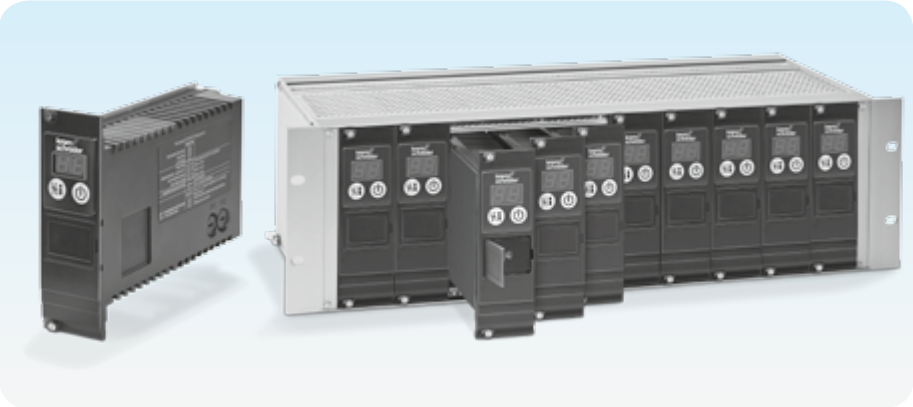
Burner control unit PFU 760

Product brochure · GB
6 Edition 05.11

- For directly ignited burners of unlimited capacity in intermittent operation or in continuous operation pursuant to EN 746-2
- Plug-in function unit for mounting in 19" module subracks
- Flame control by UV, ionization or a further option of using the furnace chamber temperature
- Display of the program status, unit parameters and flame signal; Manual mode for burner adjustment and for diagnostic purposes
- Visualization and adaptation to the specific application via the PC programming and diagnostic software BCSoft to simplify logistics management
- Air valve control relieves the furnace control
- Connection to PROFIBUS-DP via field bus interface PFA
- Certified for systems up to SIL 3 and compliant with PL e



Module subrack BGT for instance serves to accommodate several function units. It is provided with a backplane with screw terminals for simple, reliable wiring.

Application

The burner control units PFU 760 control, ignite and monitor gas burners for intermittent or continuous operation. As a result of their fully electronic design they react quickly to various process requirements and are therefore also suitable for frequent cycling operation.

The PFU 760 can be used for directly ignited industrial burners. The burners may be modulating or stage-controlled.

On industrial furnaces, the PFU 760 reduces the load on the central furnace control by taking over tasks that only relate to the burner, for example it ensures that the burner always ignites in a safe condition after it has been restarted.

The burner control unit is used for burners with mechanical combustion air supply where the fan is controlled by a separate logic and for atmospheric burners.

The air valve control on the burner control unit PFU 760L assists the furnace control for cooling, purging and output control tasks.

The program status, the unit parameters and the level of the flame signal can be read directly from the unit. The burner can be controlled manually for commissioning and diagnostic purposes.

If the local requirements on the burner control unit change, the PC software BCSoft can be adjusted to the unit parameters of the application by using the optical interface.

The service personnel is supported by a convenient visualization system of the input and output signals and the error history.

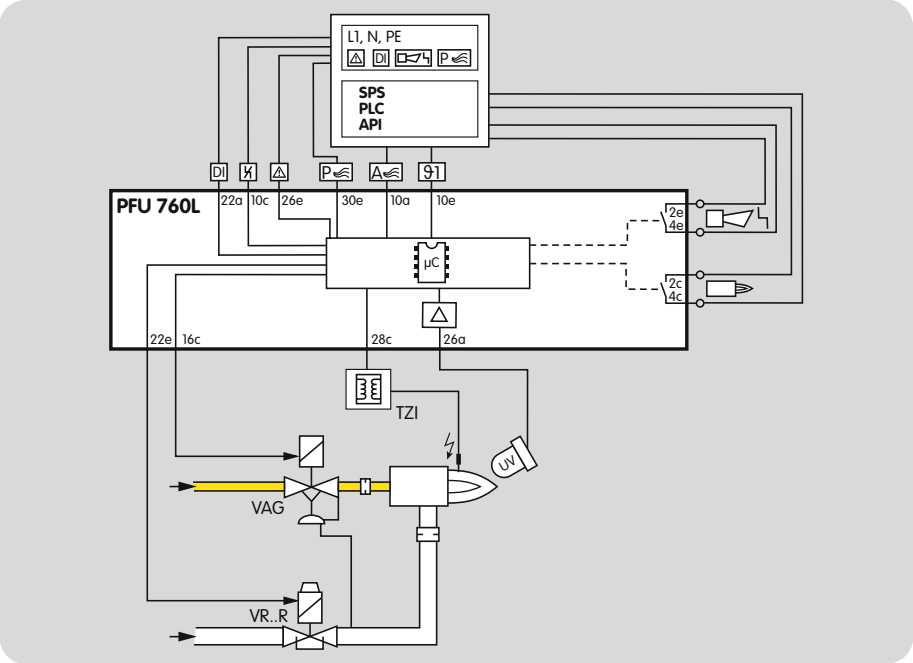
To reduce the installation and wiring costs, Elster Kromschröder offers the field bus interface PFA 700 to transfer the control signals and feedbacks via PROFIBUS-DP.

Bogie hearth forging furnace in the metallurgical industry

Intermittent shuttle kiln in the ceramics industry

Walking beam furnace with overhead firing

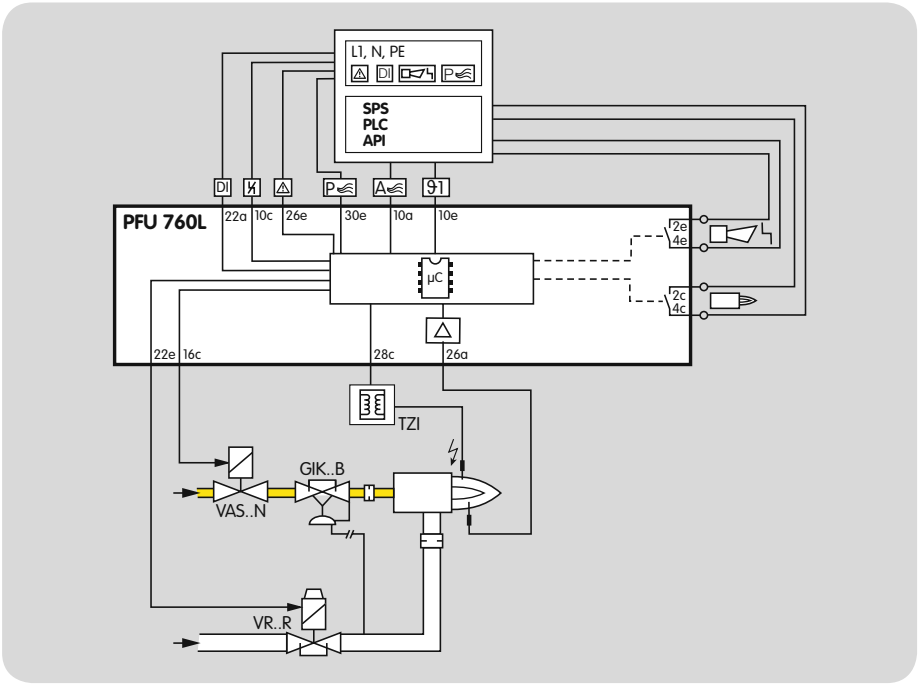
Examples of application



Staged On/Off burner control

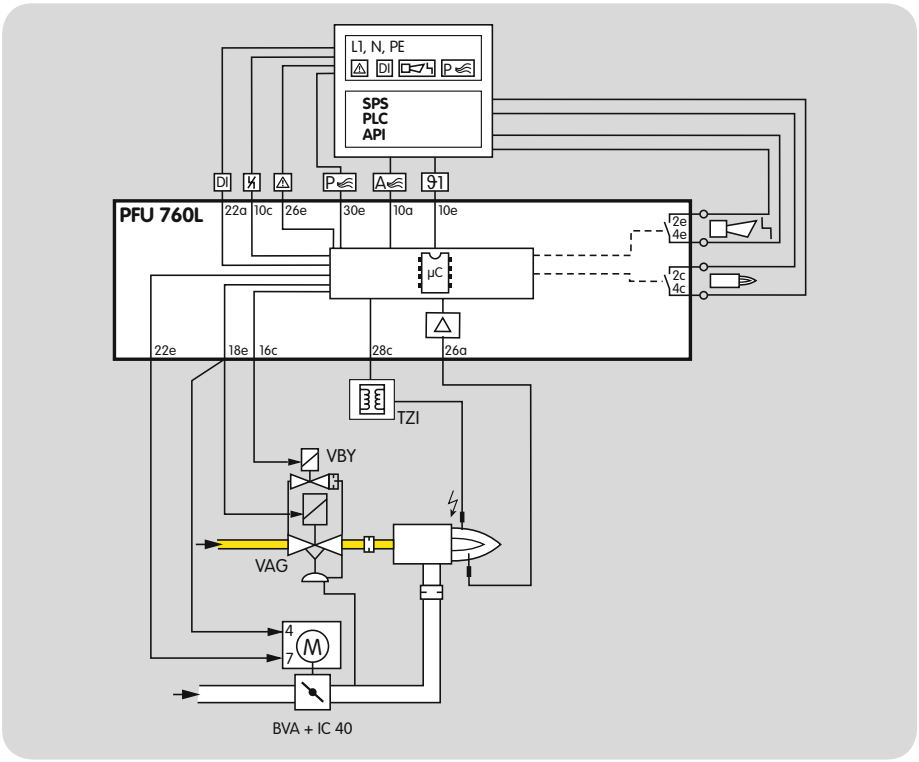
The burner can be started with reduced capacity.

A UV sensor monitors the flame signal from the burner. UV sensor UVD 1 is used for continuous operation, UV sensor UVS for intermittent operation.



Staged High/Low burner control

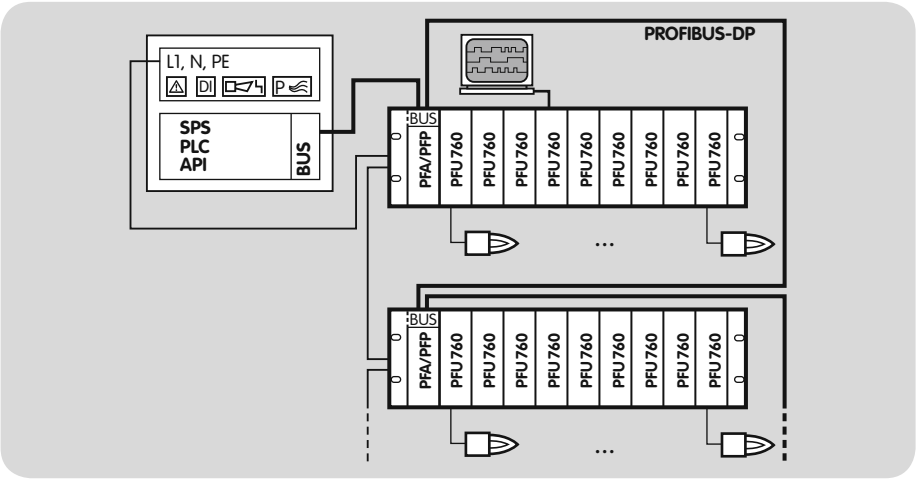
The burner starts at low-fire rate. When the operating state is reached, the PFU 760L advises the control unit. The PLC can now pulse the air valve in order to control the burner output.



Two-stage-controlled burner

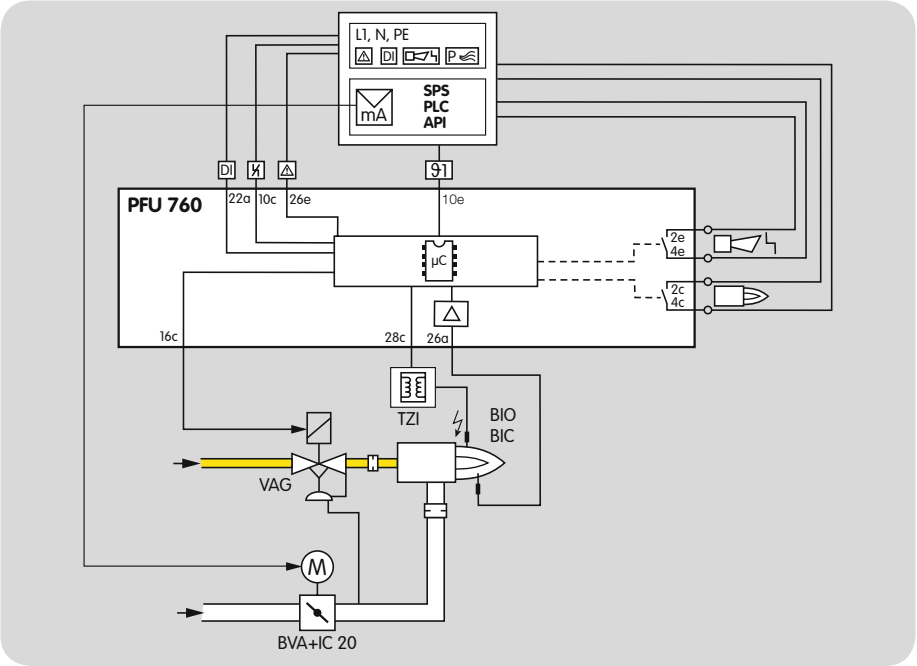
Control: ON/OFF with ignition via bypass

The burner starts at low-fire rate. When the operating state is reached, the PFU 760L issues the Enable signal for the maximum burner output.



PFU 760..D: High temperature equipment

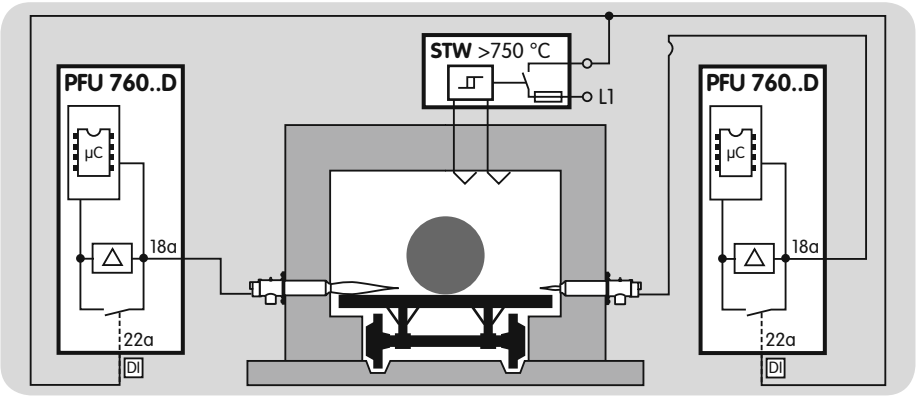
Indirect flame control using the temperature. During the start-up process, as long as the wall temperature is below auto ignition temperature the flame must be controlled by conventional methods. When the working temperature has exceeded 750°C, the safety temperature monitor (STW) takes over the indirect flame control.



Modulating-controlled burner

Control: continuous

The external control system moves the butterfly valve for air BVA to ignition position. The burner starts at low-fire rate, and a controller in the PLC controls the burner output via the butterfly valve for air BVA after the operating state has been signalled.



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Technical data

Mains voltage:
220/240 V AC, -15/+10%, 50/60 Hz or
110/120 V AC, -15/+10%, 50/60 Hz,
for grounded and ungrounded mains.

Ambient temperature:
-20 to +60°C (-4 to +140°F),
Climate: no condensation permitted.

Enclosure: IP 00 pursuant to IEC 529, after installing in a 19" module subrack according to the instructions, e.g. type BGT, the front corresponds to IP 20.

Weight: approx. 650 g (23 oz)

Type code

Code	Description
L*	Air valve control
	Mains voltage
T	220 – 240 V AC, -15/+10%, 50/60 Hz
N	110 – 120 V AC, -15/+10%, 50/60 Hz
D*	Digital input to interrupt flame control
U*	Preparation for UV sensor for continuous operation UVD 1
K1*	Compatible with PFS/PFD
K2*	PFU 778

** If "none", this specification is omitted.*

Maintenance cycles

Burner control unit PFU requires little servicing.

Detailed information on this product

http://docuthek.kromschroeder.com/doclib/main.php?language=1&folderid=206140&by_class=6

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