

MT-TEC S/S TCP EMERGENCY CLINICAL ALARM



INSTALLATION & OPERATING MANUAL

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DESCRIPTION

Housed in an ABS Bopad enclosure, this Digital Emergency Clinical Alarm panel monitors up to 8 critical gas line pressures. An additional input is also provided to monitor a Voltage Free (VF) switch such as a scavenger.

The full colour 10.1" touchscreen displays individual pipeline gases and their current pressures. Normal pressures are represented by a green display, while fault conditions are indicated as a flashing red display.

The screen layout is fully customisable using existing animated images or actual photographic representations.

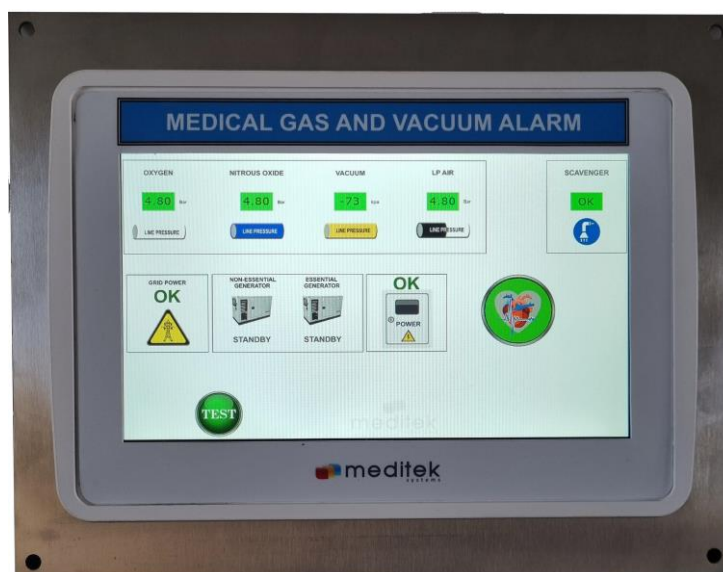
Additional mimic (Slave) panels, installed in the hospital, can be connected via the Medbus® built-in interface.

Other features include:

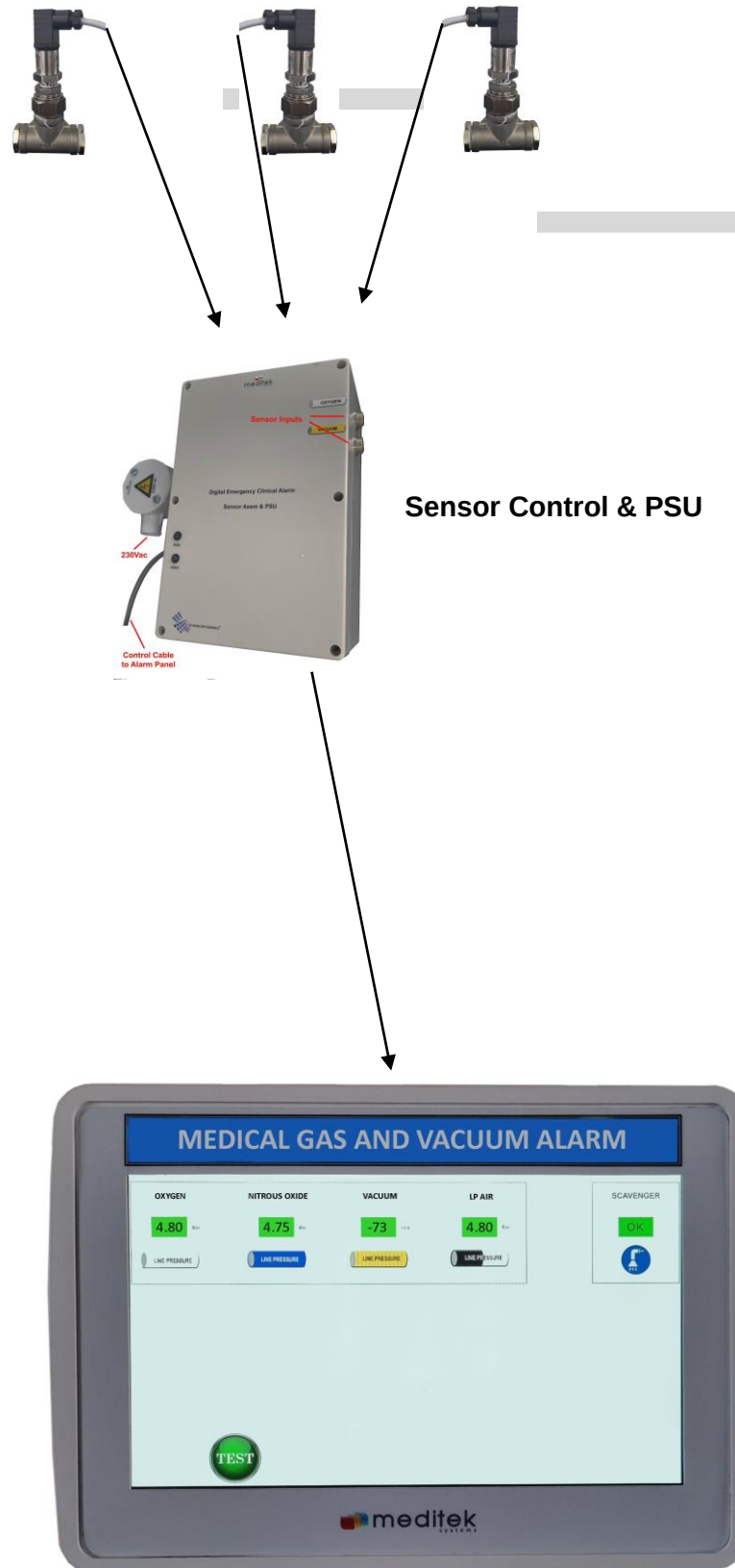
- Modbus® output / BMS signal.
- Event and data logging.
- Broken cable / sensor disconnect alarm
- Fully customisable display and alarm settings.
- Immediate viewing of past history per alarm input.
- Simple addition or removal of alarm inputs.
- Mobile App (Apilert®). (Optional)
- Battery Backup Power (Li-ion). (Optional)

During an alarm condition, an audible buzzer is activated which can be manually muted. The visual alarm will however continue to indicate a fault until such time as the fault is rectified. The audible alarm is re-activated should an additional alarm condition occur with a "remind" buzz every 15 minutes.

Operating from a standard 110/230V ac supply, the system uses a 12VDC power supply to supply the sensors and the control unit.



SCHEMATIC WIRING DIAGRAM

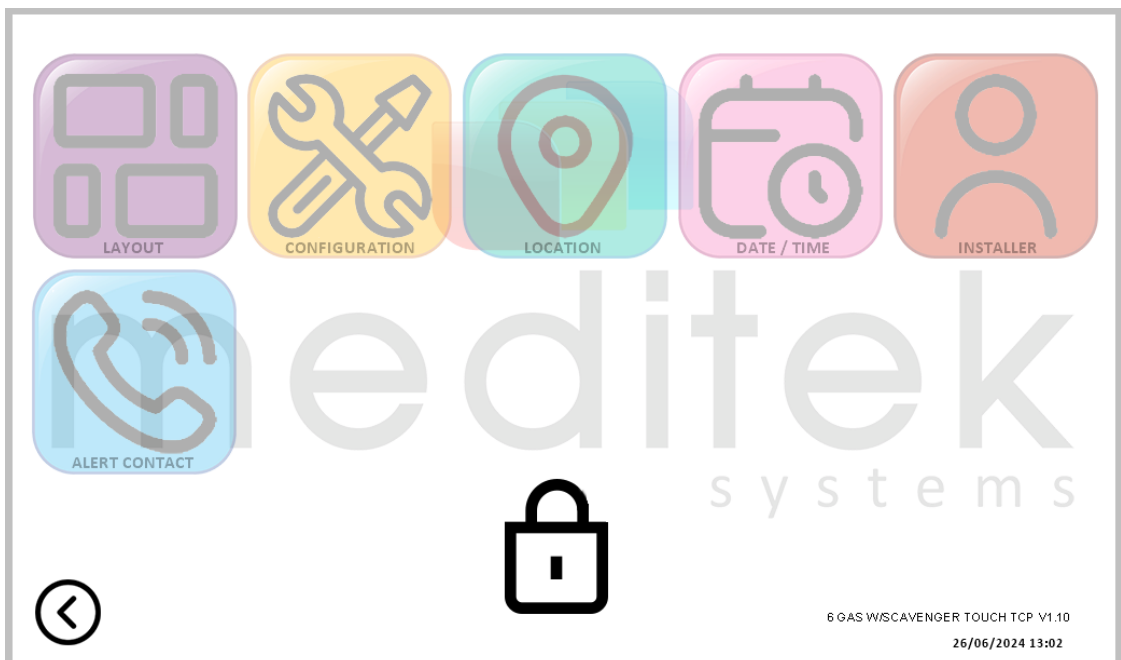


MENU

Each alarm system is programmed and calibrated before leaving the factory and no maintenance or adjustment should be required. If any of the alarm details or alarm levels needs to be changed, this may be done by qualified personnel only.

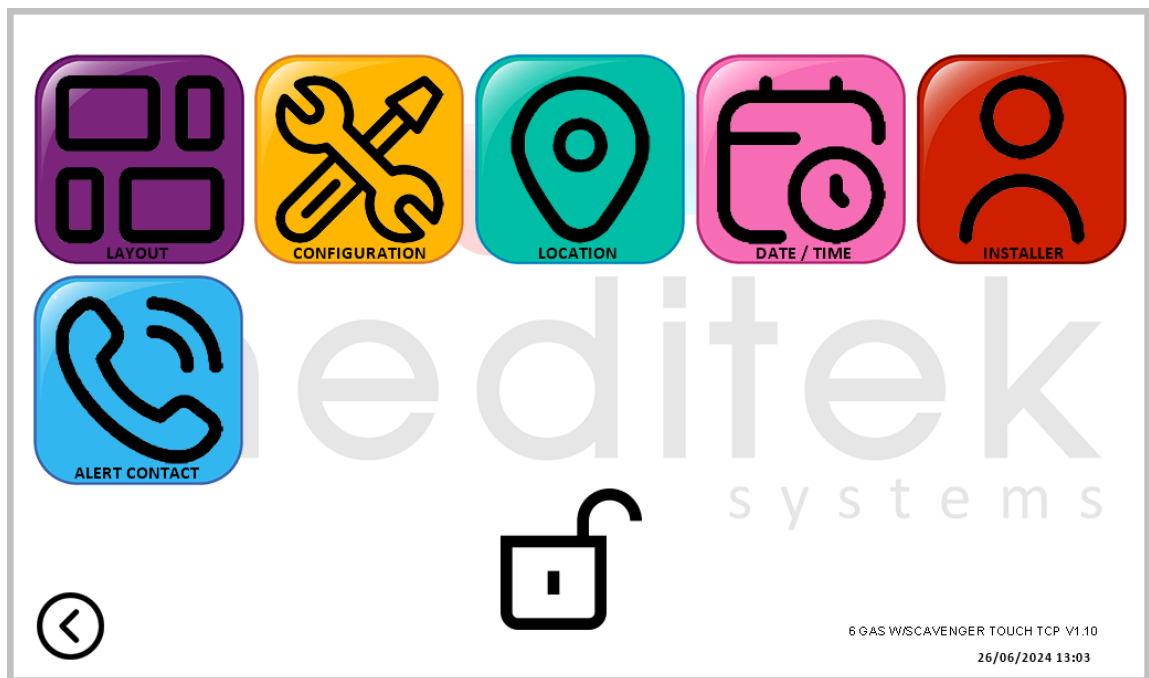


Touch on the settings icon  to access the system management menu.



Touch on lock icon  and enter the password.

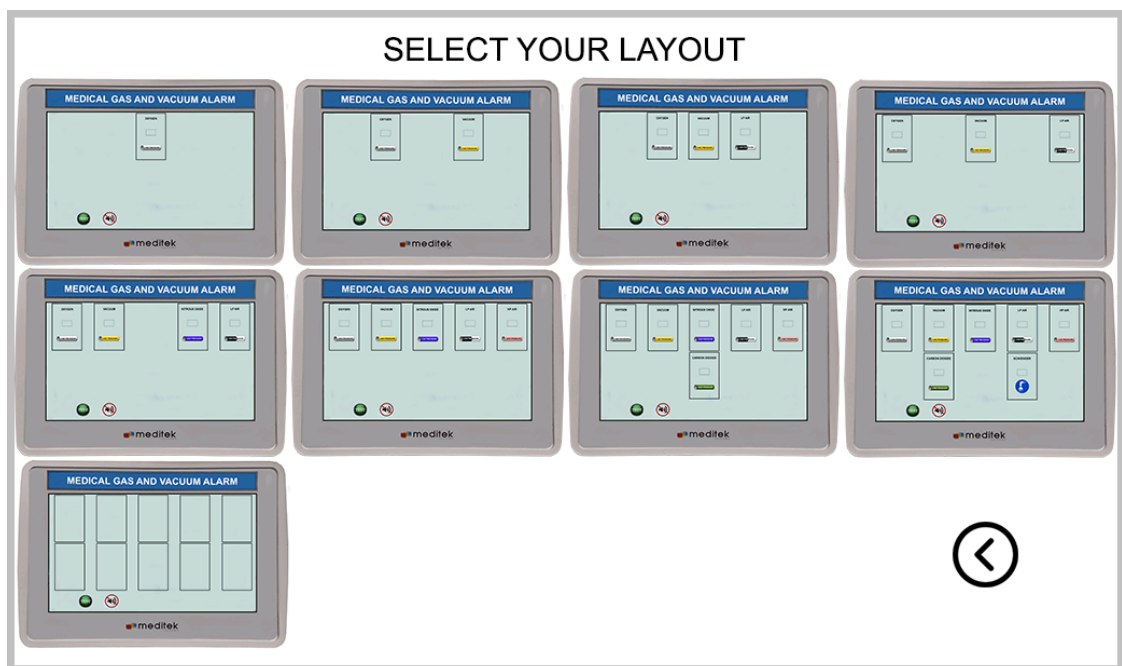
SETTINGS



All alarm settings relevant to that system will be displayed and changes can be made in real-time. The screen will automatically return to the home "Monitor" screen after 10 seconds of inactivity.

Use Back icon to return to previous page.

Touch on the layout icon  to select alarm inputs display layout.



Select a preloaded configuration from above or select the last option to design a new layout

SETTINGS Continued...

Touch on the configuration icon  to amend the alarm inputs settings.

Input: 1 Gas: OXYGEN Heading: OXYGEN Lo Alarm: 360 KPa Hi Alarm: 540 KPa Status: ACTIVE 	Input: None	Input: 2 Gas: VACUUM Heading: VACUUM Hi Alarm: -50 KPa Status: ACTIVE 	Input: None	Input: 3 Gas: LP AIR Heading: LP AIR Lo Alarm: 340 KPa Hi Alarm: 510 KPa Status: ACTIVE 
Input: None	Input: None	Input: None	Input: None	Input: None



All alarm inputs are displayed with relevant position on the display screen.
Touch on required alarm input to amend.

ADJUSTING SETTINGS

Input: 1
Gas: OXYGEN

Heading: OXYGEN

Low: 360

High: 540

SI Unit: BAR ☐ kPa ☒

Status: Act ☒ Deact ☐ Hide ☐

Preview

OXYGEN

480

 **LINE PRESSURE**



Please note:
HTM02-01 and ISO 7396 recommend alarm levels no more than 20% up or down from the nominal line pressure.

Adjust required alarm information and swipe left/right for next alarm input or back arrow.

SETTINGS Continued...

Touch on the location icon  to amend the alarm system location/area.

SET LOCATION

☐ **ADVANCED**
HEALTH

☐ **Intercare**
Medical Centres

☐ **MEDICLINIC**
EXPERTISE YOU CAN TRUST

☐ NO LOGO

☐ **Clinix**
WHERE HEALTH AND CARE MEET

☐ **lenmed**
Embrace every day

☐ **MELBOMED**
PRIVATE HOSPITALS

☐ **cure**

☒ **Life** Group
HEALTH CARE

☐ **NETCARE**

LOCATION:



Select appropriate hospital group/name and location.

Touch on the date/time icon  to amend the system date & time.

SET DATE AND TIME

DAY:

MONTH:

YEAR:

HOUR:

MINUTE:

26/06/2024 12:03



SETTINGS Continued...

Touch on the installer icon  to amend the installer's company information.

INSTALLER SETUP

☐ AFROX	☐ AIR LIQUIDE	☐ BC GAS	☐ BJ GAS
☐ BULL AND BUSH	☐ CABMED	☒ DRAGER	☐ EG MEDICAL
☐ FLAT-FOOT	☐ FRANSCO	☐ GAS BOUTIQUE	☐ GAS REPUBLIC
☐ HUTZ	☐ I & T GAS	☐ INTAKA	☐ MC GAS
☐ MEDMECH	☐ MIG	☐ NORFLEX	☐ ON SITE GAS
☐ PIPELINE SERVICES	☐ PJ GAS	☐ PRO MEDICAL GAS	☐ PURE EARTH MEDICAL
☐ ROB DYER	☐ SCHORN CHRYOGENICS	☐ SMARTECH WOMAN	☐ OTHER

INFO:



Select the appropriate installer and provide contact number.

Touch on the alert contact icon  to amend the alert notification information.

ALERT SCREEN CONTACT INFORMATION

WHO TO CONTACT:

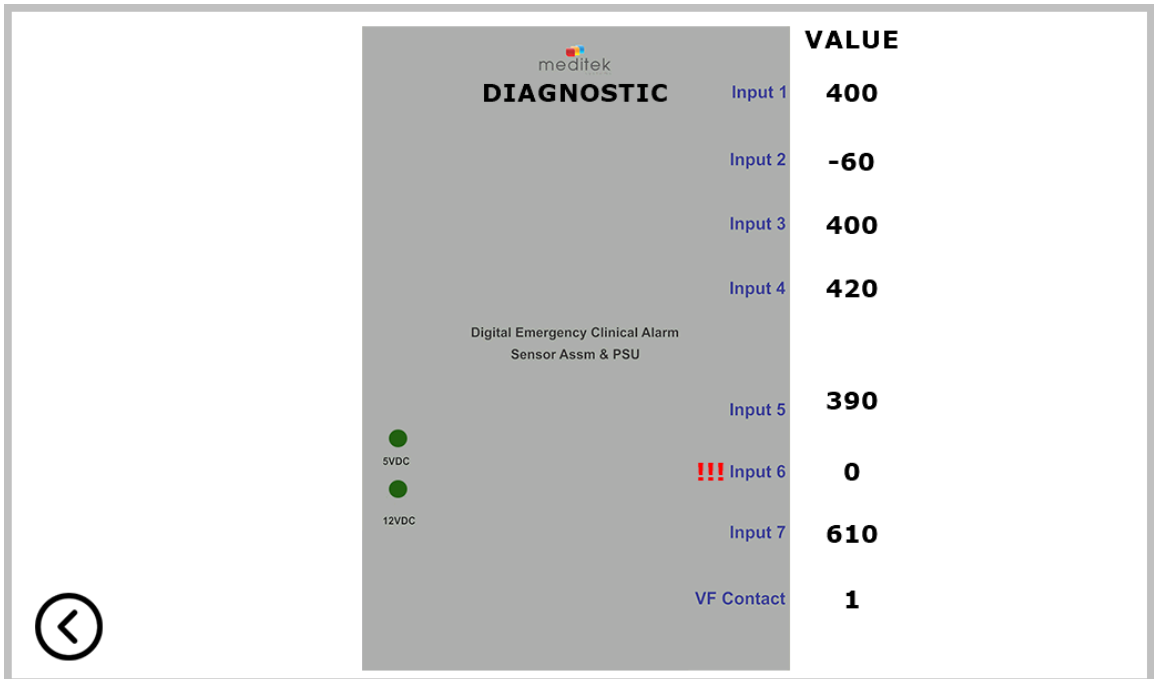
CONTACT TEL:



Provide the alert notification responsible person and contact details.

DIAGNOSTICS

Touch on the diagnostics icon  to view the current incoming sensor data.



	VALUE
Input 1	400
Input 2	-60
Input 3	400
Input 4	420
Input 5	390
!!! Input 6	0
Input 7	610
VF Contact	1

This data represents the raw sensor information being received by each input.

MANUAL

Touch on the manual icon  to see a full description of:

- Description/features
- Specifications
- Dimensions
- Troubleshooting
- Warranty
- Maintenance

EVENT HISTORY

By pressing on the required gas symbol, the relevant date stamped history will be displayed, showing the latest 50 events.

OXYGEN

395

LINE PRESSURE

VACUUM

-60

LP AIR

400

LINE PRESSURE

DATE	EVENT
18-06-2024 14:26	OXYGEN - RESTORED
18-06-2024 14:26	OXYGEN - LOW

EXIT

TEST

NETCARE WARD 1

Dräger

18/06/2024 14:27

MAINTENANCE

This alarm system has no user-serviceable parts.

Monthly check

- Throttle each line pressure and check that an alarm condition is registered.
- Press MUTE button to confirm the alarm sound is muted.
- Press TEST button to confirm all displays and alarm buzzer are working.

Annual check

- Schedule authorised and qualified personnel to perform a full sensor check and calibration. This service should be accompanied by a signed certificate of compliance.

SPECIFICATIONS

POWER SUPPLY

- 80 to 240 Volt ac 50 Hz supply 36W.
- Resettable surge suppressers.
- 12V standby charger with Li battery (optional).
- 12VDC 3A output
- Fuse 22mm 3A glass cartridge.

INPUTS

- 7 x 4-20mA pressure sensor
- 1 x analog normally closed VF contact

OUTPUTS

- Modbus®
- Medbus®
- Apilert® Mobile App (Optional)

DISPLAY

- 10,1" full colour capacitive backlit touchscreen
- Green value indication for normal operation, flashing red for alarm condition

DATA COMMUNICATION

- Half-Duplex RS485. (MT-APN16 Medbus®)
- Full-Duplex RS485. (8 CH DIB (Medbus2®))
- Optional ModBus ® over RS485 / TCP Modbus®

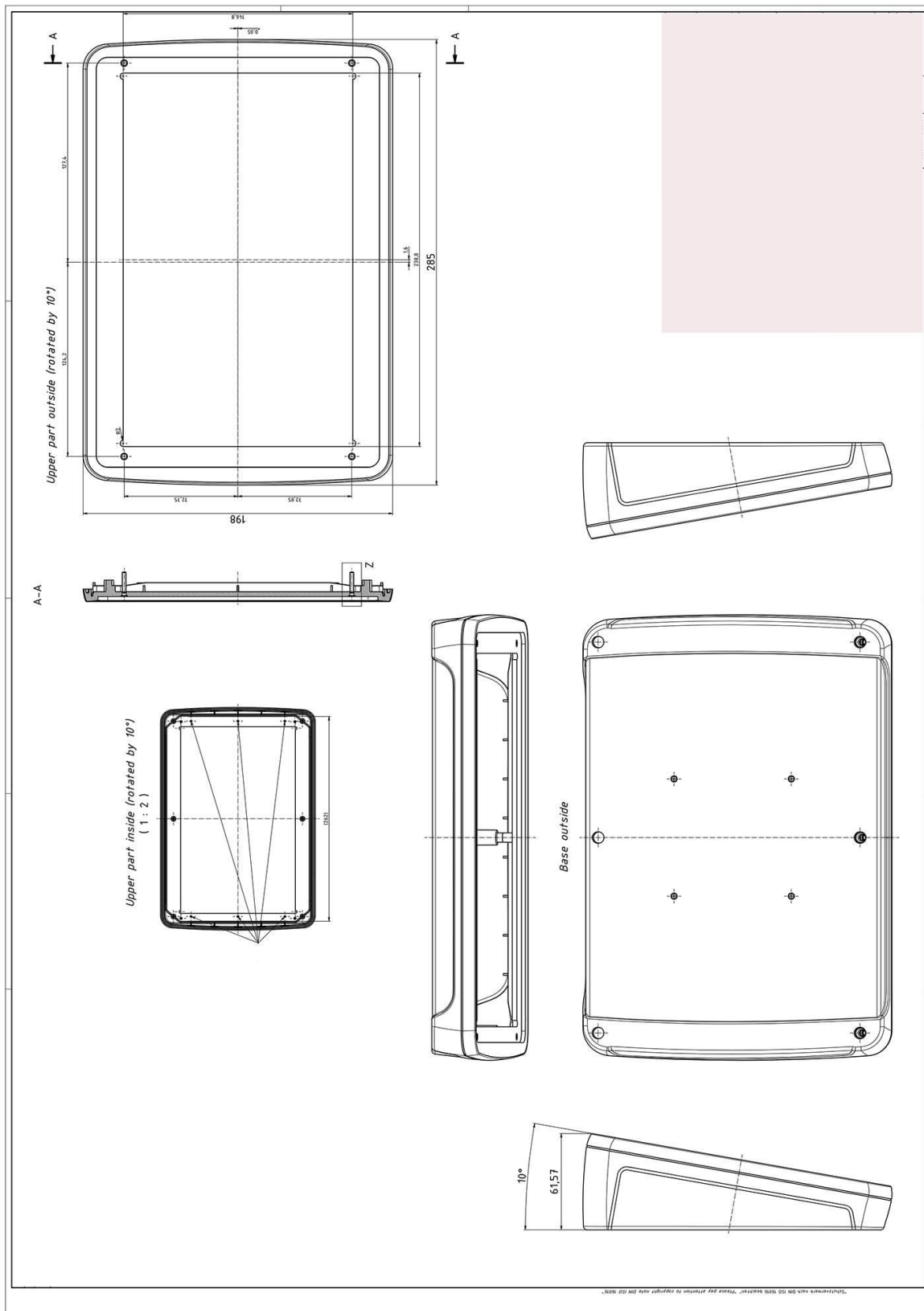
OPERATION INTEGRITY

- All V.F. contacts Normally Closed – opens on a fault.
- All sensors will indicate disconnect or failure to respond.
- All Modbus® & Medbus® will indicate failure to respond.

AUDIBLE ALARM SOUND

- ISO 3746 tested, SANS 7396 compliant – 75.6dBa

DIMENSIONS



TROUBLESHOOTING

The MT-ECT Alarm System contains no user serviceable components. All repairs and maintenance must be carried out by qualified, Meditek Systems' appointed personnel. Failure to comply may render any warranty null and void.

Changing any settings may cause the entire alarm network to malfunction and void the warranty.

Problem	Cause	Solution
Panel dead	No power or PSU failure.	Check 230Vac supply. Replace PSU.
Inputs not responding	Control cable failure.	Check control cable between sensor assembly and control unit for damage or bad contact.
Panel "frozen"	Power issue	Disconnect power and reapply after 2 minutes
Incorrect readings	Faulty Sensor	Replace sensor

These alarm systems require minimal operating maintenance but do require checking and calibration by qualified personnel annually.

Please refer any other errors to the relevant service department or contact gas@mediteksystems.co.za for assistance.

WARRANTY

Limited Warranty Statement

Meditek Systems warrants its products to be free from defects in material and workmanship under normal use for a period of twelve (12) months from the date of purchase. If the warranted products are returned during this period, Meditek Systems will repair or replace (at its option) without charge those items found to be defective. Any replacement or repairs parts are warranted for the remainder of the original warranty or ninety (90) days, whichever is longer. The original purchaser must promptly notify Meditek Systems in writing during the warranty period, of the defect in material or workmanship. Returned goods must be accompanied by a copy of the original invoice or proof of purchase. Prior authorization is required before returning the product as Meditek Systems will not accept any shipment for which prior authorized has not first been obtained.

This warranty does not cover damage incurred in shipping or handling, problems that result from external causes such as accident, abuse, misuse or problems with electrical power failures or other damage caused by:

- Peripherals or unauthorized alterations or modifications.
- Servicing not authorized by Meditek Systems.
- Usage that is not in accordance with product instructions
- Failure to provide a suitable installation environment for the products
- Improper maintenance or failure to perform regular preventative maintenance

Meditek Systems does not accept liability beyond the remedies provided for in this limited warranty or for any special, indirect, consequential or incidental damages, including without limitation, any liability for third party claims against you for damages. Meditek Systems 's maximum liability will be no more that the amount you paid for the product that is subject of the claim.

Meditek Systems will not be responsible for any custom fees, taxes, freight, travel, replacement charges or VAT that may be due.

We strongly recommend that your alarm systems be tested and maintained on a regular basis.

Warning: Dealers, installers and/ or other selling, distributing Meditek Systems product (s) are not authorized to modify this warranty or make any additional warranties.

Meditek Systems may change the terms of its limited warranty, without notice, as its discretion.

Limitations of Alarm Systems: It must be understood that while your Meditek Systems product is highly advanced and sophisticated, it does not offer any guaranteed protection in case of emergency. This is due to a number of reasons, including by not limited to inadequate or improper installation and positioning, switch or sensor limitations, power limitations and network functionality. As a result, Meditek Systems does not represent that the alarm system will prevent personal injury or property, or in all cases provide adequate warning or protection.