



SENSORS &
CONTROLLERS



ANALYZERS
& SAMPLERS



LEVEL, FLOW
& PRESSURE



WEB APP &
DATA LOGGING



ACCESSORIES

50 SERIES F/L DATASHEET

FLOWMETER FOR OPEN CHANNELS DATASHEET



MAIN FEATURES

- Flow or Level and temperature measurement with ultrasound probe or radar or piezo 4-20mA (Temperature only with ultrasound probes)
- Programming key pad with 5 keys
- "CAL" Function Key to direct access to the calibration menu
- "GRAPH" Function Key to direct access to the graphs of measure
- "USB" Function Key for data download on USB support
- "MODE" Function Key for self-recognition probes
- LCD Graphic color display 480 (R.G.B.) (W) x 272(H)
- Internal Data Logger (flash 32 Mbit) with the possibility of graphic and table visualisation of measurement trends
- PID adjustment
- Serial output RS485 MOD BUS RTU/ PROFI BUS/ ETHERNET Modbus TCP/IP (Optional)
- ETHERNET IP (on request)
- Data download on USB support
- 4 Programmable Analogical Outlets
- 4 Relay Outlets for intervention thresholds or totalization pulses or level thresholds
- 1 Relay Outlet for Instrument Anomaly Alarm
- 1 Digital Input for disabling of doses

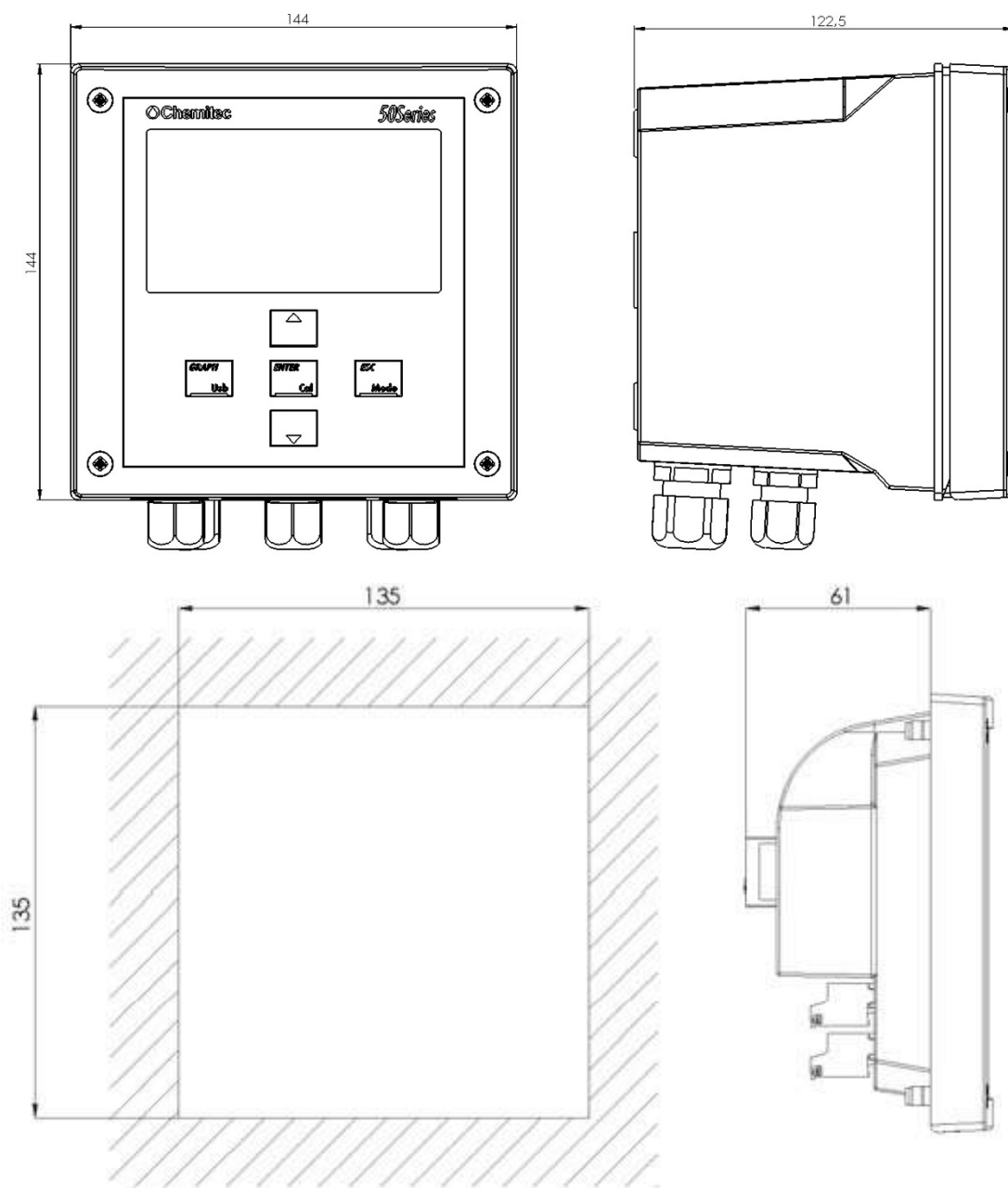
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50 SERIES F/L DATASHEET

TECHNICAL DATA

Data storage	<p>Internal Flash 32Mbit Memory (near to 128000 records). Records interval: 01:00 ÷ 99:99 min Type: Circular (F.I.F.O.) or Filling Storage of: - instant flow - totalizers - alarms With minimum storage interval of 1 min. Possibility of visualization of the stored data in tabular and graphic form, with indication of max, min and average values of the selected period. Zoom function</p>
4 Analogue outputs	1 for each measure with possibility of PID management
4 Control relay digital outputs	Set Point ON - OFF: setting of the working range, rotation of pumps, level thresholds (hysteresis / direction) or pulses for totalization
Alarm digital output	Reporting: Instrumental anomalies, lack of ultrasound echo-probe
Digital input	To disable dosages or activate washing cycle
RS485 Serial output	For set-up and real-time data acquisition from remote or for stored data download (using a dedicate-SW) MODBUS RTU communication protocol
Manual controls	Possibility to simulate all the analogue and digital outputs using the keyboard
Possible open weirs	Rectangular – Thomson – Bazin – Venturi – Palmer Bowlus – Parshall - 30 points table
Totalizers	Nr 2 1 resettable, 1 non-resettable , totalizer has 10 digits
Visualisation	LCD Graphic color display 480(R.G.B.) (W) x 272(H)
Programming	5 bubble-Keys keyboard
Data logger	Flash 32Mbit Memory (near to 128000 records)
Analogue outputs	0 / 4.00 ÷ 20.00 mA Galvanic separation: 1KV Optoisolator Maximum load 500 Ohm Second Alarm output: NAMUR 2.4 mA (with 4/20mA Range)
Digital outputs	Switching Relays Usable as NO contact Max resistive load 3A a 230Vac
Digital input	Active and already supplied Possibility to link with a 3 wires - inductive sensor
Analogue input	4-20mA Analogue Input freely programmable
Serial output	RS485 with 1200÷38400 Baud Rate programmable speed MOD BUS RTU Protocol
Operating conditions	Operating temperature -20÷65°C Storage and transport -25÷65°C Humidity 10-95% (non-condensing)
Power supply/ Electrical protections	Power supply 100÷240Vac/dc 50- 60 Hz – (Optional 24Vac/dc) - Sensors power supply: - 2-wire: 12Vdc - 4-wire: 24Vdc – Transformer isolation 4KV – Absorbing average < 7W – Electrical Protection: EMI / RFI CEI-61010 – 05/99 – According to UL, not connect to relay outputs a voltage exceeding 115V

DIMENSIONS



Mechanical Dimensions	50 Series Flow Wall IP66	50 Series Flow Panel 144x144
Dimensions (L x H x P)	144x144x122,5mm	144x144x86,5mm
Mounting thickness	122,5mm	61 mm
Material	Grey ABS RAL 7045	Grey ABS RAL 7045
Mounting	Wall	Panel
Weight	1 Kg	0,7 Kg
Front Panel	UV resistant Polycarbonate	UV resistant Polycarbonate

MAIN HARDWARE CHARACTERISTICS OF THE ELECTRONIC DEVICE

The hardware structure of this periphery is based on the adoption of extremely new CPU CMOS with 32 bits developed specifically for the execution of the so-called “embedded” applications.

The card uses flash memories to store archives of historical data and LOG files of events.

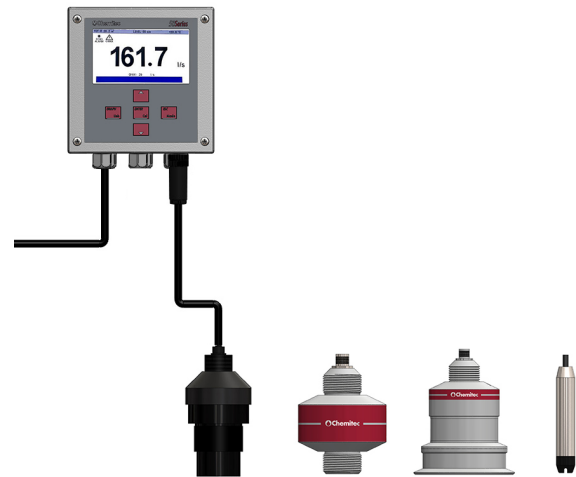
The Card has 1 RS485 gate for sensors and 1 RS485 gate (opto-isolated) for local networks used for connections with local communication devices (configuration computer, terminals and remote controls etc). As optional it is possible to install a PROFI BUS or ETHERNET serial port for connection with the communication devices PROFI BUS and ETHERNET respectively.

The card integrates a Real Time Clock (clock with date) that allows the software to storage figures in a chronological order.

THE DEVICE HAS BEEN DESIGNED TO BE FITTED ONTO A PANEL, AND IS BUILT WITH IP66 PROTECTION PANEL

CONTROLLER MAXIMUM CAPABILITY

Power supply



CHARACTERISTICS OF THE MEASURE:

Measurement Ranges:

0 -100m or 0-99999m3/h

For resolution and accuracy see the characteristics of the connected sensor

Temperature Compensation:

Automatic – only for ULTRASONIC probes

Visualisation:

Level, differential level or flow rate, resettable and non-resettable totalizer, temperature (with ultrasonic probes)

ORDER CODES

97P0610000A	50Series F/L Dig. plug&play analyser Flow Modbus Panel 220V
97P0610003A	50Series F/L Dig. plug&play analyser Flow Modbus Panel 24Vac
97P0610010A	50Series F/L Dig. plug&play analyser flow Modbus Wall 220V
97P0610013A	50Series F/L Dig. plug&play analyser flow Modbus Wall 24Vac
97P0610100A	50Series F/L Dig. plug&play analyser Flow Profibus Panel 220V
97P0610103A	50Series F/L Dig. plug&play analyser Flow Profibus Panel 24Vac
97P0610110A	50Series F/L Dig. plug&play analyser Flow Profibus Wall 220V
97P0610113A	50Series F/L Dig. plug&play analyser Flow Profibus Wall 24Vac
97P0610210A	50Series F/L Dig. plug&play analyser Flow Ethernet Wall 220V

CONTROLS, INDICATORS AND CONNECTIONS

1. LCD DISPLAY
2. DOWN
3. UP
4. ENTER
5. ESC
6. GRAPH-USB



MODBUS-RTU SERIAL INTERFACE

- Real-time data communication
- Download of the stored data on a PC via SW or directly on an USB support

