
Suggested VFD Parameter Settings for Bodine Motors

Models: 2250/2251/2252/2260/2851/2852

Contents

Table 1: Emerson Commander SK VFD parameter settings.....	2
Table 2: Emerson M200/400 settings.....	3
Table 3: Allen-Bradly Power Flex 4M VFD parameter settings.....	4
Table 4: Allen-Bradley PowerFlex 525 VFD parameter settings.....	5
Table 5: Yaskawa V1000 VFD parameter settings.....	6
Table 6: Siemens Sinamics G110 VFD parameter settings.....	7
Table 7: Siemens Micromaster 440 VFD parameter settings.....	8
Table 8: Siemens Sinamics G 120C VFD parameter settings.....	9
Table 9: ABB ACS150 VFD parameter settings.....	10
Table 10: Omron MX2 VFD parameter settings.....	11

VFD Model: Emerson Commander SK			
Parameter	Parameter Description	Parameter value	Bodine 2260 Params
1	Minimum set speed (Hz)	10	10
2	Maximum set speed (Hz)	90	90
3	Acceleration rate (s/100 Hz)	3	3
4	Deceleration rate (s/100 Hz)	3	3
5	Drive configuration	Customer specific	Customer specific
6	Motor rated current (A)	1	1.9
7	Motor rated speed (RPM)	1680	1680
10	Parameter access	3	3
16	Analog input 1 mode (mA)	Customer specific	Customer specific
32	Dynamic V to F select	ON	ON
39	Motor rated frequency (Hz)	60	60
29*	.Load defaults	EUR	EUR

*This will change the I/O to factory defaults

Table 1: Emerson Commander SK VFD parameter settings

VFD Model: Emerson M200/400

Parameter	Parameter Description	Parameter Value	Bodine 2260 Params
0.001	Minimum set speed	10	10
0.002	Maximum set speed	90	90
0.003	Acceleration	3	3
0.004	Deceleration	3	3
0.005*	Drive configuration*	AV*	AV*
0.006	Motor rated current	1	1.9
0.007	Motor rated speed	1680	1680
0.008	Motor rated voltage	230	230
0.009	Motor rated power factor	0.85	0.85
0.01	User security status	All	All
0.018**	Customer specific**	60**	60**
0.032	Dynamic V to F	1	1

Note: Use parameter 0.1244 to reset drive to factory settings – If drive is reset to factory settings, reset above drive settings.

*Parameter 0.005 may be set to “Preset” for working with preprogrammed fixed frequency Parameter 0.018 set point.

**Parameter 00.018 customer specific fixed frequency set point – may be used to operate from pad.

Table 2: Emerson M200 settings

VFD Model: Allen-Bradley Power Flex 4M

Parameter	Parameter Description	Parameter Value	Bodine 2260 Params
P101	Max Voltage	230	230
P102	NP Frequency	60	60
p103	Max amps	0.9	1.9
p104	Minimum Frequency	10	10
P105	Maximum Frequency	90	90
P106	2 Wire Control	Customer specific	Customer specific
A433	Start on Power Up	Customer specific	Customer specific
A453	No Voltage Boost	5	5
A457	Maximum Voltage	230	230
P112*	Restores Factory Defaults	1	1

*This will change the I/O to factory defaults

Table 3: Allen-Bradly Power Flex 4M VFD parameter settings

VFD Model: Allen-Bradley PowerFlex 525

Parameter	Parameter Description	Parameter Value	Bodine 2260 Params
P031	NP voltage	230	230
P032	NP Hertz	60	60
P033	NP OL current	1.5	2.85
P034	NP FLA	1	1
P035	NP poles	4	4
P036	NP RPM	1760	1760
P037	NP power (kw)	0.13	0.25
P038	Voltage class	600 V	600 V
P039	Torque perf. mode	2	2
P043	Min. frequency	10	10
P044	Max. frequency	90	90

Table 4: Allen-Bradley PowerFlex 525 VFD parameter settings

VFD Model: Yaskawa V1000

Parameter	Parameter Description	Parameter Value	Bodine 2260 Params
A1-02	V/F control	0	0
E2-01	Maximum current	1	1.9
E2-03	No-load current	0.5	0.5
E1-04	Maximum frequency	90	90
E1-05	Maximum frequency voltage	120	230
E1-07	Mid frequency	30	30
E1-08	Mid frequency voltage	50	50
E1-09	Low frequency	10	10
E1-10	Low frequency voltage	20	20
D2-02	Minimum frequency percentage	11.1	11.1
D2-01	Maximum frequency percentage	100	100
A1-03*	Restore drive to factory default	2220	2220

*This will change the I/O to factory defaults.

Table 5: Yaskawa V1000 VFD parameter settings

VFD Model: Siemens Sinamics G 110			
Parameter	Parameter Description	Parameter Value	Bodine 2260 Params
0003	Access to higher level parameters	3	3
0100	Operation for Europe/ N. America	1	1
0304	Rated motor voltage	230	230
0305	Rated motor current	0.9	1.9
0307	Rated motor power	0.16	0.375
0310	Rated motor frequency	60	60
0311	Rated motor speed	1680	1680
0700	Selection of command source	Customer specific	Customer specific
1000	Selection of frequency set point	Customer specific	Customer specific
1080	Minimum motor frequency	10	10
1082	Maximum motor frequency	90	90
1120	Ramp up time	3	3
1121	Ramp down time	3	3
1300	Control mode	0	0
1310	Continuous boost	0	0
1311	Acceleration boost	0	0
1312	Starting boost	0	0
1316	Boost end frequency	0	0

Table 6: Siemens Sinamics G110 VFD parameter settings

VFD Model: Siemens Micromaster 440

Parameter	Parameter Description	Parameter Value
100	Europe / North America	1
205	Inverter application	0
210	Supply voltage	230
304	Motor voltage rating	230
305	Motor current rating	1.9
307	Motor power rating	0.37
309	Motor efficiency rating	88
310	Motor frequency rating	60
320	Motor magnetizing current	0
335	Motor cooling	0
640	Motor overload factor [%]	100
700	Selection of command source	Customer specific
1000	Selection of frequency set point	Customer specific
1080	Min. speed	10
1082	Max. speed	90
1120	Ramp-up time	3
1121	Ramp-down time	3
1300	Control mode	2
1500	Selection of torque set point	0
1910	Select motor data identification	0
1960	Speed control optimization	0

Note: P3900 = 3 to complete commissioning and calculate motor data (set P3900 = 3 to calculate motor data only, set to 1 to reset all other parameters including I/O). Perform motor tunes only if connected to the motor P1910 = 1 only for v/f. Set P1910 = 1 and give the drive a run command. Do not turn off, as it will turn off when the calculations are complete. When the drive powers down after the tune, perform a ram to rom save by setting P971 = 1.

Table 7: Siemens Micromaster 440 VFD parameter settings

VFD Model: Siemens Sinamics G 120C DP

Parameter	Parameter Description	Parameter Value	Bodine 2260 Params
10	Drive commissioning parameter	1	1
15	Macro drive unit	12	12
210	Drive unit line supply voltage	480	480
300	Motor type selection	1	1
304	Rated motor voltage	230	230
305	Rated motor current	1	1.9
307	Rated motor power	0.16	0.375
309	Rated motor efficiency	90	90
311	Rated motor frequency	60	60
1082	Max speed	2700	2700
3900	Commissioning complete	3	3
1300	U/F control	4	4
1331	Voltage limiting	230	230
1335	Slip compensation scaling	100	100
1900	Motor identification rating (will autotune VFD)	2	2
RAM to ROM			
1300	U/F control	3	3
1320	U/F control programmable char. frequency 1	10	10
1321	U/F control programmable char. voltage 1	20	20
1322	U/F control programmable char. frequency 2	40	40
1323	U/F control programmable char. voltage 2	75	75
1324	U/F control programmable char. frequency 3	60	60
1325	U/F control programmable char. voltage 3	130	130
1326	U/F control programmable char. frequency 4	90	90
1327	U/F control programmable char. voltage 4	160	160

Table 8: Siemens Sinamics G 120C VFD parameter settings

VFD Model: ABB ACS150			
Parameter	Parameter Description	Parameter Value	Bodine 2260 Params
2007	Min Frequency (Set Speed)	10	10
2008	Max Frequency (Set Speed)	90	90
2102	Stop Function	2	2
2202	Accel	3.0	3.0
2203	Decel	3.0	3.0
2605	V/F Ratio	2	2
9905	Motor Nominal Voltage	230	230
9906	Motor Nominal Current	1.0	1.9
9907	Motor Nominal Frequency	60	60
2007	Min Frequency (Set Speed)	10	10
2008	Max Frequency (Set Speed)	90	90

Table 9: ABB ACS150 VFD parameter settings

VFD Model: Omron MX2			
Parameter	Parameter Description	Parameter Value	Bodine 2260 Params
A001	Frequency Reference*	1	1
A002	Run Command*	1	1
A003	Base frequency	60	60
A004	Maximum Frequency	90	90
A082	AVR Voltage	230	230
b012	Motor rated Current	1	1.9
H003	Motor Capacity (In KW)	0.1	0.25
H004	Motor Poles	4	4
A044	V/F algorithm	2	2
b100	Free-Setting V/F Freq. (1)	10	10
b101	Free-Setting V/F Volt (1)	27	27
b102	Free-Setting V/F Freq. (2)	20	20
b103	Free-Setting V/F Volt (2)	35	35
b104	Free-Setting V/F Freq. (3)	30	30
b105	Free-Setting V/F Volt (3)	50	50
b106	Free-Setting V/F Freq. (4)	40	40
b107	Free-Setting V/F Volt (4)	70	70
b108	Free-Setting V/F Freq. (5)	60	60
b109	Free-Setting V/F Volt (5)	120	120
b110	Free-Setting V/F Freq. (6)	70	70
b111	Free-Setting V/F Volt (6)	140	140
b112	Free-Setting V/F Freq. (7)	90	90
b113	Free-Setting V/F Volt (7)	140	140
F002	Accel	3	3
F003	Decel	3	3

*Customer specified

Table 10: Omron MX2 VFD parameter settings