

DFD5000 RESERVE MANUAL CONTROLLER
OPERATING INSTRUCTION

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1. Function Features

- Designed based on computer processor ,it can be programmed by keys on the panel to suit any type of sensor ,and there is no linear error for any sensor.
- All inputs can be calibrated with key button.
- It is produced according to ISO9002 qualified process.
- It can switch from manual state to auto state without interference.

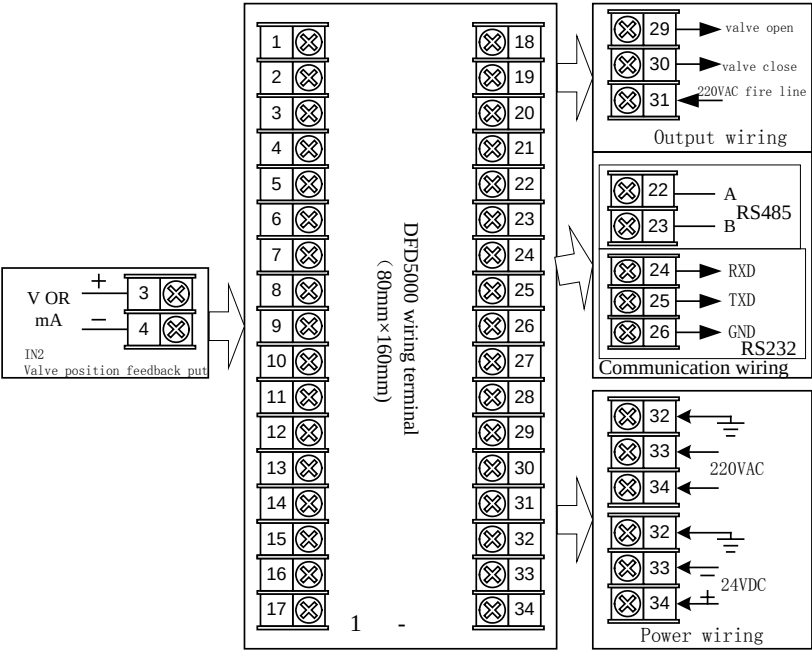
2. Technique parameters:

- Environment condition: temperature: 0 ~ 50℃ , relation humidity: ≤90%
- Power supply: AC90V ~ 265V (50 ~ 60Hz) or DC24±10%V
- Accuracy : 0.5%F.S±1digital, dissolution: 0.001,0.01,0.1,1
- Input feature: Voltage input: input impedance >300kΩ,
mA: input impedance 250Ω
- Output feature: Capability of relay:3A/220VAC or 3A/24VDC, load of resistance
Output impedance of mA: < 600Ω
Output impedance of voltage: >200kΩ
- Transmit power supply output: Electric voltage 24 ± 10 % VDC, MAX electric current 22 mA,
can connect directly with passive transducer .
- Power dissipation: <3W
- Weight<0.5kg

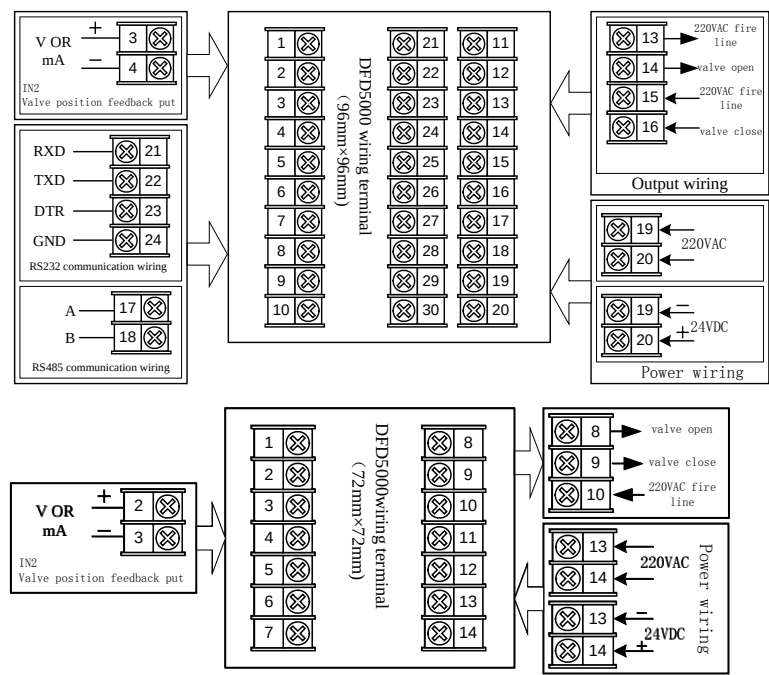
3. Ordering number

Ordering number				Explain
DFD				Intelligent Automatic Reserve Operator
Series	6			Electronic transformer
Output signal		0		Prograde/reversal signal input
Value position command signal input		5		Suit for DC 0~10mA signal input
		6		Suit for DC 4~20mA signal input
		7		Suit for DC 0~5V signal input
		8		Suit for DC 1~5V signal input
		V		80×160×150mm upright type
		F		96×96×112mm square type
Power supply				Power supply 220VAC
			D	Power supply 24VDC (no to S, SV outline)
Communication port				Without communication port
			RS232	With RS232 isolated communication port
			RS485	With RS485 isolated communication port

4. Ordering Number



Note: If there are difference between the operation instruction and case back wiring, the case back wiring is the right.



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5. Panel message

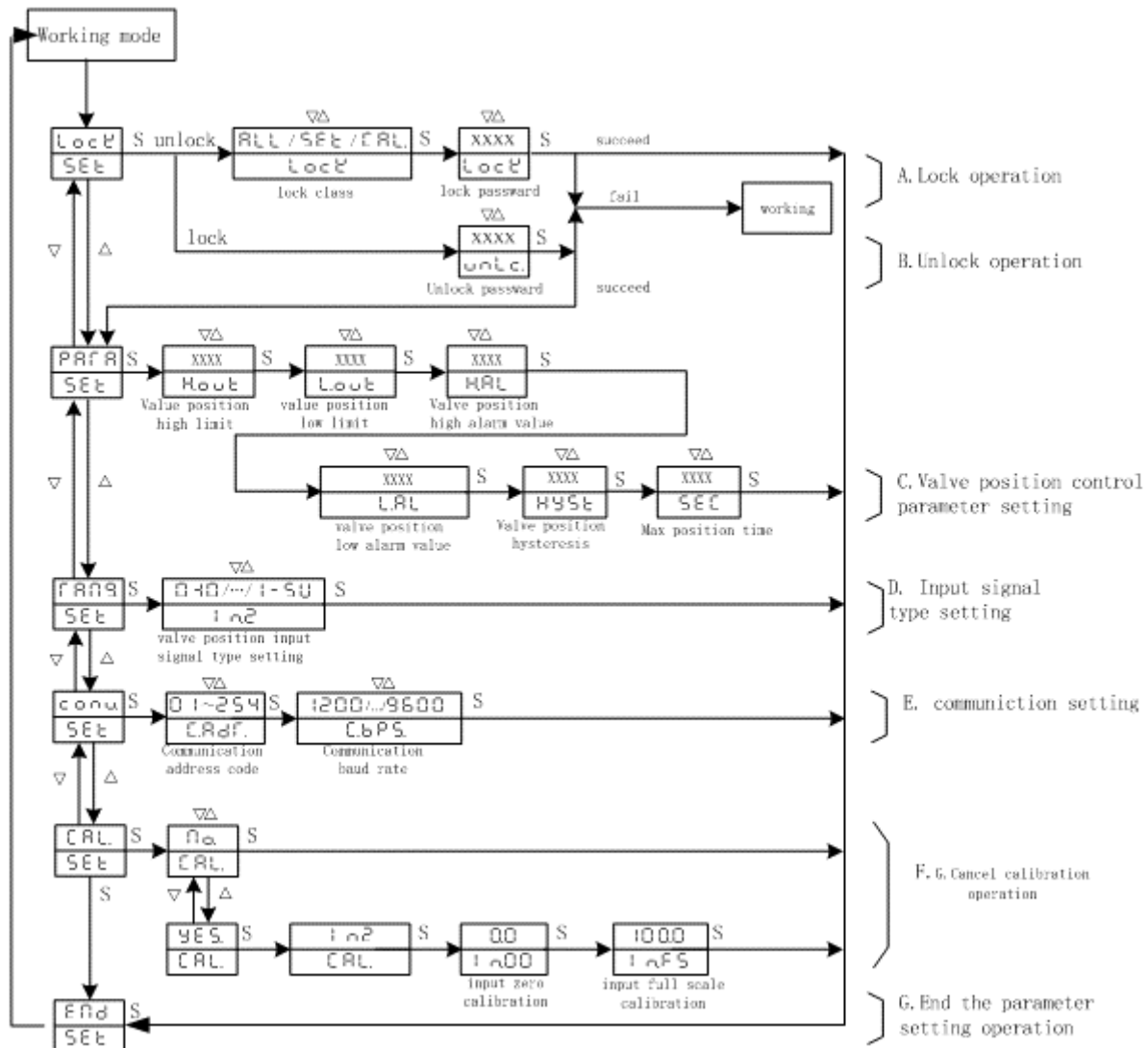


Outline:	80×160×150mm	96×96×110mm	72×72×110 mm
Panel cutoff:	76 ^{+0.74} ×152 ^{+1.00} mm	92 ^{+0.87} ×92 ^{+0.87} mm	68 ^{+0.74} ×68 ^{+0.74} mm

Name		Contents
Display	Up display	● In auto control mode, it indicates the valve position command output value ● In manual control mode, it indicates the valve position command output value ● In initial state, it indicates (DFDA) ● In parameter setting mode, it indicates parameter name or value ● It indicates , if IN1 or IN2 input line is break out
	SV bar graph	● It indicates the valve position command output value.
	Lower display	● In auto control mode, it indicates the actual valve position feedback value ● In manual control mode, it indicates the actual valve position feedback value ● In initial state, it indicates ● In parameter setting mode it indicates or parameter name ● It indicate if IN2 input line is break out
	MV bar graph	● It indicate actual valve position feedback value
Operation		● In manual control mode, press it will close the valve ● In parameter setting mode, press it will decrease the parameter valve
		● In working mode, press it will enter the parameter setting mode ● In parameter setting mode, press it to confirm the setting value

		● In manual control mode, press it will open the valve ● In parameter setting mode, press it will increase the parameter valve
		● Press it will change the working mode between auto and manual control e
LED lamp	MAN	● In manual control mode, it lights
	ALARM	● If the valve position alarm is active, it lights

6 .Key operation diagram



7. Operation Guide

A. Working mode

B. Lock operation

Menu and operation	Factory setting	Menu and operation
- Entry of the lock unlock menu group - Press key SET to confirm - Press key Δ、∇ to exit		Entry of the lock menu group
A		
/ / - Lock class setting - Press key Δ、∇ to modify - Press key SET to confirm		: Lock all menu : lock all menu besides SP/ / P : Lock calibration menu only
- Lock password setting - Press key Δ、∇ to modify - Press key SET to confirm		Lock password setting Note: "00" is invalid password
B		
- Unlock password setting - Press key Δ、∇ to modify - Press key SET to confirm		Unlock password setting

C. Valve position limit, alarm setting

Menu and operation	Factory setting	Menu and operation
- Entry of the Valve position limit and alarm menu group - Press key SET to confirm - Press key Δ、∇ to exit		
XXXX - Valve position high limit setting - Press key Δ、∇ to modify - Press key SET to confirm		Valve position high limit setting
XXXX - Valve position low limit setting - Press key Δ、∇ to modify - Press key SET to confirm		Valve position low limit setting
XXXX H.AL - Valve position high alarm value setting - Press key Δ、∇ to modify. - Press key SET to confirm	.	: high alarm
XXXX L.AL - Valve position low alarm value setting - Press key Δ、∇ to modify. - Press key SET to confirm	.	
XXXX - Valve position hysteresis - Press key "Δ" or "∇" to modify the setting - Press key "SET" to enter		Hyst $\leq$ 0.5%
XXXX - time setting - Press key "Δ" or "∇" to modify - Press key "SET" to confirm		Time setting

D. Input setting

Menu and operation	Factory setting	Menu and operation
- Entry of the range menu group - Press key SET to confirm - Press key Δ、∇ to exit		
- /--/ - - IN1 signal type selection - Press key Δ、∇ to modify - Press key SET to confirm		- : 0-10mA - : 4-20mA - : 0-5V - : 1-5V

E. Communication parameter setting

Menu and operation		Factory setting	Parameter explain
	- Entry of the communication menu group - Press key SET to confirm - Press key Δ、∇ to exit		
-	- Communication address setting - Press key Δ、∇ to modify - Press key SET to confirm		Communication address setting: 01-254
/.../	- communication baud rate settin - Press key Δ、∇ to modify - Press key SET to confirm		: 1200bps; : 2400 bps; : 4800 bps; : 9600 bps;

F. Input signal zero and full-scale calibration

Menu and operation		Factory setting	Parameter explain
	- Entry of the calibration menu group - Press key SET to confirm - Press key Δ、∇ to exit		
/	- Exit or sure to enter selection - Press key Δ、∇ to modify - Press key SET to confirm		: exit calibration : Enter to calibrate
In2 CAL	- Entry of input calibration menu group - Press key SET to confirm - Press key Δ、∇ to exit		
	- Input zero signal calibration - Press key SET to confirm - Press key Δ、∇ to exit		- / - input's zero signal is 0.00mA - / - input's zero signal is 0.00V
100.0 In.FS	- Input full scale signal calibration - Press key SET to confirm - Press key Δ、∇ to exit		- / - input's full scale signal is 20.00mA - / - Input's full scale signal is 5.000V

G. End parameter setting operation

Menu and operation		Factory setting	Parameter explain
	- End parameter setting operation - Press key SET to confirm - Press key Δ、∇ to exit		End parameter setting operation

8. Trouble elimination

Trouble		Cause	Eliminate method
Not lighting		Power fail	Check the power
		Power terminal fail	Take out the device core and check the power terminal
		Device go wrong	Contact to the distribute or manufacture
LED display		Input type setting wrong	Check the input type setting
		Input signal overflow	Check the input signal
		Input signal line break	Check the input signal wire
		Input type wrong	Check the input type setting
		Input signal overflow	Check input signal
		Calibration wrong	Calibration the input again
LED display		Input type wrong	Check input type setting
		Input signal under -range	Check input signal
		Calibration wrong	Calibration the input again

Display wrong	Input type wrong	Check the input type setting
	Correction menu setting wrong	Check the correction setting menu
	Input wire wrong	Check the input wire
	Input signal wrong	Check the input signal
Can not enter the corresponding menu	Device type wrong	Contact to the distribute or manufacture
	The menu be locked	Unlock the menu
Can't unlock the menu	Have not the menu	Contact to the distribute or manufacture
	Lose the unlock code	Contact to the distribute or manufacture
Display change suddenly	Electro-magnetic contactor spark influence	Remove the spark with a spark absorber
	Signal disturbance too strong	Depart the input signal cable from the power line
	Power disturbance too strong	Depart the device power from the power motor/transducer.
	Field cable confusion	VDC load connect a parallel reverse diode
		Signal cable depart from power cable
		Using shield signal cable, the shield connect to the earth
	Power pollution	Depart the device power supply from other power supply
		Depart the device power from the SCR device/transducer
		Add a on line power supply
Power unit fail	Power supply wrong	Check the power supply cleaner
Relay action wrong	Power supply pollution	Instead of a independent power supply ; add a power supply cleaner
	Contactors spark influence	Add a spark absorber to the AC contactor Add a parallel reverse diode to the DC load