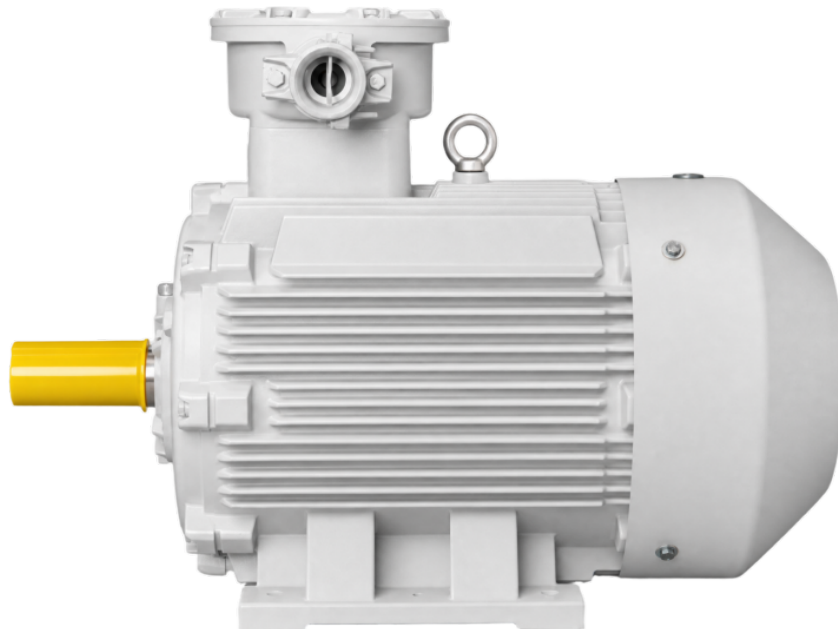


EXPLOSION-PROTECTED SERIES

YBX4

YBX4 SERIES HIGH EFFICIENCY FLAMEPROOF THREE-PHASE INDUCTION MOTOR

Totally enclosed flameproof three-phase induction motor for gas atmospheres, at grade 2 of GB 18613—2020.

**0.18–315** kW

RATED OUTPUT

H63–H355FRAME CENTRE
HEIGHT**Grade 2**

GB 18613—2020 (IE4)

Ex db

TYPE OF PROTECTION

SERIES

YBX4

REVISION

A01

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DESCRIPTION

The YBX4 series is a totally enclosed, high-efficiency flameproof induction motor. Efficiency meets grade 2 of GB 18613—2020, the middle of that standard's three grades — YBX3 is grade 3 and YBX5 grade 1.

The series is safe in use, compact, efficient and reliable, with low noise, low weight, and straightforward installation and maintenance.

TECHNICAL SPECIFICATION

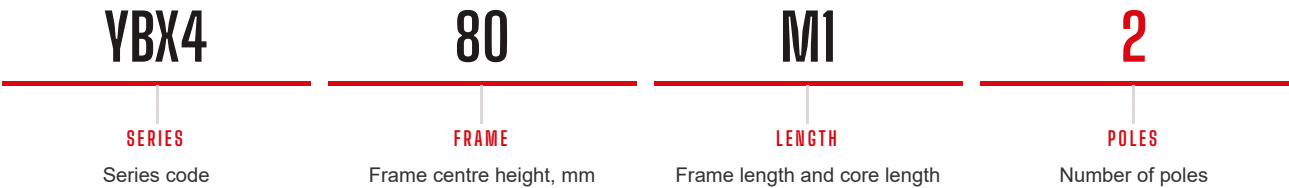
Explosion-protection marking	Ex db I Mb (mining); Ex db IIB T1 Gb to T4 Gb (plant)
Poles	2, 4, 6, 8 and 10
Altitude	Not exceeding 1,000 m (3,280 ft)
Ambient temperature	−15 °C to +40 °C (5 °F to 104 °F)
Duty type	S1, continuous duty
Mounting arrangements	IM B3 (foot), IM B5 (flange), IM B35 (foot and flange)

STANDARDS

GB/T 3836.1-2021	Explosive atmospheres — Part 1: equipment, general requirements
GB/T 3836.2-2021	Explosive atmospheres — Part 2: equipment protected by flameproof enclosure “d”
JB/T 14517-2022	YBX4 series high efficiency flameproof three-phase induction motors, frames 63 to 355
GB 18613—2020	Energy efficiency grade 2, equivalent to IE4

MODEL DESIGNATION

The type designation is formed as follows, shown for **YBX4-80M1-2**.



READING A DESIGNATION

Frames 63 to 355 are covered by the series standard.

TYPICAL APPLICATIONS

- Coal mines (Ex db I Mb)
- Group IIB gas atmospheres in plant
- Petrochemical plant
- Chemical plant

NOTES**STARTING CURRENT**

At the same rating, locked-rotor current is higher than the grade 3 YBX4 equivalent. Check the supply and protection settings against the rated data when replacing a grade 3 machine.

RATED DATA

Values are for 50 Hz operation at the rated voltage stated above. Ratings are continuous (duty type S1).

2 POLES — SYNCHRONOUS SPEED 3000 R/MIN, 50 HZ

TYPE	RATED OUTPUT kW	RATED SPEED r/min	EFFICIENCY %	POWER FACTOR cos φ	RATED CURRENT A
YBX4-80M1-2	0.75	2885	83.5	0.83	1.64
YBX4-80M2-2	1.1	2885	85.2	0.83	2.36
YBX4-90S-2	1.5	2885	86.5	0.85	3.10
YBX4-90L-2	2.2	2885	88.0	0.86	4.42
YBX4-100L-2	3	2905	89.1	0.87	5.88
YBX4-112M-2	4	2900	90.0	0.88	7.67
YBX4-132S1-2	5.5	2930	90.9	0.88	10.45
YBX4-132S2-2	7.5	2930	91.7	0.89	13.96
YBX4-160M1-2	11	2955	92.6	0.89	20.28
YBX4-160M2-2	15	2955	93.3	0.89	27.45
YBX4-160L-2	18.5	2955	93.7	0.89	33.71
YBX4-180M-2	22	2960	94.0	0.89	39.96
YBX4-200L1-2	30	2965	94.5	0.89	54.20
YBX4-200L2-2	37	2965	94.8	0.89	66.63
YBX4-225M-2	45	2970	95.0	0.89	80.87
YBX4-250M-2	55	2980	95.3	0.89	98.53
YBX4-280S-2	75	2980	95.6	0.89	133.93
YBX4-280M-2	90	2980	95.8	0.89	160.38

2 POLES — SYNCHRONOUS SPEED 3000 R/MIN, 50 HZ (CONTINUED)

TYPE	RATED OUTPUT kW	RATED SPEED r/min	EFFICIENCY %	POWER FACTOR cos φ	RATED CURRENT A
YBX4-315S-2	110	2975	96.0	0.89	195.61
YBX4-315M-2	132	2975	96.2	0.89	234.25
YBX4-315L1-2	160	2975	96.3	0.89	283.64
YBX4-315L2-2	200	2975	96.5	0.89	353.82
YBX4-355S1-2	185	2980	96.4	0.89	327.62
YBX4-355S2-2	200	2980	96.5	0.89	353.82
YBX4-355M1-2	220	2980	96.5	0.90	384.88
YBX4-355M2-2	250	2980	96.5	0.91	432.55
YBX4-355L1-2	280	2980	96.5	0.91	484.46
YBX4-355L2-2	315	2980	96.5	0.91	545.02

4 POLES — SYNCHRONOUS SPEED 1500 R/MIN, 50 HZ

TYPE	RATED OUTPUT kW	RATED SPEED r/min	EFFICIENCY %	POWER FACTOR cos φ	RATED CURRENT A
YBX4-80M1-4	0.55	1430	83.9	0.74	1.35
YBX4-80M2-4	0.75	1430	85.7	0.74	1.80
YBX4-90S-4	1.1	1440	87.2	0.75	2.56
YBX4-90L-4	1.5	1440	88.2	0.76	3.40
YBX4-100L1-4	2.2	1455	89.5	0.76	4.91
YBX4-100L2-4	3	1455	90.4	0.80	6.30
YBX4-112M-4	4	1460	91.1	0.80	8.34
YBX4-132S-4	5.5	1470	91.9	0.80	11.37
YBX4-132M-4	7.5	1470	92.6	0.81	15.19
YBX4-160M-4	11	1475	93.3	0.83	21.58
YBX4-160L-4	15	1475	93.9	0.84	28.89
YBX4-180M-4	18.5	1480	94.2	0.85	35.11
YBX4-180L-4	22	1480	94.5	0.85	41.61
YBX4-200L-4	30	1480	94.9	0.85	56.51
YBX4-225S-4	37	1485	95.2	0.85	69.47
YBX4-225M-4	45	1485	95.4	0.85	84.32
YBX4-250M-4	55	1485	95.7	0.86	101.54
YBX4-280S-4	75	1485	96.0	0.87	136.44
YBX4-280M-4	90	1485	96.1	0.88	161.70
YBX4-315S-4	110	1480	96.3	0.89	195.00
YBX4-315M-4	132	1480	96.4	0.89	233.76
YBX4-315L1-4	160	1480	96.6	0.90	279.62
YBX4-315L-4	185	1480	96.6	0.90	323.31

4 POLES — SYNCHRONOUS SPEED 1500 R/MIN, 50 HZ (CONTINUED)

TYPE	RATED OUTPUT kW	RATED SPEED r/min	EFFICIENCY %	POWER FACTOR cos φ	RATED CURRENT A
YBX4-315L2-4	200	1480	96.7	0.90	349.16
YBX4-355S1-4	185	1490	96.6	0.90	323.31
YBX4-355S2-4	200	1490	96.7	0.90	349.16
YBX4-355M1-4	220	1490	96.7	0.90	384.08
YBX4-355M2-4	250	1490	96.7	0.90	436.46
YBX4-355L1-4	280	1490	96.7	0.90	488.83
YBX4-355L2-4	315	1490	96.7	0.90	549.93

6 POLES — SYNCHRONOUS SPEED 1000 R/MIN, 50 HZ

TYPE	RATED OUTPUT kW	RATED SPEED r/min	EFFICIENCY %	POWER FACTOR cos φ	RATED CURRENT A
YBX4-80M1-6	0.37	945	78.0	0.70	1.03
YBX4-80M2-6	0.55	945	80.9	0.70	1.48
YBX4-90S-6	0.75	950	82.7	0.70	1.97
YBX4-90L-6	1.1	950	84.5	0.70	2.83
YBX4-100L-6	1.5	965	85.9	0.71	3.74
YBX4-112M-6	2.2	970	87.4	0.71	5.39
YBX4-132S-6	3	980	88.6	0.71	7.25
YBX4-132M1-6	4	980	89.5	0.72	9.43
YBX4-132M2-6	5.5	980	90.5	0.72	12.82
YBX4-160M-6	7.5	980	91.3	0.76	16.42
YBX4-160L-6	11	980	92.3	0.77	23.52
YBX4-180L-6	15	985	92.9	0.80	30.67
YBX4-200L1-6	18.5	985	93.4	0.80	37.62
YBX4-200L2-6	22	985	93.7	0.81	44.04
YBX4-225M-6	30	985	94.2	0.82	59.01
YBX4-250M-6	37	990	94.5	0.83	71.67
YBX4-280S-6	45	990	94.8	0.83	86.89
YBX4-280M-6	55	990	95.1	0.84	104.61
YBX4-315S-6	75	985	95.4	0.84	142.20
YBX4-315M-6	90	985	95.6	0.85	168.28
YBX4-315L1-6	110	985	95.8	0.85	205.25
YBX4-315L2-6	132	985	96.0	0.86	242.93
YBX4-355S-6	160	990	96.2	0.86	293.84
YBX4-355M1-6	185	990	96.2	0.86	339.76
YBX4-355M2-6	200	990	96.3	0.86	366.92
YBX4-355L1-6	220	995	96.3	0.86	403.61

6 POLES — SYNCHRONOUS SPEED 1000 R/MIN, 50 HZ (CONTINUED)

TYPE	RATED OUTPUT kW	RATED SPEED r/min	EFFICIENCY %	POWER FACTOR cos φ	RATED CURRENT A
YBX4-355L2-6	250	995	96.5	0.86	457.70

8 POLES — SYNCHRONOUS SPEED 750 R/MIN, 50 HZ

TYPE	RATED OUTPUT kW	RATED SPEED r/min	EFFICIENCY %	POWER FACTOR cos φ	RATED CURRENT A
YBX4-80M1-8	0.18	675	67.2	0.61	0.67
YBX4-80M2-8	0.25	675	70.8	0.61	0.88
YBX4-90S-8	0.37	680	74.3	0.61	1.24
YBX4-90L-8	0.55	680	77.0	0.61	1.78
YBX4-100L1-8	0.75	715	78.4	0.66	2.20
YBX4-100L2-8	1.1	715	80.8	0.67	3.09
YBX4-112M-8	1.5	710	82.6	0.69	4.00
YBX4-132S-8	2.2	720	84.5	0.70	5.65
YBX4-132M-8	3	720	85.9	0.70	7.58
YBX4-160M1-8	4	725	87.1	0.71	9.83
YBX4-160M2-8	5.5	725	88.3	0.72	13.14
YBX4-160L-8	7.5	725	89.3	0.74	17.24
YBX4-180L-8	11	730	90.4	0.74	24.98
YBX4-200L-8	15	730	91.2	0.75	33.32
YBX4-225S-8	18.5	735	91.7	0.75	40.87
YBX4-225M-8	22	735	92.1	0.76	47.75
YBX4-250M-8	30	740	92.7	0.77	63.86
YBX4-280S-8	37	740	93.1	0.78	77.42
YBX4-280M-8	45	740	93.4	0.78	93.85
YBX4-315S-8	55	740	93.7	0.80	111.48
YBX4-315M-8	75	740	94.2	0.80	151.21
YBX4-315L1-8	90	740	94.4	0.81	178.84
YBX4-315L2-8	110	740	94.7	0.81	217.88
YBX4-355S-8	132	740	94.9	0.81	260.91
YBX4-355M-8	160	740	95.1	0.82	311.74
YBX4-355L1-8	185	740	95.3	0.82	359.69
YBX4-355L2-8	200	740	95.4	0.82	388.45

10 POLES — SYNCHRONOUS SPEED 600 R/MIN, 50 HZ

TYPE	RATED OUTPUT kW	RATED SPEED r/min	EFFICIENCY %	POWER FACTOR COS ϕ	RATED CURRENT A
YBX4-315S-10	45	590	91.2	0.75	99.96
YBX4-315M-10	55	590	91.8	0.75	121.37
YBX4-315L1-10	75	590	92.3	0.76	162.45
YBX4-315L2-10	90	590	92.9	0.77	191.16
YBX4-355S-10	90	590	92.9	0.77	191.16
YBX4-355M1-10	110	590	93.1	0.78	230.15
YBX4-355M2-10	132	590	93.5	0.78	275.00
YBX4-355L1-10	160	590	93.5	0.78	333.34
YBX4-355L2-10	185	590	93.5	0.78	385.42

MOUNTING ARRANGEMENTS

The series is supplied in the following arrangements to IEC 60034-7. Letters on the drawings are the dimension symbols used in the outline and mounting dimension schedule.

ABOUT THESE DRAWINGS

The drawings show a representative frame for each arrangement and are not to scale. Dimensions for a specific frame size are given in the outline and mounting dimension schedule.

OUTLINE AND MOUNTING DIMENSIONS

Principal dimensions are given below. The complete dimension schedule, including tolerances and flange details, is issued on request.

PRINCIPAL OUTLINE AND MOUNTING DIMENSIONS (MM)

FRAME	POLES
80M	2, 4, 6, 8
90S/90SA/90L/90LA	2, 4, 6, 8/4/2, 6, 8/4
100L	2, 4, 6, 8
112M/112MA	2.6.8/4
132S/132SA/132M/132MA	2.6.8/2.4/6/4.6
160M/160L	2, 4, 6, 8
180M/180L	2, 4, 6, 8
200L	2, 4, 6, 8
225S/225M	4, 8/2; 4, 6, 8
250M	2/4, 6, 8
280S/280M	2/4, 6, 8

PRINCIPAL OUTLINE AND MOUNTING DIMENSIONS (MM) (CONTINUED)

FRAME	POLES
315S/315M/315L	2/4, 6, 8, 10
355S/355M/355L	2/4, 6, 8, 10

MANUFACTURER

CHINA HEADQUARTERS

SHANDONG LIJIU ELECTRICAL
MACHINERY CO., LTD

No.22, Shanhai Road, Rushan City, Shandong, China
Email: info@leadgomotor.com

THAILAND FACILITY

LEADGO MOTOR TECHNOLOGY
THAILAND CO LTD

Rojana Bowin 2 Industrial Estate, Si Racha,
Chonburi, Thailand
Email: info@leadgomotor.com

WEBSITE www.leadgomotor.com

Ratings and dimensions in this datasheet are taken from the LEADGO product brochure and are subject to change without prior notice as a result of continuous product development. Confirm the applicable data with the manufacturer before ordering or before modifying an existing installation.