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AFP0RF32MT

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Specifications

Item	Performance characteristics
[[Performance specifications]]Programming method / Control method	Relay symbol / Cyclic operation
[[Performance specifications]]Number of I/O points : No expansion (Control unit only)	32 points [Input : 16, Transistor output : 16]
[[Performance specifications]]Number of I/O points : With expansion 1 Same type of control and expansion units	Max. 128 points (Note: For the limitations while operating units, refer to the manual.)
[[Performance specifications]]Number of I/O points : With expansion 2 Mix type of relay and transistor units	Max. 128 points (Note: For the limitations while operating units, refer to the manual.)
[[Performance specifications]]Program memory	EEPROM (no backup battery required)
[[Performance specifications]]Program capacity	32 k steps
[[Performance specifications]]Number of instructions : Basic	110 approx.
[[Performance specifications]]Number of instructions : High-level	210 approx.
[[Performance specifications]]Operation speed : Up to 3,000 steps	Basic instructions : 0.08 μ s min. Timer instructions : 2.2 μ s min. High-level instructions : 0.32 μ s (MV instruction) min.
[[Performance specifications]]Operation speed : 3,001st and later steps	Basic instructions : 0.58 μ s min. Timer instructions : 3.66 μ s min. High-level instructions : 1.62 μ s (MV instruction) min.
[[Performance specifications]]Operation memory : Relay : Internal relay (R)	4,096 points

Item	Performance characteristics
[[Performance specifications]]Operation memory : Relay : Timer / Counter (T / C)	1,024 points
[[Performance specifications]]Operation memory : Memory area : Data register (DT)	32,765 words
[[Performance specifications]]Operation memory : Memory area : Index register (IX, IY)	14 words (IO to ID)
[[Performance specifications]]Master control relay points (MCR)	256 words
[[Performance specifications]]Number of labels (JMP and LOOP)	256 labels
[[Performance specifications]]Differential points	Equivalent to the program capacity
[[Performance specifications]]Number of step ladder	1,000 stages
[[Performance specifications]]Number of subroutines	500 subroutines
[[Performance specifications]]Special functions : High speed counter	Single-phase: 6 points (50 kHz max. each) 2-phase: 3 channels (15 kHz max. each) (Note: For the limitations while operating units, refer to the manual.)
[[Performance specifications]]Special functions : Pulse output	4 points (50 kHz max. each) 2 channels can be controlled individually. (Note: For the limitations while operating units, refer to the manual.)
[[Performance specifications]]Special functions : PWM output	4 points (6 Hz to 4.8 kHz)
[[Performance specifications]]Special functions : Pulse catch input / interrupt input	Total 8 points (with high speed counter)
[[Performance specifications]]Special functions : Interrupt program	Input : 8 programs (6 programs for C10 only) / Periodic : 1 program / Pulse match : 4 programs/td>
[[Performance specifications]]Special functions : Periodical interrupt	In units of 0.5 ms : 0.5 ms to 1.5 sec. / In units of 10 ms : 10 ms to 30 sec.
[[Performance specifications]]Special functions : Constant scan	In units of 0.5 ms : 0.5 ms to 600 ms
[[Performance specifications]]Special functions : RS485 port	One RS485 port is mounted (3P terminal block) Transmission speed (Baud rate) : 115.2 kbps (It is possible to change to 19.2 kbps by the setting.), Transmission distance : 1,200 m 3,937 ft, Communication method : half duplex
[[Performance specifications]]Maintenance : Memory backup : Program and system register	Stored program and system register in EEPROM
[[Performance specifications]]Maintenance : Memory backup : Operation memory	Backup of the entire area by FeRAM (without the need for a battery)
[[Performance specifications]]Maintenance : Self-diagnostic function	Watchdog timer (690 ms approx.), Program syntax check
[[Performance specifications]]Maintenance : Real-time clock function	Not available
[[Performance specifications]]Maintenance : Other functions	Rewriting in RUN mode, Download in RUN mode (incl. comments), 8-character password setting, and Program upload protection
[[General specifications]]Rated voltage	24 V DC
[[General specifications]]Operating voltage range	20.4 to 28.8 V DC
[[General specifications]]Allowed momentary power off time	10 ms (20.4 V DC or higher)
[[General specifications]]Operating	0 to +55 °C 32 to +131 °F

Item	Performance characteristics
temperature	
[[General specifications]]Storage temperature	-40 to +70 °C -40 to +158 °F (-20 °C to +70 °C -4 to +158 °F for T32 only)
[[General specifications]]Operating humidity	10 to 95% RH (at 25 °C 77 °F, no condensation)
[[General specifications]]Storage humidity	10 to 95% RH (at 25 °C 77 °F, no condensation)
[[General specifications]]Breakdown voltage (Detection current: 5 mA)	Input terminals - output terminals, Output terminals - power and functional ground terminals --- Transistor output : 500 V AC for 1 minute (Relay output : 1,500 V AC for 1 minute) / Input terminals - power and functional ground terminals, Functional ground terminal - power terminal --- Transistor output : 500 V AC for 1 minute (Relay output : 500 V AC for 1 minute) / Output terminals - output terminals (different common terminals) --- Relay output : 1,500 V AC for 1 minute
[[General specifications]]Insulation resistance (Test voltage: 500 V DC)	Input terminals - output terminals, input terminals - power and functional ground terminals, output terminals - power and functional ground terminals, functional ground terminal - power terminal --- Transistor output : 100 MΩ minimum (relay output : 100 MΩ minimum) / Output terminals - output terminals (different common terminals) --- Relay output : 100 MΩ minimum
[[General specifications]]Vibration resistance	5 to 9 Hz, single amplitude of 3.5 mm, 1 sweep/min; 9 to 150 Hz, constant acceleration of 9.8 m/s ² , 1 sweep/min; for 10 min each in X, Y, and Z directions
[[General specifications]]Shock resistance	147 m/s ² or more , 4 times each in X, Y, and Z directions
[[General specifications]]Noise immunity	1,000 V (p-p) with pulse widths 50 ns and 1 μs (using a noise simulator)(Power supply terminal)
[[General specifications]]Operating environment	Free from corrosive gasses and excessive dust
[[Input specifications]]Rated input voltage	24 V DC
[[Input specifications]]Applied voltage range	21.6 to 26.4 V DC
[[Input specifications]]Rated input current	2.6 mA approx. (at 24 V DC)
[[Input specifications]]Input impedance	9.1 kΩ approx.
[[Input specifications]]Input points per common	16 points / common
[[Input specifications]]Min. ON voltage/Min. ON current	19.2 V / 2 mA
[[Input specifications]]Max. OFF voltage/Max. OFF current	2.4 V / 1.2 mA
[[Input specifications]]Response time : OFF→ON	20 μs or less * An input time constant (0.1 to 64 ms) can be set.
[[Input specifications]]Response time : ON→OFF	Same as above
[[Input specifications]]Insulation method	Photocoupler
[[Input specifications]]Remark	Since the response time of X0 to X7 is very fast (for high-speed counter input) the FP0 happens to chattering noise as an input signal. To prevent this, it is recommended that the timer should be put in the ladder program.
[[Output specifications]]Output type	Open collector
[[Output specifications]]Rated load voltage	5 to 24 V DC
[[Output specifications]]Load voltage allowable range	4.75 to 26.4 V DC
[[Output specifications]]Max. load current	0.2 A / point (Max. 14 per common terminal)
[[Output specifications]]OFF state leakage current	1 μA or less
[[Output specifications]]ON state voltage drop	0.2 V DC or less
[[Output specifications]]Response time : OFF→ON	20 μs or less (Load current : 5 mA or more), 0.1 ms or less (Load current : 0.5 mA or more)

Item	Performance characteristics
[[Output specifications]]Response time : ON→OFF	40 μs or less (Load current : 5 mA or more), 0.2 ms or less (Load current : 0.5 mA or more)
[[Output specifications]]External power : Voltage	21.6 to 26.4 V DC
[[Output specifications]]External power supply : Current	60 mA or less
[[Output specifications]]Surge absorber	Zener diode
[[Output specifications]]Output points per common	16 points / common
[[Output specifications]]Insulation method	Photocoupler

Parts Inventory

Distributor	Quantity	Inventory Date
 > Master Electronics , United States Tel: 888-473-5297	1	07/15/2018
 > e-Sonic , Canada Tel: 1-800-567-6642	1	07/15/2018
 > Onlinecomponents , United States Tel: 888-906-8217	1	07/15/2018

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Related Documents

	Data Sheet
	Control FPCWIN Pro7
	FP Series digest catalog
	FP Series Lineup(FPΣ,FP0R,FP-X,FP2SH)
	FP0R
	FP0R / MINAS A6 Motion Control

