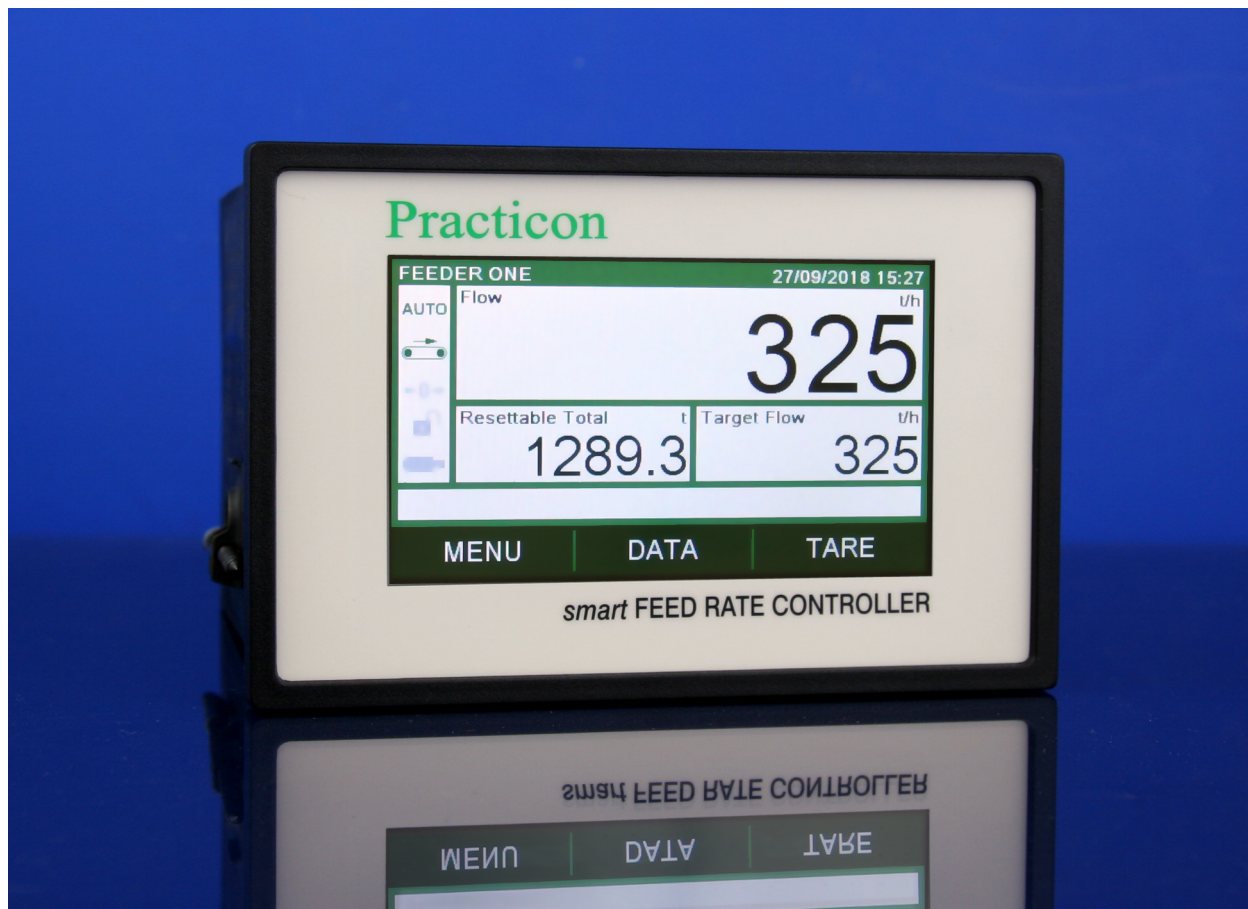




Features

- High resolution colour touchscreen display with configurable layout.
- Accurately controls the flow rate of material whilst providing Rate and Total information.
- Maintains both Resettable and Non-Resettable Totals.
- Out-of-Tolerance alarm indication.
- Batch quantity feed control from pre-set Target Total.
- Target Rate can be set locally or remotely.
- Analogue, Serial and Ethernet Connectivity.

Description

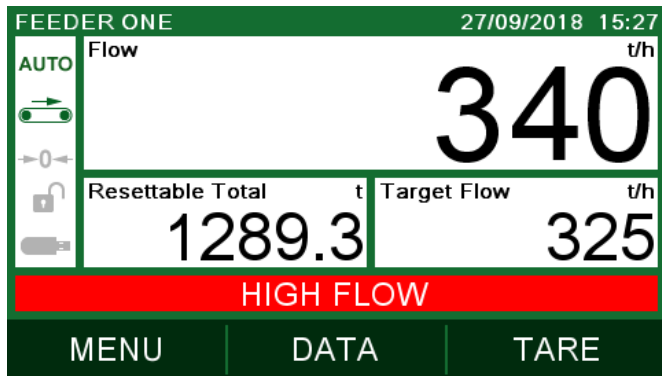
The PR1446 *smart* Belt Feeder Controller controls the flow rate of material along a conveyor belt.

By measurement of the weight of material on the belt and the speed at which the belt is moving the PR1446 calculates the rate of flow of material over the belt. It compares this with the pre-set target rate and makes accurate control adjustments to maintain the required flow rate.

Depending on the application, the PR1446 may be used to control either the speed of the belt or the material feed onto a belt running at a fixed speed.

Precision electronics combined with an easy to read colour touchscreen display and comprehensive storage and communication options provide a state of the art solution for constant rate feeding applications.

Intuitive User Interface



The colour touchscreen provides the operator with a high visibility display of the process data and status along with intuitive icon driven navigation.

The tiles on the main operating screen can be set to display the process data required by the user, and illuminated icons indicate device status conditions such as belt running etc.

Alarm conditions are displayed in red to attract the attention of the operator.

Local or Remote Target Rate Control

The target flow rate can be set locally on the PR1446 or transmitted from a remote system via a 4-20mA analogue signal, serial or network communications.

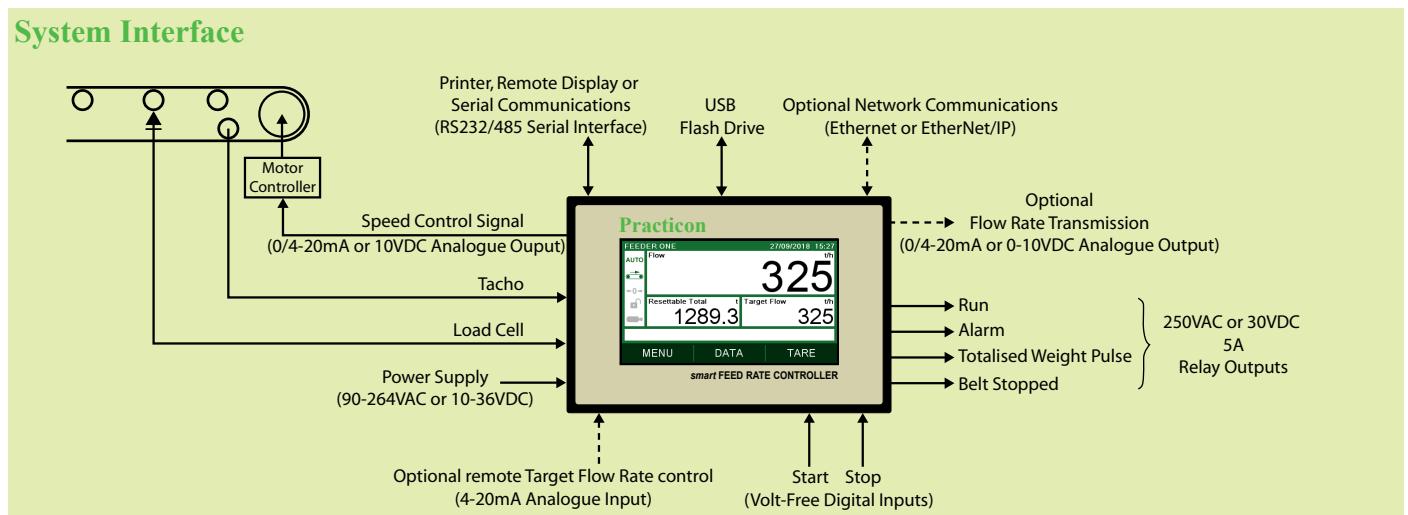
Batch Control

The PR1446 can be used in batch applications to control the feeding of a pre-set quantity of material. Use of the Run output together with the Start/Stop inputs provides the means of running the feeder until the desired target quantity of material has been conveyed. The pre-set target total can be set locally or transmitted from a remote system via the serial or network communications.

Material Blending

A number of PR1446 controllers may have their target flow rates controlled by a master PR1446 *smart* Belt Feeder Controller or PR1436 *smart* Belt Weigher Indicator. The master transmits the main material flow rate to the slave controllers (via its analogue output). Using the combination of this main material flow rate and their own material target percentage the slave units control the feed of the additive materials to continuously maintain the required overall blend.

System Interface



Tare, Dead Range and Auto Zero

A step-by-step tare routine is available directly from the main operating screen.

The dead range configuration ensures that the production totals remain unaffected when the belt is running empty.

Whenever the unit is running within the dead range the internal zero is automatically adjusted to eliminate the effects of material build up on the belt.

DYNAMIC TARE

DYNAMIC TARE RUNNING

Tacho	78.0 Hz
Load Cell Weight	22.2 kg
Time Remaining	(4056 pulses) 52 sec

Abort

Simple Calibration Routines

MATERIAL CALIBRATION

Belt Weigher Total	10781 kg
Reference Total	10245 kg
Difference (5.2%)	536 kg
Current Calibration Factor	38.00
New Calibration Factor	39.99

Confirm

Cancel

Edit Ref.
Total

An initial setup and calibration can be established by entering the belt scale data.

A choice of material, test weight or theoretical calibration routines are supported with on-screen step-by-step instructions.

Operator confirmation of calculated calibration adjustments is required before any changes are committed and all calibration events are recorded within the event log.

Diagnostic Data

A comprehensive range of diagnostic data is available to provide complete system visibility.

Along with this, a historical event log provides full traceability of operating events such as: system errors, parameter changes, scale calibration and production data reset.

These features dramatically improve the ability to offer remote technical support.

EVENT DETAIL

Time & Date	24/03/15 17:12:40
Event Type	Calibration End
Calibration Method	Material
Accepted	Yes
Belt Weigher Total	10781
Reference Total	10245
Calculated CF	39.99

Production and Management Reports

PRODUCTION LOG

Started	05/06/15 07:01:23
Ended	05/06/15 11:03:47
Material	2-4
Total	902.7t
Flow Time	2h 46m
Belt Run Time	3h 10m

The production totals and times can be stored internally, and or to USB flash drive, to provide visibility of plant productivity and shift performance.

These reports can be viewed on-screen and are also stored in a standard format allowing them to be easily imported in to office management systems.

Printed Batch Reports

The PR1446 is equipped with a configurable serial interface which may be used to drive a printer to produce time and date stamped printed batch reports. A duplicate copy of these reports can also be stored internally, and or to USB flash drive, for complete security and traceability.

Technical Data

Power Supply:

Supply : 90 - 264V AC 50/60Hz
or 10 - 36V DC.
Internal mains filter fitted.
Power : 15VA max.
Fuse : 1A anti-surge internal fuse.

Touchscreen Display:

4.3" 16 million colour TFT display with resistive touchscreen.

Load Cell Input:

Excitation : 10V DC @ 125mA max,
1 to 4 x 350 ohm load cells may
be connected in parallel.
Range : 0-20mV min, 0-2.5V max.
Filter : Adjustable 0.2 to 20Hz.
Accuracy : Up to 65,000 internal divisions
with negligible drift due to internal
self calibration.

Tacho Input:

Supply : 12V DC @ 120mA, short circuit
protected.
Type : 3 wire NPN, or volt free contact
Shaft Encoder - open collector
or push-pull.
Range : 0 - 500Hz.

Digital Inputs:

2 x volt free contact.

Relay Outputs:

4 x volt free relay contacts.
Voltage : 250V AC or 30V DC
Current : 5A

Analogue Outputs:

1 x standard and 1 x optional.
Selectable 0-20mA, 4-20mA or 0-10V.

Communication Ports:

1 x Selectable RS232 or RS422/485.
1 x USB 2.0.

Optional Communication Port:

Ethernet or EtherNet/IP.

Optional Analogue Input:

4-20mA.

Enclosure:

Panel mounting DIN case.
144mm wide x 96mm high x 154mm deep.
Panel cut-out 138mm wide x 92mm high.
Optional IP65 transparent front cover is
available upon request.

Environment:

Operating : 0 to 50°C
20-80% RH non-condensing.
Storage : -40 to 80°C

Communications

The PR1446 is equipped with a configurable RS232/485 serial interface which may be set to provide communications to a host system using one of the supported communication protocols.

- Modbus ASCII
- SABUS (ASCII)
- Modbus RTU

In addition to this it can be fitted with one of the following network communication interfaces to provide connectivity to a range of host systems.

- Ethernet
- EtherNet/IP
- Modbus TCP

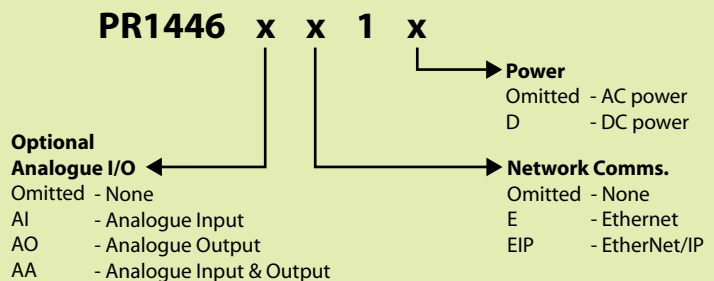
This extensive range of communication options ensures compatibility with a wide range of host systems, such as PLC control systems or PC systems via locally wired or remote cellular networks.

USB Port

The inclusion of a USB port as standard eliminates data storage limitations and greatly simplifies the transfer of data. A USB flash drive can be used either for continuous storage of production and diagnostic data or periodic transfer of internally stored data to external systems.

A backup and restore facility, using a USB flash drive, allows a complete transfer of data from one unit to another to simplify setup and reduce downtime during servicing operations.

Model Reference Structure



If no Optional Analogue I/O or Network Comms. are fitted the reference locations are replaced by a single '-' i.e. the model reference for the basic AC powered unit is PR1446-1.

Supplied by:



Practicon Limited

Chapel Lane, Rode Heath, Stoke On Trent, ST7 3SD, UK
Tel: +44 (0)1270 876211 Fax: +44(0)1270 878887
Email: sales@practicon.co.uk Website: www.practicon.co.uk