NIKKI DENSO

Instruction Manual

VCⅡ Series
D Type
Data

Manual No. TI-14130

Ver. 2.5

Preface

We thank you very much for adopting the AC servo controller <VC Ⅱ-D Type> this time.

In the text of this instruction manual, "Instruction Manual VC Ⅱ Series D Type Data" is indicated as "this manual" and in the same way, "VC Ⅱ Series driver" is indicated as "servo driver" or "this servo driver".

Precautions in safety

Before installation, wiring, operation, maintenance and inspection, and abnormality diagnosis and countermeasures, carefully read this manual and all other related operating instruction manuals for proper usage.
Before use, be sure to fully acquaint with the equipment, safety information, and other related precautions.

In the table below, cautions for safety are ranked as "Danger" and "Caution".
And contents to follow are ranked as "Prohibition" and "Compulsion".

Danger	If mishandling is made, dangerous situation as death or serious injury on a worker could occur.
Caution	If mishandling is made, dangerous situation as medium or light injury could occur and damages on goods could be suspected. However, since Caution-marked item could also cause serious results depending on the actual conditions, please comply with the important instructions.
Prohibition	Prohibitions (actions not to be done) are indicated.
Compulsion	Compulsions (actions to be done) are indicated.

Precautions in handling

⚠Caution
If you make any wrong command, parameter, and other data settings, not only abnormal operation will occur, but also the runaway and burn of the servo controller and injury may occur. Take adequate care when making settings.

About this manual

This manual explains the internal data of the servo controller.

For information on the installation, wiring, usage, maintenance and inspection, abnormality diagnosis, and countermeasures about the servo controller to use, as well as setting and display, refer to the "AC Servo controller VCⅡ Series D Type Instruction Manual".
In the event of any conflicts, the "AC Servo driver VCⅡ Series D Type Instruction Manual" prevail over this manual.

In order to use the internal data properly for data communication, make sure that you have a full understanding of the contents of this manual.

- This manual covers the servo controller of the following versions:
  - Software version 2.40 or later
  - Hardware version 3.02 or later
- On the main text, a P + 3-digit representation such as P000 means a parameter number.
- A hexadecimal number is distinguished from a decimal number by adding an "H" at the end of the number.

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Contents

Chapter 1 Data area configuration

1-1 Overall configuration

There are the parameter data / the condition data such as R or D device area (1bit/data)for theremotecontrol. By reading data from or writing data to these data area according to the communication protocol, it is possible to operate followings:

① Transmit and receive parameter data
② Read the each condition status of the device
③ Operate the device by communication instead of the external input signal.

R device	R0000	Parameter data area
	R0800	Nikki Denso's dedicated data area ※1
	∫	
D device	D0000	Condition data area
	D0130	Nikki Denso's dedicated data area※1
	∫	
	D9000	Condition data area
	D9999	
X device	X0000	Remote control I/O data area
	X0090	Nikki Denso's dedicated data area※1
	∫	

⚠Caution

- Rewriting frequency in the data area of R0000 to R0799is limited 1000 times.の
- No checking of consistency with data area for the device No. or device area is done during communication. In case of sending the command to write to Nikki Denso's dedicated data area, the nonexistent data area, out of range data, or the data which is contradicted to the other data, it may cause not only the malfunction of device, but it also damage the device or burn the motor. Please take measure to prevent such incidents.
- Although it is possible to write or read the data any time, data rewriting during an automatic run may cause a malfunction. Do not conduct data rewriting during an automatic run.

※1 Nikki Denso's dedicated data area is internal use in the servo controller. Never write the data to this area.

Chapter 2 Parameter data

2-1 Data setting of parameter area

You can edit the parameters of the servo controller by “reading” and “writing” by using “R devices”.

The parameters related t the basic specifications for serial communication need to be set on the servo controller side.

The allowable frequency of rewriting “R Devices” of data parameter is limited up to 1000 times or less.

Two devices are assigned to each parameter in the parameter area, and single parameter consisted from 32 bits.

The upper /lower relationship between the two device numbers is shown as in Table 2-1.

Table 2-1 Data structure of the parameter area

Device №	Parameter №	Setting data	
R0000	P000	Upper	Lower
R0001		R0000	R0001

The data to be set in this area is 32 bit long signed or un signed hexadecimal data

Ignoring the decimal data.

Table 2-2 Example of the parameter area setting

［Value setting］

Device No.	Parameter No.	Parameter name	Set value(Exp.)
R0262 R0263	P211	Accel. Time 1	10.000 sec

10.000 (Decimal) → Ignore decimal point → 10000 (Decimal) → 2710H (Hexadecimal) Hexadecimal conversion → 00002710H 32 bit long data (8 digits' in hexadecimal) →

Set data

Upper	Lower
R0262	R0263
0000H	2710H

［Value setting］

Device No.	Parameter No.	Parameter name	Set value (Exp,)
R0192 R0193	P136	Speed command value 3	-30.00 %

-30.00 (Decimal) → Ignore decimal → -3000 (Decimal) → FFFFF448H (Hexadecimal) Hexadecimal conversion → FFFFF448H 32 bit long data (8 digits in hexadecimal) →

Set data

Upper	Lower
R0192	R0193
FFFFH	F448H

［Number selection］

Device No.	Parameter No	Parameter No	Parameter No
R0300 R0301	P300	Rotation direction selection	1:REVERSE

1(Decimal) → 1H(Decimal) Hexadecimal conversion → 00000001H 32 bit long data (8 digits in hexadecimal) →

Set data

Upper	Lower
R0300	R0301
0000H	0001H

2-2 Parameter area list

The parameters for VCⅡ-C1 model are listed as follows:

Never alter the manufacturer's exclusive parameter or the reserved parameters

Table 2-3 Motor/ Encoder parameters

Device No.	Parameter No.	Parameter Name	Setting method	Setting range
R0000 R0001	P000	Motor type	Set value	000 ～ 999
R0002 R0003	P001	Encoder type selection	Select number	0:INC1 / 1:INC2 / 2:INC3 3:L-SEN / 4:S-INC / 5:S-ABS 6:C-SEN1 / 7:C-SEN2 8:S-INC2 / 9:S-ABS2 10:L-LESS / 11:L-ABS 12:S-ABS3 / 13:S-MABS
R0004 R0005	P002	IM/SM motor encoder pulse selection	Select number	0:1000 / 1:2000 / 2:6000 3:17bit
R0006 R0007	P003	τlinear motor linear sensor selection	Set value	-999.00000～100.00000
R0008 R0009	P004	τDISC motor encoder pulse selection	Set value	1～99999999
R0010 R0011	P005	IM/SM/τDISC motor max. speed	Set value	0～20000
R0012 R0013	P006	τ linear motor max. speed	Set value	0～100000.00
R0014 R0015	P007	τ linear motor rated speed	Set value	0.01～100000.00
R0016 R0017	P008	Encoder or magnetic pole sensor direction selection	Select number	0～3
R0018 R0019	P009	Carrier frequency selection	Select number	0:7.5KHz / 1:10KHz 2:15KHz / 3:20KHz
R0020 R0021	P010	Magnetic pole sensor type of τLinear/τDISC motor	Set value	0～9
R0022 R0023	P011	Offset of magnetic pole sensor forτ linear/τDISC motor	Set value	0.00～100.00
R0024 R0025	P012	Encoder feedback numerator value	Set value	-99999999～99999999
R0026 R0027	P013	Encoder feedback denominator value	Set value	0～99999999
R0028 R0029	P014	Manufacturer's exclusive use		
R0030 R0031	P015	Manufacturer's exclusive use		

⚠ Caution

・Since this data area is EEPROM, the numbers of rewriting is limited to 1000 times or less

Table 2-4 Motor / Encoder parameters

Device No.	Parameter No.	Parameter Name	Setting method	Setting range
R0032 R0033	P016	Differential coefficient during stoppage	Set value	0.0 ～ 9.9
R0034 R0035	P017	Filter time constant during stoppage	Set value	0.0 ～ 99.9
R0036 R0037	P018	ABS standard data	Set value	-99999999 ～ 99999999
R0038 R0039	P019	ABS standard machine position	Set value	-99999999 ～ 99999999
R0040 R0041	P020	Motor type・Number of poles	Set value	00000000 ～ 99999999
R0042 R0043	P021	Rated toque current	Set value	00000 ～ 65535
R0044 R0045	P022	Rated speed（Field control base speed）	Set value	1 ～ 20000
R0046 R0047	P023	Max. momentary torque ratio	Set value	100 ～ 799
R0048 R0049	P024	Exciting current	Set value	0 ～ 65535
R0050 R0051	P025	Rated output	Set value	0.000 ～ 999.999
R0052 R0053	P026	Current loop coefficient	Set value	0 ～ 300
R0054 ～ R0059	----	Reserved		
R0060 R0061	P030	Phase compensation angle	Set value	-100 ～ 100
R0062 R0063	P031	Servo controller rated torque current	Set value	0 ～ 65535
R0064 R0065	P032	Servo controller momentary max. torque ratio	Set value	100 ～ 799
R0066 R0067	P033	Servo controller power source capacity	Set value	0.000 ～ 999.999
R0068 ～ R0071	----	Reserved		
R0072 R0073	P036	ABS zero position electrical angle	Set value	0.00 ～ 360.00
R0074 R0075	P037	Torque command change amount limit value	Set value	0 ～ 65535
R0076 ～ R0079	----	Reserved		

⚠ Caution

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Table 2-5 Motor / Encoder parameters

Device No.	Parameter No.	Parameter Name	Setting method	Setting range
R0080 R0081	P040	Primary resistance	Set value	0 ～ 99999999
R0082 R0083	P041	Secondary resistance	Set value	0 ～ 99999999
R0084 R0085	P042	Primary self inductance	Set value	0 ～ 99999999
R0086 R0087	P043	Primary self inductance	Set value	0 ～ 99999999
R0088 R0089	P044	Mutual inductance	Set value	0 ～ 99999999
R0090 R0091	P045	Leakage inductance	Set value	0 ～ 99999999
R0092 R0093	P046	Dead time compensation time	Set value	0 ～ 65535
R0094 R0095	P047	Current loop cut off frequency	Set value	0 ～ 65535
R0096 R0097	P048	Current loop derivative time constant	Set value	0 ～ 65535
R0098 R0099	P049	Torque constant	Set value	0 ～ 99999999
R0100 R0101	P050	Magnetic pole sensor sin gain	Set value	0 ～ 4096
R0102 R0103	P051	Magnetic pole sensor sin offset	Set value	-999 ～ 999
R0104 R0105	P052	Magnetic pole sensor cos gain	Set value	0 ～ 4096
R0106 R0107	P053	Magnetic pole sensor cos offset	Set value	-999 ～ 999
R0108 R0109	P054	τDISC motor encoder compensation	Set value	-99999999 ～ 99999999
R0110 R0111	P055	Low pass filter frequency during auto magnetic pole detection	Set value	0 ～ 4999
R0112 R0113	P056	Set the landing torque at auto magnetic pole detection	Set value	0.0 ～ 100.0
R0114 R0115	P057	Set landing torque holding time at auto pole detection	Set value	0.00 ～ 9.99
R0116 R0117	P058	Distance between Tau linear motor pole opposite	Set value	0.01 ～ 1000.00
R0118 R0119	P059	Special encoder pulse number	Set value	0 ～ 99999999

⚠ Caution

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Table 2-6 Servo controller adjustment parameters

Device No.	Parameter No.	Parameter Name	Setting method	Setting range
R0120 R0121	P100	Low speed gain range	Set value	0.00 ～ 100.00
R0122 R0123	P101	Speed loop gain	Set value	0 ～ 9999
R0124 R0125	P102	Speed loop integral time constant	Set value	0.00 ～ 9999.99
R0126 R0127	P103	Speed loop differential time constant	Set value	-9999 ～ 9999
R0128 R0129	P104	Speed loop proportional gain division ratio	Set value	-100.0 ～ 100.0
R0130 R0131	P105	Speed loop differential gain division ratio	Set value	-100.0 ～ 100.0
R0132 R0133	P106	Speed loop gain / Low speed gain range	Set value	0 ～ 9999
R0134 R0135	P107	Speed loop integral time constant / Lowe speed gain range	Set value	0.00 ～ 9999.99
R0136 R0137	P108	Speed loop differential time constant / Low speed gain range	Set value	-9999 ～ 9999
R0138 R0139	P109	Speed loop proportional gain division / Low speed gain range	Set value	-100.0 ～ 100.0
R0140 R0141	P110	Speed loop differential gain division / Low speed gain range	Set value	-100.0 ～ 100.0
R0142 R0143	P111	Speed loop gain / GSEL 1	Set value	0 ～ 9999
R0144 R0145	P112	Speed loop integral time constant / GSEL 1	Set value	0.00 ～ 9999.99
R0146 R0147	P113	Speed loop differential time constant / GSEL1	Set value	-9999 ～ 9999
R0148 R0149	P114	Speed loop proportional gain division / GSEL1	Set value	-100.0 ～ 100.0
R0150 R0151	P115	Speed loop differential gain division / GSEL1	Set value	-100.0 ～ 100.0
R0152 R0153	P116	Torque limit value at magnetic pole detection	Set value	0.0 ～ 799.9
R0154 R0155	P117	Magnetic pole detection gain 1	Set value	0 ～ 9999
R0156 R0157	P118	Magnetic pole detection integral time constant	Set value	000 ～ 65535
R0158 R0159	P119	Magnetic pole detection gain 2	Set value	0 ～ 9999
R0160 R0161	P120	Torque command filter frequency	Set value	0 ～ 4999

⚠ Caution

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Table 2-7 Servo controller adjustment parameters

Device No.	Parameter No.	Parameter Name	Setting method	Setting range	
R0162 R0163	P121	Notch filter center frequency 1	Set value	0 ～ 4999	
R0164 R0165	P122	Notch filter band width 1	Set value	0 ～ 4999	
R0166 R0167	P123	Notch filter center frequency 2	Set value	0 ～ 4999	
R0168 R0169	P124	Notch filter band width 2	Set value	0 ～ 4999	
R0170 R0171	P125	Torque limit value 1+	Set value	0.0 ～ 799.9	
R0172 R0173	P126	Torque limit value 1-	Set value	0.0 ～ 799.9	
R0174 R0175	P127	Torque limit value 2+	Set value	-0.1 ～ 799.9	
R0176 R0177	P128	Torque limit value 2-	Set value	-0.1 ～ 799.9	
R0178 R0179	P129	Speed command gain	Set value	6.00 ～ 100.00	
R0180 R0181	P130	Speed command offset	Set value	-999 ～ 999	
R0182 R0183	P131	Torque command offset	Set value	-999 ～ 999	
R0184	P132	External speed limit effective/ineffective selection	Select number	0:SPD.LIM.N	
R0185				1:SPD.LIM.Y	
R0186 R0187	P133	Speed limit value	Set value	0.00 ～ 120.00	
R0188 R0189	P134	Speed command value 1	Set value	-100.00 ～ 100.00	
R0190 R0191	P135	Speed command value 2	Set value	-100.00 ～ 100.00	
R0192 R0193	P136	Speed command value 3	Set value	-100.00 ～ 100.00	
R0194 R0195	P137	Torque command value 1	Set value	-799.9 ～ 799.9	
R0196 R0197	P138	Torque command value 2	Set value	-799.9 ～ 799.9	
R0198 R0199	P139	Torque command value 3	Set value	-799.9 ～ 799.9	
R0200	P140	Auto tuning trial run direction/ inertia selection	Select number	0:BOTH/N	1:+ONLY/N
R0201				2:-ONLY/N	3:BOTH/H
				4:+ONLY/H	5:-ONLY/H
R0202 R0203	P141	Auto tuning trial run speed ratio	Select number	0.00 ～ 1.00	

⚠ Caution
Notch filter center frequency 3
Notch filter band width 3

Table 2-8 Servo controller adjustment parameters

Device No.	Parameter No.	Parameter Name	Setting method	Setting range
R0204 R0205	P142	Torque limit selection at alarm stop	Select number	0:ALM.TL.N 1:ALM.TL.Y
R0206 R0207	P143	R2 compensation selection	Select number	0:R2 OFF | 1:R2 ID
R0208 R0209	P144	Electronic thermal detecting method selection	Select number	0:STD | 1:BIG | 2:O.L.110% 3:O.L.50% | 4:O.L.70% 5:O.L.90% | 6:O.L.130% 7:O.L.150% | 8:O.L.170% 9:O.L.190%
R0210 R0211	P145	Magnetic pole sensor automatic adjustment operation	Set value	-100 ～ 100
R0212 R0213	P146	Mass / Inertia	Set value	0 ～ 999999999
R0214 R0215	P147	Viscous friction	Set value	0 ～ 999999999
R0216 R0217	P148	Disturbance correction filter frequency	Set value	0 ～ 4999
R0218 R0219	P149	τDISC motor initialization operation	Set value	-100 ～ 100
R0220 R0221	P150	Disturbance correction filter invalid limit	Set value	0.00 ～ 100.00
R0222 R0223	P151	Notch filter center frequency 3	Set value	0 ～ 4999
R0224 R0225	P152	Notch filter band width 3	Set value	0 ～ 4999
R0226 R0227	P153	Notch filter center frequency 4	Set value	0 ～ 4999
R0228 R0229	P154	Notch filter band width 4	Set value	0 ～ 4999
R0230 R0231	P155	Notch filter center frequency 5	Set value	0 ～ 4999
R0232 R0233	P156	Notch filter band width 5	Set value	0 ～ 4999
R0234 R0235	P157	Torque command low pass filter order selection	Set value	0 ～ 1
R0236 R0237	P158	Normal rated power of regenerative resistor	Set value	-999.999～999.999
R0238 R0239	P159	Sensor installation radius	Set value	0.000～10000.000

⚠Caution

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Table 2-9NC adjustment parameters

Device No.	Parameter No.	Parameter Name	Setting method	Setting range
R0240 R0241	P200	Position loop gain	Set value	0 ～ 9999
R0242 R0243	P201	Servo lock gain	Set value	0 ～ 9999
R0244 R0245	P202	Positioning completion range	Set value	0 ～ 999
R0246 ～ R0249	----	Reserved		
R0250 R0251	P205	Rough positioning feed forward ratio	Set value	0.0 ～ 120.0
R0252 R0253	R206	Rough positioning feed forward shift ratio	Set value	0.0 ～ 100.0
R0254 R0255	P207	Overflow detecting pulse	Set value	1000 ～ 99999999
R0256 R0257	P208	Deviation error detecting pulse	Set value	0 ～ 99999999
R0258 R0259	P209	Motion selection at deviation error	Select number	0:STOP 1:CONTINUE
R0260 R0261	P210	S-curve acceleration / deceleration increasing time	Set value	0.0 ～ 1000.0
R0262 R0263	P211	Acceleration time 1	Set value	0.000 ～ 99.999
R0264 R0265	P212	Acceleration time 2	Set value	0.000 ～ 99.999
R0266 R0267	P213	Acceleration time 3	Set value	-0.099 ～ 99.999
R0268 R0269	P214	Deceleration time 1	Set value	0.000 ～ 99.999
R0270 R0271	P215	Deceleration time 2	Set value	0.000 ～ 99.999
R0272 R0273	P216	Deceleration time 3	Set value	-0.099 ～ 99.999
R0274 R0275	P217	Positioning feed forward differential addition ratio	Set value	-1 ～ 31
R0276 R0277	P218	Pulse train feed forward differential addition ratio	Set value	-1 ～ 31
R0278 R0279	P219	Auto tuning condition selection	Set value	0 ～ 21
R0280 R0281	P220	Position loop differential time constant	Set value	0 ～ 9999
R0282 R0283	P221	Servo lock differential time constant	Set value	0 ～ 9999

⚠ Caution

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Table 2-10 NC Adjustment parameters

Device No.	Parameter No.	Parameter Name	Setting method	Setting range
R0284 R0285	P222	Manufacturer's exclusive use		
R0286 R0287	P223	Manufacturer's exclusive use		
R0288 R0289	P224	Inertia feed forward ratio	Set value	0.0 ～ 200.0
R0290 R0291	P225	Viscous friction feed forward ratio	Set value	0.0 ～ 200.0
R0292 R0293	P226	Position loop gain / GSEL1	Set value	0 ～ 9999
R0294 R0295	P227	Servo lock gain / GSEL1	Set value	0 ～ 9999
R0296 R0297	P228	Position loop gain / GSEL2	Set value	0 ～ 9999
R0298 R0299	P229	Servo lock gain/ GSEL2	Set value	0 ～ 9999

⚠ Caution

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Table 2-11 Positioning adjustment parameters

Device No.	Parameter No.	Parameter Name	Setting method	Setting range	
R0300	P300	Rotation direction selection	Select number	0:FORWARD	
R0301				1:REVERSE	
R0302	P301	Setting unit selection	Select number	0:mm	1:° (deg)
R0303				2:in (inch)	
R0304	P302	Minimum setting unit	Select number	0:0.00001	1:0.0001
				2:0.001	3:0.01
R0305				4:0.1	5:1
				6:0.000001	7:0.0000001
R0306 ～ R0321	----	Reserved			
R0322	P311	Torque command gain	Set value	000.0 ～ 799.9	
R0323					
R0324	P312	Mass/Inertia at GSEL condition	Set value	0 ～ 999999999	
R0325					
R0326	P313	Viscous friction at GSEL condition	Set value	0 ～ 999999999	
R0327					
R0328	P314	Select Absolute accuracy compensation functions	Set value	0 ～ 2	
R0329					
R0330	P315	Position loop gain / GSEL 3	Set value	0 ～ 9999	
R0331					
R0332	P316	Servo lock gain / GSEL3	Set value	0 ～ 9999	
R0333					
R0334	P317	Active vibration control filter center frequency	Set value	0 ～ 4999	
R0335					
R0336	P318	Active vibration control filter bandwidth	Set value	0 ～ 4999	
R0337					
R0338	P319	Active vibration control filter ineffective range	Set value	0.00 ～ 100.00	
R0339					

⚠ Caution

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Table 2-12 Operation parameters

Device No.	Parameter No.	Parameter Name	Setting method	Setting range	
R0340 R0341	P400	Jog speed 1	Set value	1 ～ 99999999	
R0342 R0343	P401	Reserved			
R0344	P402	Zero return method selection	Select number	0:STD.HOME	1:LS LESS
R0345				2:STOP HOME	3:OT HOME
				4:ABS HOME	
R0346 R0347	P403	Zero point marker selection	Select number	0:ENC.MARK 1:NON.MARK	
R0348 R0349	P404	Zero return speed	Set value	1 ～ 99999999	
R0350 R0351	P405	Zero return creep speed	Set value	1 ～ 99999999	
R0352 R0353	P406	Zero position constant	Set value	0 ～ 99999999	
R0354 R0355	P407	Zero return set distance	Set value	-99999999 ～ 99999999	
R0356 R0357	P408	Position data reference point	Set value	-99999999 ～ 99999999	
R0358 R0359	P409	Automatic run permission condition selection	Select number	0:AUTO.N 1:AUTO.Y	
R0360 R0361	P410	OT back zero return at OT deceleration	Set value	0.00 ～ 99.99	
R0362 R0363	----	Reserved			
R0364 R0365	P412	Current position set selection at power ON	Set value	0 ～ 1	
R0366 R0367	P413	Code switching positioning one rotation range	Set value	0 ～ 99999999	
R0368 R0369	P414	Multi rotation limit	Set value	0 ～ 255	
R0370 R0371	P415	Speed loop gain / GSEL2	Set value	0 ～ 9999	
R0372 R0373	P416	Speed loop integral time constant / GSEL2	Set value	0 ～ 9999.99	
R0374 R0375	P417	Speed loop differential time constant/GSEL2	Set value	-9999 ～ 9999	
R0376 R0377	P418	Speed loop proportional gain division ratio/GSEL2	Set value	-100.0 ～ 100.0	
R0378 R0379	P419	Speed loop differential gain division ratio/ GSEL2	Set value	-100.0 ～ 100.0	

⚠ Caution

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Table 2-13 Display, edit, and communication parameters

Device No.	Parameter No.	Parameter Name	Setting method	Setting range		
R0380 R0381	P500	Manufacturer's exclusive use				
R0382 R0383	P501	Manufacturer's exclusive use				
R0384 R0385	P502	LCD current position display selection	Select number	0:ABSOLUTE 2:INCREMENT 4:ENC.FB	1:MACHINE 3:ABS.ENC	
R0386 ～ R0389	----	Reserved				
R0390 R0391	P505	Communication unit number selection	Set value	0 ～ 9		
R0392 R0393	P506	Communication ID number	Set value	0 ～ 16		
R0394 R0395	P507	Data length selection (Serial communication)	Select number	0:7 BITS 1:8 BITS		
R0396 R0397	P508	Parity selection(serial communication)	Select number	0:NONE 2:EVEN	1:ODD	
R0398 R0399	P509	Baud rate selection (Serial communication)	Select number	0:4.8K 3:56K	1:9.6K	2:19.2K
R0400 R0401	P510	Reserved				
R0402 R0403	P511	Communication group ID set 1	Set value	0 ～ 255		
R0404 R0405	P512	Communication group response YES/NO 1	Select number	0:RESP.OFF 1:RESP. ON		
R0406 R0407	P513	Communication group ID set 2	Set value	0 ～ 255		
R0408 R0409	P514	Communication group response YES/NO 2	Select number	0:RESP.OFF 1:RESP. ON		
R0410 R0411	P515	Communication group ID set 3	Set value	0 ～ 255		
R0412 R0413	P516	Communication group response YES/NO 3	Select number	0:RESP.OFF 1:RESP. ON		
R0414 R0415	P517	Communication group ID set 4	Set value	0 ～ 255		
R0416 R0417	P518	Communication group response YES/NO 4	Select number	0:RESP.OFF 1:RESP. ON		
R0418 R0419	P519	Communication group ID set 5	Set value	0 ～ 255		
R0420 R0421	P520	Communication group response YES/NO 5	Select number	0:RESP.OFF 1:RESP. ON		

⚠ Caution

・Since this data area is EEPROM, the numbers of rewriting is limited to 1000 times or less

Table 2-14 Display, edit, and communication parameters

Device No.	Parameter No.	Parameter Name	Setting method	Setting range
R0422 R0423	P521	Servo control communication ID number	Select number	0 ～ 8
R0424 R0425	P522	Servo control communication control mode	Select number	0:PULSE 1:CNTRL
R0426 R0427	P523	Alarm selection at Servo control communication disturbance	Select number	0:NON ALM 1:ALM
R0428 R0429	P524	Servo control communication Real time data 1 Device No.	Set value	0 ～ 29999
R0430 R0431	P525	Servo control communication Real time data 2 Device No.	Set value	0 ～ 29999
R0432 R0433	P526	Servo control communication Real-time data 3 Device No.	Set value	0 ～ 29999
R0434 R0435	P527	Servo control communication Real-time data 4 Device No.	Set value	0 ～ 29999
R0436 R0437	P528	Servo control communication Real-time data 5Device No.	Set value	0 ～ 29999
R0438 R0439	P529	Manufacturer’s exclusive use		
R0440 R0441	P530	Remote write data 5	Set value	0 ～ 29999
R0442 R0443	P531	Remote write data 6	Set value	0 ～ 29999
R0444 R0445	P532	Manufacturer’s exclusive use		
R0446 R0447	P533	External input ON fixed selection 1	Set value	0 ～ 268435455
R0448 R0449	P534	External input ON fixed selection 2	Set value	0 ～ 268435455
R0450 R0451	P535	External input OFF fixed selection 1	Set value	0 ～ 268435455
R0452 R0453	P536	External input OFF fixed selection 2	Set value	0 ～ 268435455
R0454 R0455	P537	Manufacturer’s exclusive use		
R0456 R0457	P538	Brake release signal output speed at motor rotation.	Set value	0.0 ～ 100.0
R0458 R0459	P539	Brake release signal OFF speed from SERVO OFF after motor rotation	Set value	0.00 ～ 9.99

⚠ Caution

・Since this data area is EEPROM, the numbers of rewriting is limited to 1000 times or less

Table 2-15 Pulse train input parameters

Device No.	Parameter No.	Parameter Name	Setting method	Setting range
R0460 R0461	P600	CIH signal function selection	Select number	0:CIH CLOSE 1:CIH OPEN
R0462 R0463	P601	Pulse train command phase order switch	Select number	0:FORWARD 1:REVERSE
R0464 R0465	P602	Pulse train command type selection	Select number	0:X1 1:X2 2:X4 3:F/R PULSE 4:P + F/R 5:ID0.FCRC 6:ID0.CMNDP 7:ID0.MTENC
R0466 R0467	P603	Pulse train command compensation numerator	Set value	1 ～ 99999999
R0468 R0469	P604	Pulse train command compensation denominator	Set value	1 ～ 99999999
R0470 R0471	P605	Pulse train feed forward ratio	Set value	0.0 ～ 120.0
R0472 R0473	P606	Pulse train feed forward shift ratio	Set value	0.0 ～ 100.0
R0474 R0475	P607	Pulse train feed forward filter time constant	Set value	0.0 ～ 100.0
R0476 R0477	P608	Pulse train late compensating time	Set value	0.0 ～ 1000.0
R0478 R0479	P609	Pulse train leveling filter time	Set value	0.0 ～ 1000.0
R0480 R0481	P610	Pulse train command input selection when connecting to expansion board	Select number	0:EXT 1:STD
R0482 R0483	----	Reserved		
R0484 R0485	P612	Function selection at SSCNETⅢ communication mode	Set value	00 ～ 11
R0486 R0487	P613	PNB range	Set value	0 ～ 999
R0488 R0489	P614	Low speed gain switching delay time	Set value	-1000 ～ 1000
R0490 R0491	P615	Speed loop gain / GSEL3	Set value	0 ～ 9999
R0492 R0493	P616	Speed loop integral time constant/ GSEL3	Set value	0.00 ～ 9999.99
R0494 R0495	P617	Speed loop differential time constant / GSEL3	Set value	-9999 ～ 9999
R0496 R0497	P618	Speed loop proportional gain division / GSEL3	Set value	-100.0 ～ 100.0
R0498 R0499	P619	Speed loop differential gain division/ GSEL3	Set value	-100.0 ～ 100.0

⚠ Caution

・Since this data area is EEPROM, the numbers of rewriting is limited to 1000 times or less

Table 2-16 Input/output signal parameters

Device No.	Parameter No.	Parameter Name	Setting method	Setting range	
R0500 R0501	P700	Monitor 1 selection	Select number	0:SPD.REF.	1:SPD.FB.
R0502 R0503	P701	Monitor 2 selection		2:TRQ.REF. 4:TRQ.LIM.- 6:P.RANGE.H 8: 10: 12:OPT.L	3:TRQ.LIM.+ 5:P.RANGE.L 7:SPD.OUT 9: 11:OPT.W
R0504 R0505	P702	Speed zero detecting range	Set value	0.00 ～ 100.00	
R0506 R0507	----	Reserved			
R0508 R0509	P704	SON signal logic selection	Select number	0:SERVO ON 1:SHUT OFF	
R0510 R0511	P705	Hardware OT effective/ineffective selection	Select number	0:OT.CHK.Y 1:OT.CHK.N	
R0512 R0513	P706	Mode change check delay time	Set value	0.00 ～ 9.99	
R0514 R0515	P707	Soft limit switch position 1	Set value	-99999999 ～ 99999999	
R0516 R0517	P708	Soft limit switch position 2	Set value	-99999999 ～ 99999999	
R0518 R0519	P709	Soft limit switch position 3	Set value	-99999999 ～ 99999999	
R0520 R0521	P710	Stopping method at emergency stop	Select number	0:FREE RUN 1:QUICK	
R0522 R0523	P711	Deceleration time at emergency stop	Set value	0.00 ～ 50.00	
R0524 R0525	P712	SERVO OFF delay time at emergency stop	Set value	0.00 ～ 9.99	
R0526 R0527	P713	Stopping method at AC power down	Select number	0:FREE RUN 1:QUICK	
R0528 R0529	P714	ALM output selection at AC power down	Select number	0:ALM.OFF 1:ALM.ON	
R0530 R0531	P715	ALM/WNG signal logic selection	Select number	0:ALM/WNG1 2:ALM/WNG3	1:ALM/WNG2 3:ALM/WNG4
R0532 R0533	P716	RDY signal specification selection	Select number	0:RDY1 2:RDY3	1:RDY2 3:RDY4

⚠ Caution

・Since this data area is EEPROM, the numbers of rewriting is limited to 1000 times or less

Table 2-17 Input/output signal parameters

Device No.	Parameter No.	Parameter Name	Setting method	Setting range
R0534 R0535	P717	Manufacturer's exclusive use		
R0536 R0537	P718	PN signal delay time	Set value	0.000 ～ 9.999
R0538 R0539	P719	PN signal specification selection	Select number	0:PN1 1:PN2
R0540 R0541	P720	Remote write data 1	Set value	00000 ～ 29999
R0542 R0543	P721	Remote write data 2	Set value	00000 ～ 29999
R0544 R0545	P722	Remote write data 3	Set value	00000 ～ 29999
R0546 R0547	P723	Remote write data 4	Set value	00000 ～ 29999
R0548 R0549	P724	Remote read data 1	Set value	00000 ～ 29999
R0550 R0551	P725	Remote read data 2	Set value	00000 ～ 29999
R0552 R0553	P726	Remote read data 3	Set value	00000 ～ 29999
R0554 R0555	P727	Remote read data 4	Set value	00000 ～ 29999
R0556 R0557	P728	Remote read data 5	Set value	00000 ～ 29999
R0558 R0559	P729	Remote read data 6	Set value	00000 ～ 29999
R0560 R0561	P730	Manufacturer's exclusive use		
R0562 R0563	P731	Manufacturer's exclusive use		
R0564 R0565	P732	Manufacturer's exclusive use		
R0566 R0567	P733	Manufacturer's exclusive use		
R0568 R0569	P734	Brake output display time	Set value	-9.99 ～ 9.99

⚠ Caution

・Since this data area is EEPROM, the numbers of rewriting is limited to 1000 times or less

Table 2-18 Input/Output signal parameters

Device No.	Parameter No.	Parameter Name	Setting method	Setting range	
R0570 R0571	P735	External input invalid selection 1	Set value	0 ～ 268435455	
R0572 R0573	P736	External input invalid selection 2	Set value	0 ～ 268435455	
R0574 R0575	P737	Basic external input signal function allocation 1	Set value	0 ～ 99999999	
R0576 R0577	P738	Basic external input signal function allocation 2	Set value	0 ～ 99999999	
R0578 R0579	P739	Extended external input signal function allocation 1	Set value	0 ～ 99999999	
R0580 R0581	P740	Extended external input signal function allocation 2	Set value	0 ～ 99999999	
R0582 R0583	P741	Extended external input signal function allocation 3	Set value	0 ～ 99999999	
R0584 R0585	P742	Basic external output signal allocation	Set value	0 ～ 99999999	
R0586 R0587	P743	Extended output signal function allocation 1	Set value	0 ～ 99999999	
R0588 R0589	P744	Extended output signal function allocation 2	Set value	0 ～ 99999999	
R0590 R0591	P745	Dynamic brake function selection	Select number	0:INVALID 2:DMB OFF	1:DMB ON
R0592 R0593	P746	SERVO ON delay time at dynamic brake is ON	Set value	0 ～ 10	
R0594 R0595	P747	Servo control abnormality detection adjustment value	Set value	-1000 ～ 1000	
R0596 R0597	P748	Manufacturer's exclusive use			
R0598 R0599	----	Reserved			

⚠ Caution

・Since this data area is EEPROM, the numbers of rewriting is limited to 1000 times or less

Table 2-19 Rough positioning parameters

Device No.	Parameter No.	Parameter Name	Setting method	Setting range
R0600 R0601	P800	Rough positioning speed 1	Set value	1 ～ 99999999
R0602 R0603	P801	Extended output signal function allocation 2	Set value	1 ～ 99999999
R0604 R0605	P802	Extended output signal function allocation 3	Set value	1 ～ 99999999
R0606 R0607	P803	Positioning method 1	Set value	0 ～ 221
R0608 R0609	P804	Goal position 1	Set value	-99999999 ～ 99999999
R0610 R0611	P805	Positioning method 2	Set value	0 ～ 221
R0612 R0613	P806	Goal position 2	Set value	-99999999 ～ 99999999
R0614 R0615	P807	Positioning method 3	Set value	0 ～ 221
R0616 R0617	P808	Goal position 3	Set value	-99999999 ～ 99999999
R0618 R0619	P809	Positioning method 4	Set value	0 ～ 221
R0620 R0621	P810	Goal position 4	Set value	-99999999 ～ 99999999
R0622 R0623	P811	Positioning method 5	Set value	0 ～ 221
R0624 R0625	P812	Goal position 5	Set value	-99999999 ～ 99999999
R0626 R0627	P813	Positioning method 6	Set value	0 ～ 221
R0628 R0629	P814	Goal position 6	Set value	-99999999 ～ 99999999
R0630 R0631	P815	Positioning method 7	Set value	0 ～ 221
R0632 R0633	P816	Goal position 7	Set value	-99999999 ～ 99999999
R0634 R0635	P817	Positioning method 8	Set value	0 ～ 221
R0636 R0637	P818	Goal position 8	Set value	-99999999 ～ 99999999
R0638 ～ R0799	----	Reserved		

⚠ Caution

・Since this data area is EEPROM, the numbers of rewriting is limited to 1000 times or less

Chapter 3 Condition data

3-1 Data configuration of condition data area

By reading from D device, you can find out the condition data to know the status of servo controller. Condition data is consisted from 「2 ward data」and 「1 ward data」.

① 1 ward data
1 ward data is allocated to one of the device NO., and it is consisted from 16 bit long data of the hexadecimal with symbol ignoring decimal point.

② 2 ward data
2 ward data is allocated to 2 of the device NO., and it is consisted from 32 bit long data of the hexadecimal with symbol ignoring decimal point.

Upper /Lower column of these 2 device numbers are as follows:

Table 3-1 Data configuration of conditon data area

Device No.	Conditon data	Data	
		Upper	Lower
D9126	Actual machine motion speed	D9126	D9127
D9127			

Table 3-2 1 Ward data reading example

Device №	Condition data	Data(Example)
D9011	Latest alarm No.	18 (Reverse direction over travel)

18 (Decimal) → 12H (Hexadecimal) → 0012H (Hexadecimal) →

Read data

D9011
0012H

Hexadecimal switching　　16 bit data length (4 columns in hexadecimal))

Table 3-3 2 ward data reading (Example)

Device No.	Condition data	Data(Example)
D9302	Present position (Absolute position)	10000.00 mm
D9303		

10000.00 (Decimal) → 1000000 (Decimal) → F4240H (Hexade-cimal) → 000F4240 H (Hexadeci-mal) →

Reading data

Upper	Lower
D9302	D9303
000FH	4240H

Ignore decimal point　　Hexadecimal switching　　32bit length data (Hexadecimal in 8 column))

3-2 Condition data area list

Table 3-4 Condition data area list

Device No..	Signal name	Contents
D9000	Input signal condition 0	1-4 Refer Condition data area/ Bit list
01	〃 1	
02	〃 2	
03	〃 3	
04	Special data for controller	(※ Data for manufacturer's exclusive use)
05	〃	(〃)
06	Output signal condition 0	1-4 Refer Condition data area/ Bit list
07	〃 1	
08	〃 2	
09	Special data for controller	(※ Data for manufacturer's exclusive use)
10	〃	(〃)
11	Final alarm №	1-5 Refer Alarm/ Warning code list
12	Alarm No. 1 time before	
13	Alarm No. 2 times before	
14	Alarm No. 3 times before	
15	Alarm No. 4 times before	
16	Special data for controller	(※ Data for manufacturer's exclusive use)
17	Warning No.	1-5 Refer Alarm/ Warning code list
18	Present Alarm or Warning	1-5 Refer Alarm/ Warning code list
19	Special data for controller	
20	〃	(※ Data for manufacturer's exclusive use)
21		
22	〃	
23		
24	〃	
25		
26	〃	
27		
28	〃	
29		
30	Hardware version	
31		
32	Software version	
33		
34	Special data for controller	(※ Data for manufacturer's exclusive use)
35	〃	(〃)
36	〃	(〃)
37	〃	(〃)
38	〃	(〃)
39	〃	(〃)
40	〃	(〃)
41	〃	(〃)
42	〃	(〃)
43	〃	(〃)
44	〃	(〃)
45	〃	(〃)
46	〃	(〃)
47	〃	(〃)
48	〃	(〃)
49	〃	(〃)

Table 3-5 Condition data area list

Device No..	Signal name	Contents
D9050	Special data for controller	(※ Data for manufacturer's exclusive use)
51	〃	(〃)
52	〃	(〃)
53	〃	(〃)
54	〃	(〃)
55	〃	(〃)
56	〃	(〃)
57	〃	(〃)
58	〃	(〃)
59	〃	(〃)
60	〃	(〃)
61	〃	(〃)
62	〃	(〃)
63	〃	(〃)
64	〃	(〃)
65	〃	(〃)
66	〃	(〃)
67	〃	(〃)
68	〃	(〃)
69	〃	(〃)
70	〃	(〃)
71	〃	(〃)
72	〃	(〃)
73	〃	(〃)
74	〃	(〃)
75	〃	(〃)
76	〃	(〃)
77	〃	(〃)
78	〃	(〃)
79	〃	(〃)
80	〃	(〃)
81	〃	(〃)
82	〃	(〃)
83	〃	(〃)
84	〃	(〃)
85	〃	(〃)
86	〃	(〃)
87	〃	(〃)
88	〃	(〃)
89	〃	(〃)
90	〃	(〃)
91	〃	(〃)
92	〃	(〃)
93	〃	(〃)
94	〃	(〃)
95	〃	(〃)
96	〃	(〃)
97	〃	(〃)
98	Speed/ Torque selection No.	Select value of SS1/SS2
99	Special data for controller	(※ Data for manufacturer's exclusive use)

Table 3-6 Condition data area list

Device No.	Signal name	Contents
D9100	ST00 Motor actual speed[%]	ST00 data for display
01		
02	ST01 Present position for display	ST01 data for display
03		
04	ST02 Deviation pulse [pulse]	ST02 data for display
05		
06	ST03 External speed command value[rpm]	ST03 data for display
07		
08	ST04 External torque command value[%]	ST04 data for display
09		
10	ST05 Pulse train frequency [×10pps]	ST05 data for display
11		
12	ST06 Pulse train input accumulated value[pulse]	ST06 data for display
13		
14	ST07 External + Torque limit value [%]	ST07 data for display
15		
16	ST08 External – Torque limit value [%]	ST08 data for display
17		
18	ST09 Thermal trip rate [%]	ST09 data for display
19		
20	ST10 Effective load ratio (Effective load torque) [%]	ST10 data for display
21		
22	ST11 Peak torque ratio[%]	ST11 data for display
23		
24	ST12 Actual rotation speed of rotation object[rpm]	ST12 data for display
25		
26	ST13 Actual machine operation speed [Setting unit/s]	ST13 data for display
27		
28	ST14 Actual motor operation speed [rpm]	ST14 data for display
29		
30	ST15 Motor load ratio [%]	ST15 data for display
31		
32	ST16 Load ratio of regenerative resistor [%]	ST16 data for display
33		
34	ST17 Servo control error occurrence ratio [%]	ST17 data for display
35		
36	Special data for controller	(※ Data for manufacturer's exclusive use)
37	〃	(〃)
38	〃	(〃)
39	〃	(〃)
40	〃	(〃)
41	〃	(〃)
42	〃	(〃)
43	〃	(〃)
44	〃	(〃)
45	〃	(〃)
46	〃	(〃)
47	〃	(〃)
48	〃	(〃)
49	〃	(〃)

Table 3-7 Condition data area list

Device No.	Signal name	Contents
D９１５０	Special data for controller	(※ Data for manufacturer's exclusive use)
５１	〃	(〃)
５２	〃	(〃)
５３	〃	(〃)
５４	〃	(〃)
５５	〃	(〃)
５６	〃	(〃)
５７	〃	(〃)
５８	〃	(〃)
５９	〃	(〃)
６０	〃	(〃)
６１	〃	(〃)
６２	〃	(〃)
６３	〃	(〃)
６４	〃	(〃)
６５	〃	(〃)
６６	〃	(〃)
６７	〃	(〃)
６８	〃	(〃)
６９	〃	(〃)
７０	〃	(〃)
７１	〃	(〃)
７２	〃	(〃)
７３	〃	(〃)
７４	〃	(〃)
７５	〃	(〃)
７６	〃	(〃)
７７	〃	(〃)
７８	〃	(〃)
７９	〃	(〃)
８０	〃	(〃)
８１	〃	(〃)
８２	〃	(〃)
８３	〃	(〃)
８４	〃	(〃)
８５	〃	(〃)
８６	〃	(〃)
８７	〃	(〃)
８８	〃	(〃)
８９	〃	(〃)
９０	〃	(〃)
９１	〃	(〃)
９２	〃	(〃)
９３	〃	(〃)
９４	〃	(〃)
９５	〃	(〃)
９６	〃	(〃)
９７	〃	(〃)
９８	〃	(〃)
９９	〃	(〃)

Table 3-8 Condition data area list

Device No.	Signal name	Contents
D9200	Basic external input signal status	Refer 1-4 Condition data area/ Bit list
01		
02	Extended external input signal status	
03		
04	Special data for controller	(※ Data for manufacturer's exclusive use)
05	〃	(〃)
06	〃	(〃)
07	〃	(〃)
08	〃	(〃)
09	〃	(〃)
10	Basic external output signal status	Refer 1-4 Condition data area/ Bit list
11		
12	Extended external output signal status	
13		
14	Special data for controller	(※ Data for manufacturer's exclusive use)
15	〃	(〃)
16	〃	(〃)
17	〃	(〃)
18	〃	(〃)
19	〃	(〃)
20	Selection mode data	
21		
22	Override ratio	
23		
24	Special data for controller	(※ Data for manufacturer's exclusive use)
25	〃	(〃)
26	〃	(〃)
27	〃	(〃)
28	〃	(〃)
29	〃	(〃)
30	〃	(〃)
31	〃	(〃)
32	〃	(〃)
33	〃	(〃)
34	〃	(〃)
35	〃	(〃)
36	〃	(〃)
37	〃	(〃)
38	〃	(〃)
39	〃	(〃)
40	〃	(〃)
41	〃	(〃)
42	〃	(〃)
43	〃	(〃)
44	〃	(〃)
45	〃	(〃)
46	〃	(〃)
47	〃	(〃)
48	〃	(〃)
49	〃	(〃)

Table 3-9 Condition data area list

Device No.	Signal name	Contents
D9250	Special data for controller	(※ Data for manufacturer's exclusive use)
51	〃	(〃)
52	〃	(〃)
53	〃	(〃)
54	〃	(〃)
55	〃	(〃)
56	〃	(〃)
57	〃	(〃)
58	〃	(〃)
59	〃	(〃)
60	〃	(〃)
61	〃	(〃)
62	〃	(〃)
63	〃	(〃)
64	〃	(〃)
65	〃	(〃)
66	〃	(〃)
67	〃	(〃)
68	〃	(〃)
69	〃	(〃)
70	〃	(〃)
71	〃	(〃)
72	〃	(〃)
73	〃	(〃)
74	〃	(〃)
75	〃	(〃)
76	〃	(〃)
77	〃	(〃)
78	〃	(〃)
79	〃	(〃)
80	〃	(〃)
81	〃	(〃)
82	〃	(〃)
83	〃	(〃)
84	〃	(〃)
85	〃	(〃)
86	〃	(〃)
87	〃	(〃)
88	〃	(〃)
89	〃	(〃)
90	〃	(〃)
91	〃	(〃)
92	〃	(〃)
93	〃	(〃)
94	〃	(〃)
95	〃	(〃)
96	〃	(〃)
97	〃	(〃)
98	〃	(〃)
99	〃	(〃)

Table 3-10 Condition data area list

Device No.	Signal name	Contents
D9300	Present position (Machine position) [By parameter setting]	Machine position data:to be updated 0.8ms intervals
01		
02	Present position (Machine position) [By parameter setting]	Absolute position data: to be updated 0.8ms intervals
03		
04	Present position (Incremental position) [By parameter setting]	Incremental position data: to be updated 0.8ms intervals
05		
06	Target position (Reached position) [By parameter setting]	Reached position data: to be updated 0.8ms intervals
07		
08	Present position (ABS-ENC)	ABS encoder data: to be updated 0.8ms intervals
09		
10	Feedback position [By parameter setting]	Feedback Absolute position data: to be updated 0.8msintervals
11		
12	Deviation [pulse]	Per-pulse deviation: to be updated 0.8ms interval
13		
14	Deviation [set unit]	Per-pulse deviation: to be updated 0.8ms interval
15		
16	Special data for controller	(※ Data for manufacturer's exclusive use)
17	〃	(〃)
18	〃	(〃)
19	〃	(〃)
20	〃	(〃)
21	〃	(〃)
22	〃	(〃)
23	〃	(〃)
24	〃	(〃)
25	〃	(〃)
26	〃	(〃)
27	〃	(〃)
28	〃	(〃)
29	〃	(〃)
30	〃	(〃)
31	〃	(〃)
32	〃	(〃)
33	〃	(〃)
34	〃	(〃)
35	〃	(〃)
36	〃	(〃)
37	〃	(〃)
38	〃	(〃)
39	〃	(〃)
40	〃	(〃)
41	〃	(〃)
42	〃	(〃)
43	〃	(〃)
44	〃	(〃)
45	〃	(〃)
46	〃	(〃)
47	〃	(〃)
48	〃	(〃)
49	〃	(〃)

Table 3-11 Condition data area list

Device No.	Signal name	Contents
D９３５０	Special data for controller	(※ Data for manufacturer's exclusive use)
５１	〃	(〃)
５２	〃	(〃)
５３	〃	(〃)
５４	〃	(〃)
５５	〃	(〃)
５６	〃	(〃)
５７	〃	(〃)
５８	〃	(〃)
５９	〃	(〃)
６０	〃	(〃)
６１	〃	(〃)
６２	〃	(〃)
６３	〃	(〃)
６４	〃	(〃)
６５	〃	(〃)
６６	〃	(〃)
６７	〃	(〃)
６８	〃	(〃)
６９	〃	(〃)
７０	〃	(〃)
７１	〃	(〃)
７２	〃	(〃)
７３	〃	(〃)
７４	〃	(〃)
７５	〃	(〃)
７６	〃	(〃)
７７	〃	(〃)
７８	〃	(〃)
７９	〃	(〃)
８０	〃	(〃)
８１	〃	(〃)
８２	〃	(〃)
８３	〃	(〃)
８４	〃	(〃)
８５	〃	(〃)
８６	〃	(〃)
８７	〃	(〃)
８８	〃	(〃)
８９	〃	(〃)
９０	〃	(〃)
９１	〃	(〃)
９２	〃	(〃)
９３	〃	(〃)
９４	〃	(〃)
９５	〃	(〃)
９６	〃	(〃)
９７	〃	(〃)
９８	〃	(〃)
９９	〃	(〃)

3-3 Condition data area/Bit list

Table 3-12 Input signal status data area / Bit list

Device No.		Signal name		Contents
D９０００ ※1	0	ＲＳＴ	1:Assert	Reset 〔External input signal／Assert: input short-circuited〕
	1	ＥＭＧ	1:Assert	Emergency stop 〔External input signal / Assert: Input opened〕
	2	ＳＯＮ	1:Assert	Servo On 〔External input signal / Assert: Parameter setting〕
	3	ＤＲ	1:Assert	Start 〔External input signal / Asser: input short-circuited〕
	4	ＧＳＥＬ	1:Assert	Gain selection 〔 〃 〕
	5	ＣＬＲ	1:Assert	Deviation clear 〔 〃 〕
	6	ＦＯＴ	1:Assert	Forward direction over travel 〔External input signal / Assert: Input opened〕
	7	ＲＯＴ	1:Assert	Reverse direction over travel 〔 〃 〕
	8	ＳＳ１	1:Assert	Command selection 1 〔External input signal / Assert: Input short-circuited〕
	9	ＳＳ２	1:Assert	Command selection 2 〔 〃 〕
	A	ＳＳＤ	1:Assert	Command direction selection 〔 〃 〕
	B	ＭＤ１	1:Assert	Mode selection 1 〔 〃 〕
	C	ＭＤ２	1:Assert	Mode selection 2 〔 〃 〕
	D	ＴＬ	1:Assert	Torque limit 〔 〃 〕
	E	ＣＩＨ	1:Assert	Command pulse input prohibited 〔External input signal / Assert: parameter setting〕
	F	ＢＲＯＮ	1:Assert	Compulsory brake ON 〔External input signal Assert: Input short-circuited〕
D９００１ ※1	0	ＰＣ	1:Assert	Proportional control 〔External input signal / Assert short-circuited〕
	1	Special data for controller		（※ Data for manufacturer's exclusive use ）
	2	ＧＳＥＬ２	1:Assert	Gain selection 2 〔External input signal / Assert short-circuited〕
	3	Special data for controller		（※ Data for manufacturer's exclusive use ）
	4	〃		（ 〃 ）
	5	〃		（ 〃 ）
	6	〃		（ 〃 ）
	7	〃		（ 〃 ）
	8	ＰＳ１	1:Assert	Address selection 1 〔External input signal / Assert: Input short-circuited〕
	9	ＰＳ２	1:Assert	Address selection 2 〔 〃 〕
	A	ＰＳ３	1:Assert	Address selection 3 〔 〃 〕
	B	Special data for controller		（※ Data for manufacturer's exclusive use ）
	C	〃		（ 〃 ）
	D	〃		（ 〃 ）
	E	〃		（ 〃 ）
	F	〃		（ 〃 ）

※ This data area reflects the logical addition (OR) status of the signal input via the basic external input, remote input, CC-Link, and DeviceNet.

Condition data

Table 3-13 Input signal status data area / Bit list

Device No.	BIT	Signal name	Contents
D９００２ ※2	0	ＰＳＴ 1:Assert	Rough positioning start〔External input signal / Assert: Input short circuit〕
	1	ＦＪＯＧ 1:Assert	Forward jog 〔 〃 〕
	2	ＲＪＯＧ 1:Assert	Reverse jog 〔 〃 〕
	3	Special data for controller	（※ Data for manufacturer's exclusive use ）
	4	〃	（ 〃 ）
	5	〃	（ 〃 ）
	6	〃	（ 〃 ）
	7	〃	（ 〃 ）
	8	ＯＲ1 1:Assert	Speed override 1 〔External input signal/ Assert: Input shot circuit〕
	9	ＯＲ2 1:Assert	Speed override 2 〔 〃 〕
	A	ＯＲ3 1:Assert	Speed override 3 〔 〃 〕
	B	ＯＲ4 1:Assert	Speed override 4 〔 〃 〕
	C	Special data for controller	（※ Data for manufacturer's exclusive use ）
	D	〃	（ 〃 ）
	E	ＺＬＳ 1:Assert	Home decelerating 〔External input signal/ Assert: Input shot circuit〕
	F	Special data for controller	（※ Data for manufacturer's exclusive use ）
D９００３ ※2	0	Special data for controller	（※ Data for manufacturer's exclusive use ）
	1	ＯＲＧ 1:Assert	Homing 〔External input signal / Assert: Input short circuit〕
	2	Special data for controller	（※ Data for manufacturer's exclusive use ）
	3	〃	（ 〃 ）
	4	〃	（ 〃 ）
	5	〃	（ 〃 ）
	6	〃	（ 〃 ）
	7	〃	（ 〃 ）
	8	〃	（ 〃 ）
	9	〃	（ 〃 ）
	A	〃	（ 〃 ）
	B	〃	（ 〃 ）
	C	〃	（ 〃 ）
	D	〃	（ 〃 ）
	E	〃	（ 〃 ）
	F	〃	（ 〃 ）

※This data area reflects the logical addition (OR) status of the signal input via the basic external input, remote input, CC-Link, and DeviceNet.

Table 3-14 Output signal status data area list

Device No.	BIT	Signal name	Contents
D 9 0 0 6	0	ALM 1:Assert	Alarm 〔External output signal／Assert 1: parameter setting〕
	1	WNG 1:Assert	Warning 〔 〃 〕
	2	RDY 1:Assert	Servo ready 〔External output signal ・Assert: output connected〕
	3	SZ 1:Assert	Speed zero 〔 〃 〕
	4	PN 1:Assert	Positioning completed 〔 〃 〕
	5	Special data for controller	（※ Data for manufacturer's exclusive use ）
	6	BRK 1:Assert	Brake release 〔External output signal / Assert: Output connection〕
	7	LIM 1:Assert	At torque mode operation 〔 〃 〕
	8	Special data for controller	（※ Data for manufacturer's exclusive use ）
	9	〃	（ 〃 ）
	A	SMOD 1:Assert	At speed mode operation 〔External output signal / Assert: output connection〕
	B	TMOD 1:Assert	At torque mode operation 〔 〃 〕
	C	SMOD 1:Assert	At pulse train operation 〔 〃 〕
	D	Special data for controller	（※ Data for manufacturer's exclusive use ）
	E	〃	（ 〃 ）
	F	NMOD 1:Assert	At rough positioning 〔External output signal / Assert: Output connected〕
D 9 0 0 7	0	Special data for controller	（※ Data for manufacturer's exclusive use ）
	1	〃	（ 〃 ）
	2	〃	（ 〃 ）
	3	〃	（ 〃 ）
	4	〃	（ 〃 ）
	5	〃	（ 〃 ）
	6	〃	（ 〃 ）
	7	〃	（ 〃 ）
	8	〃	（ 〃 ）
	9	〃	（ 〃 ）
	A	HCMP 1:Assert	Zero return completed 〔External output signal / Assert: Output connected〕
	B	PNB 1:Assert	Positioning competed B 〔 〃 〕
	C	〃	（※ Data for manufacturer's exclusive use ）
	D	〃	（ 〃 ）
	E	SLSA 1: Assert	Soft limit switch A 〔External output signal / Assert: Output connected〕
	F	SLSB 1: Assert	Soft limit switch B 〔 〃 〕

Table 3-15 Output signal status data area / Bit list

Device No.	BIT	Signal name	Contents
D9008	0	Special data for controller	(※ Data for manufacturer's exclusive use)
	1	〃	(〃)
	2	〃	(〃)
	3	〃	(〃)
	4	〃	(〃)
	5	〃	(〃)
	6	〃	(〃)
	7	〃	(〃)
	8	〃	(〃)
	9	〃	(〃)
	A	〃	(〃)
	B	〃	(〃)
	C	〃	(〃)
	D	〃	(〃)
	E	〃	(〃)
	F	〃	(〃)
D9009	0	Special data for controller	(※ Data for manufacturer's exclusive use)
	1	〃	(〃)
	2	〃	(〃)
	3	〃	(〃)
	4	〃	(〃)
	5	〃	(〃)
	6	〃	(〃)
	7	〃	(〃)
	8	〃	(〃)
	9	〃	(〃)
	A	〃	(〃)
	B	〃	(〃)
	C	〃	(〃)
	D	〃	(〃)
	E	〃	(〃)
	F	〃	(〃)

Table 3-16 Basic external input signal status data area / Bit list

Device No.	BIT	Signal name	Contents
D9200 ※3	0	DI1 1:Assert	Reset (Initial value) 〔External input signal/Assert: Input short-circuited〕
	1	DI2 1:Assert	Servo ON (Initial value) 〔 〃 〕
	2	DI3 1:Assert	Start(Initial value) 〔 〃 〕
	3	DI4 1:Assert	Count prohibited (Initial value) 〔 〃 〕
	4	DI6 1:Assert	Command selection 1 (Initial value) 〔 〃 〕
	5	DI6 1:Assert	Command selection 2 (Initial value) 〔 〃 〕
	6	DI7 1:Assert	Mode selection 1 (Initial value) 〔 〃 〕
	7	DI8 1:Assert	Command selection 2 (Initial value) 〔 〃 〕
	8	Special data for controller	(※ Data for manufacturer's exclusive use)
	9	〃	(〃)
	A	〃	(〃)
	B	〃	(〃)
	C	〃	(〃)
	D	〃	(〃)
	E	〃	(〃)
	F	〃	(〃)
D9201	0	Special data for controller	(※ Data for manufacturer's exclusive use)
	1	〃	(〃)
	2	〃	(〃)
	3	〃	(〃)
	4	〃	(〃)
	5	〃	(〃)
	6	〃	(〃)
	7	〃	(〃)
	8	〃	(〃)
	9	〃	(〃)
	A	〃	(〃)
	B	〃	(〃)
	C	〃	(〃)
	D	〃	(〃)
	E	〃	(〃)
	F	〃	(〃)

※3 This data area reflects the basic external signal status only.

Condition data

Table 3-17 Extended external input signal status data area / Bit list

Device No.	BIT	Signal name	Contents
D9202 ※4	0	RST 1: Assert	Reset 〔External input signal / assert: Input short-circuited〕
	1	EMG 1: Assert	Emergency stop 〔External input signal / assert: Input opened〕
	2	SON 1: Assert	Servo ON 〔External input signal / assert: parameter setting〕
	3	PST 1: Assert	Rough positioning start 〔 〃 〕
	4	HLD 1: Assert	Hold 〔 〃 〕
	5	CLR 1: Assert	Deviation clear 〔 〃 〕
	6	FOT 1: Assert	Forward direction over travel 〔External input signal / assert: Input opened〕
	7	ROT 1: Assert	Reverse direction over travel 〔 〃 〕
	8	EI9 1: Assert	———(Initial value : Unchosen) 〔External input / Assert: Input short-circuited〕
	9	EI10 1: Assert	———(Initial value: Unchosen) 〔 〃 〕
	A	EI11 1: Assert	———(Initial value: Unchosen) 〔 〃 〕
	B	EI12 1: Assert	———(Initial value: Unchosen) 〔 〃 〕
	C	EI13 1: Assert	———(Initial value: Unchosen) 〔 〃 〕
	D	EI14 1: Assert	———(Initial value: Unchosen) 〔 〃 〕
	E	EI15 1: Assert	———(Initial value: Unchosen) 〔 〃 〕
	F	EI16 1: Assert	———(Initial value: Unchosen) 〔 〃 〕
D9203 ※4	0	EI17 1: Assert	———(Initial value: Unchosen) 〔External input signal / assert: Input short-circuited〕
	1	EI18 1: Assert	———(Initial value: Unchosen) 〔 〃 〕
	2	EI19 1: Assert	———(Initial value: Unchosen) 〔 〃 〕
	3	EI20 1: Assert	———(Initial value: Unchosen) 〔 〃 〕
	4	CIH 1: Assert	Command pulse input prohibited 〔External input signal / Assert: parameter setting〕
	5	ZLS 1: Assert	Zero point deceleration 〔External input signal / Assert: input short-circuited〕
	6	Special data for controller	（※ Data for manufacturer's exclusive use ）
	7	〃	（ 〃 ）
	8	MD1 1: Assert	Mode selection 1 External input signal / Assert: input short-circuited〕
	9	MD2 1: Assert	Mode selection 2 〔 〃 〕
	A	PC 1: Assert	Proportional control 〔 〃 〕
	B	FJOG 1: Assert	Forward direction jog 〔 〃 〕
	C	RJOG 1: Assert	Reverse direction jog 〔 〃 〕
	D	Special data for controller	（※ Data for manufacturer's exclusive use ）
	E	〃	（ 〃 ）
	F	〃	（ 〃 ）

※4 This data area reflects the basic external signal status only.

Table 3-18 Basic external output signal status data area / Bit list

Device No.	BIT	Signal name	Contents
D9210	0	DO1 1:Assert	Servo ready (Initial value)〔External output signal/ Assert: Output conduction〕
	1	DO2 1:Assert	Alarm(Initial value) 〔External output signal / Assert: Parameter setting〕
	2	DO3 1:Assert	Warning(Initial value) 〔External output signal/ Assert: output conduction〕
	3	DO4 1:Assert	Positioning completed (Initial value) 〔 〃 〕
	4	Special data for controller	(※ Data for manufacturer's exclusive use)
	5	〃	(〃)
	6	〃	(〃)
	7	〃	(〃)
	8	〃	(〃)
	9	〃	(〃)
	A	〃	(〃)
	B	〃	(〃)
	C	〃	(〃)
	D	〃	(〃)
	E	〃	(〃)
	F	〃	(〃)
D9211	0	Special data for controller	(※ Data for manufacturer's exclusive use)
	1	〃	(〃)
	2	〃	(〃)
	3	〃	(〃)
	4	〃	(〃)
	5	〃	(〃)
	6	〃	(〃)
	7	〃	(〃)
	8	〃	(〃)
	9	〃	(〃)
	A	〃	(〃)
	B	〃	(〃)
	C	〃	(〃)
	D	〃	(〃)
	E	〃	(〃)
	F	〃	(〃)

Condition data

Table 3-19 Expansion external output signal data area/ Bit list

Device No.	BIT	Signal name	Contents
D９２１２	0	ＥＯ１ 1:Assert	———(Initial value：Not selected)〔External output signal/ Assert: Output conduction〕
	1	ＥＯ２ 1:Assert	——(Initial value：Not selected)〔 〃 〕
	2	ＥＯ３ 1:Assert	——(Initial value：Not selected)〔 〃 〕
	3	ＥＯ４ 1Assert	——(Initial value：Not selected)〔 〃 〕
	4	ＥＯ５ 1Assert	——(Initial value：Not selected)〔 〃 〕
	5	ＥＯ６ 1:Assert	——(Initial value：Not selected)〔 〃 〕
	6	ＥＯ７ 1:Assert	——(Initial value：Not selected)〔 〃 〕
	7	ＥＯ８ 1:Assert	——(Initial value：Not selected)〔 〃 〕
	8	Special data for controller	（※ Data for manufacturer's exclusive use ）
	9	〃	（ 〃 ）
	A	〃	（ 〃 ）
	B	〃	（ 〃 ）
	C	〃	（ 〃 ）
	D	〃	（ 〃 ）
	E	〃	（ 〃 ）
	F	〃	（ 〃 ）
D９２１３	0	Special data for controller	（※ Data for manufacturer's exclusive use ）
	1	〃	（ 〃 ）
	2	〃	（ 〃 ）
	3	〃	（ 〃 ）
	4	〃	（ 〃 ）
	5	〃	（ 〃 ）
	6	〃	（ 〃 ）
	7	〃	（ 〃 ）
	8	〃	（ 〃 ）
	9	〃	（ 〃 ）
	A	〃	（ 〃 ）
	B	〃	（ 〃 ）
	C	〃	（ 〃 ）
	D	〃	（ 〃 ）
	E	〃	（ 〃 ）
	F	〃	（ 〃 ）

3-4 Alarm / Warning code list

Table 3-20 Alarm / Warning code list

Code №	Type	Item	Code №	Type	Item
1	Alarm	IPM error	41	Alarm	Regenerative resistor overload error
2			42	Warning	Zero return incomplete warning
3	Alarm	Over voltage error	43	Alarm	Address setting error
4	〃	Radiator overheat error	44		
5	〃	Encoder error	45		
6	〃	Over speed error	46	Alarm	ABS encoder back-up error
7	〃	Overload error	47		
8	Warning	Overload caution	48		
9	Alarm	AC shut down detection error	49	Alarm	Servo control error
10	〃	Motor axis error at start	50		
11			51		
12			52	Alarm	Reception error 1
13	Alarm	Deviation overflow	53	Alarm	Command frequency error
14	〃	Deviation error	54	Alarm	Reception error
15	Warning	Deviation error warning	55		
16			56		
17	Alarm	Forward over travel	57		
18	〃	Reverse over travel	58		
19			59		
20			60	Alarm	Data holding error 1
21			61	〃	〃 2
22			62	〃	〃 3
23			63	〃	〃 4
24			64	〃	〃 5
25	Alarm	ABS encoder battery error	65	〃	〃 6
26	Warning	ACS encoder battery error warning	66	〃	〃 7
27	Alarm	Serial encoder count error	67	〃	〃 8
28	〃	ABS encoder over flow error	68		
29	〃	ABS encoder count error	69		
30	〃	Serial encoder / IPU communication error	70		
			71		
31			72		
32	Alarm	Motor type not installed	73		
33	〃	Motor type mismatching	74		
34	〃	EEPROM writing error	75		
35	〃	Rated speed command incorrect 1	76		
36	〃	Rated speed command incorrect 2	77		
37	〃	Under voltage error	78		
38			79		
39			80		
40	Alarm	IPM overload error			

Table 3-21 Alarm / Warning code list

Code №	Type	Item
81		
82		
83		
84		
85		
86		
87		
88		
89		
90		
91		
92		
93		
94		
95		
96		
97		
98	Alarm	Data holding error 39
99	〃	〃 40
100		
101		
102	Alarm	Data holding error 43
103	〃	〃 44
104		
105		
106		
107		
108	Alarm	Rated speed command error 3
109	〃	Input power error
110		
111	Alarm	Reception time out for remote sequence control
112	Warning	Communication waiting for remote sequence control
113	Alarm	Remote sequence control IC defect
114	〃	Communication shut down for remote sequence control
115	〃	Servo control communication error
116		
117	Alarm	Servo control communication error
118	Warning	Main power under voltage detection warning
119	Alarm	Linear sensor resolution error
120		

Code №	Type	Item
121		
122		
123		
124	Warning	Remote sequence control SW change warning
125		
126		
127		
128		
129		
130	Alarm	Encoder position detection output error
131	〃	Serial No. mismatching error
132	〃	Serial No. not set
133		
134		
135	Alarm	τDISC motor 1 rotation position detection speed error
136	〃	
137	〃	ABS encoder reception light emitter error
138		
139	Alarm	Magnetic pole detection error
140		
141		
142		
143		
144		
145		
146		
147		
148		
149		
150		
151		
152		
153		
154		
155		
156		
157		
158		
159		
160		

Table 3-22 Alarm / Warning list

Code №	Type	Item
１６１		
１６２		
１６３		
１６４		
１６５	Warning	ＣＭＤ warning
１６６	〃	ＣＯＭＭ warning
１６７		
１６８		
１６９		
１７０	Alarm	Over speed
１７１	〃	Initialization error
１７２	〃	Hardware error
１７３	〃	ABS detection error
１７４	〃	Transducer error
１７５	〃	Single intensity error
１７６	Warning	Signal intensity warning
１７７	〃	Thermal warning
１７８		
１７９		
１８０		
１８１		
１８２		
１８３		
１８４		
１８５		
１８６		
１８７		
１８８		
１８９	Alarm	Absolute encoder position matching error
１９０	〃	Encoder – IPU communication error
１９１	〃	Encoder – IPU cable cut down error
１９２	〃	Encoder back-up error
１９３	〃	IPU back-up error
１９４	Warning	Encoder position detection parts deterioration warning
１９５		
１９６		
１９７		
１９８		
１９９		
２００		

Code №	Type	Item
２０１		
２０２		
２０３		
２０４		
２０５		
２０６		
２０７		
２０８		
２０９		
２１０		
２１１		
２１２		
２１３		
２１４		
２１５		
２１６		
２１７		
２１８		
２１９		
２２０		
２２１		
２２２		
２２３		
２２４		
２２５		
２２６		
２２７		
２２８		
２２９		
２３０	Warning	Servo driver emergency stop
２３１	〃	Controller emergency stop
２３２		
２３３		
２３４		
２３５		
２３６		
２３７		
２３８		
２３９		
２４０		

Chapter 4 Remote control data

4-1 Remote control data area setting

For remote control data, it is possible to remote control the device by using「Writing/Reading」

- 1 data is consisted from 1 bit in X device, and the data is set by 「0」or 「1」.
- Regardless of Positive/Negative logic, data 「1」reflects to signal ON, and data 「0」 reflects to signal OFF.
- Input signal by the external input signal and X device is controlled by theory sum (OR). ・Unlike the other device, the device NO. of X device is hexadecimal.

4-2 Remote control data area list

Table 4-1 Input/Output signal area list

Device №	Signal	Signal name	Comments
X0000	RST	Reset	
01	EMG	Emergency stop	
02	SON	Servo On	
03	DR	Start	
04	GSEL	Gain selection	
05	CLR	Deviation clear	
06	FOT	Forward over travel	
07	ROT	Reverse over travel	
08	SS1	Command selection 1	
09	SS2	Command selection 2	
0A	SSD	Command direction selection	
0B	MD1	Mode slection1	
0C	MD2	Mode selection 2	
0D	TL	Torque limit	
0E	CIH	Command pulse input prohibited	
0F	BRON	Forced break ON	
X0010	PC	Proportional control	
11	Special data for controller	（※ Data for manufacturer's exclusive use ）	
12	GSEL2	Gain selection 2	
18	PS1	Addressing 1	
19	PS2	Addressing 2	
1A	PS3	Addressing 3	
X001B ～ 1F	Special data for controller	（※ Data for manufacturer's exclusive use ）	

Table 4-2 Input/Output signal area list

Device №	Symbol	Signal	References
X 0 0 2 0	P S T	Rough positioning to start	
2 1	F J O G	Forward jog	
2 2	R J O G	Reverse jog	
2 3 ～ 2 7	Special data for controller	（※ Data for manufacturer's exclusive use ）	
2 8	O R 1	Speed override 1	
2 9	O R 2	Speed override 2	
2 A	O R 3	Speed override 3	
2 B	O R 4	Speed override 4	
2 C ～ 2 F	Special data for controller	（※ Data for manufacturer's exclusive use ）	
X 0 0 3 0	Special data for controller	（※ Data for manufacturer's exclusive use ）	
3 1	O R G	Homing	
3 2 ～ 3 F	Special data for controller	（※ Data for manufacturer's exclusive use ）	
X 0 0 4 0 ～ 5 F	Special data for controller	（※ Data for manufacturer's exclusive use ）	
X 0 0 6 0	A L M	Alarm	
6 1	W N G	Warning	
6 2	R D Y	Servo ready	
6 3	S Z	Speed zero	
6 4	P N	Positioning completed	
6 5	P R F	Rough matching	
6 6	B R K	Break release	
6 7	L I M	At torque limit	
6 8 ～ 6 9	Special data for controller	（※ Data for manufacturer's exclusive use ）	
6 A	S M O D	At speed control mode	
6 B	T M O D	At toque control mode	
6 C	P M O D	At pulse train mode	
6 D ～ 6 E	Special data for controller	（※ Data for manufacturer's exclusive use ）	
6 F	N M O D	At rough positioning mode	

Table 4-3 Input/Output signal data area list

Device No.	Symbol	Name of signal	References
X0070 ～ 79	Special data for controller	（※ Data for manufacturer's exclusive use ）	
7A	HCMP	Homing completed	
7B	PNB	Positioning completed B	
X007C ～ 7D	Special data for controller	（※ Data for manufacturer's exclusive use ）	
7E	SLSA	Soft limit switch A	
7F	SLSB	Soft limit switch B	
X008A ～ 8F	Special data for controller	（※ Data for manufacturer's exclusive use ）	

Table 4-4 Rough positioning movement selection ※1

D9400 setting data	Positioning data
0	According to PS1,PS2,PS3
1	Target position 1
2	Target position 2
3	Target position 3
4	Target position 4
5	Target position 5
6	Target position 6
7	Target position 7
8	Target position 8

Table 4-5 Rough positioning movement data area list ※1

Device No.※2	Name
D9410－D9411	Positioning method selection 1
D9412－D9413	Goal position 1
D9414－D9415	Positioning method selection 2
D9416－D9417	Goal position 2
D9418－D9419	Positioning method selection 3
D9420－D9421	Goal position 3
D9422－D9423	Positioning method selection 4
D9424－D9425	Goal position 4
D9426－D9427	Positioning method selection 5
D9428－D9429	Goal position 5
D9430－D9431	Positioning method selection 6
D9432－D9433	Goal position 6
D9434－D9435	Positioning method selection 7
D9436－D9437	Goal position 7
D9438－D9439	Positioning method selection 8
D9440－D9441	Goal position 8

Table 4-6 Serial encoder data control area list

Device No.	Signal	Contents
D9500	Serial encoder error reset & Multi-turn data clear request	By writing 85 (55H), it will process the error reset and the multi-turn data clear of serial serial encoder. This device will be in emergency stop at that time. Request complete is checked by D9550.
D9550	Serial encoder error reset & Multi-turn data clear request completed	It will be 85 (55H) when the serial encoder error reset & the multi-turn data clear request are completed by D9500. By writing 「0」 to D9500, it will be 「0」.

※1 Written data will be reflected to the movement while motor stopped.

※2 Because the rough positioning movement data area is 2 ward data, Device No. 2 will be allocated. Please be aware that the data written in this area will go back to the parameter set value after turning on the device power again.