

TOSVERT™ VF-PS1 Parameter Setting List

-Use information

-Please fill it out if necessary

Item	Contents	Item	Contents
Setting date/person		Customers name/Last delivery name	
Application		Machine's type-form/serial number	
Motor's maker /type-form		Motor's capacity/Rating	
Inverter's type-form/quantity	VFPS1	Inverter's serial number	
Using optional devices		Use peripheral device	
Connected control terminals	F, R, RES, S1, S2, S3, RR/S4, P24/PLC, CC, PP, PWR, VI/II, RX, FM, AM, OUT1, OUT2, NO, CCA, +SU, FLA, FLB, FLC		
Use main circuit/switch	R/L1, S/L2, T/L3, U/T1, V/T2, W/T3 PA+, PB, PC-, PO, PA+, RO, SO, TO	SW1(INT/PLC, PLC, INT), SW2(0-10V 0-20mA , 0-1mA) SW3(S4 , RR) , SW4(PULS , LO)	

-Please mark to symbol name of terminal block which you connect.

Basic parameter

-Four functions to entrust you

Title	Function	Adjustment range	Default setting	Memo
<i>RUH</i>	History function	-	-	
<i>RU1</i>	Automatic acceleration/ deceleration	0:Disabled 1:Automatic setting 2:Automaticsetin (during acceleration only)	0	
<i>RU2</i>	Automatic torque boost	0:Disabled 1:Automatic torque boost + auto-tuning 1 2:Sensorless vector control + auto-tuning 1	0	
<i>RU4</i>	Automatic function setting	0:Disabled 1:Frequency setting by means of voltage 2:Frequency setting by means of current 3:Voltage/current switching from external terminal 4:Frequency setting on operation panel and operation by means of terminals 5:Frequency setting and operation on operation panel 6:Coast stop	0	

Title	Function	Adjustment range	Default setting	Memo
<i>PL</i>	V/f control mode selection	0:Constant torque characteristics 1:Voltage decrease curve 2:Automatic torque boost 3:Sensorless vector control1(speed) 4:- 5:V/f 5-point setting 6:PM control 7:PG feedback control 8:- 9:Energy-saving 10:Advanced energy-saving	0	
<i>ub</i>	Manual torque boost 1	0.0~30.0%	Depending on the capacity	
<i>UL</i>	Base frequency 1	25.0~500.0Hz	50.0(-WP) 60.0(-WN)	
<i>ULU</i>	Base frequency voltage 1	200V class:50~330V 400V class:50~660V	Depending on the capacity	
<i>FH</i>	Maximum frequency	30.0~500.0Hz	80.0	
<i>UL</i>	Upper limit frequency	0.0~FH Hz	50.0(-WP) 60.0(-WN)	
<i>LL</i>	Lower limit frequency	0.0~UL Hz	0.0	
<i>ACC</i>	Acceleration time 1	0.1~6000 sec.	Depending on the capacity	
<i>DEC</i>	Deceleration time 1	0.1~6000 sec.	Depending on the capacity	
<i>RRF2</i>	RR/S4 input point 2 frequency	0.0~FH Hz	50.0(-WP) 60.0(-WN)	
<i>RIF2</i>	VI/II input point 2 frequency	0.0~FH Hz	50.0(-WP) 60.0(-WN)	
<i>SR1</i>	Preset speed operation frequency1	LL~UL Hz	0.0	
<i>SR2</i>	Preset speed operation frequency2	LL~UL Hz	0.0	
<i>SR3</i>	Preset speed operation frequency3	LL~UL Hz	0.0	
<i>SR4</i>	Preset speed operation frequency4	LL~UL Hz	0.0	
<i>SR5</i>	Preset speed operation frequency5	LL~UL Hz	0.0	
<i>SR6</i>	Preset speed operation frequency6	LL~UL Hz	0.0	
<i>SR7</i>	Preset speed operation frequency7	LL~UL Hz	0.0	
<i>FR</i>	Forward run/reverse run selection (operation panel operation)	0:Forward run 1:Reverse run 2:Forward run (Forward/reverse switchable on operation panel) 3:Reverserun (Forward/reverse switchable on operation panel)	0	

- Other basic parameters

Title	Function	Adjustment range	Default setting	Memo
<i>CRSD</i>	Command mode selection	0:Terminal input enabled 1:Operation panel input enabled (including LED/LCD option input) 2:2-wire RS485 communication input 3:4-wire RS485 communication input 4:Communication option input	0	
<i>FRSD</i>	Frequency setting mode selection 1	1:VI/II (voltage/current input) 2:RR/S4 (potentiometer/voltage input) 3:RX (voltage input) 4:Operation panel input enabled (including LED/LCD option input) 5:2-wire RS485 communication input 6:4-wire RS485 communication input 7:Communication option input 8:Optional AI1 (differential current input) 9:Optional AI2 (voltage/current input) 10:UP/DOWN frequency 11:Optional RP pulse input 12:Optional high-speed pulse input	2	

Title	Function	Adjustment range	Default setting	Memo	
$\epsilon H r$	Motor electronic Thermal protection level 1	10~100%	100		
$\sigma L n$	Electronic thermal Protection characteristic Selection	Setting	Motor type	Overload protection	OL stall
		0	Standard Motor	(protect)	x (not stall)
		1		(protect)	(stall)
		2		x (not protect)	x (not stall)
		3		x (not protect)	(stall)
		4	VF Motor	(protect)	x (not stall)
		5		(protect)	(stall)
		6		x (not protect)	x (not stall)
7	x (not protect)	(stall)			
$dSPU$	Current/voltage unit selection	0:0% 1:A (ampere)/V (volt)	0		
$F n S L$	FM terminal meter selection	0~76	0		
$F n$	FM terminal meter adjustment	-	-		
$R n S L$	AM terminal meter selection	0~76	2		
$R n$	AM terminal meter adjustment	-	-		
ζF	PWM carrier Frequency	1.0~16.0kHz (2.5~8.0kHz)	Depending on the capacity		
$U u S$	Auto-restart control selection	0:Disabled 1:At auto-restart after momentary stop 2:When turning ST on or off 3:1+2 4:At start-up	0		
$U u \zeta$	Regenerative power ride-through control	0:Disabled 1:Power ride-through 2:Deceleration stop during power failure	0		
$P b$	Dynamic braking Selection	Setting	Braking function	ST-off	Overload detect
		0	Disabled	-	-
		1	Enabled(It is Effective in trip condition.)The state of $\sigma L r$ trip is excluded.	Enabled	protect
		2		not protect	
		3		protect	
		4	Enabled(It isn't effective in trip condition)	Enabled	protect
		5		not protect	
		6		protect	
		7	Disabled	protect	
8	not protect				
$P b r$	Dynamic braking resistance	0.5~1000Ω	Depending on the capacity		
$P b \zeta P$	Allowable continuous braking resistance	0.01~600.0kW	Depending on the capacity		
$\epsilon Y P$	Factory default setting	0: - 1:50 Hz default setting 2:60 Hz default setting 3:Factory default setting 4:Trip clear 5:Cumulative operation time cleared 6:Initialization of type information 7:Save user-defined parameters 8:Reset of user-defined parameters 9:Cumulative fan operation time record clear 10:Acceleration/deceleration time setting 0.01 sec.~600.0 sec. 11:Acceleration/deceleration time setting 0.1 sec.~6000sec.	0		
$P S E L$	Registered parameter display selection	0:Standard setting mode at turn on the power 1:Quick mode at turn on the power 2:Quick mode only	0		
$F 1 - -$ $F 9 - -$	Extended parameters	Set detailed parameters shown in the following pages.	-		
$\zeta r. U$	Automatic edit function	-	-		

Title	Function	Adjustment range	Default setting	Memo
$F 106$	Input terminal priority selection	0:Disabled 1:Enabled	0	
$F 108$	Analog VI/II voltage/current switching	0:Voltage input 1:Current input	0	
$F 109$	Analog AI2 (optional circuit board) voltage/current switching	0:Voltage input 1:Current input	0	
$F 110$	Always ON function selection 1	0~155	6	
$F 111$	Input terminal function selection 1 (F)	0~155	2	
$F 112$	Input terminal function selection 2 (R)	0~155	4	
$F 114$	Input terminal function selection 4 (RES)	0~155	8	
$F 115$	Input terminal function selection 5 (S1)	0~155	10	
$F 116$	Input terminal function selection 6 (S2)	0~155	12	
$F 117$	Input terminal function selection 7 (S3)	0~155	14	
$F 118$	Input terminal function selection 8 (RR/S4)	0~155	16	
$F 119$	Input terminal function selection 9 (LI1)	0~155	0	
$F 120$	Input terminal function selection 10 (LI2)	0~155	0	
$F 121$	Input terminal selection 11 (LI3)	0~155	0	
$F 122$	Input terminal selection 12 (LI4)	0~155	0	
$F 123$	Input terminal selection 13 (LI5)	0~155	0	
$F 124$	Input terminal selection 14 (LI6)	0~155	0	
$F 125$	Input terminal selection 15 (LI7)	0~155	0	
$F 126$	Input terminal selection 16 (LI8)	0~155	0	
$F 127$	Always ON function selection 2	0~155	0	
$F 128$	Always ON function selection 3	0~155	0	
$F 130$	Output terminal function selection 1 (OUT1)	0~255	4	
$F 131$	Output terminal function selection 2 (OUT2)	0~255	6	
$F 132$	Output terminal function selection 3 (FL)	0~255	10	
$F 133$	Output terminal function selection 4 (OUT3)	0~255	254	
$F 134$	Output terminal function selection 5 (OUT4)	0~255	254	
$F 135$	Output terminal function selection 6 (R1)	0~255	254	
$F 136$	Output terminal function selection 7 (OUT5)	0~255	254	
$F 137$	Output terminal function selection 8 (OUT6)	0~255	254	
$F 138$	Output terminal function selection 9 (R2)	0~255	254	
$F 140$	Input terminal 1 response time selection (F)	2 ~ 200ms	8	
$F 141$	Input terminal 2 response time selection (R)	2 ~ 200ms	8	
$F 143$	Input terminal 4 response time selection (RES)	2 ~ 200ms	8	
$F 144$	Input terminal 5~12 response time selection	2 ~ 200ms	8	
$F 145$	Input terminal 13~16 response time selection	2 ~ 200ms	8	
$F 168$	Output terminal function selection 10 (R3)	0~255	254	
$F 169$	Output terminal function selection 11 (R4)	0~255	254	
$F 170$	Base frequency 2	25.0~ $F H$ Hz	50.0(-WP) 60.0(-WN)	
$F 171$	Base frequency voltage 2	200Vclass:50~330V 400Vclass:50~660V	Depending on the capacity	
$F 172$	Manual torque boost 2	0.0~30.0%	Depending on the capacity	
$F 173$	Thermal protection level 2	10~100%	100	
$F 190$	V/f 5-point setting VF1 frequency	0.0~ $F H$ Hz	0.0	
$F 191$	V/f 5-point setting VF1 voltage	0.0~100.0%	0.0	
$F 192$	V/f 5-point setting VF2 frequency	0.0~ $F H$ Hz	0.0	
$F 193$	V/f 5-point setting VF2 voltage	0.0~100.0%	0.0	
$F 194$	V/f 5-point setting VF3 frequency	0.0~ $F H$ Hz	0.0	
$F 195$	V/f 5-point setting VF3 voltage	0.0~100.0%	0.0	
$F 196$	V/f 5-point setting VF4 frequency	0.0~ $F H$ Hz	0.0	
$F 197$	V/f 5-point setting VF4 voltage	0.0~100.0%	0.0	
$F 198$	V/f 5-point setting VF5 frequency	0.0~ $F H$ Hz	0.0	
$F 199$	V/f 5-point setting VF5 voltage	0.0~100.0%	0.0	

Expansion parameter

-Input and output parameter 1

Title	Function	Adjustment range	Default setting	Memo
$F 100$	Low-speed signal output frequency	0.0~ $U L$ Hz	0.0	
$F 101$	Speed reach setting frequency	0.0~ $U L$ Hz	0.0	
$F 102$	Speed reach detection band	0.0~ $U L$ Hz	2.5	
$F 105$	Priority when forward/reverse run commands are entered simultaneously	0:Reverse run 1:Stop	1	

-Frequency parameter

Title	Function	Adjustment range	Default setting	Memo
F200	Frequency priority selection	0:F.R0dIF207 terminal switching (input terminal function selection 104,105) 1:F.R0dIF207 frequency switching (switching wit F208)	0	
F201	VI/II input point 1 setting	0~100%	0	
F202	VI/II input point 1 frequency	0.0~FH Hz	0.0	
F203	VI/II input point 2 setting	0~100%	100	
R1F2	VI/II input point 2 frequency	0.0~FH Hz	50.0(-WP) 60.0(-WN)	
F205	VI/II input point 1 rate	0~250%	0	
F206	VI/II input point 2 rate	0~250%	100	
F207	Frequency setting mode selection 2	Same as F.R0d (1~12)	1	
F208	Speed command priority switching frequency	0.1~FH Hz	0.1	
F209	Analog input filter	0:No filter 1:Filter approx. 10ms 2:Filter approx. 15ms 3:Filter approx. 30ms 4:Filter approx. 60ms	0	
F210	RR/S4 input point 1 setting	0~100%	0	
F211	RR/S4 input point 1 frequency	0.0~FH Hz	0.0	
F212	RR/S4 input point 2 setting	0~100%	100	
RUF2	RR/S4 input point 2 frequency	0.0~FH Hz	50.0(-WP) 60.0(-WN)	
F214	RR/S4 input point 1 rate	0~250%	0	
F215	RR/S4 input point 2 rate	0~250%	100	
F216	RX input point 1 setting	-100~100%	0	
F217	RX input point 1 frequency	0.0~FH Hz	0.0	
F218	RX input point 2 setting	-100~100%	100	
F219	RX input point 2 frequency	0.0~FH Hz	50.0(-WP) 60.0(-WN)	
F220	RX input point 1 rate	-250~250%	0	
F221	RX input point 2 rate	-250~250%	100	
F222	AI1 input point 1 setting	-100~100%	0	
F223	AI1 input point 1 frequency	0.0~FH Hz	0.0	
F224	AI1 input point 2 setting	-100~100%	100	
F225	AI1 input point 2 frequency	0.0~FH Hz	50.0(-WP) 60.0(-WN)	
F228	AI2 input point 1 setting	0~100%	0	
F229	AI2 input point 1 frequency	0.0~FH Hz	0.0	
F230	AI2 input point 2 setting	0~100%	100	
F231	AI2 input point 2 frequency	0.0~FH Hz	50.0(-WP) 60.0(-WN)	
F234	RP/high speed pulse input point 1 setting	0~100%	0	
F235	RP/high speed pulse input point 1 frequency	0.0~FH Hz	0.0	
F236	RP/high speed pulse input point 2 setting	0~100%	100	
F237	RP/high speed pulse input point 2 frequency	0.0~FH Hz	50.0(-WP) 60.0(-WN)	
F240	Starting frequency setting	0.0~10.0Hz	0.1	
F241	Operation start frequency	0.0~FH Hz	0.0	
F242	Operation start frequency hysteresis	0.0~30.0Hz	0.0	
F243	Stop frequency setting	0.0~30.0Hz	0.0	
F244	Frequency command dead band	0.0~5.0Hz	0.0	
F245	Start frequency / Stop frequency operation selection	0:standard 1:mode 1	0	
F250	DC braking start frequency	0.0~120.0Hz	0.0	
F251	DC braking current	0~100%	50	
F252	DC braking time	0.0~20.0 sec.	1.0	
F253	Forward/reverse DC braking priority control	0:Disabled 1:Enabled	0	
F254	Motor shaft fixing control	0:Disabled 1:Enabled	0	
F255	0Hz command output selection	0:Default (DC braking) 1:0Hz command	0	
F256	Time limit for lower-limit frequency operation	0.0:Disabled, 0.1~600.0sec.	0.0	
F260	Jog run frequency	F240~20.0Hz	5.0	
F261	Jog run stop pattern	0:Deceleration stop 1:Coast stop 2:DC braking stop	0	
F262	Operation panel jog run mode	0:Disabled 1:Operation panel jog run mode enabled	0	
F264	Input from external contacts – UP response time	0.0~10.0 sec.	0.1	
F265	Input from external contacts – UP frequency step	0.0~FH Hz	0.1	
F266	Input from external contacts – DOWN response time	0.0~10.0 sec.	0.1	

Title	Function	Adjustment range	Default setting	Memo
F267	Input from external contacts – DOWN frequency step	0.0~FH Hz	0.1	
F268	Initial UP/DOWN frequency	LL~UL Hz	0.0	
F269	Initial up/down frequency rewriting	0:Not changed 1:Setting of F268 changed when power is turned off	1	
F270	Jump frequency 1	0.0~FH Hz	0.0	
F271	Jumping width 1	0.0~30.0Hz	0.0	
F272	Jump frequency 2	0.0~FH Hz	0.0	
F273	Jumping width 2	0.0~30.0Hz	0.0	
F274	Jump frequency 3	0.0~FH Hz	0.0	
F275	Jumping width 3	0.0~30.0Hz	0.0	
F287	Preset speed operation frequency 8	LL~UL Hz	0.0	
F288	Preset speed operation frequency 9	LL~UL Hz	0.0	
F289	Preset speed operation frequency 10	LL~UL Hz	0.0	
F290	Preset speed operation frequency 11	LL~UL Hz	0.0	
F291	Preset speed operation frequency 12	LL~UL Hz	0.0	
F292	Preset speed operation frequency 13	LL~UL Hz	0.0	
F293	Preset speed operation frequency 14	LL~UL Hz	0.0	
F294	Preset speed operation frequency 15 (Forced operation frequency)	LL~UL Hz	0.0	
F295	Bumpless operation selection	1:Disabled 2:Enabled	0	

-Driving mode parameter

Title	Function	Adjustment range	Default setting	Memo
CF	PWM carrier frequency	1.0~16.0kHz (2.5~8.0kHz)	Depending on the capacity	
UUS	Auto-restart control selection	0:Disabled 1:At auto-restart 2:When turning ST operation standby signal on or off 3:1+2, 4:Starting	0	
UUL	Regenerative power ride-through control	0:Disabled 1:Power ride-through 2:Deceleration stop during power failure	0	
F303	Retry selection	0:Deselect, 1-10 times	0	
Pb	Dynamic braking selection	Setting Braking function ST-off Overload detect	0	
		0 Disabled - -		
		1 Enabled (It is Effective in trip condition.) Enabled protect		
		2 Enabled (It is Effective in trip condition.) Disabled not protect		
		3 The state of UL r trip is excluded. Disabled protect		
		4 Disabled not protect		
		5 Enabled (It isn't effective in trip condition) Enabled protect		
		6 Enabled not protect		
		7 Disabled protect		
		8 Disabled not protect		
F305	Overvoltage limit operation	0:Enabled 1:Disabled 2:Enabled (quick deceleration) 3:Enabled (dynamic quick deceleration)	2	
F307	Base frequency voltage selection (correction of supply voltage)	0:Without voltage compensation (limitless output voltage) 1:With voltage compensation (limitless output voltage) 2:Without voltage compensation (limited output voltage) 3:With voltage compensation (limited output voltage)	1	
Pbr	Dynamic braking resistance	0.5~1000Ω	Depending on the capacity	
PbCP	Allowable continuous braking resistance	0.01~600.0kW	Depending on the capacity	
F310	Non-stop control time/deceleration time during power failure	0.1~320.0 sec.	2.0	

Title	Function	Adjustment range	Default setting	Memo
F311	Reverse-run prohibition selection	0:Permit all 1:Prohibit reverse run 2:Prohibit forward run	0	
F312	Random mode	0:Disabled, 1:Enabled	0	
F313	Output voltage waveform selection	0:PWM carrier frequency control 1 1:PWM carrier frequency control 2	0	
F316	Carrier frequency control mode selection	0: Not decrease carrier frequency automatically 1: Decrease carrier frequency automatically 2: Not decrease carrier frequency automatically, 400V class supported 3: Decrease carrier frequency automatically, 400V class supported 4: Not decrease carrier frequency automatically, with sinusoidal filter 5: Decrease carrier frequency automatically, with sinusoidal filter	Depending on the capacity	
F319	Regenerative over-excitation upper limit	100~160%	140	
F320	Drooping gain	0.0~100.0% (Enabled if P _τ =3 or 7)	0.0	
F321	Speed at drooping gain 0%	0.0~320.0Hz (Enabled if P _τ =3 or 7)	0.0	
F322	Speed at drooping gain F320	0.0~320.0Hz (Enabled if P _τ =3 or 7)	0.0	
F323	Drooping insensitive torque	0~100% (Enabled if P _τ =3 or 7)	10	
F324	Drooping output filter	0.1~200.0 rad/s (Enabled if P _τ =3 or 7)	100.0	
F354	Commercial power /inverter switching output selection	0:Disabled 1:Automatic switching in the event of a trip 2:Commercial power switching frequency setting 3:Commercial power switching frequency setting + automatic switching in the event of a trip	0	
F355	Commercial power/inverter switching frequency	0~U _L Hz	50.0(-WP) 60.0(-WN)	
F356	Inverter-side switching waiting time	0.10~10.00 sec.	Depending on the capacity	
F357	Commercial power-side switching waiting time	0.40~10.00 sec.	0.62	
F358	Commercial power switching frequency holding time	0.10~10.00 sec.	2.00	
F359	PID control switching	0:No PID control 1:Process type PID control (temp./pressure, etc.) operation 2:Speed type PID control (potentiometer, etc.) operation 3:Stop retaining P control 4:Dancer control	0	
F360	PID control feedback control signal selection	0:Deviation input (no feedback input) 1:VI/II (voltage/current input) 2:RR/S4 (potentiometer/voltage input) 3:RX (voltage input) 4:Optional AI1 (differential current input) 5:Optional AI2 (voltage/current input) 6:PG feedback option	0	
F361	Delay filter	0.0~25.0	0.1	
F362	Proportional (P) gain	0.01~100.0	0.10	
F363	Integral (I) gain	0.01~100.0	0.10	
F364	PID deviation upper limit	L L ~U L Hz	U L	
F365	PID deviation lower limit	L L ~U L Hz	U L	
F366	Differential (D) gain	0.00~2.55	0.00	
F367	Process upper limit	L L ~U L Hz	U L	
F368	Process lower limit	L L ~U L Hz	L L	
F369	PID control waiting time	0~2400 sec.	0	
F370	PID output upper limit	L L ~U L Hz	U L	
F371	PID output lower limit	L L ~U L Hz	L L	
F372	Process increasing rate (speed type PID control)	0.1~600.0	10.0	
F373	Process decreasing rate (speed type PID control)	0.1~600.0	10.0	
F374	Frequency command agreement detection range	0.0~F _H Hz	2.5	

Title	Function	Adjustment range	Default setting	Memo
F375	Number of PG input pulses	1~9999	500	
F376	Selection of number of PG input phases	1:Single-phase input 2:Two-phase input 3:Two-phase input (Inversion of polarity)	2	
F377	PG disconnection detection	0:Disabled 1:Enabled (with filter) 2:Enabled (Detection of momentary power failure)	0	
F378	Number of RP terminal input Pulses	1~9999	500	
F379	PID output dead band	0~100%	0	

-torque up parameter1

Title	Function	Adjustment range	Default setting	Memo
F400	Auto-tuning 1	0:No auto-tuning 1:Initialize motor constant (0 after execution) 2:Continue operation continued after auto-tuning (0 after execution) 3:Auto-tuning by input terminal signal 4:Motor constant auto calculation (0 after execution)	0	
F401	Slip frequency gain	0~150%	70	
F402	Cooled	0:Disabled 1:Self-cooled motor 2:Forced air-cooled motor	0	
F405	Motor rated capacity (motor name plate)	0.10~630.0kW	Depending on the capacity	
F406	Motor rated current (motor name plate)	0.1~2000A	Depending on the capacity	
F407	Motor rated rotational speed (motor name plate)	100~60000min-1	Depending on the capacity	
F410	Motor constant 1 (torque boost)	0.0~30.0%	Depending on the capacity	
F411	Motor constant 2 (no load current)	10~90%	Depending on the capacity	
F412	Motor constant 3 (leak inductance)	0~250 (× 0.1%)	Depending on the capacity	
F413	Motor constant 4 (rated slip)	0.1~25.0%	Depending on the capacity	
F415	Exciting strengthening Coefficient	100~130%	100	
F416	Stall prevention factor	10~250	100	
F440	Power running torque limit Selection	1:VI/II (voltage/current input) 2:RR/S4 (potentiometer/voltage input) 3:RX (voltage input) 4:F441	4	
F441	Power running torque limit Level	0.0~249.9% 250.0:Disabled	250.0	
F442	Regenerative braking torque limit selection	1:VI/II (voltage/current input) 2:RR/S4 (potentiometer/voltage input) 3:RX (voltage input) 4:F443	4	
F443	Regenerative braking torque limit 1 level	0.0~249.9% 250.0:Disabled	250.0	
F454	Constant output zone torque limit selection	0:Constant output limit 1:Constant torque limit	0	
F455	Factory setting constant 1	-	0	
F458	Current control proportional gain	0~1000	0	
F460	Speed loop proportional gain	1~9999	12	
F461	Speed loop stabilization coefficient	1~9999	100	
F462	Moment of inertia of load 1	0~100	35	
F467	Motor oscillation control	0:Disabled 1:Enabled(Low gain) 2:Enabled(Middle gain) 3:Enabled(High gain)	0	
F468	Stall prevention control switching	0: Stall prevention control 1 1: Stall prevention control 2	0	
F469	Overvoltage limit constant	0: Automatic, 1~1000ms	0	

-Input and output parameter2

Title	Function	Adjustment range	Default setting	Memo
F470	VI/II input bias	0~255	Depending on each unit	
F471	VI/II input gain	0~255	Depending on each unit	
F472	RR/S4 input bias	0~255	Depending on each unit	
F473	RR/S4 input gain	0~255	Depending on each unit	
F474	RX input bias	0~255	Depending on each unit	
F475	RX input gain	0~255	Depending on each unit	
F476	Optional AI1 input bias	0~255	Depending on each unit	
F477	Optional AI1 input gain	0~255	Depending on each unit	
F478	Optional AI2 input bias	0~255	Depending on each unit	
F479	Optional AI2 input gain	0~255	Depending on each unit	
F490	Factory setting constant 2	-	0	
F491	Auto-restart method selection	0:Searching speed method 1 (factory setting) 1:Searching speed method 2	0	
F492	V/f modulation ratio (for switching)	10 ~ 100%	100	
F495	Max output voltage modulation rate	0:Standard 1:Strait 100% 2:102.5% 3:105%	0	
F498	PM motor constant 1 (d axis inductance)	0~25%	10.0	
F499	PM motor constant 2 (d axis inductance)	0~25%	10.0	

-Picking up speed and slowing down time parameter

Title	Function	Adjustment range	Default setting	Memo
F500	Acceleration time 2	0.1~6000 sec.	Depending on the capacity	
F501	Deceleration time 2	0.1~6000 sec.	Depending on the capacity	
F502	Acceleration/deceleration 1 pattern	0:Strait 1:S-pattern 1 2:S-pattern 2	0	
F503	Acceleration/deceleration 2 pattern	0:Strait 1:S-pattern 1 2:S-pattern 2	0	
F504	Panel acceleration/Deceleration selection	1:Acceleration/deceleration1 2:Acceleration/deceleration2	1	
F505	Acceleration/deceleration switching frequency	0.0~FH Hz	0.0	

-Communication function

Title	Function	Adjustment range	Default setting	Memo
F576	IP address setting Method	0:Manual setting (F577~F580 Enabled) 1:BOOTP 2:DHCP	0	
F577	IP card	Data1	0~255	0
F578		Data2	0~255	0
F579		Data3	0~255	0
F580		Data4	0~255	0
F581	Subnet mask	Data1	0~255	0
F582		Data2	0~255	0
F583		Data3	0~255	0
F584		Data4	0~255	0
F585	IP gate1	Data1	0~255	0
F586		Data2	0~255	0
F587		Data3	0~255	0
F588		Data4	0~255	0
F589	IP master	Data1	0~255	0
F590		Data2	0~255	0
F591		Data3	0~255	0
F592		Data4	0~255	0
F593	IO scan permission	0: Prohibit 1: Permit	0	
F594	Communication time-out (Modbus)	0.0~60.0sec.	0	

-Protection parameter

Title	Function	Adjustment range	Default setting	Memo
F601	Stall prevention level	0~164%,165:Deactivated	120	
F602	Inverter trip record retention selection	0:Clear when power is turned off 1:Retain even after power is turned off	0	
F603	Emergency stop	0:Coast stop 1:Deceleration stop 2:Emergency DC braking	0	
F604	Emergency DC braking control time	0.0~20.0 sec.	1.0	
F605	Output phase failure detection mode selection	0:Deselect 1:At starting (only one time after power is turned on) 2:At starting (each time power is turned on) 3:During operation 4:At starting + during operation 5:Output cut-off detection enabled	0	
F606	OL reduction starting Frequency	0.0~60.0Hz	6.0	
F608	Input phase failure detection mode selection	0:Disabled 1:Enabled	1	
F609	Low current detection hysteresis width	1~20%	10	
F610	Low current trip selection	0:No trip 1:Trip	0	
F611	Low current detection current	0~100%	0	
F612	Low current detection time	0~255 sec.	0	
F613	Selection of short circuit detection at starting	0:Each time (standard pulse) 1:Only one time after power is turned on 2:Each time (short pulse) 3:Only one time after power is turn on (short pulse) 4:Each time (Extremely shot-time pulse) 5:Only one time after power is turn on (Extremely shot-time pulse)	0	
F615	Overtorque trip selection	0:No trip 1:Trip	0	
F616	Overtorque detection level during power running	0~250%	150	
F617	Overtorque detection level during regenerative braking	0~250%	150	
F618	Overtorque detection time	0.00~10.00 sec.	0.50	
F619	Overtorque detection hysteresis	0~100%	10	
F620	Cooling fan control selection	0:Auto 1:Always ON	0	
F621	Cumulative operation time alarm setting	0.1~999.9 (x100h)	610.0	
F622	Abnormal speed detection time	0.01~100.0 sec.	0.01	
F623	Overspeed detection frequency upper band	0.0:Disabled, 0.1~30.0Hz	0.0	
F624	Overspeed detection frequency lower band	0.0:Disabled, 0.1~30.0Hz	0.0	
F625	Undervoltage detection level	50~79%, 80:(auto mode)	80	
F626	Overvoltage limit operation level	100~150%	134	
F627	Undervoltage trip selection	0:Disabled 1:Enabled	0	
F629	Regenerative power ride-through control level	55~100%	75	
F631	Temperature detection	0:Standard (120%-60 sec.) 1:Estimation of temperature	0	
F633	VI/II analog input wire breakage detection level	0:None 1~100%	0	
F634	Annual average ambient Temperature (calculation for part replacement alarms)	1:-10 ~+10 degree C 2:+11~+20 degree C 3:+21~+30 degree C 4:+31~+40 degree C 5:+41~+50 degree C 6:+51~+60 degree C	3	
F635	Rush current suppression relay activation time	0.0~2.5 sec.	0.0	
F637	PTC1 thermal selection	0:Deselect 1:Select	0	
F638	PTC2 thermal selection	0:Deselect 1:Select	0	
F639	Braking resistance overload time (10 times of rated torque)	0.1~600.0 sec.	5.0	
F640	Step-out detection current level (for PM motors)	10~150	100	
F641	Step-out detection time (for PM motors)	0.0:Not detect 0.1~25.0	0.0	

Title	Function	Adjustment range	Default setting	Memo
F643	Brake-equipped motor restart condition selection	0:Default (no waiting time for frequencies of 10Hz and less) 1:Conditional (no waiting time for frequencies of 20Hz and less)	0	
F644	Action in the event of VIII analog input wire breakage	0:Trip mode 1:The inverter operates the motor at preset speed operation frequency 14	0	
F645	PTC thermal selection	0:Disabled 1:Enabled (trip mode) 2:Enabled (alarm mode)	0	
F646	PTC detection resistor value	100-9999ohm	3000	
F647	Control power supply backup option failure monitoring	0:Control power supply not backed up 1:Control power supply backed up (alarm in the event of a failure) 2:Control power supply backed up (tripping in the event of a failure)	0	
F650	Forced fire-speed control selection	0:Disabled 1:Enabled	0	
F651	Undertorque detection selection	0:Alarm mode 1:Trip mode	0	
F652	Undertorque detection level during power running	0~250%	0	
F653	Undertorque detection level during regenerative braking	0~250%	0	
F654	Undertorque detection time	0.00~10.00 sec.	0.50	
F655	Undertorque detection hysteresis	0~100%	10	
F660	Override addition input selection	0:Disabled 1:VIII (voltage/current Input) 2:RR/S4 (potentiometer/voltage input) 3:RX (voltage input) 4:Operation panel input enabled (including LED/LCD option input) 5:2-wire RS485 input enabled 6:4-wire RS485 input enabled 7:Communications option input enabled 8:Optional AI1 (differential current input) 9:Optional AI2 (voltage/current input) 10:UP/DOWN frequency 11:Optional RP pulse input 12:Optional high-speed pulse input 13:-	0	
F661	Override multiplication input selection	0:Disabled 1:VIII 2:RR/S4 3:RX 4:- 5:Optional AI1	0	
F665	Earth detection selection	0:detection (except in stop) 1:no detection	0	
F669	Logic output/pulse output selection (OUT1)	0:Logic output, 1:Pulse output	0	
RR5L	AM terminal meter selection	0~76	2	
RR	AM terminal meter adjustment	-	-	
F672	MON1 terminal meter selection	0~76	4	
F673	MON1 terminal meter adjustment	-	-	
F674	MON2 terminal meter selection	0~76	5	
F675	MON2 terminal meter adjustment	-	-	
F676	Pulse output function selection	0~49	0	
F677	Selection of number of pulses	1.00~43.20kHz	3.84	
F678	Constant at the time of filtering	4msec, 8msec~100msec	64	
F681	FM voltage/current output switching	0:Voltage 0~10V output 1:Current 0~20mA output	0	
F682	FM output gradient characteristic	0:Negative gradient (descending) 1:Positive gradient (ascending)	1	
F683	FM bias adjustment	-10.0~100.0%	0.0	

Title	Function	Adjustment range	Default setting	Memo
F684	FM output filter	0:No filter 1:Filter approx. 10ms 2:Filter approx. 15ms 3:Filter approx. 30ms 4:Filter approx. 60ms 5:Filter approx. 120ms 6:Filter approx. 250ms 7:Filter approx. 500ms 8:Filter approx. 1s	0	
F685	AM output gradient characteristic	0:Negative inclination (downward slope) 1:Positive inclination (upward slope)	1	
F686	AM bias adjustment	-10.0~100.0%	0.0	
F688	MON1 voltage/current output switching	0:Voltage -10~10V output 1:Voltage 0~10V output 2:Current 0~20mA output	1	
F689	MON1 output gradient characteristic	0:Negative inclination (downward slope) 1:Positive inclination (upward slope)	1	
F690	MON1 bias adjustment	-10.0~100.0%	0.0	
F691	MON2 voltage/current output switching	0:Voltage -10~10V output 1:Voltage 0~10V output 2:Current 0~20mA output	1	
F692	MON2 output gradient characteristic	0:Negative inclination (downward slope) 1:Positive inclination (upward slope)	1	
F693	MON2 bias adjustment	-10.0~100.0%	0.0	

-Panel parameter

Title	Function	Adjustment range	Default setting	Memo
F700	Parameter write protect selection	0:Permit 1:Prohibit	0	
d5PU	Current/voltage unit selection	0:% 1:A (ampere)/V (volt)	0	
F702	Frequency free unit display magnification	0.00:OFF, 0.01~200.0	0.00	
F703	Frequency free unit conversion selection	0:All frequencies display free unit conversion 1:PID frequencies free unit conversion	0	
F705	Free unit display gradient characteristic	0:Negative inclination (downward slope) 1:Positive inclination (upward slope)	1	
F706	Free unit display bias	0.00~FH Hz	0.00	
F707	Changing step selection 1	0.00:Disabled, 0.01~FH Hz	0.00	
F708	Changing step selection 2	0:Disabled, 1~255	0	
F709	Standard monitor hold function	0:Real time 1:Peak hold 2:Minimum hold	0	
F710	Standard monitor display selection	0~80	0	
F711	Status monitor 1 display selection	0~80	1	
F712	Status monitor 2 display selection	0~80	2	
F713	Status monitor 3 display selection	0~80	3	
F714	Status monitor 4 display selection	0~80	4	
F721	Operation panel stop pattern selection	0:Deceleration stop 1:Coast stop	0	
F730	Operation panel frequency setting prohibition selection	0:Permit 1:Prohibit	0	
F731	LED/LCD panel cable breakage detection selection	0:Disconnection detection (ERR9 trip) 1:No disconnection detection (retain operation command)	1	
F734	Operation panel emergency stop operation prohibition selection	0:Permit 1:Prohibit	0	
F735	Operation panel reset operation prohibition selection	0:Permit 1:Prohibit	0	
F736	Prohibition of change of CnGd/FnGd during operation	0:Permit 1:Prohibit	1	
F737	All key operation prohibition	0:Permit 1:Prohibit	0	
F740	Trace selection	0:Deselect 1:At tripping 2:At triggering	1	
F741	Trace cycle	0:4ms 1:20ms 2:100ms 3:1s 4:10s	2	
F742	Trace data 1	0~49	0	
F743	Trace data 2	0~49	1	
F744	Trace data 3	0~49	2	
F745	Trace data 4	0~49	3	

Title	Function	Adjustment range	Default setting	Memo
F 748	Integral output power retention selection	0:0:Disabled 1:1:Enabled	1	
F 749	Integral output power display unit selection	0:1=1kWh 1:1=10kWh 2:1=100kWh 3:1=1000kWh 4:1=10000kWh	Depending on the capacity	
F 750	EASY key function selection	0:Quick mode/standard setting mode switching function 1:Shortcut key: pressing for 2 sec. to record the parameter, pressing normally to jump to recorded parameter (first jump to the 1st history) 2:Local/remote key:Local by ON 3:Monitor peak minimum hold trigger	0	
F 751	Quick registration parameter 1	0~999	40(AU4)	
F 752	Quick registration parameter 2	0~999	15(PT)	
F 753	Quick registration parameter 3	0~999	11(FH)	
F 754	Quick registration parameter 4	0~999	9(ACC)	
F 755	Quick registration parameter 5	0~999	10(dEC)	
F 756	Quick registration parameter 6	0~999	600(tHr)	
F 757	Quick registration parameter 7	0~999	6(FM)	
F 758	Quick registration parameter 8	0~999	999	
F 759	Quick registration parameter 9	0~999	999	
F 760	Quick registration parameter 10	0~999	999	
F 761	Quick registration parameter 11	0~999	999	
F 762	Quick registration parameter 12	0~999	999	
F 763	Quick registration parameter 13	0~999	999	
F 764	Quick registration parameter 14	0~999	999	
F 765	Quick registration parameter 15	0~999	999	
F 766	Quick registration parameter 16	0~999	999	
F 767	Quick registration parameter 17	0~999	999	
F 768	Quick registration parameter 18	0~999	999	
F 769	Quick registration parameter 19	0~999	999	
F 770	Quick registration parameter 20	0~999	999	
F 771	Quick registration parameter 21	0~999	999	
F 772	Quick registration parameter 22	0~999	999	
F 773	Quick registration parameter 23	0~999	999	
F 774	Quick registration parameter 24	0~999	999	
F 775	Quick registration parameter 25	0~999	999	
F 776	Quick registration parameter 26	0~999	999	
F 777	Quick registration parameter 27	0~999	999	
F 778	Quick registration parameter 28	0~999	999	
F 779	Quick registration parameter 29	0~999	999	
F 780	Quick registration parameter 30	0~999	999	
F 781	Quick registration parameter 31	0~999	999	
F 782	Quick registration parameter 32	0~999	50 (PSEL)	

-communication parameter

Title	Function	Adjustment range	Default setting	Memo
F 784	MAC address	Data1	0~255	0
F 785		Data2	0~255	0
F 786		Data3	0~255	0
F 787		Data4	0~255	0
F 788		Data5	0~255	0
F 789		Data6	0~255	0
F 792	Device name	Data1	0000~FFFF	0
F 793		Data2	0000~FFFF	0
F 794		Data3	0000~FFFF	0
F 795		Data4	0000~FFFF	0
F 796		Data5	0000~FFFF	0
F 797		Data6	0000~FFFF	0
F 798		Data7	0000~FFFF	0
F 799		Data8	0000~FFFF	0
F 800	Communication speed (2-wire RS485)	0:9600 bps 1:19200 bps 2:38400 bps	1	
F 801	Parity (2-wireRS485)	0:Non parity 1:Even parity, 2:Odd parity	1	
F 802	Inverter number (common)	0~247	0	
F 803	Communications time-out time (common to 2-wire RS485 and 4-wire RS485)	0:OFF, 1~100 sec.	0	
F 804	Communications time-out action (common to 2-wire RS485 and 4-wire RS485)	0~8	8	
F 805	Send waiting time (2-wire RS485)	0.00:Default, 0.01~2.00sec.	0.00	

Title	Function	Adjustment range	Default setting	Memo
F 806	Master/slave setting for inverter-to-inverter communications (2-wire RS485)	0:Slave (issues a 0Hz command if something goes wrong with the master) 1:Slave (continues operation if something goes wrong with the master) 2:Slave (trips for emergency stop if something goes wrong with the master) 3:Master (sends a frequency command) 4:Master (sends an output frequency) 5:- 6:-	0	
F 807	Protocol selection (2-wire RS485)	0:TOSHIBA 1:MODBUS	0	
F 808	Communication1 time-out condition selection	0:Disconnection detection 1:When communication mode enable 2:1+Driving operation	0	
F 810	Frequency point selection	0:Disabled 1:2-wire RS485 2:4-wire RS485 3:Communication add option	0	
F 811	Point 1 setting	0~100%	0	
F 812	Point 1 frequency	0.0~FH Hz	0.0	
F 813	Point 2 setting	0~100%	100	
F 814	Point 2 frequency	0.0~FH Hz	50.0(-W P) 60.0(-W N)	
F 815	Address monitor (Modbus puls)	0~64	1	
F 816	Command selection (Modbus puls)	0: Prohibit 1: Permit	0	
F 817	Number of command (Modbus puls)	0~8	0	
F 818	Number of monitors (Modbus puls)	0~8	0	
F 819	Command station (Modbus puls)	0~64	0	
F 820	Communication speed (4-wire RS485)	0:9600 bps 1:19200 bps 2:38400 bps	1	
F 821	Baud rate (Ethernet)	0:Automatic detection 1:10Mbps Full 2:10Mbps Half 3:100Mbps Full 4:100Mbps Half	0	
F 822	Baud rate monitor right port (Ethernet)	0:Automatic detection 1:10Mbps Full 2:10Mbps Half 3:100Mbps Full 4:100Mbps Half	-	
F 823	Baud rate monitor left port (Ethernet)	0:Automatic detection 1:10 Mbps Full 2:10Mbps Half 3:100Mbps Full 4:100Mbps Half	-	
F 824	(Reservation)	0:- 1:- 2:- 3:-	0	
F 825	Send waiting time (4-wire RS485)	0.00:Default, 0.01~2.00sec.	0.00	
F 826	Inverter-to-inverter communication setting (4-wire RS485)	0:Slave (issues a 0Hz command if something goes wrong with the master) 1:Slave (continues operation if something goes wrong with the master) 2:Slave (trips for emergency stop if something goes wrong with the master) 3:Master (sends a frequency command) 4:Master (sends an output frequency) 5:- 6:-	0	
F 827	Parity (4-wireRS485)	0:No parity 1:Even parity 2:Odd parity	1	
F 829	Protocol selection (4-wire RS485)	0:TOSHIBA 1:MODBUS	0	
F 830	Communication option setting 1	0~7	0	
F 831	Communication option setting 2	0000~FFFF	0000	
F 832	Communication option setting 3	0000~FFFF	0000	
F 833	Communication option setting 4	0000~FFFF	0000	
F 835	Communication option setting 6	0000~FFFF	0000	

Title	Function	Adjustment range	Default setting	Memo
F836	Communication option setting 7	0000~FFFF	0000	
F837	Communication option setting 8	0000~FFFF	0000	
F838	Communication option setting 9	0000~FFFF	0000	
F841	Communication option setting 10	0000~FFFF	0000	
F842	Communication option setting 11	0000~FFFF	0000	
F843	Communication option setting 12	0000~FFFF	0000	
F844	Communication option setting 13	0000~FFFF	0000	
F845	Communication option setting 14	0000~FFFF	0000	
F846	Communication option setting 15	0000~FFFF	0000	
F847	Communication option setting 16	0000~FFFF	0000	
F848	Communication option setting 17	0000~FFFF	0000	
F849	Communication2 time-out condition selection	0:Disconnection detection 1:When communication mode enable 2:1+Driving operation	0	
F850	Disconnection detection extended time	0.0~100.0 sec.	0.0	
F851	Inverter operation at disconnection	0:Inverter stop, communication command, frequency mode open (by <i>CRGD, FNGD</i>) 1:None (continued operation) 2:Deceleration stop 3:Coast stop 4:Network error (<i>ERRB</i> trip) 5:Preset speed operation (by <i>F852</i> setting)	0	
F852	Preset speed operation selection	0:None 1~15:Preset speed operation (by parameter setting)	0	
F853	Communication option station address monitor	0~255	0	
F854	Communication option speed switch monitor DeviceNet/CC-Link	0~255	0	
F856	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	
F870	Block write data 1	0:Disabled 1:Command information1 2:Command information2 3:Frequency command 4:Terminal board output data 5:Communication analog data 6:Rotational speed command	0	
F871	Block write data 2	Ditto	0	
F875	Block read data 1	0:Deselect 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:VI/II terminal board monitor 10:RR/S4 terminal board monitor 11:RX terminal board monitor 12:Input voltage (DC detection) 13:Speed feedback frequency 14:Torque 15:MY monitor 1 16:MY monitor 2 17:MY monitor 3 18:MY monitor 4 19:Free notes 20:Rotational speed	0	
F876	Block read data 2	Ditto	0	
F877	Block read data 3	Ditto	0	
F878	Block read data 4	Ditto	0	
F879	Block read data 5	Ditto	0	
F880	Free notes	0~FFFF	0	

Title	Function	Adjustment range	Default setting	Memo
F898	Error reset mode selection (for communication option)	0:Only reset trip if the requirement is from communication option, but reset all if the requirement is from the others. 1:Reset all 2:Only reset trip	1	
F899	Network option reset setting	0:None 1:Reset option circuit board and inverter	0	

-My function parameter

Title	Function	Adjustment range	Default setting	Memo
F900	Input function target 11	Input terminal function Number 0:Deselect 1:F terminal 2:R terminal 3:- 4:RES terminal 5:S1 terminal 6:S2 terminal 7:S3 terminal 8:RR/S4 terminal 9:L11 terminal 10:L12 terminal 11:L13 terminal 12:L14 terminal 13:L15 terminal 14:L16 terminal 15:L17 terminal 16:L18 terminal 17:B12 terminal 18:B13 terminal 19:B14 terminal 20:B15 terminal 21:Virtual input terminal 1 22:Virtual input terminal 2 23:Virtual input terminal 3 24:Virtual input terminal 4 25~32:Internal terminal 1~8 918~934:MY function number 1000~1255:Output selection number 2000~2099:FD00~FD99 3000~3099:FE00~FE99	0	
F901	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:COUNTR 2 (counter 2) 18:HOLD (hold) 19:SET (set) 20:RESET (reset) 21:CLR 22:CLRn	0	
F902	Input function target 12	Same as F900	0	
F903	Input function command 13	Same as F901	0	
F904	Input function target 13	Same as F900	0	
F905	Output function assigned object 1	Same as F900	0	
F906	Input function target 21	Same as F900	0	
F907	Input function command 22	Same as F901	0	
F908	Input function target 22	Same as F900	0	
F909	Input function command 23	Same as F901	0	
F910	Input function target 23	Same as F900	0	
F911	Output function assigned object 2	Same as F900	0	
F912	Input function target 31	Same as F900	0	
F913	Input function command 32	Same as F901	0	
F914	Input function target 32	Same as F900	0	
F915	Input function command 33	Same as F901	0	
F916	Input function target 33	Same as F900	0	
F917	Output function assigned object 3	Same as F900	0	
F918	My output percent data 1	0.00~200.0%	0.00	
F919	My output percent data 2	0.00~200.0%	0.00	
F920	My output percent data 3	0.00~200.0%	0.00	
F921	My output percent data 4	0.00~200.0%	0.00	
F922	My output percent data 5	0.00~200.0%	0.00	
F923	My output frequency data 1	0.0~500.0Hz	0.0	

Title	Function	Adjustment range	Default setting	Memo
F924	My output frequency data 2	0.0~500.0Hz	0.0	
F925	My output frequency data 3	0.0~500.0Hz	0.0	
F926	My output frequency data 4	0.0~500.0Hz	0.0	
F927	My output frequency data 5	0.0~500.0Hz	0.0	
F928	My output time data 1	0.01~600.0sec	0.01	
F929	My output time data 2	0.01~600.0sec	0.01	
F930	My output time data 3	0.01~600.0sec	0.01	
F931	My output time data 4	0.01~600.0sec	0.01	
F932	My output time data 5	0.01~600.0sec	0.01	
F933	No. of times of My output data 1	0~9999 times	0	
F934	No. of times of My output data 2	0~9999 times	0	
F935	Input function target 41	Same as F900	0	
F936	Input function command 42	Same as F901	0	
F937	Input function target 42	Same as F900	0	
F938	Input function command 43	Same as F901	0	
F939	Input function target 43	Same as F900	0	
F940	Output function assigned object 4	Same as F900	0	
F941	Input function target 51	Same as F900	0	
F942	Input function command 52	Same as F901	0	
F943	Input function target 52	Same as F900	0	
F944	Input function command 53	Same as F901	0	
F945	Input function target 53	Same as F900	0	
F946	Output function assigned object 5	Same as F900	0	
F947	Output function target 61	Same as F900	0	
F948	Input function command 62	Same as F901	0	
F949	Input function target 62	Same as F900	0	
F950	Input function command 63	Same as F901	0	
F951	Input function target 63	Same as F900	0	
F952	Output function assigned object 6	Same as F900	0	
F953	Input function target 71	Same as F900	0	
F954	Input function command 72	Same as F901	0	
F955	Input function target 72	Same as F900	0	
F956	Input function command 73	Same as F901	0	
F957	Input function target 73	Same as F900	0	
F958	Output function assigned object 7	Same as F900	0	
F959	Analog input function target 11	0:Disabled 1:VIII 2:RR/S4 3:RX 4:Optional AI1+, Optional AI1- 5:Optional AI2 6:Internal memory1	0	
F961	Analog function Assigned object 11	0:Disabled 1:Acceleration 2:Upper limit frequency (ωL) 3:Acceleration multiplication factor 4:Deceleration multiplication factor 5:Manual torque boost (ωb) 6:OC stall ($F50i$) 7:Thermal protection (t_{Hr}) 8:Speed loop gain ($F450$) 9: Drooping gain ($F320$) 10:PID P gain ($F362$)	0	
F962	Analog input function target 21	0:Disabled 1:VIII 2:RR/S4 3:RX 4:Optional AI1+, Optional AI1- 5:Optional AI2	0	
F964	Analog function Assigned object 21	0~10	0	
F965	Monitor output function target 11	2000~2099:FD00~FD99 3000~3099:FE00~FE99	2000	
F966	Monitor output function command 11	0:Normal monitor 1:Max. value 2:Min. value	0	
F967	Monitor output function target 21	2000~2099:FD00~FD99 3000~3099:FE00~FE99	2000	
F968	Monitor output function command 21	0:Normal monitor 1:Max. value 2:Min. value	0	
F969	Monitor output function target 31	2000~2099:FD00~FD99 3000~3099:FE00~FE99	2000	
F970	Monitor output function command 31	0:Normal monitor 1:Max. value 2:Min. value	0	
F971	Monitor output function target 41	2000~2099:FD00~FD99 3000~3099:FE00~FE99	2000	
F972	Monitor output function command 41	0:Normal monitor 1:Max. value 2:Min. value	0	
F973	Virtual input terminal selection 1	0~155	0	

Title	Function	Adjustment range	Default setting	Memo
F974	Virtual input terminal selection 2	0~155	0	
F975	Virtual input terminal selection 3	0~155	0	
F976	Virtual input terminal selection 4	0~155	0	
F977	My function selection	0:Disabled 1:My function + permission signal 2:My function always ON	0	

-Contents of monitor displays

Function	Monitor output selection
Standard monitor	F710
Contents of status monitor display	
Status (rotation direction)	Fixed
Status monitor 1	F711
Status monitor 2	F712
Status monitor 3	F713
Status monitor 4	F714
Output frequency monitor	when tripped
Input terminal information	Fixed
Input terminal information (optional)	Fixed
Input terminal information (optional)	Fixed
Output terminal information	Fixed
Output terminal information (optional)	Fixed
CPU1 version	Fixed
CPU2 version	Fixed
Past trip 1	Fixed
Past trip 2	Fixed
Past trip 3	Fixed
Past trip 4	Fixed
Part replacement alarm information	Fixed
Cumulative operation time	Fixed

-Monitor FM/AM/pulse output function selection

FM/AM/pulse output Option No	Monitor output Option No	Function
0	0	Output frequency
1	1	Frequency command value
2	2	Output current
3	3	Input voltage (DC detection)
4	4	Output voltage
5	5	Compensated frequency
6	6	Speed feedback (real-time value)
7	7	Speed feedback (1-second filter)
8	8	Torque
9	9	Torque command
11	11	Torque current
12	12	Exciting current
13	13	PID feedback value
14	14	Motor overload factor (OL2 data)
15	15	Inverter overload factor (OL1 data)
16	16	Regenerative braking resistance overload Factor (OLr data)
17	17	Regenerative braking resistor load factor(%ED)
18	18	Input power
19	19	Output power
23	23	Optional AI2 input
24	24	RR/S4 input
25	25	VI/II input
26	26	RX input
27	27	Optional AI1 input
28	28	FM output
29	29	AM output
30	-	Fixed output 1
31	-	Communication data output
32	-	Fixed output 2
33	-	Fixed output 3
-	31	Communication data output
-	32	Attached to expansion I/O card 1 CPU version
-	33	Attached to expansion I/O card 2 CPU version
34	34	Integral input power
35	35	Integral output power
45	-	Gain display
46	-	My function monitor 1 (Output of unsigned value)
47	-	My function monitor 2 (Output of unsigned value)
48	-	My function monitor 3 (Output of signed value)
49	-	My function monitor 4 (Output of signed value)
50	50	Signed output frequency
51	51	Signed frequency command value
52	52	Signed compensated frequency
53	53	Signed speed feedback (real-time value)
54	54	Signed speed feedback (1-second filter)
55	55	Signed torque
56	56	Signed torque command
58	58	Signed torque current
59	59	Signed PID feedback value
60	60	Signed RX input
61	61	Signed optional AI1 input
62	-	Signed fixed output 1
63	-	Signed fixed output 2
64	-	Signed fixed output 3
-	70	Rated voltage
-	71	Rotational speed
-	72	Communication option Reception counter
-	73	Communication option Abnormal counter
74	74	MON1
75	75	MON2
76	76	RP
-	77	COUNT1
-	78	COUNT2
-	79	PID result frequency
-	80	Synchronous speed Frequency command

-Input terminal function setting

Positive logic	Negative logic	Function
0	1	No function is assigned
2	3	F: Forward run command
4	5	R: Reverse run command
6	7	ST: Standby
8	9	RES: Reset
10	11	S1: Preset speed 1
12	13	S2: Preset speed 2
14	15	S3: Preset speed 3
16	17	S4: Preset speed 4
18	19	Jog run
20	21	Emergency stop
22	23	DC braking
24	25	Acceleration/deceleration switching
28	29	V/f switching signal
36	37	PID control OFF selection
46	47	External thermal error
48	49	Communication priority cancel
50	51	Holding of HD operation (stop of three-wire operation)
52	53	PID differentiation/integration reset
54	55	PID forward/reverse switching
56	57	Forced continuous operation
58	59	Specified speed operation
64	65	My function RUN signal
66	67	Auto-tuning signal
70	71	Servo lock signal
74	75	Integrating wattmeter display clear
76	77	Trace back trigger signal
86	87	Binary data write
88	89	Up/Down frequency (up)
90	91	Up/Down frequency (down)
92	93	Up/Down frequency (clear)
94	95	Dancer Correction OFF
98	99	Forward/reverse selection
100	101	Run/Stop command
102	103	Commercial power/INV switching
104	105	Frequency reference priority switching
106	107	VI/II terminal priority
108	109	Command terminal board priority
110	111	Parameter editing enabling
122	123	Rapidest deceleration command
124	125	Preliminary excitation
126	151	(reservation)
152	153	V/f ratio switching
154	155	Manual torque boost switching signal

-Output terminal function setting

Positive logic	Negative logic	Function
0	1	LL
2	3	UL
4	5	LOW
6	7	Acceleration/deceleration completion
8	9	Specified speed arrival
10	11	Failure FL (all trip)
12	13	Failure FL (except for EF, OCL, EPHO and OL2)
14	15	Overcurrent pre-alarm
16	17	Inverter overload pre-alarm
18	19	Motor overload pre-alarm
20	21	Overheat pre-alarm
22	23	Overvoltage pre-alarm
24	25	Main circuit undervoltage alarm
26	27	Low current alarm
28	29	Overtorque alarm
30	31	Braking resistor overload pre-alarm
32	33	In emergency stop
34	35	In course of retry
38	39	PID deviation limit
40	41	Run/Stop
42	43	Serious failure (OCA, OCL, EF, phase failure, etc.)
44	45	Light failure (OL, OC1, 2, 3, OP)
46	47	Commercial/INV switching output 1 (for inverter operation output)
48	49	Commercial/INV switching output 2 (for commercial operation output)
50	51	Cooling fan ON/OFF
52	53	In Jog run
54	55	Panel operation/terminal board operation switching
56	57	Cumulative operation time alarm
58	59	PROFIBUS/DeviceNet/CC-Link communication error
60	61	Forward/reverse run
62	63	Ready for operation 1
64	65	Ready for operation 2
70	71	In (pre-)alarm status
76	77	Inverter healthy output
78	79	RS485 communication error
80	81	Error code output 1 (6-bit output)
82	83	Error code output 2 (6-bit output)
84	85	Error code output 3 (6-bit output)
86	87	Error code output 4 (6-bit output)
88	89	Error code output 5 (6-bit output)
90	91	Error code output 6 (6-bit output)
92	93	Designated data output 1 (7-bit output)
94	95	Designated data output 2 (7-bit output)
96	97	Designated data output 3 (7-bit output)
98	99	Designated data output 4 (7-bit output)
100	101	Designated data output 5 (7-bit output)
102	103	Designated data output 6 (7-bit output)
104	105	Designated data output 7 (7-bit output)
110	111	Positive torque limit
112	113	Negative torque limit
114	115	Output for external rush suppression relay
120	121	L-STOP
128	129	Part replacement alarm
130	131	Overtorque pre-alarm
132	133	Operation frequency command 1/2 selection
134	135	Failure FL (except emergency stop)
136	137	Local/remote switching
138	139	Forced operation (Force)
140	141	Forced operation (Force)
142	143	Undertorque detection
144	145	Frequency command agreement signal (RR/S4)
146	147	Frequency command agreement signal (VI)
148	149	Frequency command agreement signal (RX)
150	151	PTC alarm detection
152	153	Power removal signal
154	155	V/II input wire breakage
222	223	My function output 1
224	225	My function output 2
226	227	My function output 3
228	229	My function output 4
230	231	My function output 5
232	233	My function output 6
234	235	My function output 7
236	237	My function output 8
238	239	My function output 9
240	241	My function output 10
242	243	My function output 11
244	245	My function output 12
246	247	My function output 13
248	249	My function output 14
250	251	My function output 15
252	253	My function output 16
254	255	Always OFF (for terminal signal tests)

-Standard default settings classified by inverter model (capacity)

(the following table)

Inverter type	Torque boost u b F 172	Base frequency voltage u L u F 171	Acc/dec time R C C / d E C F 500 F 501	PWM Carrier frequency C F	Dynamic braking resistance P b r	Allowable continuous braking Resistance P b C P	Carrier frequency control mode selection F 3 16	Inverter side switching waiting time F 3 56	Motor rated capacity F 405	Motor rated current F 406	Motor rated rotational speed F 407 *1	Motor1 constant1 (torque boost) F 410	Motor constant 2 (no load current) F 411	Motor constant3 (leak inductance) F 412	Motor constant 4 (rated slip) F 413	Display unit selection for integral output power F 749
VFPS1 - 2004PL	8.0	230	10.0	12.0	200.0	0.12	1	0.57	0.40	2.0	1680 (1400)	7.8	61	120	6.67	0
VFPS1 - 2007PL	8.0	230	10.0	12.0	200.0	0.12	1	0.57	0.75	3.4	1690 (1410)	7.3	54	100	6.11	0
VFPS1 - 2015PL	6.0	230	10.0	12.0	75.0	0.12	1	0.57	1.50	6.2	1690 (1410)	7.1	45	70	6.11	0
VFPS1 - 2022PL	6.0	230	10.0	12.0	75.0	0.12	1	0.57	2.20	8.9	1680 (1400)	5.9	41	70	6.67	0
VFPS1 - 2037PL	6.0	230	10.0	12.0	40.0	0.12	1	0.67	3.70	14.8	1690 (1410)	4.9	36	80	6.11	1
VFPS1 - 2055PL	4.0	230	10.0	12.0	20.0	0.24	1	0.87	5.50	21.0	1730 (1440)	3.9	34	70	3.89	1
VFPS1 - 2075PL	4.0	230	10.0	12.0	15.0	0.44	1	0.87	7.50	28.2	1730 (1440)	3.4	33	70	3.89	1
VFPS1 - 2110PM	3.0	230	10.0	12.0	10.0	0.66	1	1.07	11.0	40.6	1730 (1440)	2.8	27	60	3.89	1
VFPS1 - 2152PM	3.0	230	10.0	12.0	7.5	0.88	1	1.07	15.0	54.6	1730 (1440)	2.5	27	60	3.89	1
VFPS1 - 2185PM	3.0	230	30.0	4.0	7.5	0.88	1	1.37	18.5	68.0	1750 (1460)	2.6	27	70	2.78	1
VFPS1 - 2220PM	3.0	230	30.0	4.0	3.3	1.76	1	1.37	22.0	80.0	1750 (1460)	2.4	27	70	2.78	1
VFPS1 - 2300PM	3.0	230	30.0	4.0	3.3	1.76	1	1.37	30.0	108.0	1745 (1455)	2.2	26	70	3.06	1
VFPS1 - 2370PM	3.0	230	30.0	4.0	2.0	2.20	1	1.37	37.0	134.0	1750 (1460)	1.8	26	70	2.78	2
VFPS1 - 2452PM	3.0	230	30.0	4.0	2.0	2.20	1	1.37	45.0	160.0	1750 (1460)	1.7	26	60	2.78	2
VFPS1 - 2550P	3.0	230	30.0	2.5	2.0	2.20	1	1.87	55.0	196.0	1755 (1460)	1.6	24	70	2.50	2
VFPS1 - 2750P	2.0	230	60.0	2.5	1.7	3.40	1	2.37	75.0	258.0	1775 (1480)	1.5	28	50	1.39	2
VFPS1 - 2900P	2.0	230	60.0	2.5	1.7	3.40	1	1.37	90.0	306.0	1775 (1480)	1.3	26	50	1.39	2
VFPS1 - 4007PL	8.0	*2	10.0	12.0	200.0	0.12	1	0.57	0.75	1.7	1690 (1410)	7.3	54	100	6.11	0
VFPS1 - 4015PL	6.0	*2	10.0	12.0	200.0	0.12	1	0.57	1.50	3.1	1690 (1410)	7.1	45	60	6.11	0
VFPS1 - 4022PL	6.0	*2	10.0	12.0	200.0	0.12	1	0.57	2.20	4.5	1680 (1400)	5.9	41	70	6.67	0
VFPS1 - 4037PL	6.0	*2	10.0	12.0	160.0	0.12	1	0.67	3.70	7.4	1690 (1410)	4.9	36	70	6.11	1
VFPS1 - 4055PL	4.0	*2	10.0	12.0	80.0	0.24	1	0.87	5.50	10.5	1730 (1440)	3.9	34	70	3.89	1
VFPS1 - 4075PL	4.0	*2	10.0	12.0	60.0	0.44	1	0.87	7.50	14.1	1730 (1440)	3.4	33	70	3.89	1
VFPS1 - 4110PL	4.0	*2	10.0	12.0	40.0	0.66	1	1.07	11.0	20.3	1730 (1440)	2.8	27	60	3.89	1
VFPS1 - 4150PL	3.0	*2	10.0	12.0	30.0	0.88	1	1.07	15.0	27.3	1730 (1440)	2.5	27	60	3.89	1
VFPS1 - 4185PL	3.0	*2	30.0	4.0	30.0	0.88	3	1.37	18.5	34.0	1750 (1460)	2.6	27	70	2.78	1
VFPS1 - 4220PL	3.0	*2	30.0	4.0	15.0	1.76	3	1.37	22.0	40.0	1750 (1460)	2.4	27	70	2.78	1
VFPS1 - 4300PL	3.0	*2	30.0	4.0	15.0	1.76	3	1.37	30.0	54.0	1745 (1455)	2.2	26	70	3.06	1
VFPS1 - 4370PL	3.0	*2	30.0	4.0	8.0	1.76	3	1.37	37.0	67.0	1750 (1460)	1.8	27	70	2.78	2
VFPS1 - 4450PL	3.0	*2	30.0	4.0	8.0	1.76	3	1.37	45.0	80.0	1750 (1460)	1.7	26	60	2.78	2
VFPS1 - 4550PL	3.0	*2	30.0	4.0	8.0	1.76	3	1.37	55.0	98.0	1755 (1460)	1.6	24	70	2.50	2
VFPS1 - 4750PL	2.0	*2	60.0	4.0	8.0	1.76	3	1.37	75.0	129.0	1775 (1480)	1.5	28	50	1.39	2
VFPS1 - 4900PC	2.0	*2	60.0	2.5	3.7	7.40	3	1.37	90.0	153.0	1775 (1480)	1.3	26	50	1.39	2
VFPS1 - 4110KPC	2.0	*2	60.0	2.5	3.7	7.40	3	1.37	110.0	183.0	1775 (1480)	1.5	21	30	1.39	2
VFPS1 - 4132KPC	2.0	*2	60.0	2.5	3.7	7.40	3	1.37	132.0	217.0	1765 (1470)	0.7	20	40	1.94	2
VFPS1 - 4160KPC	1.5	*2	60.0	2.5	3.7	7.40	3	1.37	160.0	271.0	1765 (1470)	0.6	20	40	1.94	2
VFPS1 - 4220KPC	1.5	*2	60.0	2.5	1.9	8.70	3	1.37	220.0	371.0	1765 (1470)	0.6	20	40	1.94	2
VFPS1 - 4250KPC	1.5	*2	60.0	2.5	1.4	14.00	3	1.37	250.0	378.0	1765 (1470)	0.6	20	40	1.94	2
VFPS1 - 4280KPC	1.0	*2	60.0	2.5	1.4	14.00	3	1.37	280.0	464.0	1765 (1470)	0.6	20	40	1.94	2
VFPS1 - 4315KPC	1.0	*2	60.0	2.5	1.4	14.00	3	1.37	315.0	473.0	1765 (1470)	0.6	20	40	1.94	2
VFPS1 - 4400KPC	1.0	*2	60.0	2.5	0.95	17.40	3	1.37	400.0	691.0	1765 (1470)	0.6	20	30	1.94	3
VFPS1 - 4500KPC	0.5	*2	60.0	2.5	0.7	28.00	3	1.37	500.0	830.0	1765 (1470)	0.6	20	30	1.94	3
VFPS1 - 4630KPC	0.5	*2	60.0	2.5	0.7	28.00	3	1.37	630.0	946.0	1765 (1470)	0.6	20	30	1.94	3

*1: Factory default settings when the base frequency (u L) is set at 60Hz (50Hz) *2: Inverter with a model number ending with -WN: 460 -WP: 400