Flow Measuring and Control Device

Configuration Via Computer

FC991

FC991 devices are programmable flow measuring devices with pulse, current and voltage inputs. If the device is set with current or voltage input, linear function is given to the input. The device can control four different digital outputs with four different set points. The entered set value can be assigned to instantaneous flow, collection and batch value. It has the ability to transfer instantaneous flow, total and batch information with its analog output module. Measurement data can be transferred to a central system over RS485 line over MODBUS RTU protocol. A total of 128 devices can be connected over the communication line. These devices are based on compliance with international standards, reliability and ease of use during the design phase. For this reason, they are ergonomic devices that can be used for different controls in many sectors.

Device Features

2 pcs 6 Digit Numeric Display
6 pcs LED Indicator
11 pcs Totalizer and Batch Totalizer Indicator
1 pcs Transmitter Supply(24Vdc)
1 pcs Sensor Input (mA,mV,V,Puls)
2 pcs Numeric Input(Totalizers to reset the outside)
1 pcs RS485 Communication Unit
1 pcs Analog Output (0/4-20mA.0/2-10V)
4 pcs Relay or Logic Output (24VDC)
100-240V AC/DC Universal or 24V AC/DC Supply
Isolation Between Input/Output Modules

Sensor Error Detection
Retransmission (For Process and Set Value)
6 Different Relay Functions
ON/OFF Control
100ms Sampling and Control Cycle
Standard MODBUS RTU Communication Protocol
Configuration Via Computer

Input Types

Sensor Type	Standard	Min.	Max.
Pulse			8000
0 / 4-20 mA		0 mA	20 mA
0 / 2-10 VDC		0 VDC	10 VDC

Device Dimensions

96 mm
96 mm
91 mm
10 mm
100 mm
91 mm
91 mm
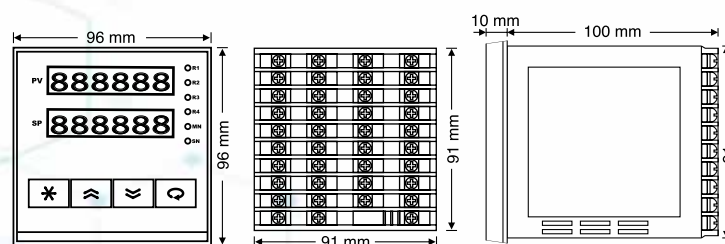
Panel Cutting Dimensions = 92 ± 0,5 mm x 92 ± 0,5 mm

Technical Specifications
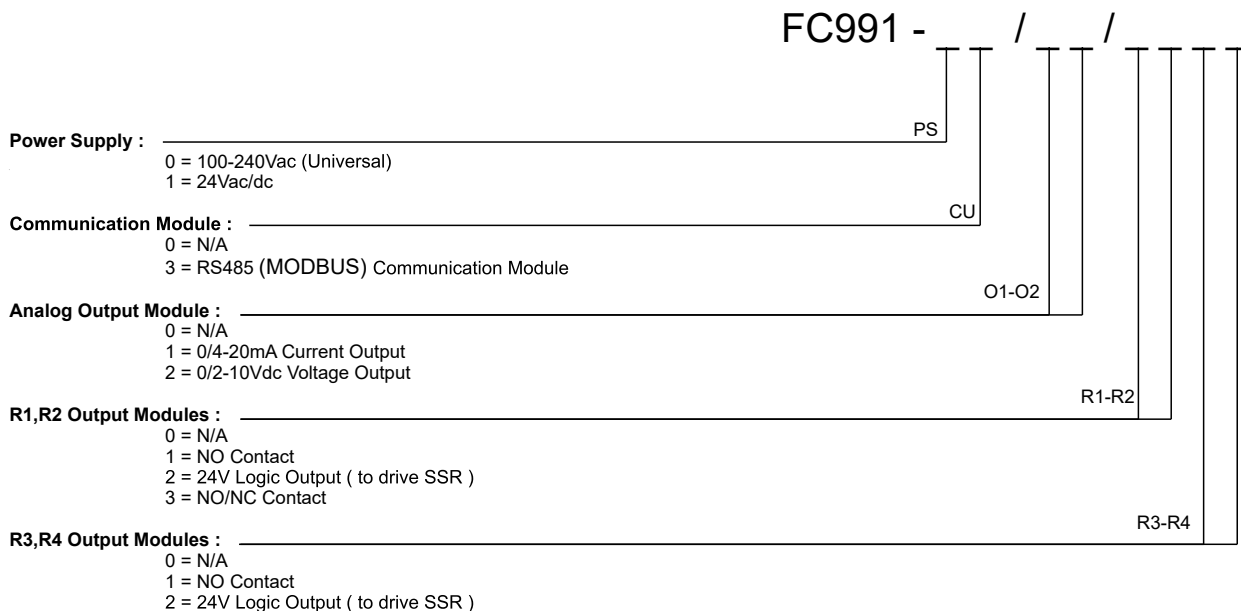
Power Supply (PS)	100-240 Vac/dc +10%-15% 24 Vac/dc +10%-20%
Power Consumption	5W, 8VA
Universal Sensor Input (S1)	Two Wired Transmitter = 4-20mA Current = 0/4-20mA Voltage = 0-50mV, 0/2-10V Pulse = PNP and NPN (Max. 8000Hz)
Transmitter Supply (TX)	24Vdc (Isc= 30mA)
Analog Input Impedance	Current = 10Ω Voltage = 1MΩ
Analog Output (O1)	Current = 0/4-20mA (RL≥500Ω)
Relay Output (R1,R2,R3)	Contact = 250VAC 10A
Contact Lifetime	No Load = 10.000.000 Switching 250V,10A Resistive Load = 1.000.000 Switching
Memory	100 Years, 100.000 Renewals
Accuracy	+/- 0,2%
Sampling Time	100 ms
Environment Temperature	Working = -10...+55°C Storage = -20...+65°C
Protection Class	Front Panel = IP54 Trunk = IP20
Dimensions	Width = 96 mm Height = 96 mm Depth = 110 mm
Panel Cutting Dimensions	91 +/- 0,5 mm x 91 +/- 0,5 mm
Weight	430 gr

Modular Structure and Connection Diagram
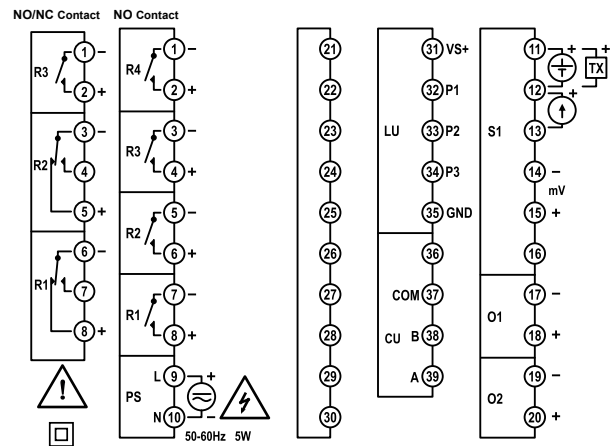
Module	Description
S1	Universal sensor input module
CU	RS485 MODBUS RTU Communication Module
LU	Logic Input Module
O1	Analog Output Module
R1,R2,R3,R4	Relay Output Module
PS	Supply voltage input (Supply voltage is determined by product code).

Product Code

FC991 - ⬚ ⬚ / ⬚ ⬚ / ⬚ ⬚ ⬚ ⬚

PS
CU
O1-O2
R1-R2
R3-R4

Power Supply :
0 = 100-240Vac (Universal)
1 = 24Vac/dc

Communication Module :
0 = N/A
3 = RS485 (MODBUS) Communication Module

Analog Output Module :
0 = N/A
1 = 0/4-20mA Current Output
2 = 0/2-10Vdc Voltage Output

R1,R2 Output Modules :
0 = N/A
1 = NO Contact
2 = 24V Logic Output (to drive SSR)
3 = NO/NC Contact

R3,R4 Output Modules :
0 = N/A
1 = NO Contact
2 = 24V Logic Output (to drive SSR)

Note : If R1 relay is coded as 3 (NO / NC), and relay R2 is selected as contact, it must be coded as NO / NC.
If the R2 relay is coded as 3 (NO / NC), and the R1 relay is selected as a contact, it must be coded as NO / NC.
If R1, R2 module is selected as 3, then R4 module must be coded as 0.