



PR448 FEED RATE CONTROLLER

Features

- Optimum feed rate stability in both high and low feed rate applications.
- Stored feed rate profile.
- Batch quantity feed option.
- Suitable for both automatic and manual refill applications.
- Serial Communications and Analogue input options.
- Low level and out-of-tolerance alarms
- Adjustable digital filtering for elimination of the effects of mechanical vibration.

Description

The PR448 controls constant rate feeding from a weigh hopper mounted on load cells and fitted with a variable speed feeder. It supplies 10V DC excitation to the load cells and amplifies and conditions the resultant signal to produce a calibrated weight reading which it digitises to a resolution of 65,000 divisions. From the reduction in this reading and from control and calibration data entered through its front panel, it accurately controls a 4-20mA output signal to the variable speed feeder, achieving pre-set target feed rate. To achieve accurate control immediately after start-up and during open loop control, it stores a profile of feed rate against net hopper weight which it continually corrects during closed loop operation and which it uses both on start-up and during open loop operation.

Technical Data

Model No:

Model PR448 Basic
Model PR448A Analogue Remote Control
Model PR448M Multidrop Serial Comms
Add 'D' for DC power option eg PR448-D

Power Supply:

Universal fused power supply 85-264V AC or 9-36V DC (eg PR448-D). Internal Mains Fuse fitted. Power consumption 10VA

Load Cell Excitation:

10V DC @ 125mA max, 1 to 4 x 350 ohm load cells may be connected in parallel.

Load Cell Input Range:

0-20mV min, 0-2.5V max.
Filter adjustable 0.2 to 20Hz.

Weighing Accuracy:

Up to 16,384 +/-0.5 divisions.
16 bit 1:65,000 internal resolution.

Analogue Output:

4-20mA Active

Relay Outputs:

240V AC or 30V DC 5A rated.

Enclosure:

Panel mounting DIN case 144mm wide x 96mm high x 132mm deep.
IP65 sealed front panel
Panel Cut-out 138mm wide x 92mm high

Environment:

Operate 0-50C, 20-80%
RH non-condensing. Storage -40 to 80C

The display may be selected to Actual Rate, Target Rate or Total at any time via the front panel keys. Access to the control and calibration data is password number protected.

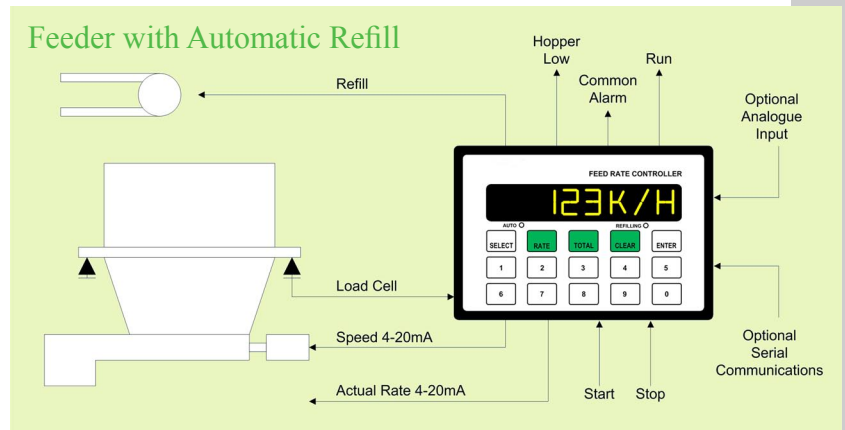
An additional 4-20mA output provides an actual feed rate signal, to PLC/computer or remote display.

Alarms

Two alarm digital outputs are provided, one for low hopper weight alarm and the other for out of tolerance feed rate or refill rate alarms.

Refill

When the material in the hopper has dropped to a pre-set level it initiates the refill process by switching to open loop control, and by setting a refill digital output on. Alternatively, it can operate in applications where the hopper is manually filled by switching to open loop control whenever a sudden rise in weight occurs above a pre-set control value.



Analogue Remote Control Option

The PR448A provides an additional 4-20mA analogue input, which when configured will control the target feed rate.

Multidrop Serial Communications Option

The PR448M provides an RS485 serial communications link for multiple feeder applications, a simple protocol using ASCII coded messages is used which is designed to be easy to implement within a host PC or PLC system.

Up to 32 PR448M units may be linked via a single twisted pair cable over a distance of up to 1000 metres.

Batch Control

The PR448 may be used to control the feeding of a preset quantity of material, a digital output can be configured to a belt run function and together with start/stop digital inputs provides the means of running the belt until the desired target quantity has been conveyed. The preset material target total may be entered via the keypad or downloaded serially in the case of the PR448M version.

Supplied by:



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