



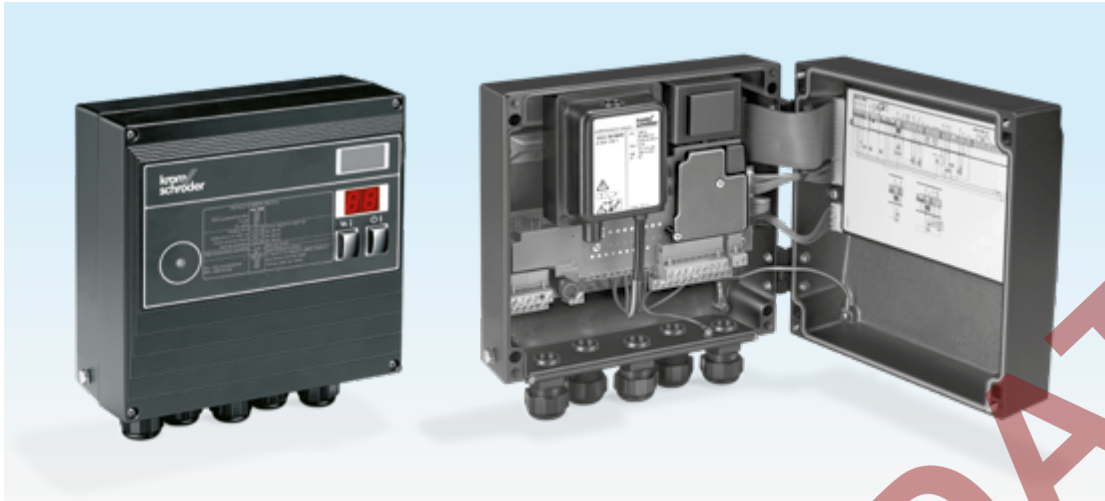
BCU 440



Burner control unit

- Automatic burner control unit, ignition transformer, indicators and operating controls in a space-saving metal housing which replaces the local burner control cabinet
- For directly ignited burners of up to 350 kW in continuous operation pursuant to EN 746-2
- Display of the program status, unit parameters and flame signal; Manual mode for burner adjustment and for diagnostic purposes
- Visualisation and adaptation to the specific application via the PC programming and diagnostic software BCSOFT to simplify logistics management.

Application



The BCU unites the functionally interrelated components of automatic burner control unit, ignition transformer, Manual/Automatic mode and display of operating and fault statuses in a compact metal housing.

Burner control unit BCU 440 controls, ignites and monitors gas burners in continuous operation.

It can be used for directly ignited industrial burners of up to 350 kW. The BCU is installed near the burner to be monitored.

The program status, the unit parameters and the level of the flame signal can be read directly from the unit.

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 visualisation system of the input and output signals and the error history.



Roller hearth kiln in the ceramics industry

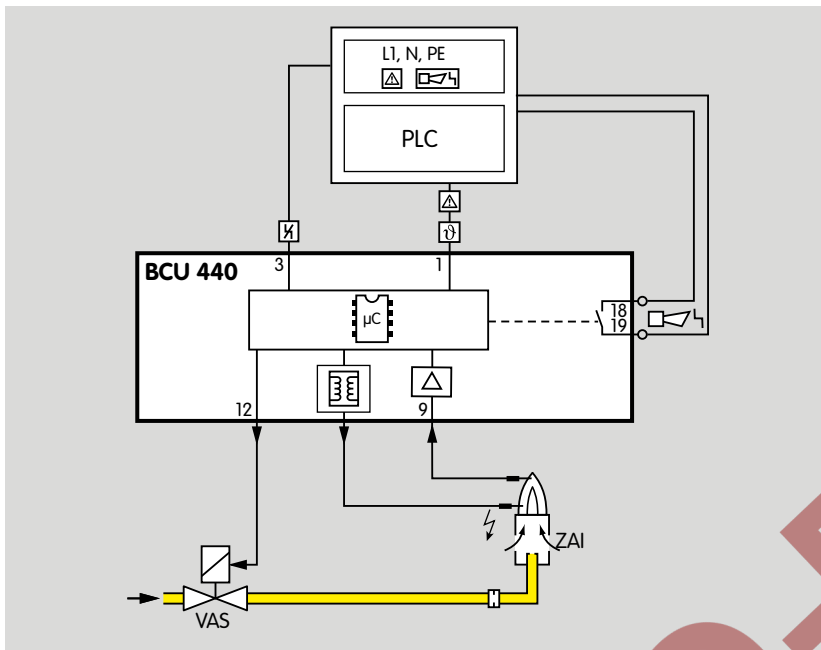


Chamber kiln



Roller hearth kiln

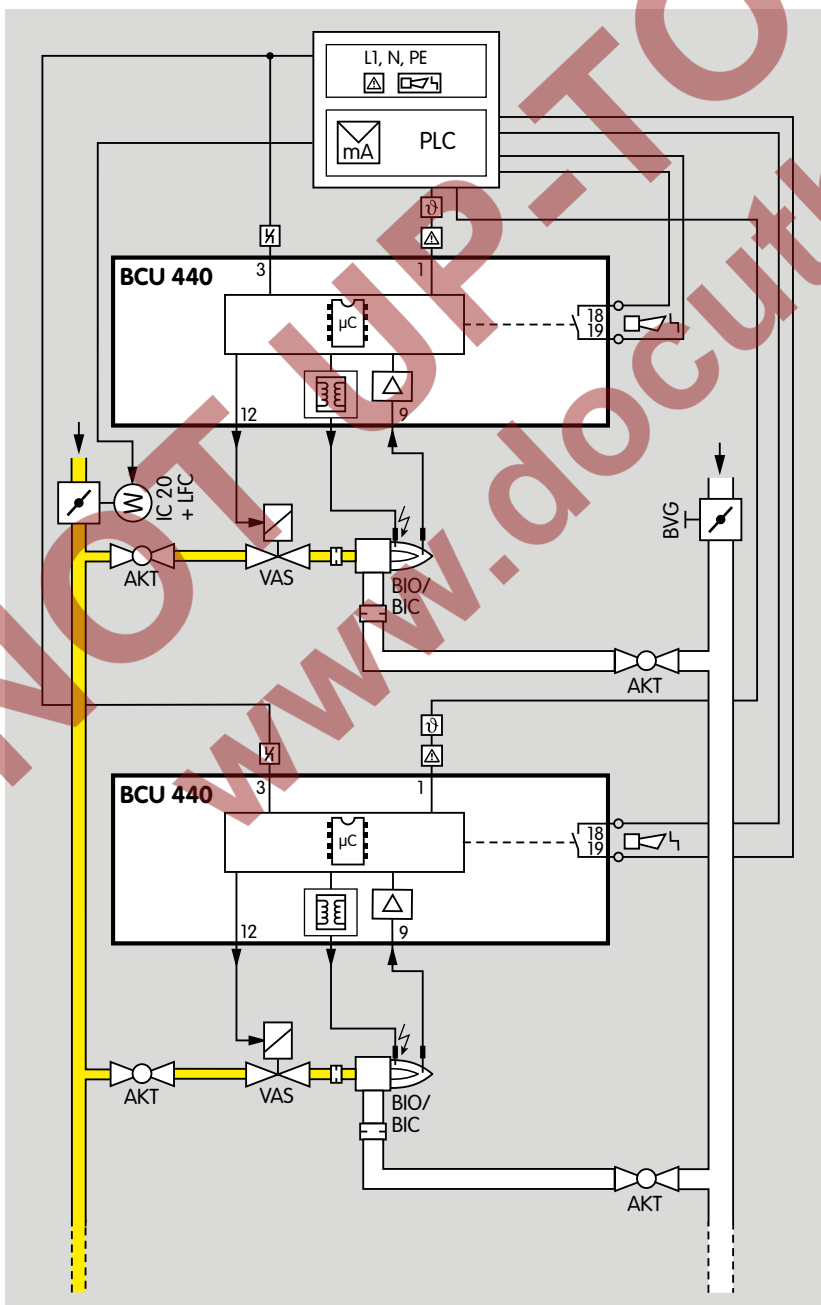
Examples of application



Atmospheric burners

Control: ON/OFF

The burner is ignited by the spark electrode and is monitored by the flame rod. In the event of a flame failure during start-up, an immediate fault lock-out occurs. In the event of a flame failure during operation, an immediate fault lock-out or a restart occurs, depending on the unit parameter settings.



BCU 440: Modulating-controlled burner

Control: continuous.

Modulating control of the gas flow rate with a constant air flow rate. The burners start at low-fire rate, and the actuator IC 20 controls the burner capacity via the linear flow control LFC after the operating state has been signalled.

Technical data

Mains voltage:

230 V AC, -15/+10%, 50/60 Hz.

115 V AC, -15/+10%, 50/60 Hz.

for grounded and ungrounded mains.

Voltage to inputs and valve = mains voltage.

Signal and control line: max. 2.5 mm² (AWG 14).

Cable for burner ground/PE wire: 4 mm² (AWG 12).

Cable gland: 5 cable glands with multiple seal inserts for cable diameters of up to 7 mm,

Each BCU is supplied for two cable glands with one seal insert each for cable diameters between 7 and 12 mm.

Input voltage of signal inputs:

Rated value	115 V AC	230 V AC
Signal „1“	80 – 126,5	160 – 253
Signal „0“	0 – 20	0 – 40
Frequenz	50/60 Hz	50/60 Hz

Inherent current:

Signal „1“	typ. 2 mA
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Power consumption: approx. 9 VA plus inherent consumption of the integrated ignition transformer (50/60 Hz).

Inherent consumption of ignition transformer:

Ignition transformer	Input		Output	
	V AC	Hz*	V	mA*
TZI 5-15/100W	230	50 (60)	0,45 (0,35)	5000 15 (11)
TZI 7-25/20W	230	50 (60)	1,1 (0,8)	7000 25 (18)
TZI 7,5-12/100W	230	50 (60)	0,6 (0,45)	7500 12 (9)
TZI 7,5-20/33W	230	50 (60)	0,9 (0,7)	7500 20 (15)
TZI 5-15/100R	115	50 (60)	0,9 (0,7)	5000 15 (11)
TZI 7-25/20R	115	50 (60)	2,2 (1,6)	7000 25 (18)
TZI 7,5-12/100R	115	50 (60)	1,2 (0,9)	7500 12 (9)
TZI 7,5-20/33R	115	50 (60)	1,8 (1,35)	7500 20 (15)
* Values in () apply to 60 Hz.				

Output current:

max. 1 A, cos ϕ = 1, for the valve outputs (or SRC outputs), but total current for valves and ignition transformer: max. 2.5 A.

Fail-safe inputs and outputs:

All the inputs and outputs marked "■" may be used for safety tasks.

Operation and fault signalling contacts:

Signalling contact for mains voltage,
max. 2 A, 253 V,
not internally fused.

Flame control: sensor voltage approx. 230 V AC,
sensor current > 1 μ A.

Length of sensor cable: max. 5 m (16.4 ft).

Fuses in unit: F1: 3.15 A, slow-acting, H, pursuant to IEC 127-2/5,

Fuse for protecting the safety-relevant ignition and valve 1 outputs (terminals 7 and 12):

Ambient temperature: -20 to +60°C (-4 to +140°F),

climate: no condensation permitted.

Enclosure: IP 54 pursuant to IEC 529.

Number of operating cycles:

Relay outputs: 250,000 pursuant to EN 298,

Mains switch: 1,000,

Reset/Information button: 1,000.

Weight: approx. 5 kg (11 lb) depending on version.

Type code

Code	Description
BCU	Burner control unit
4	Series 4
40	Basic version 40
-3	Safety time on start-up tSA [s]
-5	3
-10	5
	10
	Safety time in operation [s]
/1	1
/2	2
W	Mains voltage
R	230 V AC, -15/+10%, 50/60 Hz
	115 V AC, -15/+10%, 50/60 Hz
1	Ignition transformer
2	TZI 5-15/100
3	TZI 7-25/20
4	TZI 7,5-12/100
	TZI 7,5-20/33
GB	Front film in English with additional stickers in D, F, I, NL, E

Contact

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Technical
Information bulletin
for this product

www.docuthek.com

Search term: BCU 440

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