CLM50X MH300 Parameters

Production Parameter Writing												
Index	**Parameter Number**	**Parameter Name**	**1HP 230V**	**2HP 230V**	**3HP 230V**	**1HP 460V**	**2HP 460V**	**3HP 460V**	**1HP 460V (3000rpm)**	**2HP 460V (3000rpm)**	**3HP 460V (3000rpm)**	**Comment**
1	#Pr.00-10	Control Method	0: Speed Mode									Sets the control mode to speed mode.
2	#Pr.00-11	Velocity Mode	2: PMSVC									Sets the speed control mode for permanent magnet space vector control.
3	#Pr.00-26	Max User Defined Value	100: max display freq 100Hz									These two are used to scale the display so that it will show the 4 pole motor setting Hz and output the 6 pole motor compensated Hz. (No Longer Programmed)
4	#Pr.00-25	User Defined Characteristics	2: 2 decimal points									
5	#Pr.00-32	Digital keypad STOP Function	1: Enable STOP key									This allows the STOP key on the keypad to be operational even if the operation source is not the digital keypad.
6	#Pr.01-00	Max Operation Frequency	150: 150Hz									Max Operation Frequency of the drive to allow for 3000 rpm applications.
7	#Pr.01-01	Motor Rated Frequency	90: 90Hz						150: 150Hz			Motor rated frequency. 90 Hz = 1800 rpm
8	#Pr.01-02	Motor Rated Voltage	230Vac			460Vac						Motor rated voltage
9	#Pr.02-00	2/3 Wire Control	2: 2 wire									Two-wire mode 2, power on for operation control (M1: RUN / STOP, M2: FWD / REV)
10	#Pr.02-03	Multi-function input 3 (MI3)	0: No Function									Setting MI3 to No Function, default is multi-speed step. This is to prevent confusion if this gets wired up.
11	#Pr.02-04	Multi-function input 4 (MI4)	12: Output Stop									Seeting MI4 to Output Stop, this is used for auxiliary disconnect wiring. MI4 was chosen as the default due to it being the first one without the potential of being set by parameter 02-00.
12	#Pr.02-05	Multi-function input 5 (MI5)	0: No Function									Setting MI5 to No Function, default is multi-speed step. This is to prevent confusion if this gets wired up.
13	#Pr.02-06	Multi-function input 6 (MI6)	0: No Function									Setting MI6 to No Function, default is multi-speed step. This is to prevent confusion if this gets wired up.
14	#Pr.03-00	AVI Terminal	6: PTC									Sets the AVI terminal to be used as the PTC input terminal.
15	#Pr.03-01	ACI Terminal	11: PT1000									Sets the ACI terminal to be used as the PT1000 input terminal.
16	#Pr.03-20	AFM Output	23: Constant Voltage/Current									Sets AFM as a constant voltage/current output.
17	#Pr.03-29	ACI Input Selection	1: 0-10V									Sets ACI to be a 0-10V input range.
18	#Pr.03-31	AFM Output Selection	1: 0-20mA									Sets AFM to be a 0-20mA output.
19	#Pr.03-32	AFM DC Output	25%: 5mA									Sets the AFM output to be 25% of 20mA, AKA 5mA.
20	#Pr.05-33	Motor Selection	2: IPM									Sets the motor as a Interior Permanent Magnet Motor (IPM)
21	#Pr.05-34	PM Motor Rated Current	2.73A	5.67A	7.65A	1.6A	3.25A	4.43A	1.74A	3.57A	5.06A	This is the rated current of the motor for each variant.
22	#Pr.05-35	PM Motor Rated Power	.75 kW	1.5kW	2.22kW	.75 kW	1.5kW	2.22kW	.75kW	1.50kW	2.26kW	This is the rated power of the motor for each vartiant.
23	#Pr.05-36	PM Motor Rated RPM	1800rpm						3000rpm			This is the motor's rated speed based on the power and current above.
24	#Pr.05-37	PM Motor Pole #	6									This is the mtotor's number of poles.
25	#Pr.05-39	PM Motor Stator Resistance	2.713 Ohm	1.317 Ohm	0.718 Ohm	7.316 Ohm	3.744 Ohm	2.095 Ohm	2.713 Ohm	1.317 Ohm	0.9 Ohm	This is the motor's stator resistance for each variant. This value was gather emperically based on severl tunes.
26	#Pr.05-40	PM Motor Ld	9.95 mH	6.06 mH	3.98 mH	28.20 mH	17.17 mH	10.58 mH	9.95 mH	6.06 mH	4.42 mH	This is the motor's Ld value for each variant. This value was gather emperically based on several tunes.
27	#Pr.05-41	PM Motor Lq	22.24 mH	13.52 mH	8.45 mH	60.95 mH	38.82 mH	25.38 mH	22.24 mH	13.52 mH	9.35 mH	This is the motor's Lq value for each variant. This value was gather emperically based on several tunes.
28	#Pr.05-43	PM Motor Ke Value	54 V/1000rpm			87 V/1000rpm	85 V/1000rpm	93 V/1000rpm	54 V/1000rpm	54 V/1000rpm	50 V/1000rpm	This is the motor's Ke value for each variant. This value was gather emperically based on several tunes.
29	#Pr.05-47	PM Motor Mag Saturation	92	84	91	87	95	95	55	57	69	These are two "hidden" parameters that are populated when the drive auto tunes to the motor. These values have something to do with the magnetic saturation ratio of the motor.
30	#Pr.05-48	PM Motor Mag Saturation	74	72	71	73	73	73	62	65	97	
31	#Pr.06-13	I2T Model	0: Motor External Cooling									Sets the drive as a motor with external cooling. AKA no fan equiped. (No Longer Programmed)
32	#Pr.06-14	I2T Model Action Time	60sec									This is the time the motor will operated at 150% overload. The rest of the I2T model is scaled based on this setting. (No Longer Programmed)
33	#Pr.06-29	PTC Detection Selection	1: Fault and Ramp									Sets the operation mode of the drive when the PTC Set Level is met.
34	#Pr.06-30	PTC Level	52%									Sets the % of 100% of the AVI input. This is deafult of 52% based on the PTC trigger level and the resistor sent with the drive. 4000 Ohm trigger level of PTC.
35	#Pr.06-57	PT1000 Voltage Level 2	7.75V									Sets the volage level of 10V of the ACI input for the final fault level of the PT1000.
36	#Pr.06-56	PT1000 Voltage Level 1	7.56V									Sets the volage level of 10V of the ACI input for the initial frequency trigger level of the PT1000.
37	#Pr.06-58	PT1000 Voltage Frequency Setting	90Hz									Frequency ouput that the drive will default to when the first voltage trigger level is reached for PT1000.
38	#Pr.06-59	PT1000 Voltage Level 1 Delay	60Sec									Sets the delay timer before decelerating to the set frequency level of PT1000 trigger level 1.
39	#Pr.07-26	Torque Compensation Gain	250									Sets the torque gain for handeling torque. This corresponds to output current capability.
40	#Pr.07-38	PMSVC voltage feed forward gain	1.5									Sets voltage feedback for rapid changes in applications.
41	#Pr.10-31	I/F Mode, Current Command	150%									Sets the max current in the low speed area (< Pr. 10-39).

42	#Pr.10-32	PM FOC Speed Estimator Bandwidth	6 Hz										This is usually set when switching to PMSVC mode, so it needs to be set.
43	#Pr.10-34	PM Sensorless Speed Estimator Low-pass Filter Gain	1.5						2.5				This is usually set when switching to PMSVC mode, so it needs to be set.
44	#Pr.10-39	I/F to PM Sensorless Up switch point	9Hz						15Hz				This is the swtich point from the low speed I/F mode to Sensorless mode when accelerating.
45	#Pr.10-40	PM Sensorless to I/F down switch point	9Hz						15Hz				This is the swtich point from the low speed I/F mode to Sensorless mode when decelerating.
46	#Pr.10-52	HFI Injection Magnitude	9.1V			36.6V							This is the injection magnitude of the HFI signal that is used for rotor position detection.
47	#Pr.10-53	Angle Detection Method	2: HFI										This is the setting to use High Frequency Injection (HFI) for initial rotor position detection.