



## Flame Scanner System F350/FFS30

Sensors and systems for combustion engineering



[www.lamtec.de](http://www.lamtec.de)

# Approvals.

**EU Type Examination Certificate  
according to regulation (EU) 2016/426 (GAR)**



- DIN EN 298
- DIN EN 13611
- DIN EN 61508

**EU Type Examination Certificate according  
to directive 2014/68/EU (PED)**



- DIN EN 298
- DIN EN 13611
- DIN EN 61508

SIL 3 Confirmation DIN EN 61508



SIL 3

**UK  
CA** CE 0168  
UKCA type examination certificate



Class I, Division 2, Group A, B, C, D,  
Hazardous Locations in Preparation!



In Preparation!

# LAMTEC's New Generation of Flame Scanner Systems Is Expanding.

Detecting the presence of a flame is often more complex than you might imagine at first. With the innovative flame scanners from LAMTEC, such complex installations can be handled very easily, quickly and reliably. Our new flame scanner system F350 + FFS30 can be used for almost all monitoring tasks and is available for the spectral ranges UV, IR as well as a UV/IR dual sensor.

Supply voltage: 24 VDC  
Relay output:  $\leq$  250 VAC  
 $\leq$  120 VDC

The FFS30 flame scanner is supplied in the proven, high-quality aluminium housing. Plug-ins or screwed cable glands are directly at the sensor housing. Advantage: The brackets with screw connection for FFS07 can be used for FFS30 as well.

Due to its fail-safe contact, the system is compatible with any burner control system. The F350 can be configured on-site using the external User Interface FB30. The flame scanner is bus-compatible by means of a gateway and can thus communicate with other systems. Using the FSB (Flame Scanner Bus), it is possible to access a connected device by means of a remote software.

## Highlights:

- Configurable with external user interface FB30 or with remote software
- User-friendly commissioning, data acquisition and analysis via remote software
- FFS30 Protection class IP66/67
- EX Zone 1, 21, 2, 22
- Fail-safe bus connection iFSB between F350 and FFS30
- FFS30 with same dimensions as FFS07
- Same brackets with threaded connection as F300K, F200K, FFS07
- SIL 3
- Operating temperature:  
F350: - 40 °C ... + 70 °C  
FFS30: - 40 °C ... + 85 °C
- Higher temperatures with the cooling air housing possible



# Selection Criteria.

Depending on the spectral sensitivity of the flame scanners, they are differently suitable for certain fuels. When selecting the flame scanner, the specific requirements of the plant must be taken into account.

Type	Spectrum/nm	Viewing angle ca.	Preferred area of application/fuel
FFS30 UV 4	215 ... 360	8°	<ul style="list-style-type: none"> <li>■ Oil</li> <li>■ Gas</li> <li>■ Dust</li> <li>■ Special gases such as refinery gas, blast-furnace gas and hydrogen</li> </ul>
FFS30 IR 2	850 ... 1200	20°	<ul style="list-style-type: none"> <li>■ Combustion chamber monitoring</li> </ul>
FFS30 IR 4	1000 ... 2200	60°	<ul style="list-style-type: none"> <li>■ Combustion of oil, gas, coal, and dust with intense FGR</li> <li>■ Waste gases with a yellowish colour without UV radiation or with shielding of the UV components by water vapour and dust</li> </ul>
FFS30 UVIR 1	215 ... 360 850 ... 1700	8° 8°	<ul style="list-style-type: none"> <li>■ <b>UV:</b></li> <li>■ Oil, gas, special gases such as refinery gas and blast-furnace gas</li> <li>■ <b>IR:</b></li> <li>■ Oil, gas, wood, coal, dust combustion with intense FGR</li> <li>■ Waste gases with a yellowish colour without UV radiation or with shielding of the UV components by water vapour and dust</li> </ul>

# Accessories.

## External User Interface (UI) FB30

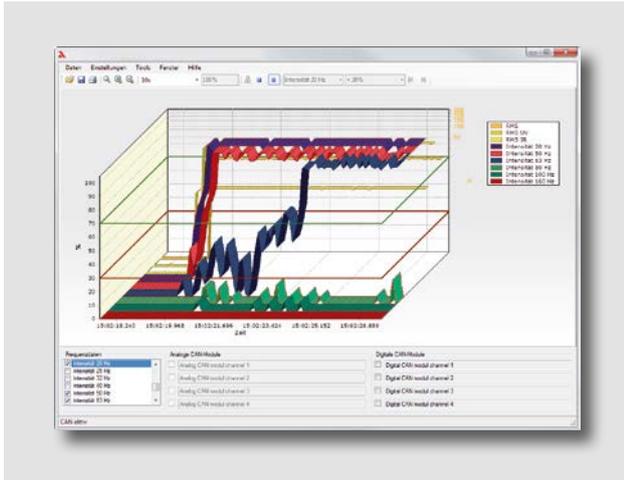
- The F350 can be adjusted with the external user interface
- The external user interface FB30 can be connected to the terminals of the F350 by means of an adapter cable
- The FB30 is supplied with 24 VDC from the same power supply as the connected F350
- IP67



External User Interface FB30

### Flamescanner-Remote-Software (FRS)

- Connection to PC via FSB/USB module and adapter cable
- The Flamescanner-Remote-Software enables a full parameterisation. Using the software, data can be recorded, saved, and analysed.
- More external, analogue and/or digital data can be received and recorded using the FSB module. The software will synchronise the data.



Flamescanner-Remote-Software

### FSB Gateway

- The FSB gateway can be used to implement an interface to the control system
- Data from one or up to 32 F350/FFS30 sensors can be transmitted via the field bus of the control unit without any problem



FSB Gateway

### FSB Gateway is available for the following fieldbus versions:

- PROFIBUS DP (Slave)
- MODBUS TCP (Client/Server)
- MODBUS RTU (Master/Slave)
- Ethernet (Frame)
- CANopen
- Others on request

### Connection Box

#### Available versions:

Connection box FG24 Ex Polyester IP65

659R0111



FG24 Ex

### Ball-and-socket joint FV40-10

You will find a complete overview of the brackets and cooling-air housings (also with extended air outlet) for LAMTEC flame scanners in the document „Flame Monitoring Systems and Accessories“ (DLT7673).



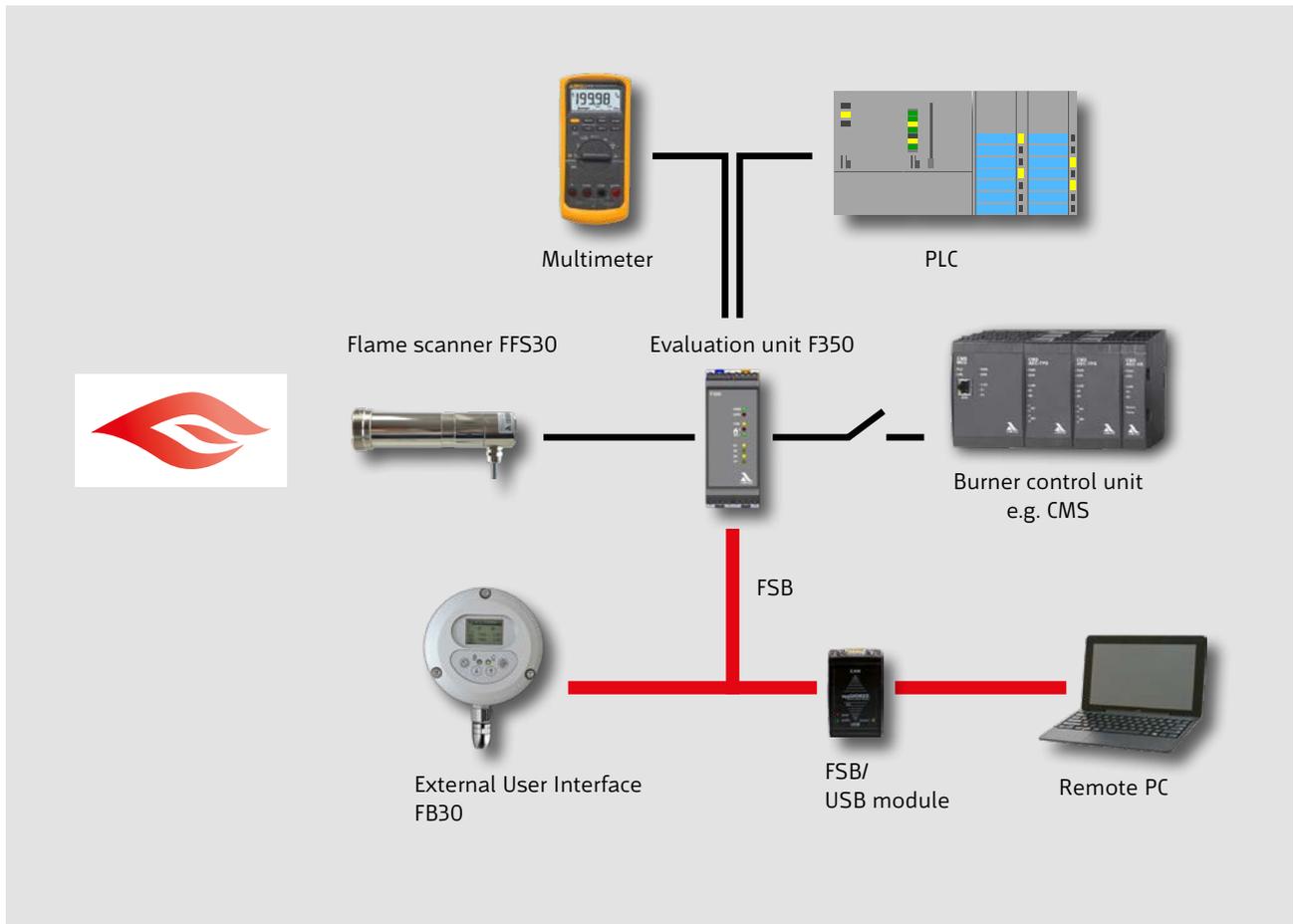
Bracket with threaded connection

### Flame scanner testing device

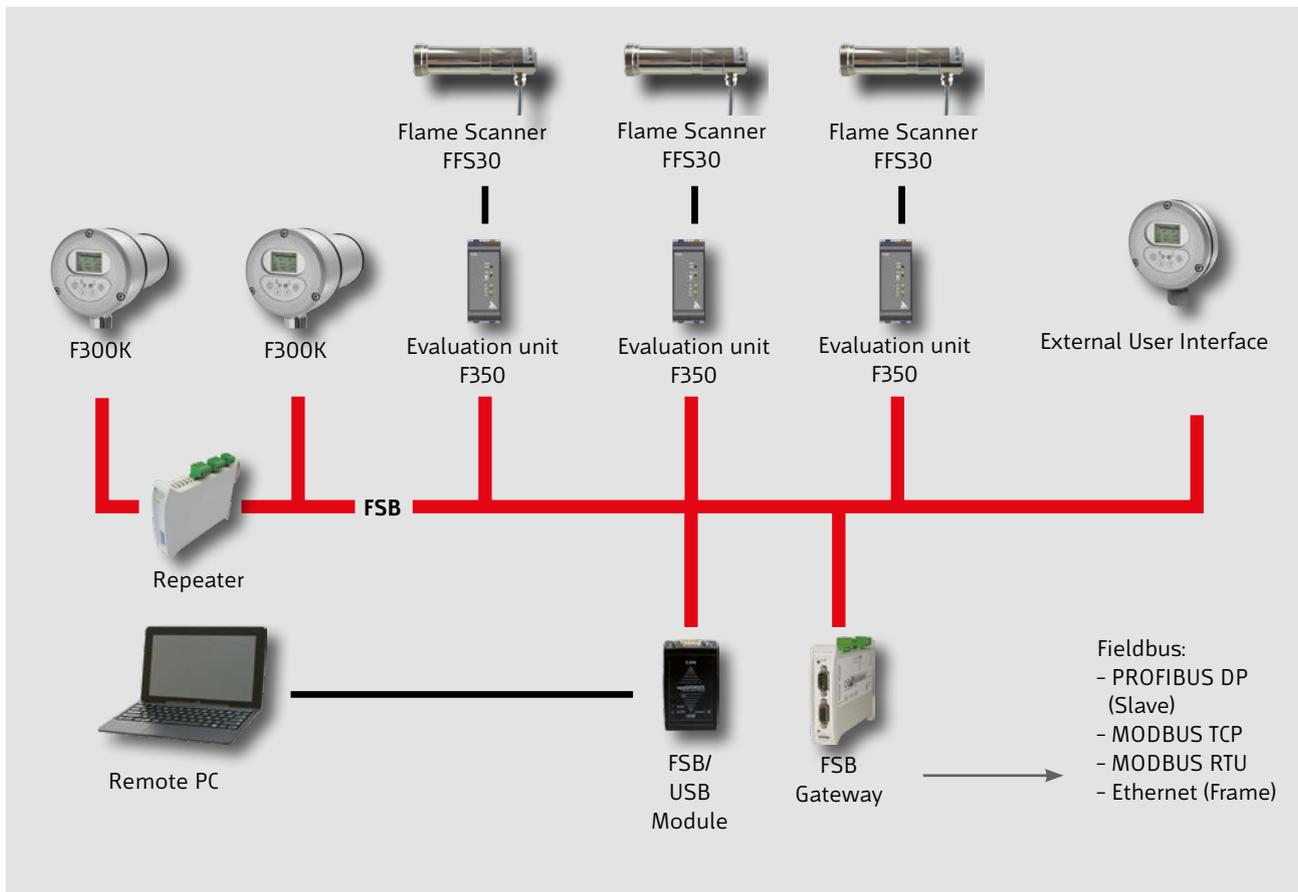
You can use the FFP30 to test that your flame scanner is working properly. The testing device simulates a variable flame frequency. The testing device is screwed onto the flame scanner, and the IR or UV beam can be activated by a rocker switch.



Flame scanner testing device



Example: Connection with a burner control unit



Example: Connection of multiple flame scanner systems. F350 can be combined with the F300K without a problem.





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