

BCS-7000

Burner Control System

BCS7000-1
Edition 03-16



The Premier Burner Control System for Aggregate Drying

- Precise control of stack temperature or material temperature and dryer draft
- User friendly, color touch screen operator interface
- Expanded limits, system status, and flame signal strength annunciation
- PLC based temperature control loops
- Simplified burner setup and tuning with electronic valve characterization
- Integral variable set point dryer draft control
- Advanced troubleshooting with help screens and remote diagnostics
- Multi-fuel and fuel optimization (liquid and gaseous fuel co-firing) capable
- User configurable inputs for data collection and trending
- Network and PC accessible via Ethernet port
- Available in table top and drop-in versions
- Designed specifically for Hauck StarJet, EcoStar, MegaStar, and NovaStar series burners (also suitable for burners from other manufacturers)



The Hauck BCS-7000 Burner Control System was designed by combustion experts with over 50 years of experience in the design of controls and equipment for the aggregate drying industry. The BCS-7000 is a fully featured, user friendly burner control system for material drying. The BCS-7000 manages all performance and safety functions of an asphalt or aggregate drying combustion system from start-up through production cycling and shutdown.

The integrated color touch screen provides an operator interface that includes expanded limits, system status and flame signal strength annunciation, as well as advanced diagnostics with alarm history and help functions. The operator interface is the gateway to operational information including firing time, fuel usage, material production and temperatures as time based trends and also recorded data. Recorded data access is configurable and available through the screen via USB or SD card. Available in table top or drop-in configurations, the control panel provides all the necessary functions to safely and efficiently operate single burner combustion systems.

The BCS-7000 utilizes an integrated PLC to manage the performance functions of the combustion system. Over other models, the BCS7000's advanced processor and increased onboard memory is capable of complex calculations, multiple control outputs, auxiliary inputs, data trending and information storage. Recorded data access is configurable and available through the PLC via SD card or Network Access. System output includes multiple control loops to provide accurate control of stack temperature, material temperature, dryer draft, air to fuel ratio and flue gas recirculation.

By incorporating these controls in the PLC, the BCS-7000 provides intelligent and safe interaction between the burner management system and the temperature control and draft control functions.

MESSAGE	DIAGNOSTICS
EXHAUST FAN FAULT	MONITOR SLOT 1 INPUT 1. CHECK THE EXHAUST FAN MOTOR STARTER INTERLOCK (POWER ON TERMINAL 1033) AND THE EXHAUST FAN FLOW SWITCH (POWER ON TERMINAL 1034).
COMBUSTION AIR INTERLOCK FAULT	MONITOR SLOT 1 INPUT 2. CHECK THE COMBUSTION AIR MOTOR STARTER (OR VFD) INTERLOCK AND CROSS RELAY. VERIFY POWER ON TERMINAL 586.
LOW AIR PRESSURE	MONITOR SLOT 1 INPUT 3. VERIFY THE COMBUSTION AIR LIMITS ARE MADE (POWER ON TERMINAL 106A). FOR LISTED BURNERS THIS INCLUDES THE PRESSURE AIR INTERLOCK (TERMINAL 1063) AND PRIMARY AIR PRESSURE SWITCH (TERMINAL 106). JUMPER 1038 TO 106 FOR OTHER BURNERS.
LOW GAS PRESSURE	MONITOR SLOT 1 INPUT 4. VERIFY THAT THE MANUAL SHUTOFF VALVE IS OPEN AND THE LOW GAS PRESSURE SWITCH IS MADE (POWER ON TERMINAL 106B).
HIGH GAS PRESSURE	MONITOR SLOT 1 INPUT 5 AND THE HIGH GAS PRESSURE SWITCH (POWER ON TERMINAL 106C).
OIL OR LP PRESSURE FAULT	MONITOR SLOT 1 INPUT 6. VERIFY THAT BOTH THE LOW AND HIGH PRESSURE SWITCHES ARE MADE (POWER ON TERMINAL 106E).
ATOMIZING AIR FAULT	MONITOR SLOT 1 INPUT 7. VERIFY THE PRIMARY AIR INTERLOCK IS CLOSED (POWER ON TERMINAL 110) FOR LISTED BURNERS. VERIFY THE PRESSURE AIR MOTOR STARTER (OR VFD) INTERLOCK AND CROSS RELAY. VERIFY POWER ON TERMINAL 586. VERIFY THE PRESSURE AIR MOTOR STARTER (OR VFD) INTERLOCK AND CROSS RELAY. VERIFY POWER ON TERMINAL 586. VERIFY THE PRESSURE AIR MOTOR STARTER (OR VFD) INTERLOCK AND CROSS RELAY. VERIFY POWER ON TERMINAL 586. VERIFY THE PRESSURE AIR MOTOR STARTER (OR VFD) INTERLOCK AND CROSS RELAY. VERIFY POWER ON TERMINAL 586.
OIL TEMPERATURE FAULT	MONITOR SLOT 1 INPUT 8. FOR HEAVY OIL SYSTEMS VERIFY THAT THE OIL HEATER IS OPERATING AND BOTH THE LOW AND HIGH TEMPERATURE SWITCHES ARE MADE (POWER ON TERMINAL 116C).

LIMITS CLOSED

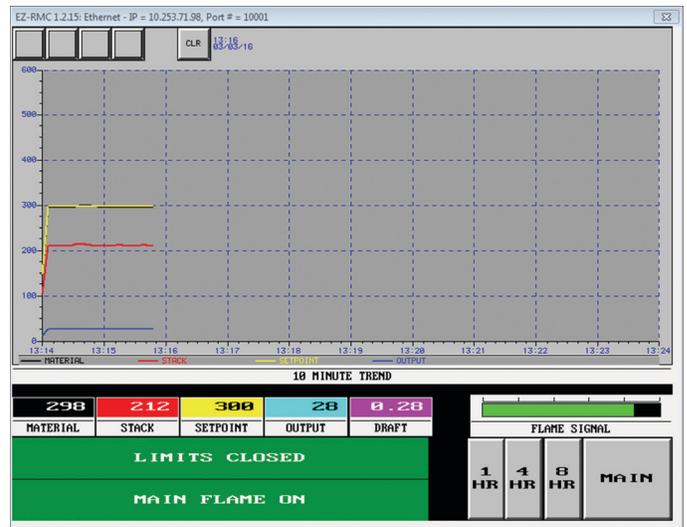
MAIN FLAME ON

BACK

NEXT

MAIN

Integrated help diagnostics from BCS-7000



Trend of set point, material and stack temperatures and burner output from BCS-7000

Configurable Options

- Burner/Control type
- Flue Gas Recirculation
- Draft Control
- Data Logging
- Auxiliary Input Display and Totalization (Up to 7 User configured)
- PC and network access for data collection, service, and troubleshooting

Hauck Manufacturing Company

T +1 717-272-3051

www.elster-thermal-solutions.com

info@hauckburner.com