

Maintenance Check-up Repair

Installation, commissioning, inspection



Services - personal and reliable

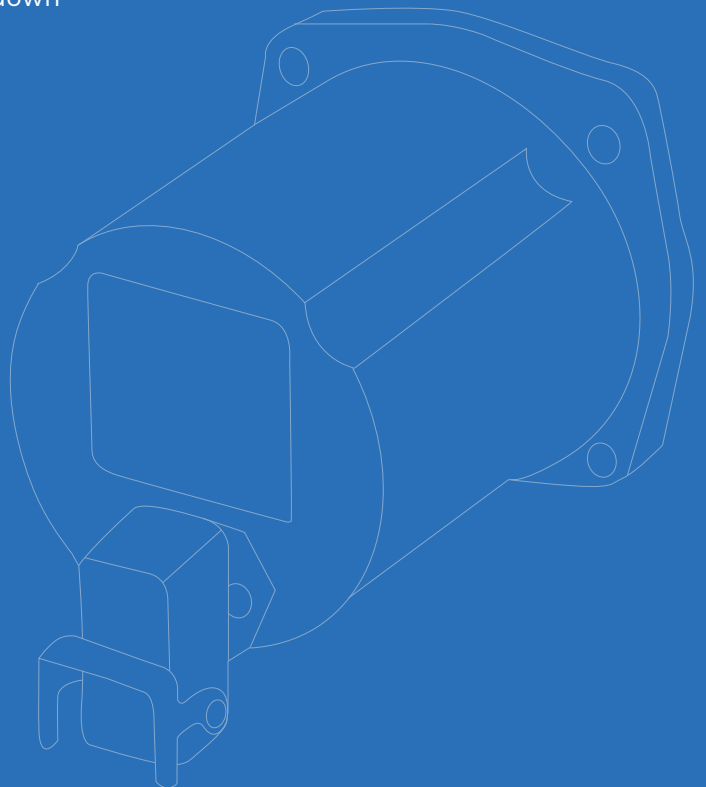
BFI Automation Mindermann GmbH supports its customers with extensive services in field of flame monitoring. These include installation, commissioning, repair and maintenance.

Safety-relevant components, such as flame monitoring, are expected to be highly reliable. Professional commissioning and frequent, careful maintenance are the basic requirements for safe operation. With recurring maintenance, irregular functions can be detected and removed. We recommend carrying out a check-up or maintenance at the latest 8 years after commissioning (at typical application and environment of the Flame Scanner) by the manufacturer or his authorized representative. Recurring maintenances verifiably leads to an increase of the device lifetime and reduce disturbance of the burner operation.

Plant-dependent maintenance intervals can be arranged with BFI Automation. We would contact you to follow-up and coordinate the next maintenance visit with you on time.

On the following pages, we describe the scope of our services such as:

- Maintenance on site during plant shutdown
- Maintenance on site during operation
- Check-up at BFI Automation
- Repair



Maintenance on site during plant shutdown!

Our service engineers will inspect all components of your Flame Monitoring System at your site during plant shutdown.

The following activities will be carried out:

- Dismounting of Flame Scanners / Flame Amplifiers / Compact Flame Controllers
- Optical inspection of all components for mechanical or electrical damage
- Checking the inside of the housing of dust and moisture
- Cleaning the lens of Flame Scanners, Compact Flame Controllers, scanner heads etc.
- Documentation of parameters and settings
- Functional check and documentation of all device features
- Replacement of gasket's (if required)
- Check-up and cleaning of sight pipes
- Control of signal cables and functions
- Mounting of Flame Scanners / Flame Amplifiers / Compact Flame Controllers

After maintenance, you will receive a complete report of the activities performed. This also includes settings as well as the results of the functional tests and their measured values. This protocol also serves as a template for national testing authorities.

In the case of a maintenance on site, please fill out the form „Request for quotation of flame monitoring system check-up on site“ (attached), so that we can plan the above-mentioned services.

The costs and duration of a maintenance on site will be quoted individually.

For regular executions, you will receive a discount of 10% on the daily or hourly rates from the second maintenance.



Maintenance on site during operation

Our service engineers will inspect all components of your Flame Monitoring System at your site during plant shutdown.

The following activities will be carried out:

- Dismounting of Flame Scanners / Flame Amplifiers / Compact Flame Controllers
- Optical inspection of all components for mechanical or electrical damage
- Checking the inside of the housing of dust and moisture
- Cleaning the lens of Flame Scanners, Compact Flame Controllers, sensor heads etc.
- Documentation of parameters and settings
- Functional check and documentation of all device features
- Replacement of gasket's (if required)
- Check-up and cleaning of sight pipes
- Control of signal cables and functions
- Alignment of sight tube arrangement
- Mounting of Flame Scanners / Flame Amplifiers / Compact Flame Controllers
- Checking and adjusting the fault-signal safety of each Flame Scanner
- Control of the flame-signal of each Flame Scanner

For maintenance during operation, each burner need to be taken out of operation individually so that the respective flame scanner can be dismounted and checked.

After maintenance, you will receive a report of the activities performed. This also includes the settings as well as the results of the functional tests and their measured values. This protocol also serves as a template for national testing authorities.

In the case of a maintenance on site, please fill out the form „Request for quotation of flame monitoring system check-up on site“ (attached), so that we can plan the operation.

The costs and duration of a maintenance on site will be quoted individually. For regular executions, you will receive a discount of 10% on the daily or hourly rates from the second maintenance.

Check-up at BFI Automation

You send your devices to BFI Automation for check-up. Please use the address listed on the last page. If required, we arrange the pickup of the material from you.

The following activities will be carried out:

- Optical inspection of all components for mechanical or electrical damage
- Checking the inside of the housing of dust and moisture
- Cleaning the lens of Flame Scanners, Compact Flame Controllers, sensor heads etc.
- Documentation of parameters and settings
- Complete function test according to test instructions for new equipment including documentation and adjustment
- 24 hours continuous test
- Replacement of gasket's (if necessary)

The activities listed above are carried out on devices with electronic components at a fixed price of 180 € per device. For accessory items, such as Fiber Optic Cables, sensor heads and pressure barriers the optical properties will be checked at a fixed price of 70 € per piece. For this service we need the devices for approx. 5 working days at BFI Automation plus shipping duration (for quantities 8 devices kindly expect a longer processing time).

In case of malfunction, you will be informed by receiving a cost estimate for repair. You will receive a report of the check-up for each device, which includes all relevant measurements.

For this service please complete the form "Return Material Authorization (RMA)" you find below, so that we can plan accordingly.



Repair – personal and reliable

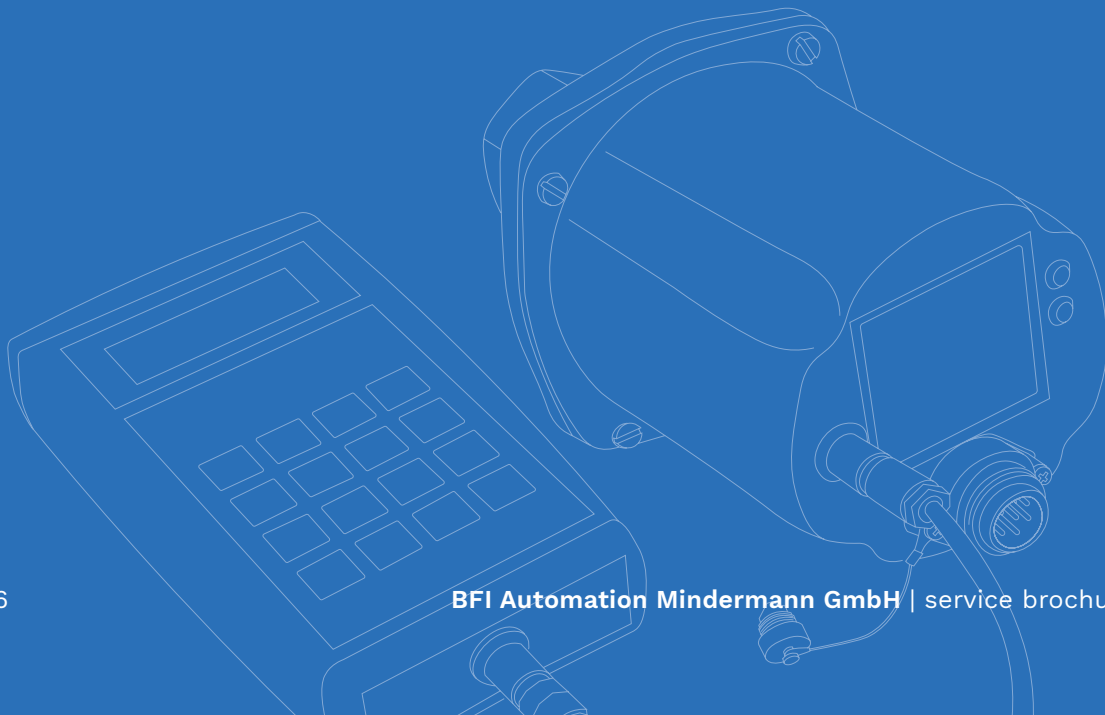
In case of malfunction, please send the defective device for repair to the address mentioned on the last page.

After receipt, our qualified employees evaluate if it is repairable or not. If it is repairable, you will get a cost estimate for repair. We will not start repairing the device before we get the authorization for repair from your site. The estimated duration of repair is approx. 3 weeks. We can usually provide replacement devices on short notice. In case of a total economic damage, we will provide you with a quotation for a new device.

The following activities will be carried out:

- Optical inspection of all components for mechanical or electrical damage
- Checking the inside of the housing of dust and moisture
- Cleaning the lens of flame scanners, compact flame controllers, etc.
- Documentation of parameters and settings
- Repair of defective components
- Complete function test according to test instructions for new equipment including documentation
- 24 hours continuous test
- Replacement of gasket's (if necessary)

For this service please complete the form “Return Material Authorization (RMA)” you find below, so that we can plan accordingly. As a Flame Monitoring System is safety-related, we would like to point out, that devices older than 15 years are excluded from repair. For devices older than 15 years, you will automatically receive a quotation for a new device.



Quality assurance measures

Our customers include power plant operators, gas turbine manufacturers and the chemical and petrochemical industries.

In all these areas, Flame Monitoring Systems are among the safety-relevant components of a combustion plant. Therefore, compliance with all safety-related standards is required. At the same time, any failure is very costly, which is why the reliability and availability of the equipment is paramount.

100% final test

Each device is 100% tested before delivery. For this purpose, we have developed special test rigs that cover a wide range of possible practical values. Each device is given an individual identifier, via which all test steps and results are documented.

Assembly inspection

Even before the final inspection, we monitor and test all components and assemblies during the production phase. In-circuit-tests, AOI and other assembly tests are indispensable components of our quality assurance.

Quality in the development phase

Already in the development phase, our decades of experience in the field of flame monitoring are incorporated into the requirements of a new product. Our own testing requirements go well beyond the applicable standards.

ISO certification

The ambition to supply our customers with the best possible product is the basic idea of our quality management system. Therefore, it is a matter of course for us to always be certified according to the latest requirements of ISO 9001. In addition, BFI Automation fulfils the requirement for testing the devices according to IECEx.



**Retourenschein/
Return Material Authorisation (RMA)**

Absenderadresse/Return address:

Rechnungsadresse/Invoice address:

Empfängeradresse/Receiving address:

BFI Automation Mindermann GmbH
Reparaturabteilung/Repair
Ruegenstr. 7
42579 Heiligenhaus
Germany

Kundenauftragsnummer/Customer order no.:

GERÄT/DEVICE:

Typ/Type:

**Seriennummer/
Serial number:**

Baujahr/Year:

Rücksendegrund/Reason to return:

☐

Reparatur/Repair

☐

Überprüfung/
Service check-up

☐

Garantie/
Warranty

Fehlerbeschreibung/Failure description:

Zubehör/Accessoires:

Kontakt Daten/Contact details:

Name

Telefon/Phone

E-Mail/Email:

Angebotsanfrage für eine Wartung der Flammenüberwachung vor Ort Request for quotation of flame monitoring system check-up on site

Kunde/Customer:

Anlage/Plant:

Adresse/Address:

Land/Country:

Ansprechpartner/Contact Person:

E-Mail/Email:

Telefon/Phone:

Flammenfühlertyp/Type of Flame Scanners:

Anzahl Flammenfühler/Quantity of Flame Scanners:

Flammenwächtertyp/Type of Flame Amplifier:

Anzahl Flammenwächter/Quantity of Flame Amplifier: Sonstige Geräte/Additional devices:

Anzahl sonstige Geräte/Quantity of additional devices:

Voraussichtlicher Stillstand der Anlage/Expected shutdown of the plant:

Weitere Informationen/Additional information:

Your sales partner



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