Panasonic

AFP7CPS41ES | FP7

Product Number	**AFP7CPS41ES**
Part Number	**AFP7CPS41ES**
Product	**FP7 CPU units**
Details	**Security enhanced type**
Product name	**FP7**

※Photo may vary from actual product.

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	AFP7CPS41ES
Part Number	AFP7CPS41ES
[[Control specifications]]Memory capacity:Memory selection pattern1	Program (steps): 234,000 Data register (Note) : 65,536 Number of max. program block (PB): 468 (Note) For data register (DT), data up to 262,144 words can be backed up.
[[Control specifications]]Memory capacity:Memory selection pattern2	Program (steps): 221,500 Data register (Note) : 131,072 Number of max. program block (PB): 443 (Note) For data register (DT), data up to 262,144 words can be backed up.
[[Control specifications]]Memory capacity:Memory selection pattern3	Program (steps): 196,000 Data register (Note 1): 262,144 Number of max. program block (PB): 392 (Note) The factory default setting is pattern 3. (Note 1) For data register (DT), data up to 262,144 words can be backed up.
[[Control specifications]]Memory capacity:Memory selection pattern4	Program (steps): 144,500 Data register (Note) : 524,288 Number of max. program block (PB): 289 (Note) For data register (DT), data up to 262,144 words can be backed up.
[[Control specifications]]Memory capacity:Memory selection pattern5	Program (steps): 51,500 Data register (Note) : 999,424 Number of max. program block (PB): 103 (Note) 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. 11 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 micro s, 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]]SD memory card function	SDHC memory cards of up to 32 GB are usable.
[[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 ℃ +32 °F, 95 sec. or less error per month, at +25 ℃ +77 °F, 15 sec. or less error per month, at +55 ℃ +131 °F, 130 sec. or less error per month
[[Control specifications]]Battery life (Value applies when no power is supplied at all.)	3.3 years or more (when no power is supplied) actual usage value: 20 years approx. (at 25 degrees 77 degrees Fahrenheit)
[[Control specifications]]Safety function	Password / Restricted distribution / Read disable setting / Encryption
[[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, 1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200, 230400 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 (Note) 5 V and 24 V DC types are not usable at the same time.
[[Dedicated power supply output port specifications for GT series programmable display]]Terminal:24V	For 24 V DC type GT series Programmable Display (Note 1) 5 V and 24 V DC types are not usable at the same time. (Note 2) Use 21.6 to 26.4 V DC to power the CPU unit. Please check the "GT Series Hardware Manual" for grounding of the GT series programmable display.
[[LAN communication port specifications]]Communication interface	Ethernet 100BASE-TX / 10BASE-TX
[[LAN communication port specifications]]Communication speed	100 Mbps, 10 Mbps auto negotiation function
[[LAN communication port specifications]]Total cable length	100 m 328 ft (500 m 1,640 ft when a repeater is used)
[[LAN communication port specifications]]Number of nodes	Max. 254 units
[[LAN communication port specifications]]Number of simultaneous connections	Max. 220 connections (user connection: 216, system connection: 4)
[[LAN communication port specifications]]Communication protocol (Communication layer)	TCP / IP, UDP
[[LAN communication port specifications]]DNS	Supports name servers
[[LAN communication port specifications]]DHCP / DHCPV6	Automatic IP address acquisition
[[LAN communication port specifications]]FTP server / Client (SSL compatible)	Server function, file transfer, number of user: 3 Client function, data and file transfer
[[LAN communication port specifications]]HTTP server / Client (SSL compatible)	Server function, system web, Customer web (8 MB), number of concurrent session: 16 Client function, data transfer
[[LAN communication port specifications]]SMTP client (SSL compatible)	Client function, mail transfer
[[LAN communication port specifications]]SNTP	Time adjustment function
[[LAN communication port specifications]]General-purpose communication	16 kB / 1 connection (user connection: 1 to 16)
[[LAN communication port specifications]]Dedicated communication	Slave communication (MEWTOCOL-COM, MEWTOCOL7-COM, MEWTOCOL-DAT, MODBUS-TCP, MC protocol (Note)) Master communication (MEWTOCOL-COM, MEWTOCOL-DAT, MODBUS-TCP, MC protocol (Note)) (Note): MC protocol is a short form denoting MELSEC communication protocol; MELSEC is a registered trademark of Mitsubishi Electric Corporation. QnA compatible 3E frame, only binary (bulk writing and bulk reading) use is available.
[[Common general specifications]]Ambient temperature	0 to +55 ℃ +32 to +131 °F, Storage: -40 to +70 ℃ -40 to +158 °F
[[Common general specifications]]Ambient humidity	10 to 95 % RH (at +25 ℃ +77 °F, no condensation), Storage: 10 to 95 % RH (at +25 ℃ +77 °F, no condensation)
[[Common general specifications]]Breakdown voltage	500 V AC for 1 minute
[[Common general specifications]]Insulation resistance	100 MOhm 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 micro s (using a noise simulator)
[[Common general	Free from corrosive gasses and excessive dust

specifications]]Operating condition

[[Individual general specifications]]Rated voltage range	20.4 to 28.8 V DC
[[Individual general specifications]]Current consumption	200 mA or less
[[Individual general specifications]]Net weight	220 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	**AFP7AD8**	
Part Number	**AFP7AD8**	
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 name	**FP7 Analog Input and Output units**	
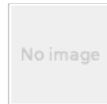
Product Number	**AFP7END**	
Part Number	**AFP7END**	
Product name	**FP7 End unit**	

Product Number	**AFP7EXPM**	Product Number	**AFP7EXPS**
Part Number	**AFP7EXPM**	Part Number	**AFP7EXPS**
Product name	**FP7 Expansion unit**	Product name	**FP7 Expansion unit**

Product Number	**AFP7FCA21**
Part Number	**AFP7FCA21**
Product	**FP7 Add-on cassettes (function cassettes)**
Product name	**FP7 Add-on cassettes (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	**AFP7MXY32DWD**
Part Number	**AFP7MC64EC**	Part Number	**AFP7MW**	Part Number	**AFP7MXY32DWD**
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	**AFP7MXY32DWDH**	Product Number	**AFP7NSC**	Product Number	**AFP7PG02L**
Part Number	**AFP7MXY32DWDH**	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**	Product name	**FP7 Pulse output units**

Product name	Multi input/output unit		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 name	**FP7 Pulse output units**	Product name	**FP7 Pulse output units**	Product name	**FP7 Pulse output units**

Product Number	**AFP7PHLSM**	Product Number	**AFP7PP02L**	Product Number	**AFP7PP02T**
Part Number	**AFP7PHLSM**	Part Number	**AFP7PP02L**	Part Number	**AFP7PP02T**
Product	**FP7 PHLS (Remote I/O) unit**	Product	**FP7 Positioning units**	Product	**FP7 Positioning units**
Details	**PHLS Master unit**	Product name	**FP7 Positioning units**	Product name	**FP7 Positioning units**
Product name	**FP7 PHLS (Remote I/O) unit**				

Product Number	**AFP7PP04L**	Product Number	**AFP7PP04T**	Product Number	**AFP7PSA1**
Part Number	**AFP7PP04L**	Part Number	**AFP7PP04T**	Part Number	**AFP7PSA1**
Product	**FP7 Positioning units**	Product	**FP7 Positioning units**	Product	**FP7 Power supply units**
Product name	**FP7 Positioning units**	Product name	**FP7 Positioning units**	Product name	**FP7 Power supply units**

Product Number	**AFP7PSA2**	Product Number	**AFP7RTD8**	Product Number	**AFP7TC8**
Part Number	**AFP7PSA2**	Part Number	**AFP7RTD8**	Part Number	**AFP7TC8**
Product	**FP7 Power supply units**	Product	**FP7 Temperature input units**	Product	**FP7 Temperature input units**
Product name	**FP7 Power supply units**	Product name	**FP7 Temperature input units**	Product name	**FP7 Temperature input units**

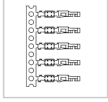|					
Product Number	**AFP7X16DW**	Product Number	**AFP7X32D2**	Product Number	**AFP7X64D2**
Part Number	**AFP7X16DW**	Part Number	**AFP7X32D2**	Part Number	**AFP7X64D2**
Product	**FP7 Input and Output Units**	Product	**FP7 Input and Output Units**	Product	**FP7 Input and Output Units**
Details	**Input units**	Details	**Input units**	Details	**Input units**
Product name	**FP7 Input and Output units**	Product name	**FP7 Input and Output units**	Product name	**FP7 Input and Output units**

Product Number	**AFP7XY64D2P**	Product Number	**AFP7XY64D2T**	Product Number	**AFP7Y16P**
Part Number	**AFP7XY64D2P**	Part Number	**AFP7XY64D2T**	Part Number	**AFP7Y16P**
Product	**FP7 Input and Output Units**	Product	**FP7 Input and Output Units**	Product	**FP7 Input and Output Units**
Details	**Input and Output units**	Details	**Input and Output units**	Details	**Output units**
Product name	**FP7 Input and Output units**	Product name	**FP7 Input and Output units**	Product name	**FP7 Input and Output units**

Product Number	**AFP7Y16R**	Product Number	**AFP7Y16T**	Product Number	**AFP7Y32T**
Part Number	**AFP7Y16R**	Part Number	**AFP7Y16T**	Part Number	**AFP7Y32T**
Product	**FP7 Input and Output Units**	Product	**FP7 Input and Output Units**	Product	**FP7 Input and Output Units**
Details	**Output units**	Details	**Output units**	Details	**Output units**
Product name	**FP7 Input and Output units**	Product name	**FP7 Input and Output units**	Product name	**FP7 Input and Output units**

Product Number	**AFP7Y64P**	Product Number	**AFP7Y64T**	Product Number	**AFP8503**
Part Number	**AFP7Y64P**	Part Number	**AFP7Y64T**	Part Number	**AFP8503**
Product	**FP7 Input and Output Units**	Product	**FP7 Input and Output Units**	Product name	**Motor Driver I/F Terminal II**
Details	**Output units**	Details	**Output units**		
Product name	**FP7 Input and Output units**	Product name	**FP7 Input and Output units**		

Product Number	**AFP8504**	Product Number	**AFP85100**	Product Number	**AFP85101**
Part Number	**AFP8504**	Part Number	**AFP85100**	Part Number	**AFP85101**
Product name	**Motor Driver I/F Terminal II**	Product name	**Connection cable for Posiotioning unit**	Product name	**Connection cable for Posiotioning unit**

Product Number	**AFP85151**	Product Number	**AFP85152**	Product Number	**AFPRP1X08D2**
Part Number	**AFP85151**	Part Number	**AFP85152**	Part Number	**AFPRP1X08D2**
Product name	**MINAS A4 series / A5 series Exclusive cable**	Product name	**MINAS A4 series / A5 series Exclusive cable**	Product	**FP7 PHLS (Remote I/O) unit**
				Details	**PHLS Slave units**
				Product name	**FP7 PHLS (Remote I/O) unit**

Product Number	**AFPRP1X16D2**	Product Number	**AFPRP1XY16D2T**	Product Number	**AFPRP1Y16T**
Part Number	**AFPRP1X16D2**	Part Number	**AFPRP1XY16D2T**	Part Number	**AFPRP1Y16T**
Product	**FP7 PHLS**	Product	**FP7 PHLS**	Product	**FP7 PHLS**

	(Remote I/O) unit			(Remote I/O) unit			(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	AFPRP2X08D2E		Product Number	AFPRP2X16D2		Product Number	AFPRP2XY16D2T	
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	AFPSGR7ENS	
Part Number	AFPRP2Y04R		Part Number	AFPRP2Y16T		Part Number	AFPSGR7ENS	
Product	FP7 PHLS (Remote I/O) unit		Product	FP7 PHLS (Remote I/O) unit		Product name	Control FPWIN 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	AFPSGR7JPS		Product Number	AFPSGR7KRS		Product Number	AFPSPR7AS	
Part Number	AFPSGR7JPS		Part Number	AFPSGR7KRS		Part Number	AFPSPR7AS	
Product name	Control FPWIN GR7		Product name	Control FPWIN GR7		Product name	Control FPWIN Pro7	
Product Number	AFPSWC		Product Number	AFPSWCKEY		Product Number	AXW7221FP	
Part Number	AFPSWC		Part Number	AFPSWCKEY		Part Number	AXW7221FP	
Product name	FP7		Product name	FP7		Product	Pressure contact for multi-wire	
						Product name	Pressure contact for multi-wire	
Product Number	AXW7231FP		Product Number	AXY52000FP		Product Number	SL-VFP7	
Part Number	AXW7231FP		Part Number	AXY52000FP		Part Number	SL-VFP7	
Product	Pressure contact for multi-wire		Product	Pressure contact tool		Product name	Flexible Wire-saving System S-LINK V	
Product name	Pressure contact for multi-wire		Details	Multi-wire connector pressure contact tool				
			Product name	Pressure contact tool				