

SERIES 500

RELEASE NOTES

500-Series Program Manager

Version 3.0.2xx

19 August 2017



contrec
Models 515 & 505



This version, 3.0.2xx of the Program Manager includes the provision for a future larger display for some batch and load applications. The remainder of this set of Release Notes relate the applications and features introduced in major release of version 3.0.1xx. Please review the full list of currently available applications, found in the 505 and 515 Hardware Overviews and on the Contrec website.

New Applications.

515-BS03 Secure Batch Controller for Mass frequency flowmeters

Tailored for mass frequency flowmeters, this application has the same security/authorisation and safety permissive capabilities as the 515-BS01 dual stage batching application.

515-BT01 Temperature Compensated Batch Controller for Volumetric frequency flowmeters

This dual stage batch controller accepts a temperature and or density input to carry out volume correction based on the ASTM D1250-04 and API Table 54 standard for Crude Oils, Lube Oils, Refined Products and Light Hydrocarbon Liquids (LPG). It includes ID security/authorisation and safety permissive capabilities.

515-AC01 Additive Controller for Volumetric frequency flowmeters

While monitoring a Main line the 515-AC01 will accurately control the injection of an additive chemical from a Process line. A dosing pumps can be accurately controlled by a stroke pulse output or stroke rate 4-20mA output to achieve a precise PPM dosage. A special sampling method and algorithm cater for difficulties normally seen with pulsating dosing pumps.

505-FG01 Generic Arithmetic Flow Computer for frequency flow and analog factor inputs

This application is unique and highly flexible. Flow is accepted on the pulse input and units of measure can be set via the Program Manager for Mass or Volume. The live analog input can be set via the Program Manager to be a wide range of units and could, for example, be connected to a live density meter. The analog input can be set as a multiplier or divider which, for example, would allow easy conversion from mass to volume or vice-versa. A User value can also be entered via the front panel and can be used as a control setpoint via the 4-20mA output. A very flexible tool... use your imagination with this one.

515-CS02 Steam/Condensate Flow Computer - Analog flowmeter in Steam line

515-CS12 Steam/Condensate Flow Computer - Analog flowmeter in Condensate line

As accounting for exact energy becomes ever more important, the 515-CS02 and 515-CS12 applications lead the way in flow computers that are required to accurately calculate the energy delivered by steam. These applications are tailored for closed 'Steam to Condensate' systems and accurately calculates Net Energy by accounting for the energy in returning condensate.

515-MP01 Master Proving - Volume Frequency Flow, Temperature & Pressure inputs

515-MP02 Master Proving - Mass Frequency Flow, Temperature & Pressure inputs

The 515-MP01 and 515-MP02 applications measure the flow of a product in a main line but also caters for meter proving. The instrument uses the frequency output from a line flowmeter and has an additional "master meter" input and Meter Factor for in-line proving. Live and average temperature and pressure readings can also be recorded during metering.

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New Features & Changes.

515 Batch Controller PRINT Function improvements

In earlier 515 batch applications the print function was shared with the RESET key. To provide greater clarity and flexibility, the reset and print functions are now part of the HOLD.SET menu and the RESET key provides a short cut to the start of the HOLD.SET menu. The 515 Batch Controllers also now have the option to enable an automatic print at the end of a batch. This option is found in the TM/LOG menu.

New Generic Label Printer added to Printer Type list for 515 applications

This generic label printer protocol (PRN TYPE 04) has been added to 515 applications to suit the Citizen Thermal Label Roll Printer CMP30LWF, but as a generic driver it may suit other label printers as well.

Forward/Reverse Flow Detection in 515-BS01 and 515-BS03 application

These applications, in ON-OFF batch mode, can now accept a quadrature pulse signal that will allow forward and reverse totalising during a delivery or transfer of product. Most applicable in unloading or barge transfer applications, these units cater for the possible reverse flow if pumps are paused or reversed and then restarted.

Improved Total Retransmission on Pulse-out, a more representative frequency

Some control applications and remote display instrumentation can benefit from the frequency of a pulse-out retransmission being more representative of the total's flowrate. The pulse-out feature has now been improved to provide greater use and flexibility.

Specific Enthalpy Adjustment in 515-SC03 accounts for initial energy

A specific enthalpy adjustment has been included into the 515-SC03 application for DP (mass) flowmeters to accurately account for any initial energy.

New 500-Series DataMod Tool.

515 Data Collection made EASY

This release of 500 Series Program Manager provides compatibility for the 515 instruments to communicate with the NEW 500-Series DataMod Tool. This tool allows for easy collection of logged data using the RTU Modbus protocol with the minimum of fuss, without having to configure a single Modbus register. The Windows based 500 DataMod software can be used to display the field instrument data and generate simple custom reports that can be printed or saved in PDF or CSV formats.

Please visit the Contrec website www.contrec.co.uk to read more or download the software as a fully functioning 15 day trial or post a request to purchase a licence.

In The Pipe Line.

The development of new features and new applications is continuing.

Density Controller to accurately control two streams

A new Density Control (Concentration/Dilution) application is soon to be released that allows a Target Net Flowrate and a Target Net Density to be achieved by accurately controlling the stroke rate of two independent 4-20mA controlled dosing pumps. Knowing the reference density and/or concentration of each line and the live Net Density, special algorithms provide excellent control for one of the toughest control applications.

Leak Monitor for critical processes

The 515-LK01 Leak Monitor, for Volumetric frequency flowmeters, has been designed to be an accurate and reliable monitoring and alarm system for critical processes where not more than acceptable volume is allowed to pass in a given time.

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