tork
valve & automation

GAP 30 Gas Alarm Control Panel

USER MANUEL

JANUARY 2022

PLEASE READ THE INSTRUCTION BEFORE USE

2354 SIL 3 ROHS ATEX

www.smstork.com

Read the operating instructions first.

- Follow the safety instructions.
- These operating instructions are part of the product.
- Retain operating instructions for the life of the product.
- Forward instructions to future users or owners of the product.

Target group:

- This document serves as a guide for personnel using the GAP30 Gas Alarm Panel. It cannot be used as a reference for any other device. The right to make changes is reserved. Contains information for installation, commissioning and maintenance personnel.

CONTENT

1. Safety instructions 4
   1.1. Security basics 4
   1.2. Warnings and precautions 4
   1.3. Considerations 5
   1.4. References and symbols 6
2. Identity 7
   2.1. Description of the device 7
   2.2. Intended use of the device 7
   2.3. Reasons for using the product 7
   2.4. Front of the device 8
   2.5. Buttons, Leds and their functions 8
   2.6. Back of the device 8
   2.7. Terminal and connection points 9
   2.8. Technicial Features 10
   2.9. Technical Dimensions 10

3. Transport, Storage, Packaging, Warranty and Protection measures 11
3.1. Transport 11
3.2. Storage 11
3.3. Packaging 11
3.4. Guarantee 11
3.5. Protection measures 13
4. Control Parameters 13
4.1. Possible malfunctions and solutions 13
4.2. splash screen 14
4.3. Monitoring Screens and explanations 15
4.4. Setting Menus and explanations 15
4.5. Settings 15
4.5.1. Gas alarm settings 15
4.5.1.1. STATUS: Making status settings 16
4.5.1.2. SIGNAL SELECTION: Signal selection 16
4.5.1.3. LIMIT: Setting the limit 16
4.5.1.4. ALARM: Making alarm settings 17
4.5.2. Tank level settings 17
4.5.3. Language settings 18
4.5.4. Time and date settings 18
4.5.5. Factory settings 18
4.6. Power cut 18
5. Electrical Connections 19
5.1. Connection of gas alarm detectors 19
5.2. Connection of tank level sensors 20
5.3. Tank 1 connection 21
5.4. Tank 2 connection 21

1. SAFETY INSTRUCTIONS

1.1. Security basics

• Our products are designed and manufactured in accordance with accepted standards.
• End-user and contractor must comply with legal requirements, directives, installation guidelines, regulations and recommendations, electrical connection, commissioning, operation and installation.
• In order to prevent personal injury and possible damage to the product, all personnel working with this device must comply with the safety and warnings specified in the safety instructions.
• Installation, electrical connection, commissioning, operation and maintenance must be performed by suitably qualified personnel authorized by the end user or contractor.
• Personnel must fully read and understand the instructions before working on this product.
• These instructions are given to know and abide by the officially recognized rules.
• Before commissioning, make sure that all settings are correct.
• Incorrect settings or connections may pose a hazard to the application or damage the installation.
• The manufacturer cannot be held responsible for any indirect damages. This risk is entirely with the user.
• Care should be taken in cases such as transportation, proper storage, assembly and installation.
• Operate the device in accordance with the instructions.
• The end user or contractor is responsible for implementing the necessary protective measures, providing and supplying guards, barriers or personal protective safety equipment for personnel.
• Maintenance and service operations should only be performed by trained and authorized personnel.
• During maintenance intervention on the faulty unit, it must be worked in accordance with the operating instructions.
• Any device changes require the manufacturer's prior written approval.

1.2. Warnings and precautions

The following warnings draw particular attention to safety-related procedures on these devices.

DANGER	WARNING	CAUTION	NOTE
Indicates an imminent dangerous situation with a high level of risk. Ignoring this warning will result in death or serious injury	Indicates a potentially hazardous situation with moderate risk. Ignoring this warning could result in death or serious injury.	Indicates a potentially dangerous situation with a low level of risk. It may cause property damage, minor or moderate injury. This warning should be heeded.	Potentially dangerous situation. Ignoring this warning does not apply to property damage and personal injury.

1.3. Considerations

COUTION Pay attention to the following points in order to use the device safely.

- The device should not be used for any other purpose.
- Liquid materials should not be placed on the device.
- In case of liquid spillage on the device, it should be checked by the authorized company or sent to the technical service.
- Maintenance and service operations should only be performed by trained and authorized personnel.
- The device should not be kept in more than 75%RH humid places.
- The device should not be operated under atmospheric pressure over 1060mBar.
- The device must be protected against sudden changes in temperature and humidity.
- The device must be used on a smooth and suitable ground.
- The device must be protected from vibrations and mechanical shocks.
- The frequency and voltage of the power line should comply with the device specifications, and it should be able to deliver sufficient current to the device.
- High-voltage generators, X-heated devices and devices that may cause noise in the supply line should not be located around the device.
- The device should not be constructed in such a way that the device's power cables, sensor cables, output connection cables, and the gas alarm device and cables to which it is connected prevent the movements of persons.
- The device must be used with accessories and parts supplied by the manufacturer. The use of different accessories and parts may cause the device to malfunction or malfunction.
- The device and its cables should not be subjected to any mechanical stress.
- The device and its accessories should be checked at least once a year.
- Fire extinguisher should be available.
- The user must have the necessary training and knowledge about fire extinguishing.
- After making sure that the device connections are made correctly and completely, the device should be started

WARNING If the device gives a warning alarm in cases such as gas leakage detection due to possible reasons, malfunction, signal interruption, the following points should be paid attention to in environments where gas leakage occurs.

- First of all, stay calm.
- Heed and obey the warnings, alarms and messages specified in this instruction and the device.
- The device shuts down the energy of the related systems connected to the output relays in case of any malfunction, inability to detect a signal, signal interruption or in case of alarm due to different reasons.
- Check if there is a gas leak in the environment where the gas alarm detectors connected to the device are located. If there is, open the doors and windows without panicking and let it get ventilated.

Against the risk of fire;

- Close the gas valve, starting from the place closest to you.
- Do not plug any electrical appliances into sockets.
- Do not use electrical devices. Warn users.
- Do not use devices such as doorbells, cell phones and walkie-talkies.
- Contact a specialist from the gas distribution company in a suitable safe place.

• If there is a flame, put it out. If there is a flame in natural gas, it is useless and dangerous to try to extinguish the flame without closing the gas valve. If the flame size is large, immediately inform service units such as fire extinguishing, fire brigade and take action.
• If electrical equipment is on fire, do not try to extinguish it with water. Use a fire extinguisher.
• If you smell gas before the device alarms, intervene appropriately as stated in the warnings and instructions, without waiting for the device to give an alarm.
• If the cause of the alarm cannot be found even though the gas leak continues, leave the area for precaution. Contact the gas distribution company to check the parts, make them safe and make the necessary maintenance and repairs. If there is a device problem, inform the manufacturer.
• Check all accessories and connections before using the device. Do not use damaged accessories and cables. Improper accessories, faulty or poor connections can cause unexpected problems such as electrical shocks.
• Before commissioning the device, make the necessary settings on the device and make sure that the inputs and outputs are working. Otherwise, contact the manufacturer.

1.4. References and symbols

The following references and symbols are used in this instruction and on the electronic cards.

SIGNS / SYMBOLS	DEFINITIONS
+24V	+24V port on DC voltage supplies
+12V	+12V port on DC voltage supplies
+5V	+5V port on DC voltage supplies
GND	0V port on DC voltage supplies
T1,T2	Tank signal inputs analog signal port
S1-S8	Gas signal inputs analog signal port
TXD(A)	Serial communication sending data port
RXD(B)	Serial communication receiving data port
COM	Relay outputs port common contact terminal
NO	Relay outputs port common contact terminal
NC	Relay outputs port common contact terminal
Grounding symbol	The connection point where the grounding connection of the device will be made.

Table 1: Symbols

2. Identity

2.1. Description of the device

GAP30 Gas Alarm Control Panel is a general-purpose, simple, easy and microprocessor-controlled device that can detect the output signal of detectors that can output in mA or voltage and can control the systems connected to the output relays according to the level of these signals, giving audible, light and visual warnings. The GAP30 gas alarm control panel, which was developed considering the needs of the user, has a structure that simplifies and strengthens the communication between the user and the device.
It provides ease of use with its graphic LCD display and MENU, EXIT, UP, DOWN keys. POWER warns the user by giving visual warning with TANK1, TANK2 and GAS lights and audible warning with buzzer (audible warning).
Settings, warning, error messages, menus and tank filling can be monitored numerically and visually on the graphic LCD screen.
It can show 8 channel gas level input and 2 channel tank level input. Related channels can be turned on or off.

2.2. Intended use of the device

GAP30 gas alarm control panel, gas alarm and tank level signal inputs from sensors or detectors (0-20, 4-20, 0-10, 2-10 mA, 0-5, 1-5, 0-10, 2- 10 VDC) detects analog signals. It is a product that aims to warn and inform the user visually, audibly and with light by controlling the connected systems according to the detected signal levels, to use the systems it controls safely and to prevent possible dangers.

In order for the GAP30 gas alarm control panel to detect the signal levels of the tank level sensor or gas alarm detector, it is sufficient to send an analog signal to the device. Not only gas alarm detector, but also temperature, pressure, level etc. It also allows the use of sensors that can produce analog output. It can also be used in other fluid filling areas, especially in tank filling stations.

2.3. Reasons for using the product

- Working with mains voltage
- Less energy consumption
- Modular, integrated design structure
- Comprehensive control, easy adjustment and flexible operation
- Supporting English and Turkish languages
- Robust and lightweight construction
- Informing the user with visual warnings and alarms
- Visual and easy use with graphic LCD screen

2.4. Front of the device

In the figure below, the front of the device is shown to inform the user.

Figure 1: Front of the device

2.5. Buttons, LEDs and their functions

The functions of the buttons and leds on the front of the GAP30 gas alarm panel are explained below.

MENU : It is used for navigating the menus, selecting the relevant menu and making confirmation, silencing the gas or tank alarms that occur on the monitoring screen.
EXIT : It is used to return to the main menu screen and leave the relevant menu.
UP : It is used to navigate the menus and increase the numerical values upwards.
DOWN : It is used to navigate in the menus, decrease the numerical values in the down direction, switch the gas and tank menus on the monitoring screen.
POWER LED : Indicates that the device is powered.
TANK1 LED : Indicates Tank1 upper limit and lower limit level exceeding warnings. If it is red, it means the upper limit, if it is green, it is the lower limit.
TANK2 LED : Indicates Tank2 upper limit and lower limit exceeding warnings. If it is red, it means the upper limit, if it is green, it is the lower limit.
GAS LED : Indicates gas alarm status. It lights up red. If the detected signal value exceeds the set limit, the led lights up and gives a warning.

2.6. Back of the device

The back side of the device is shown in the figure below to inform the user.

Figure 2: Back of the device

2.7. Terminal and connection points

Device input connection Terminal connection pins definitions are given in the picture below.

DEFINITIONS (INPUTS)

1	: +24 VDC	(Device Supply Voltage Pin)
2	: GND	(Device Supply Voltage Pin)
3	: GND	(MAX485 Communication Pin)
4	: RXD(B)	(MAX485 Communication Pin)
5	: TXD(B)	(MAX485 Communication Pin)
6	: GND	(Tank1, Tank2 Level Sensor Supply Voltage Pin)
7	: +5V DC	(Tank1, Tank2 Level Sensor Supply Voltage Pin)
8	: +12V DC	(Tank1, Tank2 Level Sensor Supply Voltage Pin)
9	: T1	(Tank1 Level Sensor Signal Input Pin)
10	: T2	(Tank2 Level Sensor Signal Input Pin)
11	: +12V DC	(Gas Alarm Device Supply Input Pin)
12	: GND	(Gas Alarm Device Supply Input Pin)
13	: S8	(Gas Alarm Device Signal Input Pin)
14	: S7	(Gas Alarm Device Signal Input Pin)
15	: S5	(Gas Alarm Device Signal Input Pin)
16	: S6	(Gas Alarm Device Signal Input Pin)
17	: +12V DC	(Gas Alarm Device Supply Input Pin)
18	: GND	(Gas Alarm Device Supply Input Pin)
19	: S4	(Gas Alarm Device Signal Input Pin)
20	: S3	(Gas Alarm Device Signal Input Pin)
21	: S1	(Gas Alarm Device Signal Input Pin)
22	: S2	(Gas Alarm Device Signal Input Pin)

Figure 3: Input Connection Terminals

The definitions of the device output connection terminal pins are given in the picture below.

DEFINITIONS (OUTPUTS)

23	: NC	(TANK1 RELAY-UL) Tank1 Level Sensor Upper Limit Relay Contact Pin
24	: COM	(TANK1 RELAY-UL) Tank1 Level Sensor Upper Limit Relay Contact Pin
25	:NO	(TANK1 RELAY-UL) Tank1 Level Sensor Upper Limit Relay Contact Pin
26	: NV	(TANK1 RELAY-AL) Tank1 Level Sensor Lower Limit Relay Contact Pin
27	: COM	(TANK1 RELAY-AL) Tank1 Level Sensor Lower Limit Relay Contact Pin
28	: NO	(TANK1 RELAY-AL) Tank1 Level Sensor Lower Limit Relay Contact Pin
29	: NC	(TANK2 RELAY-UL) Tank2 Level Sensor Upper Limit Relay Contact Pin
30	: COM	(TANK2 RELAY-UL) Tank2 Level Sensor Upper Limit Relay Contact Pin
31	: NO	(TANK2 RELAY-UL) Tank2 Level Sensor Upper Limit Relay Contact Pin
32	: NC	(TANK2 RELAY-AL) Tank2 Level Sensor Lower Limit Relay Contact Pin
33	: COM	(TANK2 RELAY-AL) Tank2 Level Sensor Lower Limit Relay Contact Pin
34	: NO	(TANK2 RELAY-AL) Tank2 Level Sensor Lower Limit Relay Contact Pin
35	: NC	(GAS RELAY1) Gas Control Relay Contact Pin
36	: COM	(GAS RELAY1) Gas Control Relay Contact Pin
37	: NO	(GAS RELAY1) Gas Control Relay Contact Pin
38	: NC	(GAS RELAY2) Gas Control Relay Contact Pin
39	: COM	(GAS RELAY2) Gas Control Relay Contact Pin
40	: NO	(GAS RELAY2) Gas Control Relay Contact Pin
41	: NC	(SIREN RELAY3) Siren Control Relay Contact Pin
42	: COM	(SIREN RELAY3) Siren Control Relay Contact Pin
43	: NO	(SIREN RELAY3) Siren Control Relay Contact Pin

Figure 4: Output Connection Terminals

2.8. Technicial Features

TECHNICAL FEATURES	
Body protection class	IP54
Body material	ABS
Dimension	72x144x115mm
Weight	515 gr
Supply voltage	24VDC
Gas detector supply voltage	12VDC
Tank level sensor Supply voltage	12VDC, 5VDC
Power consumption	1.5W
Output control relays	Gas control relays(2 Pieces), Siren relay, Tank1 relays (AL and UL), Tank2 relays (AL and UL)
Output control relays maximum current carrying capacity	28VDC 10A, 250V AC 7A
Gas level sensing input	8 pieces
Tank level detection input	2 pieces
Gas level input control signals	0/4-20 mA, 0/2-10 mA, 0/2-10V DC, 0/1-5V DC
Tank level inlet control signals	0/4-20 mA, 0/2-10 mA, 0/2-10V DC, 0/1-5V DC
Ambient temperature	-10°C ~ +50 °C
Loudness	85dB
Alarm type	Can be viewed with sound, light and on the screen
Relative humidity	30 ~ 75 %
Language option	Turkish English
User interface	Graphic LCD display (blue-white), keys and warning leds

Table 2: Technicial Features

2.9. Technical Dimensions

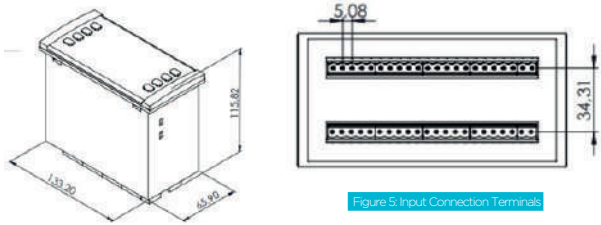


Figure 5: Input Connection Terminals

3.Transport, Storage, Packaging, Warranty and Protection measures

3.1. Transport

During the transportation of the GAP30 gas alarm panel, consider all kinds of variable transportation conditions such as impact, vibration, falling, rain, transportation that may damage it. Pack it well so that it reaches the installation site securely.

COUTION **A dangerous situation due to improper transport.**

- Check the packaging.
- Comply with the signs and symbols on the packaging.
- Make sure that the signs and symbols on the packaging are visible.

3.2. Storage

NOTE **Risk of corrosion and deterioration due to improper storage.**

- Store in a well-ventilated dry place (maximum humidity 75%).
- Protect against dust and dirt.
- Protect against ground moisture by storing on a shelf or on a wooden pallet.
- Protect against excessive temperature, humidity and water.
- Keep away from harmful oscillations such as magnetic field, radiation.

3.3. Packaging

Our products are protected by special packaging for transportation when leaving the factory. The packaging used in packaging consists of environmentally friendly materials that can be easily cleaned. It should be separated and recycled. Packaging materials such as wood, cardboard, paper, PE foil are used. TORK recommends recycling and collection centers for the disposal of packaging materials.

3.4. Warrant

- The warranty period starts from the delivery date of the product and the warranty period is 2 years.
- The entire product, including all its parts (against failures that may arise from our production and assembly errors and/or defective parts), is within the scope of our company's warranty.
- **If the product fails within the scope of warranty;**
- The time spent in repair is added to the warranty period. The repair period of the product is maximum 20 business days.
- The warranty starts from the date of notification of the product defect to the TORK authorized service, or in the absence of an authorized service station, to the seller, dealer, agency, representative, importer or manufacturer of the product. The consumer can make the failure notification by telephone, fax, e-mail, registered letter with return receipt or similar, but in case of conflict, the burden of proof rests with the consumer.

• The product;
• In the event that it breaks down at least four times within a year or six times within the warranty period determined by the manufacturer and/or importer, provided that it remains within the warranty period, from the date it is delivered to the consumer, and if the user is not able to benefit from this product due to these faults,
• In case of exceeding the maximum time required for repair,
• If it is determined that the repair of the malfunction is not possible with a report prepared by the seller, dealer, agency, representative or one of our company's officials, respectively, if the service station is not available, the product will be replaced free of charge.
• The warranty period of the product that has been changed during the warranty period, the purchased product, TORK Industrial Automation Products San. Trade Ltd. St. limited to the remaining warranty period provided by
• Free repair and product replacement obligations are eliminated in the following cases.
• Failure of the product due to use contrary to the methods or conditions specified in the user manual,
• The product and the warranty labels on its contents are damaged/torn,
• If it is determined or noticed that the product has been opened/repaired before, other than TORK Authorized Service personnel,
• In case the outer surfaces of the product and its components are broken within the customer's responsibility,
• Incorrect handling (bump, drop, impact), inadequate maintenance, abuse, use contrary to the environmental characteristics specified in the user manual, use of the product in excessively humid, dusty or hot environments, use in environments that are damaging to electronic circuits and corrosive, failures caused by accidents, impacts, electricity (voltage changes), natural disasters,
• Malfunctions or damages during transportation that are not under the responsibility of SMS Sanayi Malzemeleri Üretim ve Satısı A.S.,
• In case the defective part is replaced with parts other than TORK Authorized technical services and/or parts without SMSTORK warranty
• If it is determined by a report to be issued by the TORK authorized service, whether the malfunctions occur as a result of usage error or not.
• If the device fails after the warranty period, if you have a service agreement with TORK, request the type of service available in this agreement. If you do not have a service agreement, you can get service by contacting the TORK dealer or customer service center.

• Use original packaging materials whenever possible. The responsibility of the damages that may occur during shipment due to improper packaging belongs to the customer.
• Regarding the Warranty Certificate; For problems that may arise, an application can be made to the Ministry of Customs and Trade, General Directorate of Consumer Protection and Market Surveillance.

3.5. Protection measures

The device must be checked by the user before each use. Take precautions against damage such as rupture, crushing, cracking in cables and connections, that device connections are in accordance with the instructions for use, electrical leakages, liquid leaks and accumulations.

Before cleaning the device;

• Disconnect the power cable from the device.
• Use a soft cloth and cleaning solution.
• Be careful not to let any liquid get inside the device.
• Do not use the device with abrasive materials.

4. Control Parameters

4.1. Possible malfunctions and solutions

Before connecting and commissioning the GAP30 gas alarm panel, the user should have information about the device in hand. The table below gives information about corrective actions when a problem occurs with the device.

NOTE If there is a voltage fluctuation in the mains line, regulate the voltage fluctuation so that the device can measure correctly. Since the gas sector is in a dangerous industrial sector group, it is recommended never to compromise on safety principles.

Fault Types	Corrective Interventions
Device does not turn on	Disconnect the supply voltage cable from the mains. Check if there is electricity coming from the cable with the help of a measuring instrument. Check the power supply. If problematic, replace cable or power supply. If the problem persists, inform the company by taking the necessary measures.
Device does not turn on properly when booting	The device may have been subjected to vibrations or shocks. There may be a lack of contact or a problem in the socket ports or electronic materials. De-energize and re-energize the device. If the problem persists, use a spare device and contact the TORK manufacturer.
Continuous "GAS" alarm led flashing	Check the points where the input control signals are connected in the device and the environment where the detectors are located. If there is a gas leak, pay attention to the warnings given in the instruction. Check the integrity of the gas alarm detectors. If it is defective, request a new one.
I see "S1 ALARM" warning on the screen.	Check the points where the input control signals are connected to the device, problems such as disconnection in the terminals, breaking and crushing of the connection cables, whether there is a gas leak in the environment where the detectors are located, whether the gas alarm detectors are intact. If the problems are resolved as a result of corrective actions, the alarm functions of the device will return to normal.
I see "T1 UL alarm" warning on the screen.	TANK1 maximum level reached or no signal warning. When the device reaches the adjusted upper filling level, it closes the relay and stops the filling. When it falls below, this warning will disappear by itself. If there is a signal interruption, the warning will continue until it is resolved. TANK 2 alarm warnings are the same as TANK1 alarm warnings.
I see "T1 AL alarm" warning on the screen	TANK1 has dropped to minimum level or can't receive signal warning. When the device falls to the lower filling level set, it closes the relay and stops discharging. This warning will disappear by itself when you step on it. If there is a signal interruption, the warning will continue until it is resolved. TANK 2 alarm warnings are the same as TANK1 alarm warnings.
Everything is normal but I can't silence the gas alarm	Go to the gas monitoring screen with the DOWN button on the device. Press and hold the OK key. Wait for the alarms to stop and the device to return to normal. Take your hand off the OK button. If the alarm still persists, follow the warning "I see "S1 ALARM" on the screen".
The gas alarm detector signal output is connected to the S3 signal input of the device, but I cannot get output from ROLE2.	S1,S2,S3,S4 signal inputs control ROLE1 output, S5,S6,S7,S8 signal inputs control ROLE2 output. Fix the wrong connection made.

Table 4: Possible malfunctions and solutions

4.2. Splash screen

It is the first boot screen of the device. After the device is energized, the following screens will appear. The screens contain information such as product name, manufacturer, version information, e-mail address and origin.

Figure 5: Splash screens

4.3. Monitoring screens and explanations

DEFINITIONS (GAS)
[1] : Graphic LCD display
[2] : Gas alarm sensors (s1-s8)
[3] : Gas level
[4] : Gas level status (on, off)
[5] : Gas alarm warnings
[6] : Company e-mail address

Figure 7: Gas Level Monitoring Screen

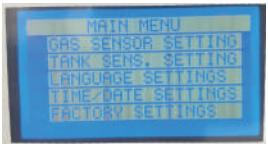
DEFINITIONS (TANK)
[1] : First tank
[2] : First tank % value
[3] : First tank adjusted upper limit value
[4] : First tank adjusted lower limit value
[5] : Second tank
[6] : Second tank % value
[7] : Second tank adjusted upper limit value
[8] : Second tank adjusted lower limit value
[9] : Tank 1 and Tank 2 warnings area

Figure 8: Tank Level Monitoring Screen

4.4. Setting menus and explanations

NOTE

If no key is pressed, you will be directed to the monitoring screen after 10 seconds. If the user interrupts the setting and leaves the device, they will be directed to the monitoring screen without saving the settings.

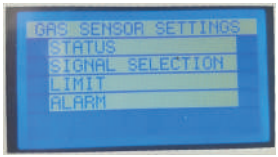


If you are on the monitoring screen, switch to the Main Menu screen by pressing the "EXIT button". Move the cursor to the line you want to select with the UP-DOWN keys. Enter the menu with the OK button.

Figure 9: Main Menu Screen

4.5. Settings

4.5.1. Gas alarm settings



Gas sensors setting screen is given. There are status, signal selection, limit setting and alarm setting menus. Make the settings by following the steps given below.

Figure 10: Gas Sensor Settings Screen

4.5.1.1. STATUS: Making status settings

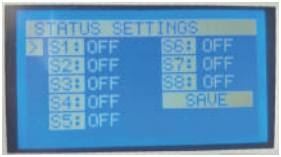


Figure 11: Status Settings Screen

1. From the Gas Sensor Settings screen, move the cursor to the STATUS line with the UP-DOWN keys.
2. Press the OK button to enter the CONDITION SETTINGS screen.
3. From the status settings screen, move the cursor to the sensor line to be adjusted with the UP-DOWN keys.
4. Initially, the status settings will be OFF. Select one of the ON, OFF options by pressing the OK button.
5. Move the cursor to the SAVE line with the UP-DOWN keys.
6. Press OK. Confirm the Save prompt and save the settings. A Saved message will appear stating that the settings have been saved.
7. If you want to exit without saving, press the EXIT button.

4.5.1.2. SIGNAL SELECTION: Making signal selection

Figure 12: Signal Selection Screen

1. From the Gas Sensor Settings screen, move the cursor to the SIGNAL SELECTION line with the UP-DOWN keys.
2. Press the OK button to enter the SIGNAL SELECTION screen.
3. From the Signal Selection screen, move the cursor to the sensor line to be adjusted with the UP-DOWN keys.
4. Select one of the 0/1-5 Volt, 0/2-10 Volt, 0/2-10mA, 0/4-20mA control signals.
5. Move the cursor to the SAVE line with the UP-DOWN keys.
6. Press OK. Confirm the Save prompt and save the settings. A Saved message will appear stating that the settings have been saved.
7. If you want to exit without saving, press the EXIT button.

4.5.1.3. LIMIT: Setting the limit

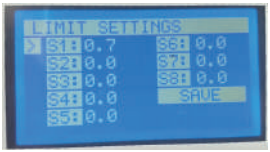


Figure 13: Limit Settings Screen

1. From the Gas Sensor Settings screen, move the cursor to the LIMIT line with the UP-DOWN keys.
2. Press the OK button to enter the LIMIT SETTINGS screen.
3. From the Limit Settings screen, move the cursor to the sensor line to be adjusted with the UP-DOWN keys.
4. Set the upper limit limit value (0.00-20.0) with the OK button.
5. Move the cursor to the SAVE line with the UP-DOWN keys.
6. Press OK. Confirm the Save prompt and save the settings.

A Saved message will appear stating that the settings have been saved.
7. If you want to exit without saving, press the EXIT button.

4.5.1.4. ALARM: Making alarm settings

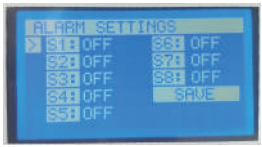


Figure 14: Alarm Settings Screen

1. From the Gas Sensor Settings screen, move the cursor to the ALARM line with the UP-DOWN keys.
2. Press the OK button to enter the ALARM SETTINGS screen.
3. From the Alarm Settings screen, move the cursor to the sensor line to be adjusted with the UP-DOWN keys.
4. Initially, the alarm settings will be OFF. Select one of the ON, OFF options by pressing the OK button.
5. Move the cursor to the SAVE line with the UP-DOWN keys.
6. Press OK. Confirm the Save prompt and save the settings. A Saved message will appear stating that the settings have been saved.
7. If you want to exit without saving, press the EXIT button.

4.5.2. Tank level settings

Figure 15: Tank Sensor Settings Screen

1. Move the cursor to the TANK SENSOR SETTING line with the UP-DOWN keys from the Main Menu screen.
2. Press the OK button to enter the TANK SENSOR SETTING screen. Tank sensor Settings screen will appear.
3. Move the cursor to Tank1 and/or Tank2 line with the UP-DOWN keys.
4. Select one of the tanks by pressing the OK button. The Tank 1 Settings screen will appear.
5. Move the cursor to the DRM line with the UP-DOWN keys.
6. Initially, the status settings will be OFF. Select one of the ON, OFF options by pressing the OK button.
7. Move the cursor to the SINY line with the UP-DOWN keys.
9. Initially set to 4-20mA signal. Select one of the control signals 0/1-5 Volt, 0/2-10 Volt, 0/2-10mA, 0/4-20mA by pressing the OK button.
10. Move the cursor to the T1UL line with the UP-DOWN keys.
11. Set the upper limit between 0-100% by pressing the OK button.
12. Move the cursor to the T1AL line with the UP-DOWN keys.

13. Set the lower limit between 0-100% by pressing the OK button.
14. Move the cursor to the SAVE line with the UP-DOWN keys.
15. Press OK. Confirm the Save prompt and save the settings.
A Saved message will appear stating that the settings have been saved.
16. If you want to exit without saving, press the EXIT button.

NOTE **Difficulty to be experienced as a result of incorrect TANK1, TANK2 and GAS settings.**

TankK1 and Tank2 settings are made as described in this section. Incorrect connections, wrong settings may prevent the device from working properly, as well as cause the connected systems to work incorrectly or not at all. Follow the instructions given in the manual. If needed, contact the manufacturer and ask for support.

4.5.3. Language settings

GAP30 gas alarm panel supports Turkish and English languages. If necessary, select the appropriate language from the Main Menu screen. The selected language will be automatically saved in the device's memory.

Figure 17: Language Selection Screen

4.5.4. Timer date settings

Timer date settings can be adjusted and viewed from the clock date screen.

4.5.5. Factory settings

It is used to permanently delete all the settings made from the memory. After returning the device to factory settings, the user can come back to the main menu screen and make the necessary settings. Returning to the factory settings can be canceled by pressing the EXIT button while on the query screen. The factory settings screen is given below.

Figure 18: Factory Settings Screen

4.6. Power cut

NOTE **When the power is cut off, the device will turn off. Since similar systems such as the gas shut-off valve connected to the device output will close it, it will stop the gas passage. All settings made during installation or setting changes are kept without being deleted from the device memory. When the power comes on, the device will turn on and the device will continue to work normally. The user must activate the closed valve and similar mechanical systems.**

5. Electrical Connections

5.1. Connection of gas alarm detectors

In the connection diagram below, GA21 gas alarm detectors, siren, power supply and output valve connection are given to the GAP30 gas alarm control panel as an example. Examine it.

• Power supply is connected to pins 1 and 2.

• Two GA21 gas alarm detector connections are shown. The supply voltage of one of the GA21 gas alarm detectors is taken from pins 11,12, and the signal cable is connected to pin 15. Detectors connected to pins between S4 and S8 control the ROLE2 output. On the other hand, GA21 gas alarm detector, supply voltage is taken from pins 17,18, and signal cable is connected to pin 21. Detectors connected to pins S1-S4 control the ROLE1 output. For details, see 2.7.Terminal and connection points diagram.

• Gas valve is connected to 36,37 pins. More than one gas valve or similar controllable systems can be connected so that the current carrying capacity of the ROLE1 is not exceeded. Valve or similar systems can be controlled by connecting to pin 39,40 in the ROLE2 output in the same way.

• Siren connection is made to pin 42,43. Siren or similar warning systems can be connected.

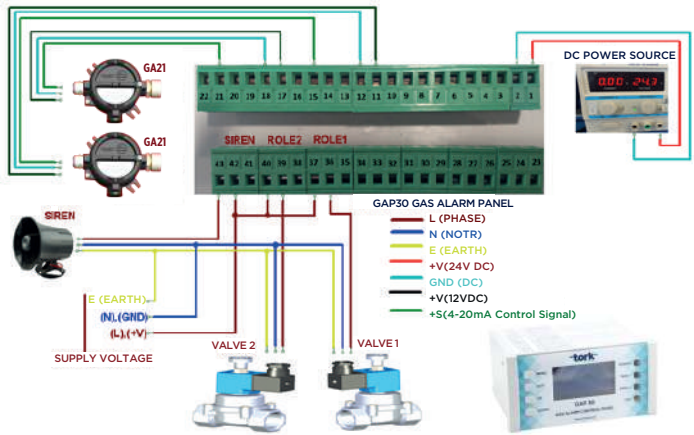


Figure 19: Gas Alarm Detectors Connection Diagram

NOTE **Relay outputs have a dry contact structure. It needs external voltage from outside. For example; If the system to be controlled will operate with 230VAC voltage, the user must pass 230V AC voltage through the relay contacts.**

5.2. Connection of tank level sensors

The connection diagram below shows two tank connections to the GAP30 gas alarm control panel as an example. Examine it.

• Power supply is connected to pins 1 and 2.
• Two tank connections are shown to the device.
• Supply voltage of TANK1 and TANK2 level sensors is taken from pins 6,8, signal cables of level sensors are connected to pins 9,10.
• 230V AC voltage is applied to pin 25 of TANK1-UL upper limit relay, pin 24 is connected to one end of the valve connected to TANK1 and the other end is connected to NEUTRAL.
• 230V AC voltage is applied to pin 28 of TANK1-AL low limit relay, pin 27 is connected to one end of the valve connected to TANK1 and the other end is connected to NEUTRAL.
• 230V AC voltage is applied to pin 31 of TANK2-UL upper limit relay, pin 30 is connected to one end of the valve connected to TANK2, and the other end is connected to NEUTRAL.
• 230V AC voltage is applied to pin 34 of TANK2-AL low limit relay, pin 33 is connected to one end of the valve connected to TANK2, and the other end is connected to NEUTRAL.
• Ground wires are connected.
• See 2.7.Terminal and connection points diagram for details.

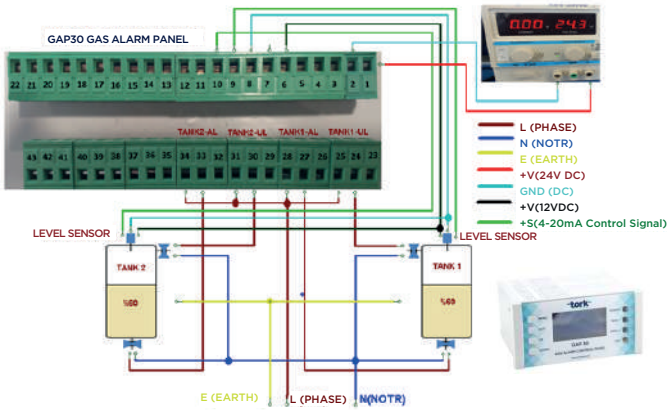


Figure 20: Connection Diagram of Tanks

5.3. Tank 1 connection

5.2. It is explained under the title "5.2. Connection of tank level sensors". Examine it.

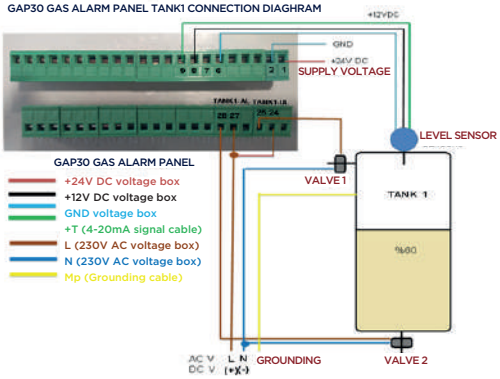


Figure 21: Tank1 Connection Diagram

5.4. Tank 2 connection

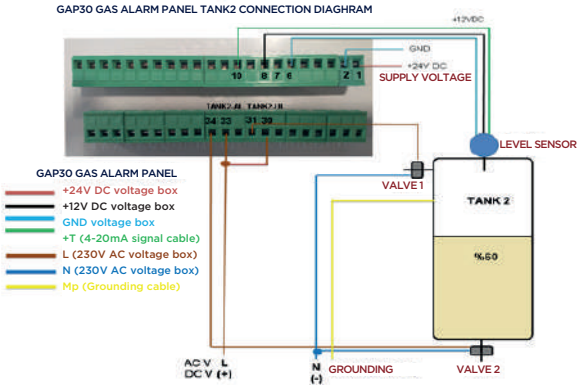


Figure 22: Tank2 Connection Diagram

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