

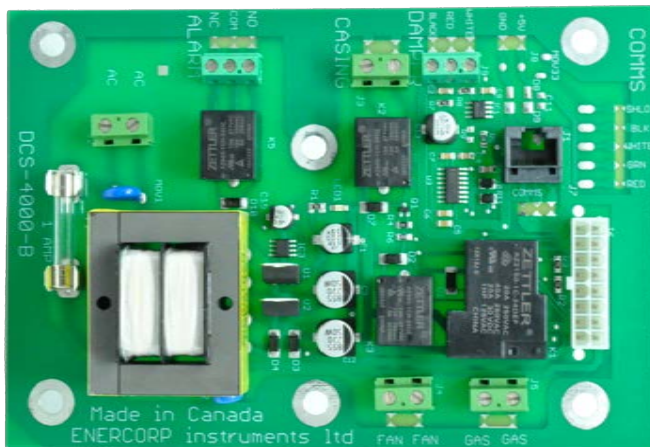
DCS-4000 Series

Digital Controller and multi function PC back board (DCS-4000-A/B/C)



The DCS-4000-A is a flush-mounted control panel featuring a touchpad and display.

It allows for control over the variety of programmable functions during the curing cycle.



The DCS-4000-B is a PCB that hosts high-amperage relays and can be connected to the DCS-4000-A via a harness cable to simplify wiring.

It also provides circuitry to enable wireless transmission when connected to the DCS-WTR.



The DCS-4000-C is a version of our DCS-4000-A with a different outer case. The rear flanges ensure simple surface mount installations.

It enables control over the variety of programmable functions during the curing cycle.

 **ENERCOP** instruments ltd

25 Shorncliffe Road, Toronto, ON, M9B3S4, Canada
Tel: 416-231-5335, Toll free: 1-800-363-7267

Capabilities

Advance & Hold Curing

This curing technique has been in widespread and successful use for many years with mechanical clockwork advance mechanisms and filled systems thermostats.

The DCS-4000 gives you the same ease of use but better, repeatable control over the curing process.

- Both the wet and dry bulb readings can be displayed accurately to the nearest degree.
- The advance rate is precisely controlled to the nearest 1/2 degree Fahrenheit.
- The wet bulb can be accurately controlled with the auto damper option.
- The starting temperatures are reset at the end of each cure to minimize accidents.

I. Casing

The DCS 4000 controls casing. You can set the time as well as the dry and wet bulb temperatures for casing.

II. Start Up Time Delay

The timer function is built into the DCS-4000 microprocessor. In setup mode you will be asked to set a time delay between 0 and 999 seconds in 1 second intervals. This will allow kilns to have staggered starts, protecting against electrical overloads, due to the large demand from several starting kilns.

III. Wet Bulb Alarm

When auto damper is active, a wet bulb temperature 10 degrees or more above the set point will trigger an alarm. This alarm is also activated when the dry bulb is 10 degrees above or below its set point.

IV. Delta-T Curing

The promise of the Delta-T technique is that it can cure tobacco with less operator attention. In this technique the fan runs continuously but the furnace fires only when the temperature difference between the top and bottom of the kiln is less than a specified amount. Initially with very wet, tightly packed tobacco the kiln will advance slowly. As the tobacco dries the furnace will fire longer and the kiln temperature will advance faster.

Ordering Data

DCS-4000-A: digital controller in panel mount case

DCS-4000-B: multi function PC back board

DCS-4000-C: digital controller in surface mount case

Microprocessor Based Wet Bulb System (WBS-4000)



The WBS-4000 system allows for a faster and more accurate wet bulb measurement without using water. We use solid-state sensors instead of a wet bulb. These sensors don't dry out or get dirty which would cause false readings with a traditional wet bulb. And with no water required the hassle of maintaining a dedicated water supply is eliminated.

The WBS-4000 system includes:

- waterless wet bulb sensor (WBS-S)
- microprocessor based waterless wet bulb transducer (WBS-T)
- connection cable for hooking up the transducer to the DCS-4000.

Technical Data

WBS-S: waterless wet bulb sensor

Wire: PVC/ PVC

Lead length: 150"

Sheath: 3" x 3/8" ID CPVC

Sensor type: Pt1000 RTD and solid state humidity sensor

Accuracy:

- Humidity sensor: +/-3% RH
- Pt1000: +/-0.3°C

Operating temperature: 0...85°C

WBS-T: microprocessor based waterless wet bulb transducer

Power supply: powered by DCS-4000. When used with DCS-3000 a 9VDC power supply is required

Enclosure: ABS box

Dimensions (LxWxH): 3.6" x 2.6" x 1.1"

Weight: 2.8 oz

Ordering Data

WBS-4000: waterless wet bulb system

WBS-S: replacement wet bulb sensor

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Dry Bulb Measurement (RTD-D)



The RTD-D is used to read the temperature of your kiln which is then displayed on the DCS-4000 front board. We use platinum sensors enclosed in stainless steel for dry bulb measurement. These sensors have better long term stability than thermistors, allowing for longer life in the field.

Technical Data

Wire: 22AWG, PVC/PVC

Lead length: 150"

Sheath: 316 stainless steel

Probe diameter: 1/4"

Probe length: 2 1/2"

Sensor type: Pt100 RTD

Accuracy: +/-0.3°C, DIN EN 60751 (according to IEC 751)

Operating temperature: 0...100°C

Termination connection type: tails c/w bare ends

Ordering Data

RTD-D

Control your kilns over the Internet (DCS-WTR-KIT)



You can both monitor and control your tobacco kilns on an iPad or PC from your home or anywhere with internet service.

- View up to 255 kilns in one yard.
 - Kilns requiring action are highlighted.
- You can select any kiln to view or directly change its status.

In addition to a DCS-4000-A or DCS-4000-C, you must have a DCS-4000-B and DCS-WTR per kiln to be able to have communication functions enabled.

Technical Data

DCS-WTR

Enclosure: moulded case with hinged cover and captive screw, not weatherproof

Dimensions (LxWxH): 3 1/8" x 2 5/8" x 4 5/8"

Weight: 6.27oz

Operating temperature: 0...85°C

Accessories: UTP network cable

DCS-WTR-KIT

The DCS-WTR-KIT has everything you need to set up your home computer to receive communications from the kiln. It includes:

- Wireless receiver
- Power supply
- PC interface for communication system
- USB to serial adaptor
- 9F to 9M serial cable adaptor
- Ethernet cable

Ordering Data

DCS-WTR-KIT: home kit for PC accessibility

DCS-WTR: wireless transmitter (for kiln setup)

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