

GA SERIES GAS ALARM DEVICE



www.smstork.com

TECHNICAL SPECIFICATION

Detecting Gases	Natural gas (metan), LPG (Lquefied Petroleum Gas)
Device Type	A Type (Visual Alarm, Audible Alarm and Output Signal)
Visual Warning	Green-Sysrem Active, Red-Alarm, Yellow-Fault
Sensor Type	Semi Conductor (5V± 0.1)
Body Material	ABS
Calibration Time	1,5 Minutes
Reaction Time	< 10 Seconds
Audible Warning	Piezoelectric Buzzer
Volume	85db
Operating Voltage	230VAC+-%10,50/60Hz
Output Signal	24-30V DC, 24-240V AC, 5A
Power Consumption	3W
Operating Area	Home etc.
Working Temperature	-10 °C ... +50 °C
Relative Humidity	0 - 95%
Body Size	60 mm x 100 mm x 45 mm
Estimated Device Life	5 Years

CONTENT

OPERATING PRINCIPLE 3

BASIC INFORMATION 3

TECHNICAL SPECIFICATION 4

MOUNTING 5

WARNINGS 7

PERMISSION OF MINISTRY OF INDUSTRY 9

WARRANTY CONDITIONS 10

WARRANTY CERTIFICATES 13

OPERATING PRINCIPLE

Gas alarm device is a gadget detecting the explosive gases in environment. Ingredients of detected gases can be methane (CH₄), propane (C₃H₈) and butane (C₄H₁₀) or mixture of these gases. Natural gas is a methane gas. LPG is made of butane gas, propane gas or mixture of these two gases. When the gas alarm device is supplied with 230V AC 50/60 Hz voltage, green LED lights. After 1,5 minutes calibrating time (sensor's heating time), device gets activate. Before calibrating time is up, don't use any gas. After calibrating time, if there is any gas leakage over the limits, the sensor detects the gas in 10 seconds at the latest and gives visual and audible alarm. As long as the gas leakage is upper levels, device goes on to giving alarm. When the leakage level is lower than alarm level, device change to normal condition instinctively, gets ready to detect. If there is no electricity, device does not work.

BASIC INFORMATION

Gas leakage sensor with ex proof housing, is designed for alerting if there is any leakage of LPG or natural gas on potentially explosive areas like an industrial kitchen or on a boiler room. It's a continuous working and installed on constant place device. Because of its relay output other devices like solenoid valve, aspira-tor, siren etc. can be controlled. The minimum concentration of a particular combustibile gas or vapor necessary to support its combustion in air is defineci as the Lower Explosive Limit (LEL) for that gas. LEL value of natural gas is %5 and LPG's LEL value is %2. Before LEL values not reaching these levels' one fifth, gas alarm device detects the leakage and gives alarm.

- Alarm level for natural gas is% 0.5 or 5000ppm (parts per million).
- Alarm level for LPG is %0.3 or 3000ppm (parts per million).

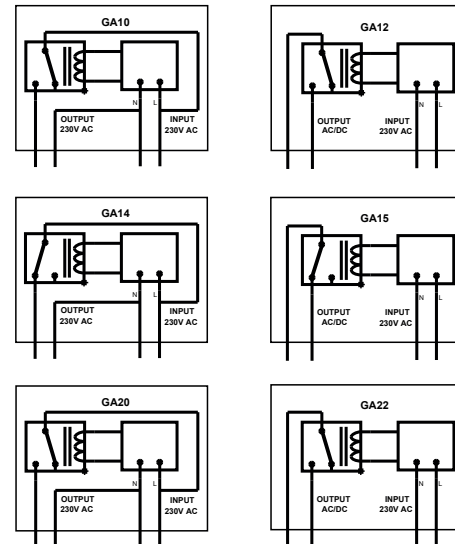
PRODUCT CODING SYSTEM

GA XX

10	Standard Gas Alarm Device
12	Normally Open Relay Contact Output Gas Alarm Device
14	Normally Close 230 VAC Output Gas Alarm Device
15	Normally Close Relay Contact Output Gas Alarm Device
20*	Plastic Body Exproof Tipped 230 VAC Output Gas Alarm Device
22*	Plastic Body Exproof Tipped Relay Contact Output Gas Alarm Device

* Only the GL01 Ex Proof Sensor housing is used in the GA 20 and GA 22 series Gas Alarm Devices.

WIRING SCHEME



MOUNTING

Device must be mounted like in Fig.1 and Fig.2
DEVICE MUST BE MOUNTED BY AN EXPERT!

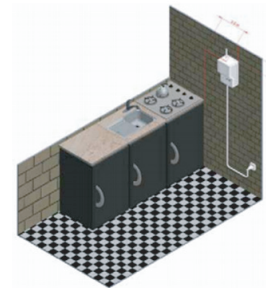


Fig.1: Installation of gas alarm device where natural gas is used.

Natural Gas

Natural gas is lighter than air. In case of gas leakage, the gas rises to the ceiling and accumulates in areas near the ceiling. Therefore, the alarm device for natural gas should be placed 5 to 15 cm below the ceiling and 1-2 m away from the gas source. This place should be on the highest window or door opening.

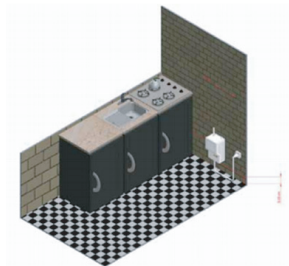


Fig.2: Installation of gas alarm device where LPG is used.

LPG

LPG is heavier than air. In case of gas leakage, the gas collapses into the ground. Therefore, the alarm device for LPG should be placed 5 to 25 cm above the ground and 1-2 m away from the gas source. This place should not be adjacent to the door, window outlets.

MONTAGE WARNING

Gas Alarm Device Gas alarm devices should not be installed in the following places!

- Over the stoves
- Over the cowls,
- Near the aspirators,
- Closed place like cabin,
- Steamy places,
- It should not be installed in very hot places. The sensor operates up to an ambient temperature of 50 ° C. Do not install the sensor in hotter places than this ambient temperature.

WARNINGS

During the alarm condition, action be taken are below.

- Calm down.
- Do not use any electric devices. Don't on or off any of them.
- Don't plug or unplug any electric device.
- By opening doors and windows, ventilate the area.
- Do not use any matches and lighter.
- Do not use the door bell. Never let anybody use it.
- Close the gas valve starting with the nearest one.
- According to flame risk don't use any mobile phone.
- Get contact with expert gas distribution company in proper place.
- Extinguish if there is a fire. If there is a flame in natural gas, it is also dangerous to try to extinguish the valve without closing it. If you smell gas without hearing an alarm, follow the warnings from the alarm. If the cause of the alarm cannot be found, even though the gas alarm is still present, discharge the area to prevent it.

9

To check the fittings, to make them safe and to required repair get in contact with the gas distributor company or get in contact with 7 /24 accessible natural gas emergency. If the gas concentration decrease the under the alarm level, alarm sound will be cut off instinctively.

- Alcohol and such as stuff steams, sprays, high density smoke, lighter gas, pungent cleaning materials can confuse the gas alarm sensor and reason wrong alarm.
- Device's main body must not be opened. Otherwise there can be a shock and device can work irregular.
- If relay output cable will not be used, don't open the isolation on its ending.
- During operation the operating conditions must be exactly followed, like technical specifications, operating temperature and pressure.
- Before the installation, control the device whether any damage on it. Before the giving energy to the device control all the installation.

MAINTENANCE The device must be controlled once in a year at least. For testing, don't release the gas to all of the area. Otherwise it can be dangerous. The main body and gas sensor must be cleaned with a soft cloth or brush and non alcoholic cleaning materials.

TROUBLESHOOTING If too many current pass from the output more than the limits, the output of the device can be damaged. in these conditions device must be send to the authorized service. This condition is not under warranty cover. If YELLOW LED lights the sensor is faulted and the device must be send to the authorized service.

CARRYING Device must be carried with its own carton box. During the carrying too many weight as damaging the device, must not be put on the device's box.

10

T.C. SANAYİ VE TİCARET BAKANLIĞI TÜKETİCİNİN VE REKABETİN KORUNMASI GENEL MÜDÜRLÜĞÜ

Belgenin Veriliş Tarihi ve Sayısı: 28.11.2013-41513

Belgenin Geçerlilik Tarihi: 28.11.2015

Bu belgenin kullanılmasına; 4077 sayılı Tüketicinin Korunması Hakkında Kanun ve bu Kanuna dayalı olarak yürürlüğe konulan Sanayi Mallarının Satış Sonrası Hizmetleri Hakkında Yönetmelik uyarınca, T.C. Gümrük ve Ticaret Bakanlığı Tüketicinin Korunması ve Piyasa Gözetimi Genel Müdürlüğü tarafından izin verilmiştir.

İmalatçı ve İthalatçı Firmannın

Ünvanı : SMS SANAYİ MALZEMELERİ ÜRETİM VE SATIŞI A.Ş.
Merkez Adresi : Y.Dudullu, Bostancı Yolu Kuru Sk. No:16, 34776 Ümraniye İstanbul - Türkiye
Telefon : 0216 364 34 05
Telefaks : 0216 364 37 57
Malın Cinsi : GAZ ALARM CİHAZI
Markası : TORK
Bedeli :
Bandrol ve Seri No :
Teslim Tarihi ve Yeri :
Garanti Süresi : 2 Yıl
Azami Tamir Süresi : 20 İş günü
Satıcı Firmannın Ünvanı :
Adres :
Telefon :
Telefaks :
Fatura Tarihi ve No :

PETEK ECE TIRYAKIOĞLU
Bakan a.
DAİRE BAŞKANI V.

Belgenin Doğruluğu www.tuketici.gov.tr Adresinden Kontrol Edilebilir.

11

WARRANTY CONDITIONS

1. The warranty period is two (2) years and starts from the date of delivery of the product to consumers.
2. All products, including all sub-parts, covered by our warranty.
3. In case of malfunction of the goods within the warranty period, the time spent in the repair is added to the warranty period. The repair time of the goods is a maximum of 20 working days. This period begins on the date of notification to the SMSTORK Authorized Service of the malfunction of the goods, to the vendor, dealer, agent, representative, importer or manufacturer of the goods in the absence of an authorized service station.

It is possible for the consumer to make the notification of the failure by telephone, fax, e-mail, registered letter or similar. However, the obligation to prove in case of dispute belongs to the consumer.

The property;

- The failure of the goods to fail within six years during the warranty period, or six times within the warranty period determined by the manufacturer - manufacturer and / or importer, as long as they are delivered to the consumer, within the warranty period.
 - Exceeding the maximum time required for repair,
 - In the event that the service station is not available, it will be replaced free of charge if it is determined that it is not possible to repair the fault by the reporter, dealer, agency, representative or one of our company officials.
 - The warranty period of the replacement goods is limited to the remaining warranty period of the purchased item.
4. Free repair and product replacement obligations are eliminated in the following cases;

12

- If the product fails due to use in a manner not in accordance with the
- If the warranty labels of the goods and their contents are destroyed / torn
- In case the goods have been opened / repaired except SMS-TORK Authorized Service personnel,
- If the external surfaces of the product and its contents break within the responsibility of the customer
- Improper transport (impact, drop, impact), improper and inadequate maintenance, misuse and misuse of the device after delivery to the consumer; insufficiency of air installation, use of the goods in extremely humid, dusty or hot environments or use in corrosive environments which are harmful to electronic circuits, accidents, impacts, electricity (voltage changes), in case of faults caused by natural disasters
- If the breakdown or damage occurred during the transportation of the SMS Industrial Materials Production and Sales Inc.
- If the defective part is replaced by SMS-TORK Authorized technical services and / or parts without SMSTORK warranty

5.The failure of the malfunctions is determined by SMS-TORK authorized service.

6. If you have a service agreement with SMS-TORK if the device fails after the warranty period, request the type of service available in this agreement. If you do not have a service agreement, contact the SMSTORK dealer or customer service center for service.

7.In order to benefit from warranty rights, please contact the manufacturer with the warranty certificate approved by the company during the warranty period. If the electric actuator

13

are shipped via cargo, be sure to include a description of your complaint, a copy of your warranty, your address and your phone.

8.Use the original packaging materials whenever possible. The customer is responsible for the damages that may occur during the shipment due to the lack of proper packaging.

9.The Ministry of Customs and Trade may apply to the General Directorate of Consumer Protection and Market Surveillance for problems related to the Guarantee Certificate.

14



WARRANTY CERTIFICATE

Manufacturer: SMS Sanayi Malzemeleri Üretim ve Satış A.Ş.

Address : Merkez: Y.Dudullu Mh. Bostancı Yolu Kuru Sk.No:16
Ümraniye - İstanbul / Türkiye

Factory : İMES O.S.B 5. Cd. No: 6 Çerkeşli OSB Mh.
Dilovaşı - Kocaeli / Türkiye

Product : GAS ALARM DEVICE
Trade Mark : TORK
Model :
Bandrol and Serial No :
Delivery Place and Date :
Warranty Period : 2 (Two) Years!
Max. Repair Time : 20 working days
Seller / Distributor :
Address :

Seller / Distributor Representative
Name-Surname :
Signature :
Date :
Bowl :
.....
.....
.....

Manufacturer Representative
Name-Surname :
Signature :
Date :
Bowl :
.....
.....
.....

www.smstork.com

15



16

GA SERİSİ GAZ ALARM CİHAZI



www.smstork.com

TEKNİK ÖZELLİKLER

Algılanan Gazlar	Doğalgaz (metan), LPG (Sıvılaştırılmış Petrol Gazı)
Cihaz Türü	A Tipi (Görsel Alarm, Sesli Alarm ve Çıkış Sinyali)
Görsel Uyarı	Yeşil-Sistem Aktif, Kırmızı-Alarm, Sarı Arıza
Sensör Tipi	Yarı İletken (5V±0.1)
Gövde Malzemesi	ABS
Kalibrasyon Zamanı	1,5 Dakika
Reaksiyon Zamanı	< 10 Sanie
Sesli Uyarı	Piezoelektrik Zil
Ses	85db
Çalışma Gerilimi	230VAC+-%10,50/60Hz
Çıkış Sinyali Röle Kontakı	24-30V DC, 24-240V AC, 5A
Güç Tüketimi	3W
Çalışma Alanı	Ev ve Benzeri Yerler
Çalışma Sıcaklığı	-10 °C ... +50 °C
Bağıl Nem	0 - 95%
Gövde Ölçüleri	60 mm x 100 mm x 45 mm
Tahmini Cihaz Ömrü	5 Yıl

5

İÇİNDEKİLER

ÇALIŞMA PRENSİBİ	3
TEMEL BİLGİLER	3
TEKNİK ÖZELLİKLER	4
MONTAJ	5
MONTAJ UYARILARI	7
SANAYİ BAKANLIĞI İZİNİ	9
GARANTİ ŞARTLARI	10
GARANTİ BELGESİ	13

2

ÇALIŞMA PRENSİBİ

Gaz alarm cihazı, çevredeki patlayıcı gazları tespit eden bir cihazdır. Algılanan gazların içindekiler metan (CH₄), propan (C₃H₈) ve bütan (C₄H₁₀) ya da bu gazların karışımı olabilir.

Doğal gaz, metan gazıdır. LPG bütan gazından yapılır, propan gazı ise bu iki gazın karışımıdır. Gaz alarm cihazına 230V AC 50/60Hz voltaj verildiğinde yeşil Led yanar. 1,5 dakika (sensörün ısınma süresi) kalibrasyon süresinden sonra cihaz aktif olur. Kalibre süresi bitmeden herhangi bir test gazı kullanmayın. Kalibrasyon süresinden sonra, eğer sınır üzerinde bir gaz kaçağı varsa sensör gazı algıladıktan en geç 10 saniye içinde görsel ve sesli olarak alarm verir. Gaz kaçağı üst düzeyde olduğu sürece cihaz alarm vermeye devam eder. Sızıntı seviyesi alarm seviyesinden düşük olduğunda, cihaz kendiliğinden normal şartlara dönmeye başlar ve algılamaya hazır hale gelir. Eğer elektrik yoksa cihaz çalışmamaktadır.

TEMEL BİLGİLER

Gaz alarm cihazları ev ve benzeri yerlerde herhangi bir doğalgaz veya LPG sızıntısı varsa uyarı için tasarlanmıştır. Gaz alarm cihazı sabit bir yere kurulan ve sürekli çalışan elektrikli alarm cihazıdır. Röle çıkışı sayesinde alarm durumunda aspiratör, siren, gaz kesici valf gibi cihazlara otomatik anahtarlama yapar. Hava ya da belirli bir yanıcı gazların patlama veya parlama oluşturmayacak konsantrasyon sınırına Alt Patlama Sınırı (APS) denir. Doğalgazın APS değeri %0,5, LPG'in %2 olup gaz alarm cihazı gaz sızıntısı bu değerlerin beşte birine ulaşmadan sesli ve ışıklı alarm vermeye başlar.

- Doğalgaz için cihazın alarm seviyesi %0,5 (binde beş) veya 5000ppm (milyonda beş bin)'dir.
- LPG için cihazın alarm seviyesi %0,3 (binde üç) veya 3000 ppm (milyonda üç bin)'dir.

3

ÜRÜN KODLAMA SİSTEMİ

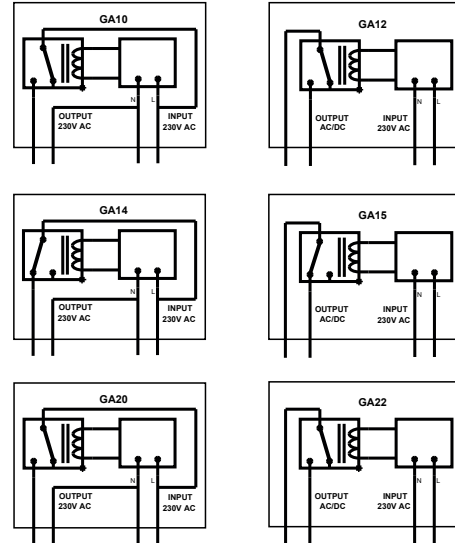
GA XX

10	Standart Gaz Alarm Cihazı
12	Normalde Açık Kuru Kontak Çıkışı Gaz Alarm Cihazı
14	Normalde Kapalı 230 VAC Çıkışlı Gaz Alarm Cihazı
15	Normalde Kapalı Kuru Kontak Çıkışlı Gaz Alarm Cihazı
20*	Plastik Gövdeli Exproof Uçlu 230 VAC Çıkışlı Gaz Alarm Cihazı
22*	Plastik Gövdeli Exproof Uçlu Kuru Kontak Çıkışlı

* GA 20 ve GA22 serisi Gaz Alarm Cihazlarında sadece GL01 Ex Proof Sensör muhafazası kullanılır.

4

BAĞLANTI ŞEMASI

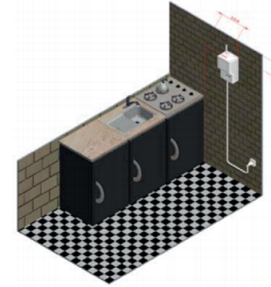


6

MONTAJ

Cihaz şekil 1 ve şekil 2'deki gibi monte edilmelidir.

CİHAZ UZMAN BİR KİŞİ TARAFINDAN MONTE EDİLMELİDİR!

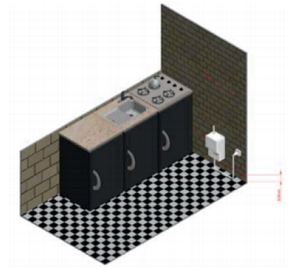


Şekil 1: Doğalgaz kullanılan ortamda gaz alarm cihazının kurulumu

Doğalgaz

Doğalgaz havadan daha hafiftir. Gaz kaçağı durumunda gaz tavana doğru yükselir ve tavana yakın bölgelerde birikir. Bu yüzden doğalgaz için alarm cihazını tavanın 5-15 cm aşağısına ve gaz kaynağından izdüşümsel olarak, 1-2 m uzağına yerleştirilmelidir. Bu yer en yüksek pencere veya kapı açıklığının üzerinde olmalıdır.

7



Şekil 2: LPG kullanılan ortamda gaz alarm cihazının kurulumu

LPG

LPG havadan daha ağırdır. Gaz kaçağı durumunda gaz zemine çöker. Bu yüzden LPG için alarm cihazını zeminden 5-25 cm yukarıya ve gaz kaynağından izdüşümsel olarak, 1-2 m uzağına yerleştirilmelidir. Bu yer kapı, pencere çıkışlarına bitişik olmamalıdır.

8

