



ENERGY TAJHIZ MELAL

تجهیزات انرژی، تأسیسات و اتوماسیون صنایع

کاتالوگ محصولات



BFI Automation

درباره شرکت BFI Automation

BFI Automation GmbH یک شرکت آلمانی پیشرو در زمینه سامانه های پایش و کنترل شعله (Flame Monitoring) در فرایندهای احتراق صنعتی است که بیش از نیم قرن تجربه و نوآوری در حوزه ایمنی احتراق دارد. این برند که با نام تجاری @Flamonitec شناخته می شود، با بیش از 20 اختراع ثبت شده و حضور در بیش از 20 کشور، به عنوان مرجع فلیم اسکنرها، سیستم های ارزیابی شعله، کنترل های حفاظتی و راهکارهای حسگری برای صنایع حساس شناخته شده است. محصولات BFI Automation برای کاربرد در نیروگاه ها، توربین های گازی، صنایع شیمیایی و پتروشیمی، کوره های صنعتی و سیستم های بخار طراحی شده اند و با تمرکز بر ایمنی SIL3، قابلیت اطمینان بالا و تطابق با استانداردهای جهانی، عملکرد پایدار و دقیق در سخت ترین شرایط را تضمین می کنند.

این محصولات با فناوری های پیشرفته مانند فلیم اسکنرهای الکترونیک کامل، سنسورهای فیبر نوری مقاوم در برابر دما و لرزش، و کنترل های compact با قابلیت شبکه به صنایع کمک می کنند تا پایش شعله، افزایش ایمنی، کاهش خطرات عملیاتی و بهینه سازی مصرف انرژی را به بالاترین سطح برسانند.

مرجع تجهیزات انرژی، تأسیسات و اتوماسیون صنایع

انرژی تجهیز ملل، فروشگاه تخصصی تأمین تجهیزات انرژی، تأسیسات و احتراق است. از مشعل و کنترلر تا شیرآلات کنترلی و سیستم های هوشمند موتورخانه، هر آنچه برای راه اندازی، نگهداری و بهینه سازی سیستم های انرژی نیاز دارید، در یک مجموعه مهندسی شده در دسترس شماست.

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Product Information

FLAME SCANNER COMPACT VERSION 200

200 (UV/UV1/IR/IR3)(EX)



- **compact design**
- **failsafe design**
- **suitable for continuous operation, intermittent and 72-hours operation**
- **use at ambient temperatures* from -55 °C to +85 °C**
(optional fiber optic insert up to 300/600 °C)
- **visualization for flame relay and flame intensity on the device by LED**
- **approved according to international standards**

1 | Design

The Flame Scanner Compact Version CFC200 is a complete, optical flame monitor for single and multi-burner systems. Its compact design integrates the flame relay and analog output and provides the binary signal „Flame ON/OFF“ as well as the analog signal „0/4 mA to 20 mA“ directly. It is suitable for continuous operation due to its fail-safe design and electronic self-monitoring.

The flame radiation is detected via a sensor and evaluated electronically. The small angel of view offers significant advantages, especially for sight tubes with small diameters and extra-neous light discrimination.

Due to the specified ambient temperature range* from -55 °C to +85 °C, the Compact Flame Controller CFC200 can be used for many industrial applications.

The Fibre Optic Cable extends the operating temperature range at the burner to +300 °C without cooling. Fibre optic lances with cooling achieve a temperature resistance of up to +600 °C and are designed for use inside the burner.

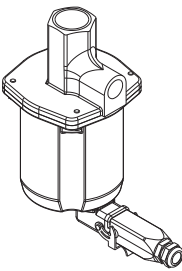
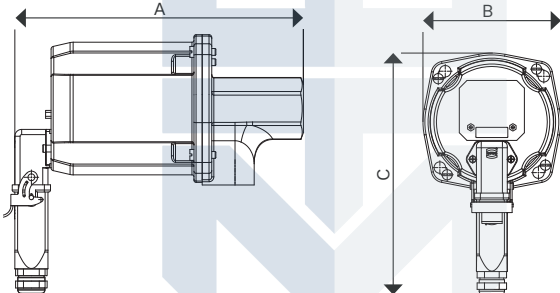
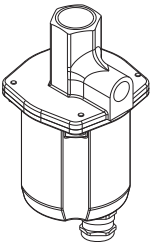
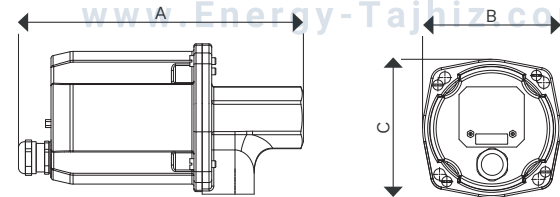
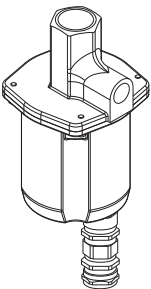
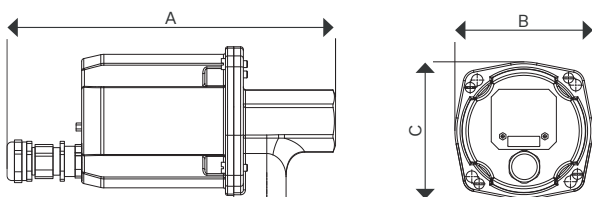
* for the specified temperature ranges heaters may be necessary.

2 | Customer benefits and usage

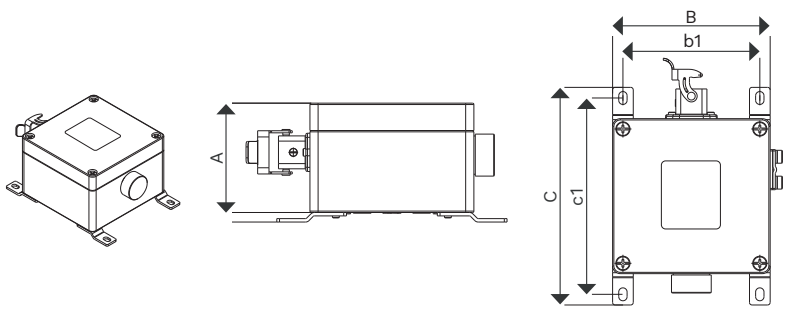
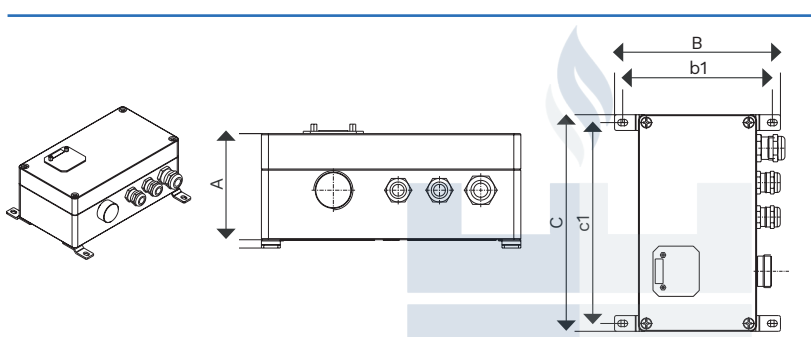
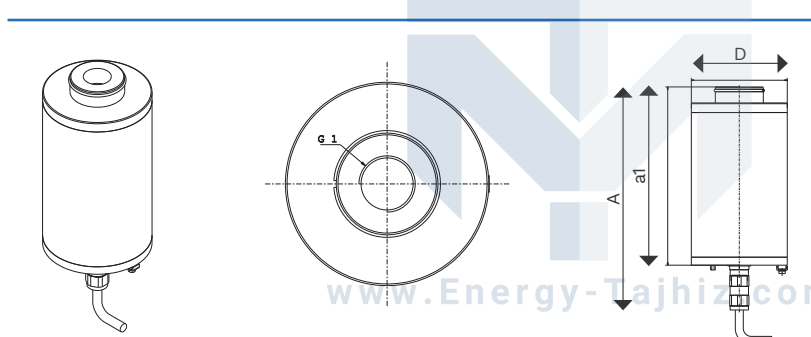
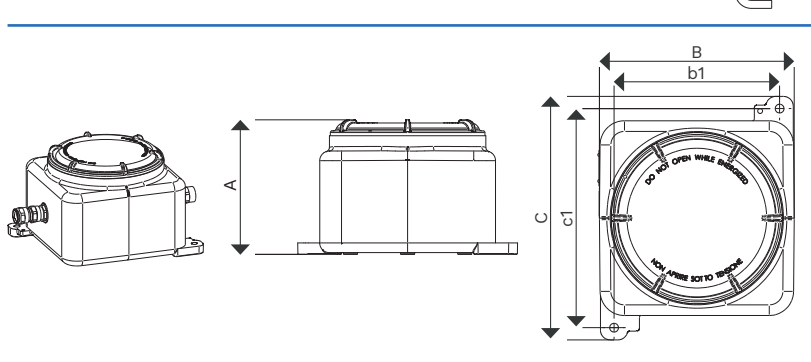
- ideally suited for use in single or multi-burner applications
- compact design reduces installation efforts and spare parts storage
- suitable for all types of fuel
- large dynamic range of the sensors enables flame monitoring of very small and very large radiation intensities

3 | Housing versions

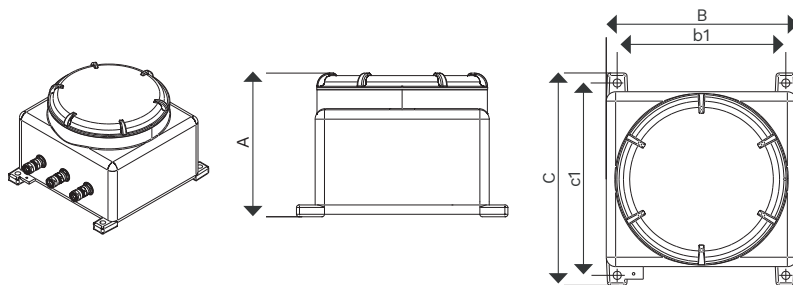
The Flame Scanner Compact Version 200 is available in different housings for ATEX Zone 1 and 2.

 			ATEX Zone 2 Standard housing Length A: 235 mm Width B: 108 mm Height C: 190 mm Weight: 1.5 kg Type: 200
 			Standard housing with Cable gland Length A: ca. 210 mm Width B: 108 mm Height C: 108 mm Weight: 1.5 kg Type: 200
 			Standard housing with Conduit gland Length A: 247 mm Width B: 108 mm Height C: 108 mm Weight: 1.5 kg Type: 200

3 | Housing versions

	<table> <tr> <td colspan="2">ATEX Zone 2</td></tr> <tr> <td colspan="2">OE-Converter housing</td></tr> <tr> <td>Length A:</td><td>80 mm</td></tr> <tr> <td>Width B/b1:</td><td>122/106 mm</td></tr> <tr> <td>Height C/c1:</td><td>168.5/152mm</td></tr> <tr> <td>Weight:</td><td>1.5 kg</td></tr> <tr> <td>Type:</td><td>200</td></tr> </table>	ATEX Zone 2		OE-Converter housing		Length A:	80 mm	Width B/b1:	122/106 mm	Height C/c1:	168.5/152mm	Weight:	1.5 kg	Type:	200
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	<table> <tr> <td colspan="2">ATEX Zone 2</td></tr> <tr> <td colspan="2">OE-Converter housing WH</td></tr> <tr> <td>Length A:</td><td>91 mm</td></tr> <tr> <td>Width B/b1:</td><td>168/125 mm</td></tr> <tr> <td>Height C/c1:</td><td>220/204 mm</td></tr> <tr> <td>Weight:</td><td>2.1 kg</td></tr> <tr> <td>Type:</td><td>200</td></tr> </table>	ATEX Zone 2		OE-Converter housing WH		Length A:	91 mm	Width B/b1:	168/125 mm	Height C/c1:	220/204 mm	Weight:	2.1 kg	Type:	200
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3 | Housing versions



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:	200 EX

4 | Technical data

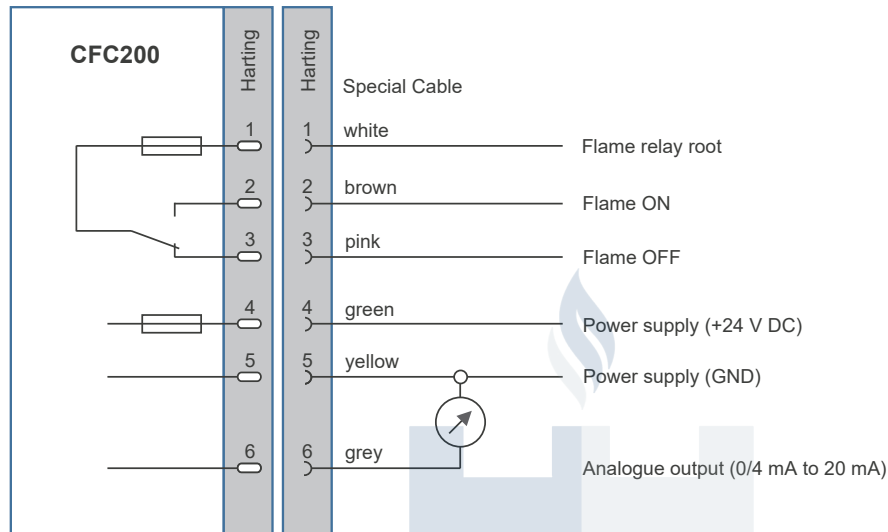
Spectral sensitivity	
UV1	190 nm to 550 nm
UV	280 nm to 420 nm
IR	300 nm to 1050 nm
IR3	1050 nm to 2700 nm
Angle of view	
Standard/Ex-d-housing	1°, 2° or 2,7°
OE-Converter housing/ Ex-d-housing (GUB)	2,7° by sensor head
Self checking	fully electronic, once per 700 ms
Power supply	24 V DC SELV
Current consumption	max. 200 mA
Prefuse	max. 0,5 A, slow
Design	according to protection class III SELV
Current output	0/4...20 mA, $R_a < 250 \Omega$ current window variable by jumpers
Flame relay	1 changeover contact, potential-free max. 48 V switching voltage max. 1 A switching current (fused with 0,5 A) max. 30 W switching power
Safety switch-off time	1 ... 5 s, set at factory to 1 s (2 - 5 s available on request)

4 | Technical data

Ambient temperature	
OE-housing (IECEX) (IR, IR3)	-20 °C to +70 °C
Ex-d-housing (GUB) (incl. heating, IECEX)	-40 °C to +85 °C
Standard-housing (IR, IR3)	
Standard-housing (UV, UV1)	-55 °C to +85 °C
OE-housing (EAC) (UV, UV1)	-55 °C to +70 °C
Electrical connection	
Standard/OE-Converter housing	dustproof plug-type connector
Ex-d-housing	permanently connected cable
Ex-d-housing (GUB)	terminal blocks
Type of protection	
OE-Converter-/Ex-d-housing/	IP 66
Ex-d-housing (GUB)	
Standard housing	IP 65
Sight port connection	
Standard/Ex-d-housing	1" female thread
OE-Converter-/Ex-d-housing (GUB)	depending on SKL
Purge air	
Connection	½" female thread
Volume	10 m³/h
Pressure	0,02 bar over combustion chamber internal pressure
CE	CE0063
IECEX	
Zone 1	
Ex-d-housing	IECEX EPS 14.0042X
Ex-d-housing (GUB)	IECEX INE 13.0069X
Zone 2	
Standard/OE-housing	IECEX TUR 15.0029X
ATEX	
Zone 1	
Ex-d-housing	EPS 14 ATEX 1 696 X
Ex-d-housing (GUB)	INERIS 13ATEX0021X
Zone 2	
Standard/OE-housing	TÜV 15 ATEX 7682 X

5 | Connection diagram

Connection of CFC without special configuration:



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