

## FBS Model List

Module Name		Specifications	
Basic Main Units	FBS-10MA◇Δ-○-C	6 points 24VDC digital input (2 points high speed 100KHz, 2 points medium speed 20KHz, 2 points medium speed total 5KHz); 4 points relay or transistor output (2 points high speed 100KHz, 2 points medium speed 20KHz); 1 RS232 or USB port(expandable up to 3); I/O is not expandable	
	FBS-14MA◇Δ-○-C	8 points 24VDC digital input (2 points high speed 100KHz, 2 points medium speed 20KHz, 4 points medium speed total 5KHz); 6 points relay or transistor output (2 point high speed 100KHz, 4 points medium speed 20KHz); 1 RS232 or USB port(expandable up to 3); I/O is not expandable	
	FBS-20MA◇Δ-○-C	12 points 24VDC digital input (2 points high speed 100KHz, 4 points medium speed 20KHz, 6 points medium speed total 5KHz); 8 points relay or transistor output (2 points high speed 100KHz, 6 points medium speed 20KHz); 1 RS232 or USB port(expandable up to 3)	
	FBS-24MA◇Δ-○-C	14 points 24VDC digital input (2 points high speed 100KHz, 6 points medium speed 20KHz, 6 points medium speed total 5KHz); 10 points relay or transistor output (2 points high speed 100KHz, 6 points medium speed 20KHz); 1 RS232 or USB port(expandable up to 3)	
	FBS-32MA◇Δ-○-C	20 points 24VDC digital input (2 points high speed 100KHz, 6 points medium speed 20KHz, 8 points medium speed total 5KHz); 12 points relay or transistor output (2 points high speed 100KHz, 6 points medium speed 20KHz); 1 RS232 or USB port(expandable up to 3); (MB is detachable terminal block)	
	FBS-32MB◇Δ-○-C	FBS-40MA◇Δ-○-C	24 points 24VDC digital input (2 points high speed 100KHz, 6 points medium speed 20KHz, 8 points medium speed total 5KHz); 16 points relay or transistor output (2 points high speed 100KHz, 6 points medium speed 20KHz); 1 RS232 or USB port(expandable up to 3); (MB is detachable terminal block)
	FBS-40MB◇Δ-○-C	FBS-60MA◇Δ-○-C	36 points 24VDC digital input (2 points high speed 100KHz, 6 points medium speed 20KHz, 8 points medium speed total 5KHz); 24 points relay or transistor output (2 points high speed 100KHz, 6 points medium speed 20KHz); 1 RS232 or USB port(expandable up to 3); (MB is detachable terminal block)
	FBS-60MB◇Δ-○-C		
Main Units	FBS-10MC◇Δ-○	6 points 24VDC digital input (2 points high speed 200KHz, 2 points medium speed 20KHz, 2 points medium speed total 5KHz); 4 points relay or transistor output (2 points high speed 200KHz, 2 points medium speed 20KHz); 1 RS232 or USB port (expandable up to 5); built-in RTC; I/O is not expandable	
	FBS-14MC◇Δ-○	8 points 24VDC digital input (2 points high speed 200KHz, 2 points medium speed 20KHz, 4 points medium speed total 5KHz); 6 points relay or transistor output (2 points high speed 200KHz, 4 points medium speed 20KHz); 1 RS232 or USB port (expandable up to 5); built-in RTC; I/O is not expandable	
	FBS-20MC◇Δ-○	12 points 24VDC digital input (4 points high speed 200KHz, 2 points medium speed 20KHz, 6 points medium speed total 5KHz); 8 points relay or transistor output (4 points high speed 200KHz, 4 points medium speed 20KHz); 1 RS232 or USB port (expandable up to 5); built-in RTC; detachable terminal block	
	FBS-24MC◇Δ-○	14 points 24VDC digital input (4 points high speed 200KHz, 4 points medium speed 20KHz, 6 points medium speed total 5KHz); 10 points relay or transistor output (4 points high speed 200KHz, 4 points medium speed 20KHz); 1 RS232 or USB port (expandable up to 5); built-in RTC; detachable terminal block	
	FBS-32MC◇Δ-○	20 points 24VDC digital input (6 points high speed 200KHz, 2 points medium speed 20KHz, 8 points medium speed total 5KHz); 12 points relay or transistor output (6 points high speed 200KHz, 2 points medium speed 20KHz); 1 RS232 or USB port (expandable up to 5); built-in RTC; detachable terminal block	
	FBS-40MC◇Δ-○	24 points 24VDC digital input (6 points high speed 200KHz, 2 points medium speed 20KHz, 8 points medium speed total 5KHz); 16 points relay or transistor output (6 points high speed 200KHz, 2 points medium speed 20KHz); 1 RS232 or USB port (expandable up to 5); built-in RTC; detachable terminal block	
	FBS-60MC◇Δ-○	36 points 24VDC digital input (8 points high speed 200KHz, 8 points medium speed total 5KHz); 24 points relay or transistor output (8 points high speed 200KHz); 1 RS232 or USB port (expandable up to 5); built-in RTC; detachable terminal block	
NC Positioning Main Units	FBS-20MN◇Δ-○	2 sets (1 axis) 920KHz 5VDC digital differential input, 10 points 24VDC digital input (4 points high speed 200KHz, 6 points medium speed total 5KHz); 2 sets (1 axis) 920KHz 5VDC digital differential output, 6 points relay or transistor output (average high speed 200KHz); 1 RS232 or USB port (expandable up to 5); built-in RTC; detachable terminal block	
	FBS-32MN◇Δ-○	4 sets (2 axes) 920KHz 5VDC digital differential input, 16 points 24VDC digital input (4 points high speed 200KHz, 8 points medium speed total 5KHz); 4 sets (2 axes) 920KHz 5VDC digital differential output, 8 points relay or transistor output (4 points high speed 200KHz); 1 RS232 or USB port (expandable up to 5); built-in RTC; detachable terminal block	
	FBS-44MN◇Δ-○	8 sets (4 axes) 920KHz 5VDC digital differential input, 20 points 24VDC digital input (8 points medium speed total 5KHz); 8 sets (4 axes) 920KHz 5VDC digital differential output, 8 points relay or low speed transistor output; 1 RS232 or USB port (expandable up to 5); built-in RTC; detachable terminal block	
Right Side Expansion Modules	Expansion Power Supply	FBS-EPW-AC/D24	Power supply of 100~240VAC or 24VDC input for expansion module; 3 sets output power with 5VDC, 24VDC, and 24VDC, 14W capacity
	DIO Expansion Units	FBS-24XY◇-○	14 points 24VDC digital input, 10 points relay or transistor output, built-in power supply
		FBS-40XY◇-○	24 points 24VDC digital input, 16 points relay or transistor output, built-in power supply
		FBS-60XY◇-○	36 points 24VDC digital input, 24 points relay or transistor output, built-in power supply
	DIO Expansion Modules	FBS-8X	8 points 24 VDC digital input
		FBS-8Y◇	8 points relay or transistor output
		FBS-8XY◇	4 points 24VDC digital input, 4 points relay or transistor output
		FBS-16Y◇	16 points relay or transistor output
		FBS-16XY◇	8 points 24VDC digital input, 8 points relay or transistor output
		FBS-20X	20 points 24VDC digital input
	Thumbwheel switch module	FBS-24XY◇	14 points 24VDC digital input, 10 points relay or transistor output
		FBS-40XY◇	24 points 24VDC digital input, 16 points relay or transistor output
		FBS-60XY◇	36 points 24VDD digital input, 24 points relay or transistor output
		FBS-24X	24 points high-density 24VDC digital input, 30 pins header with latch
		FBS-24YT/J	24 points high-density transistor SINK(T) or SOURCE(J) output (0.1A max.) : 30 pins header with latch
	16/7 Segment LED display modules	FBS-32DGI	8 sets 4 digits (total 32 digits) thumbwheel switch (or 128 points independent switch) multiplex input module, 30 pins header connector
		FBS-7SG1	1 set 8 digits 7-segment/4 digits 16-segment LED display (or 64 points independent LED) output display module, 16 pins header connector
		FBS-7SG2	2 sets 8 digits 7-segment/4 digits 16-segment LED display (or 128 points independent LED) output display module, 16 pins header connector

Module Name		Specifications
Left Side Expansion Modules	AIO modules	<p>FBs-2DA 2 channels, 14-bit analog output module (-10~10V, 0~10V or -20~20mA, 0~20mA)</p> <p>FBs-4DA 4 channels, 14-bit analog output module (-10~10V, 0~10V or -20~20mA, 0~20mA)</p> <p>FBs-4A2D 4 channels, 14-bit analog input (same specification as 6AD)+2 channels, 14-bit analog output (same specification as 2DA) combo module</p> <p>FBs-6AD 6 channels, 14-bit analog input module (-10~10V, 0~10V or -20~20mA, 0~20mA)</p>
	Temperature measurement modules	<p>FBs-2TC 2 channels, thermocouple temperature input module with 0.1°C resolution.</p> <p>FBs-6TC 6 channels, thermocouple temperature input module with 0.1°C resolution.</p> <p>FBs-16TC 16 channels, thermocouple temperature input module with 0.1°C resolution.</p> <p>FBs-6RTD 6 channels, RTD temperature input module with 0.1°C resolution.</p> <p>FBs-16RTD 16 channels, RTD temperature input module with 0.1°C resolution.</p> <p>FBs-6NTC 6 channels, NTC temperature input module with 0.1°C resolution.</p>
	AI + Temperature Measurement combo modules	<p>FBs-2A4TC 2 channels, 14-bit analog input (same specifications as 6AD)+ 4 channels thermocouple temperature input (same specifications as 6TC) combo module</p> <p>FBs-2A4RTD 2 channels, 14-bit analog input (same specifications as 6AD) + 4 channels RTD temperature input (same specifications as 6RTD) combo module</p>
	Voice modules	Built-in 1MB memory (play continuously up to 2 minutes), extendable 4GB SD card(play continuously up to 8,000 minutes) voice module, 245 messages, output 2W
	Load Cell Module	<p>FBs-1LC 1 channel, load cell measurement module with 16-bit resolution (including sign bit)</p> <p>FBs-2LC 2 channels, load cell measurement module with 16-bit resolution (including sign bit)</p>
	Potential Meter Module	FBs-4PT 4 channels, 14-bit potential meter input module (Impedance range: 1~10K Ω)
	Communication modules	<p>FBs-CM22 2 ports RS232 (Port3 +Port 4) communication module</p> <p>FBs-CM55 2 ports RS485 (Port3 +Port 4) communication module</p> <p>FBs-CM25 1 port RS232 (Port3) + 1 port RS485 (port 4) communication module</p> <p>FBs-CM25E 1 port RS232 (Port3) + 1 port RS485 (port 4) + Ethernet network interface communication module</p> <p>FBs-CM55E 1 port RS485 (Port3) + 1 port RS485 (port 4) + Ethernet network interface communication module</p> <p>FBs-CMZB ZigBee communication module</p> <p>FBs-CMZBR ZigBee communication repeater</p> <p>FBs-CMGSM GSM wireless communication module</p> <p>FBs-CM25C General purpose RS232 to RS485/RS422 communication interface converter with photocouple isolation</p> <p>FBs-CM5R General purpose RS485 repeater with photocouple isolation</p> <p>FBs-CM5H General purpose 4 ports RS485 HUB with photocouple isolation, RS485 can be connected as star connection</p>
	Communication boards	<p>FBs-CB2 1 port RS232 (Port 2) communication board</p> <p>FBs-CB22 2 ports RS232 (Port 1+ Port 2) communication board</p> <p>FBs-CB5 1 port RS485 (Port 2) communication board</p> <p>FBs-CB55 2 ports RS485 (Port 1+ Port 2) communication board</p> <p>FBs-CB25 1 port RS232 (Port 1) + 1 port RS485 (Port 2) communication board</p> <p>FBs-CBE 1 port 10 Base T Ethernet communication board</p> <p>FBs-CBEH 1 port 100 Base T Ethernet communication board</p> <p>FBs-CBCAN 1 port CANopen communication board</p>
	AIO boards	<p>FBs-B2DA 2 channels, 12-bit analog output board (0~10V or 0~20mA)</p> <p>FBs-B2A1D 2 channels, 12-bit analog input + 1 channel, 12-bit analog output combo analog board (0~10V or 0~20mA)</p> <p>FBs-B4AD 4 channels, 12-bit analog input board (0~10V or 0~20mA)</p>
	Precision Load Cell Module	FBs-1HLC 1 channel, high precision weighing control module with 24-bit resolution
Peripheral and Accessory	3-Axis Motion Control Module	3-Axis with linear and circular interpolation advanced motional control module, 3 sets of 200KHz high speed pulse input, 3 sets of 500KHz high speed pulse output, 14 points main unit, 16M Bytes program capacity, 20K Words retentive file register, built-in RS485 and Ethernet, 7.62mm detachable terminal block
	Simple HMI	<p>FBs-BDAP Board type Data Access Panel</p> <p>FBs-BPEP Board type Parameter Entry Panel</p> <p>FBs-PEP Multi characters with graphics-based Parameter Entry Pane</p>
		FBs-DAP-B/BR 16 X 2 LCD character display, 20 keys keyboard, 24VDC power supply, RS485 communication interface, built-in RFID Read/Write module with BR
		FBs-DAP-C/CR 16 X 2 LCD character display, 20 keys keyboard, 5VDC power supply, RS232 communication interface, built-in RFID Read/Write module with CR
	RFID Card	CARD-H Read / Write wireless card (for FBs-DAP-BR/CR and FBs-PEPR)
	Programming Devices	<p>FP-08 FBs- Series PLC handheld programmer</p> <p>Winproladder FATEK-PLC Winproladder Programming software</p>
	Memory Pack	FBs-PACK FBs-PLC program memory pack with 20K Words program, 20K Words register, write protection switch
	PWMMA module	PWMMA 10-bit single channel pulse width modulation(PWM) 0~10V analog output (AO) module
	USB- RS232 Converter Cable	FBs-U2C-MD-180 Communication converter cable with standard USB AM connector to RS232 MD4M connector (used in standard PC USB to FBs main unit Port 0 RS232), length 180cm
	Communication cables	FBs-232P0-9F-150 Mini-DIN 4M to DB9F communication cable (FBs main unit Port 0 RS232 connect to standard DB9M), length 150cm

Module Name		Specifications
High density DIO cable	FBs-232P0-9M-400	Mini-DIN 4M to DB9M communication cable (FBs main unit Port 0 RS232 connect to DB9F)
	FBs-232P0-MD-200	Mini-DIN 4M to Mini-DIN 4M communication cable (FBs main unit Port 0 RS232 connect to FBs-PEP/PEPR), length 200cm
	FBs-232P0-MDR-200	Mini-DIN 4M to 90° Mini-DIN 4M communication cable (FBs main unit Port 0 RS232 connect to FBs-PEP/PEPR), length 200cm
	HD30-22AWG-200	High density modules(FBs-24X, FBs-24YT/J, FBs-32DGI) connector , 30pin Socket, 22AWG I/O length200cm
	DBAN.8-nR	0.8" 4-digit 16-segment LED display, n means R(Red) 16-segment LED characters display installed, can be 1~4
	DBAN.2.3-nR	2.3" 4-digit 16-segment LED display, n means R(Red) 16-segment LED characters display installed, can be 1~4
16/7-Segment LED display	DB.56-nR	0.56" 8-digit 7-segment display, n means R(Red) 7-segment LED characters display installed, can be 1~8
	DB.8-nR	0.8" 8-digit 7-segment display, n means R(Red) 7-segment LED characters display installed, can be 1~8
	DB2.3-nR	2.3" 8-digit 7-segment display, n means R(Red) 7-segment LED characters display installed, can be 1~8
	DB4.0-nR	4.0" 4-digit 7-segment display, n means R(Red) 7-segment LED characters display installed, can be 1~4
Training Box	FBs-TBOX	46cm x 32 cm x 16cm suitcase, containing FBs-24MCT main unit, FBs-CM25E communication (RS232 + RS485 + Ethernet network), 14 simulated input switches, 10 external relay output terminal outlet I/O, peripherals such as stepping motor, encoder, 7-segment display, 10 of 10n indicator, thumbwheel switch, and 16 key keyboard.

- ◇ : R — Relay output; T — Transistor SINK(NPN) output; J — Transistor SOURCE (PNP) output; O — PhotoMOS output (non-standard)
- o : P — built-in RS232 port ; U — built-in USB port (non-standard)
- ◎ : AC — 100~240VAC power supply ; D12 — 12VDC power supply ; D24 — 24VDC power supply
- C : Blank — Standard ; C — add in RTC
- The unmarked frequencies of Digital Input (DI) or Digital Output (DO) are low speed.

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