eco Changes for a greener tomorrow

MITSUBISHI ELECTRIC
Changes for the Better

FACTORY AUTOMATION

MELSEC iQ-F Series
iQ Platform-compatible PLC

MELSEC iQ-F series

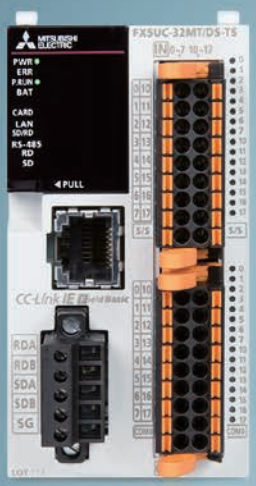
FX5UC-32MR/DS-TS, FX5-C16EYR/D-TS

Compact & Smart

Relay output type is newly introduced

for spring clamp terminal block type modules.

Relay output type for spring clamp terminal block type modules is newly introduced.



CPU module
32 points

FX5UC-32MT/DS-TS
DC D2 T1

FX5UC-32MT/DSS-TS
DC D2 T2

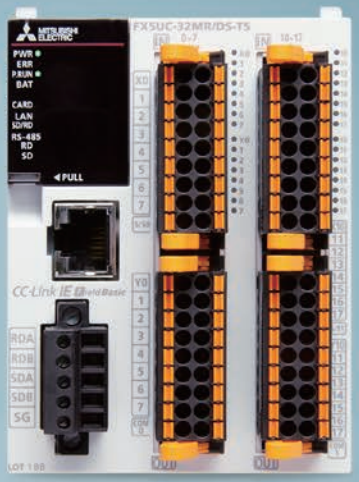
I/O module*1
32 points

Input module
FX5-C32EX/DS-TS

Output module
FX5-C32EYT/D-TS
FX5-C32EYT/DSS-TS

I/O module
FX5-C32ET/DS-TS
FX5-C32ET/DSS-TS

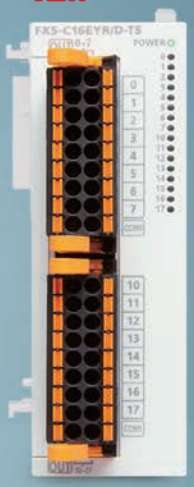
NEW



CPU module
32 points

NEW FX5UC-32MR/DS-TS
DC D2 R

NEW



I/O module*1
16 points

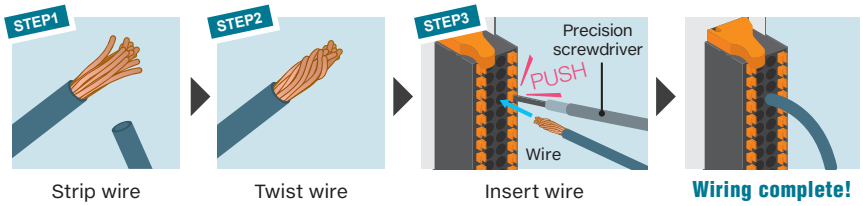
Output module
NEW FX5-C16EYR/D-TS

DC DC power supply
D2 DC input (sink/source)
T1 Transistor output (sink)
T2 Transistor output (source)
R Relay output

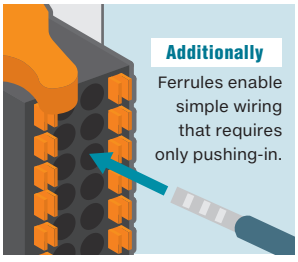
*1: When connecting to FX5U CPU module, FX5-CNV-IF is required.

PLCs are changing... Reduced wiring man-hours by adopting a spring clamp terminal block

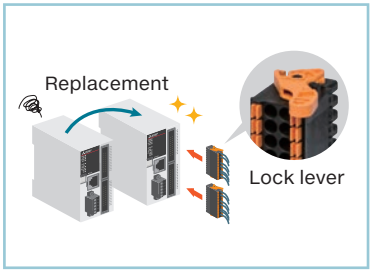
No crimp connectors and crimp tools are needed. Wiring can be performed just by preparing cables, and wiring man-hours can be reduced.



Strip wire | Twist wire | Insert wire | **Wiring complete!**

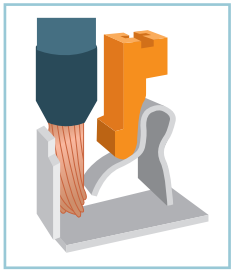


Because modules can be replaced in the "wired" state, the recovery time is reduced.



Improved vibration resistance and maintainability. Terminals do not become loose due to vibration. Human errors such as forgetting to tighten terminals are eliminated. Retightening is not required during long-time use.

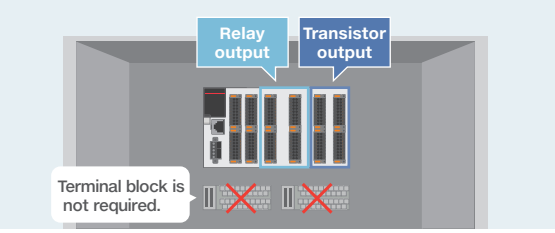
<Internal construction>



Abundant built-in functions in a compact body
Supporting customer's manufacturing with easy introduction

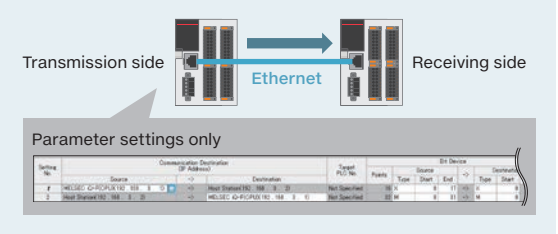
Save space by eliminating the need for a terminal block

Compact, lightweight body also cuts shipping costs. Build systems containing both relay outputs and transistor outputs .



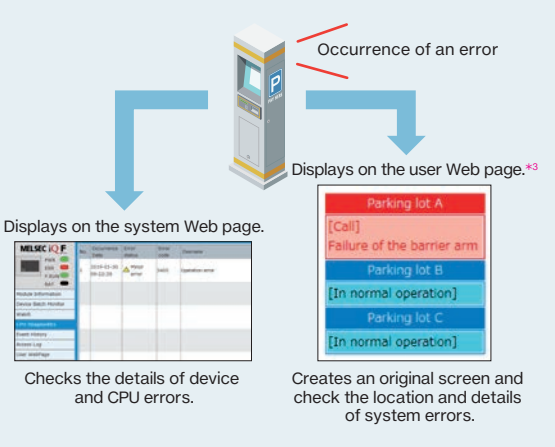
Simple CPU communication function*1

Device information can be shared with simple parameter settings, so the programming man-hours can be reduced.



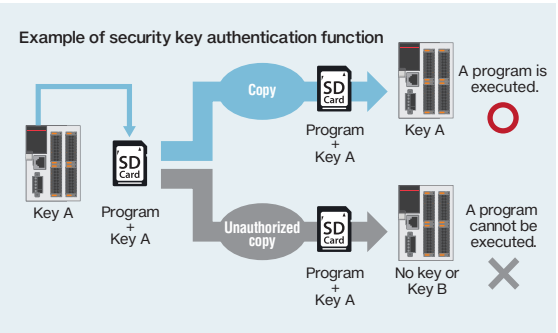
Web server function*2

View the system status even from a remote location.



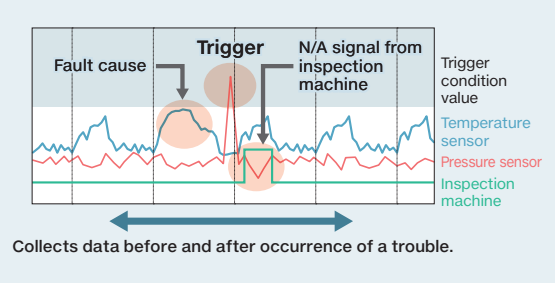
Security function

Prevents data theft, tampering, misoperation, illegal execution, etc. caused by unauthorized access from a third party with the security functions (block password, file password, remote password, security key authentication).

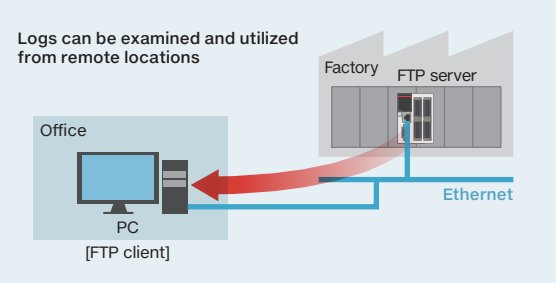


Data logging function*4

Information can be saved to the SD memory card periodically from the computer and network equipment. A trouble can be analyzed efficiently by [trigger logging] which logs only the situation before and after the occurrence of trouble. Important data can be selectively saved by setting conditions.



With the FTP server function*5, logging data can be acquired from a remote location without going to the site. Multiple logging files can be managed collectively from the office computer, reducing management and maintenance work.



*1: Supported by FX5U/FX5UC Ver. 1.110 or later and product number 17X**** or later, and by GX Works3 Ver. 1.050C or later.
*2: Supported by FX5U/FX5UC Ver. 1.060 or later and by GX Works3 Ver. 1.040S or later.
*3: Supported by FX5U/FX5UC Ver. 1.100 or later and product number 17X**** or later, and by GX Works3 Ver. 1.047Z or later.
*4: Supported by FX5U/FX5UC Ver. 1.040 or later and product number 16Y**** or later, by GX Works3 Ver. 1.030G or later, and by CPU Module Logging Configuration Tool Ver. 1.64S or later.
*5: Supported by FX5U/FX5UC Ver. 1.040 or later and product number 16Y**** or later, and by GX Works3 Ver. 1.030G or later.

PROGRAMMABLE CONTROLLERS
MELSEC iQ-F Series

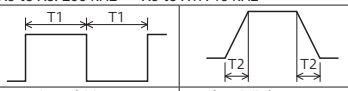
CPU module (FX5UC-32MR/DS-TS)

■ Power Supply Specifications

Item	Specifications
Power supply voltage	24 V DC
Voltage fluctuation range	+20%, -15%
Allowable instantaneous power failure time	Operation can be continued upon occurrence of instantaneous power failure for 5 ms or less.
Power fuse	125 V, 3.15 A Time-lag fuse
Rush current	35 A max. 0.5 ms or less/24 V DC
Power consumption*1	5 W/24 V DC [30 W/24 V DC +20%, -15%]
24 V DC built-in power supply	500 mA
5 V DC built-in power supply	720 mA

*1: This item shows value when only the CPU module is used. The value in [] is the value in the maximum configuration connectable to the CPU module. (The value does not include the external 24 V DC power supply of extension devices.)

■ Input Specifications
(Refer to the manual for input circuit configuration.)

Item		Specifications	
No. of input points		16 points	
Input type		Sink/source	
Input signal voltage		24 V DC +20%, -15%	
Input signal current		X0 to X17 5.3 mA/24 V DC	
Input impedance		X0 to X17 4.3 kΩ	
ON input sensitivity current		X0 to X17 3.5 mA or more	
OFF input sensitivity current		1.5 mA or less	
Input response frequency		X0 to X5: 200 kHz X6 to X17: 10 kHz	
Pulse waveform	Waveform		
		T1 (pulse width)	T2 (rise/fall time)
	X0 to X5	2.5 µs or more	1.25 µs or less
	X6 to X17	50 µs or more	25 µs or less
Input response time (H/W filter delay)		X0 to X5 ON: 2.5 µs or less OFF: 2.5 µs or less X6 to X17 ON: 3.0 µs or less OFF: 5.0 µs or less	
Input response time (Digital filter setting value)		None, 10 µs, 50 µs, 0.1 ms, 0.2 ms, 0.4 ms, 0.6 ms, 1 ms, 5 ms, 10 ms (initial value), 20 ms, 70 ms When using this product in an environment with much noise, set the digital filter.	
Input signal format (Input sensor form)		No-voltage contact input Sink: NPN open collector transistor Source: PNP open collector transistor	
Input circuit insulation		Photo-coupler insulation	
Indication of input operation		LED is lit when input is on.	

■ Output Specifications
(Refer to the manual for output circuit configuration.)

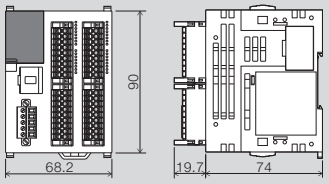
Item		Specifications	
No. of output points		16 points	
Output type		Relay	
External power supply		30 V DC or less 240 V AC or less ("250 V AC or less" if not a CE, UL, cUL compliant item)	
Max. load		2 A/point	Make sure that the total load current of 8 load points is 4 A*1 or less.
Min. load		5 V DC, 2 mA (reference values)	
Open circuit leakage current		—	
Response time	OFF←→ON	Approx. 10 ms	
Output circuit insulation		Mechanical insulation	
Indication of output operation		LED is lit when output is on.	

*1: When two common terminals are connected outside the CPU module, resistance load is 8 A or less.

■ External Dimensions

Unit: mm

Mass (weight) :
Approx. 0.35 kg
Exterior color :
Munsell
0.6B7.6/0.2



I/O module (FX5-C16EYR/D-TS)

■ Power Supply Specifications

Item		Specifications
Voltage rating		24 V DC (supplied from PLC) 5 V DC (supplied from PLC)
Current consumption	5 V DC	100 mA
	24 V DC	100 mA

■ Output Specifications
(Refer to the manual for output circuit configuration.)

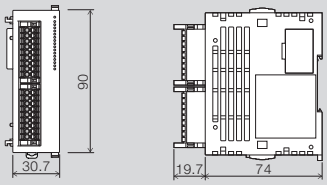
Item		Specifications	
No. of output points		16 points	
Output type		Relay	
External power supply		30 V DC or less 240 V AC or less ("250 V AC or less" if not a CE, UL, cUL compliant item)	
Max. load		2 A/point	Make sure that the total load current of 8 load points is 4 A*1 or less.
Min. load		5 V DC, 2 mA (reference values)	
Open circuit leakage current		—	
Response time	OFF←→ON	Approx. 10 ms	
Output circuit insulation		Mechanical insulation	
Indication of output operation		LED is lit when output is on	

*1: When two common terminals are connected outside the I/O module, resistance load is 8 A or less.

■ External Dimensions

Unit: mm

Mass (weight) :
Approx. 0.2 kg
Exterior color :
Munsell
0.6B7.6/0.2



■ Product List

Item	Input specifications		Output specifications	
	No. of input points	Input type	No. of ouput points	Output type
NEW FX5UC-32MR/DS-TS	16 points	24 V DC sink/source	16 points	Relay
NEW FX5-C16EYR/D-TS	—	—	16 points	Relay
FX5UC-32MT/DS-TS	16 points	24 V DC sink/source	16 points	Transistor/ sink
FX5UC-32MT/DSS-TS				Transistor/ source
FX5-C32EX/DS-TS	32 points	24 V DC sink/source	—	—
FX5-C32EYT/D-TS	—	—	32 points	Transistor/ sink
FX5-C32EYT/DSS-TS				Transistor/ source
FX5-C32ET/DS-TS	16 points	24 V DC sink/source	16 points	Transistor/ sink
FX5-C32ET/DSS-TS				Transistor/ source
FX5U-U-HW-E	MELSEC iQ-F FX5U User's Manual (Hardware) Model code: 09R536			
FX5UC-U-HW-E	MELSEC iQ-F FX5UC User's Manual (Hardware) Model code: 09R558			

⚠ Safety Warning

To ensure proper use of the products in this document, please be sure to read the instruction manual prior to use.

Registration

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