



AFP7CPS21 | FP7



※Photo may vary from actual product.

Product Number	AFP7CPS21
Part Number	AFP7CPS21
Product	FP7 CPU units
Product name	FP7

Spec Detail

As of May 30, 2021

Specifications and design of the products are subject to change without notice for the product improvement.

Item	Specifications
Product Number	AFP7CPS21
Part Number	AFP7CPS21
[[Control specifications]]Memory capacity:Memory selection pattern1	Program (steps)(Note) : 64,000 Data register (words)(Note) : 131,072 Number of max. program block (PB) : 128 (Note) The factory default setting is pattern 1. (Note) For data register (DT), data up to 262,144 words can be backed up.
[[Control specifications]]Memory capacity:Memory selection pattern2	Program (steps)(Note) : 32,000 Data register (words)(Note) : 262,144 Number of max. program block (PB) : 64 (Note1) For data register (DT), data up to 262,144 words can be backed up.
[[Control specifications]]Programming method	Relay symbol method
[[Control specifications]]Control method	Cyclic operation method
[[Control specifications]]Program memory	Built-in flash ROM (no backup battery required)
[[Control specifications]]Operation speed	Basic instruction: min. 14 ns/step
[[Control specifications]]External input (X)	8,192 points (Note) Hardware configuration governs the actually usable number of I/O points. When I/O points are not actually used, usable as internal relays.
[[Control specifications]]External output (Y)	8,192 points (Note) Hardware configuration governs the actually usable number of I/O points. When I/O points are not actually used, usable as internal relays.
[[Control specifications]]Internal relay (R)	32,768 points
[[Control specifications]]System relay (SR)	Indicate operation status of various relays is shown.
[[Control specifications]]Link relay (L)	16,384 points
[[Control specifications]]Timer (T)	4,096 points: Timer capable of counting (units: 10 μs, 1 ms, 10 ms, 100 ms or 1 sec.) x 4,294,967,295
[[Control specifications]]Counter (C)	1,024 points, Counter capable of counting 1 to 4,294,967,295
[[Control specifications]]Link data register (LD)	16,384 words
[[Control specifications]]System data register (SD)	Internal operation status of various registers is shown.

[[Control specifications]]Index register (I0 to IE)	15 long words / With switching function
[[Control specifications]]Master control relay (MCR)	Unlimited
[[Control specifications]]Number of labels (LOOP)	Max. 65,535 points for each program block (PB)
[[Control specifications]]Differential points	Unlimited
[[Control specifications]]Number of step ladders	Unlimited
[[Control specifications]]Number of subroutines	Max. 65,535 points for each program block (PB)
[[Control specifications]]Number of interrupt program	1 periodical interrupt program
[[Control specifications]]Constant scan	Available (0 to 125 ms)
[[Control specifications]]Clock / calendar	Year (last two digits), month, day, hours (24-hour display) minutes, seconds, day of week (Note)Precision of calendar; At 0 °C +32 °F, 95 sec. or less error per month, at +25 °C +77 °F, 15 sec. or less error per month, at +55 °C +131 °F, 130 sec. or less error per month
[[Control specifications]]PLC link function (Serial communication / MEWNET-W0)	Max. 16 units, link relays: 1,024 points, link registers: 128 words. (Data transfer and remote programming are not supported) (Link area allocation is switchable between the first and the second half)
[[Communication specifications for COM port]]Interface	RS-232C, three-wire system, 1 channel (Note) SD, RD and SG terminals are isolated from internal circuits.
[[Communication specifications for COM port]]Transmission distance	15 m 49.213 ft
[[Communication specifications for COM port]]Transmission speed	300, 600, 1,200, 2,400, 4,800, 9,600, 19,200, 38,400, 57,600, 115,200, 230,400 bits/sec,
[[Communication specifications for COM port]]Communication method	Half-duplex system
[[Communication specifications for COM port]]Synchronous method	Start-stop synchronization system
[[Communication specifications for COM port]]Transmission format	Stop bit: 1 bit / 2 bits Parity: none / odd / even Data length: 7 bits / 8 bits Start code: with STX / without STX End code: CR / CR + LF / none / ETX
[[Communication specifications for COM port]]Data transmission order	Transmit from bit 0 in character units.
[[Communication specifications for COM port]]Connection	General-purpose communication, Computer link and MODBUS-RTU
[[Dedicated power supply output port specifications for GT series programmable display]]Terminal:5V	For 5 V DC type GT series Programmable Display
[[Common general specifications]]Ambient temperature	0 to +55 °C +32 to +131 °F, Storage: -40 to +70 °C -40 to +158 °F
[[Common general specifications]]Ambient humidity	10 to 95 % RH (at +25 °C +77 °F, no condensation), Storage: 10 to 95 % RH (at +25 °C +77 °F, no condensation)
[[Common general specifications]]Breakdown voltage	500 V AC for 1 minute
[[Common general specifications]]Insulation resistance	100 MΩ or more (at 500 V DC)
[[Common general specifications]]Vibration resistance	5 to 8.4 Hz, single amplitude of 3.5 mm 0.138 in, 1 sweep/min. (IEC 61131-2) ; 8.4 to 150 Hz, constant acceleration of 9.8 m/s ² , 1 sweep/min. (IEC 61131-2), 10 times each in X, Y, and Z directions
[[Common general specifications]]Shock resistance	147 m/s ² or more , 3 times each in X, Y, and Z directions (IEC61131-2)
[[Common general specifications]]Noise immunity	1,000 V [p-p] with pulse width 50 ns and 1 μs (using a noise simulator)

[[Common general specifications]]Operating condition	Free from corrosive gasses and excessive dust
[[Individual general specifications]]Rated voltage range	20.4 to 28.8 V DC
[[Individual general specifications]]Current consumption	150 mA or less
[[Individual general specifications]]Net weight	180 g approx. (with terminal block and end unit)

Accessories



Product Number **AFP2801**

Part Number **AFP2801**

Product name **Discrete-wire connector set**



Product Number **AFP2802**

Part Number **AFP2802**

Product name **Flat cable connector set**



Product Number **AFP7AD4H**

Part Number **AFP7AD4H**

Product **FP7 Analog Input and Output units**

Details **FP7 Analog Input unit (High-speed and high-accuracy type)**

Product name **FP7 Analog Input and Output units**



Product Number **AFP7CCET1**

Part Number **AFP7CCET1**

Product **FP7 Add-on cassettes (communication cassettes)**

Product name **FP7 Add-on cassettes**



Product Number **AFP7CCM1**

Part Number **AFP7CCM1**

Product **FP7 Add-on Cassettes**

Details **Communication Cassettes**

Product name **FP7 Add-on cassettes**



Product Number **AFP7CCM2**

Part Number **AFP7CCM2**

Product **FP7 Add-on Cassettes**

Details **Communication Cassettes**

Product name **FP7 Add-on cassettes**



Product Number **AFP7CCS1**

Part Number **AFP7CCS1**

Product **FP7 Add-on Cassettes**

Details **Communication Cassettes**

Product name **FP7 Add-on cassettes**



Product Number **AFP7CCS1M1**

Part Number **AFP7CCS1M1**

Product **FP7 Add-on Cassettes**

Details **Communication Cassettes**

Product name **FP7 Add-on cassettes**



Product Number **AFP7CCS2**

Part Number **AFP7CCS2**

Product **FP7 Add-on Cassettes**

Details **Communication Cassettes**

Product name **FP7 Add-on cassettes**

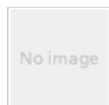


Product Number **AFP7DA4H**

Part Number **AFP7DA4H**

Product **FP7 Analog Input and Output units**

Details **FP7 Analog Output unit (High-speed and high-accuracy type)**



Product Number **AFP7END**

Part Number **AFP7END**

Product name **FP7 End unit**






















Product Number **AFP7FCA21**

Part Number **AFP7FCA21**

Product **FP7 Add-on cassettes (function cassettes)**

Product name **FP7 Add-on cassettes**

Product name	FP7 Analog Input and Output units			(function cassettes)	
					
Product Number	AFP7FCAD2	Product Number	AFP7FCTC2	Product Number	AFP7HSC2T
Part Number	AFP7FCAD2	Part Number	AFP7FCTC2	Part Number	AFP7HSC2T
Product	FP7 Add-on cassettes (function cassettes)	Product	FP7 Add-on cassettes (function cassettes)	Product	FP7 High-speed Counter Units
Product name	FP7 Add-on cassettes (function cassettes)	Product name	FP7 Add-on cassettes (function cassettes)	Product name	FP7 High-speed Counter
					
Product Number	AFP7HSC4T	Product Number	AFP7MC16EC	Product Number	AFP7MC32EC
Part Number	AFP7HSC4T	Part Number	AFP7MC16EC	Part Number	AFP7MC32EC
Product	FP7 High-speed Counter Units	Product	FP7 Motion Control Unit	Product	FP7 Motion Control Unit
Product name	FP7 High-speed Counter	Details	EtherCAT type	Details	EtherCAT type
		Product name	FP7 Motion control unit	Product name	FP7 Motion control unit
					
Product Number	AFP7MC64EC	Product Number	AFP7MW	Product Number	AFP7MX32DWD
Part Number	AFP7MC64EC	Part Number	AFP7MW	Part Number	AFP7MX32DWD
Product	FP7 Motion Control Unit	Product	Multi-wire link unit	Product	FP7 Multi Input/Output Units
Details	EtherCAT type	Product name	FP7 Multi-wire link unit	Product name	Multi input/output unit
Product name	FP7 Motion control unit				
	Discontinued				
Product Number	AFP7MX32DWDH	Product Number	AFP7NSC	Product Number	AFP7PG02L
Part Number	AFP7MX32DWDH	Part Number	AFP7NSC	Part Number	AFP7PG02L
Product	FP7 Multi Input/Output Unit	Product	FP7 Serial communication unit	Product	FP7 Pulse output units
Details	Positioning type	Product name	FP7 Serial communication unit	Product name	FP7 Pulse output units
Product name	Multi input/output unit				
					
Product Number	AFP7PG02T	Product Number	AFP7PG04L	Product Number	AFP7PG04T
Part Number	AFP7PG02T	Part Number	AFP7PG04L	Part Number	AFP7PG04T
Product	FP7 Pulse output units	Product	FP7 Pulse output units	Product	FP7 Pulse output units
Product	FP7 Pulse output	Product	FP7 Pulse output	Product	FP7 Pulse output

name	units	name	units	name	units
					
	Product Number		Product Number		Product Number
	Part Number		Part Number		Part Number
	Product		Product		Product
	Details		Product name		Product name
	AFP7PHLSM		AFP7PP02L		AFP7PP02T
	FP7 PHLS (Remote I/O) unit		FP7 Positioning units		FP7 Positioning units
	PHLS Master unit		FP7 Positioning units		FP7 Positioning units
	FP7 PHLS (Remote I/O) unit				
					
	Product Number		Product Number		Product Number
	Part Number		Part Number		Part Number
	Product		Product		Product
	Product name		Product name		Product name
	AFP7PP04L		AFP7PP04T		AFP7RTD8
	FP7 Positioning units		FP7 Positioning units		FP7 Temperature input units
	FP7 Positioning units		FP7 Positioning units		FP7 Temperature input units
					
	Product Number		Product Number		Product Number
	Part Number		Part Number		Part Number
	Product		Product name		Product
	Product name				Details
	AFP7TC8		AFP7TER		AFP7X16DW
	FP7 Temperature input units		FP7 Terminal block		FP7 Input and Output Units
	FP7 Temperature input units				Input units
					FP7 Input and Output units
					
	Product Number		Product Number		Product Number
	Part Number		Part Number		Part Number
	Product		Product		Product
	Details		Details		Details
	AFP7X32D2		AFP7X64D2		AFP7XY64D2P
	FP7 Input and Output Units		FP7 Input and Output Units		FP7 Input and Output Units
	Input units		Input units		Input and Output units
	FP7 Input and Output units		FP7 Input and Output units		FP7 Input and Output units
					
	Product Number		Product Number		Product Number
	Part Number		Part Number		Part Number
	Product		Product		Product
	Details		Details		Details
	AFP7XY64D2T		AFP7Y16P		AFP7Y16R
	FP7 Input and Output Units		FP7 Input and Output Units		FP7 Input and Output Units
	Input and Output units		Output units		Output units
	FP7 Input and Output units		FP7 Input and Output units		FP7 Input and Output units



Product Number **AFP7Y16T**

Part Number **AFP7Y16T**

Product **FP7 Input and Output Units**

Details **Output units**

Product name **FP7 Input and Output units**



Product Number **AFP7Y32P**

Part Number **AFP7Y32P**

Product **FP7 Input and Output Units**

Details **Output units**

Product name **FP7 Input and Output units**



Product Number **AFP7Y32T**

Part Number **AFP7Y32T**

Product **FP7 Input and Output Units**

Details **Output units**

Product name **FP7 Input and Output units**



Product Number **AFP7Y64P**

Part Number **AFP7Y64P**

Product **FP7 Input and Output Units**

Details **Output units**

Product name **FP7 Input and Output units**



Product Number **AFP7Y64T**

Part Number **AFP7Y64T**

Product **FP7 Input and Output Units**

Details **Output units**

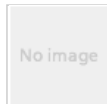
Product name **FP7 Input and Output units**



Product Number **AFP8503**

Part Number **AFP8503**

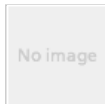
Product name **Motor Driver I/F Terminal II**



Product Number **AFP8504**

Part Number **AFP8504**

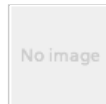
Product name **Motor Driver I/F Terminal II**



Product Number **AFP85100**

Part Number **AFP85100**

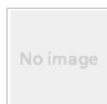
Product name **Connection cable for Posiotioning unit**



Product Number **AFP85101**

Part Number **AFP85101**

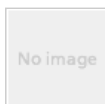
Product name **Connection cable for Posiotioning unit**



Product Number **AFP85151**

Part Number **AFP85151**

Product name **MINAS A4 series / A5 series Exclusive cable**



Product Number **AFP85152**

Part Number **AFP85152**

Product name **MINAS A4 series / A5 series Exclusive cable**



Product Number **AFPRP1X08D2**

Part Number **AFPRP1X08D2**

Product **FP7 PHLS (Remote I/O) unit**

Details **PHLS Slave units**

Product name **FP7 PHLS (Remote I/O) unit**



Product Number **AFPRP1X16D2**

Part Number **AFPRP1X16D2**

Product **FP7 PHLS (Remote I/O) unit**

Details **PHLS Slave units**

Product name **FP7 PHLS (Remote I/O) unit**



Product Number **AFPRP1XY16D2T**

Part Number **AFPRP1XY16D2T**

Product **FP7 PHLS (Remote I/O) unit**

Details **PHLS Slave units**

Product name **FP7 PHLS (Remote I/O) unit**



Product Number **AFPRP1Y16T**

Part Number **AFPRP1Y16T**

Product **FP7 PHLS (Remote I/O) unit**

Details **PHLS Slave units**

Product name **FP7 PHLS (Remote I/O) unit**





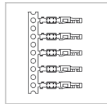
Product **AFPRP2X08D2E**



Product **AFPRP2X16D2**



Product **AFPRP2XY16D2T**

Number		Number		Number			
Part Number	AFPRP2X08D2E	Part Number	AFPRP2X16D2	Part Number	AFPRP2XY16D2T		
Product	FP7 PHLS (Remote I/O) unit	Product	FP7 PHLS (Remote I/O) unit	Product	FP7 PHLS (Remote I/O) unit		
Details	PHLS Slave units	Details	PHLS Slave units	Details	PHLS Slave units		
Product name	FP7 PHLS (Remote I/O) unit	Product name	FP7 PHLS (Remote I/O) unit	Product name	FP7 PHLS (Remote I/O) unit		
							
Product Number	AFPRP2Y04R	Product Number	AFPRP2Y16T	Product Number	AFPSGR7EN		
Part Number	AFPRP2Y04R	Part Number	AFPRP2Y16T	Part Number	AFPSGR7EN		
Product	FP7 PHLS (Remote I/O) unit	Product	FP7 PHLS (Remote I/O) unit	Product name	Control FWIN GR7		
Details	PHLS Slave units	Details	PHLS Slave units				
Product name	FP7 PHLS (Remote I/O) unit	Product name	FP7 PHLS (Remote I/O) unit				
							
Product Number	AFPSGR7JP	Product Number	AFPSWC	Product Number	AFPSWCKEY		
Part Number	AFPSGR7JP	Part Number	AFPSWC	Part Number	AFPSWCKEY		
Product name	Control FWIN GR7	Product name	FP7	Product name	FP7		
							
Product Number	AFX-BATT	Product Number	AXW7221FP	Product Number	AXW7231FP		
Part Number	AFX-BATT	Part Number	AXW7221FP	Part Number	AXW7231FP		
Product	backup battery	Product	Pressure contact for multi-wire	Product	Pressure contact for multi-wire		
Product name	Backup battery	Product name	Pressure contact for multi-wire	Product name	Pressure contact for multi-wire		
							
Product Number	AXY52000FP	Product Number	SL-VFP7				
Part Number	AXY52000FP	Part Number	SL-VFP7				
Product	Pressure contact tool	Product name	Flexible Wire- saving System S- LINK V				
Details	Multi-wire connector pressure contact tool						
Product name	Pressure contact tool						