

Description :

“ELCEN” Brake motors are normally supplied with fail safe brakes, also known as normally ON brake. The Motor is braked (Locked) when power is not applied i.e. de-energized to brake. This ensures real fail safe braking. The Construction is quite robust and requires very limited maintenance. With wearing of liners on the rotor of brake, the air – gap can be easily adjusted. If necessary, the rotor can be replaced completely as well. The brake is mounted on end cover on non-driving end of the motor. It comes with a Manual release lever. Depending upon the application requirement, AC or DC brake can be used.

Selection :

Depending upon the application, the service factor of the brake has to be selected for proper braking.

Types Of Load	Safety factor
Low mass, uniform loading, non-intermittent operation	2
Low mass, light Shock load with intermittent operation	2.5
medium mass, light Shock load with intermittent operation	3
Heavy mass, light Shock load with intermittent operation	3
Overhauling Loads	3.5

Service factors for guidelines are mentioned in the selection table.

How ever while selecting the service factor, other criteria like mounting positions, type of transmission and reductions should also be considered as well.

Selection of "ELCEN" DC Failsafe Brake Motor

OUTPUT		2-POLE 30000RPM			4-POLE 1500RPM			6-POLE 1000RPM			8-POLE 750RPM		
KW	HP	FRAME	Brake Torque	Safety Factor	FRAME	Brake Torque	Safety Factor	FRAME	Brake Torque	Safety Factor	FRAME	Brake Torque	Safety Factor
		Size	Nm		Size	Nm		Size	Nm		Size	Nm	
0.18	0.25	63	4.5	7.5	63	4.5	3.8	71	4.5	2.6	80	4.5	1.75
0.37	0.5	71	4.5	3.6	71	4.5	1.8	80	8	2.24	90S	8	
0.37	0.5	-	-	-	71	8	3.24	-	-	-	90S	12	2.5
0.55	0.75	71	4.5	2.15	80	8	2.15	80	8	1.5	90L	12	1.8

Brake Motors

0.55	0.75	71	8	4.3	-	-	-	80	20	3.7	90L	20	3
0.75	1	80	8	3.2	80	8	1.6	90L	20	2.7	100L	20	2.1
0.75	1	-	-	-	80	12	2.4	-	-	-	100L	40	4.2
1.1	1.5	80	8	2.15	90S	20	2.6	90L	20	1.8	100L	40	2.8
1.1	1.5	80	12	3.18	-	-	-	90L	32	3	-	-	-
1.5	2	-	-	-	90L	20	2	100L	32	2.24	112M	40	2
1.5	2	90S	12	2.4	90L	40	4	-	-	-	112M	70	3.5
2.2	3	-	-	-	100L	40	2.7	112M	32	1.5	132S	70	2.5
2.2	3	90L	20	2.6	100L	70	4.6	112M	70	3.3	132S	90	3.15
3.7	5	-	-	-	112M	70	2.8	132S	70	1.9	132M	90	1.9
3.7	5	100L	40	3.2	112M	90	3.6	132S	90	2.5	132M	160	3.4
5.5	7.5	112M	40	2.1	132S	90	2.4	132M	90	1.7	160M	160	2.3
5.5	7.5	112M	70	3.8	-	-	-	-	-	-	-	-	-
7.5	10	132M	70	2.8	132M	90	1.8	160M	160	2.2	160L	160	1.7
9.3	12.5	132M	90	2.2	160M	160	2.6	160M	160	1.8	-	-	-
9.3	12.5	132M	160	5.2	-	-	-	160M	240	2.69	-	-	-
11	15	160M	90	2.5	160M	160	2.2	160L	240	2.25	-	-	-
11	15	160M	160	4.4	-	-	-	-	-	-	-	-	-
15	20	160L	90	1.8	-	-	-	-	-	-	-	-	-
15	20	160L	160	3.2	-	-	-	-	-	-	-	-	-

Selection of "ELCEN" AC Failsafe Brake Motor

OUTPUT		2-POLE 3000RPM			4-POLE 1500RPM			6-POLE 1000RPM			8-POLE 750RPM		
KW	HP	FRAME	Brake	Safety	FRAME	Brake	Safety	FRAME	Brake	Safety	FRAME	Brake	Safety
			Torque	Factor		Torque	Factor		Torque	Factor		Torque	Factor
		Size	Nm		Size	Nm		Size	Nm		Size	Nm	

Brake Motors

0.18	0.25	63	4	6.72	63	4	3.36	71	4	2.32	80	4	1.75
0.37	0.5	71	4	3.24	71	4	1.62	80	8	2.24	90S	8	1.63
0.37	0.5	-	-	-	71	8	3.24	-	-	-	90S	16	3.26
0.55	0.75	71	4	2.15	80	8	2.15	80	8	1.5	90L	16	2.4
0.55	0.75	71	8	4.3	-	-	-	80	16	3	-	-	-
0.75	1	80	8	3.2	80	8	1.6	90L	16	2.2	100L	16	1.68
0.75	1	80	16	6.3	80	16	3.2	-	-	-	100L	32	3.36
1.1	1.5	80	8	2.15	90S	16	2.15	90L	16	1.5	100L	32	2.24
1.1	1.5	80	16	4.3	-	-	-	90L	32	3	-	-	-
1.5	2	90S	8	1.62	90L	16	1.62	100L	32	2.24	112M	32	1.63
1.5	2	90S	16	3.24	90L	32	3.24	-	-	-	112M	60	3.05
2.2	3	90L	16	2.15	100L	32	2.15	112M	32	1.5	132S	60	2.1
2.2	3	90L	32	4.3	100L	60	4	112M	60	2.81	132S	80	2.8
3.7	5	100L	32	2.58	112M	60	2.42	132S	60	1.68	132M	80	1.68
3.7	5	100L	60	4.8	112M	80	3.22	132S	80	2.24	132M	150	3.15
5.5	7.5	112M	32	1.74	132S	80	2.15	132M	80	1.5	160M	150	2.14
5.5	7.5	112M	60	3.26	-	-	-	-	-	-	-	-	-
7.5	10	132M	60	2.4	132M	80	1.6	160M	150	2.09	160L	150	1.57
9.3	12.5	132M	80	1.94	160M	150	2.43	160M	150	1.68	180M	240	2.02
9.3	12.5	132M	150	4.86	-	-	-	160M	240	2.69	-	-	-
11	15	160M	80	2.24	160M	150	2.1	160L	240	2.25	180L	240	1.68
11	15	160M	150	4.2	160M	240	3.36	-	-	-	180L	360	2.52
15	20	160L	80	1.6	160L	240	2.5	180L	240	1.68	-	-	-
15	20	160L	150	3	160L	360	3.74	180L	360	2.52	-	-	-

SUPPLY

Unless otherwise specified, in AC fail safe brake, 415V 3 phase AC voltage brakes are supplied. Where as in DC fail safe brake, brake voltages are 190V D.C., with a rectifier of 415V A.C. dual phase input and 190V D.C. output, duly fitted in the terminal box of the motor. For quicker releasing action of DC brake, 96 V D.C. brakes can be used with the same rectifier but with an input supply of 230V A.C. Brakes with 24V, 48V D.C. can be supplied but without rectifier. For these supply voltages of brake, inbuilt rectifier is not available, hence the brake has to energized and de-energized separately. For A.C. fail safe brake, supply voltage of 230V or 110V AC, 3phase can be supplied.