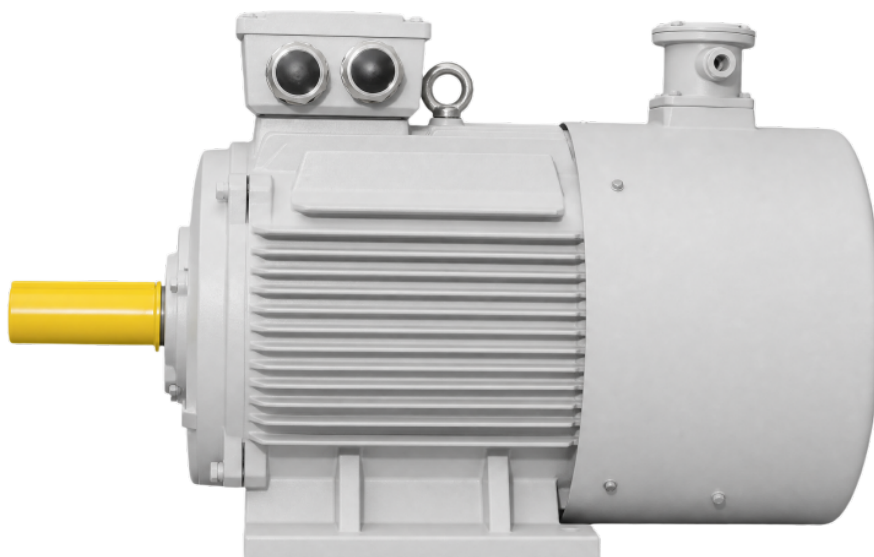


EXPLOSION-PROTECTED SERIES

YFBBPX3

YFBBPX3 SERIES HIGH EFFICIENCY DUST EXPLOSION-PROOF VARIABLE FREQUENCY SPEED CONTROL THREE-PHASE INDUCTION MOTOR

Totally enclosed dust explosion-proof induction motor for inverter-fed variable speed duty in combustible dust atmospheres.

**0.55-315** kW

RATED OUTPUT

H80-H355FRAME CENTRE
HEIGHT**3-100** Hz

FREQUENCY RANGE

Ex tb

TYPE OF PROTECTION

SERIES

YFBBPX3

REVISION

A01

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DESCRIPTION

The YFBBPX3 series is a totally enclosed, high-efficiency motor protected against dust ignition by enclosure and built for inverter supply. Efficiency meets grade 3 of GB 18613—2020.

TECHNICAL SPECIFICATION

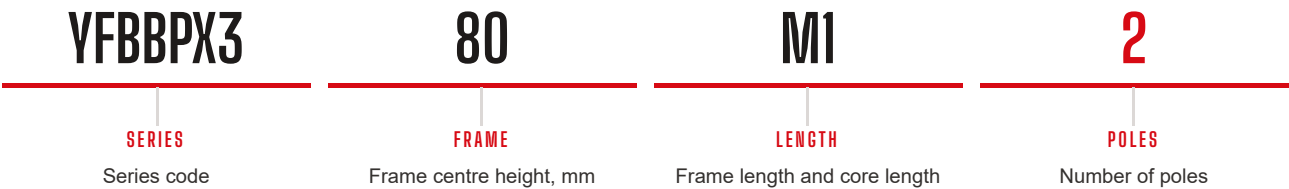
Explosion-protection marking	Ex tb IIIC T135 °C Db
Constant torque range	3 to 50 Hz
Constant power range	50 to 100 Hz (50 to 60 Hz on some ratings)
Poles	2, 4, 6, 8 and 10
Altitude	Not exceeding 1,000 m (3,280 ft)
Ambient temperature	−15 °C to +40 °C (5 °F to 104 °F)
Duty type	S1, continuous duty
Mounting 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 3836.31-2021	Explosive atmospheres — Part 31: equipment protected by enclosure “t” against dust ignition
Q/1083 SLJ 049-2022	YFBBPX3 series high efficiency dust explosion-proof variable frequency speed control three-phase induction motors, frames 80 to 355
GB 18613—2020	Energy efficiency grade 3, equivalent to IE3

MODEL DESIGNATION

The type designation is formed as follows, shown for **YFBBPX3-80M1-2**.



TYPICAL APPLICATIONS

- Explosive dust atmospheres (Ex tb IIIC T135 °C Db)
- Grain handling
- Coal handling
- Chemical and pharmaceutical plant

NOTES

DIMENSIONS

The brochure prints the mounting arrangements for this series but no dimension schedule of its own. Dimensions are issued on request.

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	HP	SPEED r/min	EFF%	COSΦ	CURRENT A
YFBBPX3-80M1-2	0.75	1	2855	80.7	0.82	1.7
YFBBPX3-80M2-2	1.1	1.5	2855	82.7	0.83	2.4
YFBBPX3-90S-2	1.5	2	2880	84.2	0.84	3.2
YFBBPX3-90L-2	2.2	3	2880	85.9	0.85	4.6
YFBBPX3-100L-2	3	4	2890	87.1	0.87	6
YFBBPX3-112M-2	4	5.5	2905	88.1	0.88	7.8
YFBBPX3-132S1-2	5.5	7.5	2920	89.2	0.88	10.6
YFBBPX3-132S2-2	7.5	10	2915	90.1	0.88	14.4
YFBBPX3-160M1-2	11	15	2940	91.2	0.89	20.6

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

TYPE	RATED OUTPUT kW	HP	SPEED r/min	EFF%	COSΦ	CURRENT A
YFBBPX3-160M2-2	15	20	2940	91.9	0.89	27.9
YFBBPX3-160L-2	18.5	25	2940	92.4	0.89	34.2
YFBBPX3-180M-2	22	30	2950	92.7	0.89	40.5
YFBBPX3-200L1-2	30	40	2950	93.3	0.89	54.9
YFBBPX3-200L2-2	37	50	2950	93.7	0.89	67.4
YFBBPX3-225M-2	45	60	2965	94.0	0.90	80.8
YFBBPX3-250M-2	55	75	2970	94.3	0.90	98.5
YFBBPX3-280S-2	75	100	2975	94.7	0.90	133.7
YFBBPX3-280M-2	90	125	2975	95.0	0.90	159.9
YFBBPX3-315S-2	110	150	2980	95.2	0.90	195.1
YFBBPX3-315M-2	132	180	2980	95.4	0.90	233.6
YFBBPX3-315L1-2	160	200	2980	95.6	0.91	279.4
YFBBPX3-315L2-2	200	270	2980	95.8	0.91	348.6
YFBBPX3-355M-2	250	340	2980	95.8	0.91	435.7
YFBBPX3-355L-2	315	430	2980	95.8	0.91	549

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

TYPE	RATED OUTPUT kW	HP	SPEED r/min	EFF%	COSΦ	CURRENT A
YFBBPX3-80M1-4	0.55	0.75	1420	80.8	0.75	1.4
YFBBPX3-80M2-4	0.75	1	1420	82.5	0.75	1.8
YFBBPX3-90S-4	1.1	1.5	1425	84.1	0.76	2.6
YFBBPX3-90L-4	1.5	2	1425	85.3	0.77	3.5
YFBBPX3-100L1-4	2.2	3	1440	86.7	0.81	4.8
YFBBPX3-100L2-4	3	4	1440	87.7	0.82	6.3
YFBBPX3-112M-4	4	5.5	1455	88.6	0.82	8.4
YFBBPX3-132S-4	5.5	7.5	1460	89.6	0.83	11.2
YFBBPX3-132M-4	7.5	10	1455	90.4	0.84	15
YFBBPX3-160M-4	11	15	1465	91.4	0.85	21.5
YFBBPX3-160L-4	15	20	1465	92.1	0.86	28.8
YFBBPX3-180M-4	18.5	25	1470	92.6	0.86	35.3
YFBBPX3-180L-4	22	30	1470	93.0	0.86	41.8
YFBBPX3-200L-4	30	40	1475	93.6	0.86	56.6
YFBBPX3-225S-4	37	50	1480	93.9	0.86	69.6
YFBBPX3-225M-4	45	60	1480	94.2	0.86	84.4
YFBBPX3-250M-4	55	75	1480	94.6	0.86	102.7
YFBBPX3-280S-4	75	100	1485	95.0	0.88	136.3

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

TYPE	RATED OUTPUT kW	HP	SPEED r/min	EFF%	COSΦ	CURRENT A
YFBBPX3-280M-4	90	125	1485	95.2	0.88	163.2
YFBBPX3-315S-4	110	150	1485	95.4	0.89	196.8
YFBBPX3-315M-4	132	180	1485	95.6	0.89	235.7
YFBBPX3-315L1-4	160	200	1485	95.9	0.89	285.1
YFBBPX3-315L2-4	200	270	1490	96.0	0.90	351.7
YFBBPX3-355M1-4	220	295	1490	96.0	0.90	386.9
YFBBPX3-355M-4	250	340	1490	96.0	0.90	439.6
YFBBPX3-355L-4	315	430	1490	96.0	0.90	553.9

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

TYPE	RATED OUTPUT kW	HP	SPEED r/min	EFF%	COSΦ	CURRENT A
YFBBPX3-80M1-6	0.37	0.5	930	73.5	0.70	1.1
YFBBPX3-80M2-6	0.55	0.75	930	77.2	0.72	1.5
YFBBPX3-90S-6	0.75	1	940	78.9	0.71	2.0
YFBBPX3-90L-6	1.1	1.5	940	81.0	0.73	2.8
YFBBPX3-100L-6	1.5	2	950	82.5	0.73	3.8
YFBBPX3-112M-6	2.2	3	950	84.3	0.74	5.4
YFBBPX3-132S-6	3	4	975	85.6	0.74	7.2
YFBBPX3-132M1-6	4	5.5	975	86.8	0.74	9.5
YFBBPX3-132M2-6	5.5	7.5	975	88.0	0.75	12.7
YFBBPX3-160M-6	7.5	10	970	89.1	0.79	16.2
YFBBPX3-160L-6	11	15	970	90.3	0.80	23.1
YFBBPX3-180L-6	15	20	980	91.2	0.81	30.9
YFBBPX3-200L1-6	18.5	25	980	91.7	0.81	37.8
YFBBPX3-200L2-6	22	30	980	92.2	0.81	44.8
YFBBPX3-225M-6	30	40	985	92.9	0.83	59.1
YFBBPX3-250M-6	37	50	985	93.3	0.84	71.7
YFBBPX3-280S-6	45	60	985	93.7	0.85	85.8
YFBBPX3-280M-6	55	75	985	94.1	0.86	103.3
YFBBPX3-315S-6	75	100	990	94.6	0.84	143.4
YFBBPX3-315M-6	90	125	990	94.9	0.85	169.5
YFBBPX3-315L1-6	110	150	990	95.1	0.85	206.8
YFBBPX3-315L2-6	132	180	990	95.4	0.86	244.5
YFBBPX3-355M1-6	160	200	990	95.6	0.86	295.7
YFBBPX3-355M-6	185	250	990	95.7	0.86	341.5
YFBBPX3-355M2-6	200	270	990	95.8	0.87	364.6

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

TYPE	RATED OUTPUT kW	HP	SPEED r/min	EFF%	COSΦ	CURRENT A
YFBBPX3-355L-6	250	340	990	95.8	0.87	455.7

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

TYPE	RATED OUTPUT kW	HP	SPEED r/min	EFF%	COSΦ	CURRENT A
YFBBPX3-80M1-8	0.18	0.25	680	58.7	0.61	0.8
YFBBPX3-80M2-8	0.25	0.35	680	64.1	0.61	1.0
YFBBPX3-90S-8	0.37	0.5	695	69.3	0.61	1.3
YFBBPX3-90L-8	0.55	0.75	695	73.0	0.61	1.9
YFBBPX3-100L1-8	0.75	1	715	75.0	0.67	2.3
YFBBPX3-100L2-8	1.1	1.5	715	77.7	0.69	3.1
YFBBPX3-112M-8	1.5	2	700	79.7	0.70	4.1
YFBBPX3-132S-8	2.2	3	715	81.9	0.71	5.7
YFBBPX3-132M-8	3	4	715	83.5	0.73	7.5
YFBBPX3-160M1-8	4	5.5	720	84.8	0.73	9.8
YFBBPX3-160M2-8	5.5	7.5	720	86.2	0.74	13.1
YFBBPX3-160L-8	7.5	10	720	87.3	0.75	17.4
YFBBPX3-180L-8	11	15	730	88.6	0.75	25.2
YFBBPX3-200L-8	15	20	730	89.6	0.76	33.5
YFBBPX3-225S-8	18.5	25	735	90.1	0.76	41
YFBBPX3-225M-8	22	30	735	90.6	0.78	47.3
YFBBPX3-250M-8	30	40	735	91.3	0.79	63.2
YFBBPX3-280S-8	37	50	740	91.8	0.79	77.5
YFBBPX3-280M-8	45	60	740	92.2	0.79	93.9
YFBBPX3-315S-8	55	75	740	92.5	0.81	111.5
YFBBPX3-315M-8	75	100	740	93.1	0.81	151.1
YFBBPX3-315L1-8	90	125	740	93.4	0.82	178.5
YFBBPX3-315L2-8	110	150	740	93.7	0.82	217.5
YFBBPX3-355M1-8	132	180	740	94.0	0.82	260.2
YFBBPX3-355M2-8	160	200	740	94.3	0.82	314.4
YFBBPX3-355L-8	200	270	740	94.6	0.83	387

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

TYPE	RATED OUTPUT kW	HP	SPEED r/min	EFF%	COSΦ	CURRENT A
YFBBPX3-355S-10	90	125	590	93.0	0.77	191
YFBBPX3-355M1-10	110	150	590	93.3	0.78	229.7
YFBBPX3-355M2-10	132	180	590	93.8	0.78	274.1
YFBBPX3-355L-10	160	200	590	93.8	0.78	332.3
YFBBPX3-355L1-10	185	250	590	93.8	0.78	384.2

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 “Constant power range Hz”, “Constant torque range Hz”, “Locked-rotor current $I_{A/N}$ ”, “Locked-rotor torque $T_{A/N}$ ”, “Max. torque $T_{max/N}$ ” 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.

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

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