



Features

- High resolution colour touchscreen display.
- Optimum feed rate stability in both high and low feed rate applications.
- Adjustable digital filtering for elimination of the effects of mechanical vibration.
- Suitable for automatic or manual refill systems.
- Feed rate profiling maintains accuracy during refill.
- Batch quantity feed control.
- Low level and Out-of-Tolerance alarms.
- Analogue, Serial and Ethernet connectivity options.

Description

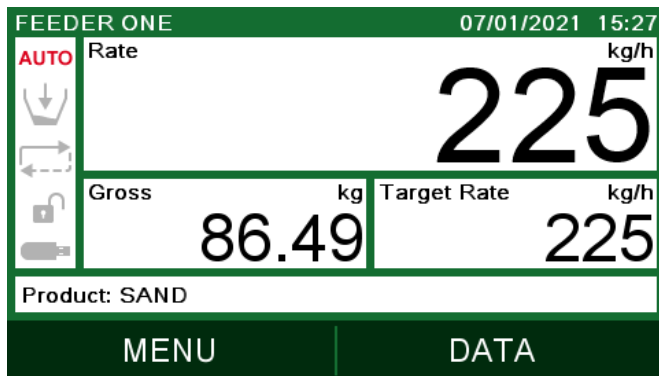
The PR1448 *smart* Feed Rate Controller controls constant rate feeding from a weigh hopper mounted on load cells and fitted with a variable speed feeder.

By measurement of the continuous loss-in-weight over time the PR1448 calculates the material feed rate and from this accurately controls the variable speed feeder to maintain the pre-set target feed rate.

The PR1448 also controls the automatic refilling of the hopper whilst continuing to control the material feed. Alternatively, where the hopper is refilled manually, volumetric control can be selected.

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 configured to display the process data required by the user.

The illuminated icons indicate the system status conditions: automatic control running, automatic refill in progress and volumetric mode selected.

Optimised Control For Multiple Products

The PR1448 control algorithm is easily tuned to provide stable yet responsive feed rate control for both high and low feed rate applications. It can store 12 sets of product configuration data allowing rapid switching between products whilst retaining the optimum control characteristics for each.

Feed Rate Profiling

To achieve accurate control at start-up and during refill, the PR1448 stores a profile of feed rate against net hopper weight, which it continually corrects during closed loop operation.

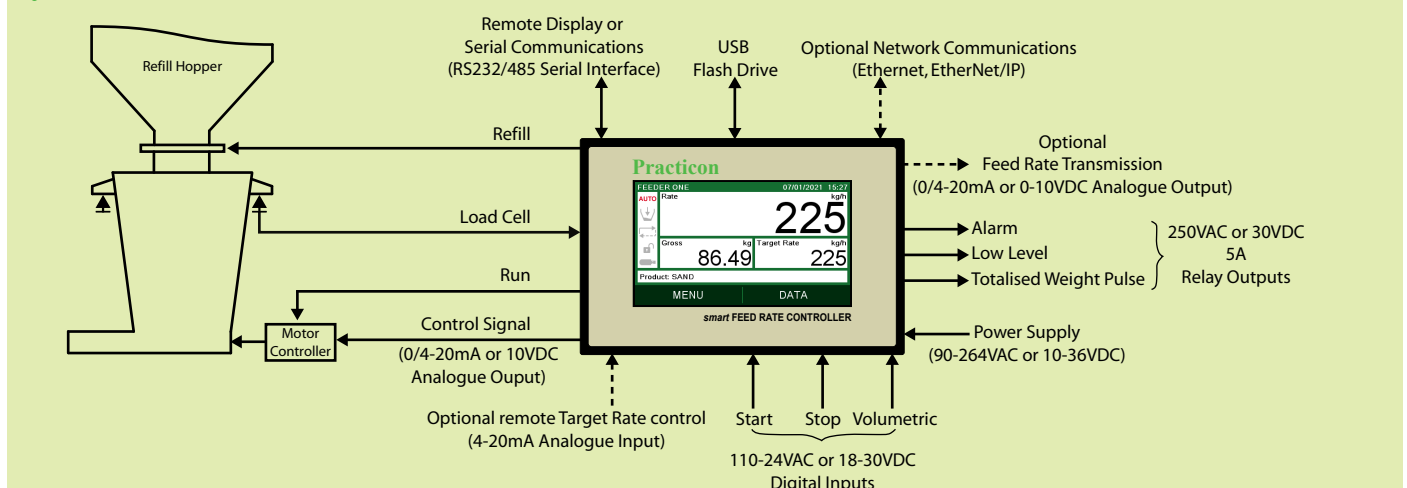
Local or Remote Target Rate Control

The target feed rate can be set locally on the PR1448 or transmitted from a remote system via a 4-20mA analogue signal, serial or network communications.

Batch Control

The PR1448 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 fed.

System Interface

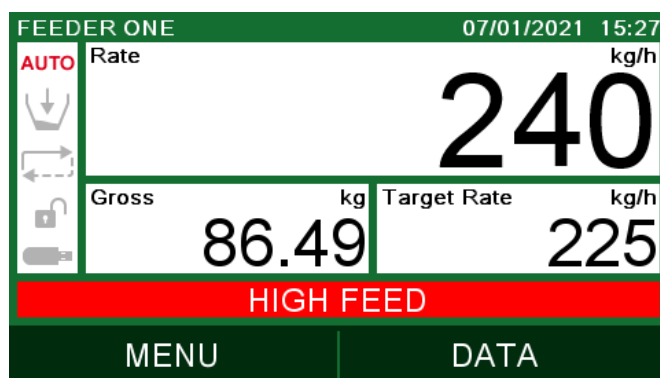


Alarms

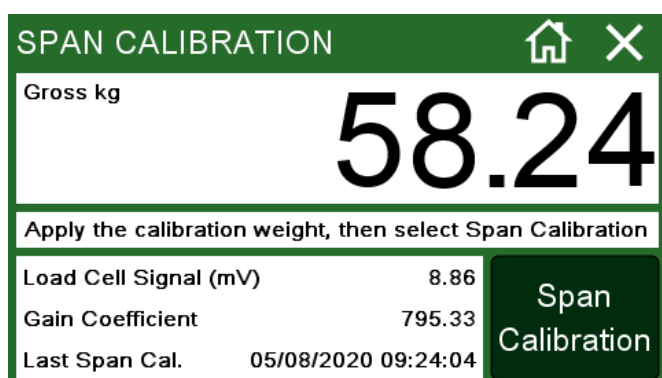
Alarms are generated for the following conditions:

- Hopper Low Level
- Out-of-Tolerance Feed Rate
- Out-of-Tolerance Refill Rate

The alarm condition is displayed on-screen and the associated digital outputs can be used to provide external indication.



Simple Calibration Routines



The weigher calibration is established using straightforward zero and span calibration routines.

A previous calibration can be restored by direct entry of the calibration coefficients.

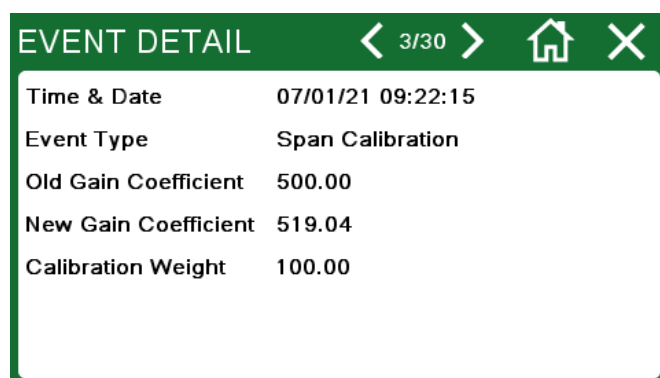
For security, the calibration data is password protected and all calibration events are recorded within the event log.

Diagnostic Data

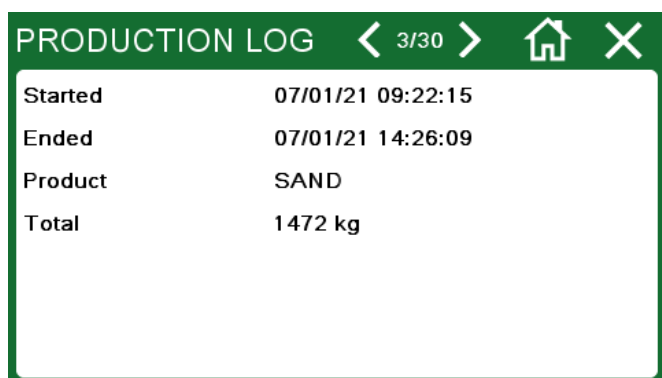
A comprehensive range of diagnostic data is available to provide complete system visibility.

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.



Production and Management Reports



The production totals 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.

Password Protection

The stored calibration and configuration data is protected by way of a configurable password. This helps to ensure that this critical data is only ever altered by trained personnel and maintains the overall integrity of the system.

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.

Digital Inputs:

4 x digital inputs.
Voltage : 110-240V AC
Current : Approximately 5-20mA

Or, for DC powered version.

Voltage : 18-30V DC
Current : 10-25mA

Relay Outputs:

6 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 PR1448 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

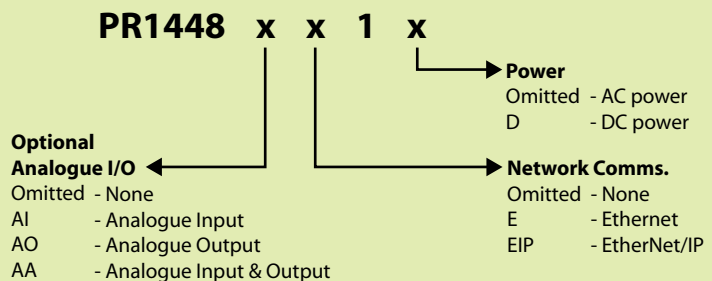
This extensive range of communication options ensures compatibility with a wide range of host PLC or PC systems.

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 PR1448-1.

Supplied by:



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