INTRA AUTOMATION GmbH

elektronische Meß- und Regelinstrumente

MESS- UND REGELINSTRUMENTE

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Batch Controller–Presetable Counter DigiFlow 514

Functions

- Full scaleable input signals 4 - 20mA analog or frequency.
- Display of rank total value, preset quantity, flow rate and accumulated quantity
- Two relay outputs for either slow and fast run or two flow channels.
- Automatic Overrun compensation
- Alert at signal fault.
- Remote Start–Stop.
- Simplified programming
- Three languages user interface
- RS232-protocol interface.

The backlit two rows alphanumeric display shows the instantaneous readings of Flow or Totals, and the four key touchpad it is used to program, configure and control the unit.

The **DigiFlow 514** has per default one analog input 4 – 20 mA each channel, as well as a frequency input for flow signal.

Furthermore each **DigiFlow 514** is equipped with one scaleable pulse output, assigned the accumulated total, for control of external counters, and a RS232 interface to output a rank protocol to printer or host, or remote controlling the unit.

Optionally there is one analog or Pt100 RTD input for temperature or density flow compensation.

The **DigiFlow 514** is powered by AC of 115/230 VAC 50/60 Hz, optionally voltages between 24 and 28 V AC/DC.

The **DigiFlow 514** provides an adjustable voltage of 17 to 19V DC for powering transmitters. Maximum current is 100mA.

Inputs:

Since the **DigiFlow 514** scaleable integrates any physical unit which is converted into 4-20mA analog or frequency signal, the user have to enter a dimension text with up to 5 characters length.

The input signals aren't converted only linearly. Also nonlinear relationships of input-to output quantity can be programmed. Additional to the predefined exponents of the conversion curve for linear, square or square root relationship of $y = A^E$, a free setable exponent can be entered. If none of these conversion terms describes exactly the relationship between input and output, a 12 point correction curve can be programmed.

Outputs:

The filling facility is controlled by two relays. The first one is switched on the whole filling time and the second one can be switched on after a setable time delay and switched off a setable quantity before filling end. Two relay outputs are available for rank end and flow alarm furthermore. The pulse output for external counters is executed as digital output with NPN-Open Collector characteristics.

Special features of the program:

Overrun compensation:
From the last filling operations is a corrected switch off point calculated, so that at further ranks the programmed quantity is more exactly reached.
Automatic Restart:
The unit can be configured to start a new batch after a setable time after ending the previous batch.
Count Direction:
The unit can be programmed to count up to batch quantity or down to zero..

Technical Specifications

General:

Display:	Backlighted, alphanumeric LC–Display, 2 rows, 16 cols. Each char is 7mm \ 0.276" high.
Keyboard:	Sealed membrane keyboard with four keys.
Transmitter supply:	18 V / 100 mA; via keyboard adjustable, isolated.
Power:	115/230 V AC; 50/60 Hz internally switchable. Optionally 24-28 V AC/DC Power consumption 10 W @ 230 V AC without Options.
Operating Temperature:	0 – 55°C \ 32 – 131 °F
Housing:	Enclosure: glass–fiber reinforced synthetic material; Front: aluminum keyboard membrane.
Face:	Watertight to IP 54 (NEMA 4X equal)
Dimensions:	144mm \ 5.7" W × 72mm \ 2.8" H × 130mm \ 5.1" D
Panel cutout:	137mm \ 5.4" W × 67mm \ 2.6" H

Programming and Configuration:

Handheld:	There is no handheld terminal required. All necessary constants and parameters are programmed using the keypad.
Language:	German, English or French selectable.

Frequency Input:

Frequency Range:	0.25 - 10 kHz Input 1. 0.25 - 500 Hz Input 2.
Input Circuits:	Most AC, logic and proximity switches accepted. 0.5 – 50 V_{pp}.
Non–Linear Correction:	Up to 12 points for curve fit.

Analog Input 4 – 20 mA:

Correcrion Curve:	Correction: Linear, square,.square root or free programmable exponent
Input Impedance:	120 Ω.
Non–Linear Correction:	Up to 12 point for curve fit.

Pulse Output:

Pulse Width:	Adjustable between 10 ms and 90 ms.
Duty Cycle:	≥ 1 : 1.
Logic:	Open Collector, Active Low.
Current sinking:	max. 100 mA.
Pulse generation:	The pulse count is proportional to the difference of a selectable decimal place (0.01....100000) from the accumulated total..

External Keyboard:

Function:	One input for start and one for stop..
Circuit:	An input voltage higher than +18 V is detected.

Communication Port:

Type:	An RS232 interface is provided. Optionally there is a RS485 multipoint communication interface for up to 32 instruments connected to a common bus.
Baud Rate:	300 – 9600 Baud.
Data Bits:	7 or 8 selectable.
Parity:	None, even or odd.
Stop Bits:	1 or 2 selectable.

Relay Output:

Function:	To control the filling unit two relays are equipped, furthermore one relay for rank end and for signal fault..
Form:	Normally open. (SPST)
Max. Voltage	250 V AC
Max. Current	6 A AC

Ordering Information

Code	Option or Feature
514	**Batch Controller - presetable counter Type DigiFlow 514**

Code	Housing
S	Panel mounting IP54 (Standard)
T	Panel mounting w ith lockable transparent door IP55

Code	Power Supply
2	230 V AC Line (Standard)
1	115 V AC Line
4	24 V AC/DC

Code	Communication Port
2	RS232 - Serial interface (Standard)
4	RS485 - Multipoint serial interface