

ESC 92BP
Boiler Plant DDC Controller

Boiler Plant System Application

The ESC 92 BP Boiler plant DDC controller is the controller of choice for the Building Owner, for the Specifying Engineer, and for the Installing Contractor.

The ESC 92BP provides:

Plant Primary loop:

- ...single and multiple stage boilers
- ...staging of 1 to 6 boilers
- ...modulating gas valve option
- ...protection for each boiler
- ...minimum flow option
- ...minimum return temp option

- ...Boiler staging based on lowest total BTU usage to-date option

Secondary Loop:

- ...injection temperature control option
- ...lead-lag pump rotation option
- ...plant supply reset option based on:
 - ...secondary zone load demand Reset, which is more energy efficient and requires less operator involvement.
 - ...outdoor air temp Reset.

The ESE – 92BP DDC Controller is the best decision for:

- replacement of existing boiler controls, or
- new construction installations.

The optional SE – 90 Off-Site Communication modules permit:

- phone dialer alarm indication
- web & phone access.

The interoperability options include:

- Modbus, Echelon, BACnet and hardware I/O.

Features

“Intelligent Tuning Software”, or ITS, continuously adjusts (PID) loop parameters, eliminating time consuming setup and re-calibration procedures which are typical of other DDC controls.

With “ITC”, installation contractors reduce their risk, and specifying engineers have fewer follow up calls to attend to.

The ESC 93 BP kit includes controller, sensors, 24va class 2 transformer, optional valves, relays and wiring diagrams and support documents.

Easy 7 step, 15 minute, setup procedure.

The SE-92BP DDC Controller operates on 24VAC Low voltage power source, with class 2 wiring.

Sample Control Specification

Electronic copies of specification are available via e-mail (www.aea.on.ca).

Base Bid tender shall include ESC 92BP DDC controller Kit as manufactured by Automation Engineering Associates Ltd., 416-252-5069.

System operating performance shall be based on the best industry standard suitable to the equipment and the distribution system Hardware Input & Output capacity and Virtual points for operator control shall be suitable for the required sequences.

Boiler Plant supply header temperature shall be maintained by staging of the plant boilers. The precision of control shall be +/- 1.5 C.

Modulating gas valve (include option if applicable)

Capacity of the staged boilers shall be modulated from a minimum capacity setting to 100%. When adding another boiler the capacity setting of the operating boilers shall be lowered prior to the addition. Similarly, when staging a boiler OFF, the capacity of the operating boilers shall be raised prior to turning the boiler OFF.

With correct security access code, Timers for Minimum OFF, Minimum ON, and interstage delay shall be adjustable, if required, from the Keypad/display.

Minimum Boiler flow (include if option applicable)

Minimum flow shall be maintained through the boiler by modulating the Plant bypass valve. Minimum flow setting shall be entered at the keypad/display during commissioning.

Minimum Boiler Return Temp (include if option applicable)

Minimum Return Temp shall be maintained through the boiler by modulating the Plant Bypass valve. Minimum Return Temp setting shall be entered at the keypad/display during commissioning.

Boiler operating time shall be monitored and totalized with rotation occurring in a seamless fashion at the time of staging. Facility shall be provided for Operator adjustment of the rotation interval.

Secondary Loop Injection Temp control,

(include if option applicable) Secondary Loop temp setting shall be maintained by modulation of injection valve.