

The Helios gas warning system GWA was specially developed to monitor pollutant concentrations in garages and loading areas. The detection of pollutants can be adjusted to the specific requirements of the property by using different sensor elements. Furthermore, the GWA can be expanded to a complete system consisting of all necessary components, such as an uninterruptible power supply (UPS), smoke extraction function power unit for controlling fans, visual and acoustic warning devices as well as an interface for integration in the building control technology (GLT).

Description

Digital gas warning system pursuant to EN 50545, with software according to EN 50271 (SIL 2), installed in compact plastic casing. Can be expanded into an individual system with smoke extraction function and power unit, for controlling extract air and jet fans in switch cabinet.

Information

The systems can only be commissioned by the Helios Customer Service team. Gas warning systems must be maintained once a year. Performance range details in Helios TGA service catalogue Ref. no. 85934.

Controller for continuous monitoring with connection option for a total of 96 bus sensors.

Product features

- High system reliability due to permanent monitoring of sensors and fail-safe storage of all parameters.
- Simple operation of control system through six input buttons and a LCD display with plain text.
- Universal, easily understandable installation concept for all components.

Scope of delivery

The Helios gas warning system is available in two different compact variants, as well as a system solution individually tailored to property-specific customer requirements.

Compact variants 1 and 2

Type GWA-C1/4
Type GWA-C2/8
Gas warning system in compact plastic casing (RAL 7035) with viewing cover and cable glands. Standard connection option for warning devices. Control output with 2-10 V signal for demand-oriented speed control of EC fans or fans with frequency inverter. For controlling other fans, optimally expandable with the garage ventilation control system LS. ModBus interface RS485 available.

Individual system solution

Type SSTG

Garage switch cabinet with gas warning system display integrated in the switch cabinet door. GWA controller and uninterruptible power supply (USV) 2 – 10 V output possible, integrated and coordinated in the garage switch cabinet for all gas warning system functions and warning systems.

Alarm thresholds

Up to four alarm thresholds can be set per sensor. Three standard values for these alarm thresholds are preset upon delivery, but these can be adjusted to on-site conditions e.g. during commissioning. If alarm threshold 3 is exceeded of if a fault occurs, a transmission signal will be automatically generated.

Alarm threshold 1 and 2:
15 minute averaging process
Alarm threshold 3 and 4:
Actual value trigger

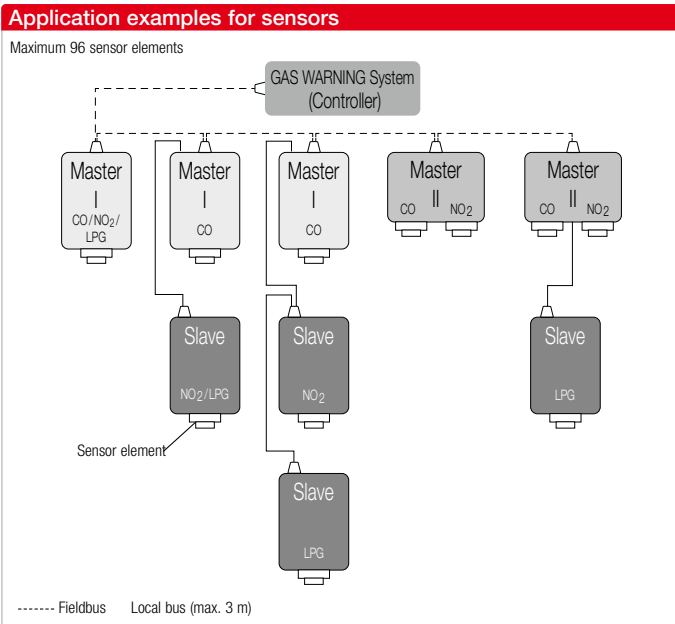
Relay

The gas warning system control unit has a defined number (see product table) of potential-free fault and alarm relays, which can be loaded with max. 250 V AC and 5.0 A. Various components such as extract air fans, jet fans or warning devices can be allocated to the individual alarm thresholds with the alarm relay.

Uninterruptible power supply

The Helios gas warning system can be expanded with an optimally tailored uninterruptible power supply (UPS). Designed for the reliable functioning of the gas warning system, connected sensors and warning devices, also for at least 1 hour in case of a power failure. In this respect, the UPS has its own self-monitoring system and is delivered in a separate casing for the two compact variants, whereby the individual system solution is integrated in the switch cabinet.

Type	Ref. no.	Voltage	P. supply 24V DC IP65	Connect. sensor elements	Fault relay	Alarm relay	Analog. inputs	Analogue outputs	Weight (without USV)	Dimensions (WxHxD)	USV				
											Type	Ref. no.	Cap..	Dim. (WxHxD)	Weight
Compact variant 1															
GWA-C1/4	05884	1~, 230V, 50/60 Hz	6.5	96	1	4	4	2	2.7	298x260x140	GWA-USV 7,2	05887	7.2 Ah	410x260x140	7 kg
Compact variant 2															
GWA-C2/8	05885	1~, 230V, 50/60 Hz	6.5	96	1	8	8	4	3.4	298x420x140	GWA-USV 7,2	05887	7.2 Ah	410x260x140	7 kg
System solution															
SSTG	02499	3~, 400V, 50/60 Hz	10	96	1	max. 32	max. 32	max. 16	A.A.	Upon request	GWA-USV 7,2	Upon req.	7.2 Ah	In switch cabinet	7 kg



■ Sensors

The individual sensors for detecting pollutant concentrations consist of sensor casings and sensor elements...

□ Sensor casing

- Sensor casing made of plastic (protection class IP65) with cable glands.
- Master I and Master II: Casing for connection of max. 3 sensor elements. Direct and indirect connection of sensor elements possible via additional casings (Slave). Connection to gas warning system via fieldbus.
- Slave: Casing for connection of one sensor element. Connection to casing Master I or Master II via local bus.

□ Sensor element

- Sensor element for mounting to sensor casing Master I, Master II or Slave.
- Available sensor elements: CO, NO₂ and LPG.
- The connection of max. 96 sensor elements is possible per gas warning system.

■ Accessories

Bus interface

Interface for connection of gas warning system to the building control technology (GLT) and transmission of system status. There is no intervention option.

- for BACnet

GWA-BG BACnet Ref. no. 05861

Sensor casing				
	Dimensions	Protection category plastic casing	Temperature range	
Master I	94x130x57	IP65	-25 to +50 °C	
Master II	130x94x57	IP65	-25 to +50 °C	
Slave	94x130x56	IP65	-25 to +50 °C	
Sensor element				
	Measurement range	Preset alarm thresholds acc. to EN 50545	Recommended installation height	Application
CO	0 -300 ppm	30 / 60 / 150	1.50 m	Petrol motors
NO₂	0 -30 ppm	3 / 6 / 15	0.80 m	Diesel motors
LPG	0 -100 % UEG	10 / 20	0.30 m	LPG motors

■ Planning information

- 1x warning sign per 500 m²
- 1x CO-, NO₂ sensor, LPG sensor per 400 m²

■ Information

The sensor elements must be calibrated or replaced regularly.

Sensor casing

- Master I for connection to GWA via fieldbus and direct connection of sensor element. Additional connection of max. 2 sensor casings (Slave) possible via local bus.

GWA-SG K M1 Ref. no. 05857

- Master II

for connection to GWA via fieldbus and direct connection of two sensor elements. Additional connection of max. 1 sensor casing (Slave) possible via local bus.

GWA-SG K M2 Ref. no. 05859

- Slave

for connection to Master I + II and direct connection of one sensor element.

GWA-SG K S Ref. no. 05860

Master I + II



Slave



Sensor element

for connection to sensor casing.

- CO

GWA-SE CO Ref. no. 05879

- NO₂

GWA-SE NO₂ Ref. no. 05881

- LPG

GWA-SE LPG Ref. no. 05882

Sensor



Warning devices

Visual and acoustic warning devices as 24 Volt signal transmitters, incl. base. Casing made from impact-resistant plastic, for ceiling and wall installation.

- Flash light siren

BLH Ref. no. 04983

- Flash light

BL Ref. no. 08216

- Siren

WH Ref. no. 08217

BL, BLH, WH



Warning sign

24 Volt warning sign with yellow symbols according to VDI 2053 on white background. Optionally with acoustic signal.

Dim. mm (W x H x D) 642 x 203 x 22

- Warning sign

GWA-WT 1 Ref. no. 08213

- Warning sign with acoustics

GWA-WT 1S Ref. no. 08214

GWA-WT

