VSDP-Series

Variable Speed Drive Panel

MCI's VSDP Series is our standard variable speed drive package. It comes standard in MCI'S specifically designed NEMA 3R UL listed enclosure with its Heat Guard solar white finish with filtered fan cooling.

Sizing VSDP Control Panels

- Size the VSDP based on the maximum current requirements.
- Do not size the VSDP based on horsepower rating.
- Horsepower rating is based on standard NEMA B 4-pole motor design as represented in NEC table 430.250 full-load current, three-phase alternating current motors.
- Verify motor FLA for proper drive sizing and select drive with full load amps equal or greater than the motor FLA for pumping systems not continually operating in the motor service factor.
- For pumps operating in the service factor will require the VSD full load output amps to equal or exceed the motor service factor or maximum amp rating (ie., 1.15 x FLA = Required Drive FLA). Selecting the next larger size VSD might be required.
- When sizing for submersible motors size the VSD based on the service factor or maximum amp rating of the motor as provided by the submersible motor manufacturer. Selecting the next larger VSD might be required.
- Refer to table VSDP-1 located below for output amp requirements for different pump type and if the pump is continually operating in the motor's service factor.
- Altitude limits: No derating is necessary below every 3,000 feet above sea level. Derate the drive output rating by 1% for every 300 feet of increase in elevation above 3000 feet.

Table VSDP-1

Input Volts	MCI VSDP		Franklin Electric	Goulds CentriPro	US Motor VHS		North American VHS		NEMA 1800 RPM Std. Squirrel Cage Mtr.	
460	HP	Output Amps	Max Amps	SF Amps	FLA	SFA	FLA	SFA 1.15	FLA	SFA 1.15
460	5	8.2	8.9	8.5					7.5	8.6
460	7.5	11	13.2	13.5	9	10.4			11	12.7
460	10	14.5	17.3	16.5	11.9	13.7	12.8	14.7	14	16.1
460	15	21	23.7	23	18.4	21.2	18.5	21.3	21	24.2
460	20	27	30.3	30	24.3	27.9	25.2	28.9	27	31.1
460	25	34	37.5	37	32	36.8	30.4	34.9	34	39.1
460	30	40	45.2	47	37	42.6	35.4	40.7	40	46
460	40	52	61.6	60	51	58.7	47.5	54.6	52	59.8
460	50	65	78.1	79	61	70.2	57	65.6	65	74.8
460	60	80	92.3	90	71	81.7	70.5	81.1	77	88.6
460	75	105	107	109	88	101.2	86	98.9	96	110.4
460	100	130	142	145	119	136.9	112	128.7	124	142.6
460	125	160	188	180	147	169.1	133.9	154	158	181.7
460	150	190	219	220	177	203.6	166.3	191.2	180	207
460	200	240	249	270	225	258.8	224.6	258.3	240	276
460	250	303			283	325.5			302	347.3
460	300	361			339	389.9			361	415.2
460	350	443			389	447.4			414	476.1
460	450	540			491	564.7			515	592.3
460	500	590			554	637.1			590	678.5
230	2	7.5	8.1	7.6					6.8	7.8
230	3	10.6	10.9	10.1					9.6	11
230	5	16.7	17.8	17.5					15.2	17.5
230	7.5	24.2	26.4	26.4	17.9	20.6			22	25.3
230	10	30.8	32.2	33	23.9	27.5	25.6	29.5	28	32.2
230	15	46.2	47.4	46	37	42.6	37	42.6	42	48.3
230	20	59.4	30.3	60	49	56.4	50.3	57.9	54	62.1
230	25	74.8	75	76	64	73.6	60.8	69.9	68	78.2
230	30	88	90.4	94	73	84	70.8	81.4	80	92
230	40	115			102	117.3	95	109.2	104	119.6
230	50	143			122	140.3	114	131.1	130	149.5
230	60	170			143	164.5	141.1	162.2	154	177.1

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