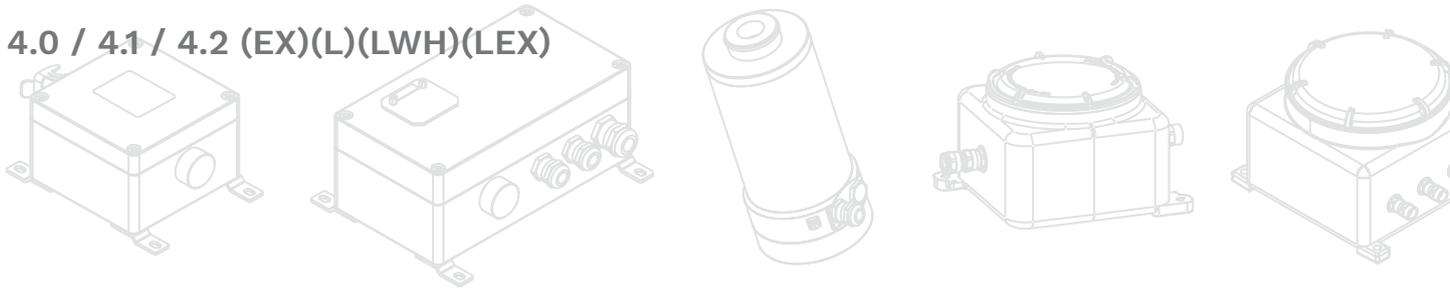


Product Information

FLAME SCANNER TYPE 4

4.0 / 4.1 / 4.2 (EX)(L)(LWH)(LEX)



- failsafe design
- suitable for continuous operation
- use at ambient temperatures from -40 °C to +70 °C (optional fiber optic insert up to 300 °C)
- approved according to international standards
- protection class IP 65/IP66
- IECEx-certified

1 | Design

The Flame Scanner Type 4 forms a complete flame monitoring system in combination with a flame amplifier of the 3000 series. The flame monitoring and evaluation system 3000 was developed under the aspects of safety and optimal availability of customer plants.

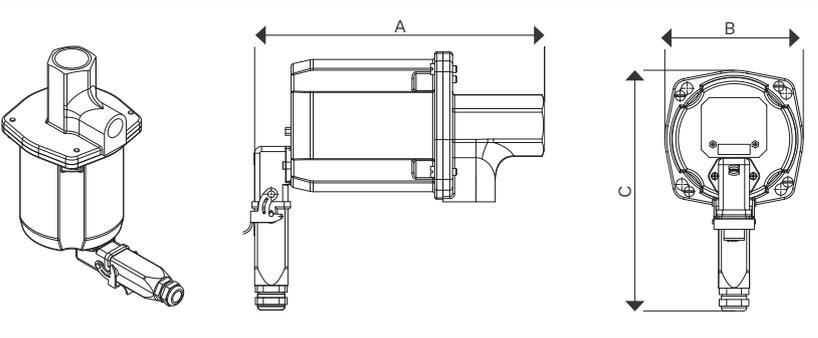
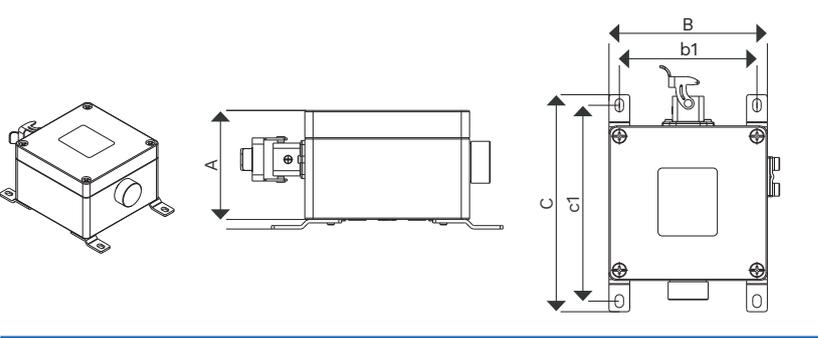
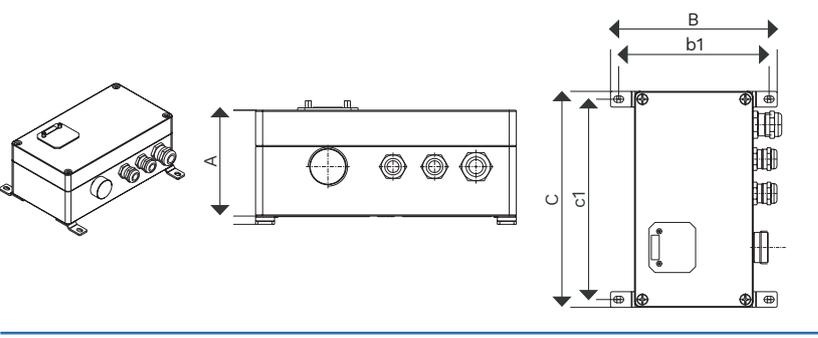
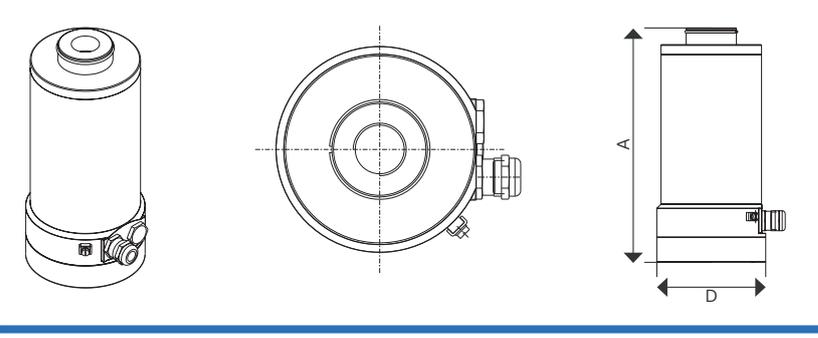
Our goals are to monitor incinerators safely and reliably, to provide criteria for optimizing the incineration process and to reduce pollutant emissions. The system is able to distinguish the flames of different burners and to selectively monitor them.

2 | Customer benefits and usage

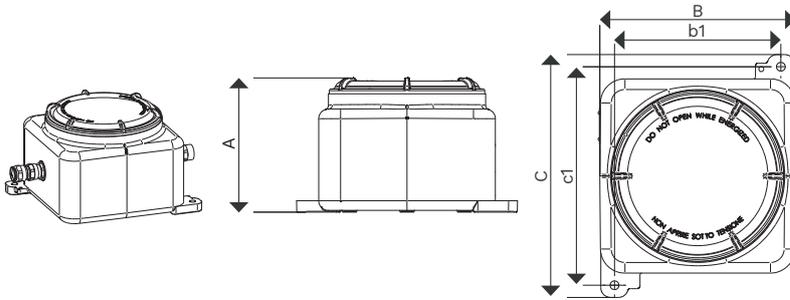
- Self-control to verify flawless function of the device
- Selective monitoring:
 - 4.0: for selective oil flame detection at oil/coaldust combined firing
 - 4.1: for selective coal dust flame detection at oil/coal dust combined firing
 - 4.2: for combustion chamber monitoring at gas/oil/coaldust firings and for monitoring of fluidized-bed combustion and stoker-fired furnace
- Si sensor
- Fully electronic construction
- Spectral analyzing process
- Tested by the German Technical Inspection Association TÜV
- IECEx certified
- SIL 2

3 | Housing versions

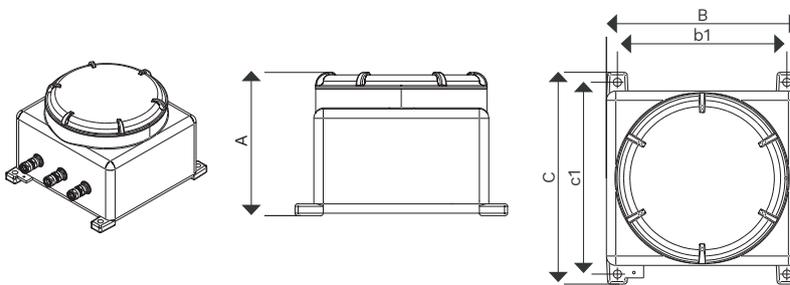
The Flame Scanner Type 4 is available in different housings for ATEX Zone 1 and 2.

	<p>ATEX Zone 2</p> <p>Standard housing</p> <p>Length A: 235 mm</p> <p>Width B: 108 mm</p> <p>Height C: 190 mm</p> <p>Weight: 1.5 kg</p> <p>Type: 4.x</p>
	<p>ATEX Zone 2</p> <p>OE-Converter housing</p> <p>Length A: 80 mm</p> <p>Width B/b1: 122/106 mm</p> <p>Height C/c1: 168.5/152mm</p> <p>Weight: 1,5 kg</p> <p>Type: 4.xL</p>
	<p>ATEX Zone 2</p> <p>OE-Converter housing WH</p> <p>Length A: 91 mm</p> <p>Width B/b1: 168/125 mm</p> <p>Height C/c1: 220/204 mm</p> <p>Weight: 2.1 kg</p> <p>Type: 4.xLWH</p>
	<p>ATEX Zone 1</p> <p>Ex-de-housing</p> <p>Length A: 290 mm</p> <p>Ø D: 130 mm</p> <p>Weight: 5 kg</p> <p>Type: 4.xEX</p>

3 | Housing versions



ATEX Zone 1	
Ex-d-housing (GUB01)	
Length A:	153 mm
Width B/b1:	200/170 mm
Height C/c1:	250/225 mm
Weight:	5 kg
Type:	4.xLEX



ATEX Zone 1	
Ex-d-housing (GUB03)	
Length A:	231 mm
Width B/b1:	305/270 mm
Height C/c1:	336/308 mm
Weight:	15 kg
Type:	4.xLEX

4 | Technical data

Spectral sensitivity	300 nm to 2700 nm
Angle of view Standard/Ex-de-housing With aperture OE-Converter housing/ Ex-d-housing	2,7° 1°, 2° or 2,7° 2,7° by sensor head
Lower limiting frequency 4.0 4.1 4.2	60 Hz 40 Hz 25 Hz
Self checking	fully electronic, once per second
Power supply	24 VDC
Current consumption Including heating	max. 200 mA max. 700 mA
Ambient temperature All housings (not EAC approved) Ex-de-housing (EAC approved)	-20 °C to +70 °C -40 °C to +60 °C
Electrical connection Standard/OE-Converter housing Ex-d-housing/Ex-de-housing/ OE-Converter housing WH	dustproof plug-type connector terminal blocks
Type of protection OE-Converter-/Ex-d-housing/ Ex-de-housing Standard housing	IP 66 IP 65
Cable length	max. 400 m
Sight port connection Standard/Ex-de-housing OE-Converter-/Ex-d-housing	1" female thread depending on SKL
Purge air Connection Volume Pressure	½" female thread 10 m³/h 0,02 bar over combustion chamber internal pressure
CE	CE0063
IECEX Zone 1 Ex-de-housing Ex-d-housing (GUB) Zone 2 Standard/OE-Converter housing	IECEX EPS 14.0042X IECEX INE 13.0069X IECEX TUR 15.0029X

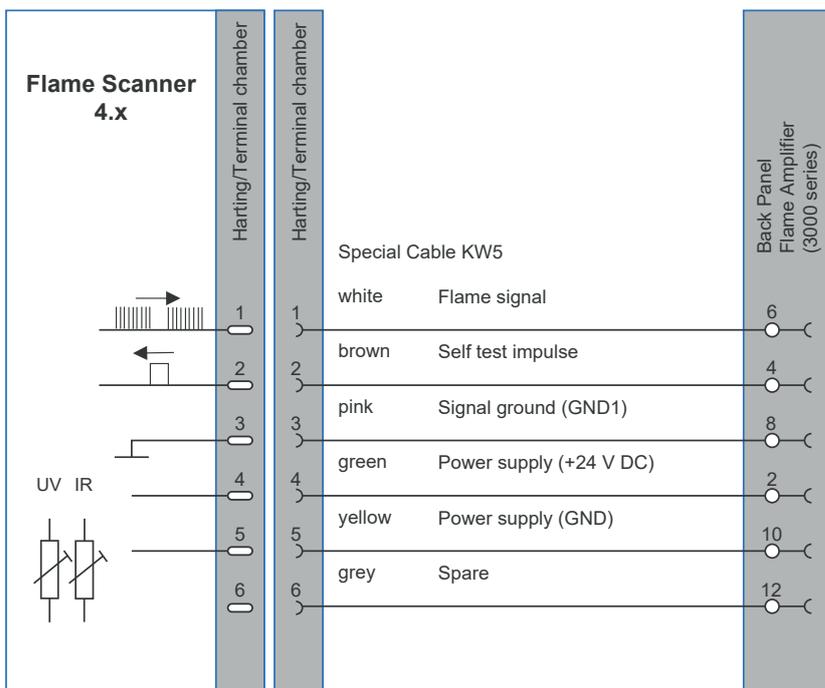
4 | Technische Daten

<p>ATEX</p> <p>Zone 1</p> <p>Ex-de-housing</p> <p>Ex-d-housing (GUB)</p> <p>Zone 2</p> <p>Standard/OE-Converter housing</p>	<p>EPS 14 ATEX 1 696 X</p> <p>INERIS 13ATEX0021X</p> <p>TÜV 15 ATEX 7682 X</p>
<p>EAC</p> <p>Zone 1</p> <p>Ex-de-housing</p> <p>Ex-d-housing (GUB)</p> <p>Zone 2</p> <p>Standard/OE-Converter housing</p>	<p>EA9C RU-DE.BH02.B.00177/19</p> <p>TC RU C-IT.BH02.B.00689/18</p> <p>TC RU C-DE.IM43.B.00536</p>

5 | Connection diagram

When using a heater, our KW6 cable must be used. The connection diagram is extended by terminals 7 and 8.

- 7 - Power supply (+24 V DC) blue
- 8 - Power supply (GND) red





BFI Automation

All data are without guarantee and refer to the product group. Product-specific information is contained in the operating instructions. We reserve the right to make technical changes. | © BFI Automation GmbH 17.02.25

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