Safety is for life.™

GSME and HOTSPOT
to safeguard your processes.

Reliable. German. Safety.

Explosion and fire prevention

Particularly plants that are at risk of explosive dust must frequently be provided with **explosion protection measures**, as ignition sources are often unavoidable. In addition to electrostatic phenomena and mechanically generated sparks, the most frequent ignition sources **particularly include glowing embers, open flames and hot surfaces**. Alongside grounding monitoring systems and spark extinguishing systems, the new detectors of the GSME and HOTSPOT series make an enormous contribution to **increasing explosion safety**. Both detectors have been developed for the early identification of combustion reactions and thermal events, which can ultimately be ignition sources for explosions.

Applications

The HOTSPOT thermographic detector and the compact GSME pyrolysis gas detector are specifically tailored for the early detection of hot surfaces and fire in dust-handling equipment, such as silos, dryers (excluding spray dryer), mills, conveyors or dust collectors.

Mechanism

The well-proven multi-criteria technology on a semiconductor basis already enables foolproof early detection by the GSME of all types of concealed and open glowing embers and smouldering fires in the emergent phase. The sensor elements of the detectors are protected from dust and moisture with the unique diffusion filter technology.

HOTSPOTs are freely parametrisable infrared camera systems in the form of detectors with integrated signal evaluation. In addition to process monitoring, they are also particularly suitable for the detection of overheating plant components and glowing embers. In the same way as the GSME detector, the HOTSPOT is also protected from the penetration of moisture and dust due to its robust design. Both detectors are specifically designed for use in areas up to Zone 20 and tested in accordance with ATEX and IECEx.

Advantages

- ✓ Explosion prevention with early detection of smouldering and developing fires (GSME).
- ✓ Detection of glowing embers, flames and hot surfaces with HOTSPOT.
- ✓ Highest moisture and dust resistance with unique diffusion filter technology.
- ✓ Approvals in accordance with ATEX and IECEx.
- ✓ Comprehensive explosion safety concepts through the integration of the detectors into the REMBE® EXKOP® Express control unit.

Visit rembe.de for detailed information and your personal contact.

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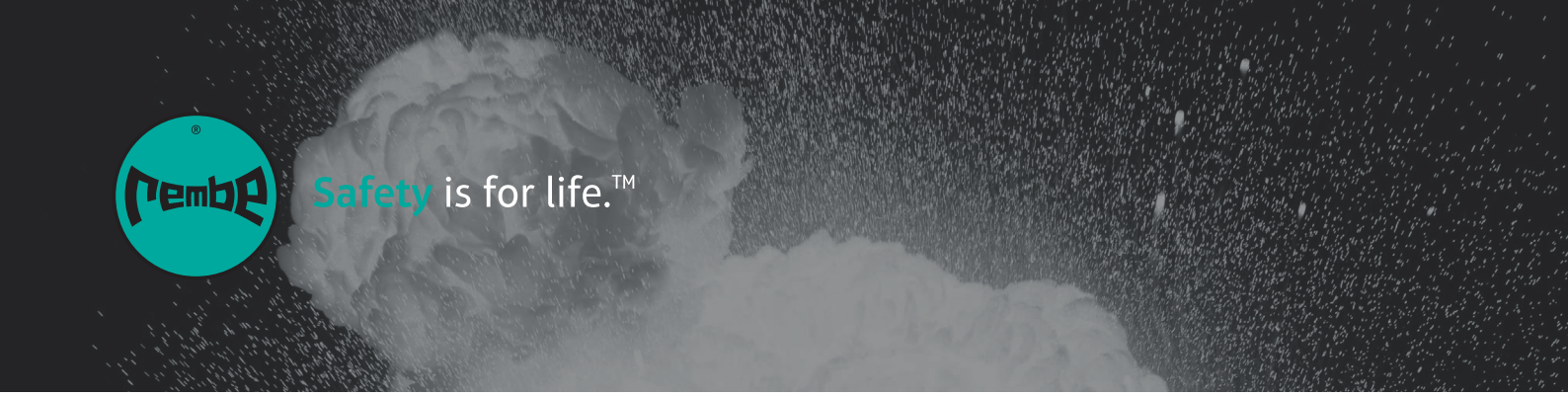
REMBE® Sustainability: Not only do we provide professional safety for your plant and machinery and protect human life, but our products also avoid harmful emissions sustainably eliminate leaks and/or reduce noise pollution. You can find more information on sustainability at rembe-green.de.



Technical data HOTSPOT

Mechanical properties	
Housing	Coated die-cast aluminium (corrosion-resistant)
Dimensions	120 x 100 x 90 mm (H x W x D)
Weight	0.6 kg (without power cable)
Protection class	IP 64
Explosion safety	Ex ta IIIC 105 °C Da (approval in accordance with ATEX and IECEx)
Thermal properties	
Relative humidity	0 to 99 % relative humidity (non-condensing)
Temperature	-20 to +50 °C
Electrical properties	
Voltage supply	20 to 40 V DC
Power consumption	10 VA
Internal fuse protection	750 mA
M-Bus Max. line length	≈ 2 km
M-Bus Max. line capacity	≈ 200 nF
M-Bus Baud rate	4800 baud
Limit value contact alarm relay	680 Ω , 20 mA max. (Alarm closer)
Limit value contact fault relay	0 Ω, 40 V or 20 mA max. (Fault opener)
Sealing air	
Purity classes	Dust ≥ 2 — Water content ≥ 3 — Oil content ≥ 2 (< 0.1 mg/m3)
Airflow rate	200 to 300 l/h (poss. test necessary!)
Detection properties	
Sensor resolution	32 x 31 Pixel
Viewing angle	53° x 52°
Reaction time	1 s
Time resolution	0.1 s or 1 s (depending on the configuration)

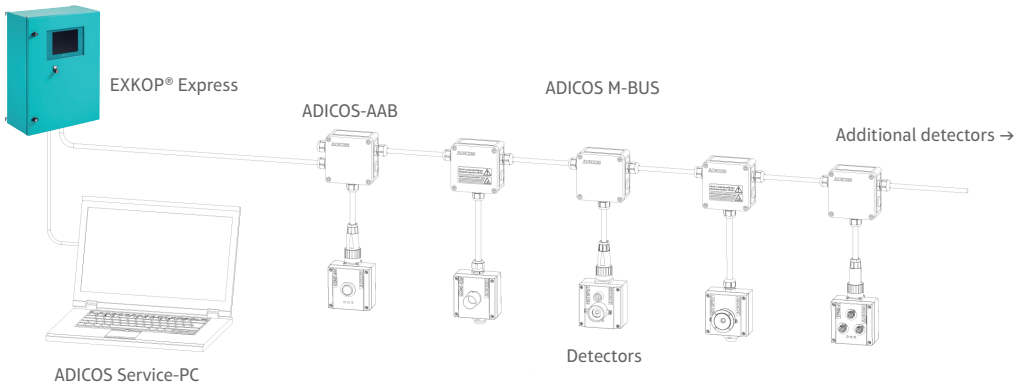
Technical data GSME

Mechanical properties	
Housing	Coated die-cast aluminium (corrosion-resistant)
Dimensions	100 x 152 x 100 mm (H x W x D) (with cable gland and light module)
Weight	0,7 kg
Protection class	IP 64
Explosion safety	Ex ta IIIC 105 °C Da / IP6x
Thermal properties	
Relative humidity	0 to 99 % relative humidity (non-condensing)
Temperature	-20 to +50 °C
Electrical properties	
Voltage supply	20 to 40 V DC
Power consumption	10 VA
Internal fuse protection	750 mA
M-Bus Max. line length	≈ 2 km
M-Bus Max. line capacity	≈ 200 nF
M-Bus Baud rate	4800 baud
Limit value contact alarm relay	680 Ω , 20 mA max. (Alarm closer)
Limit value contact fault relay	0 Ω, 40 V or 20 mA max. (Fault opener)
Detection properties	
Sensor combination	CO — H_2 — HC — NOx
Reaction time	> 30 s
Detection scenarios	Smouldering fires according to EN 54-7, smouldering fires from various organic materials

Notice

In contrast to conventional fire detection systems, the selection and positioning of special fire detectors is a particular challenge for industrial environments.
The arrangement and alignment of the detectors should therefore be exclusively specified by specialist planners!

Function principle



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