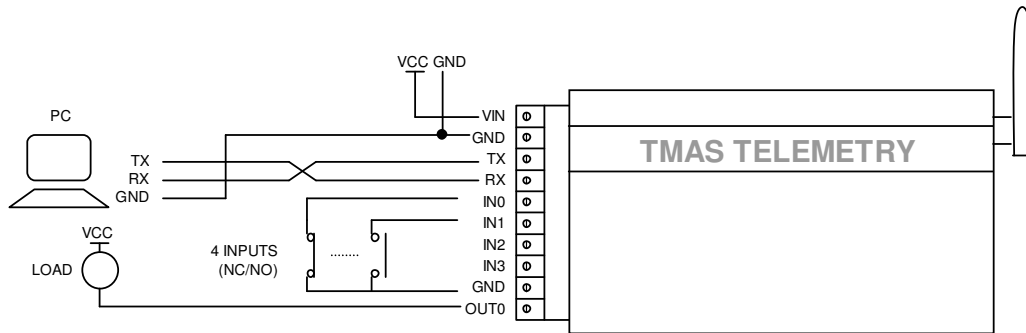
Alarm Monitoring

- When an alarm is triggered, alarm SMS will be sent to the configured users. Maximum 16 users can be configured plus the data center if it exists.
- Unless acknowledged by the users or the alarm is muted during the re-sending process, TMN-50 will keep resend to the users for the configured re-sent interval and number of re-sent.

Output Control

- The SMS format for user to control the output is **<OUTPUT Name>:ON** or **<OUTPUT Name>:OFF**. The output name is the text that is max 10 chars, case insensitive, no space and can be A-Z or 0-9. For example: "PIN1234:ON", "light:ON". The output name can be configured using PC manager.
- Only authorized users can control the output. Acknowledgement message will be send to the user to confirm the control action.

TMN-50 Wiring Diagram



LED Indications

LED	Indication	Description
Power LED ●	OFF	Power shutdown or dead
	0.6s ON / 0.6s OFF	No SIM card inserted, or network search in progress, or ongoing user authentication, or network login in progress.
	75ms ON / 3s OFF	Logged to network (monitoring control channels and user interactions). No call in progress.

5. Support Issues

For any sales and technical enquiries, please contact your local sales representatives or TCAM Technology Pte Ltd.

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