Honeywell

krom schroder



BCU 570

Burner control units

- For monitoring and controlling modulating individual burners and forced draught burners of unlimited capacity
- For directly ignited burners or burners ignited by a pilot burner in intermittent or continuous operation
- Perform safety functions in accordance with EN 746-2 and EN 676
- With optional valve proving system
- Flexible range of applications due to parameterization possibilities
- Optional bus module for fieldbus connection
- EC type-tested and certified
- Safety functions up to SIL 3 (DIN EN 62061) corresponding to PL e (ISO EN 13849)
- AGA approval in preparation

Application



BCU 570 with plug-in spring-force connection termnals



Once the plug-in power module has been removed, the parameter chip card and fuses are accessible.

Burner control unit BCU 570 controls, ignites and monitors industrial individual burners and forced draught burners of unlimited capacity in intermittent or continuous operation. It can be used for directly ignited burners or burners ignited by a pilot burner.

The BCU 570 has an interface for control elements for burner capacity control. Both actuators (IC 20, IC 40, 3-point step and RBW) and frequency converters can be controlled. A valve proving system can be integrated as an option.

The BCU 570 activates the fan and sets a connected actuator or frequency converter to pre-purge and ignition position. If the centrally checked safety requirements, e.g. pre-purge, flow detector and pressure switch check, have been met, the BCU 570 starts the burner. An enable signal is then issued to an external temperature controller which controls the actuator or frequency converter in accordance with the capacity demand. The burner control unit BCU 570 monitors the gas and air pressure. The optionally integrated valve proving system checks the valves by checking an external gas pressure switch or by checking whether the gas valve on the inlet side is closed.

Using the BCSoft program, the parameters, analysis and diagnostic information can be read from the BCU via the optionally available opto-adapter. All valid parameters are saved on the integrated parameter chip card. The parameter chip card can be removed easily, for example when the unit is replaced, and inserted into a new BCU to transfer the parameters.

An integrated Manual mode allows the manual activation of the burner control units and adjustment of the butterfly valves.

The fan output and the actuator and valve outputs which are checked for faults are accommodated in a plug-in power module. This can simply be replaced if necessary.

The BCU can be installed on a DIN rail in the control cabinet. The plug-in connection terminal strips make it easier to install and remove.

The external operator-control unit OCU is available as an option for the BCU. The OCU can be installed in the control cabinet door instead of standard control units. The program step/status or fault messages can be read on the OCU. For burner adjustment, the operating points can be approached conveniently in Manual mode using the operator-control unit.



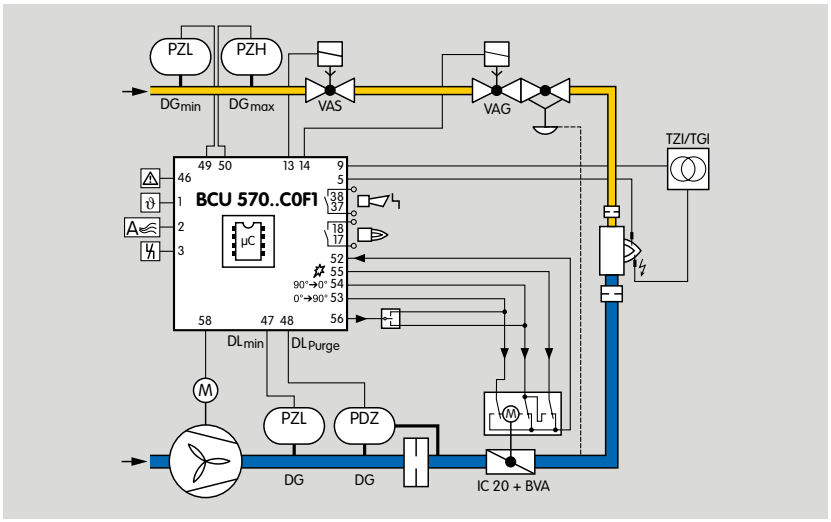
Thanks to the operator-control unit OCU, display functions and operation of the BCU can be relocated to the control cabinet door.

Using the bus module BCM 500, the BCU can be networked with a fieldbus system. Networking in a fieldbus system enables the burner control unit BCU 570 to be controlled and monitored by an automation system (e.g. PLC). This also opens up a wide range of process visualization possibilities.



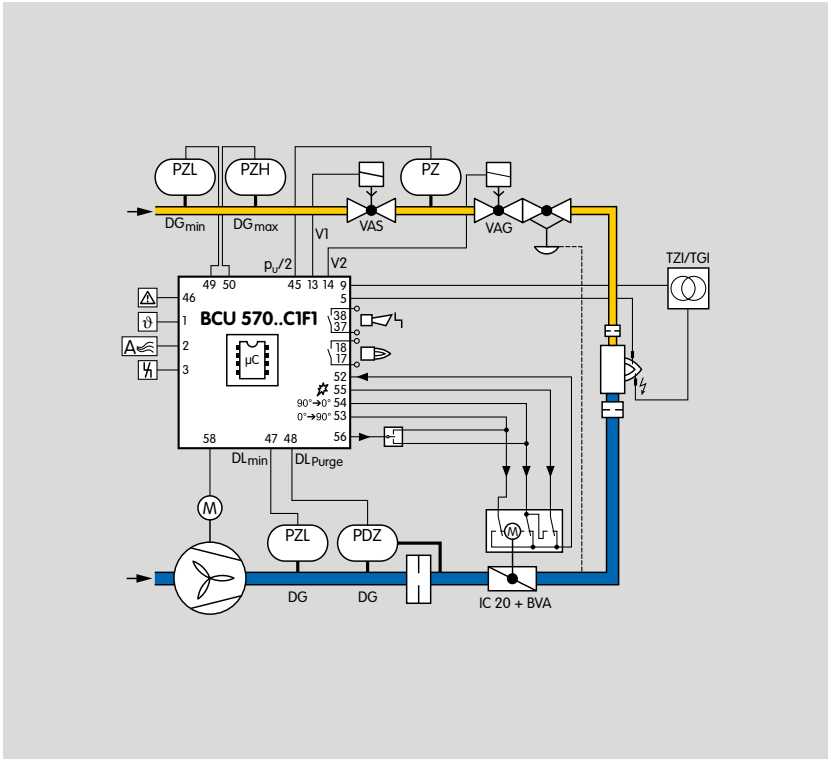
Bus module BCM 500 for DIN rail installation for lateral connection to the BCU

Examples of application



Modulating-controlled forced draught burner

The BCU 570 controls the fan, monitors the combustion media air and gas, controls pre-purge and moves the butterfly valve to pre-purge and ignition position. Once the BCU 570 has started the burner, it issues the enable signal to the external temperature controller which then assumes the control task.

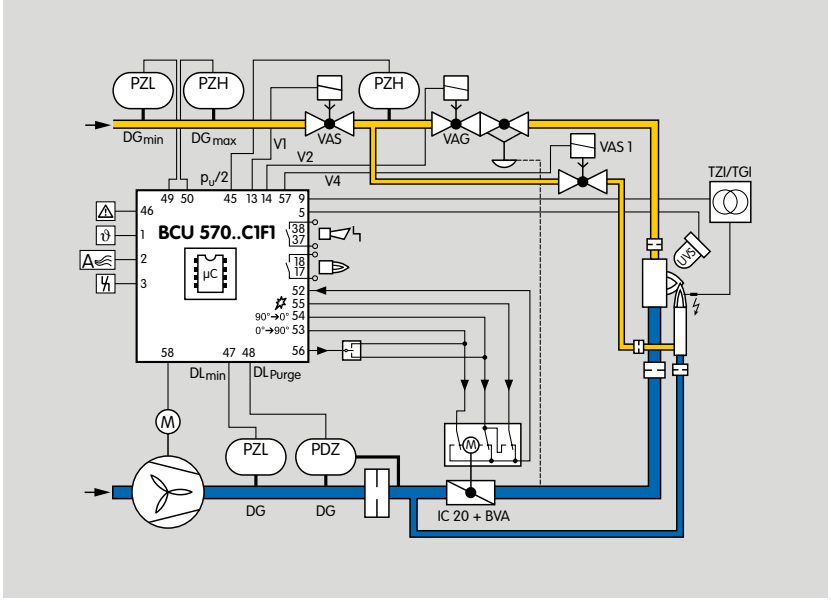


Modulating-controlled forced draught burner with valve proving system

The BCU 570..C_1 is fitted with an integrated valve proving system. This allows the tightness of two gas solenoid valves and the pipework to be checked. Optionally, the closed position of a gas solenoid valve can also be checked using a POC switch.

The tightness control function satisfies the requirements of EN 1643 (Valve proving systems for automatic shut-off valves for gas burners and gas appliances).

By checking the closed position using the proof of closure function, the BCU complies with the requirements of
NFPA 85 (Boiler and Combustion Systems Hazards Code) and NFPA 86 (Standard for Ovens and Furnaces).

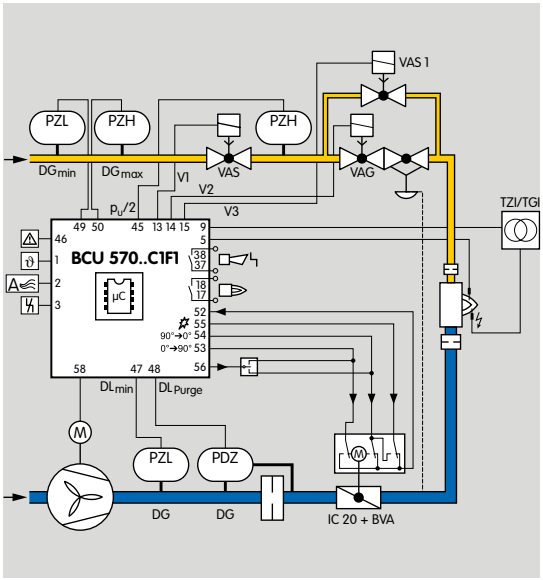


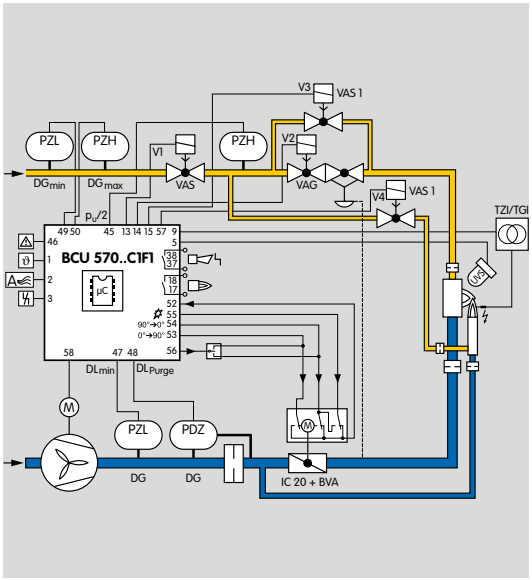
Modulating-controlled forced draught burner with pilot burner and valve proving system

The burner is ignited by a pilot burner. The integrated valve proving system checks the tightness of all gas valves and the pipework between the gas solenoid valves with the aid of the pressure switch.

Parameters may be used to decide whether the pilot burner should be operated permanently or is switched off during the main burner's safety time.

Limitation of the ignition rate in accordance with SIL/PL





Limitation of the ignition rate in accordance with SIL/PL

The burner can be started with a defined ignition rate using the connected gas valve V3. Once the BCU has been informed that the burner is in operation, gas valve V2 opens. Gas valve V3 closes.

It is thus possible to limit the ignition rate in accordance with the valid SIL/PL safety requirements.

The safe limitation of the ignition rate can be used for both applications with a single burner and burners with pilot burners..

Type code

Code	Description
BCU	Burner control unit
570	Series 570
Q W	Mains voltage: 120 V AC, 50/60 Hz 230 V AC, 50/60 Hz
C0 C1	No valve proving system With valve proving system
F1 F2	Capacity control: modulating with IC interface modulating with RBW interface
U0	Ionization or UV control in case of operation with gas
K0 K1 K2	No connection plug Connection plug with screw terminals Connection plug with spring force terminals
E	Individual packaging

Technical data

Mains voltage:
BCU 570Q:
120 V AC, -15/+10%, 50/60 Hz, ±5%,
BCU 570W:
230 V AC, -15/+10%, 50/60 Hz, ±5%,
for grounded or ungrounded mains.

Power consumption:
At 230 V AC approx. 6 W/11 VA plus power consumption per AC input of approx. 0.15 W/0.4 VA, at 120 V AC approx. 3 W/5,5 VA plus power consumption per AC input of approx. 0.08 W/0.2 VA.

Flame control:
With UV sensor or ionization sensor,
for continuous operation (intermittent operation with UVS).

Flame signal current:
Ionization control: 2 – 25 µA,
UV control: 5 – 25 µA.

Signal cable for flame signal current:
max. 100 m (164 ft).

Weight: 0.7 kg.

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

Enclosure: IP 20 pursuant to IEC 529.

Technical Information bulletin for this product

www.docuthek.com
Search term: BCU 570

Contact

www.kromschroeder.com ➔ Process Heat ➔ Sales
Elster GmbH
Strotheweg 1 · 49504 Lotte (Büren)
Germany
Tel. +49 541 1214-0
hts.lotte@honeywell.com
www.kromschroeder.com

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