SAG-A BEACON

Stand-alone Gamma Alarm System
for Gamma and X dose equivalent H*(10) rate measurement

- Light: 3 kg
- Resistant to physical shocks and drops from 1.60 m
- Quick insertion of the Dolphy® Evolution
- Reduced periodical calibration downtime and customer service
- 40-day battery life
- Recovery of 32 000 measurements on a USB flash drive
- Airtight and splash-proof

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Wide range of connectivity options (networks and relays)

Network linking

Can be inserted anywhere in the monitoring network.

The double connector can extend the network to other equipment.
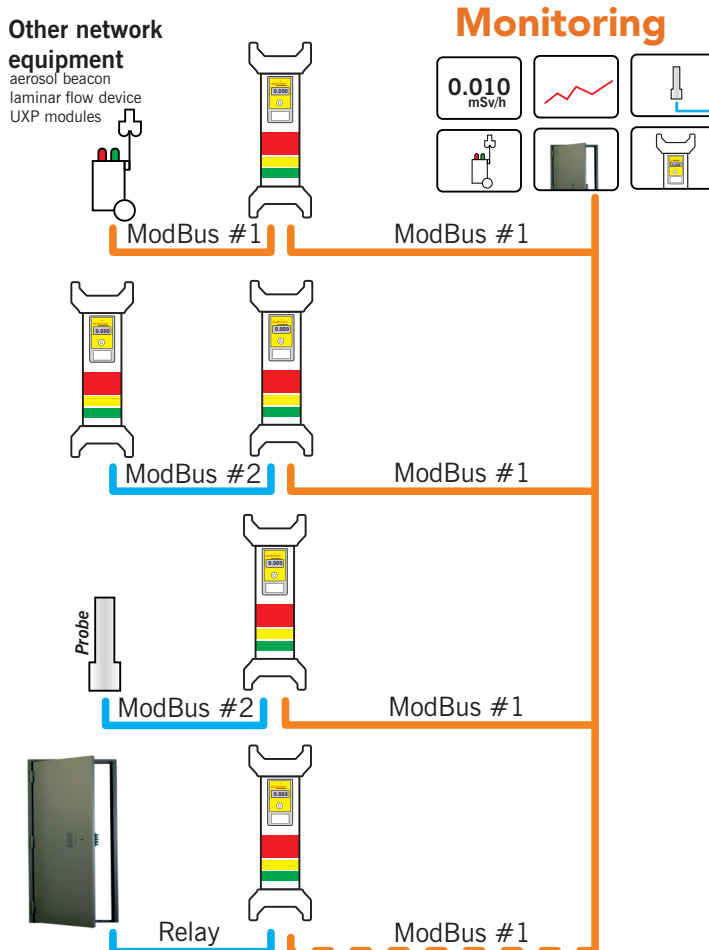
Probe (remote display)

The secondary network (ModBus #2) can connect 2 beacons. The first displays the dose rate and the alarms of the second one.

SI-GAM Remote probe

A SI-GAM remote probe can be connected to one of the beacon RS 485 ports. Several measurement ranges are available.

Status report

3 relay outputs enable the control of safety systems.

Other network equipment
aerosol beacon
laminar flow device
UXP modules

Monitoring

0.010 mSv/h

ModBus #1   ModBus #1

ModBus #2   ModBus #1

Probe

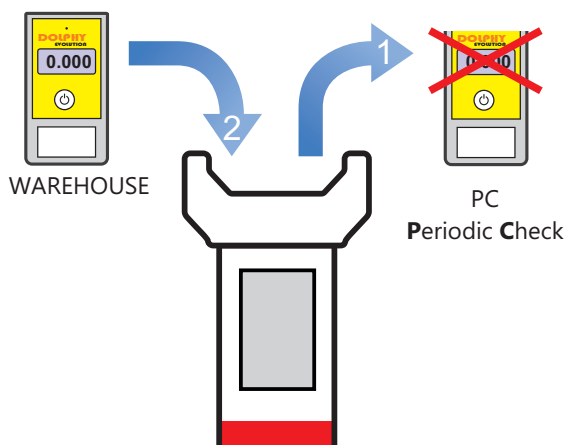ModBus #2   ModBus #1

Relay   ModBus #1

Quick insertion of the Dolphy® Evolution

Designed to reduce downtime thanks to the quick insertion of any Dolphy® Evolution.

Only the Dolphy® Evolution is sent for inspection during PC (EDF internal process) and maintenance operations. The beacon makes self-tests to check its proper functioning at every boot.
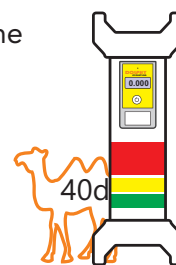
The beacon downtime lasts for less than 1 minute. The Dolphy® Evolution replacement can be done in situ.
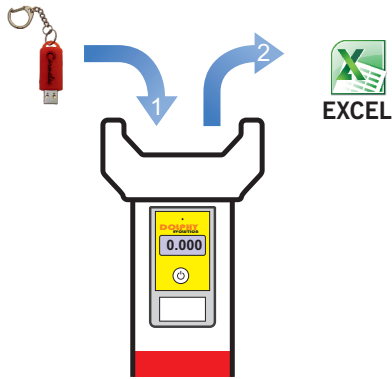
WAREHOUSE

1

2

PC
Periodic **C**heck

Extended battery life

Using its onboard batteries and the optimization of its power consumption, the SAG-A has a 40-day battery life without alarm.

The beacon lasts up to 64 hours in alarm mode.
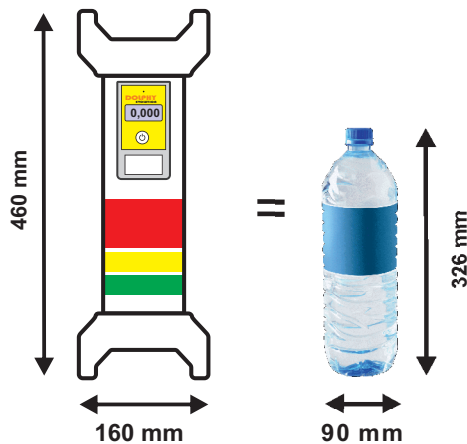
40d

Data recovery on a USB flash drive

Automatic measurement and temperature recording every 30 seconds (every second during the alarm first 10 seconds).

Recovery of 32 000 recordings on a USB flash drive in CSV format, Excel compatible .

Beacon status update logfile (alarm, start up, threshold settings, failures...)

Reduced dimensions - Mini weight
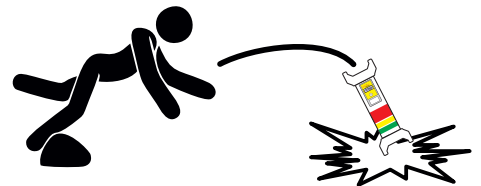
460 mm

160 mm

326 mm

90 mm

The figure opposite shows the real dimensions of the SAG-A beacon. Its dimensions are 460 mm x 160 mm x 160 mm.

In addition to being compact, it is also extremely light as it weighs less than 3 kg.

Highly resistant

The SAG-A is designed to be as resistant as possible. Its cylindrical shape and its bumper design allow for maximum shock absorptions and drops up to 1.60 m.

The beacon polycarbonate body resists repeated hammer blows !

Protection

The protection class IP65 means that the SAG-A is fully protected against dust and splashing water from all directions.

This feature allows the beacon to be used in the rain and wet environment (in a standalone mode, not connected).

The SAG-A bacon is designed to float temporarily.

Able to float

IP65

Carmelec

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Technical characteristics (for a SAG-A coupled to a Dolphy® Evolution)

Detection characteristics

Type: ambient gamma EDR H*(10) monitoring device
Reference radionuclide: ^{137}Cs
Effective range: 0.010 mSv/h to 99.9 mSv/h
Display range: 0.001 mSv/h to 99.9 mSv/h
Response time: < 2 s on all the measurement range
Energy range: from 50 keV to 1.5 MeV

Alarm characteristics

PC overdue: "PC" and malfunction alarm
Various indications: low battery, charge, remote measurement display, power supply connected by a LED on the front side
Probe saturation: 'SAT' display
Probe malfunction: 'SENSOR FAULT' display
Visual alarm: 3 warning light towers (green, yellow and red)
Sound alarm: buzzer > 85 dBA at 30 cm
Threshold: 1.6 mSv/h factory pre-set and configurable via key switch

Electrical characteristics

Battery life: 40 days without alarm / 64 hours in alarm mode
Charger: 12 V identical to that of the LED Precaution signs
Charging time: about 1 day (may be used while charging)

top view

Connectivity

Relays: 3 dry relay contact outputs (On, Failure, Alarm) :
-- 40 W with 48 VDC
-- 60 VA with 24 VAC max - on resistive charge
Network connectivity: 2 x 2 RS 485 Modbus/Jbus (EDF beacon supervision compatible)

Mechanical and environmental characteristics

bottom view

Protection class: IP 65
Operating temperature: from -20 °C to +50 °C
Sensitivity to temperature: < 0.1 %/°C on the whole range
Housing materials: polycarbonate and polyurethane
Weight: 3.0 kg (with Dolphy® Evolution)
Dimensions: 460 x 160 x 160 mm

CE Regulatory compliance

Compliance: IEC 60532-3: 2010

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