FC3/FL3 Series PLC Specifications

Products Overview

- It supports IOT modules
- Free power downloading
- Remote downloading and configuration
- It supports Flexem FlexCloud platform
- Hidden BD module connection

Products Specifications

Model		FC3-20MT-AC FL3-20MR-AC	FC3-24MT-AC FL3-24MR-AC	FC3-32MT-AC FL3-32MR-AC	FC3-40MT-AC FL3-40MR-AC	FC3-48MT-AC FL3-48MR-AC
Main PLC Input		12	12	16	24	24
Main PLC Output		8	12	16	16	24
High Speed Counting		2-count 100KHz				
High-speed Pulse	Only for transistors	2-count 100KHz				
Expandable Capability	IO Expandable Modules	Max 8 sets				
	BD Expandable Modules	1 set			2 sets	
	IOT Communication Modules	1 set(optional FL3-2G/4G/WiFi/NET module)				
Communication Ports	Miscro USB	It supports uploading& downloading, online monitoring.				
	RS232/RS485	2 RS232/485 ports optional, serial ports communication, baud rate: 4800~921600Bps				
	Ethernet	1 Modbus Tcp Slave, FC3 series did not equip Ethernet ports.				
Calender		Optional			Built-in	
Wiring structure		Dis-mountable terminal platforms				
Power	Consumption	32W	33.0W	34.2W	36W	38W
	Voltage	AC85~264V,(Hz), it is with over-voltage protection.				
DC24V Output		24V,±8%, Max500mA, it is with over-current protection.				
Instant power shortage		Within 100ms				
Anti-voltage Test		L,N terminals grounding 1500VAC,1 minute				
Anti-noise		1500Vp-p, pulse width 1μS				
Anti-vibration		5~13.2Hz vibration 7mm,13Hz~100Hz accelerating 2G,X,Y,Z each direction for 20 times.				
Shock-proof		Semi Sine wave, accelerating 15G, continuous for 11ms， X,Y, Z axis for 6 times.				
Anti-corruption		Tri-layer wet film spraying thickness≥20μm				
CE Standard		Confirms to EN61131-2:2007 standard				
Environment		Working temperature: -10C~60C Storage temperature: -20C~70C				

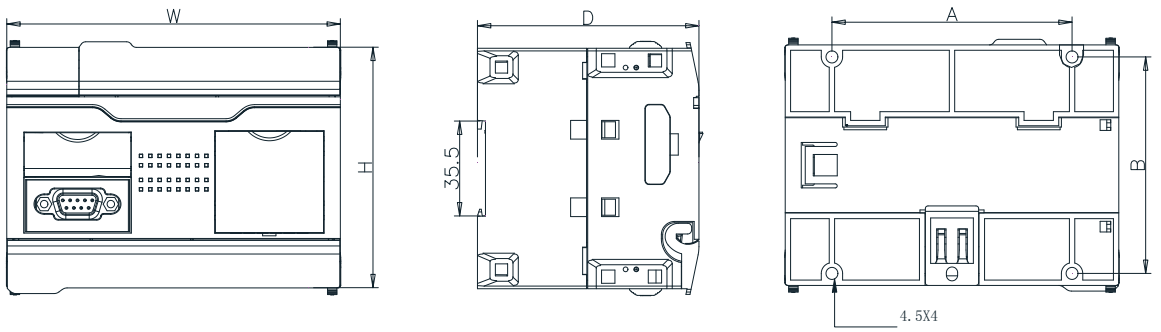
Temperature		
Environment Humidity	5%~95%(non condensate)	
Altitude	≤2000m	
Radiation Way	Natural Cooling	
Mechanical Structure	ABS Engineering	
Dimension(WXHXD)	125mm ×90mm × 83mm	172mm ×90mm × 83mm
Programming Software	FlexLogic	

FC3/FL3 Series Main Unit Parameters

Item Model		FC3/FL3 Series Main Unit
Program execution way		Circulating scanning, command interruption, procedure sequence order
Input/output Control		Freshening method
Programming Way		Ladder diagram, standard C language, can be combined using
Calculation Processing Speed		Basic Command 0.1us/ function Command (ON status 5us/OFF status 0.5us)
User Program Capacity		150K Bytes after coding
Power-off Protection Capacity		2K Bytes
Scanning Time		Empty Program<1ms
Command Type	Basic sequence control/Step ladder digraph	Sequence order Command 17/Step ladder digraph command 2 items
	Application Command	Application command 260
Input Relay	DI Input Relay	X0~X370 (Octal No),256 counts
	AI Input Relay	AI 0~255 256 counts
Output Relay	DO Output Relay	Y0~Y370 (Octal No),256 counts
	AO Output Relay	AO 0~255 256 counts
Assist Relay M	General Using	M0~M2047,2048 counts，the software can set power-down and system defaults (M500-M1023)
	Specific Using	SM000~SM511，512 counts
Status Relay S		S0-S999, 1000 counts，the software can set power-down range and system defaults S500-S999
Timer T	100ms	T0~T199 200 counts(timing 0.1~3276.7 S), inside T192~T199 is accumulative type
		T250~T255 6 counts(timing 0.1~3276.7 S), power-down type.
	10ms	T200~T245 46 counts (timing 0.01~327.67 S)
	1ms	T246~T249 4 counts (timing 0.001~32.767 S)，power-down

		type.
Counter C	16Bit	200 counts, C0~C199, inside C100~C199 defaults power-down area (software can be set)
	32Bit	56 counts , C200~C255. insideC220~C255 defaults power-down area (software can be set)
Data Register D	General Using	D0~D4095 (4096counts),the software can set power-down area(it defaults 0200-0511 (312 counts)
	Specific Using	SD0~D511 (512 counts)
Indicator Register	Data V0,Z0	V0~V7 (8 counts),Z0~Z7 (8 counts)
Jumping Branch	LBL,CJ Command Using	L0~L127 total 127 counts
Sub Program	CALL Command sub program using	P0~P127 total 128 counts
Jumping Branch	LBL,CJ Command Using	L0~L127 total 127 counts
PID Control		8 line
Program Interruption	Input Interruption I	I0~I11 total 12 counts
	Timing Interruption I	I16~I18 total 3 counts
Constant	Decimal （K）	16 bit:-32767-32768～32767, 32bit:-2,47,483,648～2,147,483,647
	hexadecimal digit （H）	16 bit:0000～FFFF,32 bit:-0000,0000～FFFF,FFFF
	32bit floating Number （F）	It is mainly used for appointed application command operation value.

Size

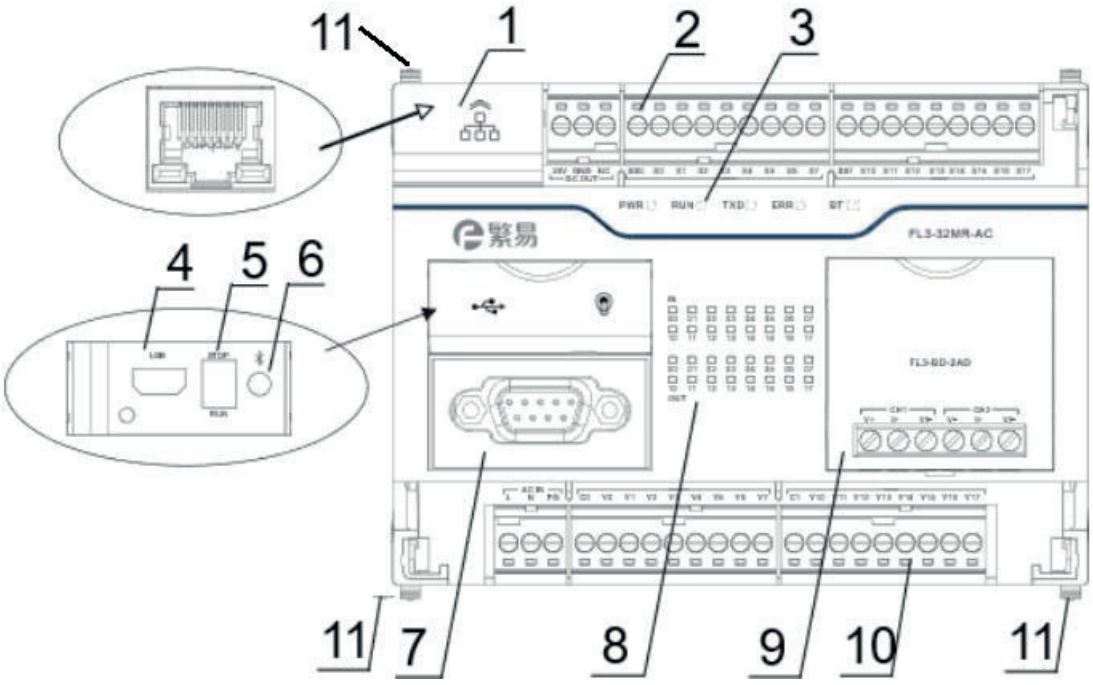


Dimension：

(Unit： mm)

Model	Total Count	Size	Screw Installation Size		Dimension
			A	B	W×H×D
FC3/FL3-20MT(R)-AC	20	35	90	81	125×90×83
FC3/FL3-24MT(R)-AC	24				
FC3/FL3-32MT(R)-AC	32				
FC3/FL3-40MT(R)-AC	40		137	81	172×90×83
FC3/FL3-48MT(R)-AC	48				

Structure



The name and function of the above unit components illustration is as below:

No	Name	Usage
1	Ethernet Ports	Ethernet ports communication Note: FC3 series did not equip Ethernet ports.
2	Dismount-able Terminal Strips	24VDC power output terminal strips,X-point input signal wiring terminal strips.
10		220V power input terminal strips, Y-point output signal wiring terminal strips.
3	Module Running Status Indication Light	PWR: working power indication light， it will always be light on when powering on.
		RUN: Main PLC running indication light, it will be lighting on during normal running,otherwise the light will not be on.
		TXD: Serial ports communication light.
		ERR: error indication light： ERR light is not on: Module normal working status. ERR light blink: module did not do authorization, and it needs to be returned to factory to be processed. ERR light on: the module cannot be used as serious application faults occur,you can make program initialization or update the firmware to PLC. If the problem is still not solved, you need return the module to the factory.

		BT: Bluetooth indication light with reserve function.
4	Micro USB Ports	User Program Downloading ports
5	Main RUN/STOP Dial Switch	You can dial PLC main machine entering RUN status, and dial PLC main machine PLC entering Stop status
6	Bluetooth Switch	Reservation function
7	DB 9Pin serial Ports	The main machine is with Port1/Port2, RS232/RS485 can be selected"chosen" by software.
8	Input/output status indication light	The main machine all X and Y working status indication light
9	Expandable BD board	Optional function and module.
11	Left/right expansion module Installation buckles	You can install the left/right expansion module around machine machine through this installation buckles.

Terminals Definition

DC OUT Max500mA			X0~X7 Input Counts									X10~X13 Input Counts								
24V	GND	.	SS0	X0	X1	X2	X3	X4	X5	X6	X7	SS1	X10	X11	X12	X13	.	.	.	.
FL3-20MT-AC(12DI 8DO)																				
L	N	PG	C0	Y0	Y1	Y2	Y3	Y4	Y5	Y6	Y7	.	.	.	.	.	.	.	.	.
AC IN 220VAC			Y0~Y7 Output Counts									Empty Counts								

DC OUT Max500mA			X0~X7 Input Counts									X10~X13 Input Counts								
24V	GND	.	SS0	X0	X1	X2	X3	X4	X5	X6	X7	SS1	X10	X11	X12	X13	.	.	.	.
FL3-20MR-AC(12DI 8DO)																				
L	N	PG	C0	Y0	Y1	Y2	Y3	.	C1	Y4	Y5	Y6	Y7	.	.	.	.	.	.	.
AC IN 220VAC			Y0~Y3Output Counts					Y4~Y7Output Counts				Empty Counts								

DC OUT Max500mA			X0~X7Input Counts								X10~X13Input Counts								
24V	GND	.	SS0	X0	X1	X2	X3	X4	X5	X6	X7	SS1	X10	X11	X12	X13	.	.	.	.
FL3-24MT-AC(12DI 12DO)																				
L	N	PG	C0	Y0	Y1	Y2	Y3	Y4	Y5	Y6	Y7	C1	Y10	Y11	Y12	Y13	.	.	.	.
AC IN 220VAC			Y0~Y7Output Counts									Y10~Y13Output Counts								

DC OUT Max500mA			X0~X7Input Counts								X10~X13Input Counts								
24V	GND	.	SS0	X0	X1	X2	X3	X4	X5	X6	X7	SS1	X10	X11	X12	X13	.	.	.	.
FL3-24MR-AC(12DI 12DO)																				
L	N	PG	C0	Y0	Y1	Y2	Y3	.	C1	Y4	Y5	Y6	Y7	.	C2	Y10	Y11	Y12	Y13	.
AC IN 220VAC			Y0~Y3Output Counts						Y4~Y7Output Counts						Y10~Y13Output Counts					

DC OUT Max500mA			X0~X7 Input Counts								X10~X17Input Counts								
24V	GND	.	SS0	X0	X1	X2	X3	X4	X5	X6	X7	SS1	X10	X11	X12	X13	X14	X15	X16	X17
FL3-32MR-AC/FL3-32MT-AC(16DI 16DO)																				
L	N	PG	C0	Y0	Y1	Y2	Y3	Y4	Y5	Y6	Y7	C1	Y10	Y11	Y12	Y13	Y14	Y15	Y16	Y17
AC IN 220VAC			Y0~Y7 Output Counts									Y10~Y17Output Counts								

DC OUT Max500mA			X0~X7 Input Counts									X10~X17 Input Counts									X20~X27 Input Counts									
24V	**GND**	**.**	**SS0**	**X0**	**X1**	**X2**	**X3**	**X4**	**X5**	**X6**	**X7**	**SS1**	**X10**	**X11**	**X12**	**X13**	**X14**	**X15**	**X16**	**X17**	**SS2**	**X20**	**X21**	**X22**	**X23**	**X24**	**X25**	**X26**	**Z27**
FL3-40MT-AC/FL3-40MR-AC(24DI 16DO)																													
L	N	PG	C0	Y0	Y1	Y2	Y3	Y4	Y5	Y6	Y7	C1	Y10	Y11	Y12	Y13	Y14	Y15	Y16	Y17	.	.	.	.	.	.	.	.	.
AC IN 220VAC			Y0~Y7 Output Counts									Y10~Y17 Output Counts									Empty Terminals								

DC OUT Max500mA			X0~X7 Input Counts									X10~X17 Input Counts									X20~X27 Input Counts								
24V	GND	.	SS0	X0	X1	X2	X3	X4	X5	X6	X7	SS1	X10	X11	X12	X13	X14	X15	X16	X17	SS2	X20	X21	X22	X23	X24	X25	X26	Z27
FL3-48MT-AC/FL3-48MR-AC(24DI 24DO)																													
L	N	PG	C0	Y0	Y1	Y2	Y3	Y4	Y5	Y6	Y7	C1	Y10	Y11	Y12	Y13	Y14	Y15	Y16	Y17	C2	Y20	Y21	Y22	Y23	Y24	Y25	Y26	Y27
AC IN 220VAC			Y0~Y7 Output Counts									Y10~Y17 Output Counts									Y20~Y27 Output Counts								

FL3series main PLC wiring terminals functions:

L	Input Power 220VAC
N	Input Power null line
PG	Grounding
24V	Output 24VDC+ ports
GND	Output 24VDC- ports
•	Empty terminals without wiring
SS0/SS1/SS2	X count input public counts
C0/C1/C2	Y count output public counts
X0-X27	X input counts
Y0-Y27	Y output counts