

Description

The PR446 controls the feed rate from a conveyor belt fitted with a variable speed motor drive. It connects with 1 to 4 load cells fitted to the belt weigher mechanism from which it generates a calibrated weight signal. It also connects with a tacho from which it receives pulses in proportion to belt movement. From these two inputs and from calibrated and control data held in its system memory it calculates the rate of flow of material over the belt.

Technical Data

Model No:

Model PR446	Basic
Model PR446A	Analogue Remote Control
Model PR446M	Multidrop Serial Communications

Power Supply:

Universal fused power supply 85-264V AC or 9-36V DC. 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.

Tacho Input

Proximity Switch, 3 wire NPN.
Or Shaft Encoder, push-pull or open collector NPN.
Integral 10V DC power supply.
Range 0-500Hz

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 IP65 sealed
144mm wide x 96mm high x 132mm deep
Cut-out 138mm wide x 92mm high

Environment:

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

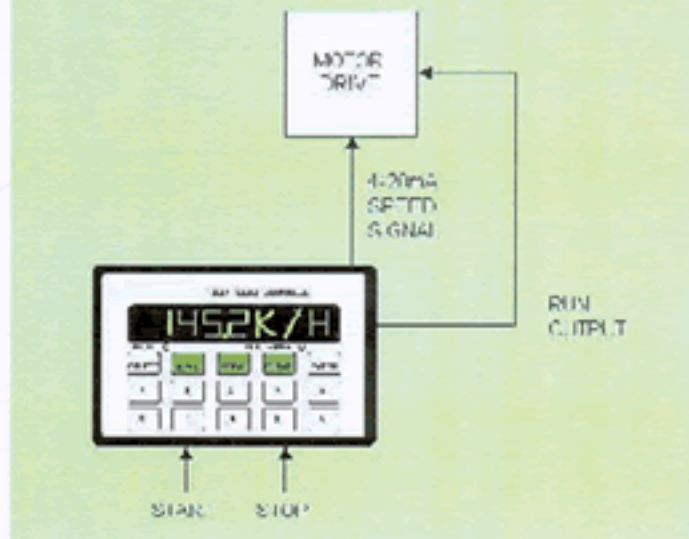
From the flow rate reading, it accurately controls a 4-20mA analogue output signal to the variable speed motor drive, achieving a pre-set target feed rate. An additional 4-20mA output provides an actual feed rate signal, to PLC/computer or remote display.

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

Batch Control

The PR446 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 PR446M version. This batch control mode is a configurable option available on all models.

Batch Control Application



Analogue Remote Control Option

The PR446A provides an additional 4-20mA analogue input, which when configured will control the target feed rate.

Multidrop Serial Communications Option.

The PR446M 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 PR446M units may be linked via a single twisted pair cable over a distance of up to 1000 metres end to end.