

》》》All Digital Controller
Induction Motor Servo System
MITY SERVO • MS SERVO



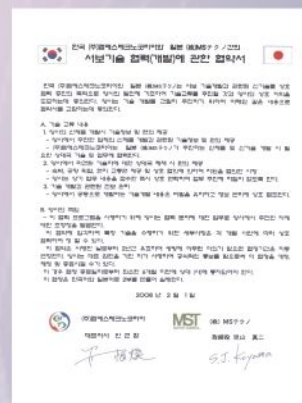
》》》 Greeting

(주)엠에스테크노코리아는 AC Induction Motor의 Servo Controller를 생산하는 전문업체로서 고정도 위치제어, 가변 Torque제어, 속도 제어, 동기운전제어 등의 첨단제어 기술력을 기반으로 빠르고 정확한 정보화 사회의 중심에 자리하고자 노력하고 있습니다.

모터 제어의 첨단 Software기술인 QMCL(Quick Motion Control Language)를 개발 적용한 전용 언어를 내장한 Controller로서 소용량(200W)에서 초대용량(500Kw)까지 생산 기술력을 확보하여 21C 녹색사업화에 기여하고자 합니다. 지속적인 신기술 개발과 고객의 소리에 귀 기울이는 신뢰받는 기업이 되기 위해 최선을 다하겠습니다. 감사합니다.

(주)엠에스테크노코리아
대표이사 **안근환**

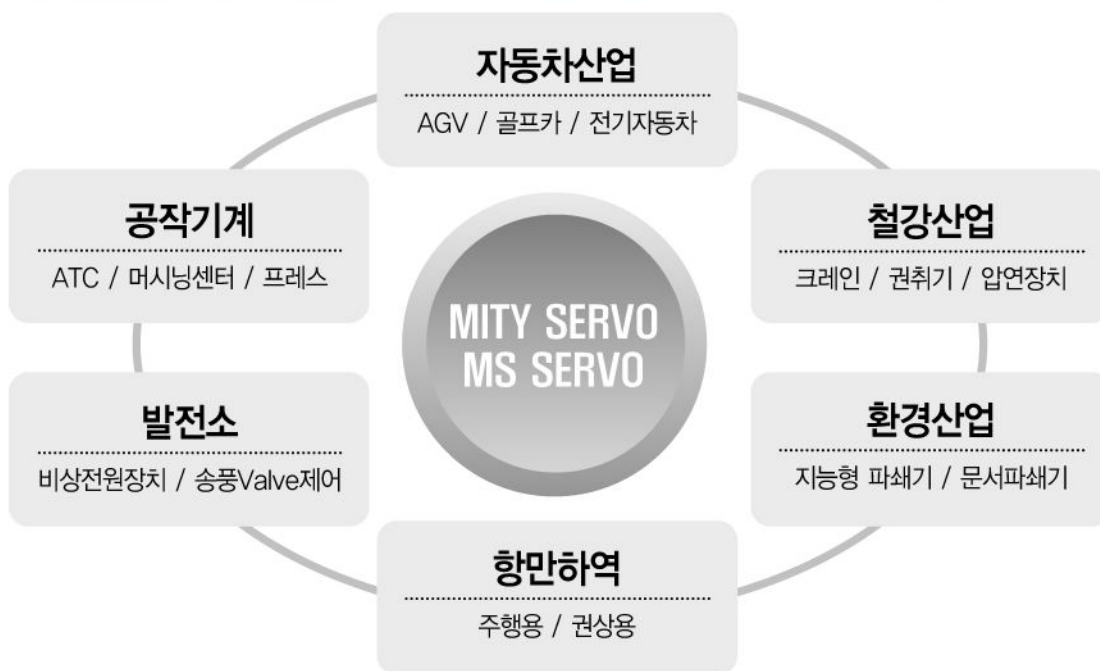
》》》 Agreement



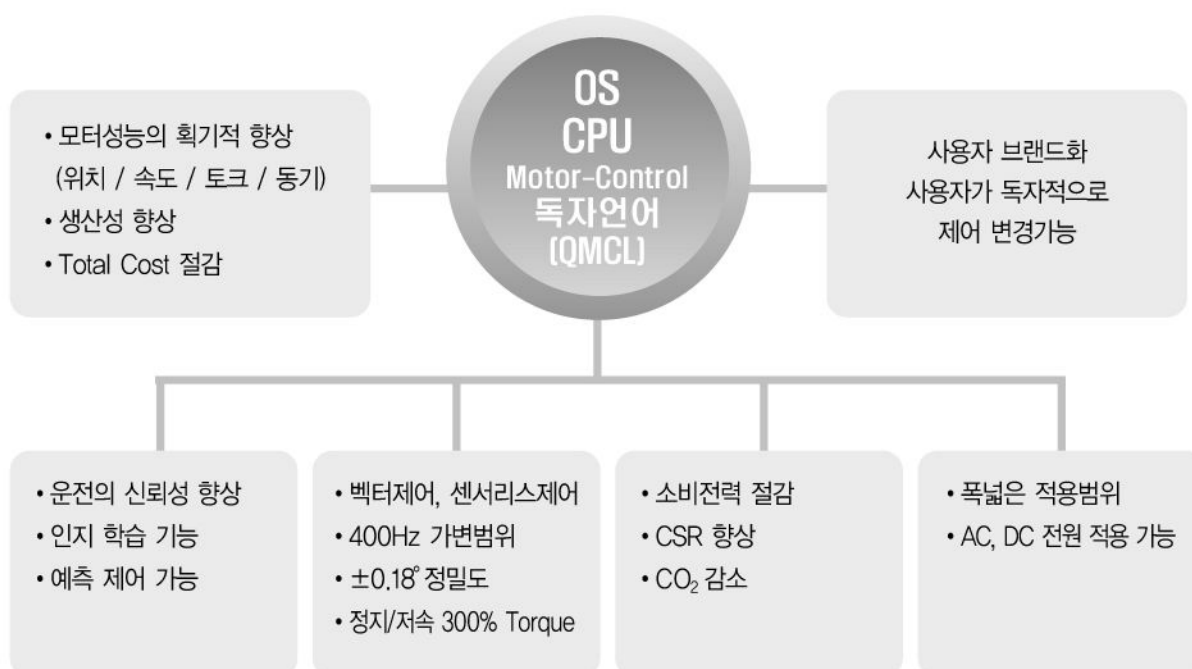


MITY SERVO

> 활용 방안



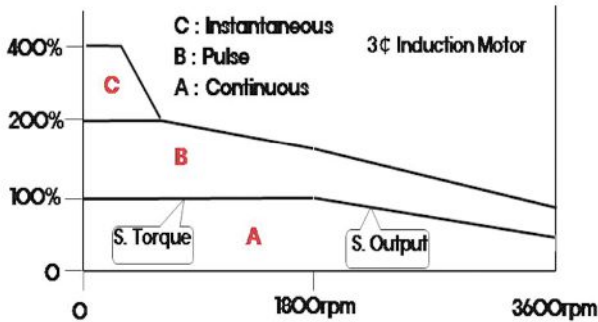
> MITY SERVO는 범용 모터의 상식을 바꾼대!!



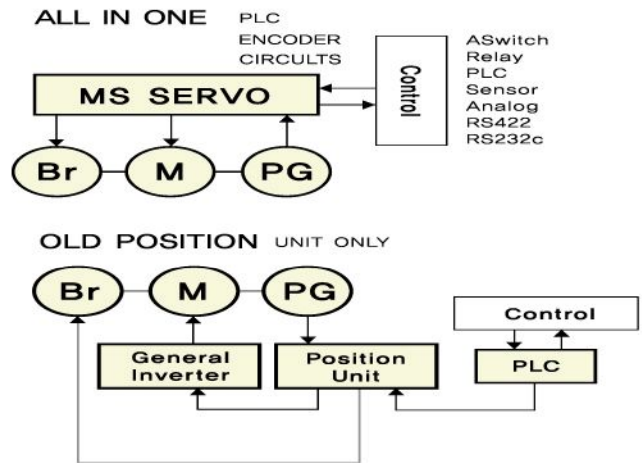
》》》 MITY SERVO의 특성

> Torque 특성곡선

Resolution : 0.3 rpm
RPM Control Range : [1 : 6000]



> All in ONE Type



> Motor 제어 전용 언어 / QMCL

Column	Command	MSCL (Motor Language)
00	F7CF0460FFFFFFFF	CALL \$460 : System Parameter
01	EFD001FFFFFFFF	SEVCC=1 : Motor On
02	DEE1CFE50FFFFFFF	L00 DPEEK HZP \$FE50 : User. Para No. 0⇒HZP
03	F102FFFFFFFF	JMP L00 : JUMP

· 1행 8Bit(16문자: 16진수)

Command List

- Motor Control : SEVCC,SFT,HZP,VFB,MAXHZ,MINHZ ; PLS,PLS2,PSG,POS,PLSI, etc
- I/O Control : C4,C5,C0,C1, AD0,AD1,DA0,DA1
- Branch : JMP,JEQ,JPL,JMI,JSR,BRA
- Memory Move : POKE,PEEK,DPOKE,DPEEK
- Arithmetic : =, +, -, ×, /, × 2^, / 2^
- Logics : AND,OR,EXR
- 2Byte Memory : A0~A9,B0~B9
- 4Byte Memory : AA,AC,AE,BA,BC,BF
- Display : CA,CB,
- Machine Language Sub Routine : CALL (\$460, \$464)

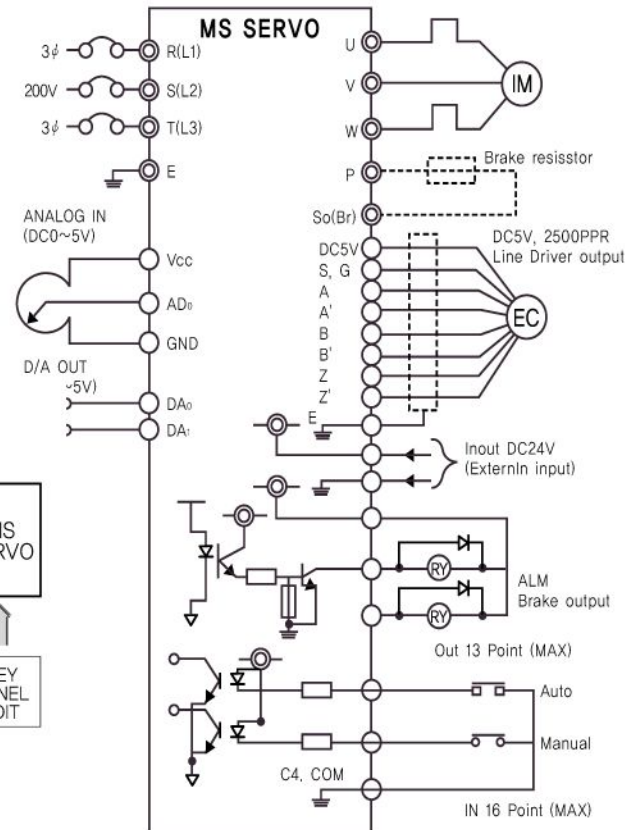
PC(Micom)Edit : QMCL2006 System Case

List File (Compile with Editor)

3	0	F7CF0460	CALL \$460 ; 시스템 파라미터
4	0	A3001000	A3=1000 ;
5	1	F908C4D701	G00 JNE G10 C4 AND 1 ; 수동?
6	2	F511C4D702	JNE G20 C4 AND 2 ; 자동?
7	3	F026	JSR Z10 ; 1차 전원 ON SUB ;
8	4	F022	JMP G30 ;
9	5	F102	JSR Z00 ; 1차 전원 ON SUB ;
10	6	F302C4D701	G10 JED G00 C4 AND 1 ;
11	7	DEA1CFE50FFFFFFF	HZP=1 ; HZP ;
12	8	F102	JMP L00 ;
13	9	F102	JMP L00 ;

> Multi Function is All in One

Standard Diagram(200V) EXternIn conection example(200V)



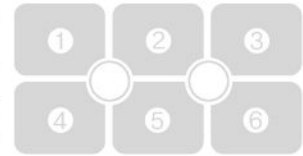
Application of using product of MS SERVO



**MITY
SERVO**

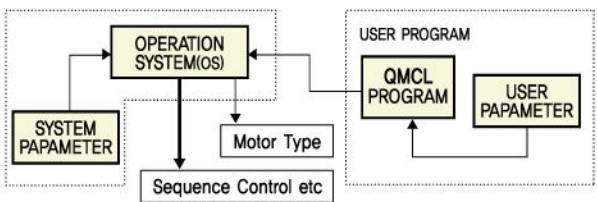
**MS
SERVO**

- ① Cable Reeler
- ② 전용가공기계
- ③ AUTO CRUSHER
- ④ SERVO PRESS
- ⑤ GOLF CAR
- ⑥ A.G.V



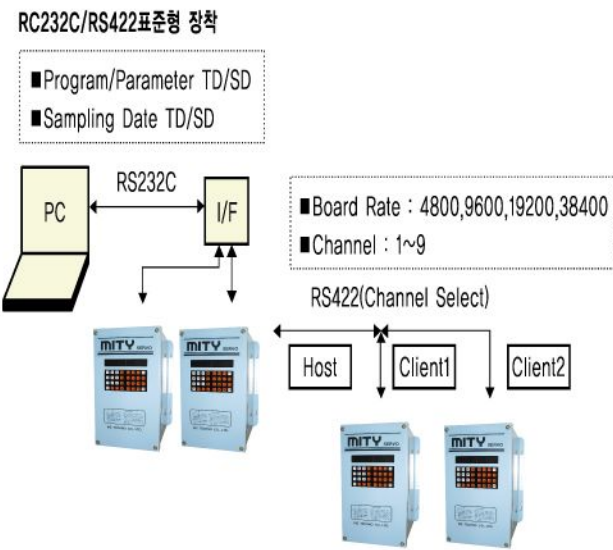
MITY SERVO / MS SERVO is Standard of the 21st century

> MS SERVO SOFTWARE



- Operating System**
 OS : KS01, KS02, KS03, KW01, KW02, KW03
 KS : Single Encoder KW : Dabble Encoder
 01 : Version No. 02 : Version No.
- User Program(ROMX3bank, RAM)**
 ROM : 1024 Lines RAM : 423 Lines
- Parameter**
 System Parameter : No.0~No.96
 User Parameter : 48step(2byte Memory)

> MS SERVO SERIAL COMM.



MS SERVO SPECIAL & STANDARD SPECIFICATION

is Standard of the 21st century / MITY SERVO

> MSB series special specification(200V)

Specification	model	MSB							Specification	CPU	MS106A1		
		01	02	04	08	15	22	37					
Motor(kw)		0.1	0.2	0.4	0.75	1.5	2.2	3.7					
Output capacity (KVA)		0.3	0.5	0.8	1.3	2.4	3.2	5.3				200kpps Line driver method	
Rated output current (A)		0.8	1.3	2.5	3.6	7	9.3	16				Potocapra insulation Current type 5mA	
Maximum output current (A)		2.8	5.7	11	14	21	27	45				Potocapra insulation Open collector output(40mA/point)	
Maximum resurrection current (A)		2	3	4	8	12	12	24					
Minimum resurrection resistance (Ω)		200	130	100	50	36	36	18					
Weight (kg)		2.5	2.5	2.5	2.5	4	4	8					
Input power supply, voltage, frequency		3φ 200V / 220V AC ±10%, 50/60Hz											
Control method		Sine wave digital all method vector contrl (encoder use)											
Use conditions	Ambient temperature	-10°C~+40°C											
	Relative humidity	There must not be 90% or less be dewy.											
	Altitude	1000m or less											
	Atmosphere	There must be neither causticity gas nor dust, etc.											
												Sequence power supply	DC24V (external input)
												Analog input	2channel (DC0~5V)
												Analog output	2channel (DC0~5V)
												Serial communications	RS422 (standard mounting) RS232C(DC0~5V)

▶ MSB시량은 VEA시량을 참조하십시오.

> VEA series standard specification(200V)

Specification	model	VEAS		VEA													
		04	08	15	22	37	55	75	110	150	220	300	370	450	550	750	900
Motor(kw)		0.4	0.75	1.5	2.2	3.7	5.5	7.5	11	15	22	30	37	45	55	75	90
Output capacity (KVA)		0.8	1.3	2.4	3.2	5.3	7.5	10.3	15.2	20.2	29	42	51	61	71	99	120
Rated output current (A)		2.5	3.6	7	9.3	16	22	27	42	53	77	104	133	159	190	260	315
Maximum output current (A)		11	14	21	27	45	60	60	90	120	180	270	270	360	360	510	510
Maximum resurrection current (A)		4	8	12	12	24	24	24	40	160	160	240	240	320	320	540	540
Minimum resurrection resistance (Ω)		100	50	36	36	18	18	18	11	3	3	2	2	1.5	1.5	0.75	0.75
Weight (kg)		2.5	2.5	4	4	8	10	12	12	20	2.5	40	40	55	55	120	120
Input power supply, voltage, frequency		3φ 200V / 220V AC ±10%, 50/60Hz															
Control method		Sine wave digital all method vector contrl (encoder use)															

Use conditions	Ambient temperature	-10°C~+40°C															
	Relative humidity	There must not be 90% or less be dewy.															
	Altitude	1000m or less															
	Atmosphere	There must be neither causticity gas nor dust, etc.															

> VEAH series standard specification(400V)

Specification	model	VEAH															
		15	22	37	55	75	110	150	220	300	370	450	550	750	1100	1300	1600
Motor(kw)		1.5	2.2	3.7	5.5	7.5	11	15	22	30	37	45	55	75	110	130	160
Output capacity (KVA)		2.7	4	6.1	10	14	18	23	34	44	53	65	80	108	160	190	229
Rated output current (A)		3.6	5.2	8	13	18	24	30	44	57	70	85	105	142	210	250	310
Maximum output current (A)		14	14	25	35	53	71	106	140	210	210	280	280	420	630	630	700
Maximum resurrection current (A)		14	14	25	35	35	40	60	80	120	160	210	280	280	400	400	450
Minimum resurrection resistance (Ω)		58	58	32	23	20	14	10	6.7	6.7	3.8	2.9	2.9	2.5	1.75	1.75	1.6
Weight (kg)		4	4	8	10	12	12	20	25	40	40	55	55	130	150	150	180
Input power supply, voltage, frequency		3φ 200V / 220V AC ±10%, 50/60Hz															
Control method		Sine wave digital all method vector contrl (encoder use)															
Use conditions	Ambient temperature	-10°C~+40°C															
	Relative humidity	There must not be 90% or less be dewy.															
	Altitude	1000m or less															
	Atmosphere	There must be neither causticity gas nor dust, etc.															

▶ 200kw~500kw는 주문생산입니다.

> VEA(VEAH) series CPU specification(200V/400V)

Specification	CPU Board	V3E021	V3W080	
		Encoder input	1 channel	2 channel
Sequence input	16 points	12 points	Potocapra insulation Current type 5mA	
Sequence output	13 points	8 points	Potocapra insulation Open collector output (40mA/point)	
Sequence power supply			DC24V (external input)	
Analog input			2channel (DC0~5V)	
Analog output			2channel (DC0~5V)	
Serial communications			RS422 (standard mounting) RS232C (DC0~5V)	
			(example) The voltage conversion substrate is necessary for the communication with the personal computer sequencer etc. (The voltage conversion substrate becomes the option goods.)	

Externals Size

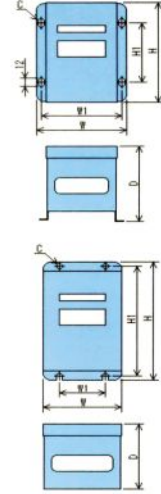
200V

> VEA series standard specification

Model	Size	W	W1	H	H1	D	C
VEAS-01	132	132	117	190	122	151	4-φ6
VEAS-02							
VEAS-04							
VEAS-08							
VEA-15	156	156	141	234	148	165	4-φ6
VEA-22							
VEA-37							
		234	219	342	298	203	4-φ6

Model	Size	W	W1	H	H1	D	C
VEA-55	257	257	150	451	425	250	4-φ10
VEA-75							
VEA-110							
VEA-150	330	330	240	631	603	299	4-φ10
VEA-220							
VEA-300							
VEA-370	431	431	330	761	730	299	4-φ10
VEA-450							
VEA-550							
VEA-750							
VEA-900							

Please inquire of our company,

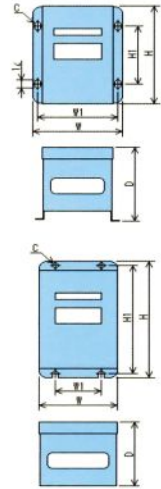


400V

> VEAH series standard specification

Model	Size	W	W1	H	H1	D	C
VEA-55	257	257	150	450	425	250	4-φ10
VEA-75							
VEA-110							
VEA-150	330	330	240	631	603	299	4-φ10
VEA-220							
VEA-300							
VEA-370	431	431	330	761	730	299	4-φ10
VEA-450							
VEA-550							
VEA-750	600	500	1005	975	375	4-φ12	

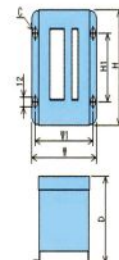
Model	Size	W	W1	H	H1	D	C
VEAH-900	800	800	300	1336	1306	405	6-φ12
VEAH-1100							
VEAH-1300							
VEAH-1600							



200V

> MSB series special specification

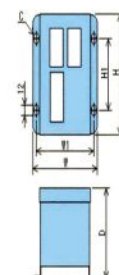
Model	Size	W	W1	H	H1	D	C
MSB-01	104	104	94	180	88	170	4-φ6
MSB-02							
MSB-04							
MSB-08							
MSB-15	104	104	94	221	129	170	4-φ6
MSB-22							



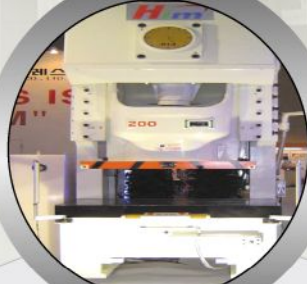
440V

> MSBH series special specification

Model	Size	W	W1	H	H1	D	C
MSBH-01	104	104	94	221	129	170	4-φ6
MSBH-02							
MSBH-04							
MSBH-08							
MSBH-15	104	104	94	2012	200	170	4-φ6
MSBH-22							



株式会社 MS テクノ



THIS IS STANDARD OF THE 21C CENTRY
MITYSERVO
MS SERVO



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