INTRA AUTOMATION GmbH

MESS- UND REGELINSTRUMENTE

elektronische Meß- und Regelinstrumente

CE

TÜV CERT
EN ISO 9001

Microprocessor Controlled Digital Level-Indicator   DigiFlow 520

Functions

- Full scaleable input signals 0/4-20 mA analog
- Able to process two input signals as two independent measurements
- Simplified programming
- Indication of the tank content in freely definable units
- Bargraph. Indicates the current measured percentage
- Correction for non-linear tanks
- Correction for density changes
- User menus in three languages
  – German
  – English
  – French
- RS232-interface or optional RS485-interface

The backlit two rows alphanumeric display shows the current readings and in conjunction with the 4 key touchpad is also used to program and configure the unit.

The **DigiFlow 520** is equipped per default with 2 analog inputs 0/4 – 20 mA.

Furthermore the unit is equipped as a standard with 2 definable limit alarm relais, selectable as high or low level alarm, as well as a RS232-interface (optional: RS485-interface).

Optionally up to two scaleable analog outputs 0/4 – 20 mA can be assigned.

The RS232-interface will output all parameters, which are displayed. This can be done to a printer or a host computer.

An integrated real time clock is included to send protocols in selectable intervals, up to 9999 min. Totals can be reset.

The unit is powered by AC of 115/235 V 50/60 Hz. Optionally by voltages between 24–28 V AC/DC.

The **DigiFlow 520** provides an adjustable voltage of 17 through 19V for powering transmitters. The maximum current is 100 mA.
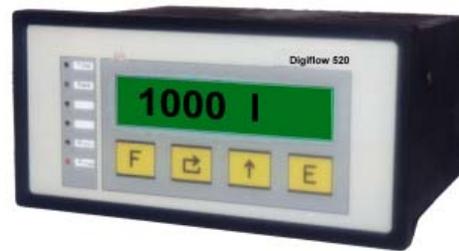
Inputs:

Since the **DigiFlow 520** can indicate any physical unit that is transmitted as an 4–20mA analog signal, freely scaleable, the measurement channels can be assigned to a dimension text with up to 5 characters length.

The input signals are not only linearly converted. Also nonlinear relations of input-to-output quantity can be programmed. In addition to the predefined linear exponents it is possible to program the tank content indication according to the shape of the tank. If non-of these curve traces apply to the tank, a curve trace function can be programmed with 20 points, between which the measured values are linearly interpolated. That is why a direct reading of the tank content is possible.

The tank content can be controlled with the 2 programmable alarm relais contacts (High- and Low-alarms). The alarm-switch points can be freely programmed with the plastic sealed keyboard.

The digital level indicator can be connected to most of the existing level measurement instruments as pressure transmitters, reed chain, capacitive measurement device, radar- and ultrasonic. In the case that the level is measured with a pressure transducer, a direct correction can be programmed for changes in density of the liquid.

That is why it is not necessary to re-calibrate the measuring sensor. Strong movements of the liquid in the tank can be dampened with a digital filter with selectable time constants.

Technical Specifications

General:

Display:	Backlit alphanumeric LC-Display 16 cols. Each char is 0.413" high.
Keyboard:	Sealed membrane keyboard with 4 keys.
Transmitter Supply:	18 V / 100 mA; via keyboard adjustable, isolated.
	115/230 VAC; 50/60 Hz internally switchable
	Optional 28 V AC/DC
	power consumption approx. 10 W at 235 V AC without options.
Operating Temperature:	32 - 131°F
Housing:	Enclosure: glass-fiber reinforced synthetic material; Front: aluminum keyboard membrane.
Face:	Watertight to IP54 (NEMA 4X equal)
Dimensions:	5.7" W × 2.8" H × 5.1" D
Panel cutout:	5.4" W × 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.
Non-linear correction:	Up to 20 points for curve fit

Analog input 0/4– 20 mA:

Inputs:	Linear, corrected for selectable powers of 10. Dependent on tank shape.
Input impedance:	120 Ω
Circuit:	All inputs are isolated, no common ground.
Accuracy:	$\leq 0,1\%$

External Keyboard:

Function:	Input for switching of the indication
Circuit:	A voltage of + 24 V is recognized as a pushed button.

Communication Port:

Type:	An RS-232 interface is provided. Optionally an RS-485 multipoint communication interface for up to 32 instruments connected to a common bus is available.
Baud Rate:	300 – 9600 Baud
Data Bits:	7 or 8 selectable
Parity:	None, even or odd.
Stop Bits	1 or 2 selectable
Data logging:	Output in intervals up to 9999 min or through keystroke.

Relais Output:

Function:	High- and low alarm can be chosen according to the tank volume.
Form:	Normally open. (SPST)
Max. Voltage:	250 V AC
Max. Current:	6 A AC

Options

Analog outputs

Function:	Selectable: output current proportional to standard display or proportional to a selectable RTD direct input. Setpoints at 4 mA and 20 mA, linear interpolation in between.
Output Span:	0 – 20 mA or 4 –20 mA selectable.
Resolution:	12 Bit
Max. Load:	500 Ω internally powered. 800 Ω externally 24 V powered.
Powering:	If there is no external supply > 15 V the output will be internally powered automatically.
Accuracy:	$\leq 0,1\%$

Ordering Information

Code	Option or Feature					
520	**Digital Level Indicator type: Digiflow 520**					
	Code	**Housing**				
	S	Panel mounting IP54 (Standard)				
	T	Panel mounting with lockable transparent door IP55				
	E	Explosion proof housing				
		Code	**Power Supply**			
		2	230 V AC line			
		1	115 V AC line			
		4	24 V AC/DC			
			Code	**Analog Output**		
			X	No analog output		
			1	1 analog output		
			2	2 analog outputs		
				Code	**Communication Ports**	
				2	RS232 - interface (Standard)	
				4	RS485 – interface	
					Code	**Relais Contacts**
					S	Relais for high or low level alarm

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