



FL21 Open Channel Flowmeter

General Description

Open channel devices such as Parshall and Palmer-Bowls flumes are used for measurement of irrigation flows, water rights apportionment, and flow of sewage.

Instantaneous flow rate (e.g. cubicFeet/second) is obtained from the water level height in the channel measured with a level sensor (e.g. ultrasonic). The fl21 calculates the flow rate and stores the totalized flow.

The digital rs485 output can be connected to radio equipment in order to obtain a continuous remote monitoring and create a historical registry.

Characteristics

Inputs

- 1 Standard process variables as 4..20mA, 0..10V,etc.
- 1 Two additional external inputs (dry contact) programmable as reset functions.

Readings

- 1 Flow rate in Parshall y Palmer-Bowls flumes for several sizes.
- 1 Totalized in 6 high bright 14.5mm height red digits. (Upper display)
- 1 Input process variable in lower 4 digits.
- 1 Pre-scale, adjust the totalized for any engineering unit.
- 1 Continuous memory, stores last reading.
- 1 Registers maximum and minimum readings for process variable input.

Alarms

- 1 4 alarms assigned independently to preset values of the totalized count or the input rate, linked to the 2 output relays,
- 1 Latch and standby functions.

Outputs

- 1 Two output relays, with two programmable alarms each (high and low)
- 1 Output pulse with frequency proportional to the analog input. For external totalizing in PLCs.
- 1 Galvanically isolated analog outputs for the rate meter: active loop 4..20ma ,0...10V, passive loop 4..20ma.

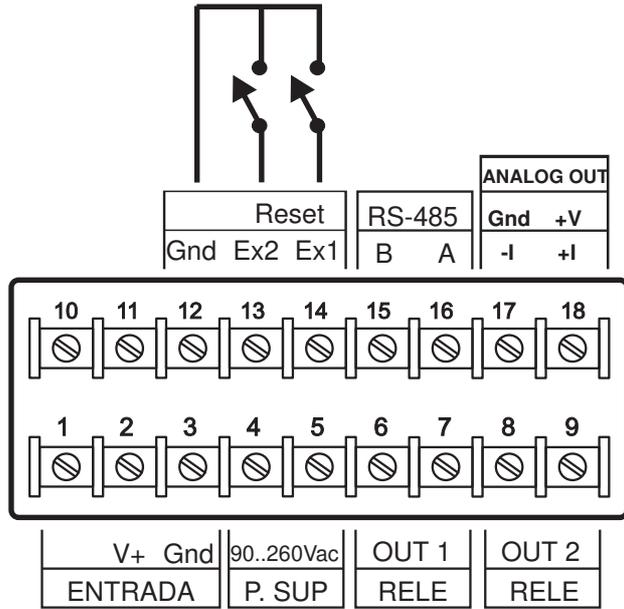
Communications

- 1 RS485 Modbus RTU serial communications reports data to a PC or PLC.

Configuration.

- 1 From a PC compatible by means of RPS software.
- 1 From frontal push buttons.

FL20a Electrical conections



0..20mA, 4..20mA

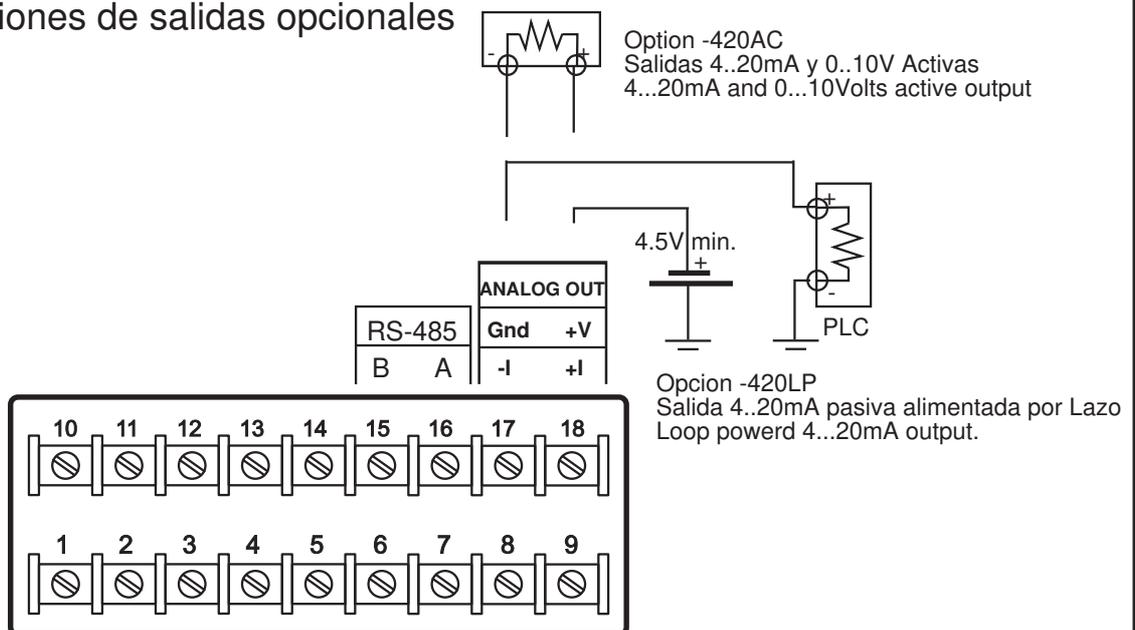


0..10V, 0..5V, 0..50mV



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Conexiones de salidas opcionales



420OUT_00

TECHNICAL SPECIFICATIONS

INPUTS Process variable type:
4...20 mA, 0...20 mA, 0...5 V, 1..5 V, 0..10 V, 0..50 mV

OUTPUTS: Relays, 2 outputs for alarms 250VAC/ 3A., normally open or normally close by software.

Optional:

- 420L 4... 20 mA, loop powered, Vdrop 4.5V max. opto isolated (5kV).
 - 420A 4..20ma/0-10V Active loop, opto isolated (5kV).
 - RS485 modbus RTU serial communications, opto isolated (5kV).
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POWER SUPPLY:

- Current mode switching power supply.
 - Version: 85...260 Vac, 6 W, 45...65 Hz.
 - Version: 20...60 VDC, 6 W, (optional)
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CONSTRUCTION:

- Aluminum and Polycarbonate; IP65
 - Total Dimension: DIN 1/8; 96 x 48 x 135 mm.
 - Panel cut: 92 x 45 mm.
 - Weight: 300 grams.
 - Operation temperature: 0 ... 50 °C.
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CE DIRECTIVES: 2006/95/EC (LVD) Low Voltage Directive
2004/108/EC (EMC) Electromagnetic compatibility directive

STANDARDS: Safety: IEC61010-1:2010
EMC immunity: EN61326-1:2006 Industrial locations.
EMC emissions: EN61326-1:2006 Class B.

PART CODES:

Part number must be done selecting the following alternatives.

FL21

-AC : 85...260 Vac, 6 W, power supply.

-DC : 18...60 Vdc, 6 W power supply.

OPTIONAL

-420L :4..20ma passive loop

-420A :4..20ma active, includes also 0..10Vdc

OPTIONAL

-RS485 :modbus RTU serial communications

For example:

FL21-AC

AC power supply , without any optional output.

FL21-DC-RS485

DC power supply and modbus RTU serial communications.

FOR MORE INFORMATION CONTACT US:

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