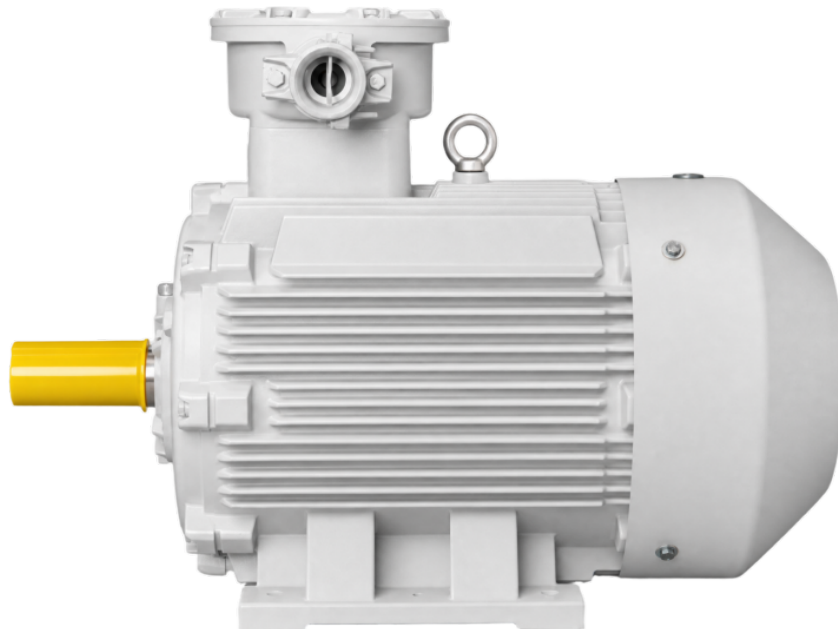


EXPLOSION-PROTECTED SERIES

YBX3

YBX3 SERIES HIGH EFFICIENCY FLAMEPROOF THREE-PHASE INDUCTION MOTOR

Totally enclosed flameproof three-phase induction motor for gas atmospheres, at grade 3 of GB 18613—2020.

**0.18–315** kW

RATED OUTPUT

H63–H355FRAME CENTRE
HEIGHT**Grade 3**

GB 18613—2020 (IE3)

Ex db

TYPE OF PROTECTION

SERIES

YBX3

REVISION

A01

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DESCRIPTION

The YBX3 series is a totally enclosed, high-efficiency flameproof induction motor. Efficiency meets grade 3 of GB 18613—2020, the lowest of that standard's three grades — YBX4 is grade 2 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 12628-2016	YBX3 series high efficiency flameproof three-phase induction motors, frames 63 to 355
GB 18613—2020	Energy efficiency grade 3, equivalent to IE3

MODEL DESIGNATION

The type designation is formed as follows, shown for **YBX3-80M1-2**.

YBX3	80	M1	2
SERIES	FRAME	LENGTH	POLES
Series code	Frame centre height, mm	Frame length and core length	Number of poles

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

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
YBX3-80M1-2	0.75	2855	80.7	0.83	1.7
YBX3-80M2-2	1.1	2855	82.7	0.83	2.4
YBX3-90S-2	1.5	2880	84.2	0.84	3.2
YBX3-90L-2	2.2	2880	85.9	0.85	4.6
YBX3-100L-2	3	2890	87.1	0.87	6
YBX3-112M-2	4	2905	88.1	0.88	7.8
YBX3-132S1-2	5.5	2920	89.2	0.88	10.6
YBX3-132S2-2	7.5	2915	90.1	0.89	14.2
YBX3-160M1-2	11	2940	91.2	0.89	20.6
YBX3-160M2-2	15	2940	91.9	0.89	27.9
YBX3-160L-2	18.5	2940	92.4	0.89	34.2
YBX3-180M-2	22	2950	92.7	0.89	40.5
YBX3-200L1-2	30	2950	93.3	0.89	54.9
YBX3-200L2-2	37	2950	93.7	0.89	67.4
YBX3-225M-2	45	2965	94.0	0.89	81.7
YBX3-250M-2	55	2970	94.3	0.89	99.6
YBX3-280S-2	75	2975	94.7	0.89	135.2
YBX3-280M-2	90	2975	95.0	0.89	161.7
YBX3-315S-2	110	2980	95.2	0.89	197.3
YBX3-315M-2	132	2980	95.4	0.89	236.2
YBX3-315L1-2	160	2980	95.6	0.89	285.7
YBX3-315L2-2	200	2980	95.8	0.89	356.4
YBX3-355M1-2	220	2980	95.8	0.89	392
YBX3-355M2-2	250	2980	95.8	0.90	440.6
YBX3-355L1-2	280	2980	95.8	0.90	493.4

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
YBX3-355L2-2	315	2980	95.8	0.90	555.1

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
YBX3-80M1-4	0.55	1420	77.8	0.75	1.4
YBX3-80M2-4	0.75	1420	82.5	0.75	1.8
YBX3-90S-4	1.1	1425	84.1	0.75	2.6
YBX3-90L-4	1.5	1425	85.3	0.75	3.6
YBX3-100L1-4	2.2	1440	86.7	0.81	4.8
YBX3-100L2-4	3	1440	87.7	0.82	6.3
YBX3-112M-4	4	1455	88.6	0.82	8.4
YBX3-132S-4	5.5	1460	89.6	0.82	11.4
YBX3-132M-4	7.5	1455	90.4	0.83	15.2
YBX3-160M-4	11	1465	91.4	0.85	21.5
YBX3-160L-4	15	1465	92.1	0.85	29.1
YBX3-180M-4	18.5	1470	92.6	0.86	35.3
YBX3-180L-4	22	1470	93.0	0.86	41.8
YBX3-200L-4	30	1475	93.6	0.87	56
YBX3-225S-4	37	1480	93.9	0.87	68.8
YBX3-225M-4	45	1480	94.2	0.87	83.4
YBX3-250M-4	55	1480	94.6	0.88	100.4
YBX3-280S-4	75	1485	95.0	0.88	136.3
YBX3-280M-4	90	1485	95.2	0.89	161.4
YBX3-315S-4	110	1485	95.4	0.89	196.8
YBX3-315M-4	132	1485	95.6	0.89	235.7
YBX3-315L1-4	160	1485	95.8	0.89	285.1
YBX3-315L-4	185	1485	95.9	0.89	329.3
YBX3-315L2-4	200	1490	96.0	0.89	355.7
YBX3-355M1-4	220	1490	96.0	0.89	391.2
YBX3-355M2-4	250	1490	96.0	0.89	444.6
YBX3-355L1-4	280	1490	96.0	0.89	497.9
YBX3-355L2-4	315	1490	96.0	0.89	560.2

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

TYPE	RATED OUTPUT kW	RATED SPEED r/min	EFFICIENCY %	RATED CURRENT A
YBX3-80M1-6	0.37	930	62.0	1.3
YBX3-80M2-6	0.55	930	73.6	1.6
YBX3-90S-6	0.75	940	78.9	2
YBX3-90L-6	1.1	940	81.0	2.8
YBX3-100L-6	1.5	950	82.5	3.7
YBX3-112M-6	2.2	950	84.3	5.4
YBX3-132S-6	3	975	85.6	7.2
YBX3-132M1-6	4	975	86.8	9.5
YBX3-132M2-6	5.5	975	88.0	12.7
YBX3-160M-6	7.5	970	89.1	16.4
YBX3-160L-6	11	970	90.3	23.7
YBX3-180L-6	15	980	91.2	30.9
YBX3-200L1-6	18.5	980	91.7	37.8
YBX3-200L2-6	22	980	92.2	44.2
YBX3-225M-6	30	985	92.9	60.6
YBX3-250M-6	37	985	93.3	71.7
YBX3-280S-6	45	985	93.7	84.8
YBX3-280M-6	55	985	94.1	103.3
YBX3-315S-6	75	990	94.6	141.7
YBX3-315M-6	90	990	94.9	171.5
YBX3-315L1-6	110	990	95.1	206.8
YBX3-315L2-6	132	990	95.4	244.5
YBX3-355S-6	160	990	95.6	292.3
YBX3-355M1-6	185	990	95.7	337.6
YBX3-355M2-6	200	990	95.8	364.6
YBX3-355L1-6	220	990	95.8	401.1
YBX3-355L2-6	250	990	95.8	455.7

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
YBX3-80M1-8	0.18	680	51.0	0.61	0.9
YBX3-80M2-8	0.25	680	54.0	0.61	1.2
YBX3-90S-8	0.37	695	62.0	0.61	1.5
YBX3-90L-8	0.55	695	63.0	0.61	2.2
YBX3-100L1-8	0.75	715	68.7	0.67	2.5
YBX3-100L2-8	1.1	715	70.7	0.67	3.5

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

TYPE	RATED OUTPUT kW	RATED SPEED r/min	EFFICIENCY %	POWER FACTOR cos φ	RATED CURRENT A
YBX3-112M-8	1.5	700	72.8	0.71	4.4
YBX3-132S-8	2.2	715	77.9	0.71	—
YBX3-132M-8	3	715	78.9	0.73	—
YBX3-160M1-8	4	720	79.9	0.73	10.4
YBX3-160M2-8	5.5	720	82.0	0.74	13.8
YBX3-160L-8	7.5	720	84.0	0.75	18.1
YBX3-180L-8	11	730	86.4	0.75	25.8
YBX3-200L-8	15	730	86.9	0.76	34.5
YBX3-225S-8	18.5	735	89.1	0.76	41.5
YBX3-225M-8	22	735	89.6	0.78	47.8
YBX3-250M-8	30	735	90.4	0.79	63.8
YBX3-280S-8	37	740	90.9	0.79	78.3
YBX3-280M-8	45	740	91.4	0.79	94.7
YBX3-315S-8	55	740	92.3	0.80	113.2
YBX3-315M-8	75	740	93.2	0.80	152.8
YBX3-315L1-8	90	740	93.5	0.80	182.8
YBX3-315L2-8	110	740	93.5	0.82	218
YBX3-355S-8	132	740	93.8	0.82	260.8
YBX3-355M-8	160	740	94.0	0.82	315.4
YBX3-355L1-8	185	740	94.0	0.82	364.7
YBX3-355L2-8	200	740	94.2	0.83	388.7

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
YBX3-355S-10	90	590	92.9	0.77	191.2
YBX3-355M1-10	110	590	93.1	0.78	230.2
YBX3-355M2-10	132	590	93.5	0.78	275
YBX3-355L-10	160	590	93.5	0.78	333.3
YBX3-355L1-10	185	590	93.5	0.78	385.4

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

The series is supplied in the IM B3 (foot), IM B5 (flange), IM B35 (foot and flange) mounting arrangements. The full outline and mounting dimension schedule for each frame — including flange details and tolerances — is issued on request and is not reproduced in this datasheet.

COLUMNS NOT REPRODUCED

The brochure does not print “Power factor $\cos \phi$ ” as values grouped over bands of ratings rather than per type. Those figures are available on request and are omitted here rather than shown against the wrong rating.

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