Basic set-up guide FAN/PUMP suggeted LS inverter settings S100

ſ	Parameter	Description	Unit	Default set	Suggested set	Notes				
	Acc	Accelerating time	seconds	*20.0	5 to 60	Increase if overcurrent 'OCt' trip occurs on accelerating. If PID control, set = 0.1				
유	Dec	Decelerating time	seconds	**30.0	As required	Increase if overvolt 'Out' trip occurs on stopping or decelerating. If PID control, set = 0.1				
ဥ	Drv	Command source	Seconds	1	As required	Connect 'RUN FORWARD' contact between terminals 'P1' and 'CM' or '24'. Close to RUN, open to STOP.				
Ĕ	Fra	Frequency Ref source	-	0	2 or 3	Set 2 if using 0-10V input on terminal 'V1'. Set 5 if using mA signal on terminal 'I2'				
atic	119	requericy iter source		U	2013	Oct 2 in using 0-104 input on terminal 41. Oct 3 in using the signal on terminal 12.				
Operation Group			No n	nore	essent	ial parameters in this group				
Ü					0000110	iai parametere in tine greap				
	100	0	1	0		lo ve				
	dr.09	Control Mode	KW	0	0	0 = V/F control for light duty applications Factory set 1:1 to inverter size. Change if lower or higher power motor is connected especially when using dual rating.				
dn	dr.14 dr.18	Motor power Base Frequency	Hz	60.00	50.00	Set to frequency shown on motor rating plate (normally 50Hz in UK/Europe)				
3ro	dr.10	Max. Output Frequency	Hz	60.00	50.00	Sets maximum allowable frequency (motor speed) - reduce to 50.00 for UK/European motors.				
6 - (dr.93	Parameter Initialize	-	-	N/A	Set to 0 to set ALL groups back to factory set values				
ž										
	No more essential parameters in this group									
						Je en				
	bA.10	Input Power Frequency	Hz	60.00	50.00	Set to 50Hz if using in UK/Europe etc				
g	bA.10 bA.11	Pole number	ПД	4	As required	Check motor rating plate rpm data. ie, 1500 (-1 to -10%) = 4, 1000 (-1 to -10%) = 6, 3000 (-1 to -10%) = 2, etc				
Gro	UA.TT	r die Humber		-4	As required	Check fillion falling place (pin data: ie, 1500 (-1 to -10 %) = 4, 1000 (-1 to -10 %) = 0, 5000 (-1 to -10 %) = 2, etc				
Basic - Group	bA.13	Motor rated current	А	-	As required	Set to motor rating plate current. (Be careful to use the correct value if star/delta or 50/60Hz values are given)				
3as	bA.15	Motor rated voltage	V	-	As required	Set to motor rating plate value				
	bA.19	AC Input voltage	V	380	400	Set to 400V or whatever the input line to line voltage is.				
				-		_				
g n	Ad.24	Frequency limits select	-	0	1	Set to 1 to allow changes to upper and lower frequency (speed) limits				
5.	Ad.25	Low limit	Hz	0.50	0.50 (or higher)					
÷	Ad.26 Ad.64	High Limit	Hz -	60.00	50.00 (or lower)	O For a service when it was a service ONLO. For a service on internal theorems to the service when a service of				
Advanced - Group	A0.64	Cooling Fan operation		U	2	0 = Fan operates when inverter output is ON; 2 = Fan operates on internal thermostat (only runs when needed)				
Ivar	No more essential parameters in this group									
¥	No more essential parameters in this group									
- Group	Cn.04	Carrier Frequency	kHz	3	As required	Inrease if low audible motor noise is required. Keep value low if enclosure is small or motor cable is long				
8										
<u> </u>				No m	oro occoi	ntial parameters in this group				
Control				140 1110	Di e essei	iliai parameters in tins group				
ပိ										
	In.08	Terminal 'V1' min. volts	V	0.00	0	Sets terminal 'V1' minimum voltage for external potentiometer operation.				
a	In.09	Output frequency at In.08	%	0.00	As required	Fixes the motor / output frequency when terminal 'V1' is at voltage set in parameter In.08				
- Group	In.10	Terminal 'V1' max. volts	V	10	10	Sets terminal 'V1' maximum voltage for external potentiometer operation.				
ō	In.11	Output frequency at In.10	%	100.00	As required	Fixes the motor / output frequency when terminal 'V1' is at voltage set in parameter In.10				
out	In.53	Terminal 'I2' min. current	mA	4.00	0.00 or 4.00	Sets terminal '12' minimum current when an external milli Amp loop is used to give the speed reference				
'n	In.54	Output frequency at In.53	Hz	0	As required	Fixes the motor / output frequency when terminal 'l2' is at mA level set in parameter In.53				
	In.55 In.56	Terminal 'I2' max. current	mA %	20.00 100.00	20.00	Sets terminal '12' maximum current when an external milli Amp loop is used to give the speed reference				
ш	111.00	Output frequency at In.55	70	100.00	As required	Fixes the motor / output frequency when terminal I' is at mA level set in parameter In.55				
	Pr.04	Load Duty	-	1	0	Set to '0' for normal duty applications and if motor is one size bigger (KW) than inverter rating (KW)				
g	Pr.05	Phase-loss protection	-	Binary	As required	Set to '01' for output (motor) phase loss protection, '10' for input phase loss protection, and '11' for both				
Group										
Ė										
cţio		No more essential parameters in this group								
Protectio	idar parameters in tins group									
F.										

***3.0kHz up to 22KW

Denotes MUST check / set parameters for best operation

All others are relative to the design requirements of the equipment and/or application or environment.

Basic set-up guide HEAVY DUTY APPLICATION suggeted LS inverter settings S100

Unit Default set Suggested set Notes

-	Parameter	Description	Unit	Default set	Suggested set	Notes						
۵	Acc	Accelerating time	seconds	*20.0	2 to 5	Increase if overcurrent 'OCt' trip occurs on accelerating. If PID control, set = 0.1						
Operation Group	Dec	Decelerating time	seconds	**30.0	2 to 10+	Increase if overvolt 'Oui' trip occurs on stopping or decelerating. If PID control, set = 0.1						
ō	Drv	Command source	-	1	1	Connect 'RUN FORWARD' contact between terminals 'P1' and 'CM' or '24' . Close to RUN, open to STOP.						
ou	Frq	Frequency Ref source	-	0	2 or 3	Set 2 if using 0-10V input on terminal "V1". Set 5 if using mA signal on terminal "I2"						
rati												
be			No r	nore	essenti	ial parameters in this group						
0			1101	11010		ar parameters in this group						
	dr.09	Control Mode	-	0	0 or 4	0 = V/F control; 4 = IM Sensorless Vector control (may be needed if increased starting torque is required)						
	dr.14	Motor power	KW	*	!	Factory set 1:1 to inverter size. Change if lower or higher power motor is connected.						
희	dr.18	Base Frequency	Hz	60.00	50.00	Set to frequency shown on motor rating plate (normally 50Hz in UK/Europe)						
5	dr.20	Max. Output Frequency	Hz	60.00	50.00	Sets maximum allowable frequency (motor speed) - reduce to 50.00 for UK/European motors.						
9	dr.93	Parameter Initialize	-	-	N/A	Set to 0 to set ALL groups back to factory set values						
ř												
	No more essential parameters in this group											
	No more essential parameters in this group											
	bA.10	Input Power Frequency	Hz	60.00	50.00	Set to 50Hz if using in UK/Europe etc						
욕	bA.11	Pole number	-	4	As required	Check motor rating plate rpm data. ie, 1500 (-1 to -10%) = 4, 1000 (-1 to -10%) = 6, 3000 (-1 to -10%) = 2, etc						
Basic - Group	bA.12	Rated slip	RPM	-	As required	Enter a value which is the synchronous speed - rotor speed. Ex: 1500 - 1420 = 80, so enter '80'						
ဗု	bA.13	Motor rated current	Α	-	As required	Set to motor rating plate current. (Be careful to use the correct value if star/delta or 50/60Hz values are given)						
sic	bA.15	Motor rated voltage	V	-	As required	Set to motor rating plate value						
Ba	bA.19	AC Input voltage	V	380	400	Set to 400V or whatever the input line to line voltage is.						
	bA.20	Auto Tuning	-	0	0 or 2	0 = standard factory installed motor parameters apply; 2 = auto-tuning routine, installs actual connected motor values.						
_				-								
0	Ad.24	Frequency limits select		0	1	Set to 1 to allow changes to upper and lower frequency (speed) limits						
팅	Ad.25	Low limit	Hz	0.50	0.50 (or higher)	on to the disease disease dispose and tensor inequation (uppers) in the						
ອັ	Ad.26	High Limit	Hz	60.00	50.00 (or lower)							
0	Ad.64	Cooling Fan operation	-	0	2	0 = Fan operates when inverter output is ON; 2 = Fan operates on internal thermostat (only runs when needed)						
Advanced - Group			<u> </u>	-	_							
Iva	No more essential parameters in this group											
¥		No more essential parameters in this group										
a	Cn.04	Carrier Frequency	kHz	3	As required	Inrease if low audible motor noise is required. Keep value low if enclosure is small or motor cable is long						
Control - Group			•			·						
ō												
<u>.</u>				No me	ore esser	ntial parameters in this group						
ţ				140 111	010 00001	idai parameters in ans group						
ပိ												
	In.08	Terminal 'V1' min. volts	V	0.00	0	Sets terminal 'V1' minimum voltage for external potentiometer operation.						
	In.09	Output frequency at In.08	%	0.00	As required	Fixes the motor / output frequency when terminal 'V1' is at voltage set in parameter In.08						
dn	In.10	Terminal 'V1' max. volts	V	10	10	Sets terminal "V1" maximum voltage for external potentiometer operation.						
- Group	In.11	Output frequency at In.10	%	100.00	As required	Fixes the motor / output frequency when terminal "V1" is at voltage set in parameter In.10						
Ĭ.	In.53	Terminal 'I2' min. current	mA	4.00	0.00 or 4.00	Sets terminal '12' minimum current when an external milli Amp loop is used to give the speed reference						
Input	In.54	Output frequency at In.53	Hz	0	As required	Fixes the motor / output frequency when terminal 'l2' is at mA level set in parameter In.53						
드	In.55	Terminal 'I2' max. current	mA	20.00	20.00	Sets terminal '12' maximum current when an external milli Amp loop is used to give the speed reference						
	In.56	Output frequency at In.55	%	100.00	As required	Fixes the motor / output frequency when terminal 'l' is at mA level set in parameter In.55						
		Saspat Hoquonoy at 111.00	/0	100.00	. 10 Toquilou	- 300 ato motor, suspensed and attended to attribute out in parameter into						
	Pr.04	Load Duty	_	1	4	Leave set to '1' to enable 'Heavy Duty' or constant torque application settings (conveyor, mixer, etc)						
윽	Pr.04 Pr.05	Phase-loss protection		Binary	As required	Set to '01' for output (motor) phase loss protection, '10' for input phase loss protection, and '11' for both						
iroup	F1.03	i nasesioss protection		Dillary	As required	Decree or for output (motor) priase loss protection, for for imput priase loss protection, and fit for both						
<u>ق</u>												
ou												
ecti	No more essential parameters in this group											

***3.0kHz up to 22KW

Parameter Description

Denotes MUST check / set parameters for best operation

All others are relative to the design requirements of the equipment and/or application or environment.

Jun-14

 $^{^*}$ Note: Parameters Dr.09 and bA.20 are meant to be used together - ie don't change Dr.09 to 4 without setting bA.20 to 2