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TECHNOLOGY GROUP

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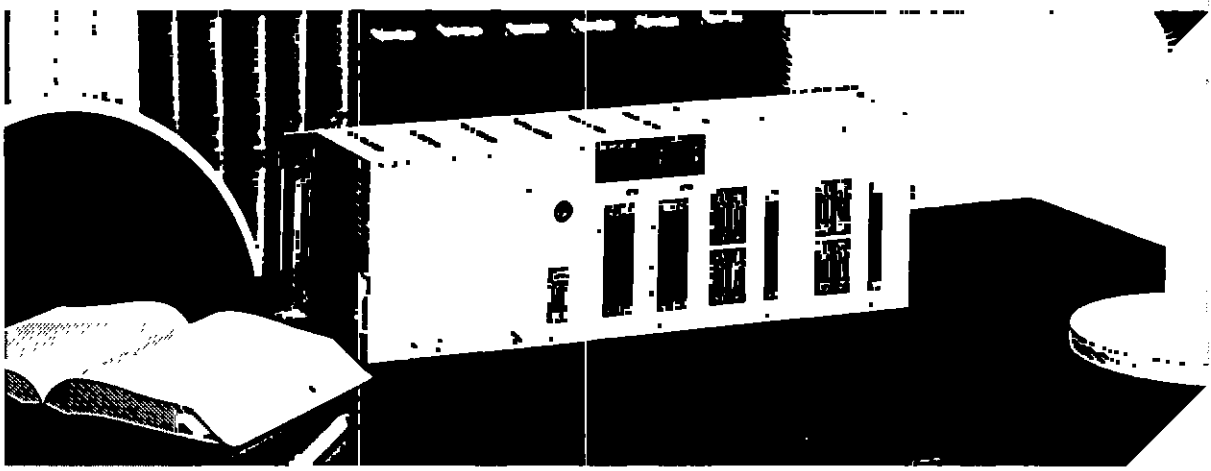
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PROGIC-8

MULTIAXES MOTION CONTROLLER



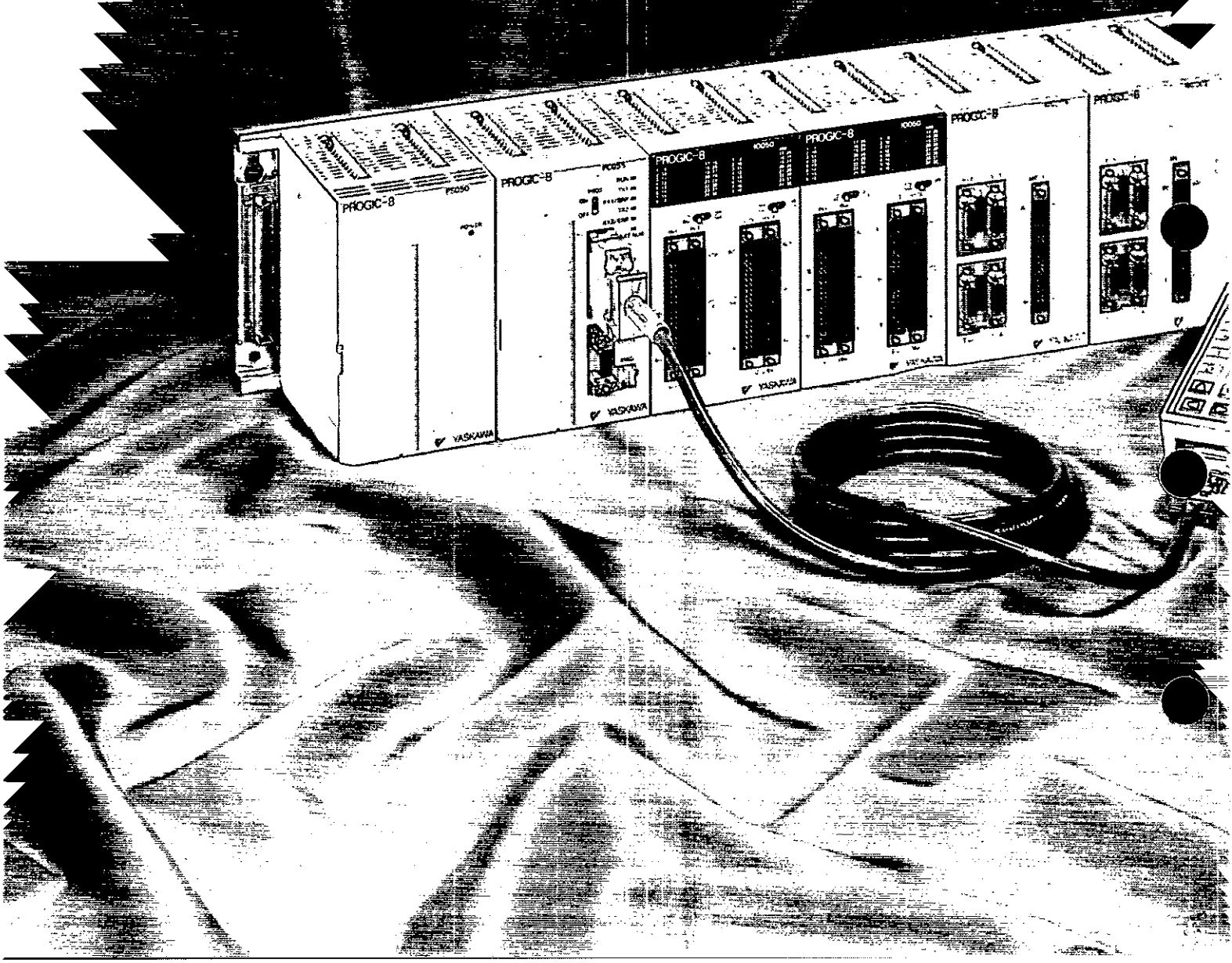
YASKAWA

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DESIGNED FOR MOTION AND SEQUENCE CONTROL:

"MULTIAXES MOTION CONTROLLER"
WITH BUILT-IN P.L.C FOR AUXILIARY SEQUENCING

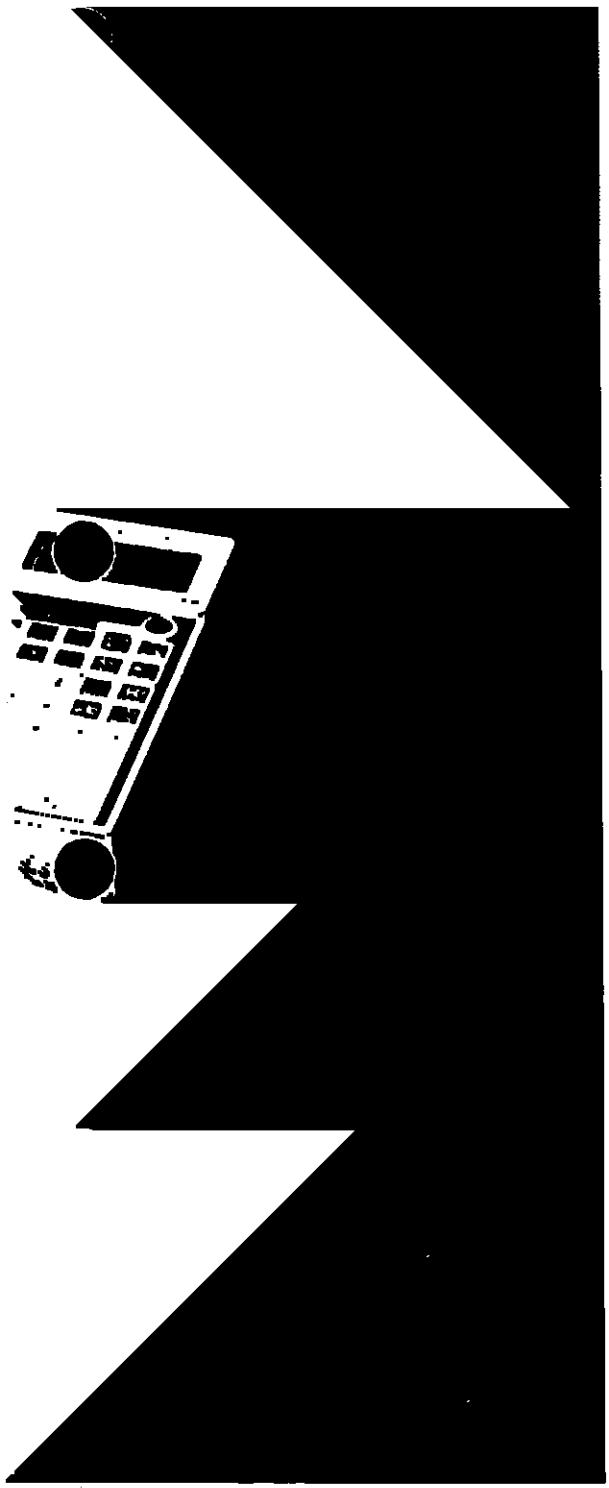
PROGIC-8 IS CREATED FOR TODAY'S DEMANDING APPLICATIONS



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Motion Control and Sequence Control can be Achieved with PROGIC-8

Motion and sequence are combined into one controller.
Motion of up to 8 axes can be programmed for 3000 blocks to perform judging or calculating control easily.

Only This Unit Performs All Machine Controls

Motion controller and sequencer are combined with this unit.
It can control 8 axes for SERVOMOTOR and 256 I/O points (up to 512 points as an option), requiring no additional sequencer.

Compact Design

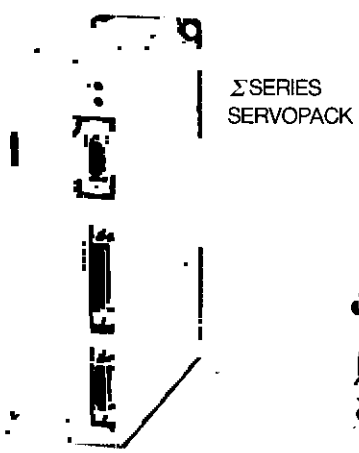
- Up to 8 axes with common high speed backplate bus connections to optional P.L.C. (up to 80 inputs, 48 outputs).
- IBM compatible programming (motion and sequence control) optional teach pendant motion program.
- Compatible with YASKAWA's complete digital servo product line (30 watts to 60 kW and up to 508 in·lb continuous torque).

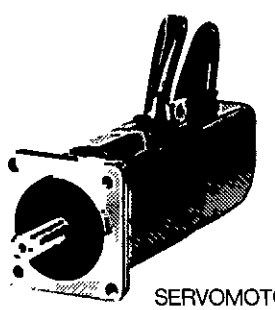
Powerful Functions Fully Reflect the Machine Performance

The motion and sequencer units are highly integrated. Therefore, signal transmission time is greatly reduced.
The super high-speed processing sequence section can control 16000 steps with ease. Not only normal contact control but also counter/analog I/O can be connected.

Easy System Startup and Maintenance

Your personal computer will be changed to the programmer or monitoring device. Not only motion and sequence programs but also parameters required for startup can be controlled one-dimensionally by only this unit.
Any programming or correction can be performed immediately by the teach pendant.

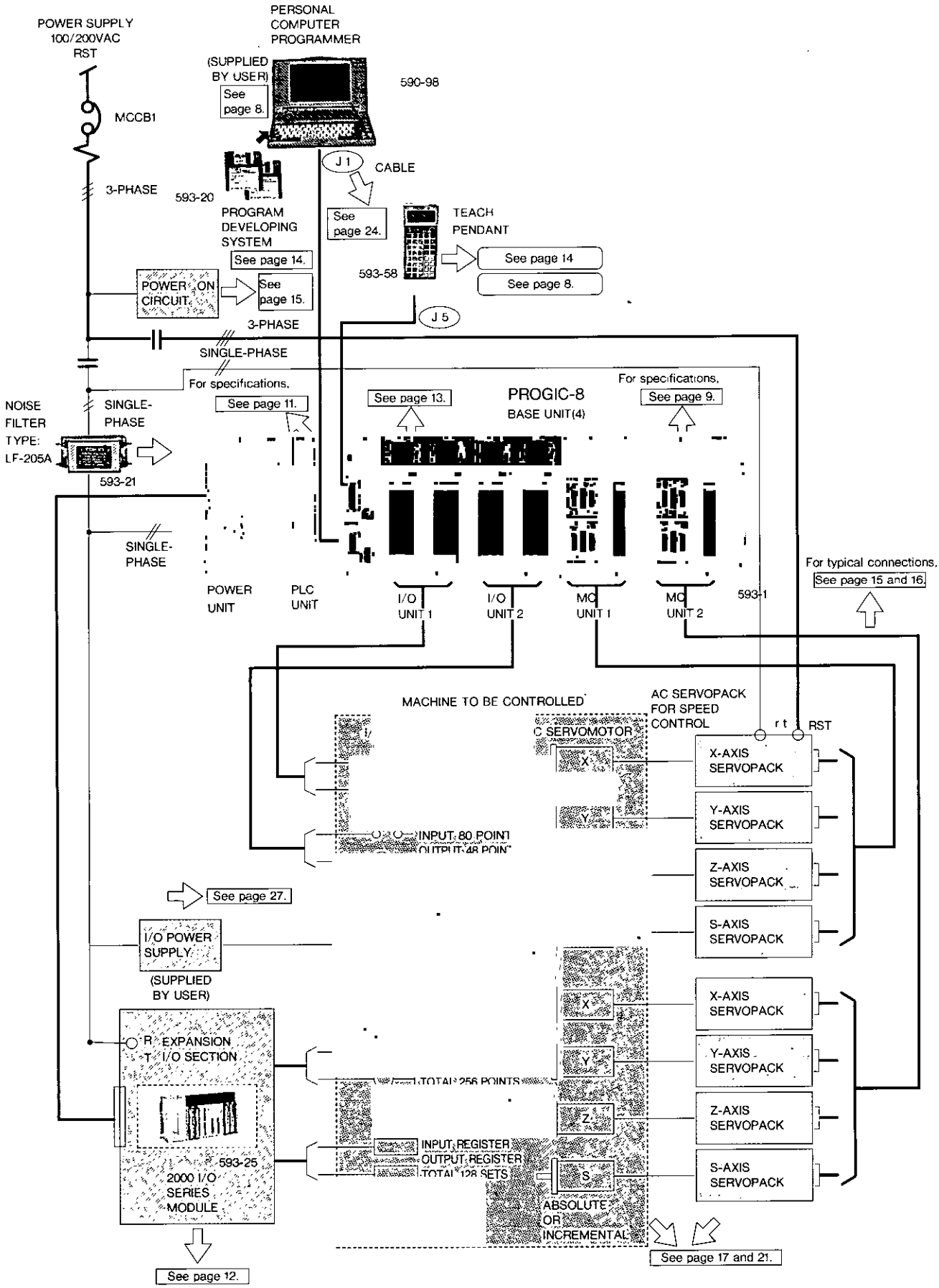




SERVOMOTOR

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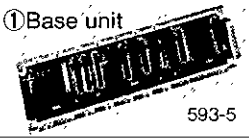
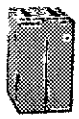
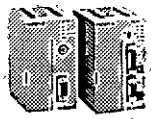
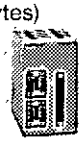
SYSTEM CONFIGURATION (AND INDEX)



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LIST OF MAIN UNIT

■Main Unit Type and Specifications

①Base unit  593-5	(1)JEPMC-MB041 (2)JEPMC-MB051 (3)JEPMC-MB052 (4)JEPMC-MB062	• 4-slot, I/O unit×1, MC unit×1 • 5-slot, I/O unit×2, MC unit×1 • 5-slot, MC unit×2, I/O unit×1 • 6-slot, I/O unit×2, MC unit×2	Fied location method
②Power supply unit  593-33	(1)JEPMC-PS050	• Input power supply : 85 to 264VAC	
③PLC unit (Ladder memory : 16000 steps)  593-10 Basic Type / Model 2 Type	(1)JEPMC-PC050	• Communication port : RS-232C×1 • Incremental encoder exclusive specifications	Basic type
	(2)JEPMC-PC055	• Communication port : RS-232C×2 • Absolute/incremental encoder switching specifications • Compatible with teach pendant	Model 2 type
	(3)JEPMC-PC056	• Communication port : RS-232C×2 • Absolute/incremental encoder switching specifications • Type for expansion I/O • Compatible with teach pendat	Model 2 type
④I/O unit 	(1)JEPMC-IO050	Input = 80 points, 12V/24V, 2.5/5mA, 50% duty Output = 48 points, 12V/24V, 100mA, 50% duty	
⑤MC unit (Program memory = 60kbytes)  593-32	(1)JEPMC-MC002	• 4 axes/unit • Incremental encoder exclusive specifications	Basic type
	(2)JEPMC-MC003	• 4 axes/unit • Absolute/incremental encoder switching specifcations • Type for teach pendant	Model 2 type
⑥Program developing system (software for personal computer)  593-20	(1)FPMC-DE3	• 3.5-inch FD • For personal computer • For sequence program/motion program development	
⑦Teach pendant  593-57	(1)JEPMC-TB050	• Liquid crystal module with EL back-lighting (16 alphanumeric characters×4 lines) • Connected to PLC unit by RS-232C (MEMOBUS protocol)	Arrange exclusive -use cable. See page 25 for details.
⑧PROM module  593-13	(1)JEPMC-MM001	• Memory capacity : 16,000 steps Used when fixed to PROM so that PLC unit sequence program cannot be changed by user.	

●Since base unit is of fixed location type, each unit mounting position is specified as shown in the table below

●For combination of the PLC unit and MC unit, refer to page 22.

Name of unit which can be inserted into each slot

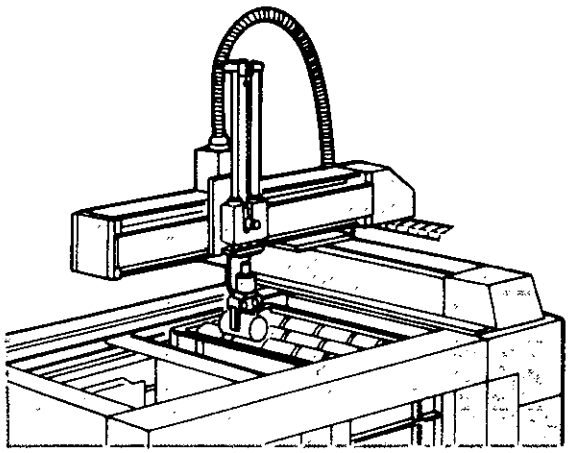
Base unit	slot 1	slot 2	slo			16
JEPMC-MB041	Power supply unit	PLC unit	I/O unit	MC unit	—	—
JEPMC-MB051				I/O unit	MC unit	—
JEPMC-MB052				MC unit		—
JEPMC-MB062				I/O unit		MC unit

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APPLICATION EXAMPLES

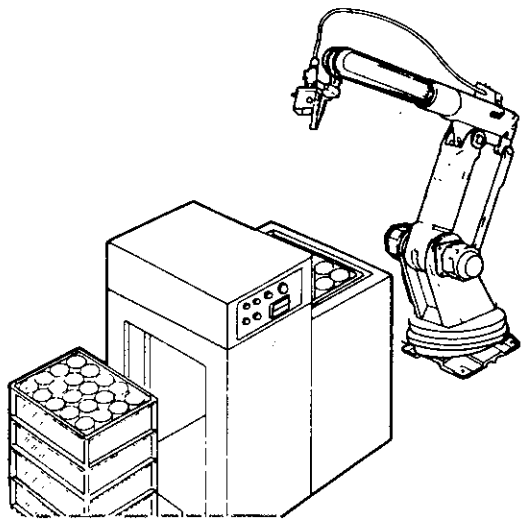
■OPTIMUM FOR MACHINES SUCH AS SHOWN BELOW.

Orthogonal Coordinate System Robot



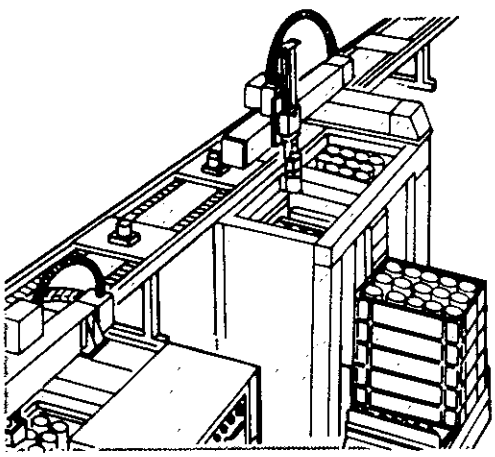
- ●Transfer Equipment
- ●Slider

Robot Peripheral Device



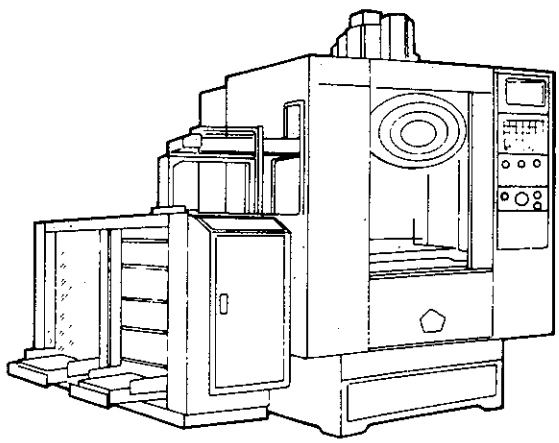
- ●Palletizer

Feeder/Assembler



- ●Assembling Robot
- ●Palletizer

Machine Tool Peripheral Device



- ●Auto-loader/ Unloader
- ●Perforating Device

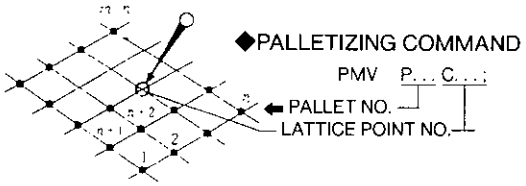
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FUNCTIONS

■YOUR HIGH-PERFORMANCE MACHINES ARE SUPPORTED BY THESE FUNCTIONS.

A

"Palletizing command" and "point table position command" help handling programming.



◆PALLETIZING COMMAND

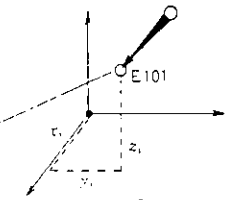
PMV P... C...;

← PALLET NO.

LATTICE POINT NO.

◆POINT TABLE POSITION COMMAND

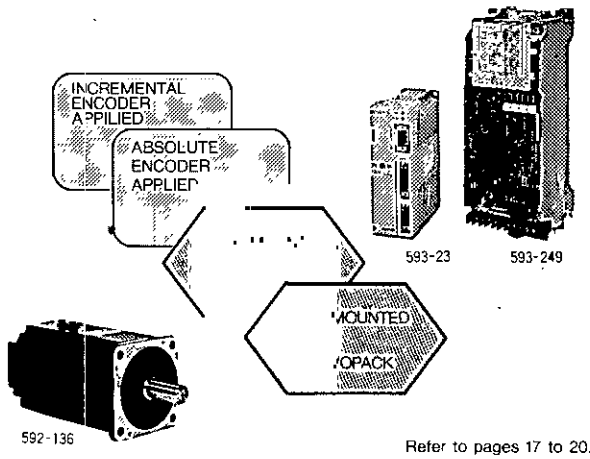
MOVE 101;



Refer to page 10

B

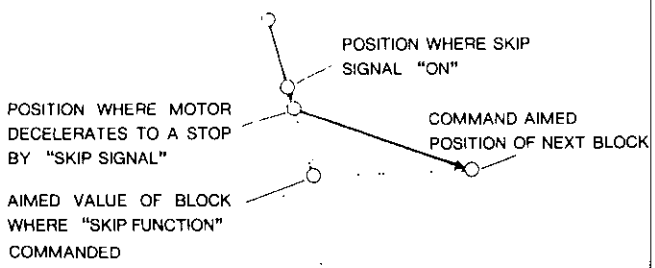
Industry standard servo drive interface compatible with YASKAWA's complete line of AC servos.



Refer to pages 17 to 20.

C

"Skip function" or "programming I/O function" realizes control suitable for the site status.



A function adjustable for the site can be created by using the above "skip command" or "function to refer to PLC unit coil in motion program and output to relay"

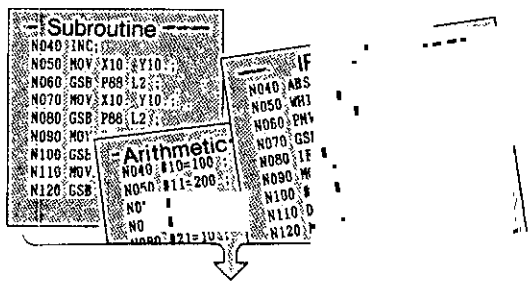
D

Subroutines includes high level programming features such as

1) WHILE..DO..

2) GOTO branching

3) Arthmetic (+, −, ∗, /), etc.

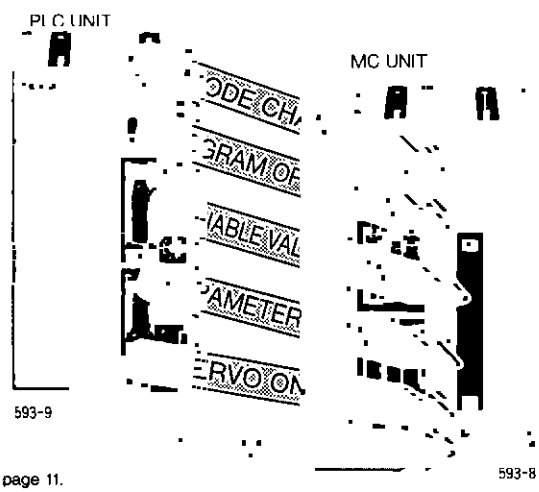


HIGH-EFFICIENT PROGRAM

HIGH-GRADE JUDGING CALCULATING CONTROL

E

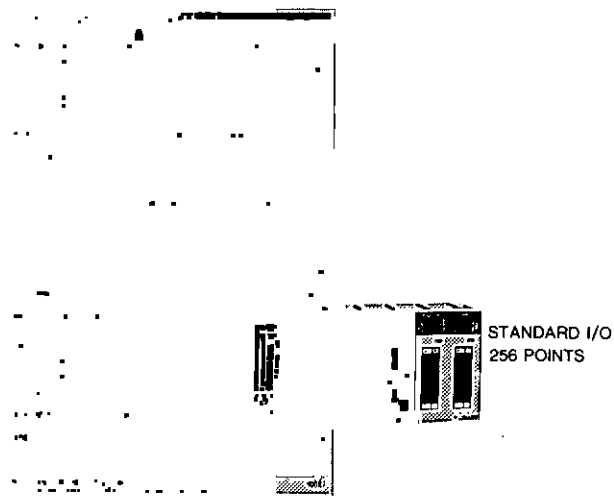
"Motion command" from PLC unit can precisely control the "motion unit"



Refer to page 11.

F

"Expansion I/O" available for existing or future expansion requirements beyond 256. (Consult factory.)

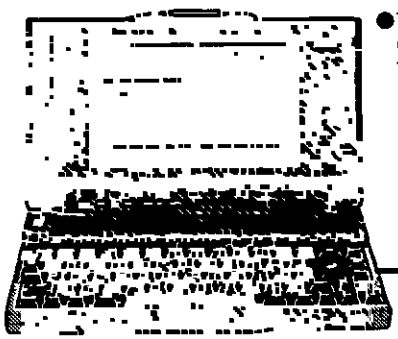


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FUNCTIONS (Cont'd)

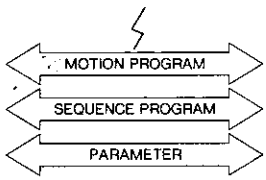
SYSTEM CAN BE STARTED UP SO EASILY.

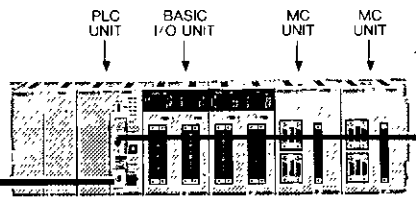
G Use your personal computer as a programming unit.



590-98

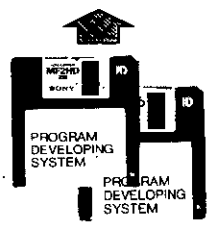
●The following data required for system startup can be easily created; what is more, they can be controlled from the personal computer.





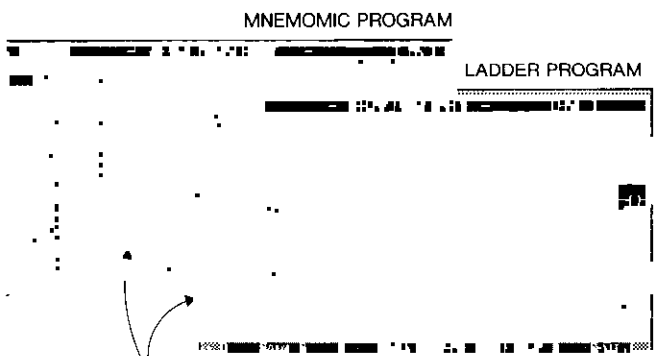
●EASY LOAD/SAVE

593-2



593-20

●OK to simply insert the program developing system (software) into the personal computer.



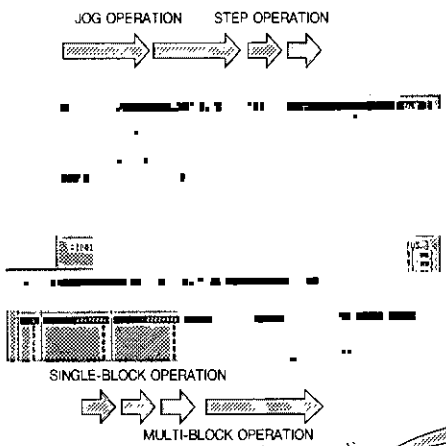
●These printing functions are also provided.

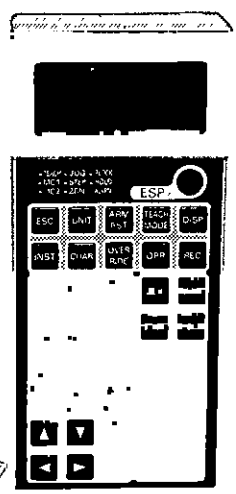
Teach pendant makes your programming easy.

●Moves each axis to a target position in the manual mode operation.

●The current position data can be input to the motion program.

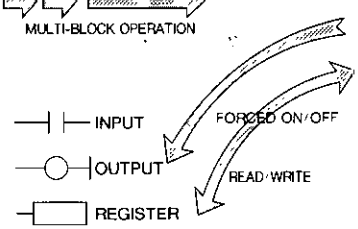
●Check the input position by block operation.





593-58

●PLC/MC unit I/O can be turned ON/OFF or the contents of a register can be chenged forcedly.



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■MC Unit Specifications (Up to 2 units of one of two models can be mounted.)

1. Number of control axes	4 axes ·Simultaneous 4 axes: Positioning ·Simultaneous 3 axes: Linear and helical interpolation ·Simultaneous 2 axes: Circular arc interpolation Position reference processing time: 8ms	
2. Independent operation axis	Up to 2 independent axes which can operate only by PLC unit sequence command can be set among the above 4 axes.	
3. Coordinate setting unit	Linear axis : Minimum 0.001mm Rotation axis: Minimum 0.001 degree	
4. Maximum reference value	±99999999 Indefinite length positioning is possible for both rotation and linear axes.	Up to 1 MPPS (MPPS : Mega Pulse Per Sec)
5. Rapid traverse speed and interpolation speed	Up to 60/min. (in case of 0.001mm/pulse) Up to 600/min. (in case of 0.01mm/pulse)	
6. Automatic acceleration /deceleration	Interpolation : Exponent type accel/decel Rapid traverse, jog, zero-point return (Homing) : S-curve, 1-step linear or 2-step linear can be set independently.	
7. Rapid traverse over-ride and jog override	Parameter No. 31 or parameter 4× [1% to 100% (15 steps)]	
8. Manual continuous feeding	Simultaneous 4 axes possible	
9. Manual step feeding (#1)	Simultaneous 4 axes possible	(#1): Mounted only on model 2
10. Positioning control	Positioning completion range can be set (1 to 250 command units)	
11. Software stroke limit	Positive limit and negative limit per axis	
12. Coordinate setting	Current coordinate value can be changed.	
13. Backlash compensation	0 to 32767 pulses	
14. Servo drive control	Analog speed command type SERVOPACK can be driven.	
	(1) Position detection: Incremental encoder only	Basic type
	(2) Position detection: Absolute/incremental encoder	(#1): Mounted only on model 2
15. Operation mode	Mode can be selected by PLC unit sequence command ·Edit mode: To load/save programs to PROGIC-8 from personal computer programmer ·Auto mode: To perform automatic operation ·Manual mode: To perform JOG feeding or zero-point return ·Online edit mode: To program by teaching current value by block by personal computer programmer	
16. Personal computer programmer	Personal computer can become a programmer by installing "programming system (software)". Programming are done in both offline and online.	
17. Program method	Interpreter method by basic-like motion language	

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SPECIFICATIONS (Cont'd)

PLC UNIT SPECIFICATIONS ⇨ PAGE 11
I/O UNIT/COMMON SPECIFICATIONS ⇨ PAGE 13
PERSONAL COMPUTER PROGRAMMER/ TEACH PENDANT SPECIFICATIONS ⇨ PAGE 14

MC Unit Specifications (Cont'd)

MC UNIT SPECIFICATIONS(CONT'D) ⇩

Function	Specification	Remarks
18. Programming functions	Positioning (MOV), linear interpolation (MVS), circular interpolation (MCW, MCC), helical interpolation (MCW, MCC), absolute coordinate (ABS), relative coordinate (INC), M-code output (SET M89), positioning completion waiting (PFN), sub-program (GSB), I/O (#1256, #0256), arithmetic (+, −, ∗, /), loop (WHILE..DO..), branching (GOTO..), condition branching (IF..GOTO..)	
19. Data table type positioning command(#1)	Positioning at the location of the point No. specified by #E according to MOV #E...; command. The position is a point in the 4-axis (X, Y, Z, S) space stored in advance. Up to 500 points can be stored.	(#1)Mounted only on model 2.
20. Palletizing command(#1)	Positioning at the location of the lattice point No. by C on the pallet No. P according to PMV P...C...; command. Maximum pallet No. : 199 Maximum lattice point No. : 999 × 999	(#1)Mounted only on model 2.
21. Skip function(#)	When the external "skip signal" is turned ON during axis move according to SKP X...Y...Z...F...; command, the axis move stops and the remaining moving amount in that block is canceled to go ahead to next block.	(#1)Mounted only on model 2.
22. Program number	A program can be registered and stored with any program number from 001 to 099 and a sequence number from N001 to N999.	
23. Program capacity	Up to 60kbytes Obtained by combining the program registration area and program area.	
24. Program execution	(1) Specify the program No. and block No. from the PLC unit to execute automatic operation. (Auto mode) (2) Execute single-block operation by an command from the PLC unit. (Auto mode) (3) Execute any program by an command from the personal computer programmer. (Online edit mode)	
25. Program execution method	Execute commands without servo control described in the next blocks during execution of servo motor control command, such as positioning, interpolation, etc.	
26. Data save	Stored programs and parameters are backed up by battery.	
27. Program I/O	Refer to the PLC unit coil from the motion program to output it to the relay. Coils to PLC units and relay from PLC unit are available.	
28. I/O signals	Overtravel, deceleration point input, stop position input/brake output	
29. Zero-point return (Homing)	Simultaneous all-axis method and program method are available. Activated by a command from the PLC unit or motion program.	
30. Monitor	The following status can be monitored from the personal computer programmer (1) Current position, I/O status with PLC unit, execution program steps (2) Position error, current speed, alarm status, alarm record, etc.	
31. Utility command	The following are convenient functions which can be activated by the sequence command from the PLC unit. Mode change, program operation, JOG operation, compensated value setting, parameter change, servo ON/OFF	

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■PLC Unit Specifications (Any one unit from 3 models can be mounted.)

1. Control method	Scanning method by stored program control		When optional EPROM is selected, prepare the "PROM module"(See page 22.)
2. Programming language	Ladder language (by relay symbols) and mnemonic language (by language commands)		
3. Program memory	6000 steps (24 bits/step) Standard: CMOS memory, battery backup		
4. Data memory	Holding register: 2048 words (16 bits/word)		
5. Basic command processing time	0.125μs/step		
6. Arithmetic function	(1) Relay	NO/NC contact, stepping relay (2 types), rising edge differential contact, falling edge differential contact	
	(2) Coil	Coil, latch coil, set coil, reset coil	
	(3) Timer, counter	100msec timer, 10msec timer, up counter, down counter	
	(4) Four basic arithmetic commands	Addition (ADD), subtraction (SUB), multiplication (MUL), division(DIV), double-length calculation (DAD, DSB, DML, DDV)	
	(5) Arithmetic operation commands	Square root (SQR), double-length square root (DSQ), sine (SIN), cosine (COS)	
	(6) Data transfer commands	Register→Table (RTT), Table→Register (TTR), Table→Table (TTT), Block Transfer (BLK), First-In (FIN), First-Out (FOUT), etc.	
	(7) Matrix commands	AND table (ANT), OR table (ORT), Exclusive OR (XOR), bit judgement (SEN), bit reverse (CMP), comparison (CPR), modification (MBT), multi-bit shift rotation (MRT)	
	(8) Data conversion	BCD→BIN conversion (BIN), BIN→BCD conversion (BCD)	
	(9) Special commands	Skip (SKP), Pulse (PLS), Subroutine (GSB)	
7. Motion commands	Single-block operation (SMD), program operation (MVL), independent A-axis operation (MVA), independent B-axis operation (MVB), zero-point return operation (ZRN), JOG operation (JOG), current position setting (POS), parameter setting (PRM), variable setting (VAR), alarm reset (ARS), servo ON (SVON), mode setting (MOD), MC unit reset (MRS), monitor (MON), emergency stop information (ESP)		
8. Step operation(＃1)	Jog operation (JOG) extension function which enables the following operations: By specifying the axis name, incremental shift amount and speed on the sequence program, movement is made from the current position of the axis by the specified incremental amount.		(＃1):Mounted only on model 2.

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SPECIFICATIONS (Cont'd)

■PLC Unit Specifications (Cont'd)

Function	Specifications		Remarks
9. Standard I/O	A System to use only "I/O Unit"		
	(1) I/O configuration	I/O point assignment: Fixed type	
	(2) I/O points	<I/O unit × 1 mounted> Discrete I/O: Up to 128 points Input: 80 points, Output: 48 points	
		<I/O unit × 2 mounted> Discrete I/O: Up to 256 points Input: 160 points, Output: 96 points	
10. Expansion I/O	(1) I/O configuration	I/O point assignment: Variable type	
	(2) I/O points	<I/O unit × 1 mounted at PROGIC-8 side> Discrete I/O: Up to 384 points can be added. Input + output = 384 points or less Register I/O: Up to 128 sets can be added. Input + output = 128 sets or less	Total 512 points can be controlled. → Refer to page 17.
		<I/O unit × 2 mounted at PROGIC-8 side> Discrete I/O: Up to 256 poins can be added. input + output = 256 points or less Register I/O: Up to 128 sets can be added. input + output = 128 sets or less	Total 512 points can be controlled. → Refer to page 17.
	Module type	Discrete I/O, register I/O, counter module, positioning module, analog module, etc.	
11. Communication port 1 (PORT 1)	(1) Electrical specifications (2) Communication condition (3) Communication protocol (4) Application	RS-232C, D-sub connector 9P Baud rate: 9600bps, data: 8 bits, parity: even, stop bit: 1 Memobus protocol Personal computer programmer	Basic type PLC unit: Only one of this type of port is mounted on JEPMC-PC050/-PC051.
12. Communication port 2 (※1) (PORT 2)	(1) Electrical specifications (2) Communication condition (3) Communication protocol (4) Application	RS-232C, D-sub connector 15P Baud rate: 19.2kbps (selectable), data: 8 bits, parity: even, stop bit: 1 Memobus protocol, "1 : N" communication available Personal computer, teach pendant	(※1)Mounted only on model 2 specifications. *Maximum value of N is 15.
13. Memory backup	Lithium battery × 1, battery life : 5 years (at 25℃), total no-conduction memory contents holding time: 1 year (at 25℃)		
14. Traceback function	Discrete 8-point ON/OFF status and numerical data for register; 1 point can be traced for up to 1024 scans. Convenient for program debugging.		
15. RAS function (RAS: Reliability, Availability and Service ability)	Various self-diagnosis functions are mounted. (Watchdog timer, memory total checksum, program data check, LSI diagnosis) Error message display and error code record (up to 4) are performed.		
16. Contact sweep function	Constant scan time up to 200 msec by every 10 msec can be set.		

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■PLC Unit Specifications (Cont'd)

17. Reference No. (when only standard I/O used)		(1) Output coil	01 to 048	I/O unit×1 mounted
			01 to 096	I/O unit×2 mounted
		(2) Input relay	I1 to I80	I/O unit×1 mounted
			I1 to I160	I/O unit×2 mounted
	Internally used elements	(3) Internal coil	N1 to N1536	N1536 fixed to use for battery coil
		(4) Timer relay	T1 to T256	T1 to T128: 100msec timer, T129 to T256: 10msec timer
		(5) Counter relay	C1 to C256	C1 to C128: Addition counter C129 to C256: Subtraction counter
		(6) MC unit coil	Y1 to Y512	Y1 to Y256: MC unit 1, Y257 to Y512: MC unit 2
		(7) MC unit relay	X1 to X512	X1 to X256: MC unit 1, X257 to X512: MC unit 2
		(8) MC control relay	P1 to P256	P1 to P128: MC unit 1 P129 to P256: MC unit 2
		(9) M-code relay	MUXX	U: MC unit No., XX: 00 to 89: code No.
		(10) Stepping relay	SYYXX	YY: Stage Nos. 01 to 32, XX: Step Nos. 01 to 99
		(11) Data register	W1 to W2048	Refer to the following when expansion I/O is used.
18. Reference No. (maximum value when expansion I/O added)		(1) Output coil	049 to 512	I/O unit×1 mounted on PROGIC-8
			097 to 0512	I/O unit×2 mounted on PROGIC-8
		(2) Input relay	I81 to I512	I/O unit×1 mounted on PROGIC-8
			I161 to I512	I/O unit×2 mounted on PROGIC-8
				However, limited to 512 points or less (input points + output points)
		(3) Output register	W1 to W128	Limited to 128 sets or less (input registers + output registers)
		(4) Input register	Z1 to Z128	
		(5) Data register	W129 to W2048	W1 to W128 used for output registers.

■I/O Unit Specifications (Up to 2 units can be mounted)

1. I/O points	Discrete I/O	Up to 128 points Input points (I1 to I80), 80 points Output points (01 to 048), 48 points
2. Input section specifications	(1) Input voltage	12VDC/24VDC
	(2) Input current	Up to 5mA/point (Duty ON 50% common)
3. Output section specifications	(1) Operation voltage	12VDC/24VDC
	(2) Operation current	Up to 100mA/point, up to 800mA/common
	(3) Common points	16 points/common

■Common Specifications

Power supply	Single-phase 85VAC to 264VAC, 47 to 63Hz (automatic adjustment)	Humidity	30 to 95% RH (non-condensing)
Power Consumption	100VA	Vibration resistance	1G (57 to 150Hz)
Momentary power loss assurance time	20ms (less than 20ms is not regarded as a power loss)	Shock resistance	10G
		Environment	No flammable or corrosive gases, little dust
		Grounding	Exclusive-use class 3
Ambient temperature	0 to +55℃ (main module)	Insulation voltage	1500VAC for one minute
		Insulation resistance	100MΩ or more at 500VDC
Storage temperature	-20 to +85℃ (excluding lithium battery)		
		Noise resistance	1500V, 1μS, rising edge 1nS

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SPECIFICATIONS (Cont'd)

PERSONAL COMPUTER PROGRAMMER/TEACH PENDANT SPECIFICATIONS

Classification		Function	Contents
PLC Programming	Mnemonic programmer	(1) Mnemonic programming function**	Creates and edits sequence program by mnemonic language.
		(2) Compile function**	Converts sequence program in mnemonic language to object code in ladder language.
	Ladder Programmer	(1) Ladder display function**	Displays compiled object code in ladder circuit.
		(2) PLC load function	Loads/saves object code between PLC unit and personal computer PP.
		(3) Ladder monitor function	Monitors sequence program in PLC unit in ladder language.
		(4) Ladder program function	Creates or changes sequence program in PLC unit in ladder language.
		(5) Assignment function**	Assigns direct I/O or expansion I/O. Also assigns subroutine.
		(6) Reverse compile function**	Converts object code to mnemonic language on personal computer PP.
MC Programming	Motion programmer	(1) Program editing function**	Creates and edits motion program.
		(2) Parameter creating function**	Creates parameter file to be set to MC unit.
		(3) Online program editing function	Creates motion program using current position value.
		(4) Online parameter editing function	Changes parameter in MC unit.
	Loader	(1) Program loader function	Loads/saves motion program.
		(2) Parameter loader function	Loads/saves parameters.
	Monitor	(1) Position monitor function	Monitors current value of each servo axis in MC unit.
		(2) Program monitor function	Monitors execution step of motion program in MC unit.

Notes: Functions marked with ** are offline functions (personal computer PP exclusive operation functions.)
All other functions are online functions (functions to operate by connecting to PROGIC-8).

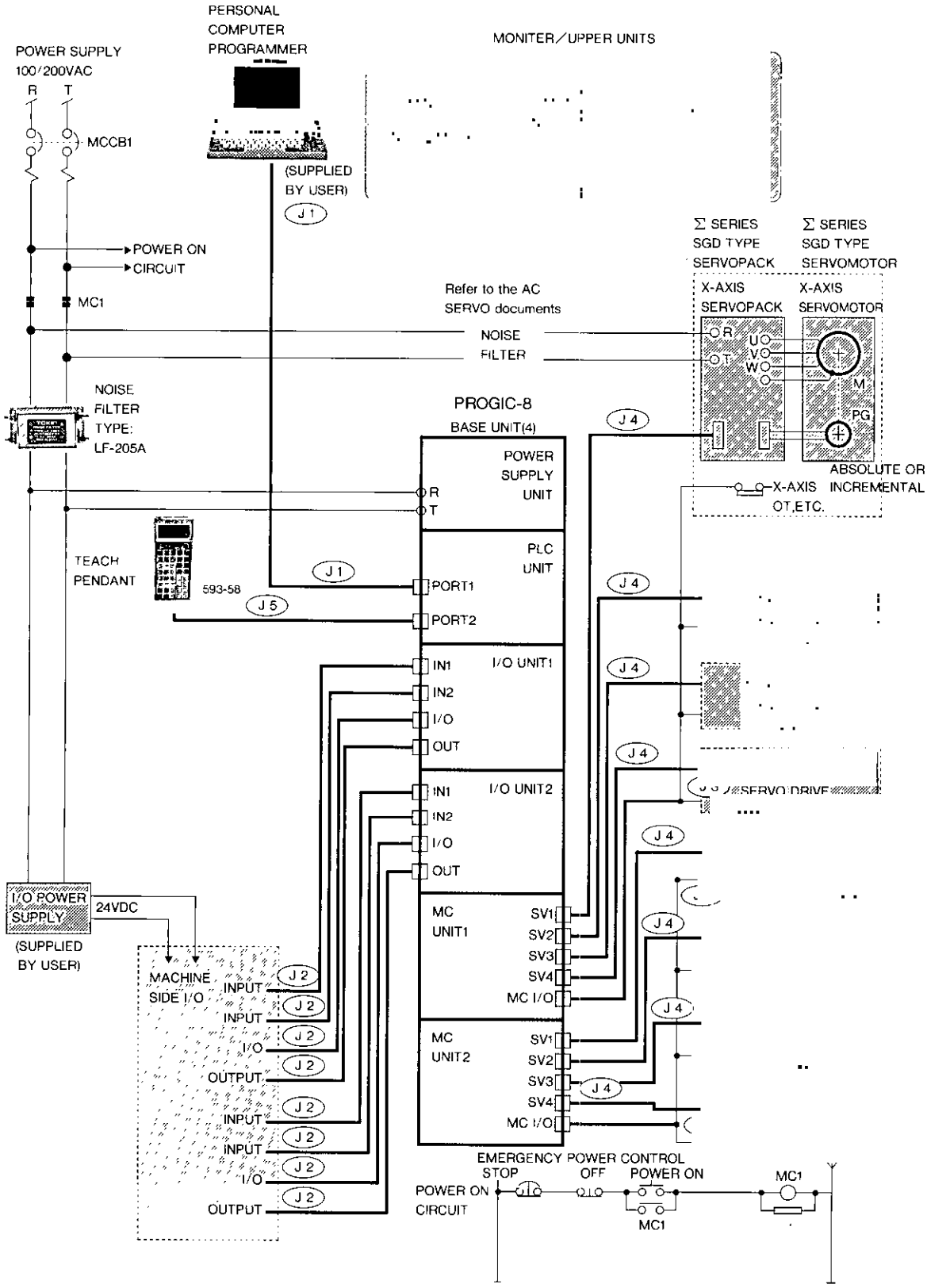
TEACH PENDANT SPECIFICATIONS

Classification		Function	Contents
Operating Function	Teaching mode	(1) Program editing	Creates and edits motion program. JOG operation is enabled and current position value can be used in motion program.
		(2) Table editing	Edits point table of point table type position command. JOG operation is enabled and current position value can be used in point table.
		(3) Position display	Monitors current value of each MC unit axis.
		(4) Data change	PLC unit I/O forced ON/OFF and register contents read/write enabled. MC unit I/O forced ON/OFF and variable contents read/write enabled.
		(5) Status display	Displays MC unit motion program execution step or alarm code.
		(6) Manual operation	Operation in manual mode, i.e., JOG operation, step operation, and zero point return enabled.
		(7) Block operation	Operation in the units of block, i.e., single-block operation and multi-block operation enabled.
	Monitor (auto) mode	(1) Position display	Monitors current position value of each MC unit axis.
		(2) Data change	PLC unit I/O forced ON/OFF and register contents read/write enabled. MC unit I/O forced ON/OFF and variable contents read/write enabled. Although it is monitor mode, data can be changed.
		(3) Status display	Displays MC unit motion program execution step or alarm code.
Hardware Specifications		(1) Display unit	Liquid crystal character display, 16 characters × 4 lines
		(2) Connecting method	RS-232C, Memobus protocol
		(3) Connection cable	Prepare exclusive-use cable. 2m: JEPMC-W5320-02, 5m: JEPMC-W5320-05

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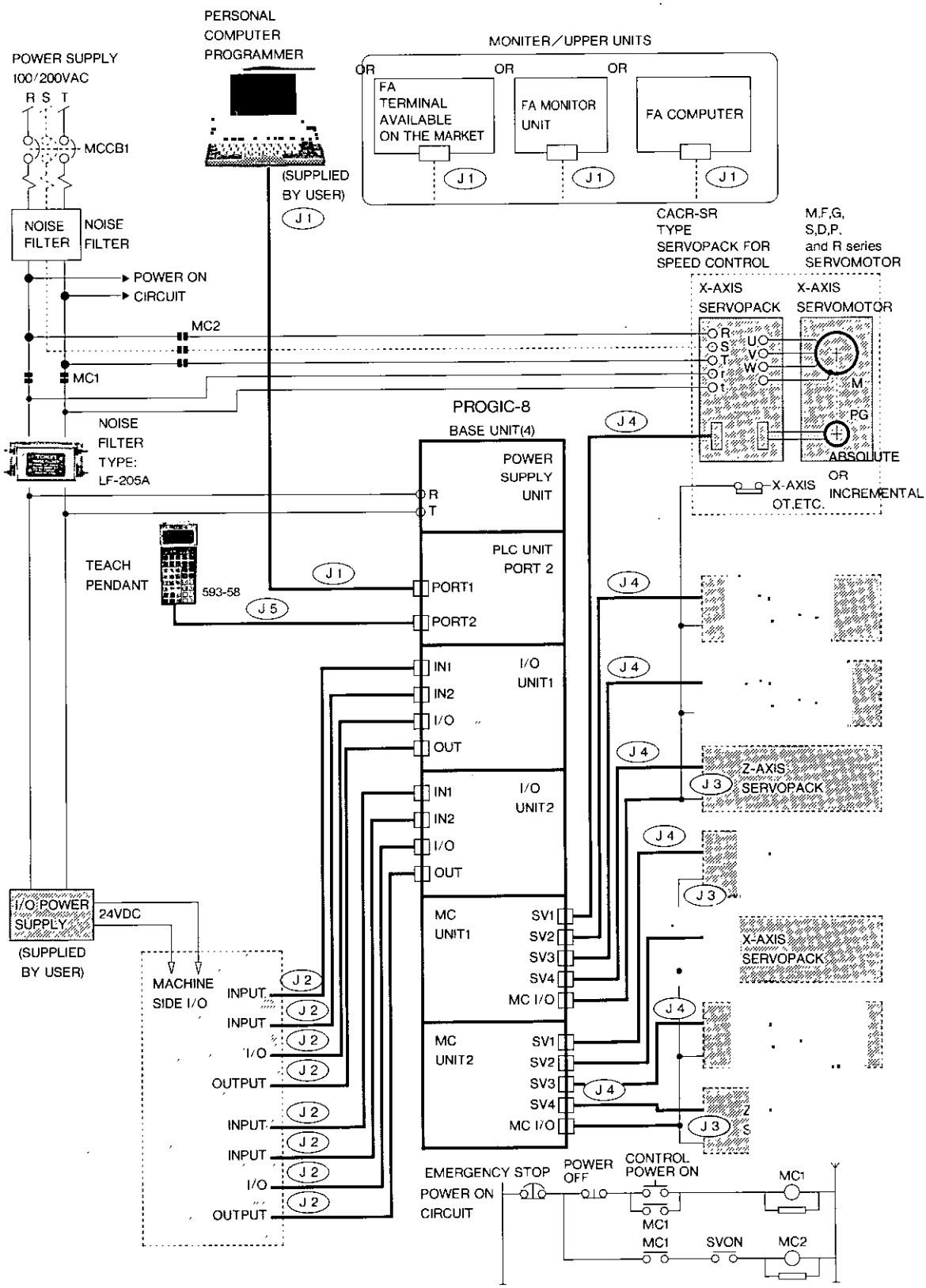
TYPICAL CONNECTION

TYPICAL CONNECTION 1: CONNECTION WITH Σ SERIES SGD TYPE SERVOPACK



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TYPICAL CONNECTION 2: CONNECTION WITH SR TYPE SERVOPACK FOR SPEED/TORQUE CONTROL



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COMBINATION OF SERVOMOTOR AND SERVOPACK FOR SPEED CONTROL

■Base-mounted Type with Incremental Encoder

SERVOPACK Main Circuit Power Supply			[illegible] VAC						[illegible] VAC			
SERVOPACK Type: SGD-									A5BS	01BS	02BS	
Σ Series	Motor Type: SGM-		A3A312	A5A312	01A312	02A312	04A312	08A312	A3B312	A5B312	01B312	02B312
	Rated Output	kW(HP)	0.03(0.04)	0.05(0.07)	0.1(0.13)	0.2(0.27)	0.4(0.53)	0.75(1.01)	0.03(0.04)	0.05(0.07)	0.1(0.27)	0.2(0.53)
	Rated Torque	N · m	0.095	0.159	0.318	0.637	1.27	2.39	0.095	0.159	0.318	0.637
		lb · in	0.845	1.41	2.82	5.63	11.3	21.1	0.845	1.41	2.82	5.63
	Rotation Speed:Rated/Max.r/mim		3,000/4,500									
	Allowable Load Inertia	$kg \cdot m^2 \times 10^{-4}$	0.63	0.78	1.20	3.69	3.82	13.9	0.63	0.78	1.20	3.69
		$lb \cdot in \cdot s^2 \times 10^{-3}$	0.55	0.69	1.06	3.26	3.38	11.8	0.55	0.69	1.06	3.26

SERVOPACK Main Circuit Power Supply			[illegible]								
SERVOPACK Type: CACR-SR			[illegible]							0BE	
M Series	Motor Type: USAMED-		—	03B21	—	06B21	09B22	12B22	20B22	30B22	44B22
	Rated Output	kW(HP)	—	0.3(0.4)	—	0.6(0.8)	0.9(1.2)	1.2(1.6)	2.0(2.7)	3.0(4.1)	4.4(6.0)
	Rated Torque	N · m	—	2.84	—	5.68	8.63	11.5	19.1	28.4	41.9
		lb · in	—	25	—	50	76	102	169	252	372
	Rotation Speed:Rated/Max.r/mim		—	1,000/2,000							1000/1500
	Allowable Load Inertia	$kg \cdot m^2 \times 10^{-4}$	—	67.5	—	121.5	183.5	334	550	715	1200
		$lb \cdot in \cdot s \times 10^{-3}$	—	60	—	107.5	162.5	296	486	633.5	1063
F Series	Motor Type: USAFED-		02C21	03C21	05C21	—	09C21	13C22	20C22	30C22	44C22
	Rated Output	kW(HP)	0.15(0.2)	0.3(0.4)	0.45(0.6)	—	0.85(1.1)	1.3(1.7)	1.8(2.4)	2.9(3.9)	4.4(5.9)
	Rated Torque	N · m	0.98	1.96	2.84	—	5.39	8.33	11.5	18.6	28.4
		lb · in	9	17	25	—	48	74	102	165	252
	Rotation Speed:Rated/Max.r/mim		1,500/2,500								
	Allowable Load Inertia	$kg \cdot m^2 \times 10^{-4}$	6.5	10.3	67.5	—	121.5	183.5	334	550	572
		$lb \cdot in \cdot s^2 \times 10^{-3}$	5.75	9	60	—	107.5	162.5	296	486	505
G Series	Motor Type: USAGED-		02A21	03AS21	05A21	—	09A21	13A22	20A22	30A22	44A22
	Rated Output	kW(HP)	0.15(0.2)	0.3(0.4)	0.45(0.6)	—	0.85(1.1)	1.3(1.7)	1.8(2.4)	2.9(3.9)	4.4(5.9)
	Rated Torque	N · m	0.98	1.96	2.84	—	5.39	8.34	11.5	18.6	28.4
		lb · in	9	17	25	—	48	74	102	165	252
	Rotation Speed:Rated/Max.r/mim		1,500/3,000								
	Allowable Load Inertia	$kg \cdot m^2 \times 10^{-4}$	6.5	10.3	67.5	—	12.15	183.5	223	393	360
		$lb \cdot in \cdot s^2 \times 10^{-3}$	5.75	9	60	—	107.5	162.5	296	486	505
S Series	Motor Type: USASED-		02A32	03A32	05A32	—	03A31	15A31	—	30A31	—
	Rated Output	kW(HP)	0.15(0.2)	0.31(0.42)	0.46(0.63)	—	0.77(1.05)	1.54(2.09)	—	3.08(4.2)	—
	Rated Torque	N · m	0.49	0.98	1.47	—	2.45	4.90	—	9.80	—
		lb · in	4	9	13	—	22	44	—	87	—
	Rotation Speed:Rated/Max.r/mim		3,000/4,000								
	Allowable Load Inertia	$kg \cdot m^2 \times 10^{-4}$	0.65	2.55	3.8	—	14.25	16.5	—	28.7	—
		$lb \cdot in \cdot s^2 \times 10^{-3}$	0.55	2.25	3.25	—	12.5	14.5	—	25.4	—
D Series	Motor Type: USADED-		—	—	05E3	—	—	10E3	15E3	22E3	37E3
	Rated Output	kW(HP)	—	—	0.5(0.68)	—	—	1.0(1.36)	1.5(2.0)	2.2(3.0)	3.7(5.0)
	Rated Torque	N · m	—	—	2.35	—	—	4.80	7.16	10.5	17.7
		lb · in	—	—	21	—	—	42	63	93	156
	Rotation Speed:Rated/Max.r/mim		—	—	2000/2500	—	—	2,000/2,500			
	Allowable Load Inertia	$kg \cdot m^2 \times 10^{-4}$	—	—	105	—	—	160	310	415	575
		$lb \cdot in \cdot s^2 \times 10^{-3}$	—	—	93	—	—	141	275	368	509

●AC SERVOMOTOR

S G M - 0 1 A 3 1 2

- Σ SERIES — SGM SERVOMOTOR
- RATED OUTPUT — A3: 30W 01: 100W 04: 400W A5: 50W 02: 200W 08: 750W
- POWER SUPPLY — A: 200V B: 100V
- ENCODER SPECIFICATIONS — 3: 2048 P/R Incremental Encoder W: 12-bit Absolute Encoder
- OPTION — B: With brake S: With shaft seal D: With brake & shaft seal P: drip-proof provision
- SHAFT SPECIFICATIONS — 2: straight without key 1: tapered without key
- DESIGN REVISION ORDER

●AC SERVOPACK

S G D - 0 1 A S

- Σ SERIES — SGD SERVOPACK
- RATED OUTPUT — A3: 30W 01: 100W 04: 400W A5: 50W 02: 200W 08: 750W
- POWER SUPPLY — A: 200V B: 100V
- TYPE — S: For speed (torque) control P: For positioning control

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BASE-MOUNTED, INCREMENTAL TYPE ⇨ PAGE 19
RACK-MOUNTED, ABSOLUTE TYPE ⇨ PAGE 20
RACK-MOUNTED, INCREMENTAL TYPE ⇩

COMBINATION OF SERVOMOTOR AND SERVOPACK FOR SPEED CONTROL

■Rack-mounted Type with Incremental Encoder

SERVOPACK Main Circuit Power Supply			Single-phase, 200VAC					
SERVOPACK Type: CACR-SR			A5AC1□	01AC1□	02AC1□	03AC1□	05AC1□	07AC1□
P Series	Motor Type: USAPED-		—	01C	02C	03C	05C	07C
	Rated Output	kW(HP)	—	0.1(0.13)	0.2(0.27)	0.3(0.4)	0.5(0.68)	0.75(1.01)
	Rated Torque	N · m	—	0.318	0.637	0.955	1.59	2.39
		lb · in	—	2.80	5.65	8.45	14.0	21.2
	Rotation Speed: Rated/Max,r/min		—	3,000/4,500				
	Allowable Load Inertia	$kg \cdot m^2 \times 10^{-4}$	—	1.95	3.2	4.9	23.9	32.85
		$lb \cdot in \cdot s^2 \times 10^{-3}$	—	1.75	2.75	4.25	21.15	29.10
R Series	Motor Type: USARED-		A5C□2K	01C□2K	02C□2K	03C□2K	05C□2K	07C□2K
	Rated Output	kW(HP)	0.5(0.68)	0.10(0.13)	0.20(0.27)	0.30(0.4)	0.50(0.68)	0.70(0.95)
	Rated Torque	N · m	0.159	0.318	0.637	0.955	1.59	2.23
		lb · in	1.40	2.80	5.65	8.45	14.0	19.6
	Rotation Speed: Rated/Max,r/min		3,000/4,500					
	Allowable Load Inertia	$kg \cdot m^2 \times 10^{-4}$	0.76	1.25	5.07	7.66	27.2	37.2
		$lb \cdot in \cdot s^2 \times 10^{-3}$	0.65	1.10	4.50	6.75	24.10	32.95

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COMBINATION OF SERVOMOTOR AND SERVOPACK FOR SPEED CONTROL

■Base-mounted Type with Absolute Encoder

SERVOPACK Main Circuit Power Supply												
SERVOPACK Type: SGD-									BS	A5BS	01BS	02BS
Σ Series	Motor Type: SGM-		A3AW12	A5AW12	01AW12	02AW12	04AW12	08AW12	A3BW12	A5BW12	01BW12	02BW12
	Rated Output	kW(HP)	0.03(0.04)	0.05(0.07)	0.1(0.13)	0.2(0.27)	0.4(0.53)	0.75(1.01)	0.03(0.04)	0.05(0.07)	0.1(0.13)	0.2(0.27)
	Rated Torque	N・m	0.095	0.159	0.318	0.637	1.27	2.39	0.095	0.159	0.316	0.637
		lb・in	0.845	1.41	2.82	5.63	11.3	21.1	0.845	1.41	2.82	5.63
	Rotation Speed: Rated/Max. r/min		3,000/4,500									
	Allowable Load Inertia	kg・m² ×10⁻⁴	0.63	0.78	1.20	3.69	3.82	13.9	0.63	0.78	1.20	3.69
		lb・in・s² ×10⁻³	0.55	0.69	1.06	3.26	3.38	11.8	0.55	0.69	1.06	3.26

SERVOPACK Main Circuit Power Supply											
SERVOPACK Type: CACR-SR							10BY	15BY	20BY	30BY	44BY
M Series	Motor Type: USAMED-		—	03BS1	—	06BS1	09BS1	12BS2	20BS2	30BS2	44BS2
	Rated Output	kW(HP)	—	0.3(0.4)	—	0.6(0.8)	0.9(1.2)	1.2(1.6)	2.0(2.7)	3.0(4.1)	4.4(6.0)
	Rated Torque	N・m	—	2.84	—	5.67	8.63	11.5	19.1	28.4	41.9
		lb・in	—	25	—	50	76	102	169	252	372
	Rotation Speed: Rated/Max. r/min		1,000/2,000								1000/1500
	Allowable Load Inertia	kg・m² ×10⁻⁴	—	67.5	—	121.5	183.5	334	550	715	1200
		lb・in・s² ×10⁻³	—	60	—	107.5	162.5	296	486	633.5	1063
F Series	Motor Type: USAFED-		02CS1	03CS	05CS	—	09CS	13CS	20CS	30CS	44CS
	Rated Output	kW(HP)	0.15(0.2)	0.3(0.4)	0.45(0.6)	—	0.85(1.1)	1.3(1.7)	1.8(2.4)	2.9(3.9)	4.4(5.9)
	Rated Torque	N・m	0.98	1.96	2.84	—	5.39	8.33	11.5	18.6	28.4
		lb・in	9	17	25	—	48	74	102	165	252
	Rotation Speed: Rated/Max. r/min		1,500/2,500								
	Allowable Load Inertia	kg・m² ×10⁻⁴	6.5	10.3	67.5	—	122	184	334	550	715
		lb・in・s² ×10⁻³	5.75	9	60	—	108	163	296	486	633.5
G Series	Motor Type: USAGED-		02AS	03AS	05AS	09AS	—	13SA	20AS	30AS	44AS
	Rated Output	kW(HP)	0.15(0.2)	0.3(0.4)	0.45(0.6)	0.85(1.1)	—	1.3(1.7)	1.8(2.4)	2.9(3.9)	4.4(5.9)
	Rated Torque	N・m	0.98	1.96	2.84	5.39	—	8.34	11.5	18.6	28.4
		lb・in	9	17	25	48	—	74	102	165	252
	Rotation Speed: Rated/Max. r/min		1,500/3,000								
	Allowable Load Inertia	kg・m² ×10⁻⁴	6.5	10.3	67.5	121.5	—	183.5	290	475	715
		lb・in・s² ×10⁻³	5.75	9	60	107.5	—	162.5	257	421	633.5
S Series	Motor Type: USASED-		02AS	03AS	05AS	—	08AS	15AS	—	30AS	—
	Rated Output	kW(HP)	0.15(0.2)	0.31(0.4)	0.46(0.6)	—	0.77(1.05)	1.54(2.09)	—	3.08(4.2)	—
	Rated Torque	N・m	0.49	0.98	1.47	—	2.45	4.90	—	9.80	—
		lb・in	4	10	13	—	22	44	—	87	—
	Rotation Speed: Rated/Max. r/min		3,000/4,000								
	Allowable Load Inertia	Kg・m² ×10⁻⁴	0.65	2.55	3.8	—	14.25	16.5	—	28.7	—
		lb・in・s² ×10⁻³	0.55	2.25	3.35	—	12.5	14.5	—	25.4	—
D Series	Motor Type: USADED-		—	—	05EW2	—	—	10EW2	15EW2	22EW2	37EW2
	Rated Output	kW(HP)	—	—	0.5(0.68)	—	—	1.0(1.36)	1.5(2.0)	2.2(3.3)	3.7(5.0)
	Rated Torque	N・m	—	—	2.53	—	—	4.80	7.16	10.5	17.7
		lb・in	—	—	21	—	—	42	63	93	156
	Rotation Speed: Rated/Max. r/min		—	—	2000/2500	—	—	2,000/2,500			
	Allowable Load Inertia	kg・m² ×10⁻⁴	—	—	105	—	—	160	310	415	740
		lb・in・s² ×10⁻³	—	—	93	—	—	141	275	368	655

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COMBINATION OF SERVOMOTOR AND SERVOPACK FOR SPEED CONTROL

■Base-mounted Type with Absolute Encoder

SERVOPACK Main Circuit Power Supply				Single-phase 200VAC				
SERVOPACK Type: CACR-SR			[illegible]	01AY1	02AY1	03AY1	05AY1	07AY1
P Series	Motor Type: USAMED-		—	01CW2	02CW2	03CW2	05CW2	07CW2
	Rated Output	kW(HP)	—	0.1(0.13)	0.2(0.27)	0.3(0.4)	0.5(0.68)	0.75(1.01)
	Rated Torque	N · m	—	0.318	0.637	0.955	1.59	2.39
		lb · in	—	2.80	5.65	8.45	14.0	21.2
	Rotation Speed: Rated/Max. r/mim		—	3,000/4,500				
	Allowable Load Inertia	$kg \cdot m^2 \times 10^{-4}$	—	1.96	3.18	4.9	23.9	32.85
		$lb \cdot in \cdot s^2 \times 10^{-3}$	A5CS2	1.75	2.75	4.25	21.15	29.10
R Series	Motor Type: USARED-		0.5(0.68)	01CS2	02CS2	03CS2	05CS2	07CS2
	Rated Output	kW(HP)	0.159	0.1(0.13)	0.2(0.27)	0.3(0.4)	0.5(0.68)	0.7(0.95)
	Rated Torque	N · m	1.40	0.318	0.637	0.955	1.59	2.23
		lb · in	1.40	2.80	5.65	8.45	14.0	1.95
	Rotation Speed: Rated/Max. r/mim		3,000/4,500					
	Allowable Load Inertia	$kg \cdot m^2 \times 10^{-4}$	0.76	1.25	5.07	7.66	27.2	37.2
		$lb \cdot in \cdot s^2 \times 10^{-3}$	0.65	1.10	4.50	6.75	24.10	32.95

■SERVOPACK for Speed Control

CACR - SR 05 B E 1 2 G-E

- CACR - SR: AC SERVOPACK; CONTROL TYPE SR: FOR SPEED CONTROL
- 05: CAPACITY INDICATION
- B: SERIES — A: R,P,H SERIES; B: M,F,G,S,D SERIES
- E: DESIGN REVISION ORDER
- 1: INPUT FORM — 1: INPUT POWER SUPPLY 200V,ANALOG INPUT REFERENCE; 2: INPUT POWER SUPPLY 100V,ANALOG INPUT REFERENCE
- 2: DETECTOR SPECIFICATIONS
- G-E: APPLICABLE MOTOR — M: M SERIES; F: F SERIES; G: G SERIES; D: D SERIES; S: S SERIES; P: P SERIES; R: R SERIES

Model	Incremental Encoder: Standard (P/R)				Semi-standard (P/R)				New Incremental Encoder: Standard (P/R)		Semi-standard (P/R)		Absolute Encoder: Standard (P/R)			Semi-standard (P/R)		
M Series	—	—	—	—	—	—	2	8192	3	2048			S	8192	W	1024		
F Series	—	—	—	—	—	—	2		3									
G Series	—	—	—	—	—	—	2		3									
S Series 02A,03A,05A	—	—	—	—	—	—	3	2048	4	2500								
S Series 08A,15A,30A	—	—	—	—	—	—	3		4									
D Series	—	—	—	—	—	—	3		2	8192	W	1024	S	8192				
R Series	E	1500	F	1000									S	8192	W	1024		
P Series	E	1500	F	1000									W	1024	S	8192		

■AC SERVOMOTOR

US AG E D - 05 A 2 2 K

- US AG: AC SERVOMOTOR; SERIES NAME — AM: M SERIES; AF: F SERIES; AG: G SERIES; AS: S SERIES; AD: D SERIES; AR: R SERIES; AP: P SERIES
- E: PROTECTIVE/COOLING METHOD — E: TOTALLY-ENCLOSED SELF-COOLED; K: TOTALLY-ENCLOSED, EXTERNALLY FAN-COOLED
- D: MOTOR CONSTRUCTION — D: FERRITE MAGNET; M: RARE EARTH MAGNET
- 05: CAPACITY INDICATION※
- A: DESIGN REVISION ORDER
- 2: DETECTOR SPECIFICATIONS
- 2: MAIN MACHINE CONSTRUCTION — 1: TAPER SHAFT; 2: STRAIGHT SHAFT
- K: LOAD-SIDE SPECIFICATIONS — BLANK: STANDARD; O: STANDARD WHEN BRAKE PROVIDED AT DRIVEN SIDE; K: WITH KEY; S: WITH SHAFT SEAL; T: WITH KEY AND SHAFT SEAL
- DRIVE SIDE SPECIFICATIONS — BLANK: STANDARD; B: WITH BRAKE (S,G,R,P SERIES); E: WITHOUT BRAKE (M,F,D SERIES)

※Refer to the technical sheet of each series motor.

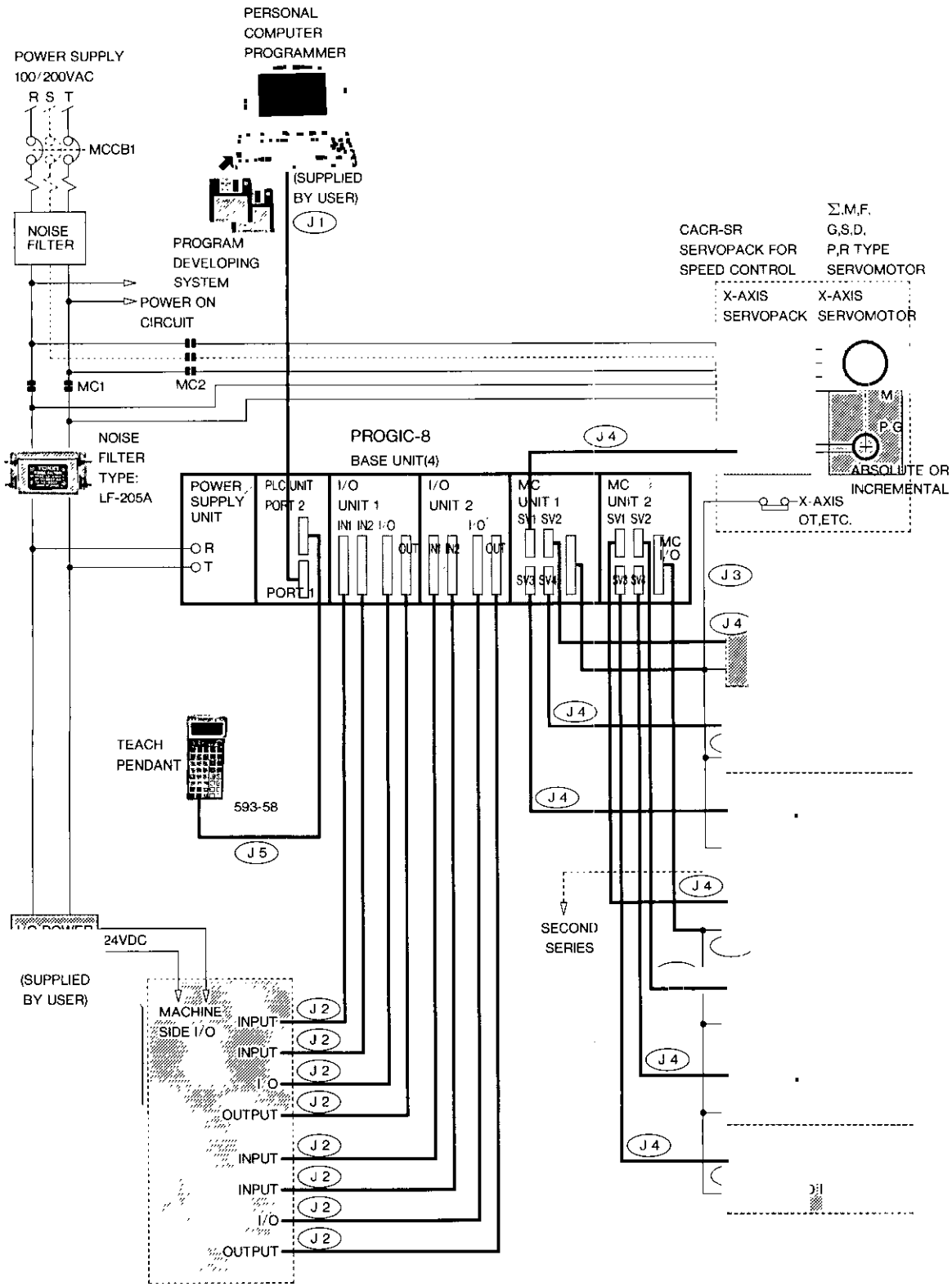
Model	Incremental Encoder: Standard (P/R)				Semi-standard (P/R)				New Incremental Encoder: Standard (P/R)		Semi-standard (P/R)		Absolute Encoder: Standard (P/R)			Semi-standard (P/R)		
M Series	—	—	—	—	—	—	2	8192	3	2048			S	8192	W	1024		
F Series	—	—	—	—	—	—	2		3									
G Series	—	—	—	—	—	—	2		3									
S Series 02A,03A,05A	—	—	—	—	—	—	3	2048	4	2500								
S Series 08A,15A,30A	—	—	—	—	—	—	3		4									
D Series	A	6000	B	5000			3		2	8192	W	1024	S	8192				
R Series	E	1500	F	1000									S	8192	W	1024		
P Series	E	1500	F	1000									W	1024	S	8192		

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ORDER LIST

(REFER TO THE FOLLOWING CONFIGURATION DIAGRAM TO PREPARE THE LISTS ON PAGES 22 TO 24.)

‹PROGIC-8 SYSTEM CONFIGURATION›



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ORDER LIST (Cont'd)

SERVOMOTOR/SERVOPACK ORDER LIST ⇨ PAGE 23
CABLE UNIT ORDER LIST ⇨ PAGE 24
MAIN UNIT ORDER LIST ⇩

■Main Unit Order List

Model	Specifications		Type	Q'ty	Price
①Base unit	·4-slot, I/O unit×1, MC unit×1 ·5-slot, I/O unit×2, MC unit×1 ·5-slot, MC unit×2, I/O unit×1 ·6-slot, I/O unit×2, MC unit×2	Fixed location method	(1)JEPMC-MB041 (2)JEPMC-MB051 (3)JEPMC-MB052 (4)JEPMC-MB062	unit unit unit unit	
②Power unit	·Input power supply: 85 to 264VAC		(1)JEPMC-PS050	unit	
③PLC unit (Ladder memory: 16000 steps)	·Communication port: RS-232C×1 ·Incremental encoder exclusive specifications	Basic type	(1)JEPMC-PC050	unit	
	·Communication port: RS-232C×2 ·Absolute/incremental encoder switching specifications ·Type for teach pendant	Model 2 type	(2)JEPMC-PC055	unit	
	·Communication port: RS-232C×2 ·Absolute/incremental encoder switching specifications ·Type for expansion I/O ·Type for teach pendant	Model 2 type	(3)JEPMC-PC056	unit	
④I/O unit	·Input=80 points, 12V/24V, 2.5/5mA, 50% duty ·Output=48 points, 12V/24V, 100mA, 100% duty		(1)JEPMC-IO050	unit	
⑤MC unit (Program memory: 60kbytes)	·4 axes/unit ·Incremental encoder exclusive specification	Basic type	(1)JEPMC-MC002	unit	
	·4 axes/unit ·Absolute/incremental encoder switching specification ·Type for teach pendant	Model 2 type	(2)JEPMC-MC003	unit	
⑥Program developing system	·for personal computer ·For sequence program/motion program creation	·3.5-inch FD	(1)FPMC-DE3	set	
⑦Teach pendant	·Liquid crystal module with EL back-lighting (16 alphanumeric characters×4 lines) ·Arrange exclusive-use cable.		(1)JEPMC-TB050	unit	
⑧PROM module	·Memory capacity: 16000 steps Used when fixed to PROM so that PLC unit sequence program cannot be changed by user.		(1)JEPMC-MM001	unit	

■Combination of Main Modules

Option Item	Basic Type		Model 2 Type		
	MC unit JEPMC-	PLC unit EPMC-	MC unit JEPMC-	PLC unit JEPMC-	
	MC002	PC050	MC003	PC055	PC056
(1)Incremental Encoder Exclusive-use Specifications	⇧	⇧	– – – –	– – – –	– – – –
(2)Specifications for Expansion I/O	– – – –	– – – –	– – – –	– – – –	⇧
(3)Specifications for Absolute / incremental Switching	– – – –	– – – –	⇧	⇧	⇧
(4)For Teach Pendant	– – – –	– – – –	⇧	⇧	⇧
(5)For Point Table Type Position Reference (MC Unit)	– – – –	– – – –	⇧	– – – –	– – – –
(6)For Palletizing Command (MC Unit)	– – – –	– – – –	⇧	– – – –	– – – –
(7)For Skip Function (MC Unit)	– – – –	– – – –	⇧	– – – –	– – – –
(8)For Step Operation (PLC Unit)	– – – –	– – – –	– – – –	⇧	⇧
Possible Combination	↑	↑	↑	↑	↑
Remarks	Simultaneous use of basic type and model 2 type is not allowed.				

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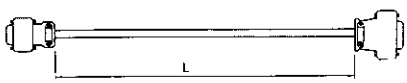
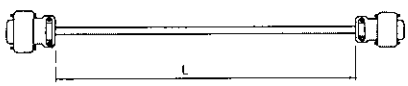
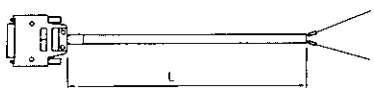
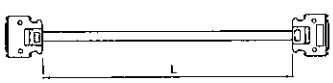
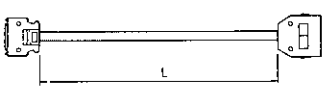
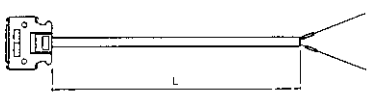
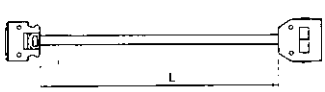
■SERVOMOTOR/SERVOPACK Order List

Model	Specifications	Type	Q'ty	Price
(A) AC SERVOMOTOR Σ Series, M,F,G,S,D,R,P Series	X-axis	(1)	unit	
	Y-axis	(2)	unit	
	Z-axis, A-axis	(3)	unit	
	S-axis, B-axis	(4)	unit	
	X-axis	(5)	unit	
	Y-axis	(6)	unit	
	Z-axis, A-axis	(7)	unit	
	S-axis, B-axis	(8)	unit	
(B) AC SERVOPACK Σ Series SGD Type, CACR-SR Type	X-axis	(1)	unit	
	Y-axis	(2)	unit	
	Z-axis, A-axis	(3)	unit	
	S-axis, B-axis	(4)	unit	
	X-axis	(5)	unit	
	Y-axis	(6)	unit	
	Z-axis, B-axis	(7)	unit	
	S-axis, B-axis	(8)	unit	

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ORDER LIST(Cont'd)

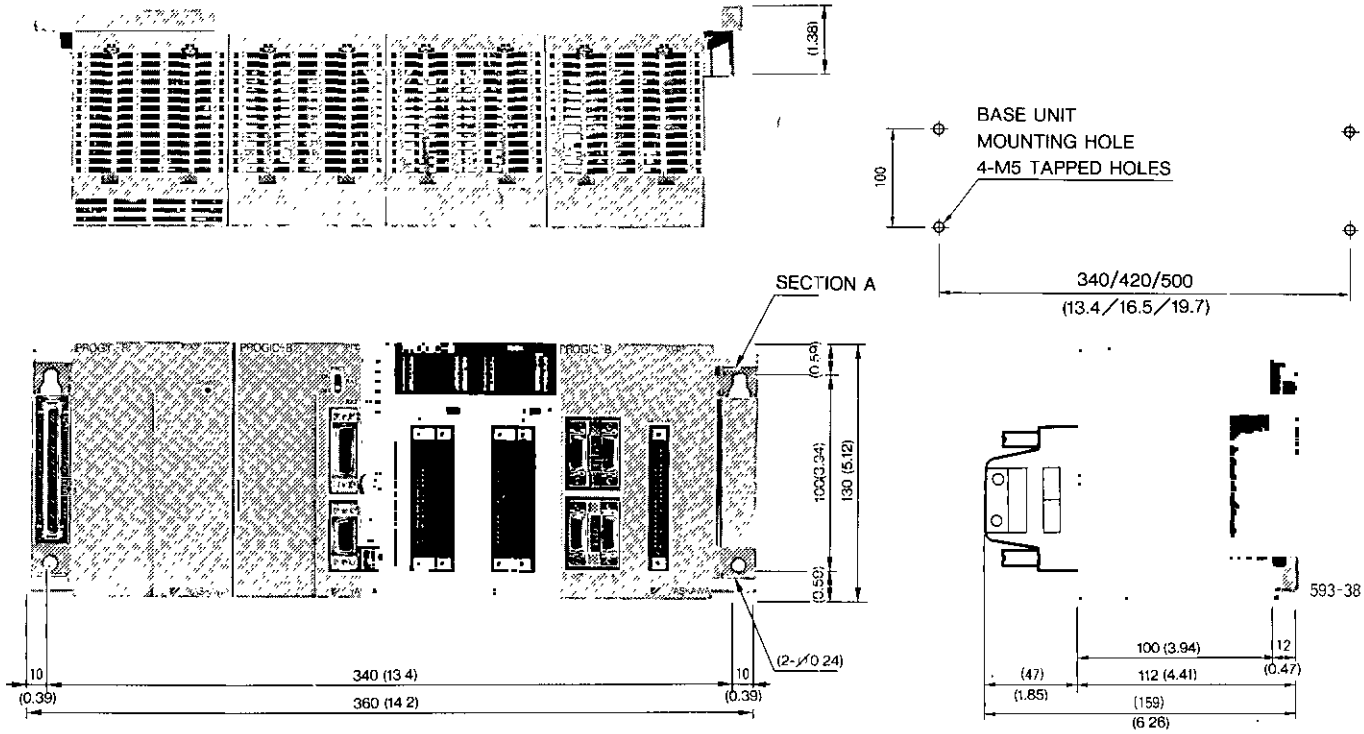
■Cable Unit Order List (For detailed outside dimensions, refer to "DIMENSIONS" on page 26.)

Symbol	Model	Specifications		Type	Q'ty	Price
(J1)	Cable for communication (PLC unit to personal computer PP, others) (for PORT 1)		2.5m	(1)JEPMC-W5310-03		
			15m	(2)JEPMC-W5310-15		
(J5)	Cable for teach pendant (PLC unit to teach pendant) (for PORT 2)		2.0m	(1)JEPMC-W5320-02		
			5.0m	(2)JEPMC-W5320-05		
	Cable for communication (PLC unit to personal computer PP, others) (for PORT 2)		2.5m	(1)JEPMC-W5330-03		
			15m	(2)JEPMC-W5330-15		
(J2)	I/O cable (I/O) (I/O unit to machine side I/O)		0.5m	(1)JEPMC-W5410-05		
			1.0m	(2)JEPMC-W5410-10		
			3.0m	(3)JEPMC-W5410-30		
(J3)	I/O cable (MC) (MC unit to machine side I/O) For basic type/ model 2		0.5m	(1)JEPMC-W5551-05		
			1.0m	(2)JEPMC-W5551-10		
			3.0m	(3)JEPMC-W5551-30		
(J4) Incre-mental	Cable (MC unit to Σ series SGD SERVOPACK) For incremental encoder		0.5m	(1)JEPMC-W5530-05		
			1.0m	(2)JEPMC-W5330-10		
			3.0m	(3)JEPMC-W5530-30		
	Cable (MC unit to SR type SERVOPACK) For incremental encoder		0.5m	(1)JEPMC-W5510-05		
			1.0m	(2)JEPMC-W5510-10		
			3.0m	(3)JEPMC-W5510-30		
(J4) For incre-mental/abso-lute encoder	Cable (MC unit to general-purpose amplifier)		1.0m	(1)JEPMC-W5540-10		
			2.0m	(2)JEPMC-W5540-20		
(J4) Absolute	Cable (MC unit to Σ series SGD SERVOPACK) For absolute encoder		0.5m	(1)JEPMC-W5531-05		
			1.0m	(2)JEPMC-W5531-10		
			3.0m	(3)JEPMC-W5531-30		
	Cable (MC unit to SR type SERVOPACK) For absolute encoder		0.5m	(1)JEPMC-W5511-05		
			1.0m	(2)JEPMC-W5511-10		
			3.0m	(3)JEPMC-W5511-30		

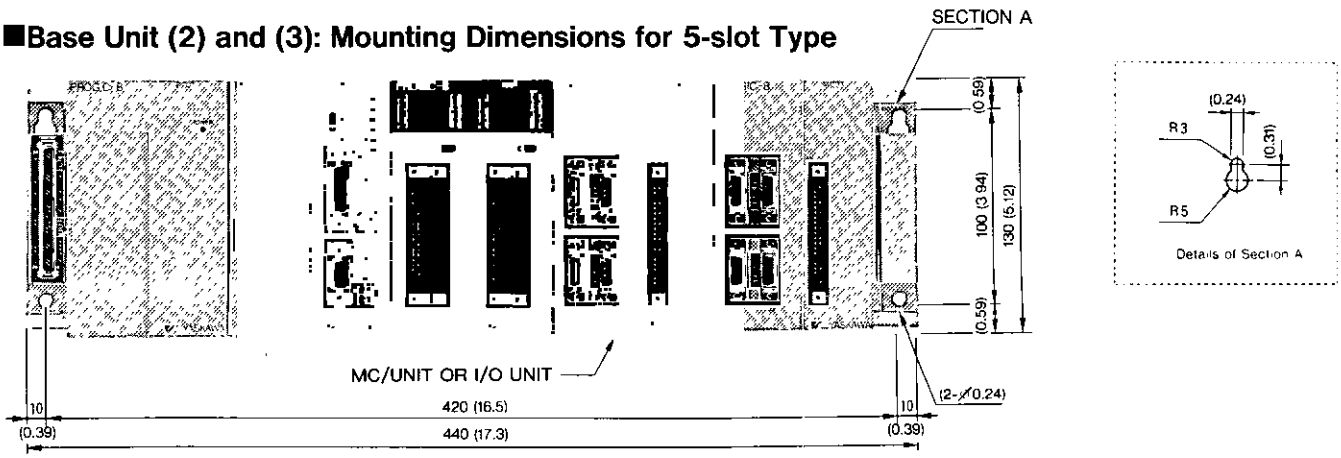
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DIMENSIONS in mm (inches)

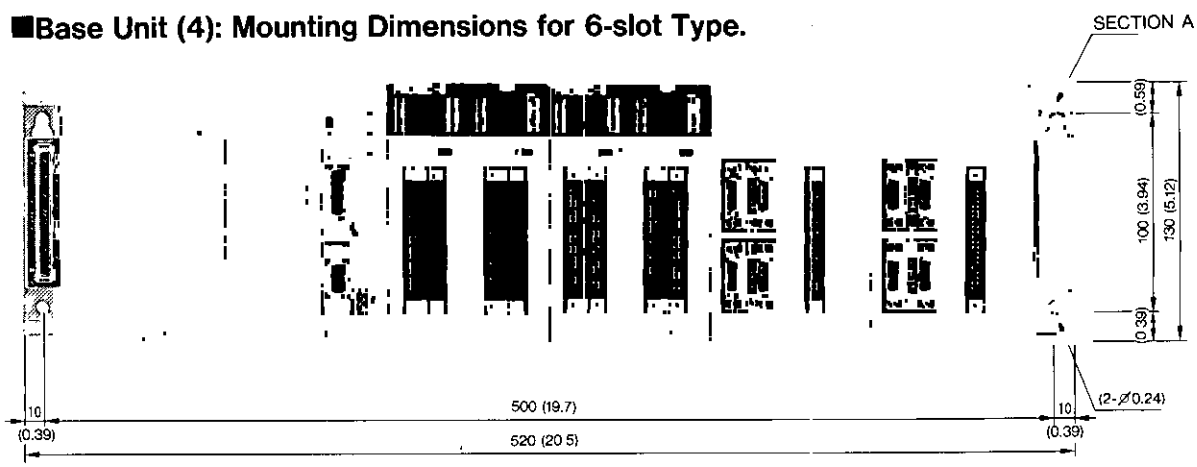
■Base Unit (1): Mounting Dimensions for 4-slot Type



■Base Unit (2) and (3): Mounting Dimensions for 5-slot Type



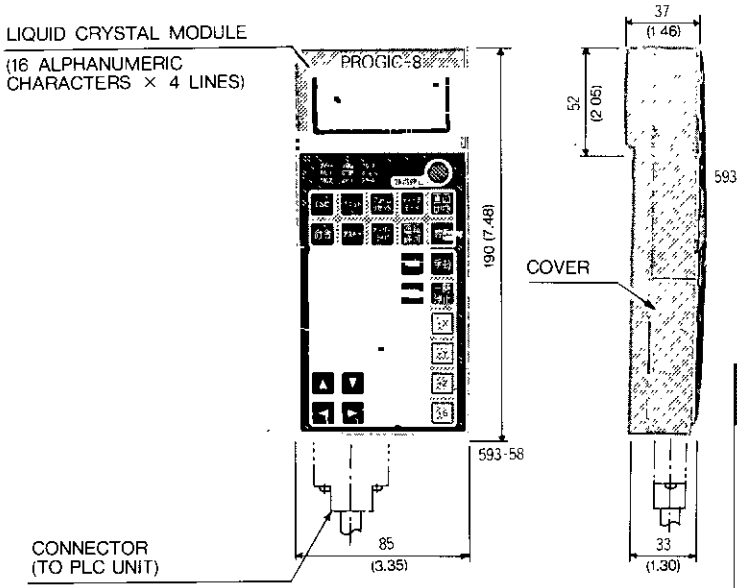
■Base Unit (4): Mounting Dimensions for 6-slot Type.



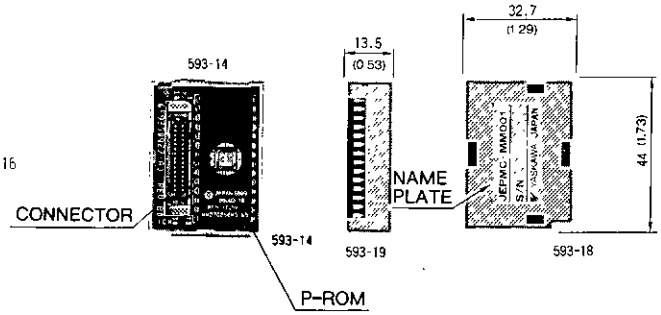
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DIMENSIONS in mm (inches) (Cont'd)

■Teach Pendant



■PROM Module

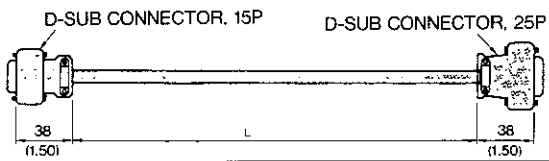


■CABLES

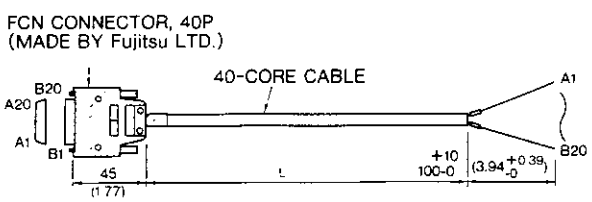
Cable for communication (PLC unit to personal computer PP, others) (PORT1) JEPMC-W5310-



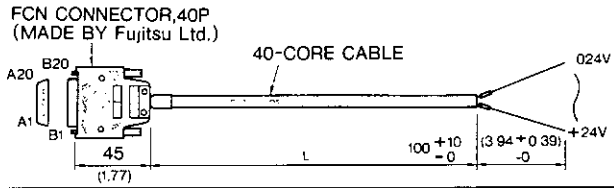
Cable for communication (PLC unit to personal computer PP, others) (PORT2)) JEPMC-W5330-



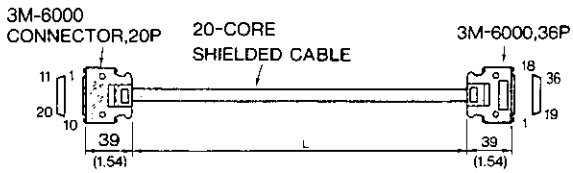
J2 **I/O cable (I/O) (I/O unit to machine side I/O)** JEPMC-W5410-



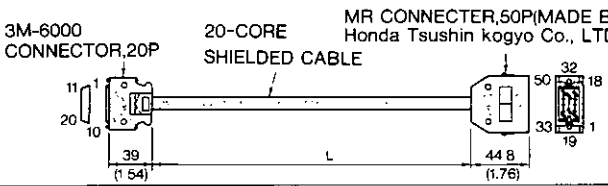
J3 **I/O cable (MC) (MC unit to machine side I/O)** JEPMC-W5551-



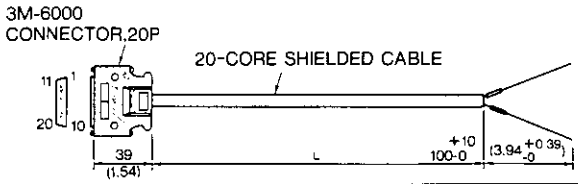
J4 **Cable (MC unit to Σ series SGD SERVOPACK)** JEPMC-W5530- :Incremental JEPMC-W5531- :absolute



J4 **Cable (MC unit to SR type SERVOPACK)** JEPMC-W5510- :Incremental JEPMC-W5511- :absolute



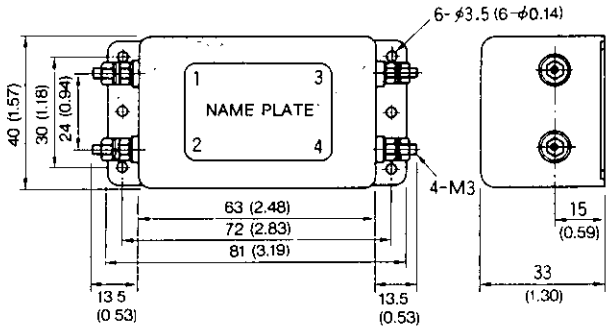
J4 **Cable (MC unit to general-purpose servo amplifier)** JEPMC-W5540- :Incremental /absolute



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■Noise Filter

● For PROGIC-8 Power Supply Line
Type : LF-205A
(For Single-phase)



● For AC SERVO DRIVE
Select the noise filter for servo power supply line according to the capacity and number of servos to be used.
For details, refer to YASKAWA AC SERVOPACK technical documents.

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PROGIC-8

MULTIAXES MOTION CONTROLLER

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Phone (03) 3284-9111 Telex YASKAWA J33530 Fax (03) 3284-9034
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