L300P Series Inverter
Instruction Manual Supplement

For Inverters with Model Suffix of –LBRM or –HBRM

This supplement is to be used together with the
L300P Series Inverter Instruction Manual (NB604XA)

The functions and settings in this supplement supercede those in the L300P Instruction Manual.

Manual Number: NBZ601DX

After reading this manual, keep it handy for future reference.

Hitachi Industrial Equipment Systems Co., Ltd.

Revision History

No.	Revision Contents	The Date of Issue	Operation Manual No.
1	Initial Release	Oct.1999	NBZ601AX
2	Change of Factory Default Settings	Sep.2000	NBZ601CX
3	Revised by HAL	Jun. 2002	NBZ601DX

1. Added functions

RUN Permissive input signal for FW/REV [ROK]

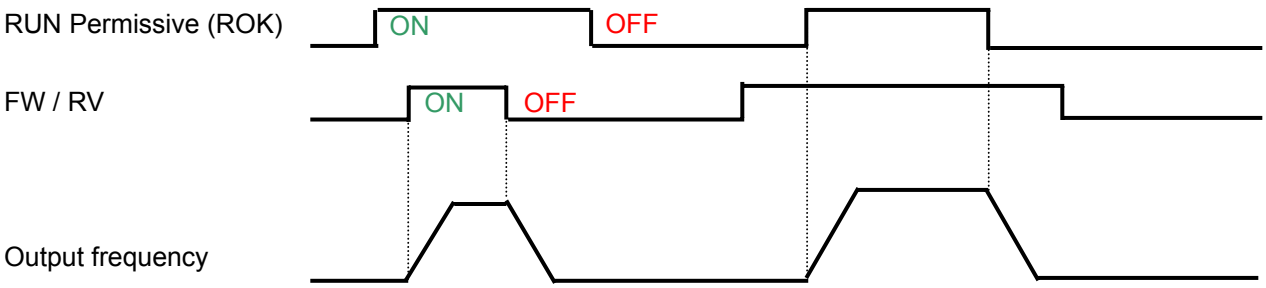
Related Functions
C001-C005 : Intelligent input setting

・Assign function 49 (ROK) to an intelligent input terminal.

・When inverter is in the STOP mode, and the RUN Permissive input signal [ROK] is "ON," the inverter can enter RUN mode via FW or RV signals

・When inverter is in the STOP mode, and the RUN Permissive input signal [ROK] is "OFF," the FW and RV terminals are disabled, and the inverter cannot enter the RUN mode.

・When inverter is in the RUN mode and Permissive input signal [ROK] transitions from "ON" to "OFF," the inverter will decelerate to a stop.



Required Parameter Settings: parameter C001 to C005 (intelligent inputs 1 to 5)
Option Code Setting: RUN Permissive input signal for FW/REV = **49** [ROK]

Output signal for RUN Command Source [RMD]

Related Functions
C021-C022 : Intelligent output setting
C026 : Alarm relay output setting
A002 : RUN command source

・Assign function 27 [RMD] to an intelligent input terminal.

・When the RUN command source is set to Remote operator, (meaning A002 = 02), the RUN Command Source Output Signal [RMD] is "ON".

・When the RUN Command Source is **NOT** the Remote operator, (A002 is NOT = 02) the RUN Command Source Output Signal [RMD] is "OFF".

Required Parameter Settings: parameter C021, C022, or C026 (Intelligent outputs 11 or 12, or alarm relay)
Option Code Setting: RUN Command Source output signal = **27** [RMD]

Inverter Action on Loss of Analog Frequency Reference Input Signal

Related Functions

P020 :Freq. During Loss of O/OI/O2

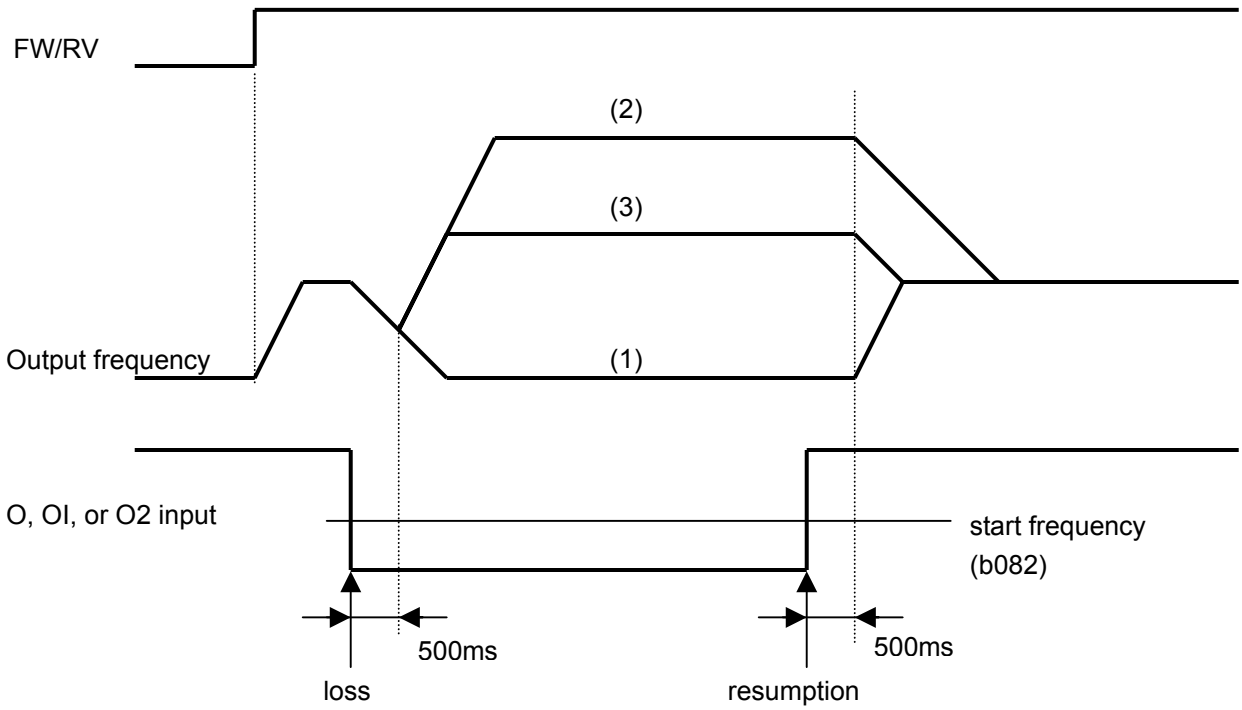
A020/A220 : 1st/2nd/multi-stage speed

b082 : Start frequency adjustment

Set parameter P050

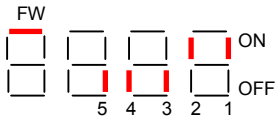
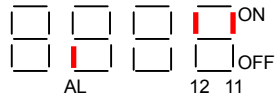
When the frequency reference is set by the O, OI, or O2 analog input, if the reference signal remains less than start frequency (parameter b082) level for more than 500 ms, the inverter assumes that the O, OI, or O2 input was lost. Depending on the setting of parameter P50, the inverter will run at a preset frequency according to the options defined in the following table. Subsequently, if the frequency reference from O, OI, or O2 input rises higher than the start frequency (parameter b082) and remains at that level for more than 500 ms, the inverter will assume that the O, OI, or O2 input was re-established and resume normal operation.

Set item	Function code	Set value	Description
Frequency during the loss of O, OI, or O2 input	P050	00	Function disabled
		01	Frequency = 0 Hz (1)
		02	Frequency = maximum frequency (2)
		03	Frequency = 1st/2nd/multi-stage speed (parameter No.A020/A220) (3)



2. Function Parameter list

Monitor mode

Display code	Function name	Monitor or Data Range (digital operator)
d001	Output Frequency Monitor	0.00-99.99/100.0-400.0 (Hz)
d002	Output Current Monitor	0.0-999.9 (A)
d003	Rotation Direction Monitor	F(forward)/o(stop)/r(reverse)
d004	Process Variable (PV) PID Feedback Monitor	0.00-99.99/100.0-999.9/1000. -9999. / 1000-9999/{100-{999 (10000-99900)
d005	Input Terminal Status	
d006	Intelligent Output Terminal Status	
d007	Scaled Output Frequency Monitor	0.00-99.99/100.0-999.9/1000. -9999. / 1000-3996
d013	Output Voltage Monitor	0.0-600.0 (V)
d014	Input Power monitor	0.0-999.9 (kW)
d016	Cumulative operation RUN time monitor	0.-9999./1000-9999/{100-{999 (hr)
d017	Cumulative Power ON Time Monitor	0.-9999./1000-9999/{100-{999 (hr)
d080	Trip Counter	0.-9999./1000-6553(10000-65530) (time)
d081	Trip monitor 1	Factor, frequency (Hz), current (A), voltage (V), RUN time (hr), power ON time (hr)
d082	Trip monitor 2	Factor, frequency (Hz), current (A), voltage (V), RUN time (hr), power ON time (hr)
d083	Trip monitor 3	Factor, frequency (Hz), current (A), voltage (V), RUN time (hr), power ON time (hr)
d084	Trip monitor 4	Factor, frequency (Hz), current (A), voltage (V), RUN time (hr), power ON time (hr)
d085	Trip monitor 5	Factor, frequency (Hz), current (A), voltage (V), RUN time (hr), power ON time (hr)
d086	Trip monitor 6	Factor, frequency (Hz), current (A), voltage (V), RUN time (hr), power ON time (hr)
d090	Programming Error Monitor	Warning code

Function Mode

Display code	Function name	Monitor or Data Range (digital operator)	LBRM/ HBRM Initial Data	LFU/HFU Initial Data
F001	Output frequency	0.0, starting frequency to Maximum frequency (Hz)	15.00 NOTE (1)	0.00
F002	Acceleration (1) time	0.01-99.99/100.0-999.9/1000.-3600.(s)	60.00	30.00
F202	Acceleration (2) time	0.01-99.99/100.0-999.9/1000. -3600. (s)	60.00	30.00
F003	Deceleration (1) time	0.01-99.99/100.0-999.9/1000. -3600. (s)	90.00	30.00
F203	Deceleration (2) time	0.01-99.99/100.0-999.9/1000. -3600. (s)	90.00	30.00
F004	Keypad Run Key Routing	00(forward)/01(reverse)	00	00

NOTE (1) : This value appears because lower limiter (A062, A262) is set to 15Hz.

Function Mode

Code		Function name	Setting range	LBRM/HFBM Initial Data	LFU/HFU Initial data
Base setting	A001	Frequency setting selection	00(VR)/01(terminal)/02(operator)/03(RS485)/ 04(option1)/05(option2)	01	01
	A002	Operation setting selection	01(terminal)/02(operator)/03(RS485)/04(option1)/05(option2)	01	01
	A003	Base frequency,	30. - maximum. frequency (Hz)	60.	60.
	A203	Base frequency, 2nd motor	30. - 2nd braking maximum. frequency (Hz)	60.	60.
	A004	Maximum frequency	30. - 400. (Hz)	60.	60.
	A204	Maximum frequency, 2nd motor	30. - 400. (Hz)	60.	60.
Analog input setting	A005	AT terminal selection	00(Changing of O and OI with AT terminal)/ 01(Changing of O and O2 with AT terminal)	00	00
	A006	02 selection	00(single)/01(auxiliary speed of O, OI) [no reversible]/ 02(auxiliary speed of O, OI [reversible]	00	00
	A011	0 start	0.00-99.99/100.0-400.0 (Hz)	0.00	0.00
	A012	0 end	0.00-99.99/100.0-400.0 (Hz)	60.00	0.00
	A013	0 start rate	0.-100.0 (%)	0.	0.
	A014	0 end rate	0.-100.0(%)	100.	100.
	A015	0 start selection	00 (external starting frequency)/01(0Hz)	01	01
	A016	O, OI, O2 sampling	1.-30.(times)	8.	8.
Multistage speed・jogging frequency setting	A019	Multi-speed selection	00(binary : range is to 16 stage speed with 4 terminals)/ 01(bit : range is to 6 stage speed with 5 terminals)	00	00
	A020	Multi-speed 0	0.00, starting frequency-maximum. frequency(Hz)	NOTE (1) 15.00	0.00
	A220	Multi-speed 0, 2nd motor	0.00, starting frequency-2nd braking maximum frequency(Hz)	NOTE (1) 15.00	0.00
	A021	Multi-speed1	0.00, starting frequency-maximum frequency(Hz)	NOTE (1) 15.00	0.00
	A022	Multi-speed2	0.00, starting frequency-maximum frequency(Hz)	NOTE (1) 15.00	0.00
	A023	Multi-speed3	0.00, starting frequency-maximum frequency(Hz)	NOTE (1) 15.00	0.00
	A024	Multi-speed4	0.00, starting frequency-maximum frequency(Hz)	NOTE (1) 15.00	0.00
	A025	Multi-speed5	0.00, starting frequency-maximum frequency(Hz)	NOTE (1) 15.00	0.00
	A026	Multi-speed6	0.00, starting frequency-maximum frequency(Hz)	NOTE (1) 15.00	0.00
	A027	Multi-speed7	0.00, starting frequency-maximum frequency(Hz)	NOTE (1) 15.00	0.00
	A028	Multi-speed8	0.00, starting frequency-maximum frequency(Hz)	NOTE (1) 15.00	0.00
	A029	Multi-speed9	0.00, starting frequency-maximum frequency(Hz)	NOTE (1) 15.00	0.00
	A030	Multi-speed10	0.00, starting frequency-maximum frequency(Hz)	NOTE (1) 15.00	0.00
	A031	Multi-speed11	0.00, starting frequency-maximum frequency(Hz)	NOTE (1) 15.00	0.00
	A032	Multi-speed12	0.00, starting frequency-maximum frequency(Hz)	NOTE (1) 15.00	0.00
	A033	Multi-speed13	0.00, starting frequency-maximum frequency(Hz)	NOTE (1) 15.00	0.00
	A034	Multi-speed14	0.00, starting frequency-maximum frequency(Hz)	NOTE (1) 15.00	0.00
	A035	Multi-speed15	0.00, starting frequency-maximum frequency(Hz)	NOTE (1) 15.00	0.00
	A038	Jogging frequency	0.00, starting frequency-9.99(Hz)	1.00	1.00
	A039	Jogging selection	00(free-run on JG stop / invalid on running) / 01(stop decelerating on JG stop / invalid on running) / 02(DC braking on JG stop/invalid on running) / 03(free-run on JG stop/valid on running [JG after stop decelerating]) / 04 (stop decelerating on JG stop/valid on running) / 05 (DC braking on JG stop/valid on operating)	00	00

Function Mode

Code		Function name	Setting range	LBRM/HFBM Initial Data	LFU/HFU Initial data
V/f characteristic	A041	Torque boost selection	00 (manual torque boost) / 01 (automatic torque boost)	00	00
	A241	Torque boost selection, 2nd motor	00 (manual torque boost) / 01 (automatic torque boost)	00	00
	A042	Manual torque boost	0.0-20.0(%)	1.0	1.0
	A242	Manual torque boost, 2nd Motor	0.0-20.0(%)	1.0	1.0
	A043	Manual torque boost point	0.0-50.0(%)	5.0	5.0
	A243	Manual torque boost point, 2nd motor	0.0-50.0(%)	5.0	5.0
	A044	1st control	00/(VC)/01(VP1.7power)/02(free V/f setting)	01	00
	A244	2nd control	00/(VC)/01(VP1.7power)/02(free V/f setting)	01	00
	A045	Output voltage gain	20. - 100.	100.	100.
Direct current braking	A051	DC braking selection	00(invalid)/01(valid)	00	00
	A052	DC braking frequency	0.00-60.00(Hz)	0.50	0.50
	A053	DC braking wait time	0.0 - 5.0(s)	0.0	0.0
	A054	DC braking power	0. - 70. (%)	0.	0.
	A055	DC braking time	0.0 - 60.0(s)	0.0	0.0
	A056	DC braking edge/level Selection	00(edge action) / 01(level action)	01	01
	A057	DC braking power (starting time)	0. - 70. (%)	0.	0.
	A058	DC braking time(starting time)	0.00-60.0(s)	0.0	0.0
	A059	DC carrier frequency	0.5-12(kHz) Derating	3.0	3.0

Function Mode

Code		Function name	Setting range	LBRM/HFBM Initial Data	LFU/HFU Initial data
Upper and lower limiter·jump Frequency	A061	1st frequency upper limiter	0.00, 1st frequency lower limiter-maximum frequency(Hz)	60.00	0.00
	A261	2nd frequency upper limiter	0.00 , 2nd frequency lower limiter-2nd setting maximum frequency(Hz)	60.00	0.00
	A062	1st frequency lower limiter	0.00 , start frequency-maximum frequency(Hz)	15.00	0.00
	A262	2nd frequency lower limiter	0.00 , start frequency-2nd setting maximum frequency(Hz)	15.00	0.00
	A063	Jump frequency1	0.00-99.99/100.0-400.0(Hz)	0.00	0.00
	A064	Jump frequency band1	0.00-10.00(Hz)	0.50	0.50
	A065	Jump frequency2	0.00-99.99/100.0-400.0(Hz)	0.00	0.00
	A066	Jump frequency band2	0.00-10.00(Hz)	0.50	0.50
	A067	Jump frequency3	0.00-99.99/100.0-400.0(Hz)	0.00	0.00
	A068	Jump frequency band3	0.00-10.00(Hz)	0.50	0.50
	A069	Acceleration stop frequency	0.00-99.99/100.0-400.0(Hz)	0.00	0.00
	A070	Acceleration stop time	0.00-60.0(s)	0.0	0.0
PID control	A071	PID selection	00(invalid)/01(valid)	00	00
	A072	PID P gain	0.2-5.0	1.0	1.0
	A073	PID I gain	0.0-3600.(s)	1.0	1.0
	A074	PID D gain	0.00-100.0(s)	0.00	0.00
	A075	PID scale	0.01-99.99(%)	1.00	1.00
	A076	PID feedback selection	00(feedback : OI)/01(feedback : O)	00	00
AVR	A081	AVR selection	00(ON always)/01(OFF always)/02(OFF on decelerating)	00	00
	A082	Motor voltage selection	200/215/220/230/240 , 380/400/415/440/460/480(V)	230/460	230/460
Operation mode/ adjustable function	A085	Operation mode selection	00(normal operation)/01(energy-saving operation)	00	00
	A086	Energy-saving response· accuracy adjustment	0.0-100.0(s)	50.0	50.0
	A092	Acceleration time2	0.01-99.99/100.0-999.9/1000.-3600.(s)	60.00	15.00
	A292	Acceleration time2(2nd motor)	0.01-99.99/100.0-999.9/1000.-3600.(s)	60.00	15.00
	A093	Deceleration time2	0.01-99.99/100.0-999.9/1000.-3600.(s)	90.00	15.00
	A293	Deceleration time2(2nd motor)	0.01-99.99/100.0-999.9/1000.-3600.(s)	90.00	15.00
	A094	2nd stage adjustable selection	00(change with 2CH terminal)/01(change with setting)	00	00
	A294	2nd stage adjustable selection(2nd motor)	00(change with 2CH terminal)/01(change with setting)	00	00
	A095	2nd acceleration frequency	0.00-99.99/100.0-400.0(Hz)	0.00	0.00
	A295	2nd acceleration frequency(2nd motor)	0.00-99.99/100.0-400.0(Hz)	0.00	0.00
	A096	2nd deceleration frequency	0.00-99.99/100.0-400.0(Hz)	0.00	0.00
	A296	2nd deceleration frequency (2nd motor)	0.00-99.99/100.0-400.0(Hz)	0.00	0.00
	A097	Acceleration pattern selection	00(straight line)/01(S-curve)/02(U-curve)/ 03(reverse U-curve)	00	00
	A098	Deceleration pattern selection	00(straight line)/01(S-curve)/02(U-curve)/ 03(reverse U-curve)	00	00
External frequency adjustment	A101	OI start	0.00-99.99/100.0-400.0(Hz)	0.00	0.00
	A102	OI end	0.00-99.99/100.0-400.0(Hz)	60.00	0.00
	A103	OI start rate	0.-100. (%)	20.	20.
	A104	OI end rate	0.-100. (%)	100.	100.
	A105	OI start selection	00(external start frequency)/01(0Hz)	01	01
	A111	O2 start	-400.--100./-99.9-0.00-99.9/100.-400.(Hz)	-60.00	0.00
	A112	O2 end	-400.--100./-99.9-0.00-99.9/100.-400.(Hz)	60.00	0.00
	A113	O2 start rate	-100. - 100. (%)	-100.	-100.
	A114	O2 end rate	-100. - 100. (%)	100.	100.
Accel, Decel	A131	Acceleration curve constant	01(small swelling)-10(large swelling)	02	02
	A132	Deceleration curve constant	01(small swelling-10(large swelling)	02	02
Instantaneous power failure restart	b001	Retry selection	00(trip)/01(Ohz start)/02(start after equal frequency)/ 03(trip after equaling frequency and deceleration stop)	02	00
	b002	Allowable under-voltage power failure time	0.3-1.0(s)	1.0	1.0
	b003	Retry wait time	0.3-100.(s)	1.0	1.0
	b004	Instantaneous power failure/ under-voltage trip during stop	00(invalid/01(valid)/ 02(invalid during stop and deceleration by stop command)	00	00
	b005	Instantaneous power failure/ under-voltage retry time selection	00(16 times)/01(free)	00	00
	b006	Open-phase selection	00(invalid)/01(valid)	00	00
	b007	Frequency setting to match	0.00-99.99/100.0-400.0(Hz)	0.00	0.00

Function mode

Code		Function name	Setting range	LBRM/HFBM Initial Data	LFU/HFU Initial data
Electronic thermal	b012	Electronic thermal level	0.2*constant current-1.20*constant current(A)	Rated current of inverter× 1.20	Rated current of inverter
	b212	Electronic thermal level (2nd motor)	0.2*constant current-1.20*constant current(A)	Rated current of inverter× 1.20	Rated current of inverter
	b013	Electronic thermal characteristic selection	00/(reduced characteristic)/01(constant characteristic)/ 02(free setting)	00	01
	b213	Electronic thermal characteristic selection (2nd motor)	00/(reduced characteristic)/01(constant torque characteristic)/ 02(free setting)	01	01
	b015	Free electronic thermal frequency1	0.-400.(Hz)	0.	0.
	b016	Free electronic thermal current1	0.0-1000.(A)	0.0	0.0
	b017	Free electronic thermal frequency2	0.-400.(Hz)	0.	0.
	b018	Free electronic thermal current2	0.0-1000. (A)	0.0	0.0
	b019	Free electronic thermal frequency3	0.-400.(Hz)	0.	0.
	b020	Free electronic thermal current3	0.0-1000.(A)	0.0	0.0
Overload restriction	b021	Overload restriction selection	00(invalid)/01(enabled on acceleration·constant speed)/ 02(enabled on constant speed)	01	01
	b022	Overload restriction level	0.50* rated current-1.50* rated current(A)	Rated Current of inverter ×1.20	Rated Current of inverter ×1.20
	b023	Overload restriction limit constant	0.10-30.00(s)	10.00	1.00
	b024	Overload restriction 2 selection	00(invalid)/01(valid on acceleration·constant speed)/ 02(valid on constant speed)	01	01
	b025	Overload restriction level2	0.50*rated current-1.50*rated current(A)	Rated current of inverter× 1.20	Rated current of inverter ×1.20
	b026	Overload restriction constant2	0.10-30.00(s)	1.00	1.00
	b031	Software lock mode selection	00(impossible to change the data except this item on SFT terminal ON)/ 01(impossible to change the data except setting frequency item on SFT terminal is ON)/02(impossible to change the data except this item)/ 03(impossible to change the data except setting frequency item)/ 10(possible to change data on operating)	01	01
Free V/f setting	b100	Free V/f frequency1	0.- Free V/f frequency2(Hz)	0.	0.
	b101	Free V/f voltage1	0.-800.0(V)	0.0	0.0
	b102	Free V/f frequency2	0.- Free V/f frequency3(Hz)	0.	0.
	b103	Free V/f voltage 2	0.-800.0(V)	0.0	0.0
	b104	Free V/f frequency3	0.- Free V/f frequency4(Hz)	0.	0.
	b105	Free V/f voltage 3	0.-800.0(V)	0.0	0.0
	b106	Free V/f frequency4	0.- Free V/f frequency5(Hz)	0.	0.
	b107	Free V/f voltage 4	0.-800.0(V)	0.0	0.0
	b108	Free V/f frequency5	0.- Free V/f frequency6(Hz)	0.	0.
	b109	Free V/f voltage 5	0.-800.0(V)	0.0	0.0
	b110	Free V/f frequency6	0.- Free V/f frequency7(Hz)	0.	0.
	b111	Free V/f voltage 6	0.-800.0(V)	0.0	0.0
	b112	Free V/f frequency7	0.-400.(Hz)	0.	0.
	b113	Free V/f voltage 7	0.-800.0(V)	0.0	0.0

Function Mode

Code		Function name	Setting range	LBRM/HFBM Initial Data	LFU/HFU Initial data
Intelligent input terminal setting	C001	Intelligent input1 setting	01/(RV:Reverse Run/Stop)/02(CF1:Multi-speed1)/03(CF2:Multi-speed2)/ 04(CF3:Multi-speed3)/05(CF4:Multi-speed4)/06(JG:Jogging)/ 07(DB:External DC braking)/08(SET:2nd control)/ 09(2CH:two-stage adjustable speed)/ 11(FRS:Free-run)/12(EXT:External trip)/ 13(USP:Unattended start protection)/14(CS:commercial change)/ 15(SFT:software lock)/16(AT:Analog input voltage/current select)/ 18(RS:Reset inverter)/20(STA:3wire run)/21(STP:3wire keep)/ 22(F/R:3wire forward/reverse)/23(PID:PID selection valid/invalid) / 24(PIDC:PID integrating reset)/ 27(UP:Remote control UP function)/28(DWN:Remote control DOWN function)/ 29(UDC:Remote control data clear)/32(SF1:Multi-speed bit1)/ 33(SF2:Multi-speed bit2)/34(SF3:Multi-speed bit3)/35(SF4:Multi-speed bit4)/ 36(SF5:Multi speed bit5)/37(SF6:Multi-speed bit6)/38(SF7:Multi-speed bit7)/ 39(OLR:Overload restriction change)/no(NO:No assign) 49(ROK: permissive input signal for FW/REV) NOTE (2)	18	18
	C002	Intelligent input2 setting		16	16
	C003	Intelligent input3 setting		49	13
	C004	Intelligent input4 setting		02	02
	C005	Intelligent input5 setting		01	01

NOTE (2) : See Page 1(ROK: RUN Permissive input signal for FW/REV)

Function mode

Code		Function name	Setting range	LBRM/HFBM Initial Data	LFU/HFU Initial data
Input terminal setting intelligent	C011	Intelligent input1a/b(NO/NC) selection	00(NO)/01(NC)	00	00
	C012	Intelligent input2a/b(NO/NC) selection	00(NO)/01(NC)	00	00
	C013	Intelligent input3a/b(NO/NC) selection	00(NO)/01(NC)	00	01
	C014	Intelligent input4a/b(NO/NC) selection	00(NO)/01(NC)	00	00
	C015	Intelligent input5a/b(NO/NC) selection	00(NO)/01(NC)	00	00
	C019	Input FWa/b(NO/NC) selection	00(NO)/01(NC)	00	00
Output terminal state setting·Output level setting	C021	Intelligent output 11 setting	00(RUN:running)/01(FA1:Frequency arrivaltype1 signal)/ 02(FA2:frequency arrival type2 signal)/ 03(OL:Overload advance notice signal)/ 04(OD:Output deviation for PID control)/ 05(AL:Alarm signal)/06(FA3:Only setting frequency)/ 08(IP:On instantaneous stop/09(UV:Under voltage/ 11(RNT:RUN time over/ 12(ONT:ON time over)/13(THM:thermal caution)/ 27(RMD: RUN command source) NOTE (3)	27	01
	C022	Intelligent output 12 setting		00	00
	C026	Alarm relay output setting		05	05
	C027	FM selection	00(Output frequency)/01(Output current) / 03(Digital output frequency)/04(Output voltage)/ 05(Output electric power)/06(thermal load rate)/07(LAD frequency)	00	00
	C028	AM selection	00(Output frequency)/01(Output current)/04(Output voltage)/ 05(Output electric power)/06(thermal load rate)/07(LAD frequency)	00	00
	C029	AMI selection	00(Output frequency)/01(Output current)/04(Output voltage)/ 05(Output electric power)/06(Thermal load rate)/07(LAD frequency)	00	00
Communication function adjustment	C031	Intelligent output 11a/b	00(NO)/01(NC)	00	00
	C032	Intelligent output 12a/b	00(NO)/01(NC)	00	00
	C036	Alarm relay output a/b	00(NO)/01(NC)	00	01
	C040	Overload advance notice signal output mode	00(On accel. And decel, constant speed)/ 01(Only constant speed)	01	01
	C041	Overload notice level	0.0-2.0*rated current(A)	Inverter rated current	Inverter rated current
	C042	Frequency arrival setting for accel.	0.00-99.99/100.0-400.0(Hz)	0.00	0.00
	C043	Arrival frequency setting for decel.	0.00-99.99/100.0-400.0(Hz)	0.00	0.00
	C044	PID deviation setting level	0.0-100.0(%)	3.0	3.0
	C061	Electorical thermal protection warning level setting	0.-100.(%)	80.	80.
Analog meter setting	C070	Data command	02(operator)/03(RS485)/04(option1)/05(option2)	02	02
	C071	Communicating transmission speed	02(TEST)/03(2400bps)/04(4800bps)/05(9600bps)/06(19200bps)	04	04
	C072	Communication code	1. -32.	1.	1.
	C073	Communication bit	7(7bit)/8(8bit)	7	7
	C074	Communication parity	00(no parity name)/01(even parity)/02(odd parity)	00	00
	C075	Communication stop bit	1(bit)/2(bit)	1	1
	C078	Communication waiting time	0.-1000.(ms)	0.	0.
	C081	O adjustment	0.-9999./1000-6553(10000-65530)	Setting on forwarding	Setting on forwarding
	C082	OI adjustment	0.-9999./1000-6553(10000-65530)	Setting on forwarding	Setting on forwarding
	C083	O2 adjustment	0.-9999./1000-6553(10000-65530)	Setting on forwarding	Setting on forwarding
	C085	Thermistor adjustment	0.0 - 1000.	105.0	105.0
	C086	AM offset adjustment	0.0 - 10.0(V)	0.0	0.0
	C087	AMI adjustment	0. - 255.	80	80
	C088	AMI offset adjustment	0. - 20.0(mA)	4.0	4.0

NOTE (3) : See Page 1 (RMD : Output signal for RUN Command Source)

Function mode

	Code	Function name	Setting range	LBRM/HFBM Initial Data	LFU/HFU Initial data
The others	b034	RUN time/Power ON time level	0.-9999./1000-6553(10000-65530)hr	0.	0.
	b035	Operation direction restrict	00(Reverse is valid)/01(Only forward)/02(Only reverse)	00	00
	b036	Start reduced voltage	00(Start reduced voltage time small)-06(Start reduced voltage time large)	06	06
	b037	Display selection	00(all display)/01(each function display)/02(User setting，main setting)	00	00
	b080	AM adjustment	0. - 255.	180	180
	b081	FM adjustment	0. - 255.	60	60
	b082	Start frequency adjustment	0.10-9.99(Hz)	0.50	0.50
	b083	Carrier frequency setting	0.5-12.0(kHz) Derating enable,	3.0	3.0
	b084	Initialize mode	00(Trip history clear)/01(Data initialization)/ 02(Trip history clear + data initialization)	00	00
	b085	Country code for initialization	00(Interior)/01(EC)/02(USA)	02	02
	b086	Frequency scalar conversion factor	0.1-99.9	1.0	1.0
	b087	STOP key enable	00(valid)/01(invalid)	00	00
	b088	Resume on FRS cancellation mode	00(0Hz start)/01(Start f-equaling)	00	00
	b090	BRD usage ratio	0.0-100.0(%)	0.0	0.0
	b091	Stop mode selection	00(deceleration stop)/01(Free-run stop)	01	00
	b092	Cooling fan control	00(Always ON)/01(ON during run 〈After power ON, then for 5 minutes on stop is implied.〉)	00	00
	b095	BRD selection	00(invalid)/01(valid〈invalid during stop〉)/02(valid〈valid during stop〉)	00	00
	b096	BRD ON level	330-380/660-760(V)	360/720	360/720
	b098	Thermistor selection	00(invalid)/01(Positive temperature coefficient enable)/ 02 (NTC enable)	00	00
	b099	Thermistor error level	0. – 9999. (ohm)	3000.	3000.
	C091	Debug mode selection	00(No display)/01(Display)	00	00
	C101	UP/DWN selection	00(No frequency data)/01(Keep frequency data)	00	00
	C102	Reset selection	00(Trip cancel during ON)/01(Trip cancel during OFF)/ 02(Valid only during trip〈Cancel during ON〉)	00	00
	C103	Reset f frequency matching selection	00(0Hz start)/01(Start f-equaling)	01	00
	C121	O zero adjustment	0.-9999./1000-6553(10000-65530)	Set on forwarding	Set on forwarding
	C122	OI zero adjustment	0.-9999./1000-6553(10000-65530)	Set on forwarding	Set on forwarding
	C123	O2 zero adjustment	0.-9999./1000-6553(10000-65530)	Set on forwarding	Set on forwarding
	H003	1st motor capacity selection	0.20-75.0(kW)	Set on forwarding	Set on forwarding
	H203	2nd motor capacity selection	0.20-75.0(kW)	Set on forwarding	Set on forwarding
	H004	1st motor pole selection	2/4/6/8(pole)	4	4
	H204	2nd motor pole selection	2/4/6/8(pole)	4	4
	H006	1st stabilized factor	0. - 255.	100.	100.
	H206	2nd stabilized factor	0. - 255.	100.	100.
	P001	Option1 operation selection on error	00(TRP)/01(RUN)	00	00
	P002	Option2 operation selection on error	00(TRP)/01(RUN)	00	00
	P031	Input mode selection for Digital input option	00(Mode 0)/01(Mode 1)/02(Mode 2)	00	00
	P050	Frequency during the loss of O,O2,OI input	00(invalid)/01(0Hz)/02(maximum Frequency)/03(multi speed 0) NOTE (1)	00	00
	U001	User1 selection	no/d001-P050	no	no
	U002	User2 selection	no/d001-P050	no	no
	U003	User3 selection	no/d001-P050	no	no
	U004	User4 selection	no/d001-P050	no	no
	U005	User5 selection	no/d001-P050	no	no
	U006	User6 selection	no/d001-P050	no	no
	U007	User7 selection	no/d001-P050	no	no
	U008	User8 selection	no/d001-P050	no	no
	U009	User9 selection	no/d001-P050	no	no
	U010	User10 selection	no/d001-P050	no	no
	U011	User11 selection	no/d001-P050	no	no
	U012	User12 selection	no/d001-P050	no	no

NOTE (4) : See Page 2 (When O, OI, or O2 frequency reference input signal is lost)

3.Standard specification list

(1) 200V class

Inverter Model		L300P-004LFU	L300P-007LFU	L300P-015LFU	L300P-022LFU	L300P-037LFU	L300P-055LFU	L300P-075LFU	L300P-110LFU	L300P-150LFU	L300P-185LFU	L300P-220LFU	L300P-300LFU	L300P-370LFU	L300P-450LFU	L300P-550LFU
Protection structure (note1)		IP20(NEMA1)														
Max. Applicadie Motor 4P (kW) (note2)		0.4	0.75	1.5	2.2	3.7	5.5	7.5	11	15	18.5	22	30	37	45	55
Rated input Alternating voltage(kVA)	200V	1.0	1.5	2.5	3.6	5.7	8.3	11.0	15.2	20.0	25.2	29.4	39.1	48.4	58.5	72.7
	240V	1.2	2.0	3.1	4.3	6.8	9.9	13.3	18.2	24.1	30.3	35.3	46.9	58.1	70.2	87.2
Rated input alternating voltage		Three-phase 200-240V (+-10%) 50Hz/60Hz														
Rated output voltage (note3)		Three-phase 200-240V (This corresponds to receiving voltage.)														
Rated output current (A)		3	5	7.5	10.5	16.5	24	32	44	58	73	85	113	140	169	210

(2) 400V class

Inverter Model		-	L300P-007HFU	L300P-015HFU	L300P-022HFU	L300P-037HFU	L300P-055HFU	L300P-075HFU	L300P-110HFU	L300P-150HFU	L300P-185HFU	L300P-220HFU	L300P-300HFU	L300P-370HFU	L300P-450HFU	L300P-550HFU
Protection structure (note1)		IP20(NEMA1)														
Max. Applicadie Motor 4P (kW) (note2)		-	0.75	0.15	2.2	3.7	5.5	7.5	11	15	18.5	22	30	37	45	55
Rated input Alternating voltage(kVA)	400V	-	1.5	2.5	3.6	5.7	8.3	11.0	15.2	20.0	25.6	29.7	39.4	48.4	58.8	72.7
	480V	-	2.0	3.1	4.3	6.8	9.9	13.3	18.2	24.1	30.7	35.7	47.3	58.1	70.1	87.2
Rated input alternating voltage		Three-phase 380-480V (+-10%) 50Hz/60Hz														
Rated output voltage (note3)		Three-phase 380-480V (This corresponds to receiving voltage.)														
Rated output current (A)		-	2.5	3.8	5.3	8.6	12	16	22	29	37	43	57	70	85	105

(3) Commom specification for 200V/400V class

Inverter Model			L300P-004LFU	L300P-007L/HFU	L300P-015L/HFU	L300P-022L/HFU	L300P-037L/HFU	L300P-055L/HFU	L300P-075L/HFU	L300P-110L/HFU	L300P-150L/HFU	L300P-185L/HFU	L300P-220L/HFU	L300P-300L/HFU	L300P-370L/HFU	L300P-450L/HFU	L300P-550L/HFU
Control system			Sine-wave modulation PWM system.														
Output frequency range (note4)			0.1-400Hz														
Frequency accuracy			Digital command +/-0.01% for Max. frequency, analog frequency +/-0.2%(25+-10C)														
Frequency resolving power			Digital setting: 0.01Hz, analog setting:Max. frequency /4000														
Voltage/frequency characteristic			V/f option variable, V/f control, (constant torque, reduced torque)														
Overload current rate			120% for 60 seconds, 150% for 0.5second														
Acceleration/ deceleration time			0.01-3,600seconds (straight or S-Curve on acceleration, deceleration is optional setting individually), 2nd adjustable setting is possible.														
Contro	Regenerative Control (short duration) (note5)		BRD circuit built-in (Discharge resistance is required.)									Regenerative unit is required.					
	DC Braking		On starting and decelerating by stop command, inverter operates under operation setting frequency. Or inverter operates with external input (Breaking power, time, frequency can be set.)														
Input signal	Freq-uency	Operator	No Operator														
		Volume	Setting with potentiometer on the digital operator (Built-in as standard) (Analog setting)														
		External Signal	DC 0 to 5V, -5 to +5V, 0 to 10V, -10 to +10V (input impedance 10k ohm), 4-20mA (input impedance 100 ohm)														
		External port	Setting with RS485 communication														
	Run/ Stop	Operator	No Operator														
		External signal	Forward Run/Stop (1a connect), reverse command is impossible on assigning of terminal (selection of 1a, 1b is possible), input of 3 wires is possible.														
		External port	Setting with RS485.														
	Intelligent input terminal		Use by selecting terminals from; Reverse command (RV), multi-speed1-4 (CF1-CF4), jogging (JG), external dc braking (DB), 2nd control (SET),2nd acceleration (2CH), free-run stop (FRS), external trip (EXT), USP function (USP), commercial change (CS),software lock (SFT), analog input voltage / current / select (AT), reset inverter (RS), 3 wire run (STA),3 wire keep (STP), 3 wire direction selection (F/R), PID selection valid/invalid (PID), PID integrating reset (PIDC), remote control,up function (UP), remote control down function (DWN), remote control data clear (UDC), multi-speed bit 1-7(SF1-SF7),overload ristriction change (OLR), permissive input signal for FW/RV(ROK), no assign (NO)														
	Thermistor input t erminal		1 terminal														
Output	Intelligent output terminal		2 relay outputs (1a contact), relay(1c contact), output relay selection as follows; (selection from during running, on arrival with constant speed, over setting frequency, PID over-deviation, running command distinction)														
	Intelligent monitor output terminal		Analog voltage output, analog current output, pulse line output														
Display monitor			Output frequency, output current, frequency conversion value, trip history, input output terminal state, input electric power, output voltage.														
Other function			V/f free setting (5 points), Upper / lower frequency limitter, Frequency jump, Curve adjustable speed, Manual torque boost level / Braking point,Analog meter adjustment, Starting frequency, Carrier frequency adjustment, Electronic thermal free setting, External start/end (frequency/rate),Analog input selection, Trip retry, Reduced voltage start, Overload restriction														
Carrier frequency range			0.5-12 kHz														
Protection function			Over-current, over-voltage, under-voltage, electronic thermal level, abnormal trouble, ground fault current on starting, instantaneous stop, USP error, open-phase error, control resistor overload, CT error, external trip, communication error														
Usage surrounding	Frequency temperature /Preservation temperature (note6) /humidty		-10 to 40 degrees (note7) / -20 to 65 degrees / 20 to 90% RH (installed with no dew condensation)														
	Vibration (note7)		5.9m / s 2 (0.6G), 10-55Hz												2.9m / s 2 (0.3G), 10-55Hz		
	Using place		Under 1,000m above sea level, indoors (installed away from corrosive gasses, dust)(note8)														
Paint color			Grey (Munsell 8.5YR6.2 / 0.2)							Blue (D.I.C14 version No.436)							
Options			Remote operator, copy unit, cable for each operator, braking resistor, regenerative control unit, alternating reactor, D.C. reactor, EMC Mains filter, higher harmonic control unit, LCR filter, applied control installation														
Schematic mass (kg)			3.5	3.5	3.5	3.5	3.5	3.5	5	5	5	12	12	12	20	30	30

(note1) Protective system bases on JME1030.

(note2) Applicable motor indicates HITACHI three-phase motor. When you use other motor, set so that the motor current doesn't exceed the rated current of the inverter.

(note3) Output voltage will reduce when the power voltage is reduced. (Except when AVR function is selected.)

(note4) When you operate motor over 50/60Hz, inquire about the allowable max.revolution time of motor etc. from motor manufacturer.

(note5) Braking resistance isn't installed in the inverter. When the inverter requires a high regenerative torque, use optional braking resistance and regenerative braking unit.

(note6) Protective temperature is temperature during transportation.

(note7) This bases on the test methods of JIS C0911(1984).

(note8) When the inverter is used in a place with dust, we recommend the optional varnish coating specification. Before it is required.