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UMSITEC
Umwelt- und Sicherheitstechnik

OPERATING INSTRUCTION GNA Gas Emergency Alarm

Emergency Alarm Switch for 4-20 mA Sensor Input

GNA Gas
Emergency Alarm

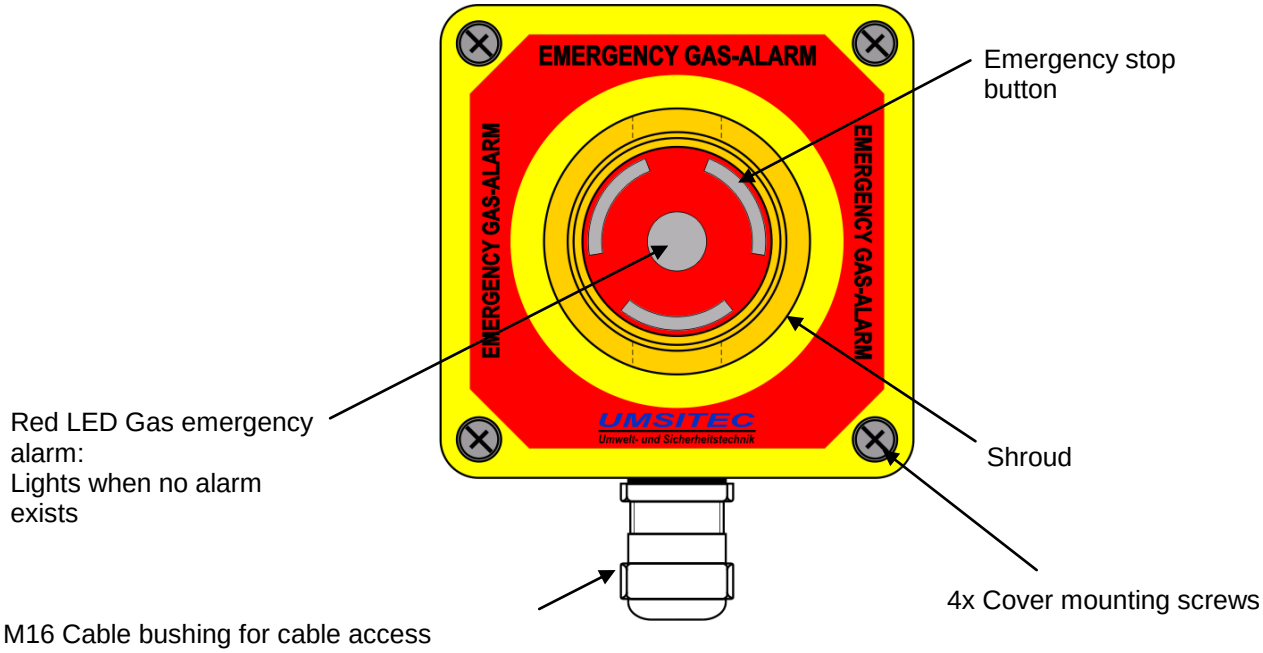
Important!

The GNA may only be operated if this operating instruction has been understood and is applied.

Function

- The GNA Gas Emergency Alarm is an emergency alarm switch especially designed for 4-20 mA sensor inputs of gas detection systems.
- It is connected instead of a sensor (2- wire connection)
- **Attention!** The Gas Emergency Alarm is **not** a real **emergency stop switch** that is used for direct safety shutdowns of devices and systems, in fact the gas emergency alarm forces by triggering an alarm of the gas alarm center.
- The alarm is activated by switching the load current: **16,4 mA = operation normal / 4 mA = alarm**
- There is a 5 pole terminal as connection:
  Terminal 6/ +24V
  Terminal 7/ 4-20 mA sensor input
  Terminal 8 and 9 are not required
  Terminal 10/ mass
- The respective operating status is indicated by 1 **red LED** in the emergency stop button:
- **LED lights = normal operation**, the switch is not triggered.
- **LED Off = alarm**, the switch is triggered.
- A power supply is not needed; the sensor input also serves as a voltage source.
- After pressing, the gas emergency alarm must be unlocked to release to normal operation.
- To prevent accidental actuation of the emergency stop button there is a key protective shroud.

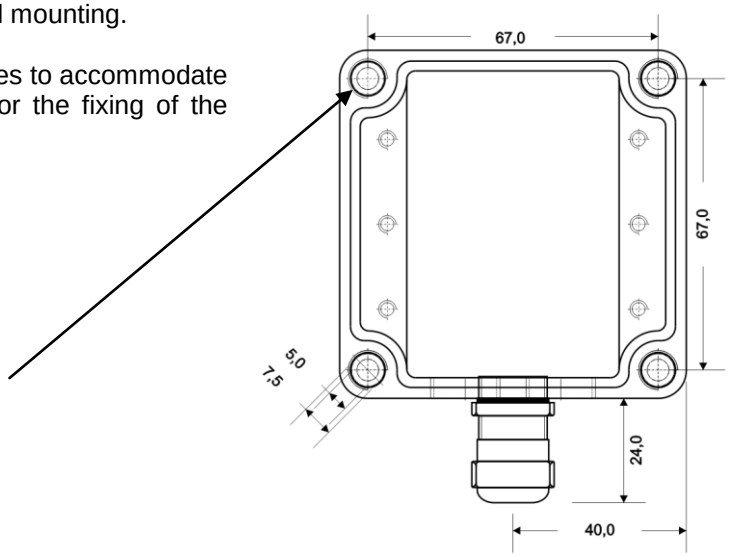
Important: The gas emergency alarm provides only the required protection if conforming to standard by the expert be involved in a system.



Mounting

The gas emergency alarm is suitable for surface wall mounting.

The four 7.5 mm drill holes in the housing base serves to accommodate the mounting screws for wall mounting and also for the fixing of the housing cover.



4x mounting screws for wall mounting

Gas Emergency Connection

The gas emergency alarm has a 2-wire connection and does not require a power supply terminal, because the sensor input simultaneously serves as a voltage source.

As connection cable is provided a 2 (4) core phone cable.
Two different cable types are provided,
by default JY (St) 1x2x0, 8mm or halogen-free JH (St) 2x2x0, 8mm.
Please note that the different core identification is the two types of cables.
In addition, the pairwise assignment of xa and xb wire in the cable must not be interchanged:

JY (St) 1x2x0, 8mm

(VDE 0815)

JH (St) 2x2x0, 8mm

(VDE 0815 / VDE 0816)

The wire colors may be assigned at the **JY (St) 1x2x0, 8mm** cable as follows:

Lower part
Emerency stop NC

Terminal 6: to +2	=> red 1a	Terminal 8: not used
Terminal 7: to 4-20 mA sensor input	=> blue 1b	Terminal 9: not used
Terminal 10: drain wire (shield)		

The drain wire in the cable is connected to the shield.

The wire colors may be assigned at the **JH (St) 2x2x0, 8mm** cable as follows:

Lower part
Emergency stop NC

Terminal 6: to +24V	=> red 1a	Terminal 8: not used
Terminal 7: to 4-20 mA sensor input	=> red 1b	Terminal 9: not used
Terminal 10: drain wire (shield)		

The drain wire in the cable is connected to the shield.

Not used are: => green 2a
=> green 2b

CAUTION: When installing, make sure that bare wire and the bare ground wire are to be covered with insulation and cannot come into contact with the circuit

Maintenance

The gas emergency alarm GNA is factory-calibrated and tested.
Regular maintenance is required, especially the emergency stop button, to obtain the functionality.

Maintenance tools

Current measurement device with mA range
Alarm lock switch to block alarms if necessary

Balance / Programming

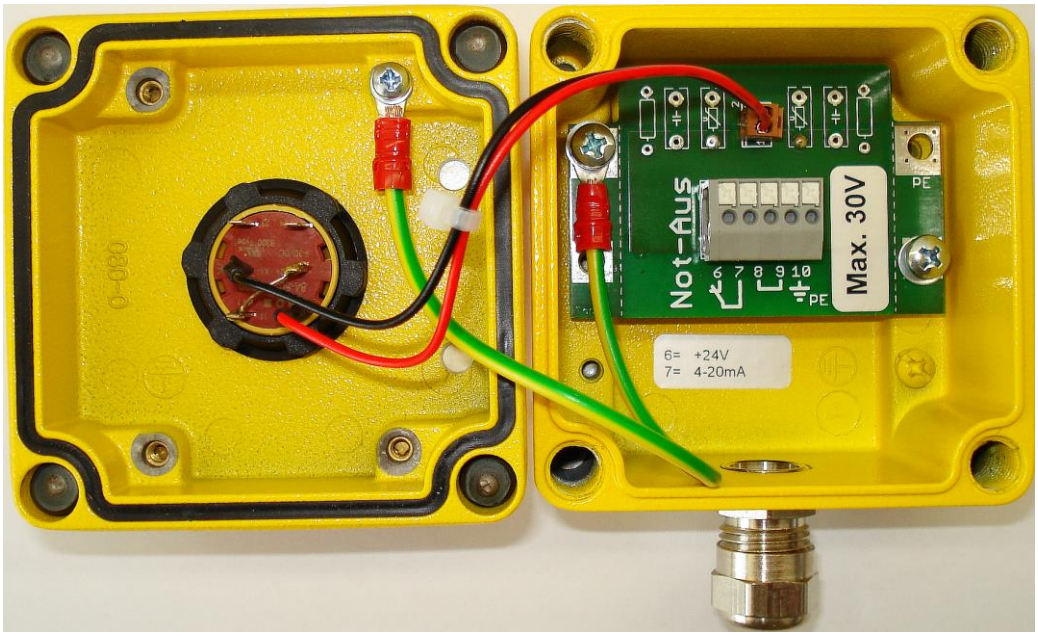
- The GNA Gas emergency alarm is fixed setting on 2 currents, 4 mA and 16,4 mA. A post-adjustment is not possible. The upper current value is for normal fault-free operation, the lower current value for alarm, if the gas emergency alarm switch is triggered.
- In the gas alarm center the normal operation and in case of alarm, using the current thresholds, it must be programmed accordingly: 16,4 mA is 100%; at 90% of this value the alarm is triggered.
- A serial number cannot be programmed.

Connecting diagram

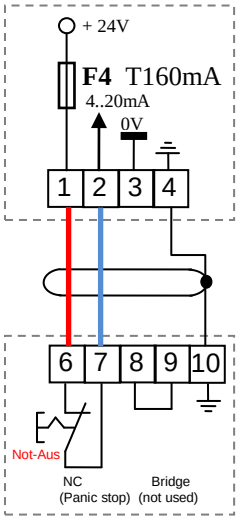
Lower part: Emergency connection with 1x5 contacts

NC bridge ⏚

6 7 8 9 10



GAZ Gas Alarm Center
Sensor input



GNA /Gas Panic Alarm
Ground, Terminal

Specification: Gas Emergency Alarm GNA

Suitability:	industry, residential and office spaces
Temperature range:	-20..+50°C (ambient)
Housing:	aluminium power-coated, LxWxD: 80x80x60mm
Color:	RAL 1023, yellow
Protection:	housing: IP 66 / EN 60529; Emergency stop button: IP65
Output signal:	1x analogue 4 mA and 16,4 mA 5% selectable
Max.load:	500 r / min. 15V supply
Supply:	12..30 VDC (supply trough sensor input)
Connection line:	up to 500m in: JY (ST) Y 1x2x0,8mm
Current consumption:	16,4mA @ 12 V DC - 28 V DC
Emergency stop switch element:	NC contact material gold, switching the load current source 4 mA / 16,4 mA
CE-conformity:	distribution: residential, immunity: industrial area
Weight:	490g
Warranty:	2 years

Applicable gas centers: GAZ 201, GDZ 201, GAZ 401, GDZ 401, CCZ 401,
GAZ 801, GDZ 801, CCZ 801

Commissioning

When wiring and programming the gas warning system properly, the gas emergency stop should work immediately after the operating voltage has been switched on and the system detects it.
The correct function is indicated when the green "Operation" LED is lighting.

Maintenance

To maintain the reliability, a service according to VDE regulations is to manage.

State of September 2012

Subject to technical changes