



for a greener tomorrow



**MITSUBISHI
ELECTRIC**

Changes for the Better

FACTORY AUTOMATION

MELSEC iQ-F Series
iQ Platform-compatible PLC

MELSEC iQ-F
series

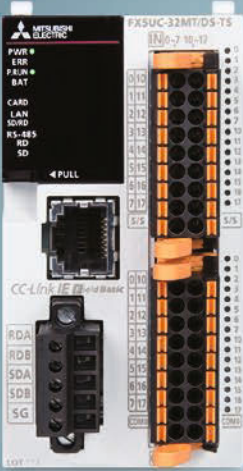
FX5UC-32MR/DS-TS, FX5-C16EYR/D-TS



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

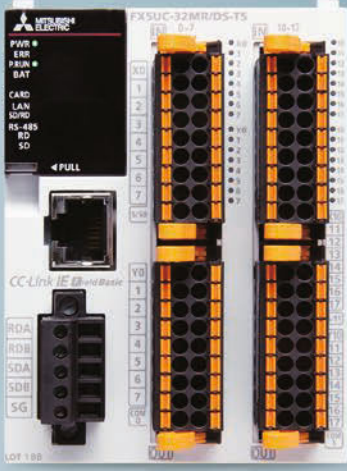


I/O module*1
32 points

Input module
FX5-C32EX/DS-TS

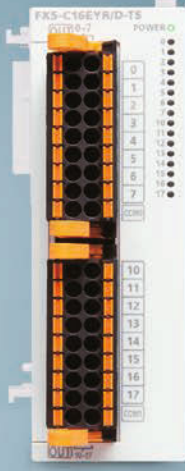
Output module
FX5-C32EYT/D-TS
FX5-C32EYT/DSS-TS

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



CPU module
32 points

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



I/O module*1
16 points

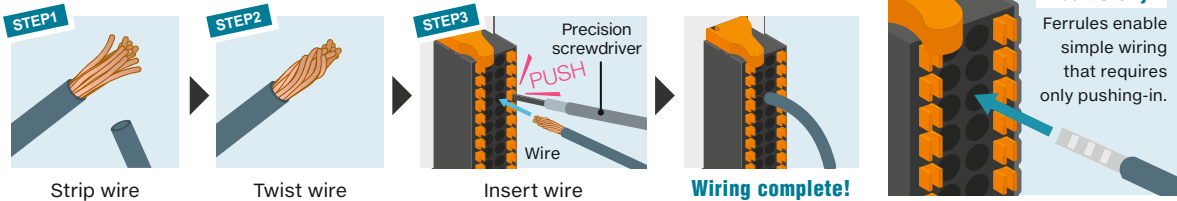
NEW **Output module**
FX5-C16EYR/D-TS

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

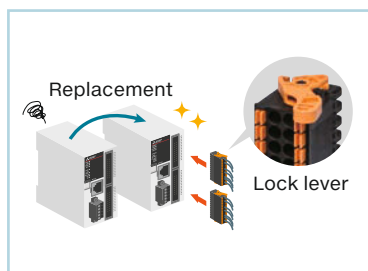
*1: When connecting to FX5U CPU module, FX5-CNV-IF is required.

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

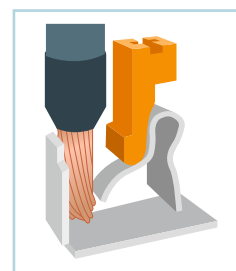
No crimp connectors and crimp tools are needed. Wiring can be performed just by preparing cables, and wiring man-hours can be reduced.



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.

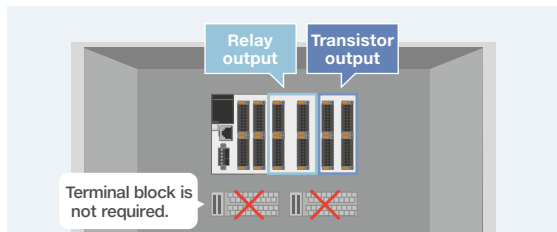


Abundant built-in functions in a compact body

Supporting customer's manufacturing with easy introduction

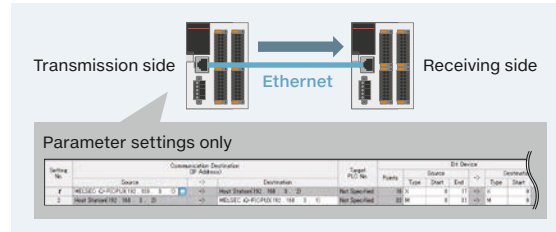
Save space by eliminating the need for a terminal block

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



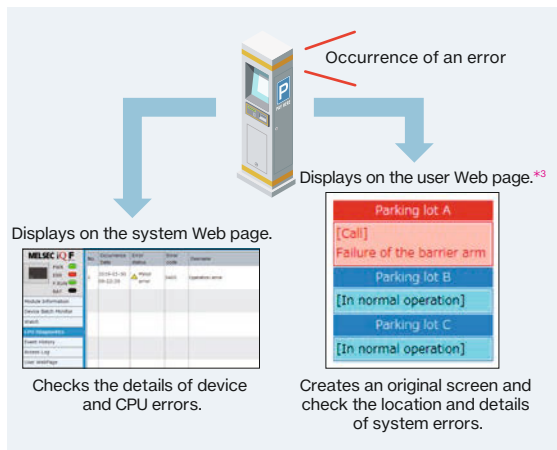
Simple CPU communication function*1

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



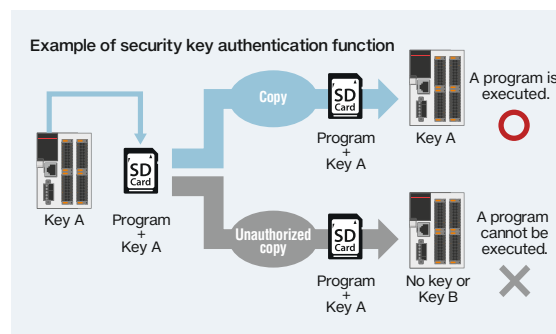
Web server function*2

View the system status even from a remote location.



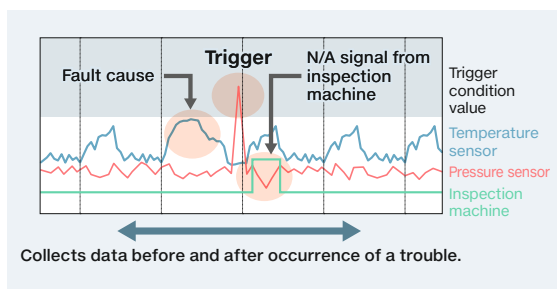
Security function

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).

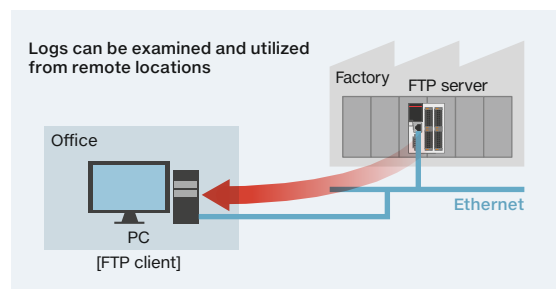


Data logging function*4

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**** (The product numbers of FX5UC-32MT/DS-TS and FX5UC-32MT/DSS-TS are 178****.) 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**** (The product numbers of FX5UC-32MT/DS-TS and FX5UC-32MT/DSS-TS are 178****.) 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*	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.)

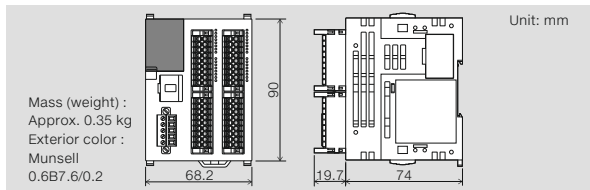
Item	Specifications
No. of input points	16 points
Input type	Sink/source
Input signal voltage	24 V DC +20%, -15%
Input signal current	X0 to X17 5.3 mA/24 V DC
Input impedance	X0 to X17 4.3 kΩ
ON input sensitivity current	X0 to X17 3.5 mA or more
OFF input sensitivity current	1.5 mA or less
Input response 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/ Make sure that the total load current of 8 point load points is 4 A** 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



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

■ Power Supply Specifications

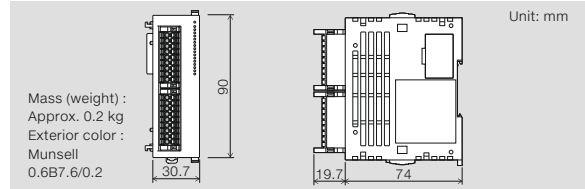
Item	Specifications
Voltage rating	24 V DC (supplied from PLC) 5 V DC (supplied from PLC)
Current consumption	5 V DC 100 mA 24 V DC 100 mA

■ 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** 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



■ Product List

Item	Input specifications		Output specifications	
	No. of input points	Input type	No. of output 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.

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