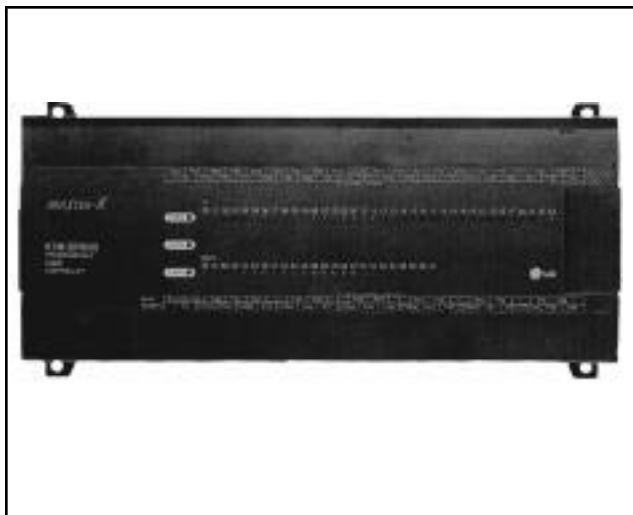


MASTER-K80S



FEATURES

- **Compact size and high function type**
 - Base: 10, 20, 30, 40, 60 I/O
 - Expansion: 10 I/O
- **Various built-in function for applications**
 - One high speed counter (1 phase 16kHz, 2 phase 8kHz)
 - One pulse train output (2kHz)
 - Eight PID Control loops with Auto Tuning
 - Eight Pulse catch inputs
 - One RS-232C I/F (dedicated, user defined, modbus Protocol)
- **Various special function modules**
 - Analogue I/Os, Cnet I/F, Analogue timer
- **RTC Pack, Memory pack (option)**
- **On-line editing**

SYSTEM CONFIGURATION

Items			Specifications
Program Control Method			Cyclic Operation of stored program, Interrupt task operation
I/O Updating Method			Refresh Method, Direct I/O method
Program Languages			Mnemonic, Ladder diagram
No. of Instructions	Basic		30
	Application		218
Processing Speed			0.5μs/Step
Program Capacity			7K Steps
Data Memory	I/O Area (P)		P0000~P015F
	Aux. Area (M)		M0000~M191F
	Keep Area (K)		K0000~K031F
	Link Area (L)		L0000~L063F
	Special Area (F)		F0000~F063F
	Timer (T)		100ms: T000~T191 / 10ms: T192~T255
	Counter (C)		C000~C255
	Step Control Area (S)		S00.00~S99.99
	Data Registration (D)		D0000~D4999
Built-in Special Function	PID Control		Controlled by instruction, auto tuning, forward/reverse, forced output, operation scan time setup
	Cnet I/F Function (RS-232C)		Dedicated protocol, MODBUS protocol, user-defined protocol
	High Speed counter	Counting Speed	1 Phase: 16kHz (1 channel) 2 Phase: 8kHz (1 channel) 3 counting modes
		Counting Modes	1 Phase, up/down count with program input 1 Phase, up/down count with B phase input 2 Phase, up/down count with phase difference
		Multiplication	select one of 1, 2, or 4
		Pulse Catch	Pulse width: 0.3ms, 8 Points
	Pulse Output		1x2kHz (transistor output only)
	External Interrupt		8 points, 0.3ms
	Input Filter		0~15ms

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Type	K7M-DR10S/(DC)	K7M-DR20S/(DC)	K7M-DR30S/(DC)	K7M-DR40S/(DC)	K7M-DR60S/(DC)	G7E-DR10A
	K7M-DT10S	K7M-DT20S	K7M-DT30S	K7M-DT40S	K7M-DT60S	-
Input Point	6	12	18	24	36	6
Insulation Device	Photo coupler					
Rated Input Voltage	DC12~24V					
Rated Input Current	DC12V 4.5mA, DC24V 9mA					
Operation Voltage	DC10.2-28.8V (Ripple : 5% or less)					
Max. Simultaneously On	100% Simultaneously on					
On Voltage/Current	More than DC9.5V/4.3mA					
Off Voltage/Current	Less than DC5V/1.5mA					
Input Impedance	About 2.7 KW (P000-P002 : 1.5KW)					
Operation Off-On	1~15ms					
Indicator On-Off	1~15ms					
Operation Indicator	LED					

OUTPUT (RELAY)

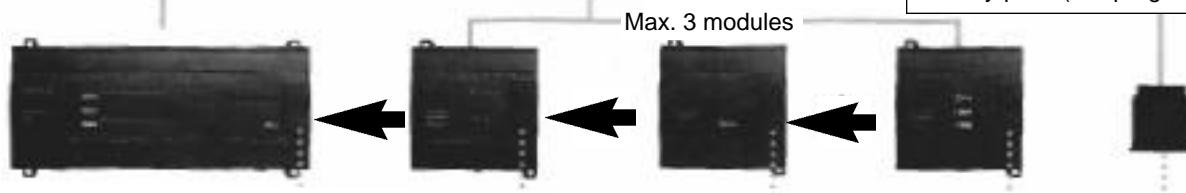
Type	K7M-DR10S/(DC)	K7M-DR20S/(DC)	K7M-DR30S/(DC)	K7M-DR40S/(DC)	K7M-DR60S/(DC)	G7E-R10A
Output Point	4	8	12	16	24	4
Switching Device	Relay					
Insulation Device	Relay					
Rated Load Voltage	DC24V/2A (Resistive load), AC220V/2A (COS ϕ =1) 1 Point					
/Current	2A/1 Point/com, 4A/2 Points/com, 4A/4 Points/com					
Minimum Input	DC5V/ 1mA					
Mix. Load Voltage	AC250V DC110V					
Mix. Switching Frequency	1,200 Times/hour					
Surge Killer	None					
Lifetime of Relay	Over 20 million operations					
Mechanical	Over 100,000 operations					
Electrical						
Response time	Within 10ms					
Off - On	Within 12ms					
On - Off						
Operation Indicator	LED					
External Wiring	Terminal block (M3 x 6Screw)					

OUTPUT (TRANSISTOR)

Item	Type	K7M-DT10S	K7M-DT20S	K7M-DT30S	K7M-DT40S	K7M-DT60S
Output Point		4	8	12	16	24
Rated Operating Voltage		DC 12/24				
Rated Operating Current		0.5A/1Point, 3A/1com				
Response time	Off - On	Less than 2ms				
	On - Off	Less than 2ms				
Common Method		8 Points/1com, Sink type				
Operation Indicator		LED				
Insulation Device		Photo coupler				
Surge Killer		Clamp diode				
Internal Power~ Consumption		170mA				

SYSTEM CONFIGURATION

Base Unit Processin speed: 0.5 μ s Program capacity: 7k steps Type: K7M-DR10S K7M-DR10S/DC K7M-DT10S K7M-DR20S K7M-DR20S/DC K7M-DT20S K7M-DR30S K7M-DR30S/DC K7M-DT30S K7M-DR40S K7M-DR40S/DC K7M-DT40S K7M-DR60S K7M-DR60S/DC K7M-DT60S	Expansion unit Digital I/Output: DC 6 points/relay 4 point Analogue I/O: Input 2ch, Output 1ch Analogue timer: 4 points Cnet I/F for RS-422/RS-232C (for modem) Fnet (master) DevicNet (slave) Profibus (slave)	Available System Digital I/Output: 2 modules Analogue I/O: 2 modules Analogue timer: 3 modules Cnet I/F: 1 module <div>Max. 3 modules</div>
Option Pack RTC (Real Time Clock) Pack Memory pack (For program back-up)		



OPTION MODULE

Analogue I/O
Module
(G7F-ADHA)



Items		Specification	
A/D Part	Analog Input	Voltage	DC0~ 10V
		Current	DC0~20mA or 4~20mA
	Digital Output Resolution		12bit (0~4,000)
	Voltage/Current Selection		Selected by dip switch - Short V and 1 terminal for current Input
	Analog Input Channels		2 channels/module
D/A Part	Absolute Maximum Input	Voltage	DC-0.5V, +12V
		Current	DC-2mA, +25mA
	Digital Output Resolution		12bit (0~4,000)
	Analog Output	Voltage	DC0~20mA (load impedance 2KW~-1 MW)
		Current	DC0~20mA (load impedance 560 W or less)
			Separated terminal
			1 channels/module
		Voltage	DC+15V
		Current	DC+24mA
		DC0-1 OV	2.5mV (1/4,000)
		DC0-20mA	5μA (1/4,000)
			±0.5% or less (Full scale)
			Scan time+1.5ms/channels
			Photo coupler between input terminal and ground (No insulation between channels)
			14 point terminal block
			DC24V, 80mA
			DC5V, 10mA
			235g

Analogue
Potentiometer
Module
(G7F-AT2A)

-Four analogue potentiometers can be used on the job manually to adjust set points such as timer values or other variables, without going into PLC program.

-Adjustments can be made from the front part of the module using variable resistors.

Items		Specification	
No. of Timers		4 Point	
Digital Output Range		(8bit) 0 ~200	
Timers Setting .		Set by adjustable volume switch	
Accuracy Of Timer		±2.0% (Full scale)	
Current Consumption		50mA	
Weight		180g	

Cnet I/F Module
(G7L-CUEB,
C7L-CUEC)

-RS-422/485 interface enables communication between computer and 32 PLCs using the multidrop system (G7L-CUEC)

-MODBUS master/slave mode can be used on a MODBUS RTU or ASCII mode.

-Long distance communication through RS-232C modem connection (G7L-CUEB)

-Communication parameter setting can be made in programming tool (KGLWIN)

Items		Specification	
Mode	Interface	RS-422, Modem (RS-232C)	
	Dedicated Mode	Supports multidrop/1:1 communication via LG dedicated protocol	
		Supports high speed link service	
	KGMWIN Mode .	Supports remote control via MASTER-K PLC protocol	
	Modbus Mode	Supports master and slave function with MODBUS Protocol (ASCII, RTU)	
Date Structure	User Mode	Operated with user-defined protocol	
	Date Bit	7 or 8	
	Stop Bit	1 or 2	
	Start Bit	1 or 2	
	Parity	Even /Odd /None	
Synchronization		Asynchronous method	
Transmission Speed		9,600/19,200/38,400/56,000/76,800/115,200/128,000 bps	
Setting Method		Parameter setting with KGLWIN software	
Max. Cable Length		500m	
Weight		180g	

Items		Specification	
Input	Type	AC Powered	DC Powered
	Rated Voltage	AC100~240 (Free voltage)	DC12-24V (Free Voltage)
	Input Voltage Range	AC85-264V	DC10.2~28.8V
	Frequency	47~63Hz	-
	Inrush Current	30A (When the power turns on)	-
	Leakage Current	3mA or less (AC264V, 63Hz)	-
	Fuse	250VAC 2A, UL Listed (Slow Blow Type)	250VAC 5A, UL Listed (Slow Blow Type)
DC 24V Output	Dropout Tolerance	20ms or less	20ms or less
	Output Current	0.2A(Isolated from DC5V)	-
	Output Voltage	24V±10% (21.6~26.4V)	-
	Ripple Noise	400mVp-p	-
	Over-Current Voltage	0.22~1.5A	-