



Intended Use

- Hazardous Area Zone 1, 2 & 21, 22
- Typical applications: compressors, fans, pumps, winches, cranes, etc.
- Certified temperature: -15°C to +40°C

Features...

...that make a difference

- Cast iron material
- Three phase asynchronous induction motor
- Motor overheat protection sensor
- Optimized ventilation system
- Reduced noise levels
- Solid base for reduced vibration levels
- Terminal blocks rotated by 4 x 90°
- Top or Side mounted terminal box

Approvals & Marking

- II 2 GD, Exd IIC T4 Gb or Exd IIB T4 Gb
- ATEX certificate no.: DNV 14 ATEX 5038X
- IECEx Certified Gb, Db
- IP55 (IP66 on request)

Introduction

The flameproof EX3M motor is suitable for zone 1, 2 and 21, 22 applications.

EX3M motor is used in hazardous location with explosive gas of class IIA, IIB or IIC and temperature class of T4 to T1. They are totally enclosed fan cooled (TEFC) squirrel cage motors which have many remarkable features such as high efficiency, compact construction, low noise, lightweight, reliable and convenient maintenance and long service life etc. High strength materials and class F insulation assure the safety and reliability. The stator windings are wound with high strength polyester enameled round copper wire and treated with the progress of vacu pressure impregnation (VPI) to make them as a whole, thus good electrical, mechanical performance, moisture resistance and thermal stability could be achieved. The rotors of motor are dynamically balanced to make them operate smoothly with small vibration and low noise.

EX3M motor is ATEX certified. This product can typically be used as motor of compressors, fans and pumps etc. in hazardous location.

Specification

General Technical Data:

Material:	Cast Iron
Finish Color:	Blue or Customized
Frame Size:	63 to 280
Mounting Options:	Horizontal or Vertical
Typical Mounting:	IM B3, IM B5, IM B30, IM B35
Terminal Box Position:	Top or Side Mounted
Terminal Box Rotation:	4 x 90°
Number of Poles:	2 to 8
Rated Power:	0.12 to 90 kW
Rated Voltage:	380 or 415 VAC
Frequency:	50 or 60 Hz
Speeds:	3000-750 r/min (2 to 8 Poles)
Efficiency:	IE3
Duty:	S1 (Continuous)
Insulation Class:	F

Table 1: Synchronous Speed 3000 r/min, 380V 50Hz

Frame Size	P (kW)	n (r/min)	cos φ	η (%)	In (A)	Ik In	Mn (Nm)	Mm Mn	J (kgm2)	m (kg)	Lp (dB)
63M1-2	0.18	2720	0.80	65.0	0.53	5.5	2.3	2.2	0.0021	13	61
63M2-2	0.25	2720	0.81	68.0	0.69	5.5	2.3	2.2	0.0028	13	61
71M1-2	0.37	2740	0.81	69.0	1.01	6.1	2.3	2.2	0.0033	22	64
71M2-2	0.55	2740	0.82	74.0	1.38	6.1	2.3	2.3	0.0035	23	64
80M1-2	0.75	2825	0.83	77.4	1.77	6.8	2.3	2.3	0.0049	27	67
80M2-2	1.1	2825	0.83	79.6	2.53	7.3	2.3	2.3	0.0059	29	67
90S-1	1.5	2840	0.84	81.3	3.38	7.6	2.3	2.3	0.0095	36	72
90L-2	2.2	2840	0.85	83.2	4.73	7.8	2.3	2.3	0.0120	40	72
100L-2	3	2880	0.87	84.6	6.19	8.1	2.2	2.3	0.0208	51	76
112M-2	4	2890	0.88	85.8	8.05	8.3	2.2	2.3	0.0370	70	77
132S1-2	5.5	2900	0.88	87.0	10.9	8.0	2.2	2.3	0.0736	92	80
132S2-2	7.5	2900	0.89	88.1	14.5	7.8	2.2	2.3	0.0908	100	80
160M1-2	11	2900	0.89	89.4	21.0	7.9	2.2	2.3	0.241	175	86
160M2-2	15	2930	0.89	90.3	28.4	8.0	2.2	2.3	0.301	186	86
160L-2	18.5	2920	0.89	90.9	34.7	8.1	2.2	2.3	0.351	198	86
180M-2	22	2940	0.89	91.3	41.1	8.2	2.2	2.3	0.477	260	88
200L1-2	30	2950	0.89	92.0	55.7	7.5	2.2	2.3	0.767	305	90
200L2-2	37	2950	0.89	92.5	68.3	7.5	2.2	2.3	0.850	335	90
225M-2	45	2970	0.89	92.9	82.7	7.6	2.2	2.3	1.424	400	92
250M-2	55	2970	0.89	93.2	100.7	7.6	2.2	2.3	1.75	466	93
280S-2	75	2970	0.89	93.8	136.5	6.9	2.0	2.3	1.89	676	94
280M-2	90	2970	0.89	94.1	163.3	7.0	2.0	2.3	2.02	758	94

Table 2: Synchronous Speed 1500 r/min, 380V 50Hz

Frame Size	P (kW)	n (r/min)	cos φ	η (%)	In (A)	Ik In	Mn (Nm)	Mm Mn	J (kgm2)	m (kg)	Lp (dB)
63M1-4	0.12	1380	0.82	57.0	0.44	4.4	2.3	2.2	0.0033	10	52
63M2-4	0.18	1380	0.82	60.0	0.62	4.4	2.3	2.2	0.0035	11	52
71M1-4	0.25	1380	0.82	65.0	0.79	5.2	2.3	2.2	0.0042	22	55
71M2-4	0.37	1380	0.83	67.0	1.12	5.2	2.3	2.3	0.0050	23	55
80M1-4	0.55	1390	0.85	80.7	1.38	6.3	2.3	2.3	0.0085	28	58
80M2-4	0.75	1390	0.86	79.6	1.91	6.5	2.3	2.3	0.0116	31	58
90S-4	1.1	1400	0.86	81.4	2.74	6.6	2.3	2.3	0.0189	25	61
90L-4	1.5	1400	0.86	82.8	3.67	6.9	2.3	2.3	0.0225	42	61
100L1-4	2.2	1420	0.86	84.3	4.90	7.5	2.3	2.3	0.045	53	64
100L2-4	3	1420	0.86	85.8	6.50	7.6	2.3	2.3	0.053	58	64
112M-4	4	1440	0.86	86.6	8.56	7.7	2.3	2.3	0.084	80	65
132S-4	5.5	1440	0.86	87.7	11.6	7.5	2.0	2.3	0.151	91	71
132M-4	7.5	1440	0.86	88.7	15.5	7.4	2.0	2.3	0.213	107	71
160M-4	11	1460	0.86	89.8	21.9	7.5	2.2	2.3	0.469	167	75
160L-4	15	1460	0.86	90.6	29.2	7.5	2.2	2.3	0.562	190	75
180M-4	18.5	1470	0.86	91.2	35.8	7.7	2.2	2.3	0.831	235	76
180L-4	22	1470	0.86	91.6	42.4	7.8	2.2	2.3	1.03	245	76
200L-4	30	1470	0.86	92.3	57.4	7.2	2.2	2.3	1.12	295	79
225S-4	37	1480	0.86	92.7	70.5	7.3	2.2	2.3	1.21	384	81
225M-4	45	1480	0.86	93.1	85.4	7.4	2.2	2.3	1.85	420	81
250M-4	55	1480	0.86	93.5	103.9	7.4	2.2	2.3	2.32	520	83
280S-4	75	1480	0.88	94.0	137.8	6.7	2.2	2.3	2.86	725	86
280M-4	90	1480	0.88	94.2	165.0	6.9	2.2	2.3	3.34	754	86