

TOSVERT VF-MB1

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Parameter List  
for up to CPU version 106

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## VF-MB1 Parameter List for up to CPU version 106

Setting Date	
Customer	
End user	
Application	
Application No/Serial No	
Inverter's Type-Form	
Quantity	
Inverter's Serial No	
Motor's capacity	

**-Terminal stand use state**

	Terminal Name	Use state
Main terminal block	PA/+	
	PB	
	PBe	
	PC/-	
	R/L1	
	S/L2	
	T/L3	
	U/T1	
	V/T2	
	W/T3	
	E/G	
Control terminal block	FLA	
	FLB	
	FLC	
	RY	
	RC	
	CC	
	VIA	
	VIB	
	VIC	
	PP	
	FM	
	F	
	R	
	RES	
	CC	
	S1	
	S2	
	S3	
	CC	
	OUT	
NO		
P24		
+ SU		
STO		
Setting of slide switch	SW1	SOURCE / PLC / SINK
	SW2	LOGIC / PTC

**1 Frequency setting parameter**

Title	Function	Unit	Minimum setting unit Panel/Communication	Adjustment range	Default setting	User setting	Reference
<i>FL</i>	Operation frequency of operation panel	Hz	0.1/0.01	<i>LL - UL</i>	0.0		3.2.2

**2 Basic parameters**

•Five navigation functions

Title	Communication No.	Function	Unit	Minimum setting unit Panel/Communication	Adjustment range	Default setting	User setting	Reference
<i>RUH</i>	-	History function	-	-	Displays parameters in groups of five in the reverse order to that in which their settings were changed. * (Possible to edit)	-		4.3 5.1
<i>RUF</i>	0093	Guidance function	-	-	0: - 1: - 2: Preset speed guidance 3: Analog signal operation guidance 4: Motor 1 & 2 switching operation guidance 5: Motor constant setting guidance	0		4.3 5.2
<i>RUL</i>	0094	Overload characteristic selection	-	-	0: - 1: Constant torque characteristic (150%-60s) 2: Variable torque characteristic (120%-60s)	0		3.5 5.3 6.14
<i>RU1</i>	0000	Automatic acceleration / deceleration	-	-	0: Disabled (manual setting) 1: Automatic 2: Automatic (only at acceleration)	0		5.4
<i>RU2</i>	0001	Torque boost setting macro function	-	-	0: Disabled 1: Automatic torque boost + auto-tuning 2: Vector control + auto-tuning 3: Energy saving + auto-tuning	0		5.5

•Basic parameters

Title	Communication No.	Function	Unit	Minimum setting unit Panel/Communication	Adjustment range	Default setting	User setting	Reference
<i>CND</i>	0003	Command mode selection	-	-	0: Terminal board 1: Panel keypad (including remote keypad) 2: RS485 communication 3: CANopen communication 4: Communication option	1		3.2 5.6 7.3
<i>FND</i>	0004	Frequency setting mode selection 1	-	-	0: Setting dial 1 (save even if power is off) 1: Terminal board VIA 2: Terminal board VIB 3: Setting dial 2 (press in center to save) 4: RS485 communication 5: UP/DOWN from external logic input 6: CANopen communication 7: Communication option 8: Terminal board VIC 9, 10: - 11: Pulse train input	0		3.2 5.6 6.3.4 6.6.1 7.3
<i>FNL</i>	0005	Meter selection	-	-	0: Output frequency 1: Output current 2: Frequency reference 3: Input voltage (DC detection) 4: Output voltage (command value) 5: Input power 6: Output power 7: Torque 8: - 9: Motor cumulative load factor 10: Inverter cumulative load factor 11: PBR (Braking resistor) cumulative load factor 12: Frequency setting value (after compensation) 13: VIA input value 14: VIB input value 15: Fixed output 1 (output current 100% equivalent) 16: Fixed output 2 (output current 50% equivalent) 17: Fixed output 3 (other than the output current) 18: RS485 communication data 19: For adjustments ( <i>F<sub>n</sub></i> set value is displayed) 20: VIC input value 21: Pulse train input value 22: - 23: PID feedback value 24: Integral input power 25: Integral output power	0		3.4 5.7
<i>F<sub>n</sub></i>	0006	Meter adjustment gain	-	-	-	-		3.4 5.7

Title	Communication No.	Function	Unit	Minimum setting unit Panel/Communication	Adjustment range	Default setting	User setting	Reference
<i>F<sub>r</sub></i>	0008	Forward/reverse run selection (Panel keypad)	-	-	0: Forward run 1: Reverse run 2: Forward run (F/R switching on remote keypad) 3: Reverse run (F/R switching on remote keypad)	0		5.8
<i>ACC</i>	0009	Acceleration time 1	s	0.1/0.1	0.0-3600 (360.0)*3	10.0		5.4
<i>DEC</i>	0010	Deceleration time 1	s	0.1/0.1	0.0-3600 (360.0)*3	10.0		
<i>F<sub>H</sub></i>	0011	Maximum frequency	Hz	0.1/0.01	30.0-500.0	80.0		5.9
<i>U<sub>L</sub></i>	0012	Upper limit frequency	Hz	0.1/0.01	0.5- <i>F<sub>H</sub></i>	*1		5.10
<i>L<sub>L</sub></i>	0013	Lower limit frequency	Hz	0.1/0.01	0.0- <i>U<sub>L</sub></i>	0.0		
<i>u<sub>L</sub></i>	0014	Base frequency 1	Hz	0.1/0.01	20.0-500.0	*1		5.11
<i>u<sub>L</sub>v</i>	0409	Base frequency voltage 1	V	1/0.1	50-330 (240V class) 50-660 (500V class)	*1		5.11 6.15.6
<i>P<sub>t</sub></i>	0015	V/F control mode selection	-	-	0: V/F constant 1: Variable torque 2: Automatic torque boost control 3: Vector control 4: Energy-saving 5: Dynamic energy-saving (For fan and pump) 6: PM motor control 7: V/F 5-point setting 8: -	*1		5.12
<i>u<sub>b</sub></i>	0016	Torque boost value 1	%	0.1/0.1	0.0-30.0	*2		5.13
<i>t<sub>Hr</sub></i>	0600	Motor electronic-thermal protection level 1	% (A)	1/1	10-100	100		3.5 5.14 6.24.1

\*1: Default values vary depending on the capacity. See the table of last page

\*2: Depends upon the setup menu settings. See the table of last page.

\*3: These parameters can be changed to 0.01s unit by setting *F<sub>5</sub> 19= 1*.

Title	Communication No.	Function	Unit	Minimum setting unit Panel/Communication	Adjustment range				Default setting	User setting	Reference
					Set		OL protect	OL stall			
OLP	0017	Electronic-thermal protection characteristic selection	-	-	0	Standard motor	valid	invalid	0		3.5 5.14
					1		valid	valid			
					2		invalid	invalid			
					3		invalid	valid			
					4	VF motor	valid	invalid			
					5		valid	valid			
					6		invalid	invalid			
					7		invalid	valid			
Fr1	0018	Preset-speed frequency 1	Hz	0.1/0.01	LL-UL				0.0		3.6 5.15
Fr2	0019	Preset-speed frequency 2	Hz	0.1/0.01	LL-UL				0.0		
Fr3	0020	Preset-speed frequency 3	Hz	0.1/0.01	LL-UL				0.0		
Fr4	0021	Preset-speed frequency 4	Hz	0.1/0.01	LL-UL				0.0		
Fr5	0022	Preset-speed frequency 5	Hz	0.1/0.01	LL-UL				0.0		
Fr6	0023	Preset-speed frequency 6	Hz	0.1/0.01	LL-UL				0.0		
Fr7	0024	Preset-speed frequency 7	Hz	0.1/0.01	LL-UL				0.0		
FPId	0025	Process input value of PID control	Hz	0.1/0.01	F368-F367				0.0	-	5.16 6.20
typ	0007	Default setting	-	-	0: - 1: 50Hz default setting 2: 60Hz default setting 3: Default setting 1 (Initialization) 4: Trip record clear 5: Cumulative operation time clear 6: Initialization of type information 7: Save user setting parameters 8: Load user setting parameters 9: Cumulative fan operation time record clears 10, 11: - 12: Number of starting clear 13: Default setting 2 (Complete initialization)				0		3.1 4.3 4.3.2 5.17

Title	Communication No.	Function	Unit	Minimum setting unit Panel/Communication	Adjustment range	Default setting	User setting	Reference	
<i>SEt</i>	0099	Checking the region setting *2	-	-	0: Start setup menu 1: Japan (read only) 2: North America (read only) 3: Asia (read only) 4: Europe (read only)	*1		3.1 4.4 5.18	
<i>PSEL</i>	0050	Registered parameters display selection	-	-	0: Standard setting mode at power on 1: Easy setting mode at power on 2: Easy setting mode only	0		4.5 5.19	
<i>F1--</i>	-	Extended parameter starting at 100	-	-	-	-	-	4.2.2	
<i>F2--</i>	-	Extended parameter starting at 200	-	-	-	-	-		
<i>F3--</i>	-	Extended parameter starting at 300	-	-	-	-	-		
<i>F4--</i>	-	Extended parameter starting at 400	-	-	-	-	-		
<i>F5--</i>	-	Extended parameter starting at 500	-	-	-	-	-		
<i>F6--</i>	-	Extended parameter starting at 600	-	-	-	-	-		
<i>F7--</i>	-	Extended parameter starting at 700	-	-	-	-	-		
<i>F8--</i>	-	Extended parameter starting at 800	-	-	-	-	-		
<i>F9--</i>	-	Extended parameter starting at 900	-	-	-	-	-		
<i>A---</i>	-	Extended parameter starting at A	-	-	-	-	-		
<i>C---</i>	-	Extended parameter starting at C	-	-	-	-	-		
<i>Gr.U</i>	-	Automatic edit function	-	-	-	-	-		4.3.1 5.20

\*1: Depends upon the setup menu settings. See the table of last page.

\*2: the region is set to 1 to 4 when parameter *SEt* is read. to re-select a region, set " 0 " to start up the setup menu.

**3 Extended parameters**

• Input/output parameters

Title	Communication No.	Function	Unit	Minimum setting unit Panel/Communication	Adjustment range	Default setting	User setting	Reference
<i>F 100</i>	0100	Low-speed signal output frequency	Hz	0.1/0.01	0.0- <i>F H</i>	0.0		6.1.1
<i>F 101</i>	0101	Speed reach setting frequency	Hz	0.1/0.01	0.0- <i>F H</i>	0.0		6.1.3
<i>F 102</i>	0102	Speed reach detection band	Hz	0.1/0.01	0.0- <i>F H</i>	2.5		6.1.2 6.1.3
<i>F 104</i>	0104	Always active function selection 1	-	-	0-153	0(No function)		6.3.1
<i>F 105</i>	0105	Priority selection (Both F-CC and R-CC are ON)	-	-	0: Reverse 1: Deceleration stop	1		6.2.1
<i>F 107</i>	0107	Analog input terminal selection (VIB)	-	-	0: 0 - +10V 1: -10 - +10V	0		6.2.2 6.6.2 7.3
<i>F 108</i>	0108	Always active function selection 2	-	-	0-153	0(No function)		6.3.1
<i>F 109</i>	0109	Analog/logic input selection (VIA/VIB)	-	-	0: Analog input for communications VIB-analog input 1: VIA-analog input VIB-contact input (Sink) 2: VIA-analog input VIB-contact input (Source) 3: VIA-contact input (Sink) VIB-contact input (Sink) 4: VIA-contact input (Source) VIB-contact input (Source)	0		6.2.3 6.3.2 6.6.2 7.2.1 7.3
<i>F 110</i>	0110	Always active function selection 3	-	-	0-153	6 (ST)		6.3.1
<i>F 111</i>	0111	Input terminal selection 1A (F)	-	-	0-203	2 (F)		6.3.2 7.2.1
<i>F 112</i>	0112	Input terminal selection 2A (R)	-	-		4 (R)		
<i>F 113</i>	0113	Input terminal selection 3A (RES)	-	-		8 (RES)		
<i>F 114</i>	0114	Input terminal selection 4A (S1)	-	-		10 (SS1)		
<i>F 115</i>	0115	Input terminal selection 5 (S2)	-	-		12 (SS2)		
<i>F 116</i>	0116	Input terminal selection 6 (S3)	-	-		14 (SS3)		
<i>F 117</i>	0117	Input terminal selection 7 (VIB)	-	-		8-55	16 (SS3)	
<i>F 118</i>	0118	Input terminal selection 8 (VIA)	-	-	24 (AD2)			



Title	Communication No.	Function	Unit	Minimum setting unit Panel/Communication	Adjustment range	Default setting	User setting	Reference
<i>F 130</i>	0130	Output terminal selection 1A (RY-RC)	-	-	0-255	4 (LOW)		6.3.3 7.2.2
<i>F 131</i>	0131	Output terminal selection 2A (OUT)	-	-		6 (RCH)		
<i>F 132</i>	0132	Output terminal selection 3 (FL)	-	-		10 (FL)		
<i>F 137</i>	0137	Output terminal selection 1B (RY-RC)	-	-		255 (always ON)		
<i>F 138</i>	0138	Output terminal selection 2B (OUT)	-	-		255 (always ON)		
<i>F 139</i>	0139	Output terminal logic selection (RY-RC, OUT-NO)	-	-	0: <i>F 130</i> and <i>F 137</i> <i>F 131</i> and <i>F 138</i> 1: <i>F 130</i> or <i>F 137</i> <i>F 131</i> and <i>F 138</i> 2: <i>F 130</i> and <i>F 137</i> <i>F 131</i> or <i>F 138</i> 3: <i>F 130</i> or <i>F 137</i> <i>F 131</i> or <i>F 138</i>	0		6.3.3 7.2.2
<i>F 144</i>	0144	Input terminal response time	ms	1/1	1-1000	1		7.2.1
<i>F 146</i>	0146	Logic input/pulse train input selection (S2)	-	-	0: Logic input 1: Pulse train input	0		6.6.5
<i>F 147</i>	0147	Logic input/PTC input selection (S3)	-	-	0: Logic input 1: Pulse train input	0		2.3.2 6.24.15
<i>F 151</i>	0151	Input terminal selection 1B (F)	-	-	0-203	0		6.3.2 7.2.1
<i>F 152</i>	0152	Input terminal selection 2B (R)	-	-		0		
<i>F 153</i>	0153	Input terminal selection 3B (RES)	-	-		0		
<i>F 154</i>	0154	Input terminal Selection 4B (S1)	-	-		0		
<i>F 155</i>	0155	Input terminal selection 1C (F)	-	-		0		
<i>F 156</i>	0156	Input terminal selection 2C (R)	-	-		0		
<i>F 167</i>	0167	Frequency command agreement detection range	Hz	0.1/0.01		0.0- <i>FH</i>	2.5	

Title	Communication No.	Function	Unit	Minimum setting unit Panel/Communication	Adjustment range	Default setting	User setting	Reference
<i>F 170</i>	0170	Base frequency 2	Hz	0.1/0.01	20.0-500.0	50.0 (WP) 60.0 (WN)		6.4.1
<i>F 171</i>	0171	Base frequency voltage 2	Hz	1/0.1	50-330 (240V class) 50-660 (500V class)	*2		
<i>F 172</i>	0172	Torque boost 2	%	0.1/0.1	0.0-30.0	*1		
<i>F 173</i>	0173	Motor electronic-thermal protection level 2	% (A)	1/1	10-100	100		3.5 6.4.1 6.24.1
<i>F 185</i>	0185	Stall prevention level 2	% (A)	1/1	10-199 200 (disabled)	150		6.4.1 6.24.2
<i>F 190</i>	0190	V/f 5-point setting VF1 frequency	Hz	0.1/0.01	0.0-FH	0.0		5.12 6.5
<i>F 191</i>	0191	V/f 5-point setting VF1 voltage	%	0.1/0.01	0.0-125.0	0.0		
<i>F 192</i>	0192	V/f 5-point setting VF2 frequency	Hz	0.1/0.01	0.0-FH	0.0		
<i>F 193</i>	0193	V/f 5-point setting VF2 voltage	%	0.1/0.01	0.0-125.0	0.0		
<i>F 194</i>	0194	V/f 5-point setting VF3 frequency	Hz	0.1/0.01	0.0-FH	0.0		
<i>F 195</i>	0195	V/f 5-point setting VF3 voltage	%	0.1/0.01	0.0-125.0	0.0		
<i>F 196</i>	0196	V/f 5-point setting VF4 frequency	Hz	0.1/0.01	0.0-FH	0.0		
<i>F 197</i>	0197	V/f 5-point setting VF4 voltage	%	0.1/0.01	0.0-125.0	0.0		
<i>F 198</i>	0198	V/f 5-point setting VF5 frequency	Hz	0.1/0.01	0.0-FH	0.0		
<i>F 199</i>	0199	V/f 5-point setting VF5 voltage	%	0.1/0.01	0.0-125.0	0.0		

\*1: Default values vary depending on the capacity. See the table of last page

\*2: 230 (200V class), 460 (400V class), 575 (600V class)

• Frequency parameters

Title	Communication No.	Function	Unit	Minimum setting unit Panel/Communication	Adjustment range	Default setting	User setting	Reference
<i>F200</i>	0200	Frequency priority selection	-	-	0: <i>FNOd</i> (Switchable to <i>F207</i> by terminal input) 1: <i>FNOd</i> (Switchable to <i>F207</i> at 1.0Hz of designated frequency)	0		6.6.1 7.3
<i>F201</i>	0201	VIA input point 1 setting	%	1/1	0-100	0		6.6.2 7.3
<i>F202</i>	0202	VIA input point 1 frequency	Hz	0.1/0.01	0.0-500.0	0.0		
<i>F203</i>	0203	VIA input point 2 setting	%	1/1	0-100	100		
<i>F204</i>	0204	VIA input point 2 frequency	Hz	0.1/0.01	0.0-500.0	50.0 (WP) 60.0 (WN)		
<i>F205</i>	0205	VIA input point 1 rate	%	1/0.01	0-250	0		6.26
<i>F206</i>	0206	VIB input point 2 rate	%	1/0.01	0-250	100		
<i>F207</i>	0207	Frequency setting mode selection 2	-	-	0: Setting dial 1 (save even if power is off) 1: Terminal board VIA 2: Terminal board VIB 3: Setting dial 2 (press in center to save) 4: RS485 communication 5: UP/DOWN from external logic input 6: CANopen communication 7: Communication option 8: Terminal board VIC 9, 10: - 11: Pulse train input	1		6.3.4 6.6.1 7.3
<i>F209</i>	0209	Analog input filter	ms	1/1	2-1000	64		6.6.2 7.3
<i>F210</i>	0210	VIB input point 1 setting	%	1/1	-100 - +100	0		
<i>F211</i>	0211	VIB input point 1 frequency	Hz	0.1/0.01	0.0-500.0	0.0		
<i>F212</i>	0212	VIB input point 2 setting	%	1/1	-100 - +100	100		
<i>F213</i>	0213	VIB input point 2 frequency	Hz	0.1/0.01	0.0-500.0	50.0 (WP) 60.0 (WN)		
<i>F214</i>	0214	VIB input point 1 rate	%	1/0.01	-250 - +250	0		6.26 6.27
<i>F215</i>	0215	VIB input point 2 rate	%	1/0.01	-250 - +250	100		

Title	Communication No.	Function	Unit	Minimum setting unit Panel/Communication	Adjustment range	Default setting	User setting	Reference
F216	0216	VIC input point 1 setting	%	1/1	0-100	0		6.6.2 7.3
F217	0217	VIC input point 1 frequency	Hz	0.1/0.01	0.0-500.0	0.0		
F218	0218	VIC input point 2 setting	%	1/1	0-100	100		
F219	0219	VIC input point 2 frequency	Hz	0.1/0.01	0.0-500.0	*1		
F220	0220	VIC input point 1 rate	%	1/0.01	0-250	0		6.26
F221	0221	VIC input point 2 rate	%	1/0.01	0-250	100		
F239	0239	Factory specific coefficient 2A	-	-	-	-		*2
F240	0240	Starting frequency setting	Hz	0.1/0.01	0.1-10.0	0.5		6.7.1
F241	0241	Operation starting frequency	Hz	0.1/0.01	0.0-FH	0.0		6.7.2
F242	0242	Operation starting frequency hysteresis	Hz	0.1/0.01	0.0-FH	0.0		
F249	0249	PWM carrier Frequency during DC braking	kHz	0.1/0.1	2.0-16.0	4.0		6.8.1
F250	0250	DC braking starting frequency	Hz	0.1/0.01	0.0-FH	0.0		
F251	0251	DC braking current	%(A)	1/1	0-100	50		
F252	0252	DC braking time	s	0.1/0.1	0.0-25.5	1.0		
F254	0254	Motor shaft fixing control	-	-	0: Disabled 1: Enabled (after DC braking)	0		6.8.2
F256	0256	Time limit for lower-limit frequency operation	s	0.1/0.1	0: Disabled 0.1-600.0	0.0		6.9.1
F257	0257	Factory specific coefficient 2B	-	-	-	-		*2
F258	0258	Factory specific coefficient 2C	-	-	-	-		*2
F260	0260	Jog run frequency	Hz	0.1/0.01	F240-20.0	5.0		6.10
F261	0261	Jog run stopping pattern	-	-	0: Deceleration stop 1: Coast stop 2: DC braking stop	0		
F262	0262	Panel jog run operation mode	-	-	0: InValid 1: Valid	0		

\*1: Default values vary depending on the capacity. See the table of last page

\*2: Factory specific coefficients are parameters exclusively for manufacturer settings.  
Do not change these parameters.

Title	Communication No.	Function	Unit	Minimum setting unit Panel/Communication	Adjustment range	Default setting	User setting	Reference
F264	0264	External logic input -UP response time	s	0.1/0.1	0.0-10.0	0.1		6.6.3
F265	0265	External logic input -UP frequency steps	Hz	0.1/0.01	0.0- <i>FH</i>	0.1		
F266	0266	External logic input -DOWN response time	s	0.1/0.1	0.0-10.0	0.1		
F267	0267	External logic Input-DOWN frequency steps	Hz	0.1/0.01	0.0- <i>FH</i>	0.1		
F268	0268	Initial value of UP/DOWN frequency	Hz	0.1/0.01	<i>LL - UL</i>	0.0		
F269	0269	Change of the initial value of UP/DOWN frequency	-	-	0: Not changed 1: Setting of <i>F268</i> changed when power is turned off	1		
F270	0270	Jump frequency 1	Hz	0.1/0.01	0.0- <i>FH</i>	0.0		6.11
F271	0271	Jumping width 1	Hz	0.1/0.01	0.0-30.0	0.0		
F272	0272	Jump frequency 2	Hz	0.1/0.01	0.0- <i>FH</i>	0.0		
F273	0273	Jumping width 2	Hz	0.1/0.01	0.0-30.0	0.0		
F274	0274	Jump frequency 3	Hz	0.1/0.01	0.0- <i>FH</i>	0.0		
F275	0275	Jumping width 3	Hz	0.1/0.01	0.0-30.0	0.0		
F287	0287	Preset-speed frequency 8	Hz	0.1/0.01	<i>LL - UL</i>	0.0		3.6 6.12
F288	0288	Preset-speed frequency 9	Hz	0.1/0.01	<i>LL - UL</i>	0.0		
F289	0289	Preset-speed frequency 10	Hz	0.1/0.01	<i>LL - UL</i>	0.0		
F290	0290	Preset-speed frequency 11	Hz	0.1/0.01	<i>LL - UL</i>	0.0		
F291	0291	Preset-speed frequency 12	Hz	0.1/0.01	<i>LL - UL</i>	0.0		
F292	0292	Preset-speed frequency 13	Hz	0.1/0.01	<i>LL - UL</i>	0.0		
F293	0293	Preset-speed frequency 14	Hz	0.1/0.01	<i>LL - UL</i>	0.0		
F294	0294	Preset-speed frequency 15	Hz	0.1/0.01	<i>LL - UL</i>	0.0		
F295	0295	Bumpless operation selection	-	-	0: Disabled 1: Enabled	0		6.13
F298	0298	Factory specific coefficient 2D	-	-	-	-		*1

\*1: Factory specific coefficient parameters are manufacturer setting parameters.  
Do not change the value of these parameters.

• Operation mode parameters

Title	Communication No.	Function	Unit	Minimum setting unit Panel/Communication	Adjustment range	Default setting	User setting	Reference
F300	0300	PWM carrier frequency	kHz	0.1/0.1	2.0-16.0	4.0		6.14
F301	0301	Auto-restart control selection	-	-	0: Disabled 1: At auto-restart after momentary stop 2: At ST terminal off and on 3: 1 + 2 4: At start-up	0		6.15.1
F302	0302	Regenerative power ride-through control (Deceleration stop)	-	-	0: Disabled 1: Regenerative power ride-through control 2: Deceleration stop during power failure 3: Synchronize acceleration/ deceleration (signal) 4: Synchronized acceleration/ deceleration (signal + failure)	0		6.15.2
F303	0303	Retry selection (number of times)	Times	1/1	0: Disabled 1-10	0		6.15.3
F304	0304	Dynamic braking selection	-	-	0: Disabled 1: Enabled, Resistor overload protection enabled 2: Enabled 3: Enabled, Resistor overload protection enabled (At ST terminal on) 4: Enabled (At ST terminal on)	0		6.15.4
F305	0305	Overvoltage limit operation (Deceleration stop mode selection)	-	-	0: Enabled 1: Disabled 2: Enabled (Quick deceleration control) 3: Enabled (Dynamic quick deceleration control)	2		6.15.5
F307	0307	Supply voltage correction (output voltage limitation)	-	-	0: Supply voltage uncorrected, output voltage limited 1: Supply voltage corrected, output voltage limited 2: Supply voltage uncorrected, output voltage unlimited 3: Supply voltage corrected, output voltage unlimited	*2		6.15.6
F308	0308	Dynamic braking resistance		0.1/0.1	1.0-1000	* 1		6.15.4
F309	0309	Allowable continuous braking resistance	kW	0.01/0.01	0.01-30.00	* 1		

\*1: Parameter values vary depending on the capacity. See the table of last page.

\*2: Depends upon the setup menu settings. See the table of last page.

Title	Communication No.	Function	Unit	Minimum setting unit Panel/Communication	Adjustment range	Default setting	User setting	Reference
<i>F310</i>	0310	Factory specific coefficient 3A	-	-	-	-		*1
<i>F311</i>	0311	Reverse-run prohibition	-	-	0: Forward/reverse run permitted 1: Reverse run prohibited 2: Forward run prohibited	0		6.15.7
<i>F312</i>	0312	Random mode	-	-	0: Disabled 1: Random mode 1 2: Random mode 2 3: Random mode 3	0		6.14
<i>F316</i>	0316	Carrier frequency control mode selection	-	-	0: Carrier frequency without reduced automatically	1		6.14
					1: Carrier frequency with automatic reduction			
					2: Carrier frequency not reduced automatically support for 500V models			
					3: Carrier frequency reduced automatically support for 500V models			
<i>F317</i>	0317	Synchronized deceleration time (time elapsed between start of deceleration to stop)	s	0.1/0.01	0.0-3600 (360.0)	2.0		6.15.2
<i>F318</i>	0318	Synchronized acceleration time (time elapsed between start of acceleration to achievement of specified speed)	s	0.1/0.01	0.0-3600 (360.0)	2.0		
<i>F319</i>	0319	Regenerative over-excitation upper limit	%	1/1	100-160	120		6.15.5
<i>F320</i>	0320	Droop gain	%	1/1	0.0-100.0	0.0		6.16
<i>F323</i>	0323	Droop insensitive torque band	%	1/1	0-100	10		
<i>F324</i>	0324	Droop output filter	-	0.1/0.1	0.1-200.0	100.0		

\*1: Factory specific coefficient parameters are manufacturer setting parameters.  
Do not change the value of these parameters.

Title	Communication No.	Function	Unit	Minimum setting unit Panel/Communication	Adjustment range	Default setting	User setting	Reference
<i>F328</i>	0328	Light-load high-speed operation selection	-	-	0: Disabled 1: High-speed operation speed set automatically (Power running at F command: Increase) 2: High-speed operation speed set automatically (Power running at R command: Increase) 3: High-speed operation speed set with $f_{33\bar{O}}$ (Power running at F command: Increase) 4: High-speed operation speed set with $f_{33\bar{O}}$ (Power running at R command: Increase)	0		6.17
<i>F329</i>	0329	Light-load high-speed learning function	-	-	0: No learning 1: Forward run learning 2: Reverse run learning	0		6.17
<i>F330</i>	0330	Automatic light-load high-speed operation frequency	Hz	0.1/0.01	30.0- $U_L$	*1		
<i>F331</i>	0331	Light-load high-speed operation frequency	Hz	0.1/0.01	5.0- $U_L$	40.0		
<i>F332</i>	0332	Light-load high-speed operation load waiting time	s	0.1/0.1	0.0-10.0	0.5		
<i>F333</i>	0333	Light-load high-speed operation load detection time	s	0.1/0.1	0.0-10.0	1.0		
<i>F334</i>	0334	Light-load high-speed operation heavy load detection time	s	0.1/0.1	0.0-10.0	0.5		
<i>F335</i>	0335	Switching load torque during power running	%	1/0.01	-250 - +250	50		
<i>F336</i>	0336	Heavy-load torque during power running	%	1/0.01	-250 - +250	100		
<i>F337</i>	0337	Heavy-load torque during constant power running	%	1/0.01	-250 - +250	50		
<i>F338</i>	0338	Switching load torque during regenerative braking	%	1/0.01	-250 - +250	50		

\*1: Default setting values vary depending on the setup menu setting. See the table of last page.



Title	Communication No.	Function	Unit	Minimum setting unit Panel/Communication	Adjustment range	Default setting	User setting	Reference
<i>F340</i>	0340	Creeping time1	s	0.01/0.01	0.00-10.00	0.00		6.18.1
<i>F341</i>	0341	Braking mode selection	-	-	0: Disabled 1: Forward winding up 2: Reverse winding up 3: Horizontal operation	0		
<i>F342</i>	0342	Load portion torque input selection	-	-	0: Disabled 1: VIA 2: VIB 3: VIC 4: <i>F343</i>	0		
<i>F343</i>	0343	Hoisting torque bias input (valid only when <i>F343</i> =4)	%	1/0.01	-250 - +250	100		
<i>F344</i>	0344	Lowering torque bias multiplier	%	1/0.01	0-100	100		
<i>F345</i>	0345	Brake release time	s	0.01/0.01	0.00-10.00	0.05		
<i>F346</i>	0346	Creeping frequency	Hz	0.1/0.01	<i>F240</i> -20.0	3.0		
<i>F347</i>	0347	Creeping time 2	s	0.01/0.01	0.00-10.00	0.10		
<i>F348</i>	0348	Braking time earning function		1/1	0: Disabled 1: Learning (0 after adjustment)	0		
<i>F349</i>	0349	Acceleration/ deceleration suspend function	-	1/1	0: Disabled 1: Parameter setting 2: Terminal input	0		6.19
<i>F350</i>	0350	Acceleration suspend frequency	Hz	0.1/0.01	0.0- <i>FH</i>	0.0		
<i>F351</i>	0351	Acceleration suspend time	s	0.1/0.1	0.0-10.0	0.0		
<i>F352</i>	0352	Deceleration suspend frequency	Hz	0.1/0.01	0.0- <i>FH</i>	0.0		
<i>F353</i>	0353	Deceleration suspend time	s	0.1/0.1	0.0-10.0	0.0		
<i>F359</i>	0359	PID control waiting time	s	1/1	0-2400	0		6.20
<i>F360</i>	0360	PID control	-	-	0: Disabled 1: Process type PID control 2: Speed type PID control	0		
<i>F361</i>	0361	Delay filter	s	0.1/0.1	0.0-25.0	0.1		
<i>F362</i>	0362	Proportional gain	-	0.01/0.01	0.01-100.0	0.30		
<i>F363</i>	0363	Integral gain	-	0.01/0.01	0.01-100.0	0.20		
<i>F366</i>	0366	Differential gain	-	0.01/0.01	0.00-2.55	0.00		
<i>F367</i>	0367	Process upper limit	Hz	0.1/0.01	0.0- <i>FH</i>	*1		
<i>F368</i>	0368	Process lower limit	Hz	0.1/0.01	0.0- <i>F367</i>	0.0		
<i>F369</i>	0369	PID control feedback signal selection	-	-	0: Disabled 1: VIA 2: VIB 3: VIC 4 to 6: -	0		

\*1: Default setting values vary depending on the setup menu setting. See the table of last page.

Title	Communication No.	Function	Unit	Minimum setting unit Panel/Communication	Adjustment range	Default setting	User setting	Reference
F372	0372	Process increasing rate (speed type PID control)	s	0.1/0.1	0.1-600.0	10.0		6.20
F373	0373	Process decreasing rate (speed type PID control)	s	0.1/0.1	0.1-600.0	10.0		
F375	0375	Factory specific coefficient 3B	-	-	-	-		*1
F376	0376	Factory specific coefficient 3C	-	-	-	-		
F378	0378	Number of pulse train input	pps	1/1	100-5000	250		6.6.5
F380	0380	PID forward/reverse characteristics selection	-	-	0: Forward 1: Reverse	0		6.20
F382	0382	Hit and stop control	-	-	0: Disabled 1: Enabled 2: -	0		6.18.2
F383	0383	Hit and stop control frequency	Hz	0.1/0.01	0.1-30.0	5.0		
F384	0384	Factory specific coefficient 3D	-	-	-	-		*1
F385	0385	Factory specific coefficient 3E	-	-	-	-		
F386	0386	Factory specific coefficient 3F	-	-	-	-		
F389	0389	PID control Reference signal selection	-	-	0: f mod/f 207 selected 1: Terminal board VIA 2: Terminal board VIB 3: f p i d 4: RS485 communication 5: UP/DOWN from external logic input 6: CANopen communication 7: Communication option 8: Terminal board VIC 9, 10: - 11: Pulse train input	0		6.20
F390	0390	Factory specific coefficient 3G	-	-	-	-		*1
F391	0391	Hysteresis for lower-limit frequency operation	Hz	0.1/0.01	0.0 - <i>UL</i>	0.2		6.9.1

\*1: Factory specific coefficient parameters are manufacturer setting parameters.  
Do not change the value of these parameters.

•Torque boost parameter

Title	Communication No.	Function	Unit	Minimum setting unit Panel/Communication	Adjustment range	Default setting	User setting	Reference
<i>F400</i>	0400	Auto-tuning	-	-	0: Auto-tuning disabled 1: Initialization of <i>F402</i> (after execution: 0) 2: Auto-tuning executed (after execution: 0) 3: - 4: Motor constant auto calculation (after execution: 0) 5: 4 + 2 (after execution: 0)	0		6.21
<i>F401</i>	0401	Slip frequency gain	%	1/1	0-150	50		
<i>F402</i>	0402	Automatic torque boost value	%	0.1/0.1	0.0-30.0	*2		
<i>F405</i>	0405	Motor rated capacity	kW	0.01/0.01	0.01-22.00	*2		
<i>F412</i>	0412	Motor specific coefficient 1	-	-	-	-		*3
<i>F415</i>	0415	Motor rated current	A	0.1/0.1	0.1-100.0	*1		6.21
<i>F416</i>	0416	Motor no-load current	%	1/1	10-90	*1		
<i>F417</i>	0417	Motor rated speed	min <sup>-1</sup>	1/1	100-64000	*1		
<i>F441</i>	0441	Power running torque limit 1 level	%	1/0.01	0-249% 250: Disabled	250		6.22.1
<i>F443</i>	0443	Regenerative braking torque limit 1 level	%	1/0.01	0-249% 250: Disabled	250		
<i>F444</i>	0444	Power running torque limit 2 level	%	1/0.01	0-249% 250: Disabled	250		
<i>F445</i>	0445	Regenerative braking torque limit 2 level	%	1/0.01	0-249% 250: Disabled	250		
<i>F451</i>	0451	Acceleration / deceleration operation after torque limit	-	1/1	0: In sync with acceleration/ deceleration 1: In sync with min time	0		6.22.2
<i>F452</i>	0452	Power running stall continuous trip detection time	s	0.01/0.01	0.00-10.00	0.00		6.22.3
<i>F454</i>	0454	Constant output zone torque limit selection	-	-	0: Constant output limit 1: Constant torque limit	0		6.22.1
<i>F458</i>	0458	Motor specific coefficient 2	-	-	-	-		*3
<i>F459</i>	0459	Load inertia moment ratio	times	0.1/0.1	0.1-100.0	1.0		6.21

\*1: Parameter values vary depending on the capacity. See the table of last page.

\*2: Depends upon the setup menu settings. See the table of last page.

\*3: Motor specific coefficient 1 to 9 are parameters exclusively for manufacturer settings. Do not change these parameter.

Title	Communication No.	Function	Unit	Minimum setting unit Panel/Communication	Adjustment range	Default setting	User setting	Reference
F460	0460	Motor specific coefficient 3	-	-				*1
F461	0461	Motor specific coefficient 4	-	-				
F462	0462	Motor specific coefficient 5	-	-				
F467	0467	Motor specific coefficient 6	-	-				

• Input/output parameters 2

Title	Communication No.	Function	Unit	Minimum setting unit Panel/Communication	Adjustment range	Default setting	User setting	Reference
F470	0470	VIA input bias	-	1/1	0-255	128		6.6.4
F471	0471	VIA input gain	-	1/1	0-255	128		
F472	0472	VIB input bias	-	1/1	0-255	128		
F473	0473	VIB input gain	-	1/1	0-255	128		
F474	0474	VIC input bias	-	1/1	0-255	128		
F475	0475	VIC input gain	-	1/1	0-255	128		

• Torque boost parameters2

Title	Communication No.	Function	Unit	Minimum setting unit Panel/Communication	Adjustment range	Default setting	User setting	Reference
F480	0480	Motor specific coefficient 7	-	-	-	-		*1
F485	0485	Motor specific coefficient 8	-	-	-	-		
F490	0490	Motor specific coefficient 9	-	-	-	-		
F495	0495	Motor specific coefficient 10	-	-	-	-		
F499	0499	Motor specific coefficient 11	-	-	-	-		

\*1: Motor specific coefficient 1 to 9 are parameters exclusively for manufacturer settings.  
Do not change these parameter.

• Acceleration/deceleration time parameters

Title	Communication No.	Function	Unit	Minimum setting unit Panel/Communication	Adjustment range	Default setting	User setting	Reference
<i>F500</i>	0500	Acceleration time 2	s	0.1/0.1	0.0-3600 (360.0) *1	10.0		6.23.2
<i>F501</i>	0501	Deceleration time 2	s	0.1/0.1	0.0-3600 (360.0) *1	10.0		
<i>F502</i>	0502	Acceleration/ deceleration 1 pattern	-	-	0: Linear 1: S-pattern 1 2: S-pattern 2	0		6.23.1
<i>F503</i>	0503	Acceleration/ deceleration 2 pattern	-	-		0		6.23.2
<i>F504</i>	0504	Acceleration/ deceleration selection (1, 2, 3)	-	-		1: Acceleration/deceleration 1 2: Acceleration/deceleration 2 3: Acceleration/deceleration 3	1	
<i>F505</i>	0505	Acceleration/ deceleration 1 and 2 switching frequency	Hz	0.1/0.01	0.0 (disabled) 0.1- <u>UL</u>	0.0		
<i>F506</i>	0506	S-pattern lower-limit adjustment amount	%	1/1	0-50	10		6.23.1
<i>F507</i>	0507	S-pattern upper-limit adjustment amount	%	1/1	0-50	10		
<i>F510</i>	0510	Acceleration time 3	s	0.1/0.1	0.0-3600 (360.0)*1	10.0		6.23.2
<i>F511</i>	0511	Deceleration time 3	s	0.1/0.1	0.0-3600 (360.0)*1	10.0		
<i>F512</i>	0512	Acceleration/ deceleration 3 pattern	-	-	0: Linear 1: S-pattern 1 2: S-pattern 2	0		
<i>F513</i>	0513	Acceleration/ deceleration 2 and 3 switching frequency	Hz	0.1/0.01	0.0: (disabled) 0.1- <u>UL</u>	0.0		
<i>F515</i>	0515	Deceleration time at emergency stop	s	0.1/0.01	0.0-3600 (360.0)*1	10.0		6.24.4
<i>F519</i>	0519	Setting of acceleration/ deceleration time unit	-	-	0:- 1:0.01s unit (after execution: 0) 2:0.1s unit (after execution)	0		6.23.2

\*1These parameters can be changed to 0.01s unit by setting *F519* = 1.

• Protection parameters

Title	Communication No.	Function	Unit	Minimum setting unit Panel/Communication	Adjustment range	Default setting	User setting	Reference
<i>F601</i>	0601	Stall prevention level 1	% (A)	1/1	10-199 , 200 (disabled)	150		6.24.2
<i>F602</i>	0602	Inverter trip retention selection	-	-	0: Canceled with the power off 1: Retained with power off	0		6.24.3
<i>F603</i>	0603	Emergency stop selection	-	-	0: Coast stop 1: Deceleration stop 2: Emergency DC braking 3: Deceleration stop ( <i>F515</i> ) 4: Quick deceleration atop 5: Dynamic quick deceleration stop			6.24.4

Title	Communication No.	Function	Unit	Minimum setting unit Panel/Communication	Adjustment range	Default setting	User setting	Reference
F604	0604	DC braking time during emergency stop	s	0.1/0.1	0.0-20.0	1.0		6.24.4
F605	0605	Output phase failure detection mode selection	-	-	0: Disabled 1: At start-up (only one time after power on) 2: At start-up (each time) 3: During operation 4: At start-up + during operation 5: Detection of cutoff on output side	0		6.24.5
F607	0607	Motor 150% -overload detection time	s	1/1	10-2400	300		3.5 6.24.1
F608	0608	Input phase failure detection selection	-	-	0: Disabled 1: Enabled	1		6.24.6
F609	0609	Small current detection hysteresis	%	1/1	1-20	10		6.24.7
F610	0610	Small current trip/alarm selection	-	-	0: Alarm only 1: Tripping	0		
F611	0611	Small current detection current	% (A)	1/1	0-150	0		
F612	0612	Small current detection time	s	1/1	0-255	0		
F613	0613	Detection of output short-circuit at start-up	-	-	0: Each time (standard pulse) 1: Only one time after power on (standard pulse) 2: Each time (short pulse) 3: Only one time after power on (short pulse)	0		6.24.8
F614	0614	Ground fault detection selection	-	-	0: Disabled 1: Enabled	1		
F615	0615	Over-torque trip/alarm selection	-	-	0: Alarm only 1: Tripping	0		6.24.9
F616	0616	Over-torque detection level	%	1/0.01	0 (disabled) 1-250	150		
F618	0618	Over-torque detection time	s	0.1/0.1	0.0-10.0	0.5		
F619	0619	Over-torque detection hysteresis	%	1/1	0-100	10		
F620	0620	Cooling fan on/off control	-	-	0:on/off control 1:Always on	0		6.24.10
F621	0621	Cumulative operation time alarm setting	100 hours	0.1/0.1 (=10 hours)	0.0-999.0	876.0		6.24.11
F626	0626	Over-voltage stall protection level	%	1/1	100-150	*1		6.15.4 6.15.5
F627	0627	Under-voltage trip/alarm selection	-	-	0: Alarm only 1: Tripping 2: Alarm only(detection level 50% or less, input AC reactor required)	0		6.24.1

\*1: Parameter values vary depending on the capacity. See the table of last page.

Title	Communication No.	Function	Unit	Minimum setting unit Panel/Communication	Adjustment range	Default setting	User setting	Reference
F631	0631	Inverter over-load detection method	-	-	0: 150%-60s (120%-60s) 1: Temperature estimation	0		3.5
F632	0632	Electronic-thermal memory	-	-	0: Disabled 1: Enabled	0		3.5 6.24.1
F633	0633	Analog input break detection level (VIC)	%	1/1	0: Disabled, 1-100	0		6.24.13
F634	0634	Annual average ambient temperature (parts replacement alarms)	-	-	1: -10 to +10 2: 11-20 3: 21-30 4: 31-40 5: 41-50 6: 51-60	3		6.24.14
F644	0644	Operation selection of analog input break detection (VIC)	-	-	0: Tripping 1: Alarm only (Coast stop) 2: Alarm only (F649 frequency) 3: Alarm only (Maintain running) 4: Alarm only (Deceleration stop)	0		6.24.13
F645	0645	PTC thermal selection	-	-	1: Tripping 2: Alarm only	1		6.24.15
F646	0646	PTC detection resistor value		1/1	100-9999	3000		
F648	0648	Number of starting alarm	10000 times	0.1/0.1	0.0-999.0	999.0		6.24.16
F649	0649	Fallback frequency	Hz	0.1/0.1	-u	0.0		6.24.13
F650	0650	Forced fire-speed control selection	-	-	0: Disabled 1: Enabled	0		6.25
F656	0656	Factory specific Coefficient 6A	-	-	-	-		*1
F657	0657	Overload alarm level	%	1/1	10-100	50		3.5
F660	0660	Override addition input selection	-	-	0: Disabled 1: VIA 2: VIB 3: VIC 4: f c	0		6.26
F661	0661	Override multiplication Input selection	-	-	0: Disabled 1: VIA 2: VIB 3: VIC 4: F 7 2 9	0		
F663	0663	Analog input terminal function selection (VIB)	-	-	0: Frequency command 1: Acceleration/deceleration time 2: Upper limit frequency 3, 4: - 5: Torque boost value 6: Stall prevention level 7: Motor electronic-thermal protection level 8 to 10: - 11: Base frequency	0		6.28.1

\*1: Motor specific coefficient 1 to 9 are parameters exclusively for manufacturer settings.  
Do not change these parameter.

• Output parameters

Title	Communication No.	Function	Unit	Minimum setting unit Panel/Communication	Adjustment range	Default setting	User setting	Reference
F669	0669	Logic output/pulse train output selection (OUT)	-	-	0: Logic output 1: Pulse train output	0		6.28.1
F676	0676	Pulse train output function selection (OUT)	-	-	0: Output frequency 1: Output current 2: Frequency reference 3: Input voltage (DC detection) 4: Output voltage (command value) 5: Input power 6: Output power 7: Torque 8: - 9: Motor cumulative load factor 10: Inverter cumulative load factor 11: PBR (braking reactor) cumulative load factor 12: Frequency setting value (after compensation) 13: VIA Input value 14: VIB Input value 15: Fixed output 1 (output current: 100% equivalent) 16: Fixed output 2 (output current: 50% equivalent) 17: Fixed output 3 (other than the output current) 18: Communication data 19: - 20: VIC input value 21, 22: - 23: PID feedback value	0		
F677	0677	Maximum numbers of pulse train output	kpps	0.01/0.01	0.50-2.00	0.80		
F678	0678	Pulse train output filter	ms	1/1	2-1000	64		
F679	0679	Pulse train input filter	ms	1/1	2-1000	2		6.6.5
F681	0681	Analog output signal selection	-	-	0: Meter option (0 to 1mA) 1: Current (0 to 20mA) output 2: Voltage (0 to 10V) output	0		3.4 6.28.2
F684	0684	Analog output filter	ms	1/1	2-1000	2		
F691	0691	Inclination characteristic of analog output	-	-	0: Negative inclination (downward slope) 1: Positive inclination (upward slope)	1		
F692	0692	Analog output bias	%	0.1/0.1	-1.0-+100	0.0		
F693	0693	Factory specific coefficient 6B	-	-	-	-		*1

\*1: Motor specific coefficient 1 to 9 are parameters exclusively for manufacturer settings.  
Do not change these parameter.



•Operation panel parameters

Title	Communication No.	Function	Unit	Minimum setting unit Panel/Communication	Adjustment range	Default setting	User setting	Reference
F700	0700	Parameter protection selection	-	-	0: Permitted 1: Writing prohibited (Panel and remote keypad) 2: Writing prohibited (1 + RS485) 3: Reading prohibited (Panel and remote keypad) 4: Reading prohibited (3 + RS485 communication)	0		6.29.1
F701	0701	Current/voltage unit selection	-	-	0: % 1: A (ampere) / V (volt)	0		6.29.2
F702	0702	Frequency free unit display magnification	Times	0.01/0.01	0.00: Disabled (display of frequency) 0.01-200.0	0.00		6.29.3
F703	0703	Frequency free unit coverage selection	-	1/1	0: All frequencies display 1: PID frequencies display	0		
F705	0705	Inclination characteristic of free unit display	-	1/1	0: Negative inclination (downward slope) 1: Positive inclination (upward slope)	1		
F706	0706	Free unit display bias	Hz	0.1/0.01	0.00- <i>FH</i>	0.00		
F707	0707	Free step 1 (1-step rotation of setting dial)	Hz	0.01/0.01	0.00: Disabled 0.01- <i>FH</i>	0.00		6.29.4
F708	0708	Free step 2 (panel display)	-	-	0: Disabled 1-255	0		
F709	0709	Standard monitor hold function	-	-	0: Real time 1: Peak hold 2: Minimum hold	0		6.29.7

Title	Communication No.	Function	Unit	Minimum setting unit Panel/Communication	Adjustment range	Default setting	User setting	Reference
F710	0710	Initial panel display selection	-	-	0: Operation frequency (Hz/free unit) 1: Output current (%/A) 2: Frequency setting value (Hz/free unit) 3: Input voltage (DC detection) (%/V) 4: Output voltage (command value) (%/V) 5: Input power (kW) 6: Output power (kW) 7: Torque (%) 8: - 9: Motor cumulative load factor 10: Inverter cumulative load factor 11: PBR (Braking resistor) cumulative load factor 12: Frequency setting value (after compensation) (Hz/free unit) 13: VIA input value (%) 14: VIB input value (%) 15 to 17: - 18: Arbitrary code from communication 19: - 20: VIC input value (%) 21: Pulse train input value (kpps) 22: - 23: PID feedback value (Hz/free unit) 24: Input power (kWh) 25: Output power (kWh) 26: Motor load factor (%) 27: Inverter load factor (%) 28: Inverter rated current (A) 29: FM output value (%) 30: Pulse train output value (kpps) 31: Cumulative power on time (100 hours) 32: Cumulative fan operation time (100 hours) 33: Cumulative operation time (100 hours) 34: Number of starting (10000 times) 35: Forward number of starting (10000 times) 36: Reverse number of starting (10000 times) 37 to 39: - 40: Inverter rated current (Carrier frequency corrected) 41 to 51: - 52: Frequency setting value/Operation frequency(Hz/free unit)	0		6.29.5 8.2.1 8.3.2

Title	Communication No.	Function	Unit	Minimum setting unit Panel/Communication	Adjustment range	Default setting	User setting	Reference
F 7 1 1	0711	Status Monitor 1	-	-	0: Operation frequency (Hz/free unit) 1: Output current (%/A) 2: Frequency setting value (Hz/free unit) 3: Input voltage (DC detection) (%/V) 4: Output voltage (Command value) (%/V) 5: Input power (kW) 6: Output power (kW) 7: Torque (%) 8: - 9: Motor cumulative load factor 10: Inverter cumulative load factor	2		6.29.6 8.2.1 8.3.2
F 7 1 2	0712	Status Monitor 2	-	-	11: PBR (Braking resistor) cumulative load factor 12: Frequency setting value (after compensation) (Hz/free unit) 13: VIA input value (%) 14: VIB input value (%) 15 to 19: - 20: VIC input value (%) 21: Pulse train input value (kpps) 22: - 23: PID feedback value (Hz/free unit)	1		
F 7 1 3	0713	Status Monitor 3	-	-	24: Input power (kWh) 25: Output power (kWh) 26: Motor load factor (%) 27: Inverter load factor (%) 28: Inverter rated current (A) 29: FM output value (%)	3		
F 7 1 4	0714	Status Monitor 4	-	-	30: Pulse train output value (kpps) 31: Cumulative power on time (100 hours) 32: Cumulative fan operation time (100 hours)	4		
F 7 1 5	0715	Status Monitor 5	-	-	33: Cumulative operation time (100 hours) 34: Number of starting (10000 times) 35: Forward number of starting (10000 times) 36: Reverse number of starting (10000 times)	5		
F 7 1 6	0716	Status Monitor 6	-	-	37 to 39: - 40: Inverter rated current (Carrier frequency corrected) 41 to 51: -	6		
F 7 1 7	0717	Status Monitor 7	-	-		27		
F 7 1 8	0718	Status Monitor 8	-	-		0		
F 7 1 9	0719	Canceling of operation command when stand by terminal (ST) is turned off	-	-	0: Operation command canceled (cleared) 1: Operation command retained 2: Panel Communication operation command canceled (cleared)	1		6.29.8
F 7 2 0	0720	Initial remote keypad display	-	-	0-52 (Same as F 7 1 0)	0		6.29.5 8.3.2
F 7 2 1	0721	Panel stop pattern	-	-	0: Deceleration stop 1: Coast stop	0		6.29.9

Title	Communication No.	Function	Unit	Minimum setting unit Panel/Communication	Adjustment range	Default setting	User setting	Reference
F 729	0730	Operation panel override Multiplication gain	%	1/1	-100 - +100	0		6.26
F 730	0730	Panel frequency setting prohibition (FL)	-	-	0: Permitted 1: Prohibited	0		6.29.1
F 731	0731	Disconnection detection of remote keypad	-	-	0: Permitted 1: Prohibited	0		
F 732	0732	Local/remote key prohibition of remote keypad	-	-	0: Permitted 1: Prohibited	1		6.13 6.29.1
F 733	0733	Panel operation prohibition (RUN key)	-	-	0: Permitted 1: Prohibited	0		6.29.1
F 734	0734	Panel emergency stop operation prohibition	-	-	0: Permitted 1: Prohibited	0		
F 735	0735	Panel reset operation prohibition	-	-	0: Permitted 1: Prohibited	0		
F 736	0736	ENOD/FNOD change prohibition during operation	-	-	0: Permitted 1: Prohibited	1		
F 737	0737	All key operation prohibition	-	-	0: Permitted 1: Prohibited	0		
F 738	0738	Password setting (F700)	-	-	0: Password unset 1-9998 9999: Password set	0		
F 739	0739	Password verification	-	-	0: Password unset 1-9998 9999: Password set	0		
F 740	0740	Trace selection	-	-	0: Disabled 1: At tripping 2: At triggering 3: 1 + 2	1		6.30
F 741	0741	Trance cycle	-	-	0: 4ms 1: 20ms 2: 100ms 3: 1s 4: 10s	2		
F 742	0742	Trace data 1	-	-	0-42	0		
F 743	0743	Trace data 2	-	-		1		
F 744	0744	Trace data 3	-	-		2		
F 745	0745	Trace data 4	-	-		3		
F 746	0746	Status monitor filter	ms	-	8-1000	200		6.29.7
F 748	0748	Integrating wattmeter retention selection	-	-	0: Disabled 1: Enabled	0		6.31
F 749	0749	Integrating wattmeter display unit selection	-	-	0: 1=1kWh 1: 1=10kWh 2: 1=100kWh 3: 1=1000kWh	*1		6.31

\*1: Depends upon the setup menu settings. See the table of last page.

Title	Communication No.	Function	Unit	Minimum setting unit Panel/Communication	Adjustment range	Default setting	User setting	Reference
F 750	0750	EASY key function selection	-	-	0: Easy/standard setting mode switching function 1: Shortcut key 2: Local/remote key 3: Monitor peak / minimum hold trigger	0		4.5 6.32
F 751	0751	Easy setting mode parameter 1	-	-	0-2999 (Set by communication number)	3		
F 752	0752	Easy setting mode parameter 2	-	-		4		
F 753	0753	Easy setting mode parameter 3	-	-		9		
F 754	0754	Easy setting mode parameter 4	-	-		10		
F 755	0755	Easy setting mode parameter 5	-	-		600		
F 756	0756	Easy setting mode parameter 6	-	-		6		
F 757	0757	Easy setting mode parameter 7	-	-		999		
F 758	0758	Easy setting mode parameter 8	-	-		999		
F 759	0759	Easy setting mode parameter 9	-	-		999		
F 760	0760	Easy setting mode parameter 10	-	-		999		
F 761	0761	Easy setting mode parameter 11	-	-		999		
F 762	0762	Easy setting mode parameter 12	-	-		999		
F 763	0763	Easy setting mode parameter 13	-	-		999		
F 764	0764	Easy setting mode parameter 14	-	-		999		
F 765	0765	Easy setting mode parameter 15	-	-		999		
F 766	0766	Easy setting mode parameter 16	-	-		999		
F 767	0767	Easy setting mode parameter 17	-	-		999		
F 768	0768	Easy setting mode parameter 18	-	-		999		
F 769	0769	Easy setting mode parameter 19	-	-		999		
F 770	0770	Easy setting mode parameter 20	-	-		999		
F 771	0771	Easy setting mode parameter 21	-	-		999		
F 772	0772	Easy setting mode parameter 22	-	-		999		
F 773	0773	Easy setting mode parameter 23	-	-		999		
F 774	0774	Easy setting mode parameter 24	-	-	999			

Title	Communication No.	Function	Unit	Minimum setting unit Panel/Communication	Adjustment range	Default setting	User setting	Reference
<i>F 775</i>	0775	Easy setting mode parameter 25	-	-	0-2999 (Set by communication number)	999		4.5 6.32
<i>F 776</i>	0776	Easy setting mode parameter 26	-	-		999		
<i>F 777</i>	0777	Easy setting mode parameter 27	-	-		999		
<i>F 778</i>	0778	Easy setting mode parameter 28	-	-		999		
<i>F 779</i>	0779	Easy setting mode parameter 29	-	-		999		
<i>F 780</i>	0780	Easy setting mode parameter 30	-	-		999		
<i>F 781</i>	0781	Easy setting mode parameter 31	-	-		999		
<i>F 782</i>	0782	Easy setting mode parameter 32	-	-		999		
<i>F 799</i>	0799	Factory specific coefficient 7A	-	-	-		*1	

• Communication parameters

Title	Communication No.	Function	Unit	Minimum setting unit Panel/Communication	Adjustment range	Default setting	User setting	Reference
<i>F800</i>	0800	Baud rate	-	-	3: 9600bps 4: 19200bps 5: 38400bps	4		6.33.1
<i>F801</i>	0801	Parity	-	-	0: NON (No parity) 1: EVEN (Even parity) 2: ODD (Odd parity)	1		
<i>F802</i>	0802	Inverter number	-	1/1	0-247	0		
<i>F803</i>	0803	Communication time-out time	s	1/1	0.0: (disabled) 0.1-100	0.0		
<i>F804</i>	0804	Communication time-out action	-	-	0: Alarm only 1: Trip (Coast stop) 2: Trip (Deceleration stop)	0		
<i>F805</i>	0805	Communication waiting time	s	0.01/0.0 1	0.00-2.00	0.00		
<i>F806</i>	0806	Setting of master and slave for communication between inverters	-	-	0: Slave (0 Hz command issued in case the master inverter fails) 1: Slave (Operation continued in case the master inverter fails) 2: Slave (Emergency stop tripping in case the master inverter fails) 3: Master (transmission of frequency commands) 4: Master (transmission of output frequency signals)	0		
<i>F808</i>	0808	Communication time-out detection condition	-	-	0: Valid at any time 1: Communication selection of f mod or c mod 2: 1 + during operation	1		

\*1: Factory specific coefficient parameters are manufacturer setting parameters.

Do not change the value of these parameters.

Title	Communication No.	Function	Unit	Minimum setting unit Panel/Communication	Adjustment range	Default setting	User setting	Reference
<i>F810</i>	0811	Communication command point selection	-	1/1	0: Disabled 1: Enabled	0		6.6.2 6.331
<i>F811</i>	0811	Communication command point 1 setting	%	1/1	0-100	0		
<i>F812</i>	0812	Communication command point 1 Frequency	Hz	0.1/0.01	0.0-f h	0.0		
<i>F813</i>	0813	Communication command point 2 setting	%	1/1	0-100	100		
<i>F814</i>	0814	Communication command point 2 Frequency	Hz	0.1/0.01	0.0-f h	*1		
<i>F829</i>	0829	Selection of communication protocol	-	-	0: Toshiba inverter protocol 1: Mod bus RTU protocol	0		6.33.1
<i>F856</i>	0856	Number of motor poles for communication	-	-	1: 2 poles 2: 4 poles 3: 6 poles 4: 8 poles 5: 10 poles 6: 12 poles 7: 14 poles 8: 16 poles	2		
<i>F870</i>	0870	Block write data 1	-	-	0: No selection 1: Command information 1 2: Command information 2 3: Frequency setting 4: Output data on the terminal board 5: Analog output for communication 6: Speed command	0		
<i>F871</i>	0871	Block write data 2	-	-		0		
<i>F875</i>	0875	Block read data 1	-	-	0: No selection 1: Status information 2: Output frequency 3: Output current 4: Output voltage 5: Alarm information 6: PID feedback value 7: Input terminal board monitor 8: Output terminal board monitor 9: VIA terminal board monitor 10: VIB terminal board monitor 11: VIC terminal board monitor 12: Input voltage (DC detection) 13: Motor speed 14: Torque	0		
<i>F876</i>	0876	Block read data 2	-	-		0		
<i>F877</i>	0877	Block read data 3	-	-		0		
<i>F878</i>	0878	Block read data 4	-	-		0		
<i>F879</i>	0879	Block read data 5	-	-		0		
<i>F880</i>	0880	Free notes	-	1/1	0-65535 (65535)	0		6.33.3

\*1: Depends upon the setup menu settings. See the table of last page.

Title	Communication No.	Function	Unit	Minimum setting unit Panel/Communication	Adjustment range	Default setting	User setting	Reference
<i>F898</i>	0898	Factory specific coefficient 8A	-	-	-	-		*1
<i>F899</i>	0899	Communication function reset	-	-	0:- 1:Reset (after execution:0)	0		6.33.1

• Reservation area parameters

Title	Communication No.	Function	Unit	Minimum setting unit Panel/Communication	Adjustment range	Default setting	User setting	Reference
<i>F900</i>	0900	Factory specific coefficient 9A	-	-	-	-		*1
<i>F901</i>	0901	Factory specific coefficient 9B	-	-	-	-		
<i>F902</i>	0902	Factory specific coefficient 9C	-	-	-	-		
<i>F909</i>	0909	Factory specific coefficient 9D	-	-	-	-		
<i>F910</i>	0910	Step-out detection current level	%	1/1	1-150	100		6.34
<i>F911</i>	0911	Step-out detection time	s	0.01 /0.01	0.00: No detection 0.01-2.55	0.00		
<i>F912</i>	0912	q-axis inductance	mH	0.01 /0.01	0.01-650.0	10.00		6.21.2 6.34
<i>F913</i>	0913	d-axis inductance	mH	0.01 /0.01	0.01-650.0	10.00		
<i>F914</i>	0914	Factory specific coefficient 9E	-	-	-	-		*1
<i>F915</i>	0915	PM control mode selection	-	-	0: Mode 0 1: Mode 1 2: Mode 2 3: Mode 3 4: Mode 4	3		6.21.2
<i>F916</i>	0916	Factory specific coefficient 9F	-	-	-	-		*1
<i>F917</i>	0917	Factory specific coefficient 9G	-	-	-	-		
<i>F918</i>	0918	Factory specific coefficient 9H	-	-	-	-		
<i>F919</i>	0919	Factory specific coefficient 9I	-	-	-	-		
<i>F920</i>	0920	Factory specific coefficient 9J	-	-	-	-		
<i>F930</i>	0930	Factory specific coefficient 9K	-	-	-	-		

\*1: Factory specific coefficient parameters are manufacturer setting parameters.  
Do not change the value of these parameters.



• Traverse parameters

Title	Communication No.	Function	Unit	Minimum setting unit Panel/Communication	Adjustment range	Default setting	User setting	Reference
<i>F980</i>	0980	Traverse selection	-	1/1	0: Disabled 1: Enabled	0		6.35
<i>F981</i>	0981	Traverse acceleration time	s	0.1/0.1	0.1-120.0	25.0		
<i>F982</i>	0982	Traverse deceleration time	s	0.1/0.1	0.1-120.0	25.0		
<i>F983</i>	0983	Traverse step	%	0.1/0.1	0.0-25.0	10.0		
<i>F984</i>	0984	Traverse jump step	%	0.1/0.1	0.0-50.0	10.0		

• Logic sequence parameters

Title	Communication No.	Function	Unit	Minimum setting unit Panel/Communication	Adjustment range	Default setting	User setting	Reference
<i>A900</i>	A900	Input function target 11	-	-	Input terminal function number 0: No function 1: Terminal F 2: Terminal R 3: Terminal RES 4: Terminal S1 5: Terminal S2 6: Terminal S3 7: Terminal VIB 8: Terminal VIA 9 to 20: - 21 to 24: Virtual input terminal 1 to 4 25 to 32: Internal terminal 1 to 4 918 to 934: Logic sequence function number 1000 to 1255: Output selection number 2000 to 2099: FD00 to FD99 3000 to 3099: FE00 to FE99	0		6.36

Title	Communication No.	Function	Unit	Minimum setting unit Panel/Communication	Adjustment range	Default setting	User setting	Reference
<i>A901</i>	A901	Input function Command 12	-	-	0: NOP (not operation) 1: ST (move) 2: STN 3: AND (logical product) 4: ANDN 5: OR (logical sum) 6: ORN 7: EQ (equal) 8: NE (not equal) 9: GT (greater than) 10: GE (greater or equal) 11: LT (less than) 12: LE (less or equal) 13: ASUB (absolute) 14: ON (on delay timer) 15: OFF (off delay timer) 16: COUNT 1 (counter 1) 17: COUNT 2 (counter 2) 18: HOLD (hold) 19: SET (set) 20: RESET (reset) 21: CLR 22: CLRN	0		6.36
<i>A902</i>	A902	Input function target 12	-	-	0-3099 (Same as a 900)	0		
<i>A903</i>	A903	Input function command 13	-	-	0-22 (Same as a 901)	0		
<i>A904</i>	A904	Input function target 13	-	-	0-3099 (Same as a 900)	0		
<i>A905</i>	A905	Output function assigned object 1	-	-	0-3099 (Same as a 900)	0		
<i>A906</i>	A906	Input function target 21	-	-	0-3099 (Same as a 900)	0		
<i>A907</i>	A907	Input function command 22	-	-	0-22 (Same as a 901)	0		
<i>A908</i>	A908	Input function target 22	-	-	0-3099 (Same as a 900)	0		
<i>A909</i>	A909	Input function command 23	-	-	0-22 (Same as a 901)	0		
<i>A910</i>	A910	Input function target 23	-	-	0-3099 (Same as a 900)	0		
<i>A911</i>	A911	Output function assigned object 2	-	-	0-3099 (Same as a 900)	0		
<i>A912</i>	A912	Input function target 31	-	-	0-3099 (Same as a 900)	0		
<i>A913</i>	A913	Input function command 32	-	-	0-22 (Same as a 901)	0		
<i>A914</i>	A914	Input function target 32	-	-	0-3099 (Same as a 900)	0		
<i>A915</i>	A915	Input function command 33	-	-	0-22 (Same as a 901)	0		
<i>A916</i>	A916	Input function target 33	-	-	0-3099 (Same as a 900)	0		

Title	Communication No.	Function	Unit	Minimum setting unit Panel/Communication	Adjustment range	Default setting	User setting	Reference
A917	A917	Output function assigned object 3	-	-	0-3099 (Same as a 900)	0		
A918	A918	Output percent data 1	%	0.01/0.01	0.00-200.0	0.00		
A919	A919	Output percent data 2	%	0.01/0.01	0.00-200.0	0.00		
A920	A920	Output percent data 3	%	0.01/0.01		0.00		
A921	A921	Output percent data 4	%	0.01/0.01		0.00		
A922	A922	Output percent data 1	%	0.01/0.01		0.00		
A923	A923	Output frequency data 1	Hz	0.1/0.01	0.0-500.0	0.0		
A924	A924	Output frequency data 2	Hz	0.1/0.01		0.0		
A925	A925	Output frequency data 3	Hz	0.1/0.01		0.0		
A926	A926	Output frequency data 4	Hz	0.1/0.01		0.0		
A927	A927	Output frequency data 5	Hz	0.1/0.01		0.0		
A928	A928	Output time data 1	s	0.01/0.01	0.01-600.0	0.01		
A929	A929	Output time data 2	s	0.01/0.01		0.01		
A930	A930	Output time data 3	s	0.01/0.01		0.01		
A931	A931	Output time data 4	s	0.01/0.01		0.01		
A932	A932	Output time data 5	s	0.01/0.01		0.01		
A933	A933	Number of times of output data 1	times	1/1	0-9999	0		
A934	A934	Number of times of output data 2	times	1/1		0		
A935	A935	Input function target 41	-	-	0-3099 (Same as a 900)	0		
A936	A936	Input function command 42	-	-	0-22 (Same as a 901)	0		
A937	A937	Input function target 42	-	-	0-3099 (Same as a 900)	0		
A938	A938	Input function command 43	-	-	0-22 (Same as a 901)	0		
A939	A939	Input function target 42	-	-	0-3099 (Same as a 900)	0		
A940	A940	Output function assigned object 4	-	-	0-3099 (Same as a 900)	0		
A941	A941	Input function target 51	-	-	0-3099 (Same as a 900)	0		
A942	A942	Input function command 52	-	-	0-22 (Same as a 901)	0		
A943	A943	Input function target 52	-	-	0-3099 (Same as a 900)	0		
A944	A944	Input function command 53	-	-	0-22 (Same as a 901)	0		

Title	Communication No.	Function	Unit	Minimum setting unit Panel/Communication	Adjustment range	Default setting	User setting	Reference
<i>A945</i>	A945	Input function target 53	-	-	0-3099 (Same as a 900)	0		
<i>A946</i>	A946	Output function assigned object 5	-	-	0-3099 (Same as a 900)	0		
<i>A947</i>	A947	Input function target 61	-	-	0-3099 (Same as a 900)	0		
<i>A948</i>	A948	Input function command 62	-	-	0-22 (Same as a 901)	0		
<i>A949</i>	A949	Input function target 62	-	-	0-3099 (Same as a 900)	0		
<i>A950</i>	A950	Input function command 63	-	-	0-22 (Same as a 901)	0		
<i>A951</i>	A951	Input function target 63	-	-	0-3099 (Same as a 900)	0		
<i>A952</i>	A952	Output function assigned object 6	-	-	0-3099 (Same as a 900)	0		
<i>A953</i>	A953	Input function target 71	-	-	0-3099 (Same as a 900)	0		
<i>A954</i>	A954	Input function command 72	-	-	0-22 (Same as a 901)	0		
<i>A955</i>	A955	Input function target 72	-	-	0-3099 (Same as a 900)	0		
<i>A956</i>	A956	Input function command 73	-	-	0-22 (Same as a 901)	0		
<i>A957</i>	A957	Input function target 73	-	-	0-3099 (Same as a 900)	0		
<i>A958</i>	A958	Output function assigned object 7	-	-	0-3099 (Same as a 900)	0		
<i>A973</i>	A973	Virtual input terminal selection 1	-	-	0-203	0		
<i>A974</i>	A974	Virtual input terminal selection 2	-	-		0		
<i>A975</i>	A975	Virtual input terminal selection 3	-	-		0		
<i>A976</i>	A976	Virtual input terminal selection 4	-	-		0		
<i>A977</i>	A977	Logic sequence function selection	-	-	0: Disabled 1: Logic sequence function + permission signal 2: Logic sequence function always ON	0		

Default settings by inverter rating

Inverter type	Torque boost value	Dynamic braking resistance	Dynamic braking resistor capacity	Automatic torque boost value	Motor rated capacity	Motor rated current	Motor no-load current	Over-Voltage stall protection level	Integrating Wattmeter display unit selection
	<i>ub / F172 (%)</i>	<i>F308 (Ohm)</i>	<i>F309 (kW)</i>	<i>F402 (%)</i>	<i>F405 (kW)</i>	<i>F415 (A)</i>	<i>F416 (%)</i>	<i>F626 (%)</i>	<i>F749</i>
VFMB1S-2002PL	6.0	200.0	0.12	8.3	0.20	1.2	70	136	0
VFMB1S-2004PL	6.0	200.0	0.12	6.2	0.40	2.0	65	136	0
VFMB1S-2007PL	6.0	200.0	0.12	5.8	0.75	3.4	60	136	0
VFMB1S-2015PL	6.0	75.0	0.12	4.3	1.50	6.2	55	136	0
VFMB1S-2022PL	5.0	75.0	0.12	4.1	2.20	8.9	52	136	0
VFMB1-4004PL	6.0	200.0	0.12	6.2	0.40	1.0	65	141	0
VFMB1-4007PL	6.0	200.0	0.12	5.8	0.75	1.7	60	141	0
VFMB1-4015PL	6.0	200.0	0.12	4.3	1.50	2.4	55	141	0
VFMB1-4022PL	5.0	200.0	0.12	4.1	2.20	4.5	52	141	0
VFMB1-4037PL	5.0	160.0	0.12	3.4	4.00	7.4	48	141	1
VFMB1-4055PL	4.0	80.0	0.24	2.6	5.50	10.5	46	141	1
VFMB1-4075PL	3.0	60.0	0.44	2.3	7.50	14.1	43	141	1
VFMB1-4110PL	2.0	40.0	0.66	2.2	11.00	20.3	41	141	1
VFMB1-4150PL	2.0	30.0	0.88	1.9	15.00	27.3	38	141	1

-Default settings by setup menu

Setting	Main regions	Frequency	Base frequency voltage 1 & 2		V/F control mode selection	Supply voltage correction (output voltage limitation)	Motor rated speed
		<i>UL, UL, F170, F204, F213, F219, F330, F367, F814 (Hz)</i>	<i>ULU, F171 (V)</i>	240V class	500V class	<i>Pt</i>	<i>F307</i>
<i>EU</i>	Europe	50.0	230	400	0	2	1410
<i>ASIA</i>	Asia	50.0	230	400	0	2	1410
<i>USA</i>	North America	60.0	230	460	0	2	1710
<i>JP</i>	Japan	60.0	200	400	2	3	1710