KROMSCHRÖDER
BCU 4 SERIES
NEXT-GENERATION BURNER CONTROL UNIT

All-in-one modular solutions for industrial multi-burner applications
Developed for furnace builder OEMs, burner manufacturers and end users in sectors such as metals, ceramics, food and automotive, the next-generation BCU 4 Series gives industrial designers, engineers, operators and service technicians a multi-functional, space-efficient, modular control solution for virtually any multi-burner application. The units have been designed for simplified engineering, installation and start-up.

Replacing an earlier product line of the same name, the next-generation BCU 4 Series models come equipped with an ignition transformer, burner control and an embedded HMI – arranged within a compact housing. The BCU 4 Series can be optionally configured with high temperature control, low NOx running mode, a valve proving system, a bus module and a replaceable power module that facilitates SIL approval and helps extend product life.

**KEY FEATURES:**
- Modular, all-in-one design
- Compact housing
- Multi-functional
- Easy system integration
- High number of switching cycles
- IIoT-ready
- Reduced maintenance
- Worldwide approvals

**COMPARING GENERATIONS**

In comparison to the previous generation models, the next-generation BCU 4 Series incorporates a wide range of refinements, plus new technology, features and options to increase utility and effectiveness. The key differences include:

<table>
<thead>
<tr>
<th>FEATURE</th>
<th>PREVIOUS GENERATION BCU 400</th>
<th>NEXT - GENERATION BCU 4 SERIES</th>
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</thead>
</table>
| Gas and air outputs          | 2 gas valve outputs for the BCU 460, 465  
2 gas valve outputs for the BCU 480  
Relay output for air valve  
Previously unavailable | 3 gas valve outputs for the BCU 460, 465  
4 gas valve outputs for the BCU 480  
Solid-state output for air valve to reach high number of switching cycles  
Automatic relay testing | |
| Valve proving system         | Previously unavailable | Optional valve proving system (tightness control, proof of closure) |
| Stage-controlled gas burner features | L (air valve)  
F3 (air valve) and F1 (IC 40) | |
| HMI features                 | 2-digit information display  
Push-button switch for mains and reset function  
Optional Profibus  
Previously unavailable  
Optional high temperature operation | 4-digit information display for vital information at a glance  
New push buttons: Reset / Information and Main switch  
Optional Profibus, Profinet, EtherNet/IP incorporating improved bus communication  
Parameter Chip Card for easy replacement of the BCU without knowing the final parameter setting  
Optional high temperature and flameless operating mode to reduce thermal NOx |
FEATURES & BENEFITS

UNIT PARAMETER ADJUSTMENT
If local requirements for the burner control unit change, unit parameters can easily be adjusted using BCSoft software. Parameters are automatically stored on the integrated Parameter Chip Card, which can be removed from one unit and inserted into another – for example, when replacing a BCU.

VISUALIZATION CAPABILITIES
Visualization is achieved through the integrated display, which shows program status, error codes, statistics and parameter settings. Enhanced visualization displaying inputs and outputs is available via BCSoft or bus communication (Profinet, EtherNet/IP).

VITAL INFORMATION AT A GLANCE
Program status, unit parameters and level of flame signal can be easily and conveniently read from the new, 4-digit unit display. The BCU also incorporates a manual mode for commissioning, maintenance, adjustments or diagnostics.

OPTIONAL VALVE PROVING SYSTEM
An optional valve proving system consisting of a programming sequence and pressure switch continually checks automatic shut-off valves for leaks.

POWER MANAGEMENT
A power management feature reduces installation and wiring costs. The power for the valves and ignition transformer is supplied via the BCU power supply, rather than the safety chain, and is protected by a replaceable fine-wire fuse. Outputs for the actuator and valves are monitored and can be easily replaced – in the case of a faulty relay – via a replaceable plug-in power module.

SIMPLIFIED BURNER SYSTEM INTEGRATION
BCU 4 Series models can be mounted close to industrial burners versus being housed in a separate cabinet, enabling better system integration.

IIOT-READY
The conventional, widespread systems used in industrial furnace and kiln construction must be connected for signal processing. An optional bus module connects the BCU to a fieldbus interface in a Profinet, EtherNet/IP or Profibus network. The bus module is designed to be mounted inside the BCU.

STANDARDIZED FIELDBUS DESIGN
The BCU 4 Series uses a standard fieldbus system that helps to reduce development, installation and commissioning costs compared with conventional wiring or manufacturer-specific, bespoke solutions. Additionally, components, connection methods and tools can be purchased from a wide range of suppliers.

SIMILAR IN DESIGN. DIFFERENT FUNCTIONS.

<table>
<thead>
<tr>
<th>Function</th>
<th>BCU 460</th>
<th>BCU 465</th>
<th>BCU 480</th>
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</thead>
<tbody>
<tr>
<td>Intermittent or continuous operation</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
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<tr>
<td>Modulating or stage-controlled burners</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
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<tr>
<td>Pilot burner ignition</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
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<tr>
<td>Interrupted or permanent pilot burner</td>
<td>-</td>
<td>-</td>
<td>✔️</td>
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<tr>
<td>Support protective process control, e.g. cooling, purging and capacity control</td>
<td>-</td>
<td>-</td>
<td>✔️</td>
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<tr>
<td>Air flow monitoring</td>
<td>-</td>
<td>✔️</td>
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<tr>
<td>Pre- and post-ventilation for self-recuperative burners</td>
<td>-</td>
<td>✔️</td>
<td>-</td>
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<tr>
<td>Valve Proving System (VPS)</td>
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<td>-</td>
<td>✔️</td>
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<tr>
<td>High temperature operation</td>
<td>-</td>
<td>-</td>
<td>✔️</td>
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BCU 460 | BCU 465 | BCU 480

- = Optional
REAL VISIBILITY. DELIVERED IN REAL TIME.

Developed by the thermal process experts at Honeywell, Thermal IQ™ is a remote monitoring solution that securely connects your combustion equipment - BCU 4 Series included - to the cloud, making critical thermal process data available anytime, anywhere, on any smart device.