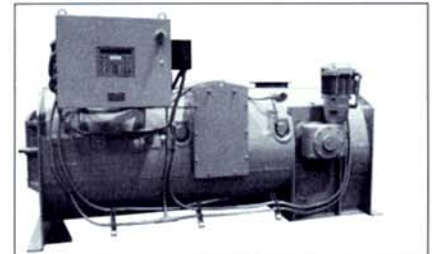


STOCK UPGRADE KIT

196NT CONTROLLER



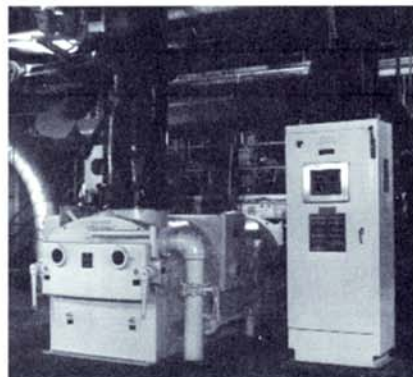
STOCK® EG2410 Gravimetric Feeder with STOCK 196NT® MPC controller



STOCK® batch scales equipped with STOCK 196NT® microprocessor controllers

An advanced microprocessor control package has been developed to meet the demanding applications of controlling STOCK® coal handling products. Performance enhancements, expanded communications system support, and increased diagnostic software have made the STOCK 196NT® controller the standard for control requirements.

Stock coal handling products (such as batch scales, volumetric and gravimetric feeders) using an earlier design microprocessor controller should be up-graded to the STOCK 196NT® controls with a simple retrofit kit. The control upgrade package bolts in place of the existing CPU display board. The kit is supplied with all the necessary hardware for completion of the installation. An installation, operation, and maintenance manual is also provided.



STOCK® gravimetric feeder with remote microprocessor control cabinet

Many installations have placed an upgrade kit in inventory in place of a spare CPU board and will upgrade the controls as required. Kit pricing is comparable to replacement pricing of the existing CPU and program chip. Contact your Stock representative or the Stock Parts Department by calling 800-289-7326, for assistance with determining the proper kit for your installation.

STOCK 196NT® MICROPROCESSOR CONTROLLER ENHANCEMENTS

- Simplified operator interface with improved keyboard design, grouping keys by function and eliminating shift key functions
- Two-line, 80-character, VF alphanumeric display
- Printed text messages replace code numbers and simplify maintenance
- Eighteen self-test modes allow on-line equipment monitoring
- Ability to perform the tare and span calibration independently, thereby enhancing diagnostic capability
- Simple bolt-in installation with minimal field labor and no change to existing cabinet wiring
- Replaces obsolete controls with technology powerful enough to support your feeder control requirements and systems into the next century
- Serial interface for data logging
- Event tracking with real-time clock

Stock Quality, Stock Reliability

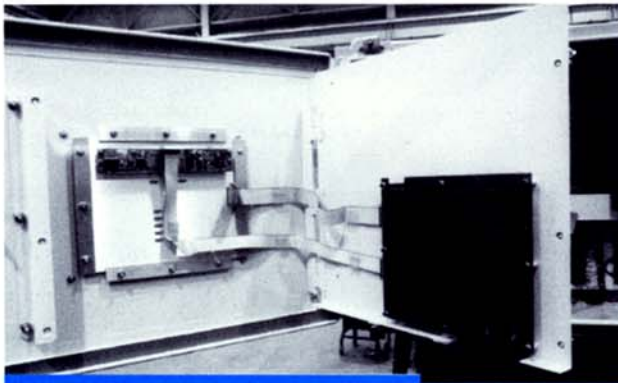
INSTALLATION OF THE STOCK 196NT[®] MICROPROCESSOR CONTROLLER

The conversion kit is engineered to your specific requirements and includes a new CPU board, display/keyboard, E-Prom, connecting cables, hardware, installation instructions, operation and maintenance manual, and a drawing

documenting the conversion to the STOCK 196NT[®] microprocessor. Stock service engineers are available to assist during the installation and to provide operator training. Installation consists of disassembly of the old CPU, keyboard, and associated cables, and reassembly of the new STOCK 196NT[®] CPU board and keyboard.

OTHER USES FOR THE STOCK 196NT[®]

The STOCK 196NT[®] conversion kit is easily adaptable for converting other makes of belt feeder and batch scale controllers. Please contact our main office or the local authorized Stock representative in your territory for additional information.



SPECIFICATIONS

POWER - 115 V ac +15% 50-60 Hz 8 100 VA

ENVIRONMENTAL - Operating Temperature: 0°C to 65°C.
Storage Temperature: -40°C to 85°C.
Humidity: 0-95% noncondensing

DIGITAL INPUTS - Twelve contact closures from system
-15 V dc to optocoupler input @ 20 mA. optically isolated from low-level logic signals

DIGITAL OUTPUTS - Eight relays controlled by optically isolated low-level signals:

Control Relays: K1-K7 contacts rated at 120 V ac @1.5 A, 30 V dc @ 1.5 A, resistive loading

Data Relays: K8 relay, contacts rated at 120 V ac/dc max., 25 watts max., make or break.
Pulse duration - 100 msec. on.

ANALOG INPUTS - One optically isolated channel

Available Signal Ranges:

Voltage: 0 to +5 V dc, +1 to +5 V dc, 0 to +10 V dc, 0 to -5 V dc, -1 to -5 V dc, 0 to -10 V dc, +10 to -10 V dc, -10 to +10 V dc, all voltage types into 90K ohm minimum

Current: 0 to 4 mA, 0 to 5 mA, 0 to 10 mA, 1 to 5 mA, into 500 ohm load
0 to 20 mA, 4 to 20 mA, into 250 ohm load
0 to 50 mA, 10 to 50 mA, into 100 ohm load

Potentiometer: 1K to 10K full scale ohms, using 5 V dc source

Weight Signals: Two Wheatstone bridge inputs with 10 V dc bridge excitation

ANALOG OUTPUTS - Two optically isolated channels

Available Signal Ranges:

Voltage: 0 to 5 V dc, 1 to 5 V dc, 0 to 10 V dc, with 50 mA load max.

Current: 0 to 4 mA, 0 to 5 mA, 1 to 5 mA, 0 to 20 mA, 4 to 20 mA into 600 ohm load max.
10 to 50 mA into 250 ohm load max.

TACHOMETER INPUT - 0 to 3,600 Hz, sinusoid or zero-crossing square wave, 3 to 100 V ac

SERIAL COMMUNICATIONS - 20 mA current loop @ 9600 baud

For additional information about Stock Equipment Company or its products, please contact:

www.stockequipment.com

STOCK

STOCK EQUIPMENT COMPANY

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