

Серия MELSEC iQ-F



Серия MELSEC iQ-F является дальнейшим развитием успешной серии F и отличается усовершенствованной высокоскоростной шиной, расширенным перечнем встроенных функций, поддержкой перспективной сети SSCNETIII/H и улучшенной средой разработки.

Для программирования и параметрирования используется программное обеспечение разработчика GXWorks3.

Независимо от вида применения – в качестве автономного решения или для сетевых систем – MELSEC iQ-F выведет ваше предприятие на более высокий уровень.

Технические характеристики:

FX5U base units with 32–80 I/Os

Specifications	FX5U-32MR/DS	FX5U-32MT/DSS	FX5U-32MR/ES	FX5U-32MT/ESS
Integrated inputs/outputs	32	32	32	32
Power supply	24 V DC	24V DC	100–240 V AC	100–240 V AC
Integrated inputs	16	16	16	16
Integrated outputs	16	16	16	16
Output type	Relay	Transistor (source type)	Relay	Transistor (source type)
Power consumption W	30	30	30	30
Weight kg	0.7	0.7	0.7	0.7
Dimensions (WxHxD) mm	150x90x83	150x90x83	150x90x83	150x90x83
Order information Art. no.	297436	297438	280489	280491

Specifications	FX5U-64MR/DS	FX5U-64MT/DSS	FX5U-64MR/ES	FX5U-64MT/ESS
Integrated inputs/outputs	64	64	64	64
Power supply	24 V DC	24 V DC	100–240 V AC	100–240 V AC
Integrated inputs	32	32	32	32
Integrated outputs	32	32	32	32
Output type	Relay	Transistor (source type)	Relay	Transistor (source type)
Power consumption W	40	40	40	40
Weight kg	1.0	1.0	1.0	1.0
Dimensions (WxHxD) mm	220x90x83	220x90x83	220x90x83	220x90x83
Order information Art. no.	301923	301945	280492	280494

Specifications	FX5U-80MR/DS	FX5U-80MT/DSS	FX5U-80MR/ES	FX5U-80MT/ESS
Integrated inputs/outputs	80	80	80	80
Power supply	24 V DC	24V DC	100–240 V AC	100–240 V AC
Integrated inputs	40	40	40	40
Integrated outputs	40	40	40	40
Output type	Relay	Transistor (source type)	Relay	Transistor (source type)
Power consumption	W 45	45	45	45
Weight	kg 1.2	1.2	1.2	1.2
Dimensions (WxHxD)	mm 285x90x83	285x90x83	285x90x83	285x90x83
Order information	Art. no. 301946	301948	280495	280497

* Sink type transistor output units on request.

FX5UC base units with 32–96 I/Os

Specifications	FX5UC-32MT/DSS	FX5UC-64MT/DSS	FX5UC-96MT/DSS
Integrated inputs/outputs	32	64	96
Power supply	24 V DC	24 V DC	24 V DC
Integrated inputs	16	32	48
Integrated outputs	16	32	48
Output type	Transistor (source type)	Transistor (source type)	Transistor (source type)
Power consumption	5 W	8 W	11 W
Weight	kg 0.2	0.3	0.35
Dimensions (WxHxD)	mm 42.1x90x89.1	62.2x90x89.1	82.3x90x89.1
Order information	Art. no. 283530	294579	294581

* Sink type transistor output units on request.

Models mentioned above: FX5U-32MR/DS, FX5U-32MT/DSS, FX5U-32MR/ES, FX5U-32MT/ESS, FX5U-64MR/DS, FX5U-64MT/DSS, FX5U-64MR/ES, FX5U-64MT/ESS, FX5U-80MR/DS, FX5U-80MT/DSS, FX5U-80MR/ES, FX5U-80MT/ESS, FX5UC-32MT/DSS, FX5UC-64MT/DSS, FX5UC-96MT/DSS

- Модуль центрального процессора
- Модуль ввода-вывода
- Аналоговый модуль
- Модуль высокоскоростного счетчика
- Простой модуль движения / модуль позиционирования
- Сетевой/коммуникационный модуль
- Опция

➤ Модуль центрального процессора



Многофункциональный базовый модуль с источником питания, ЦПУ и каналами ввода/вывода. Встроенные возможности включают высокоскоростные счетчики, выходы позиционирования, Ethernet и слот для SD-карты.

Дополнительная информация

Технические характеристики

FX5U base units with 32–80 I/Os

Specifications	FX5U-32MR/DS	FX5U-32MT/DSS	FX5U-32MR/ES	FX5U-32MT/ESS
Integrated inputs/outputs	32	32	32	32
Power supply	24 V DC	24V DC	100–240 V AC	100–240 V AC
Integrated inputs	16	16	16	16
Integrated outputs	16	16	16	16
Output type	Relay	Transistor (source type)	Relay	Transistor (source type)
Power consumption W	30	30	30	30
Weight kg	0.7	0.7	0.7	0.7
Dimensions (WxHxD) mm	150x90x83	150x90x83	150x90x83	150x90x83
Order information Art. no.	297436	297438	280489	280491

Specifications	FX5U-64MR/DS	FX5U-64MT/DSS	FX5U-64MR/ES	FX5U-64MT/ESS
Integrated inputs/outputs	64	64	64	64
Power supply	24 V DC	24 V DC	100–240 V AC	100–240 V AC
Integrated inputs	32	32	32	32
Integrated outputs	32	32	32	32
Output type	Relay	Transistor (source type)	Relay	Transistor (source type)
Power consumption W	40	40	40	40
Weight kg	1.0	1.0	1.0	1.0
Dimensions (WxHxD) mm	220x90x83	220x90x83	220x90x83	220x90x83
Order information Art. no.	301923	301945	280492	280494

Specifications	FX5U-80MR/DS	FX5U-80MT/DSS	FX5U-80MR/ES	FX5U-80MT/ESS
Integrated inputs/outputs	80	80	80	80
Power supply	24 V DC	24V DC	100–240 V AC	100–240 V AC
Integrated inputs	40	40	40	40
Integrated outputs	40	40	40	40
Output type	Relay	Transistor (source type)	Relay	Transistor (source type)
Power consumption	W 45	45	45	45
Weight	kg 1.2	1.2	1.2	1.2
Dimensions (WxHxD)	mm 285x90x83	285x90x83	285x90x83	285x90x83
Order information	Art. no. 301946	301948	280495	280497

* Sink type transistor output units on request.

FX5UC base units with 32–96 I/Os

Specifications	FX5UC-32MT/DSS	FX5UC-64MT/DSS	FX5UC-96MT/DSS
Integrated inputs/outputs	32	64	96
Power supply	24 V DC	24 V DC	24V DC
Integrated inputs	16	32	48
Integrated outputs	16	32	48
Output type	Transistor (source type)	Transistor (source type)	Transistor (source type)
Power consumption	5W	8W	11W
Weight	kg 0.2	0.3	0.35
Dimensions (WxHxD)	mm 42.1x90x89.1	62.2x90x89.1	82.3x90x89.1
Order information	Art. no. 283530	294579	294581

* Sink type transistor output units on request.

Models mentioned above: FX5U-32MR/DS, FX5U-32MT/DSS, FX5U-32MR/ES, FX5U-32MT/ESS, FX5U-64MR/DS, FX5U-64MT/DSS, FX5U-64MR/ES, FX5U-64MT/ESS, FX5U-80MR/DS, FX5U-80MT/DSS, FX5U-80MR/ES, FX5U-80MT/ESS, FX5UC-32MT/DSS, FX5UC-64MT/DSS, FX5UC-96MT/DSS

➤ Модуль ввода-вывода



Модули ввода/вывода выпускаются в версиях со встроенным источником питания и без него и могут иметь различные конфигурации ввода/вывода.

Дополнительная информация

Технические характеристики

Powered I/O extension

Specifications	FX5-16 ER/ES	FX5-16 ET/ES	FX5-16 ET/ESS	FX5-32 ER/DS	FX5-32 ET/DS	FX5-32 ET/DSS	FX5-32 ER/ES	FX5-32 ET/ES	FX5-32 ET/ESS
Electrical data									
Integrated inputs/outputs	16	16	16	32	32	32	32	32	32
Power supply	AC range (+10 %, -15 %)			—			100–240 V		
	Frequency at AC			—			50/60		
	DC range (+20 %, -30 %)			24 V			—		
Max. input apparent power	—			25			25		
Inrush current at ON	—			50 A <0.5 ms			50 A <0.5 ms		
	24 V DC			—			30 A <5 ms		
	100 V AC			—			65 A <5 ms		
Allowable momentary power failure time	—			5			10 ^②		
	200 V AC			—			65 A <5 ms		
External service power supply (24 V DC)	—			—			310		
Power supply int. bus (5 V DC)	—			965			965		
Inputs									
Integrated inputs	8	8	8	16	16	16	16	16	16
Input type	Sink/source	Sink/source	Sink/source	Sink/source	Sink/source	Sink/source	Sink/source	Sink/source	Sink/source
Input signal voltage	24 V DC +20 %, -15 %	24 V DC +20 %, -15 %	24 V DC +20 %, -15 %	24 V DC +20 %, -15 %	24 V DC +20 %, -15 %	24 V DC +20 %, -15 %	24 V DC +20 %, -15 %	24 V DC +20 %, -15 %	24 V DC +20 %, -15 %
Min. current for logical 1	3 mA	3	3	3	3	3	3	3	3
Max. current for logical 0	1.5 mA	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Response time	Hardware filter delay: ON: 50 µs or less; OFF: 150 µs or less Digital filter setting value: 10 ms (initial value), adjustable from 10 µs to 70 ms								
Outputs									
Integrated outputs	8	8	8	16	16	16	16	16	16
Output type	Relay	Transistor (sink)	Transistor (source)	Relay	Transistor (sink)	Transistor (source)	Relay	Transistor (sink)	Transistor (source)
Switching voltage (max.)	≤30 V DC, ≤240 V AC	5–30 V DC	5–30 V DC	≤240 V AC, ≤30 V DC	5–30 V DC	5–30 V DC	≤240 V AC, ≤30 V DC	5–30 V DC	5–30 V DC
Max. output current	- per output	2 A	0.5	0.5	2	0.5	0.5	2	0.5
	- per group *	8	0.8/1.6 ^③	0.8/1.6 ^③	8	0.8/1.6 ^③	0.8/1.6 ^③	8	0.8/1.6 ^③
Response time	10 ms	≤0.2	≤0.2	10	≤0.2	≤0.2	10	≤0.2	≤0.2
Life of contacts (switching times) ^①	3,000,000 at 20 VA; 1,000,000 at 35 VA; 200,000 at 80 VA	—	—	3,000,000 at 20 VA; 1,000,000 at 35 VA; 200,000 at 80 VA	—	—	3,000,000 at 20 VA; 1,000,000 at 35 VA; 200,000 at 80 VA	—	—
Mechanical data									
Weight	kg	0.25	0.25	0.25	0.65	0.65	0.65	0.65	0.65
Dimensions (WxHxD)	mm	40x90x83	40x90x83	40x90x83	150x90x83	150x90x83	150x90x83	150x90x83	150x90x83
Order information	Art. no.	304652	304653	304654	297439	297440	297441	280506	280507

① Not guaranteed by Mitsubishi Electric

② Adjustable from 10 to 100 ms when the supply voltage is 200 V AC

③ 0.8 A for 4 outputs per group and 1.6 A for 8 outputs per group

* This limitation applies only per reference terminal for each group. Please observe the terminal assignments for the group identification.

Unpowered I/O extension

Specifications	High-speed pulse input/ output modules		Input modules		Output modules							
	FX5- 16ET/ES-H	FX5- 16ET/ESS-H	FX5- 8EX/ES	FX5- 16EX/ES	FX5- 8EVR/ES	FX5- 8EYT/ES	FX5- 8EYT/ESS	FX5- 16EVR/ES	FX5- 16EYT/ES	FX5- 16EYT/ESS		
Electrical data												
Integrated inputs/outputs	16	16	8	16	8	16	8	16	8	16		
Power supply	5 V DC	Supplied internally		Supplied internally		Supplied internally						
	24 V DC	Supplied from service power supply or external power supply		Supplied from service power supply or external power supply		Supplied internally						
Current consumption	5 V DC	mA	100	100	75	100	75	75	75	100	100	100
	24 V DC	mA	125 (82 ^①)	125 (82 ^①)	50	85	75	75	75	125	125	125
Inputs												
Integrated inputs	8	8	8	16								
Input type	Sink/source	Sink/source	Sink/source	Sink/source								
Input signal voltage	24 V DC +20 %, -15 %		24 V DC +20 %, -15 %									
Min. current for logical 1	mA	3.5	3.5	3.0	3.0							
Max. current for logical 0	mA	1.5	1.5	1.5	1.5							
Response time	X0 to X5: ON: ≤2.5 μs; OFF: ≤2.5 μs X6, X7: ON: ≤30 μs; OFF: ≤50 μs		ON: ≤50 μs; OFF: ≤150 μs									
Outputs												
Integrated outputs	8	8			8	16	8	16	8	16		
Output type	Transistor (sink)	Transistor (source)			Relay	Transistor (sink)	Transistor (source)	Relay	Transistor (sink)	Transistor (source)		
Switching voltage (max.)	5–30 V DC				≤240 V AC, ≤30 V DC	5–30 V DC	5–30 V DC	≤240 V AC, ≤30 V DC	5–30 V DC	5–30 V DC		
Max. output current	- per output	A	0.5	0.5			2	0.5	0.5	2	0.5	0.5
	- per group *	A	1.6 ^②	1.6 ^②			8	0.8 ^③	0.8 ^③	8	1.6 ^②	1.6 ^②
Response time	ms	Y0, Y1, Y4, Y5: ≤2.5 μs Y2, Y3, Y6, Y7: ≤0.2 ms				3,000,000 at 20 VA; 1,000,000 at 35 VA; 200,000 at 80 VA			3,000,000 at 20 VA; 1,000,000 at 35 VA; 200,000 at 80 VA			
Mechanical data												
Weight	kg	0.25	0.25	0.25	0.25	0.2	0.2	0.2	0.25	0.25	0.25	
Dimensions (WxHxD)	mm	40x90x83	40x90x83	40x90x83	40x90x83	40x90x83	40x90x83	40x90x83	40x90x83	40x90x83	40x90x83	
Order information	Art. no.	297442	297443	280498	280505	280499	280500	280501	280502	280503	280504	

① Current consumption when external power supply is used for the input circuit.

② 1.6 A for 8 outputs per group

③ 0.8 A for 4 outputs per group

* This limitation applies only per reference terminal for each group. Please observe the terminal assignments for the group identification.

Specifications	Input/output modules		Input modules				Output modules					
	FX5-C32ET/D	FX5-C32ET/DSS	FX5-C16EX/D	FX5-C16EX/DS	FX5-C32EX/D	FX5-C32EX/DS	FX5-C16EYT/D	FX5-C16EYT/DSS	FX5-C32EYT/D	FX5-C32EYT/DSS		
Electrical data												
Integrated inputs/outputs	32	32	16	16	32	32	16	16	32	32		
Power supply	5V DC	Supplied internally		Supplied internally				Supplied internally				
	24V DC	Input connector: Supplied from service power supply or external power supply Output connector: Supplied internally		Supplied from service power supply or external power supply				Supplied internally				
Current consumption	5V DC	mA	120	120	100	100	100	100	100	120	120	
	24V DC	mA	Input connector: 65 Output connector: 100 ^①		65	65	130	130	100	100	200	200
Inputs												
Integrated inputs	16	16	16	16	32	32						
Input type	Sink	Sink/source	Sink	Sink/source	Sink	Sink/source						
Input signal voltage	24V DC +20%, -15%		24V DC +20%, -15%									
Min. current for logical 1	mA	3.0	3.0	3.0	3.0	3.0	—					
Max. current for logical 0	mA	1.5	1.5	1.5	1.5	1.5						
Response time		ON: ≤50 μs; OFF: ≤150 μs		ON: ≤50 μs; OFF: ≤150 μs								
Outputs												
Integrated outputs	16	16					16	16	32	32		
Output type	Transistor (sink)	Transistor (source)					Transistor (sink)	Transistor (source)	Transistor (sink)	Transistor (source)		
Switching voltage (max.)	5–30 V DC		—				5–30 V DC		5–30 V DC			
Max. output current	- per output	A	0.1	0.1					0.1	0.1	0.1	0.1
	- per group *	A	0.8 ^②	0.8 ^②					0.8 ^②	0.8 ^②	0.8 ^②	0.8 ^②
Response time	ms	≤0.2 ms	≤0.2 ms					≤0.2	≤0.2	≤0.2	≤0.2	
Mechanical data												
Weight	kg	0.15	0.15	0.1	0.1	0.15	0.15	0.1	0.1	0.15	0.15	
Dimensions (WxHxD)	mm	20.1x90x53	20.1x90x53	14.6x90x53	14.6x90x53	20.1x90x53	20.1x90x53	14.6x90x53	14.6x90x53	20.1x90x53	20.1x90x53	
Order information												
Art. no.	283533	283534	294582	294583	283531	283532	294584	294585	283555	283556		

① Current consumption when external power supply is used for the input circuit.

② 0.8 A per COM /+V terminal

* This limitation applies only per reference terminal for each group. Please observe the terminal assignments for the group identification.

Models mentioned above: FX5-16ER/ES, FX5-16ET/ES, FX5-16ET/ESS, FX5-32ER/DS, FX5-32ET/DS, FX5-32ET/DSS, FX5-32ER/ES, FX5-32ET/ES, FX5-32ET/ESS, FX5-16ET/ES-H, FX5-16ET/ESS-H, FX5-8EX/ES, FX5-16EX/ES, FX5-8EYR/ES, FX5-8EYT/ES, FX5-8EYT/ESS, FX5-16EYR/ES, FX5-16EYT/ES, FX5-16EYT/ESS, FX5-C32ET/D, FX5-C32ET/DSS, FX5-C16EX/D, FX5-C16EX/DS, FX5-C32EX/D, FX5-C32EX/DS, FX5-C16EYT/D, FX5-C16EYT/DSS, FX5-C32EYT/D, FX5-C32EYT/DSS

➤ Аналоговый модуль



Опции для аналоговых входов и выходов, входов температурных датчиков и управления температурой. Также можно подключить аналоговые интеллектуальные функциональные модули серии FX3.

Дополнительная информация

Технические характеристики

Analog input module

Specifications		FX3 U-4AD	FX5-8AD
Applicable for		Base units FX3G/FX3GC/FX3GE/FX3U/FX3UC/FXSU/FXSUC	Base units FXSU/FXSUC
Analog channels	Inputs	4	8
	Outputs	—	—
Analog input range		-10—+10 V DC/ -20—+20 mA/ 4—+20 mA	-10—+10 V DC/ -20—+20 mA/ Temperature detector (K, J, T, B, R, S, Pt100, Ni100) ①
Resolution	Voltage	0.32 mV (16 bit + sign)	0.3125 mV (16 bit + sign)
	Current	1.25 μA (15 bit + sign)	0.625 μA (16 bit + sign)
Fullscale overall accuracy		±0.3—1 % ②	±0.3—±0.5 %
Power supply	5 V DC	110 mA (from base unit)	—
	24 V DC	90 mA	100 mA (from external) 40 mA (from base unit)
Related I/O points		8	8
Weight	kg	0.2	0.3
Dimensions (WxHxD)	mm	55x90x87	50x90x83
Order information		Art. no. 169508	312297

① Dependent on the ambient temperature

② Please refer to manuals for further details of specification of temperature detectors.

Analog output module

Specifications		FX3 U-4DA
Applicable for		Base units FX3G/FX3GC/FX3GE/FX3U/FX3UC/FXSU/FXSUC
Analog channels	Inputs	—
	Outputs	4
Analog output range		-10—+10 V DC/ 0—+20 mA/ 4—+20 mA
Resolution	Voltage	0.32 mV (16 bit + sign)
	Current	0.63 μA (15 bit)
Fullscale overall accuracy		±0.3—0.5 %*
Power supply	5 V DC	—
	24 V DC	160 mA
Related I/O points		8
Weight	kg	0.2
Dimensions (WxHxD)	mm	55x90x87
Order information		Art. no. 169509

* Dependent on the ambient temperature

Note: To connect these modules to a FX3UC or FX3GC base unit, an adapter FX2N-CNV-IF or a power supply FX3UC-1PS-5V is required.

Temperature control module

Specifications		FX3 U-4LC	FX5-4LC
Applicable for		Base units FX3G, FX3GC, FX3GE, FX3U, FX3UC, FXSU, FXSUC	Base units FXSU, FXSUC
Analog inputs		4 (Thermocouple and Pt100 sensors)	4 (Thermocouple, Pt100 and Pt1000 sensors)
Compensated temperature range	°C	-200—+2300	-200—+2300
Digital outputs		4 NPN transistor open collector output points	4 NPN transistor open collector output points
Resolution	°C	0.1 or 1	0.1 or 1
Fullscale overall accuracy		±0.3—0.7 % (fullscale, dependent on the ambient temperature)	
Power supply	5 V DC	160 mA (from base unit)	140 mA (from base unit)
	24 V DC	50 mA	25 mA
Related I/O points		8	8
Dimensions (WxHxD)	mm	90x90x86	60x90x83
Order information		Art. no. 232806	312298

Note: To connect these modules to a FX3UC or FX3GC base unit, an adapter FX2N-CNV-IF or a power supply FX3UC-1PS-5V is required.

Analog I/O adapters

Specifications	FX5-4AD-ADP	FX5-4DA-ADP
Analog channels		
Inputs	4	—
Outputs	—	4
Analog range	-10—+10 V DC, -20—+20 mA	-10—+10 V DC, 0—+20 mA
Resolution	312.5 μ V/1.125 μ A (14 bit)	250 μ V/1 μ A (14 bit)
Overall accuracy	$\pm 0.1\%$ */ $\pm 0.3\%$	$\pm 0.1\%$ */ $\pm 0.2\%$
Power supply		
5 V DC	10 mA (from base unit)	10 mA (from base unit)
24 V DC	20 mA (from base unit)	160 mA (external power supply)
Related I/O points	0	0
Weight	kg 0.1	0.1
Dimensions (WxHxD)	mm 17.6x90(106)x89.1	17.6x90(106)x89.1
Order information	Art. no. 283559	283560

*Dependent on the ambient temperature and signal quality

Models mentioned above: FX3U-4AD, FX5-8AD, FX3U-4DA, FX3U-4LC, FX5-4LC, FX5-4AD-ADP, FX5-4DA-ADP

➤ Модуль высокоскоростного счетчика



Модули высокоскоростных счетчиков. Также можно подключить модуль высокоскоростных счетчиков серии FX3.

Дополнительная информация

Технические характеристики

High-speed counter modules

Specifications	FX3U-2HC
Applicable for	Base units FX3U/FX3UC/FX5U/FX5UC
Counter inputs	2 (1 phase) or 1 (2 phase)
Max. counting frequency	kHz 200/100/50
Signal level	5, 12, 24 V DC
Input format	bit —
Type of counter	Up/down counter, ring counter
Counting range	
16 bit	0—65535
32 bit	-2147483648—+2147483647
Output type	2 x transistor (5—24 V DC; 0.5 A)
Power supply	
5 V DC	24 mA (from base unit)
24 V DC	—
Related I/O points	8
Weight	kg 0.08
Dimensions (WxHxD)	mm 55x90x87
Order information	Art. no. 232805

*The FX2NC 1HC can only be connected to a FX3UC base unit.

High-speed pulse input/output modules

Specifications	FX5-16ET/ES-H	FX5-16ET/ESS-H
Electrical data		
Integrated inputs/outputs	16	16
Power supply	Supplied internally	
	Supplied from service power supply or external power supply	
Current consumption	5 V DC	100
	24 V DC	125 (82 ^①)
Inputs		
Integrated inputs	8	8
Input type	Sink/source	Sink/source
Input signal voltage	24 V DC +20 %, -15 %	
Min. current for logical 1	3.5	3.5
Max. current for logical 0	1.5	1.5
Response time	X0 to X5: ON: ≤2.5 μs; OFF: ≤2.5 μs X6, X7: ON: ≤30 μs; OFF: ≤50 μs	
Outputs		
Integrated outputs	8	8
Output type	Transistor (sink)	Transistor (source)
Switching voltage (max.)	5–30 V DC	
Max. output current	- per output	0.5
	- per group *	1.6 ^②
Response time	Y0, Y1, Y4, Y5: ≤2.5 μs Y2, Y3, Y6, Y7: ≤0.2 ms	
Mechanical data		
Weight	0.25	0.25
Dimensions (WxHxD)	40x90x83	40x90x83
Order information	Art. no.	297442
		297443

① Current consumption when external power supply is used for the input circuit.

② 1.6 A for 8 outputs per group

* This limitation applies only per reference terminal for each group. Please observe the terminal assignments for the group identification.

Models mentioned above: FX3U-2HC, FX5-16ET/ES-H, FX5-16ET/ESS-H

➤ Простой модуль движения / модуль позиционирования



Модуль Simple Motion с поддержкой SSCNETIII/H. Также можно подключить модули импульсных выходов серии FX3.

Дополнительная информация

Технические характеристики

Simple Motion modules

Specifications	FX5-40SSC-S	FX5-80SSC-S
Number of controllable axes	4	8
Interpolation functions	Linear interpolation for up to 4 axes, circular interpolation for 2 axes	
Control system	PTP (Point To Point) control, Trajectory control (both linear and arc), Speed control, Speed-position switching control, Position-speed switching control, Speed-torque control	
Mark detection function	Regular mode, Specified Number of Detections mode, Ring Buffer mode; Mark detection signal: up to 4 points, mark detection setting: 16 settings	
Servo amplifier connection method	SSCNETIII/H	
Servo amplifier	MR-JE-B/MR-J4-B/MR-J4W2-B/MR-J4W3-B servo amplifier range	
Operation cycle	1.77 ms	1.77 ms
Power supply	5 V DC	—
	24 V DC	250 mA
Related I/O points	8	8
Weight	0.3	0.3
Dimensions (WxHxD)	50x90x83	50x90x83
Order information	Art. no.	281405
		304187

Single-axis positioning modules

Specifications	FX3U-1PG	FX5-20PG-P
Applicable for	Base units FX3U/FX3UC/FX5U/FX5UC	Base units FX5U/FX5UC
Accessible axes	1	2
Output frequency	10–200 000 pulses/s	1–200 000
Signal level for digital inputs	24 V DC/40 mA	24 V DC/5 mA
Power supply	5 V DC 24 V DC	—
	150 mA (from base unit)	120 mA (from base unit)
Related I/O points	8	8
Weight	kg 0.3	0.2
Dimensions (WxHxD)	mm 43x90x87	50x90x83
Order information	Art. no. 259298	312301

High-speed pulse input/output modules

Specifications	FX5-16ET/ES-H	FX5-16ET/ESS-H
Electrical data		
Integrated inputs/outputs	16	16
Power supply	5 V DC 24 V DC	Supplied internally Supplied from service power supply or external power supply
Current consumption	5 V DC mA 100 24 V DC mA 125 (82 ^①)	100 125 (82 ^①)
Inputs		
Integrated inputs	8	8
Input type	Sink/source	Sink/source
Input signal voltage	24 V DC +20 %, -15 %	
Min. current for logical 1	mA 3.5	3.5
Max. current for logical 0	mA 1.5	1.5
Response time	X0 to X5: ON: ≤2.5 μs; OFF: ≤2.5 μs X6, X7: ON: ≤30 μs; OFF: ≤50 μs	
Outputs		
Integrated outputs	8	8
Output type	Transistor (sink)	Transistor (source)
Switching voltage (max.)	5–30 V DC	5–30 V DC
Max. output current	- per output A 0.5 - per group * A 1.6 ^②	0.5 1.6 ^②
Response time	ms Y0, Y1, Y4, Y5: ≤2.5 μs Y2, Y3, Y6, Y7: ≤0.2 ms	
Mechanical data		
Weight	kg 0.25	0.25
Dimensions (WxHxD)	mm 40x90x83	40x90x83
Order information	Art. no. 297442	297443

① Current consumption when external power supply is used for the input circuit.

② 1.6 A for 8 outputs per group

* This limitation applies only per reference terminal for each group. Please observe the terminal assignments for the group identification.

Models mentioned above: FX5-40SSC-S, FX5-80SSC-S, FX3U-1PG, FX5-20PG-P, FX5-16ET/ES-H, FX5-16ET/ESS-H

➤ Сетевой/коммуникационный модуль



Коммуникационные модули RS-232, RS-485, RS-422. Также можно подключить мастер модуль CC-Link серии FX3.

Дополнительная информация

Технические характеристики

Network modules for CC-Link

Specifications	FX3U-16CCL-M ^①	FX5-CCL-MS
Applicable for	Base units FX3G, FX3GC, FX3GE, FX3U, FX3UC, FX5U, FX5UC	Base units FX5U, FX5UC
Module type	Master station	Master / Intelligent device station
Link points per station	I/O points	32
	Register	8
Max. number of I/O points	FX3G/FX3GC/FX3GE: 32 x nbr. of stations ≤ 128 FX3U/FX3UC: 32 x nbr. of stations ≤ 256 ^②	768
Number of connectable modules	Max. 16	Max. 24
Power supply	5 V DC	—
	24 V DC	240 mA
Related I/O points	8	100 mA
Weight	kg 0.4	8
Dimensions (WxHxD)	mm 55x90x87	0.3
Dimensions (WxHxD)	mm 55x90x87	50x90x83
Order information	Art. no. 248224	312299

① To connect these modules to a FX3UC or FX3GC base unit, an adapter FX2N-CNV-IF or a power supply FX3UC-1PS-5V is required. More informations about CC-Link are available in various other publications from Mitsubishi Electric.

② Total of I/O points in base unit and extension units within the CC-Link network ≤ 384.

Note : Please refer to manual for slave functionality.

Specifications	FX3U-64CCL
Module type	Intelligent device station
Link points per station	I/O points
	Register
Max. transmission speed	128 (Occupying 1 station with Octuple expanded cyclic setting)
Related I/O points	32 (Occupying 1 station with Octuple expanded cyclic setting)
Max. transmission speed	10 Mbps
Related I/O points	8
Power supply	24 V DC
Weight	kg 0.3
Dimensions (WxHxD)	mm 55x90x87
Dimensions (WxHxD)	mm 55x90x87
Order information	Art. no. 217915

Notes: When attaching the FX3U-64CCL to a FX3UC/FX3GC base unit, the FX2N-CNV-IF interface converter or the FX3UC-1PS-5V power supply unit is required. More informations about CC-Link are available in various other publications from Mitsubishi Electric.

Network module for CC-Link IE Field

Specifications	FX5-CCLIEF
Station type	Intelligent device station
Communication speed	1 Gbps
Max. number of I/O points	RX
	RY
	RWr
	RWw
Power supply	384 points, 48 bytes
Power supply	5 V DC
	24 V DC
Related I/O points	384 points, 48 bytes
Weight	1024 points, 2048 bytes ^①
Dimensions (WxHxD)	1024 points, 2048 bytes ^①
Dimensions (WxHxD)	10 mA
Dimensions (WxHxD)	230 mA (external power supply)
Dimensions (WxHxD)	8
Dimensions (WxHxD)	kg 0.3
Dimensions (WxHxD)	mm 50x90x103
Order information	Art. no. 297444

① 256 points (512 bytes) when the master station is in high-speed mode.

Network module for CANopen

Specifications		FX3U-CAN
Module type		CANopen master
CANopen communication standard		CIA 301 V4.2, CIA 302 V4.1, CIA 305 V2.2
CANopen Lift application profile mode		CIA 417 V2.1
CANopen PLC device profile mode		CIA 405 V2.0
Max. number of modules that can be connected to the network		30 without repeater; 127 with repeater
Station numbers		1–127
Supported communication speeds	kbps	10, 20, 50, 125, 250, 500, 800, 1000
Status displays		RUN, Error, Power, Network status
Power supply	5 V DC 24 V DC	290 mA —
Related I/O points		8
Weight	kg	0.2
Dimensions (WxHxD)	mm	43x90x88.7
Order information	Art. no.	141179

Note: To connect this module to a FX3UC/FX3GC base unit, an adapter FX2NC-CNV-IF or a power supply FX3UC-1PS-5V is required.

AnyWireASLINK system master module

Specifications		FX5-ASL-M
Module type		AnyWireASLINK system master module
Max. number of I/O points		384
Number of connectable modules		128
Power supply	5 V DC 24 V DC	200 mA 100 mA
Related I/O points		8
Weight	kg	0.2
Dimensions (WxHxD)	mm	40x90x83 (97.3 with connector)
Order information	Art. no.	312300

RS485 communication expansion adapter

Specifications		FX5-485ADP
Transmission standard		Conforming to RS485 and RS422 standards
Communication speed *	bps	300/600/1200/2400/4800/9600/19200/38400/57600/115200
Max. communication distance	m	1200 m
External device connection method		Terminal block
Power supply	5 V DC 24 V DC	20 mA (from base unit) 30 mA (from base unit)
Related I/O points		0
Weight	kg	0.08
Dimensions (WxHxD)	mm	17.6x106x74
Order information	Art. no.	280514

* The communication method and communication speed vary depending upon the communication type.

RS232C communication expansion adapter

Specifications	FX5-232ADP	
Transmission standard	Conforming to RS232C standard	
Communication speed *	bps	300/600/1200/2400/4800/9600/19200/38400/57600/115200
Max. transmission distance		15 m
External device connection method	9 pole D-SUB connector (male)	
Power supply	5 V DC	30 mA (from base unit)
	24 V DC	30 mA (from base unit)
Related I/O points	0	
Weight	kg	0.08
Dimensions (WxHxD)	mm	17.6x106x74
Order information	Art. no.	280513

* The communication method and communication speed vary depending upon the communication type.

Interface adapters

Specifications	FX5-485-BD	FX5-232-BD	FX5-422-BD-GOT
Applicable for	Base units FX5U	Base units FX5U	Base units FX5U
Interface	RS485	RS232C with 9 pole D-SUB connector	RS422 with 8 pole mini DIN connector
Power supply	5 VDC/20 mA (from base unit)	5 V DC/20 mA (from base unit)	5 V DC/20 mA (from base unit)
Related I/O points	—	—	—
Weight	kg	0.02	0.02
Dimensions (WxHxD)	mm	38x51.4x30.5	38x51.4x15.4
Order information	Art. no.	280512	280511
			280515

Models mentioned above: FX3U-16CCL-M, FX5-CCL-MS, FX3U-64CCL, FX5-CCLIEF, FX3U-CAN, FX5-ASL-M, FX5-485ADP, FX5-232ADP, FX5-485-BD, FX5-232-BD, FX5-422-BD-GOT

➤ Опция



Модельный ряд модулей преобразования шины, источников питания, батарей.

Дополнительная информация

Технические характеристики

Connector conversion modules

Specifications	FX5-CNV-IF	FX5-CNV-IFC
Conversion type	FX5 (Extension cable type) -> FX5 (Extension connector type)	FX5 (Extension connector type) -> X5 (Extension cable type)
Compatible CPU module	FX5U	FX5UC
No. of connectable modules	Max. 1	Max. 1
Power supply	5 V DC	—
	24 V DC	—
Related I/O points	0	0
Weight	kg	0.06
Dimensions (WxHxD)	mm	14.6x90x74
Order information	Art. no.	297455
		283557

Bus conversion modules

Specifications	FX5-CNV-BUS	FX5-CNV-BUSC
Conversion type	FX5 (Extension cable type) -> FX3	FX5 (Extension connector type) -> FX3
Compatible CPU module	FX5U, FX5UC ^①	FX5U ^② , FX5UC
No. of connectable modules	Max. 1	Max. 1
Power supply	150 mA (from base unit)	150 mA (from base unit)
	5 V DC	—
	24 V DC	—
Related I/O points	8	8
Weight	kg 0.1	0.1
Dimensions (WxHxD)	mm 16x90x83	14.6x90x74
Order information	Art. no. 280510	283558

① FX5-CNV-IFC or FX5-C1PS-5V is necessary to connect to FX5UC.

② FX5-CNV-IF is necessary to connect to FX5U.

Connector conversion adapter

Specifications	FX5-CNV-BC
Conversion type	Extended extension cable -> FX5 module (Extension cable type)
Compatible CPU module	FX5U/FX5UC
Weight	kg 0.04
Dimensions (WxHxD)	mm 60.5x40x16.4
Order information	Art. no. 297456

Extension power supply modules

Specifications	FX5-1PSU-5V	FX5-C1PS-5V
Application	Power supply for FX5U (AC power supply type)	Power supply for FX5U (DC power supply type) and FX5UC
Rated power supply voltage	100–240 V AC (50/60 Hz)	24 V DC
Power consumption	Max. 20 W	Max. 30 W
Output voltage	5 V DC/24 V DC	5 V DC/24 V DC
Max. output current	5 V DC 1.2 A at 40 °C; 0.8 A at 55 °C 24 V DC 0.3 A at 40 °C; 0.2 A at 55 °C	1.2 A at 40 °C; 0.8 A at 55 °C 0.625 A at 40 °C; 0.4 A at 55 °C
No. of connectable modules	Max. 2	Max. 2
Related I/O points	0	0
Weight	kg 0.3	0.1
Dimensions (WxHxD)	mm 50x90x83	20.1x90x74
Order information	Art. no. 280509	294586

5 V power supply unit

Specifications	FX3U-1PSU-5V
Application	Power supply for the FX3G/FX3U system bus
General specifications	Conforms to FX family base units
Nominal input voltage	100–240 V (50/60 Hz)
Output voltage	5 V DC/24 V DC
Max. output current	5 V DC 1 A at 40 °C; 0.8 A at 55 °C 24 V DC 0.3 A at 40 °C; 0.2 A at 55 °C
Ambient temperature	-25–+55 °C (operation), -40–+85 °C (storage)
Ambient humidity	max. 95 % (no condensation)
Weight	kg 0.3
Dimensions (WxHxD)	mm 55x90x87
Order information	Art. no. 169507

Note:

The FX3U-1PSU-5V can't be used with a 24 V base unit!

When connecting an input extension module (ind. FX2N-8ER-ES/UL, FX2N-8ER) to the FX3U-1PSU-5V, supply the power for it from the 24 V DC service power supply of the connected main unit or powered extension unit on the upstream side.

г.Ростов-на-Дону:

ул. Магнитогорская 1Г, к. 20
Т.к. (863) 221-25-48
e-mail: info@itrostov.ru



[www. itrostov. ru](http://www.itrostov.ru)

г. СТАВРОПОЛЬ

Ул. Заводская 11
Т.ф.: (8652) 28-10-36, т.к. 49-04-36
e-mail: zakaz@itrostov.ru

Backup batteries

Specifications	FX3U-32BL	
Applicable for	Base units FX3G/FX3GC/FX3GE/FX3U/FX3UC/FX5U/FX5UC	
Order information	Art. no.	165286

Extended extension cables

Specifications	FX5-30EC	FX5-65EC
Application	Connect ion of an extension module located distantly or on a second stage. Depending on the module to be connected with, a connection conversion adapter FX5-CNV-BC is required.	
Length	m 0.3	0.65
Order information	Art. no.	297457
		297458

Models mentioned above: FX5-CNV-IF, FX5-CNV-IFC, FX5-CNV-BUS, FX5-CNV-BUSC, FX5-CNV-BC, FX5-1PSU-5V, FX5-C1PS-5V, FX3U-1PSU-5V, FX3U-32BL, FX5-30EC, FX5-65EC