

rEF - Speed Reference Mode



Parameter	Code	Factory Setting
External Reference Value	-Hz LFr	
Analog Input Virtual	-% AIU1	
Speed Reference (read only)	-Hz FrH	
Internal PID Reference	-% rPI	
PID Reference Value	-% rPC	

Mon - Monitoring Mode



Parameter	Code	Factory Setting
External Reference Value	-Hz LFr	
Analog Input Virtual	-% AIU1	
Speed Reference (read only)	-Hz FrH	
Output Frequency	-Hz rFr	
Motor Current	-A LCr	
PID Error	-% rPE	
PID Feedback	-% rPF	
PID Reference	-% rPC	
Main Voltage	-V UIn	
Motor Thermal State	-% tHr	
Drive Thermal State	-% tHd	
Output Power	-% Opr	
Product Status	Stat	
Maintenance Menu	MAI	
State of Logic Inputs LI1 to LI4	LISI	
State of Logic Output LO1 & Relay R1	LOSI	
Display of High Speed Value	-Hz HSU	
Drive Power Rating	nCU	
Drive Voltage Rating	UCAL	
Specific Product Number	SPn	
Card 1 Software Version	C1SU	
Card 2 Software Version	C2SU	
Run Elapsed Time Display	rtH1	
Power On Time Display	PtH	
Fan Time Display	FtH	
Process Elapsed Time	Pet	

NOTE: The key drive settings for basic operation are highlighted in yellow. Refer to the Altivar 12 User Manual BBV28581 for additional programming instructions.

Mon - Monitoring Mode Cont.



Parameter	Code	Factory Setting
Modbus Communication Status	COM1	
Last Detected Fault 1	dP1	
State of Drive at Detected Fault 1	EP1	
Last Detected Fault 2	dP2	
State of Drive at Detected Fault 2	EP2	
Last Detected Fault 3	dP3	
State of Drive at Detected Fault 3	EP3	
Last Detected Fault 4	dP4	
State of Drive at Detected Fault 4	EP4	
HMI Password	Cod	

ConF - Configuration Mode



Parameter	Code	Factory Setting
External Reference Value	-Hz LFr	
Analog Input Virtual	-% AIU1	
Standard Motor Frequency	-Hz bFr	50 Hz
Reference Channel 1	Fr1	AI1
Acceleration	-s ACC	3 s
Deceleration	-s dEC	3 s
Low Speed	-Hz LSP	0 Hz
High Speed	-Hz HSP	50 or 60 Hz
Rated Motor Power	nPr	Varies w/ rating
Store Customer Parameter Set	SCS	nO
Factory/Recall Customer Parameter Set	FCS	nO
Access to Complete Menu	FULL	
Macro-Configuration	CFG	StS
Input Output Menu I_O-		
Type of Control	tCC	2C
2 Wire Type Control	tCt	trn (transition)
Logic Inputs Type	nPL	POS
AI1 Configuration submenu		
AI1 Type	AI1t	5U
AI1 Current Scaling Parameter of 0%	-mA CrL1	4 mA
AI1 Current Scaling Parameter of 100%	-mA CrH1	20 mA
R1 Assignment	r1	FLt

ConF - Configuration Mode Cont.



Parameter	Code	Factory Setting	
LO1 Configuration submenu			
LO1 Assignment	LO1	nO	
LO1 Status (Output active level)	LO1S	POS	
Application Overload Time Delay	-s tOL	0 s	
Application Overload Threshold	-% LOC	90% of nCr	
Time Delay before Auto Start for Overload Fit	-min FtO	0 min	
Application Underload Time Delay	-s ULt	0 s	
Application Underload Threshold	-% LUL	60% of nCr	
Time Delay before Auto Start for Underload Fit	-min FtU	0 min	
Motor Frequency Threshold	-Hz Ftd	50 or 60 Hz	
Motor Current Threshold	-A Ctd	Varies w/ rating	
Motor Thermal State Threshold	-% ttd	100%	
AO1 Configuration submenu			
AO1 Assignment	AO1	nO	
AO1 Type	AO1t	0A	
Motor Control Menu drC-			
Standard Motor Frequency	-Hz bFr	50 Hz	
Rated Motor Power	nPr	Varies w/ rating	
Rated Motor Cos phi	CoS	Varies w/ rating	
Rated Motor Voltage	-V UnS	230 V	
Rated Motor Current	-A nCr	Varies w/ rating	
Rated Motor Frequency	-Hz FrS	50 Hz	
Rated Motor Speed	-rpm nSP	Varies w/ rating	
Maximum Frequency	-Hz tFr	60 Hz	
Motor Control Type	Ctt	Std	
IR Compensation (law U/F)	-% UFr	100%	
Slip Compensation	-% SLP	100%	
Frequency Loop Stability	-% StA	20%	
Frequency Loop Gain	-% FLG	20%	
Flux Profile	-% PFL	20%	
Switching Frequency	-kHz SFr	4 kHz	
Switching Frequency Type	SFt	HF1	
Motor Noise Reduction	nrd	nO	
Auto-tuning	tUn	nO	
Motor Parameter Choice	MPC	nPr	

ConF - Configuration Mode Cont. 

Parameter	Code	Factory Setting	
Control Menu Ctl-			
Reference Channel 1		Fr1	Al1
External Reference Value	-Hz	LFr	
Analog Input Virtual	-%	AlU1	
Reverse inhibition		rIn	nO
Stop Key Priority		PSt	YES
Channel Configuration		CHCF	SIM
Command Channel 1		Cd1	tEr
Forced Local Assignment		FLO	nO
Forced Local Reference		FLOC	nO
Function Menu Fun-			
Ramp submenu rPt			
Acceleration	-s	ACC	3 s
Deceleration	-s	dEC	3 s
Ramp Shape Assignment		rPt	Lin
Ramp Switching Commutation		rPS	nO
Acceleration 2	-s	AC2	5 s
Deceleration 2	-s	dE2	5 s
Decel Ramp Adaptation Assignment		brA	YES
Stop Configuration submenu Stt			
Type of Stop		Stt	rMP
Freewheel Stop Assignment		nSt	nO
Fast Stop Assignment		FSt	nO
Ramp Divider		dCF	4
Reverse Direction		rrS	nO
Auto DC Injection submenu AdC			
Automatic DC injection		AdC	YES
Automatic DC Injection Current	-%	SdC1	70%
Automatic DC Injection Time	-s	tdC1	0.5 s
Jog Assignment		JOG	nO
Preset Speed submenu PSS			
2 preset speeds		PS2	nO
4 preset speeds		PS4	nO
8 preset speeds		PS8	nO
Preset speed 2	-Hz	SP2	10 Hz
Preset speed 3	-Hz	SP3	15 Hz
Preset speed 4	-Hz	SP4	20 Hz

ConF - Configuration Mode Cont. 

Parameter	Code	Factory Setting	
Preset speed 5	-Hz	SP5	25 Hz
Preset speed 6	-Hz	SP6	30 Hz
Preset speed 7	-Hz	SP7	35 Hz
Preset speed 8	-Hz	SP8	40 Hz
Skip Frequency	-Hz	JPF	0 Hz
PID submenu Pld			
PID Feedback Assignment		PIF	nO
PID Proportional Gain		rPG	1
PID Integral Gain		rIG	1
PID Derivative Gain		rdG	0
PID Feedback Scale Factor		FbS	1
Activation Internal PID Reference		PII	nO
2 preset PID Assignment		Pr2	nO
4 preset PID Assignment		Pr4	nO
2 Preset PID Reference	-%	rP2	25%
3 Preset PID Reference	-%	rP3	50%
4 Preset PID Reference	-%	rP4	75%
Internal PID Reference	-%	rP1	0%
PID Reference Ramp	-s	PrP	0 s
PID Min Value Reference	-%	rPL	0%
PID Max Value Reference	-%	rPL	100%
PID Predictive Speed	-Hz	SFS	nO
Acceleration 2	-s	AC2	5 s
PID Correction Reverse		PIC	nO
PID Auto/Manual Assignment		PAU	nO
PID Manual Reference		PIM	nO
Low Speed Operating Time	-s	tLS	nO
PID Wake Up Level	-%	rSL	0%
Wake Up Threshold	-%	UPP	0%
Sleep Threshold Offset	-Hz	SLE	1 Hz
PID Feedback Supervision Threshold	-%	LPI	nO
PID Feedback Supervision Function Time Delay	-s	tPI	0 s
Maximum Frequency Detection Hysteresis	-Hz	APO	0 Hz
PID Feedback Supervision		MPI	YES
Fallback Speed	-Hz	LFF	0 Hz

ConF - Configuration Mode Cont. 

Parameter	Code	Factory Setting	
Pump submenu PMP			
Application Overload Time Delay	-s	tOL	0 s
Application Overload Threshold	-%	LOC	90% of nCr
Time Delay before Auto Start for Overload Fit	-min	FtO	0 min
Application Underload Time Delay	-s	ULt	0 s
Application Underload Threshold	-%	LUL	60% of nCr
Time Delay before Auto Start for Underload Fit	-min	FtU	0 min
Selecting the Operating Mode		MdE	nO
Starting Frequency of the Auxiliary Pump	-Hz	FOn	HSP
Time Delay Before Starting the Auxiliary Pump	-s	tOn	2 s
Ramp for Reaching the Auxiliary Pump Nominal Speed	-s	rOn	2 s
Auxiliary Pump Stopping Frequency	-Hz	FOF	0 Hz
Time Delay Before the Auxiliary Pump Stop Command	-s	tOF	2 s
Ramp for Auxiliary Pump Stopping	-s	rOF	2 s
Zero Flow Detection Period	-min	nFd	nO
Zero Flow Detection Activation Threshold	-Hz	FFd	0 Hz
Zero Flow Detection Offset	-Hz	LFd	0 Hz
Current Limitation submenu CLI			
2nd Current Limitation Commutation		LC2	nO
Current Limitation	-A	CLI	1.5 In
Current Limitation 2	-A	CL2	1.5 In
Speed Limit submenu SPL			
Low Speed	-Hz	LSP	0 Hz
Low Speed Operating Time	-s	tLS	nO
High Speed	-Hz	HSP	50 or 60 Hz
2 HSP Assignment		SH2	nO
4 HSP Assignment		SH4	nO
High Speed 2	-Hz	HSP2	as HSP
High Speed 3	-Hz	HSP3	as HSP
High Speed 4	-Hz	HSP4	as HSP

ConF - Configuration Mode Cont. 

Parameter	Code	Factory Setting	
Fault Detection Management Menu FLt-			
Detected Fault Reset Assignment		rSF	nO
Automatic Restart submenu			
Automatic Restart submenu		Atr	nO
Max Automatic Restart Time		tAr	5 min
Catch on the Fly		FLr	nO
Motor Thermal Protection submenu			
Motor Thermal Current	-A	ItH	Varies w/ rating
Motor Protection Type		tHt	ACL
Overload Fault Management		OLL	YES
Motor Thermal State Memo		MtM	nO
Output Phase Loss		OPL	YES
Input Phase Loss		IPL	Varies w/ rating
Undervoltage submenu USb			
Undervoltage Fault Management		USb	0
Undervoltage Prevention		StP	nO
Undervoltage Ramp Deceleration Time	-s	StP	1 s
IGBT Test		Strt	nO
4 - 20 mA Loss Behavior		LFLI	nO
Detected Fault Inhibition Assignment		InH	nO
Modbus Fault Management		SLL	YES
Degraded Line Supply Operation		drm	nO
Reset Power Run		rPr	nO
External Fault submenu EtF			
External Fault Assignment		EtF	nO
Stop Type - External Fault		EPL	nO
Fallback Speed	-Hz	LFF	0 Hz

ConF - Configuration Mode Cont. 

Parameter	Code	Factory Setting	
Communication Menu COM-			
Modbus Address		Add	OFF
Modbus Baud Rate	-kbps	tbr	19.2
Modbus Format		tFO	8E1
Modbus Time out	-s	ttO	10 s
Input Scanner submenu ICS			
Com Scanner Read Address Parameter 1		nMA1	0C81
Com Scanner Read Address Parameter 2		nMA2	219C
Com Scanner Read Address Parameter 3		nMA3	0
Com Scanner Read Address Parameter 4		nMA4	0
Output Scanner submenu OCS			
Com Scanner Write Address Parameter 1		nCA1	2135
Com Scanner Write Address Parameter 2		nCA2	219A
Com Scanner Write Address Parameter 3		nCA3	0
Com Scanner Write Address Parameter 4		nCA4	0
Input Scanner Access submenu ISA			
Com Scanner Read Address Value 1		nM1	ETA Value
Com Scanner Read Address Value 2		nM2	RFRD Value
Com Scanner Read Address Value 3		nM3	8000
Com Scanner Read Address Value 4		nM4	8000
Output Scanner Access submenu OSA			
Com Scanner Write Address Value 1		nC1	CMD Value
Com Scanner Write Address Value 2		nC2	LFRD Value
Com Scanner Write Address Value 3		nC3	8000
Com Scanner Write Address Value 4		nC4	8000