

FLSC

totally enclosed three-phase asynchronous motors

General information



Efficiency class IE1

Totally enclosed three-phase asynchronous motors, cast iron casing FLSC series, according to IEC 60034, 60038, 60072, power 0.18 to 750 kW, frame size 80 to 450 mm.

- Single speed: 2, 4, 6 and 8 poles; 230/400V or 400 V Δ , 50 Hz.
- Two speed: 2/4, 4/6, 4/8 and 6/8 poles; centrifugal or general use; PAM, Dahlander or separate windings; 400 V Y or Δ , 50 Hz.

FLSC Corrobloc finish

The Corrobloc finish is constructed is based on the FLS cast iron motor. Added to the construction of the basic cast iron motor special finishes improving the resistance to corrosion in particularly harsh environments.

Protection

IP 55 standard version providing a good sealing against projected liquid and dust in an industrial environment.

The selection tables for motors in this catalogue allows for:

- Direct on line starting on the mains supplies 230 V or 400 V operating in:
 - delta connection (Δ) at 230 V,
 - star connection (Y) at 400 V.

- Star/delta starting (Y/ Δ) on mains supply 400 V with:

- star connection (Y) during initial starting,
- delta connection (Δ) in 400 V duty.

Finish

Stainless steel assembly screws. RAL 6000 finishing paint (green).

Protection of the shaft end and of the flange against atmospheric corrosion.

Main supply

- Standard according to IEC 60038:

- 230/400 V +10% -10% at 50 Hz.
Standard construction suitable for the following supplies:

- 220/380 V +5% -5% at 50 Hz,
- 230/400 V +10% -10% at 50 Hz,
- 240/415 V +5% -5% at 50 Hz,
- 265/460 V +5% -5% at 60 Hz.

Voltages for powers equal or greater than 3 kW:

- 380 V Δ +5% -5% at 50 Hz,
- 400 V Δ +10% -10% at 50 Hz,
- 415 V Δ +5% -5% at 50 Hz,
- 460 V Δ +5% -5% at 60 Hz.

Construction allowing Y/ Δ start.

Description of the FLSC cast iron three-phase motors

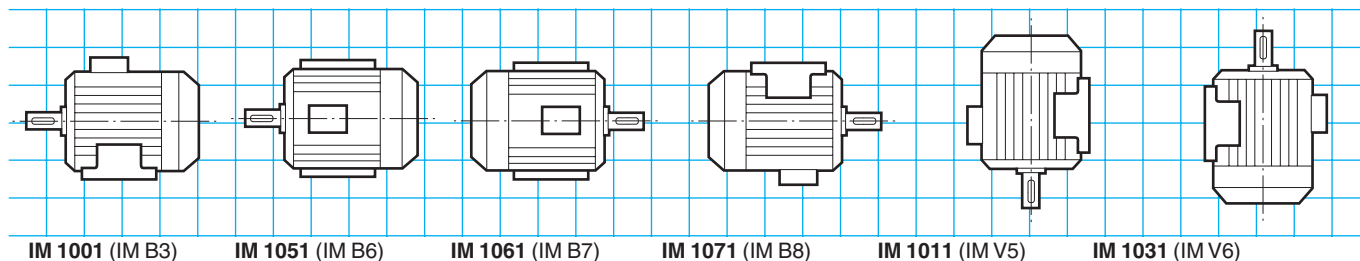
Component	Materials	Remarks
Finned housing	Cast iron	- with cast foot, or without foot • 4, 6 or 8 mounting holes for the foot casing • lifting rings for frame sizes ≥ 90 - earth terminal on foot or fin
Stator	Insulated low carbon magnetic steel laminations Enameled electrolytic copper	- the low carbon content guarantees the long term stability of the characteristics - assembled sheet metal - stator anto-corrosion and dielectric protection (winding heads) - semi-enclosed slots - insulation system class F
Rotor	Insulated low carbon magnetic steel laminations Aluminium or copper	- inclined slots - dielectric protection and rotor anticorrosion - squirrel cage pressure die cast in aluminium (or alloy for special applications) or mixed in copper - mounted on the shaft by heat shrinking, or keyed for mixed rotors - dynamically balanced rotor class A - 1/2 key
Shaft	Steel	- for frame size ≤ 132 : • shaft end fitted with screw and washer • closed keyway - for frame size ≥ 160 : • tapped centre hole • open key
End shields	Cast iron	
Bearings and lubrication		- ball bearings set C3 or C4 - ZZ types lubricated for life up to 132 - semi-protected or open types from 160 upwards, regreaseable - preloaded rear bearings up to 315 S, preloaded front bearings from 315 M upwards
Labyrinth seals Lipseals	Technopolymer, or steel, or cast iron, or synthetic rubber	- front labyrinth seals for foot mounted motors with frame size ≤ 132 - front lipseal for flange and foot or flange mounted motors with frame sizes ≤ 132 - front and rear lipseal for frame sizes from 160 to 225 MT inclusive - decompression grooves for 225 M to 355 LD - front and rear labyrinth seals for frame sizes ≥ 355 LK
Fan	Composite material up to 280 included and metal starting from 315 ST	- 2 directions of rotation: straight blades
Fan cover	Sheet steel	- on request, fitted with a drip cover for operation in vertical position, shaft facing down
Terminal box	Cast iron body cover and cover	- IP 55 - fitted with a 6 stud terminal board up to 335 LD, 6 or 12 terminals thereafter - terminal box delivered fitted with brass cable glands up to 132 - from 315 to 355 LD, cone delivered drilled, without cable glands - from 160 to 450, cable gland baseplate without drilled holes (cone and cable glands optional) - 1 earth terminal in all terminal boxes - screw in stainless steel
Name plate	Stainless steel	- indelible marking
Screw	Stainless steel	
Painting		- system IIIa

FLSC

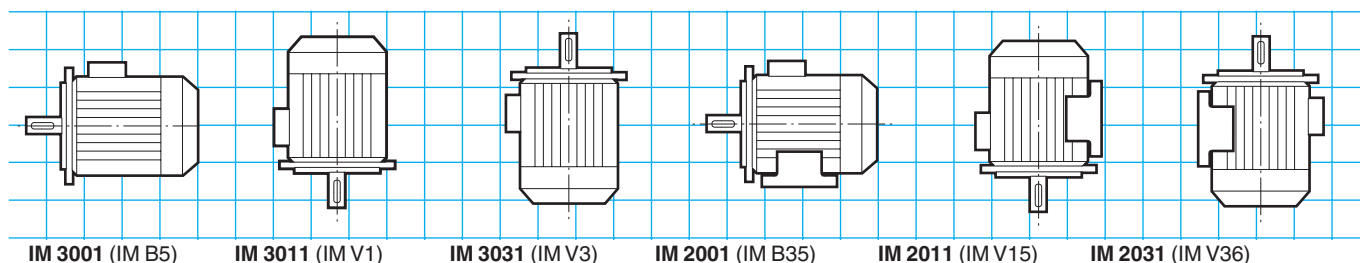
totally enclosed three-phase asynchronous motors

Mounting positions

Foot mounted motors

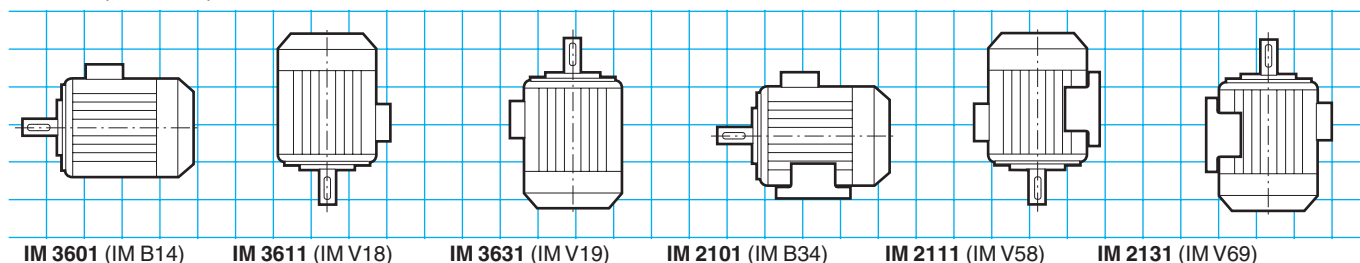


(FF) plain hole flange mounted motors

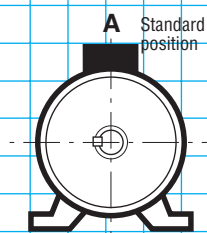


(FT) tapped hole flange mounted motors

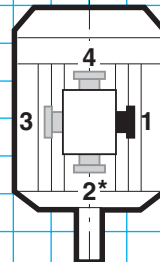
• Possible positions up to 132 frame size inclusive



Terminal box position in relation to the motor shaft end



Cable gland position in relation to the motor shaft end



1 : standard

* Position 2 not recommended and not feasible
on standard flange mounted motor with plain holes (FF)

FLSC

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Adaptation possibilities

Leroy-Somer offers, for use with the FLSC totally enclosed three-phase asynchronous motors, many options which meet the needs of highly diverse applications. They are described below and in the chapters relating to gearboxes and to speed variation. For other variants or any specific adaptation, consult the technical specialists at Leroy-Somer.

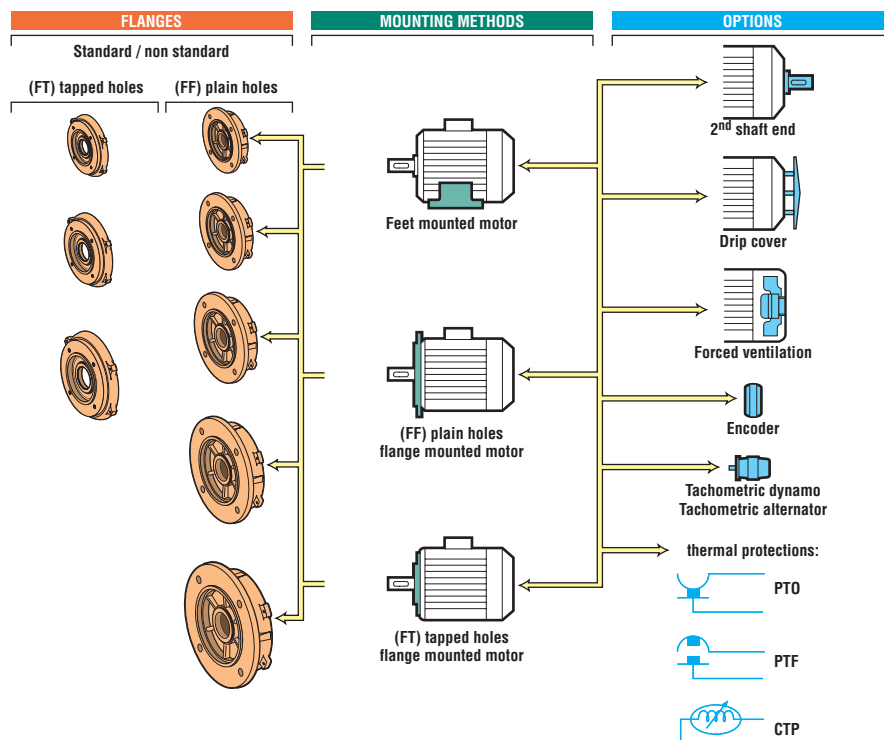
The FLSC motors may be associated to:

- gearboxes
- electronic variable speed drive¹

The options:

- drip cover
- stainless steel cover
- anti-blocking cover
- forced ventilation
- thermal protections
- cable glands of different dimensions
- switch
- cable output
- customised painting system
- second shaft end
- non standard flanges
- anti-condensation heater
- aluminium fan

1. Conforming to the regulations for use indicated by the standard IEC 34-17.



Designation / Codification

4P 1500 min ⁻¹	FLSC	315	M	132 kW	IM 1001 (IM B3)	400 V Δ	50 Hz	IP 55
Speed polarity	Motor type	IEC 60072-1 frame size	Housing designation and builder index	Rated power	IEC 60034-7 mounting position	Power supply voltage	Power supply frequency	IEC 60034-5 protection

Codification example:

FLSC three-phase asynchronous motor 1500 min⁻¹,
132 kW IM 1001 (IM B3), 400 V Δ

Designation	Code
4P FLSC 315 M 132 kW	
IM 1001 (IM B3) 400 V Δ	MA4 13 426

Codification example:

Addition of a PTO thermal protection

Designation	Code
• PTO	MATP 1011

The table above is an example.

It allows the creation of the designation for the required product.

This designation corresponds to a product code.

The product codes that are present in the selection grids can be used directly.

They simplify the ordering process.

The codification table is incorporated in the price list with the designations list.

FLSC

totally enclosed three-phase asynchronous motors

Selection

IP 55 - 50 Hz - Class F - 230 V Δ / 400 V Y - S1

2
poles
3000 min⁻¹

IE1

	Rated power	Rated speed	Rated torque	Rated current	Power factor	Efficiency* IEC 60034-2-1; 2007	Starting current/ Rated current	Starting torque/ Rated torque	Maximum torque/ Rated torque	Moment of inertia	Weight	Noise
Type	P _N kW	N _N min ⁻¹	M _N Nm	I _{N (400V)} A	Cos Phi 4/4 3/4 2/4	η 4/4 3/4 2/4	I _d / I _n	M _d /M _n	M _m /M _n	J kg.m ²	IM B3 kg	LP db(A)
FLSC 80 L	0.75	2840	2.52	1.6	0.86 0.84 0.76	75.7 76.1 73.3	5.9	2.4	2.2	0.001	15	61
FLSC 80 L	1.1	2837	3.7	2.4	0.84 0.77 0.65	77.3 78.3 76.4	5.6	2.7	2.4	0.001	18	61
FLSC 90 S	1.5	2870	4.99	3.3	0.81 0.75 0.64	80.0 79.5 75.9	7.3	3.0	3.1	0.001	21	64
FLSC 90 L	2.2	2862	7.34	4.3	0.88 0.82 0.71	82.0 83.0 81.9	8.1	3.8	3.6	0.002	26	64
FLSC 100 L	3	2925	9.79	5.5	0.91 0.89 0.85	82.5 82.6 80.1	8.4	2.5	3.1	0.007	42	66
FLSC 112 M	4	2940	13	7.5	0.89 0.87 0.81	83.9 83.5 81.4	8.7	3.0	3.5	0.008	48	69
FLSC 132 S	5.5	2940	17.9	10.6	0.86 0.84 0.79	85.9 86.6 85.4	7.6	2.4	3.0	0.017	67	72
FLSC 132 S	7.5	2950	24.3	14.1	0.87 0.85 0.81	86.8 87.6 86.7	8.9	2.7	3.5	0.024	70	72
FLSC 160 MA	11	2948	35.8	20	0.90 0.88 0.82	88.0 87.2 85.3	8.4	2.8	2.4	0.037	97	74
FLSC 160 MB	15	2940	48.8	27	0.90 0.88 0.82	89.0 89.3 87.1	8.1	2.8	2.3	0.043	108	74
FLSC 160 L	18.5	2939	60.1	33	0.90 0.88 0.82	89.8 90.7 89.1	7.7	2.6	2.2	0.057	126	74
FLSC 180 MR	22	2941	71.5	40	0.87 0.87 0.80	89.9 89.9 88.2	8.6	3.5	2.6	0.065	135	75
FLSC 200 LA	30	2950	97.1	52	0.90 0.91 0.89	90.7 90.4 88.8	7.7	2.5	2.0	0.13	245	75
FLSC 200 LB*	37	2954	119	63	0.90 0.89 0.84	92.4 92.5 91.5	8.1	2.9	2.3	0.16	265	75
FLSC 225 MT*	45	2950	145	77	0.90 0.89 0.85	92.8 93.1 92.3	7.8	2.7	2.2	0.19	290	76
FLSC 250 M*	55	2966	177	94	0.89 0.87 0.81	93.1 93.1 92.3	8.0	2.5	2.3	0.44	405	77
FLSC 280 S*	75	2965	242	127	0.90 0.89 0.81	93.4 93.5 92.9	8.4	2.7	2.3	0.47	505	77
FLSC 280 M*	90	2961	290	147	0.92 0.91 0.88	93.9 94.2 94.1	7.7	2.6	2.4	0.53	560	77
FLSC 315 ST	110	2974	353	178	0.93 0.91 0.86	94.2 93.5 94.0	8.8	2.8	3.0	1.08	850	77
FLSC 315 M	132	2962	426	221	0.90 0.89 0.87	94.2 94.6 94.2	6.9	1.8	2.1	1.71	1000	84
FLSC 315 LA	160	2969	515	272	0.89 0.87 0.85	94.1 94.2 93.3	7.4	2.0	2.3	1.71	1050	84
FLSC 315 LB	200	2967	644	342	0.88 0.86 0.80	94.0 94.2 93.5	7.9	2.3	2.2	1.99	1150	84
FLSC 355 LA	250	2978	802	419	0.89 0.87 0.85	94.9 94.7 94.0	7.4	2.1	2.3	3.39	1400	84
FLSC 355 LB	275	2980	881	464	0.89 0.90 0.86	94.9 94.7 92.3	8.4	2.3	2.9	3.39	1500	84
FLSC 355 LB*	315	2976	1011	526	0.90 0.89 0.89	94.9 94.8 94.5	7.2	1.8	2.1	3.39	1500	84
FLSC 355 LC	330	2980	1058	560	0.88 0.86 0.81	94.9 94.7 94.4	7.9	1.9	2.6	3.39	1915	84
FLSC 355 LC	355	2979	1138	591	0.90 0.88 0.83	94.9 94.8 93.8	8.5	2.3	2.4	4.03	1915	84
FLSC 355 LD*	400	2977	1283	669	0.89 0.87 0.82	95.0 95.3 94.6	7.3	2.0	2.1	4.03	1915	84

* This standard replaces the IEC 60034-2; 1996

• Temperature rise class F

FLSC

totally enclosed three-phase asynchronous motors

Selection

2
poles
3000 min⁻¹

IP 55 - 50 Hz - Class F - 230 V Δ / 400 V Y - S1

A

	Rated power at 50 Hz	IM 1001 (IM B3)		IM 3001 (IM B5)		IM 2001 (IM B35)		IM 3601 (IM B14)	
	P_N								
Type	kW	Code	Qty	Code	Qty	Code	Qty	Code	Qty
FLSC 80 L	0.75	MA2 75 125	3	MA2 75 127	3	MA2 75 1C7	2	MA2 75 129	2
FLSC 80 L	1.1	EA2 11 225	3	EA2 11 227	3	EA2 11 2C7	2	EA2 11 229	2
FLSC 90 S	1.5	EA2 15 215	3	EA2 15 227	3	EA2 15 2C7	2	EA2 15 229	2
FLSC 90 L	2.2	EA2 22 213	3	EA2 22 215	3	EA2 22 2B5	2	EA2 22 217	2
FLSC 100 L	3	EA2 30 213	3	EA2 30 215	3	EA2 30 2B5	2	EA2 30 217	2
FLSC 112 M	4	EA2 40 213	2	EA2 40 215	2	EA2 40 2B5	2	EA2 40 217	2
FLSC 132 S	5.5	EA2 55 225	2	EA2 55 227	2	EA2 55 2C7	2	EA2 55 229	2
FLSC 132 S	7.5	EA2 75 213	2	EA2 75 215	2	EA2 75 2B5	2	EA2 75 217	2
FLSC 160 MA	11	EA2 11 319	1	EA2 11 321	1	EA2 11 3C1	1		
FLSC 160 MB	15	EA2 15 319	1	EA2 15 321	1	EA2 15 3C1	1		
FLSC 160 L	18.5	EA2 18 319	1	EA2 18 321	1	EA2 18 3C1	1		
FLSC 180 MR	22	EA2 22 319	1	EA2 22 321	1	EA2 22 3C1	1		
FLSC 200 LA	30	EA2 30 319	1	EA2 30 321	1	EA2 30 3C1	1		
FLSC 200 LB	37	EA2 37 319	1	EA2 37 321	1	EA2 37 3C1	1		
FLSC 225 MT	45	EA2 45 319	1	EA2 45 321	1	EA2 45 3B1	1		
FLSC 250 M	55	EA2 55 319	1	EA2 55 321	1	EA2 55 3C1	1		
FLSC 280 S	75	EA2 75 319	2		-	EA2 75 3C1	2		
FLSC 280 M	90	EA2 90 319	2		-	EA2 90 3C1	2		
FLSC 315 ST	110	MA2 11 419	2		-	MA2 11 4C1	2		
FLSC 315 M	132	MA2 13 419	2		-	MA2 13 4C1	2		

Selection example:

Speed:	3000 min ⁻¹ - 2 poles
Power:	1.5 kW
Mounting and position:	IM 1001 (IM B3)
Mains supply voltage:	230/400 V

Designation:

2P FLSC 90 S 1.5 kW IM 1001 (IM B3)
230/400 V

Code: EA2 15 215

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Selection

4
poles
1500 min⁻¹

IP 55 - 50 Hz - Class F - 230 V Δ / 400 V Y - S1

IE1

Type	Rated power	Rated speed	Rated torque	Rated current	Power factor			Efficiency* IEC 60034-2-1; 2007			Starting current/ Rated current	Starting torque/ Rated torque	Maximum torque/ Rated torque	Moment of inertia	Weight	Noise
	P _N	N _N	M _N	I _N (400V)	Cos Phi			η			I _d / I _N	M _d /M _N	M _M /M _N	J	IM B3	LP
	kW	min ⁻¹	Nm	A	4/4	3/4	2/4	4/4	3/4	2/4				kg.m ²	kg	db(A)
FLSC 80 L	0.55	1410	3.72	1.6	0.74	0.69	0.56	-	-	-	4.4	2.1	2.3	0.001	15	44
FLSC 80 L	0.75	1425	5.03	2	0.75	0.70	0.58	73.4	72.7	68.3	5.7	3.0	2.8	0.002	17	44
FLSC 90 S	1.1	1429	7.35	2.5	0.83	0.77	0.68	77.3	78.8	77.2	4.9	1.6	2.0	0.003	19	50
FLSC 90 L	1.5	1428	10	3.3	0.82	0.74	0.62	79.3	79.9	77.5	5.3	1.8	2.3	0.003	21	50
FLSC 90 L	1.8	1438	12	4	0.82	0.75	0.63	79.8	80.3	77.8	5.9	2.2	3.3	0.004	23	50
FLSC 100 L	2.2	1457	14.4	4.6	0.83	0.78	0.67	80.3	81.2	79.3	6.3	2.0	2.5	0.008	41	52
FLSC 100 L	3	1454	19.7	6.2	0.82	0.76	0.64	82.8	83.4	81.8	6.5	2.1	2.6	0.009	44	52
FLSC 112 M	4	1462	26.1	8.4	0.81	0.74	0.62	84.8	84.9	83.0	7.4	2.6	3.1	0.012	48	52
FLSC 132 S	5.5	1467	35.8	10.9	0.84	0.78	0.66	86.4	86.6	85.1	8.0	2.8	3.8	0.015	65	59
FLSC 132 M	7.5	1450	49.4	14.3	0.87	0.82	0.75	86.0	87.0	86.3	7.3	1.9	2.9	0.019	70	59
FLSC 132 M	9	1449	59.3	16.8	0.88	0.80	0.72	87.2	88.2	87.8	7.6	2.9	3.0	0.023	75	59
FLSC 160 M	11	1464	72.2	21.4	0.83	0.79	0.68	88.4	88.5	87.2	7.8	2.6	3.3	0.06	103	65
FLSC 160 L	15	1467	98.4	29.6	0.82	0.75	0.64	89.1	88.9	87.3	7.9	2.6	3.2	0.079	120	65
FLSC 180 MR	18.5	1461	121	35.5	0.83	0.78	0.67	90.2	90.5	89.6	8.8	3.3	2.7	0.095	135	64
FLSC 180 L	22	1466	143	41	0.86	0.82	0.72	91.0	91.3	90.5	7.0	3.0	3.0	0.137	184	64
FLSC 200 L	30	1471	195	55	0.85	0.80	0.70	90.8	90.8	89.5	2.8	2.8	2.3	0.24	260	66
FLSC 225 ST*	37	1476	239	69	0.82	0.76	0.64	92.6	93.1	92.6	7.2	3.2	3.3	0.28	290	66
FLSC 225 M*	45	1483	290	78	0.87	0.83	0.74	93	93.6	92.9	7.1	2.6	2.9	0.7	388	68
FLSC 250 M*	55	1479	355	102	0.82	0.80	0.71	93.4	93.8	93.3	6.6	2.4	2.0	0.7	395	68
FLSC 280 S*	75	1483	483	137	0.82	0.79	0.66	92.7	92.9	92.3	7.8	3.0	3.0	0.815	475	68
FLSC 280 M*	90	1478	582	161	0.85	0.81	0.72	93.4	93.6	93	7.5	2.9	2.5	1.015	565	68
FLSC 315 ST	110	1482	709	203	0.83	0.79	0.71	93.3	93.5	92.9	7.3	2.9	2.7	1.83	850	70
FLSC 315 M	132	1489	847	249	0.81	0.75	0.65	94	94.3	93.6	8.5	3.2	2.7	2.91	1000	73
FLSC 315 LA	160	1489	1032	298	0.81	0.76	0.64	94.8	94	94	8.4	2.5	3.2	3.4	1050	73
FLSC 315 LB*	200	1486	1284	376	0.80	0.74	0.66	95	94.9	93.9	8.2	2.3	3.5	3.4	1150	73
FLSC 355 LA*	250	1490	1606	427	0.88	0.85	0.78	94	94	93.2	8.2	1.9	3.2	6.2	1510	80
FLSC 355 LB*	300	1490	1924	509	0.88	0.87	0.81	94.8	94.9	93.7	7.4	1.8	2.9	6.2	1550	80
FLSC 355 LC	315	1491	2019	596	0.81	0.75	0.63	94.6	94.5	93.3	9.7	2.2	3.7	6.5	1800	80
FLSC 355 LC*	355	1491	2277	655	0.82	0.76	0.65	94.4	93.5	93.2	8.9	2.0	3.3	6.5	1800	80
FLSC 355 LD*	400	1491	2565	700	0.86	0.84	0.77	95.1	95.2	94.5	7.0	2.1	2.3	7.4	1930	80
FLSC 400 LB	400	1491	2562	691	0.87	0.85	0.78	-	-	-	8.0	2.0	2.6	11.7	2350	82
FLSC 355 LKB	450	1489	2884	769	0.88	0.86	0.81	-	-	-	6.8	1.7	2.3	11.7	2320	82
FLSC 400 LB	450	1489	2884	769	0.88	0.86	0.81	-	-	-	6.8	1.7	2.3	11.7	2350	87
FLSC 355 LKB	500	1489	3205	870	0.87	0.85	0.79	-	-	-	6.4	1.8	2.1	11.7	2320	82
FLSC 400 LVB	500	1489	3205	870	0.87	0.85	0.79	-	-	-	1.7	1.8	2.1	11.7	2350	87
FLSC 450 LA	500	1493	3200	853	0.88	0.88	0.77	-	-	-	7.3	1.7	2.6	21	3100	82
FLSC 450 LVA	550	1492	3523	961	0.88	0.88	0.82	-	-	-	6.5	1.6	2.3	21	3100	85
FLSC 450 LB	630	1491	4030	1089	0.87	0.85	0.78	-	-	-	7.4	1.7	2.4	24	3450	82
FLSC 450 LVB	675	1491	4323	1161	0.87	0.85	0.78	-	-	-	6.9	1.6	2.2	24	3450	85

* This standard replaces the IEC 60034-2; 1996

• Temperature rise class F

FLSC

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Selection

4
poles
1500 min⁻¹

IP 55 - 50 Hz - Class F - 230 V Δ / 400 V Y - S1

A

Type	Rated power at 50 Hz	IM 1001 (IM B3)		IM 3001 (IM B5)		IM 2001 (IM B35)		IM 3601 (IM B14)	
	P_N kW	Code	Qty	Code	Qty	Code	Qty	Code	Qty
FLSC 80 L	0.55	MA4 55 128	1	MA4 55 129	1	MA4 55 1C9	1	MA4 55 130	1
FLSC 80 L	0.75	MA4 75 131	1	MA4 75 133	1	MA4 75 1D3	1	MA4 75 135	1
FLSC 90 S	1.1	EA4 11 231	1	EA4 11 232	1	EA4 11 2D2	1	EA4 11 233	1
FLSC 90 L	1.5	EA4 15 229	1	EA4 15 230	1	EA4 15 2D0	1	EA4 15 231	1
FLSC 90 L	1.8		-	EA4 18 230	1	EA4 18 2D0	1	EA4 18 231	1
FLSC 100 L	2.2	EA4 22 231	1	EA4 22 232	1	EA4 22 2D2	1	EA4 22 233	1
FLSC 100 L	3	EA4 30 219	2	EA4 30 221	2	EA4 30 2C1	1	EA4 30 223	1
FLSC 112 M	4	EA4 40 219	1	EA4 40 221	1	EA4 40 2C1	1	EA4 40 223	1
FLSC 132 S	5.5	EA4 55 237	1	EA4 55 239	1	EA4 55 2D9	1	EA4 55 241	1
FLSC 132 M	7.5	EA4 75 231	1		-		-		-
FLSC 132 M	9		-		-		-		-
FLSC 160 M	11	EA4 11 331	1	EA4 11 333	1	EA4 11 3D3	1		
FLSC 160 L	15	EA4 15 331	1	EA4 15 333	1	EA4 15 3D3	1		
FLSC 180 MR	18.5	EA4 18 331	1	EA4 18 333	1	EA4 18 3D3	1		
FLSC 180 L	22	EA4 22 331	1	EA4 22 333	1	EA4 22 3D3	1		
FLSC 200 L	30	EA4 30 331	1	EA4 30 333	1	EA4 30 3D3	1		
FLSC 225 ST	37	EA4 37 331	1	EA4 37 333	1	EA4 37 3D3	1		
FLSC 225 M	45	EA4 45 331	1	EA4 45 333	1	EA4 45 3D3	1		
FLSC 250 M	55	EA4 55 331	1	EA4 55 333	1	EA4 55 3D3	1		
FLSC 280 S	75	EA4 75 331	2		-	EA4 75 3D3	2		
FLSC 280 M	90	EA4 90 331	2		-	EA4 90 3D3	2		
FLSC 315 ST	110	MA4 11 431	2		-	MA4 11 4D3	2		
FLSC 315 M	132	MA4 13 425	2		-	MA4 13 4C7	2		

Selection example:

Speed:	1500 min ⁻¹ - 4 poles
Power:	11 kW
Mounting and position:	IM 3001 (IM B5)
Mains supply voltage:	230/400 V

Designation:

4P FLSC 160 M 11 kW IM 3001 (IM B5)
230/400 V

Code: EA4 11 333

FLSC

totally enclosed three-phase asynchronous motors

Selection

IP 55 - 50 Hz - Class F - 400 V Δ - S1

2
poles
3000 min⁻¹

IE1

	Rated power	Rated speed	Rated torque	Rated current	Power factor			Efficiency* IEC 60034-2-1; 2007			Starting current/ Rated current	Starting torque/ Rated torque	Maximum torque/ Rated torque	Moment of inertia	Weight	Noise
Type	P _N kW	N _N min ⁻¹	M _N Nm	I _{N (400V)} A	Cos Phi			η			I _d / I _n	M _d /M _n	M _m /M _n	J kg.m ²	IM B3 kg	LP db(A)
					4/4	3/4	2/4	4/4	3/4	2/4						
FLSC 80 L	0.75	2840	2.52	1.6	0.86	0.84	0.76	75.7	76.1	73.3	5.9	2.4	2.2	0.001	15	61
FLSC 80 L	1.1	2837	3.7	2.4	0.84	0.77	0.65	77.3	78.3	76.4	5.6	2.7	2.4	0.001	18	61
FLSC 90 S	1.5	2870	4.99	3.3	0.81	0.75	0.64	80.0	79.5	75.9	7.3	3.0	3.1	0.001	21	64
FLSC 90 L	2.2	2862	7.34	4.3	0.88	0.82	0.71	82.0	83.0	81.9	8.1	3.8	3.6	0.002	26	64
FLSC 100 L	3	2925	9.79	5.5	0.91	0.89	0.85	82.5	82.6	80.1	8.4	2.5	3.1	0.007	42	66
FLSC 112 M	4	2940	13	7.5	0.89	0.87	0.81	83.9	83.5	81.4	8.7	3.0	3.5	0.008	48	69
FLSC 132 S	5.5	2940	17.9	10.6	0.86	0.84	0.79	85.9	86.6	85.4	7.6	2.4	3.0	0.017	67	72
FLSC 132 S	7.5	2950	24.3	14.1	0.87	0.85	0.81	86.8	87.6	86.7	8.9	2.7	3.5	0.024	70	72
FLSC 160 MA	11	2948	35.8	20	0.90	0.88	0.82	88.0	87.2	85.3	8.4	2.8	2.4	0.037	97	74
FLSC 160 MB	15	2940	48.8	27	0.90	0.88	0.82	89.0	89.3	87.1	8.1	2.8	2.3	0.043	108	74
FLSC 160 L	18.5	2939	60.1	33	0.90	0.88	0.82	89.8	90.7	89.1	7.7	2.6	2.2	0.057	126	74
FLSC 180 MR	22	2941	71.5	40	0.87	0.87	0.80	89.9	89.9	88.2	8.6	3.5	2.6	0.065	135	75
FLSC 200 LA	30	2950	97.1	52	0.90	0.91	0.89	90.7	90.4	88.8	7.7	2.5	2.0	0.13	245	75
FLSC 200 LB*	37	2954	119	63	0.90	0.89	0.84	92.4	92.5	91.5	8.1	2.9	2.3	0.16	265	75
FLSC 225 MT*	45	2950	145	77	0.90	0.89	0.85	92.8	93.1	92.3	7.8	2.7	2.2	0.19	290	76
FLSC 250 M*	55	2966	177	94	0.89	0.87	0.81	93.1	93.1	92.3	8.0	2.5	2.3	0.44	405	77
FLSC 280 S*	75	2965	242	127	0.90	0.89	0.81	93.4	93.5	92.9	8.4	2.7	2.3	0.47	505	77
FLSC 280 M*	90	2961	290	147	0.92	0.91	0.88	93.9	94.2	94.1	7.7	2.6	2.4	0.53	560	77
FLSC 315 ST	110	2974	353	178	0.93	0.91	0.86	94.2	93.5	94.0	8.8	2.8	3.0	1.08	850	77
FLSC 315 M	132	2962	426	221	0.90	0.89	0.87	94.2	94.6	94.2	6.9	1.8	2.1	1.71	1000	84
FLSC 315 LA	160	2969	515	272	0.89	0.87	0.85	94.1	94.2	93.3	7.4	2.0	2.3	1.71	1050	84
FLSC 315 LB	200	2967	644	342	0.88	0.86	0.80	94.0	94.2	93.5	7.9	2.3	2.2	1.99	1150	84
FLSC 355 LA	250	2978	802	419	0.89	0.87	0.85	94.9	94.7	94.0	7.4	2.1	2.3	3.39	1400	84
FLSC 355 LB	275	2980	881	464	0.89	0.90	0.86	94.9	94.7	92.3	8.4	2.3	2.9	3.39	1500	84
FLSC 355 LB*	315	2976	1011	526	0.90	0.89	0.89	94.9	94.8	94.5	7.2	1.8	2.1	3.39	1500	84
FLSC 355 LC	330	2980	1058	560	0.88	0.86	0.81	94.9	94.7	94.4	7.9	1.9	2.6	3.39	1915	84
FLSC 355 LC	355	2979	1138	591	0.90	0.88	0.83	94.9	94.8	93.8	8.5	2.3	2.4	4.03	1915	84
FLSC 355 LD*	400	2977	1283	669	0.89	0.87	0.82	95.0	95.3	94.6	7.3	2.0	2.1	4.03	1915	84

* This standard replaces the IEC 60034-2; 1996

• Temperature rise class F

FLSC

totally enclosed three-phase asynchronous motors

Selection

IP 55 - 50 Hz - Class F - ΔT 80 K - 400 V Δ - S1

2
poles
3000 min⁻¹

A

	Rated power at 50 Hz	IM 1001 (IM B3)	IM 3001 (IM B5)	IM 2001 (IM B35)	IM 3601 (IM B14)
Type	P_N kW	Code	Code	Code	Code
FLSC 100 L	3	EA2 30 214	EA2 30 216	EA2 30 2B6	EA2 30 218
FLSC 112 M	4	EA2 40 214	EA2 40 216	EA2 40 2B6	EA2 40 218
FLSC 132 S	5.5	EA2 55 226	EA2 55 228	EA2 55 2C8	EA2 55 230
FLSC 132 S	7.5	EA2 75 214	EA2 75 216	EA2 75 2B6	EA2 75 218
FLSC 160 MA	11	EA2 11 320	EA2 11 322	EA2 11 3B2	
FLSC 160 MB	15	EA2 15 320	EA2 15 322	EA2 15 3C2	
FLSC 160 L	18.5	EA2 18 320	EA2 18 322	EA2 18 3C2	
FLSC 180 MR	22	EA2 22 320	EA2 22 322	EA2 22 3C2	
FLSC 200 LA	30	EA2 30 320	EA2 30 322	EA2 30 3C2	
FLSC 200 LB	37	EA2 37 320	EA2 37 322	EA2 37 3C2	
FLSC 225 MT	45	EA2 45 320	EA2 45 322	EA2 45 3C2	
FLSC 250 M	55	EA2 55 320	EA2 55 322	EA2 55 3C2	
FLSC 280 S	75	EA2 75 320		EA2 75 3C2	
FLSC 280 M	90	EA2 90 320		EA2 90 3C2	
FLSC 315 ST	110	MA2 11 420		MA2 11 4C2	
FLSC 315 M	132	MA2 13 420		MA2 13 4C2	

Selection example:

Speed:	3000 min ⁻¹ - 2 poles
Power:	4 kW
Mounting and position:	IM 2001 (IM B35)
Mains supply voltage:	400 V

Designation:

2P FLSC 112 M 4 kW IM 2001 (IM B35)
400 V

Code: EA2 40 2B6

FLSC

totally enclosed three-phase asynchronous motors

Selection

IP 55 - 50 Hz - Class F - 400 V Δ - S1

4
poles
1500 min⁻¹

IE1

Type	Rated power	Rated speed	Rated torque	Rated current	Power factor			Efficiency* IEC 60034-2-1; 2007			Starting current/ Rated current	Starting torque/ Rated torque	Maximum torque/ Rated torque	Moment of inertia	Weight	Noise
	P _N	N _N	M _N	I _{N (400V)}	Cos Phi			η			I _d / I _N	M _d /M _N	M _M /M _N	J	IM B3	LP
	kW	min ⁻¹	Nm	A	4/4	3/4	2/4	4/4	3/4	2/4				kg.m ²	kg	db(A)
FLSC 80 L	0.55	1410	3.72	1.6	0.74	0.69	0.56	-	-	-	4.4	2.1	2.3	0.001	15	44
FLSC 80 L	0.75	1425	5.03	2	0.75	0.70	0.58	73.4	72.7	68.3	5.7	3.0	2.8	0.002	17	44
FLSC 90 S	1.1	1429	7.35	2.5	0.83	0.77	0.68	77.3	78.8	77.2	4.9	1.6	2.0	0.003	19	50
FLSC 90 L	1.5	1428	10	3.3	0.82	0.74	0.62	79.3	79.9	77.5	5.3	1.8	2.3	0.003	21	50
FLSC 90 L	1.8	1438	12	4	0.82	0.75	0.63	79.8	80.3	77.8	5.9	2.2	3.3	0.004	23	50
FLSC 100 L	2.2	1457	14.4	4.6	0.83	0.78	0.67	80.3	81.2	79.3	6.3	2.0	2.5	0.008	41	52
FLSC 100 L	3	1454	19.7	6.2	0.82	0.76	0.64	82.8	83.4	81.8	6.5	2.1	2.6	0.009	44	52
FLSC 112 M	4	1462	26.1	8.4	0.81	0.74	0.62	84.8	84.9	83.0	7.4	2.6	3.1	0.012	48	52
FLSC 132 S	5.5	1467	35.8	10.9	0.84	0.78	0.66	86.4	86.6	85.1	8.0	2.8	3.8	0.015	65	59
FLSC 132 M	7.5	1450	49.4	14.3	0.87	0.82	0.75	86.0	87.0	86.3	7.3	1.9	2.9	0.019	70	59
FLSC 132 M	9	1449	59.3	16.8	0.88	0.80	0.72	87.2	88.2	87.8	7.6	2.9	3.0	0.023	75	59
FLSC 160 M	11	1464	72.2	21.4	0.83	0.79	0.68	88.4	88.5	87.2	7.8	2.6	3.3	0.06	103	65
FLSC 160 L	15	1467	98.4	29.6	0.82	0.75	0.64	89.1	88.9	87.3	7.9	2.6	3.2	0.079	120	65
FLSC 180 MR	18.5	1461	121	35.5	0.83	0.78	0.67	90.2	90.5	89.6	8.8	3.3	2.7	0.095	135	64
FLSC 180 L	22	1466	143	41	0.86	0.82	0.72	91.0	91.3	90.5	7.0	3.0	3.0	0.137	184	64
FLSC 200 L	30	1471	195	55	0.85	0.80	0.70	90.8	90.8	89.5	2.8	2.8	2.3	0.24	260	66
FLSC 225 ST*	37	1476	239	69	0.82	0.76	0.64	92.6	93.1	92.6	7.2	3.2	3.3	0.28	290	66
FLSC 225 M*	45	1483	290	78	0.87	0.83	0.74	93	93.6	92.9	7.1	2.6	2.9	0.7	388	68
FLSC 250 M*	55	1479	355	102	0.82	0.80	0.71	93.4	93.8	93.3	6.6	2.4	2.0	0.7	395	68
FLSC 280 S*	75	1483	483	137	0.82	0.79	0.66	92.7	92.9	92.3	7.8	3.0	3.0	0.815	475	68
FLSC 280 M*	90	1478	582	161	0.85	0.81	0.72	93.4	93.6	93	7.5	2.9	2.5	1.015	565	68
FLSC 315 ST	110	1482	709	203	0.83	0.79	0.71	93.3	93.5	92.9	7.3	2.9	2.7	1.83	850	70
FLSC 315 M	132	1489	847	249	0.81	0.75	0.65	94	94.3	93.6	8.5	3.2	2.7	2.91	1000	73
FLSC 315 LA	160	1489	1032	298	0.81	0.76	0.64	94.8	94	94	8.4	2.5	3.2	3.4	1050	73
FLSC 315 LB*	200	1486	1284	376	0.80	0.74	0.66	95	94.9	93.9	8.2	2.3	3.5	3.4	1150	73
FLSC 355 LA*	250	1490	1606	427	0.88	0.85	0.78	94	94	93.2	8.2	1.9	3.2	6.2	1510	80
FLSC 355 LB*	300	1490	1924	509	0.88	0.87	0.81	94.8	94.9	93.7	7.4	1.8	2.9	6.2	1550	80
FLSC 355 LC	315	1491	2019	596	0.81	0.75	0.63	94.6	94.5	93.3	9.7	2.2	3.7	6.5	1800	80
FLSC 355 LC*	355	1491	2277	655	0.82	0.76	0.65	94.4	93.5	93.2	8.9	2.0	3.3	6.5	1800	80
FLSC 355 LD*	400	1491	2565	700	0.86	0.84	0.77	95.1	95.2	94.5	7.0	2.1	2.3	7.4	1930	80
FLSC 400 LB	400	1491	2562	691	0.87	0.85	0.78	-	-	-	8.0	2.0	2.6	11.7	2350	82
FLSC 355 LKB	450	1489	2884	769	0.88	0.86	0.81	-	-	-	6.8	1.7	2.3	11.7	2320	82
FLSC 400 LB	450	1489	2884	769	0.88	0.86	0.81	-	-	-	6.8	1.7	2.3	11.7	2350	87
FLSC 355 LKB	500	1489	3205	870	0.87	0.85	0.79	-	-	-	6.4	1.8	2.1	11.7	2320	82
FLSC 400 LVB	500	1489	3205	870	0.87	0.85	0.79	-	-	-	1.7	1.8	2.1	11.7	2350	87
FLSC 450 LA	500	1493	3200	853	0.88	0.88	0.77	-	-	-	7.3	1.7	2.6	21	3100	82
FLSC 450 LVA	550	1492	3523	961	0.88	0.88	0.82	-	-	-	6.5	1.6	2.3	21	3100	85
FLSC 450 LB	630	1491	4030	1089	0.87	0.85	0.78	-	-	-	7.4	1.7	2.4	24	3450	82
FLSC 450 LVB	675	1491	4323	1161	0.87	0.85	0.78	-	-	-	6.9	1.6	2.2	24	3450	85

* This standard replaces the IEC 60034-2; 1996

• Temperature rise class F

FLSC

totally enclosed three-phase asynchronous motors

Selection

4
poles
1500 min⁻¹

IP 55 - 50 Hz - Class F - ΔT 80 K - 400 V Δ - S1

A

	Rated power at 50 Hz	IM 1001 (IM B3)		IM 3001 (IM B5)		IM 2001 (IM B35)		IM 3601 (IM B14)	
Type	P_N kW	Code	Qty	Code	Qty	Code	Qty	Code	Qty
FLSC 100 L	3	EA4 30 220	1	EA4 30 222	2	EA4 30 2C2	2	EA4 30 224	2
FLSC 112 M	4	EA4 40 220	2	EA4 40 222	2	EA4 40 2C2	2	EA4 40 224	2
FLSC 132 S	5.5	EA4 55 238	2	EA4 55 240	2	EA4 55 2E0	2	EA4 55 242	2
FLSC 132 M	7.5	EA4 75 232	2	EA4 75 234	2	EA4 75 2D4	2	EA4 75 236	2
FLSC 132 M	9		-		-		-		-
FLSC 160 M	11	EA4 11 332	1	EA4 11 334	1	EA4 11 3D4	1		
FLSC 160 L	15	EA4 15 332	1	EA4 15 334	1	EA4 15 3D4	1		
FLSC 180 MR	18.5	EA4 18 332	1	EA4 18 334	1	EA4 18 3D4	1		
FLSC 180 L	22	EA4 22 332	1	EA4 22 334	1	EA4 22 3D4	1		
FLSC 200 L	30	EA4 30 332	1	EA4 30 334	1	EA4 30 3D4	1		
FLSC 225 ST	37	EA4 37 332	1	EA4 37 334	1	EA4 37 3D4	1		
FLSC 225 M	45	EA4 45 332	1	EA4 45 334	1	EA4 45 3D4	1		
FLSC 250 M	55	EA4 55 332	1	EA4 55 334	1	EA4 55 3D4	1		
FLSC 280 S	75	EA4 75 332	2		-	EA4 75 3D4	2		
FLSC 280 M	90	EA4 90 332	2		-	EA4 90 3D4	2		
FLSC 315 ST	110	MA4 11 432	2		-	MA4 11 4D4	2		
FLSC 315 M	132	MA4 13 426	2		-	MA4 13 4C8	2		

Selection example:

Speed:	1500 min ⁻¹ - 4 poles
Power:	90 kW
Mounting and position:	IM 1001 (IM B3)
Mains supply voltage:	400 V

Designation:

**4P FLSC 280 M 90 kW IM 1001 (IM B3)
400 V**

Code: EA4 90 332

FLSC

totally enclosed three-phase asynchronous motors

Selection

A

6 poles
1000 min⁻¹

IP 55 - 50 Hz - Class F - Δ T 80 K - 230 V Δ / 400 V Y or 400 V Δ - S1

IE1

Type	Rated power	Rated speed	Rated torque	Rated current	Power factor			Efficiency* IEC 60034-2-1; 2007			Starting current/ Rated current	Starting torque/ Rated torque	Maximum torque/ Rated torque	Moment of inertia	Weight	Noise
	P _N	N _N	M _N	I _N (400V)	Cos Phi			η			I _d / I _N	M _d /M _N	M _v /M _N	J	IM B3	LP
	kW	min ⁻¹	Nm	A	4/4	3/4	2/4	4/4	3/4	2/4				kg.m ²	kg	db(A)
FLSC 80 L	0.25	950	2.51	0.8	0.74	0.68	0.55	60.3	58.2	54.0	3.6	2.0	1.9	0.002	14	40
FLSC 80 L	0.37	940	3.76	1.2	0.74	0.68	0.55	61.0	59.9	55.2	3.8	1.9	2.1	0.003	15	40
FLSC 80 L	0.55	955	5.5	1.8	0.67	0.59	0.46	65.1	64.0	59.0	4.4	2.5	2.6	0.004	16	40
FLSC 90 S	0.75	940	7.62	2.1	0.80	0.75	0.65	70.5	69.3	63.5	3.5	2.0	2.2	0.004	21	45
FLSC 90 L	1.1	940	11.2	2.7	0.81	0.76	0.66	70.7	71.0	66.7	4.8	1.8	2.2	0.005	23	45
FLSC 100 L	1.5	955	15	3.5	0.78	0.72	0.61	75.7	76.4	75.2	6.3	2.2	2.8	0.013	41	48
FLSC 112 M	2.2	960	21.9	5.2	0.77	0.71	0.59	77.7	78.2	76.3	5.5	2.3	2.4	0.015	45	48
FLSC 132 S	3	953	30.1	6.9	0.76	0.74	0.63	79.7	81.0	79.7	5.3	2.2	2.4	0.038	71	55
FLSC 132 M	4	970	39.4	9	0.78	0.72	0.61	82.4	83.3	81.9	6.7	2.8	2.7	0.052	76	55
FLSC 132 MU	5.5	970	54.1	12.2	0.79	0.74	0.63	83.1	84.0	82.7	7.1	3.2	2.7	0.060	88	55
FLSC 160 M	7.5	968	74	16	0.79	0.72	0.59	84.7	84.7	84.7	4.3	1.5	2.3	0.085	100	56
FLSC 160 L	11	966	109	23	0.80	0.74	0.63	86.4	86.1	84.4	5.0	1.5	2.3	0.12	128	56
FLSC 180 L	15	975	147	30	0.81	0.78	0.69	87.7	88.0	86.9	6.8	2.1	3.1	0.2	170	63
FLSC 200 LA	18.5	975	181	36	0.83	0.77	0.68	88.9	89.0	88.2	7.0	2.2	2.4	0.29	240	65
FLSC 200 LB	22	973	216	44	0.81	0.74	0.65	90.0	90.0	89.2	6.7	2.5	1.7	0.31	260	65
FLSC 225 M	30	984	293	59	0.80	0.74	0.62	91.3	91.5	90.8	1.5	2.5	2.6	0.94	392	66
FLSC 250 M	37	983	362	73	0.79	0.74	0.62	91.5	92.0	91.2	7.0	2.4	2.5	0.94	394	66
FLSC 280 S	45	979	443	87	0.81	0.76	0.67	91.7	92.3	92.0	6.2	2.3	2.1	1.13	455	66
FLSC 280 M	55	983	538	105	0.81	0.75	0.64	92.5	92.9	92.5	7.3	2.5	2.6	1.26	532	66
FLSC 315 ST	75	987	726	133	0.86	0.85	0.79	92.6	93.1	93.0	6.3	2.4	2.3	1.8	850	76
FLSC 315 M	90	987	871	161	0.85	0.80	0.73	92.4	93.1	93.2	6.6	1.8	2.7	2.6	1000	76
FLSC 315 LA	110	983	1069	199	0.85	0.83	0.73	93.3	93.9	93.5	5.9	1.6	2.5	2.6	1050	76
FLSC 315 LB	132	988	1276	241	0.83	0.77	0.67	93.9	94.2	94.0	7.3	2.0	3.4	3.5	1125	76
FLSC 315 LB	150	992	1453	292	0.78	0.73	0.60	94.0	94.1	93.4	7.8	1.8	3.0	3.5	1125	76
FLSC 355 LA	185	987	1790	345	0.81	0.77	0.65	94.4	94.7	94.6	7.2	2.0	3.6	5.4	1415	78
FLSC 355 LB	220	988	2126	413	0.81	0.76	0.66	94.0	94.2	93.6	7.2	2.0	2.6	6.3	1535	78
FLSC 355 LD	250	993	2404	437	0.82	0.79	0.72	94.5	94.9	94.7	7.2	1.8	2.3	8.6	1935	78
FLSC 355 LD	300	992	2888	552	0.82	0.79	0.71	94.5	94.9	94.5	6.1	1.6	2.1	8.6	1935	78
FLSC 355 LKB	350	993	3362	628	0.84	0.81	0.74	94.8	94.9	94.4	6.5	1.9	2.2	17	2350	78
FLSC 400 LB	350	993	3362	628	0.84	0.81	0.74	94.8	94.9	94.4	6.5	1.9	2.2	17	2350	78
FLSC 450 LA	400	996	3835	745	0.81	0.76	0.66	94.6	94.4	93.4	7.9	2.0	2.8	33	3230	80
FLSC 400 LKB	500	996	4794	952	0.79	0.74	0.63	-	-	-	8.0	2.1	2.5	35	3350	80
FLSC 450 LB	500	996	4794	952	0.79	0.74	0.63	-	-	-	8.0	2.1	2.5	35	3400	80
FLSC 450 LB	550	994	5273	1034	0.80	0.74	0.63	-	-	-	7.4	1.9	2.3	35	3400	80

* This standard replaces the IEC 60034-2; 1996

FLSC

totally enclosed three-phase asynchronous motors

Selection



IP 55 - 50 Hz - Class F - Δ T 80 K - 230 V Δ / 400 V Y or 400 V Δ - S1

A

Type	Rated power at 50 Hz	IM 1001 (IM B3)	
	P _N kW	Code	Qty
FLSC 80 L	0.25		-
FLSC 80 L	0.37		-
FLSC 80 L	0.55		-
FLSC 90 S	0.75		-
FLSC 90 L	1.1		-
FLSC 100 L	1.5		-
FLSC 112 M	2.2		-
FLSC 132 S	3		-
FLSC 132 M	4		-
FLSC 132 MR	5.5		-
FLSC 160 M	7.5		-
FLSC 160 L	11		-
FLSC 180 L	15		-
FLSC 200 LA	18.5		-
FLSC 200 LB	22		-
FLSC 225 M	30		-
FLSC 250 M	37		-
FLSC 280 S	45		-
FLSC 280 M	55		-
FLSC 315 ST	75		-
FLSC 315 M	90		-

FLSC

totally enclosed three-phase asynchronous motors

Selection

8
poles
750 min⁻¹

IP 55 - 50 Hz - Class F - Δ T 80 K - 230 V Δ / 400 V Y or 400 V Δ - S1

	Rated power	Rated speed	Rated torque	Rated current	Power factor			Efficiency IEC 60034-2; 1996			Starting current/ Rated current	Starting torque/ Rated torque	Maximum torque/ Rated torque	Moment of inertia	Weight	Noise
Type	P _N kW	N _N min ⁻¹	M _N Nm	I _{N(400V)} A	Cos Phi			η			I _d / I _n	M _d /M _n	M _M /M _n	J kg.m ²	IM B3 kg	LP db(A)
					4/4	3/4	2/4	4/4	3/4	2/4						
FLSC 80 L	0.18	710	2.42	0.8	0.64	0.58	0.46	52.3	51	45	3.0	1.7	1.7	0.003	14	40
FLSC 80 L	0.25	720	3.32	1.1	0.6	0.55	0.44	54.5	54	46	3.2	2.0	2.4	0.004	16	40
FLSC 90 S	0.37	685	5.16	1.2	0.71	0.57	0.45	64	63	59	3.5	1.6	1.6	0.004	21	45
FLSC 90 L	0.55	695	7.56	1.7	0.72	0.59	0.46	63	58	54	3.3	1.8	1.8	0.005	23	45
FLSC 100 LK	0.75	720	9.95	2.3	0.68	0.6	0.47	70.9	70	66	4.1	1.9	1.9	0.009	41	48
FLSC 100 LK	1.1	720	14.6	3.8	0.62	0.56	0.44	68	66	60	4.1	1.8	2.4	0.012	43	48
FLSC 112 M	1.5	725	19.8	4.8	0.63	0.57	0.45	72.5	72	68	4.0	2.1	2.2	0.015	45	49
FLSC 132 S	2.2	715	29.4	7.2	0.6	0.55	0.44	74	74	72	3.2	1.4	1.8	0.025	71	54
FLSC 132 M	3	705	40.6	9.1	0.63	0.57	0.46	76	76	73	3.1	1.3	1.9	0.033	81	54
FLSC 160 MA	4	710	53.8	11.3	0.63	0.56	0.44	81.5	82	80.1	3.8	1.4	1.7	0.062	105	56
FLSC 160 MB	5.5	710	74	15	0.65	0.58	0.46	82	82.5	80.6	3.8	1.4	1.7	0.071	111	56
FLSC 160 L	7.5	715	100	20	0.65	0.58	0.46	83	93.5	81.6	3.8	1.5	1.8	0.086	128	56
FLSC 180 L	11	724	145	27	0.7	0.63	0.51	85.1	84.9	82.4	3.9	1.4	1.7	0.21	175	62
FLSC 200 L	15	729	197	34	0.72	0.66	0.53	88.1	88	86.2	5.0	1.8	2.6	0.32	265	62
FLSC 225 ST	18.5	727	243	41	0.73	0.67	0.54	89	88.9	87.1	5.0	1.6	2.3	0.38	285	65
FLSC 225 M	22	732	287	48	0.72	0.68	0.58	92.1	92.6	91.7	5.9	1.8	2.5	0.83	388	65
FLSC 250 M	30	729	393	61	0.78	0.74	0.64	91.2	91.7	90.8	6.2	1.8	2.5	0.83	393	65
FLSC 280 S	37	723	489	75	0.78	0.74	0.64	92	92.1	91	4.5	1.3	1.8	1.4	472	65
FLSC 280 M	45	730	589	102	0.7	0.66	0.55	91.7	91.8	90.7	6.0	2.3	3.2	1.75	563	65
FLSC 315 ST	55	738	712	102	0.83	0.8	0.71	94.2	94.5	94	7.4	2.1	3.0	2.7	850	75
FLSC 315 M	75	743	964	147	0.78	0.76	0.68	94.8	95	94.3	7.4	2.0	2.2	3.1	1000	78
FLSC 315 LA	90	742	1158	177	0.78	0.76	0.68	94.7	94.9	94.2	6.7	1.9	2.1	4.2	1030	78
FLSC 315 LB	110	742	1416	222	0.76	0.74	0.66	94.8	95	94.3	7.2	2.0	2.2	5.1	1125	78
FLSC 355 LA	132	741	1701	258	0.78	0.75	0.68	95.3	95.2	94.2	6.7	2.0	2.2	5.5	1415	78
FLSC 355 LB	160	741	2062	312	0.78	0.75	0.68	95.3	95.2	94.2	6.9	2.0	2.2	6	1535	78
FLSC 355 LD	200	741	2577	364	0.84	0.81	0.74	95	94.9	93.9	6.7	1.6	1.7	6.5	1935	78
FLSC 355 LKA	250	743	3213	464	0.82	0.77	0.67	95.3	95.1	94.2	6.8	1.6	2.2	18.5	2170	78
FLSC 400 LA	250	743	3213	464	0.82	0.77	0.67	95.3	95.1	94.2	6.8	1.6	2.2	18.5	2200	78
FLSC 355 LKB	300	741	3866	552	0.83	0.78	0.68	95	94.8	94	6.0	1.1	1.5	21.6	2370	78
FLSC 400 LB	300	741	3866	552	0.83	0.78	0.68	95	94.8	94	6.0	1.1	1.5	21.6	2400	78
FLSC 400 LKA	350	746	4480	652	0.81	0.78	0.69	96.2	95.9	95	6.2	1.7	1.4	40	3100	78
FLSC 450 LA	350	746	4480	652	0.81	0.78	0.69	96.2	95.9	95	6.2	1.7	1.4	40	3150	78
FLSC 400 LKB	400	746	5120	737	0.82	0.79	0.71	96.1	95.8	94.9	6.7	1.9	1.6	47	3420	78
FLSC 450 LB	400	746	5120	737	0.82	0.79	0.71	96.1	95.8	94.9	6.7	1.9	1.6	47	3470	78

FLSC

totally enclosed three-phase asynchronous motors

Selection



IP 55 - 50 Hz - Class F - Δ T 80 K - 230 V Δ / 400 V Y or 400 V Δ - S1

A

Type	Rated power at 50 Hz	IM 1001 (IM B3)	
	P _N kW	Code	Qty
FLSC 80 L	0.18		-
FLSC 80 L	0.25		-
FLSC 90 S	0.37		-
FLSC 90 L	0.55		-
FLSC 100 LK	0.75		-
FLSC 100 LK	1.1		-
FLSC 112 M	1.5		-
FLSC 132 S	2.2		-
FLSC 132 M	3		-
FLSC 160 MA	4		-
FLSC 160 MB	5.5		-
FLSC 160 L	7.5		-
FLSC 180 L	11		-
FLSC 200 L	15		-
FLSC 225 ST	18.5		-
FLSC 225 M	22		-
FLSC 250 M	30		-
FLSC 280 S	37		-
FLSC 280 M	45		-
FLSC 315 ST	55		-
FLSC 315 M	75		-

FLSC totally enclosed three-phase multispeed asynchronous motors

Selection

General table of the multispeed motors
Use: centrifugal machines
IP 55 - 50 Hz - Class F - ΔT 80 K - 400 V - S1

Type		2/4 poles Dahlander	4/6 poles PAM ¹ or 2 windings	4/8 poles Dahlander	6/8 poles PAM ¹ or 2 windings
		Rated power at 50 Hz kW	Rated power at 50 Hz kW	Rated power at 50 Hz kW	Rated power at 50 Hz kW
FLSC 80 L	GV ² / PV ³	0.75 / 0.18	0.55 / 0.18	0.75 / 0.12	0.37 / 0.18
FLSC 90 S	GV / PV	1.1 / 0.22	0.75 / 0.25	1.1 / 0.18	0.55 / 0.27
FLSC 90 L	GV / PV	1.5 / 0.3	1.1 / 0.37	1.5 / 0.25	0.75 / 0.37
FLSC 100 L	GV / PV	2.2 / 0.37	1.5 / 0.55	2.2 / 0.37	1.1 / 0.55
FLSC 100 L	GV / PV	3 / 0.55	2.2 / 0.37	3 / 0.55	-
FLSC 112 M	GV / PV	-	3 / 1.1	-	1.5 / 0.75
FLSC 112 MR	GV / PV	4 / 0.75	4 / 1.5	4 / 0.75	2.2 / 1.1
FLSC 132 M	GV / PV	5.1 / 1.1	5.5 / 1.8	5 / 1.1	3 / 1.5
FLSC 132 M	GV / PV	7.5 / 1.5	-	7.5 / 1.5	-
FLSC 160 MA	GV / PV	-	7.3 / 2.4	-	5 / 1.7
FLSC 160 MB	GV / PV	11 / 2.7	-	10 / 2.5	-
FLSC 160 L	GV / PV	15 / 3.7	10 / 3.3	14 / 3	7.3 / 2.4
FLSC 180 MR	GV / PV	18.5 / 4.5	12.5 / 4	18.5 / 4.5	-
FLSC 180 L	GV / PV	22 / 5.5	14.5 / 5	22 / 4.8	10 / 3.3
FLSC 200 LA	GV / PV	-	20 / 6	-	12.5 / 4
FLSC 200 LB	GV / PV	30 / 7.5	-	30 / 6.5	15 / 5
FLSC 225 ST	GV / PV	-	25 / 8.2	-	-
FLSC 225 MT	GV / PV	37 / 9	-	37 / 8	-
FLSC 225 M	GV / PV	42 / 10.5	30 / 10	42 / 8.5	20 / 6.7
FLSC 250 M	GV / PV	45 / 11	37 / 12.2	45 / 9	25 / 8.2
FLSC 280 S	GV / PV	55 / 13.7	50 / 16.7	55 / 11	30 / 10
FLSC 280 M	GV / PV	75 / 18.7	60 / 20	75 / 15	37 / 12.2
FLSC 315 ST	GV / PV	90 / 27.5	72.5 / 25	90 / 18	50 / 16.7
FLSC 315 M	GV / PV	-	88.5 / 29	-	60 / 20
FLSC 315 LA	GV / PV	-	108 / 35	110 / 22	75.5 / 25
FLSC 315 LB	GV / PV	-	132 / 45	-	100 / 39
FLSC 355 LA	GV / PV	-	167 / 55	160 / 32	123 / 41
FLSC 355 LB	GV / PV	-	200 / 66	200 / 40	147 / 49
FLSC 355 LD	GV / PV	-	270 / 88	220 / 44	200 / 67
FLSC 400 LA	GV / PV	-	300 / 100	300 / 60	230 / 78
FLSC 400 LB	GV / PV	-	335 / 110	450 / 90	250 / 85
FLSC 450 LA	GV / PV	-	370 / 120	500 / 100	300 / 100
FLSC 450 LB	GV / PV	-	450 / 150	550 / 110	330 / 110

1. PAM up to 132

2. GV: High speed

3. PV: Low speed

The electrical characteristics specific to these motors are available on request.

FLSC totally enclosed three-phase multispeed asynchronous motors

Selection

General table of the multispeed motors
General use
IP 55 - 50 Hz - Class F - ΔT 80 K - 400 V - S1

Type		2/4 poles Dahlander	4/6 poles 2 windings	4/8 poles Dahlander	6/8 poles 2 windings
		Rated power at 50 Hz kW	Rated power at 50 Hz kW	Rated power at 50 Hz kW	Rated power at 50 Hz kW
FLSC 80 L	GV ¹ / PV ²	0.75 / 0.55	-	0.5 / 0.22	-
FLSC 90 S	GV / PV	1.1 / 0.75	0.55 / 0.37	0.75 / 0.4	-
FLSC 90 L	GV / PV	1.5 / 1.1	0.75 / 0.55	1.1 / 0.5	-
FLSC 100 L	GV / PV	2.2 / 1.5	1.1 / 0.75	1.5 / 0.75	-
FLSC 100 L	GV / PV	3 / 2.2	1.5 / 1.1	-	-
FLSC 112 M	GV / PV	-	2.2 / 1.5	2.2 / 1.1	-
FLSC 112 MR	GV / PV	4.5 / 3.7	2.8 / 1.8	3 / 1.5	-
FLSC 132 M	GV / PV	6 / 4.5	4 / 2.5	5.5 / 3	-
FLSC 132 M	GV / PV	7.5 / 5.5	5.5 / 3.7	7.5 / 4	-
FLSC 160 MA	GV / PV	-	5.5 / 3.7	-	3.75 / 2.5
FLSC 160 MB	GV / PV	11 / 9	-	-	-
FLSC 160 L	GV / PV	15 / 11	7.5 / 5	12 / 6	5.5 / 3.7
FLSC 180 L	GV / PV	18.5 / 15.5	9 / 6.2	13 / 7.5	7.5 / 5
FLSC 180 L	GV / PV	22 / 16	11 / 7.3	15 / 9	-
FLSC 200 LA	GV / PV	-	15 / 10	18 / 11	9 / 6
FLSC 200 LB	GV / PV	30 / 22.5	-	22 / 15	11.5 / 7.7
FLSC 225 ST	GV / PV	-	18.5 / 12.3	27 / 18	-
FLSC 225 MT	GV / PV	37 / 27.5	-	-	-
FLSC 225 M	GV / PV	42 / 31	22.5 / 15	30 / 20	15 / 10
FLSC 250 M	GV / PV	45 / 33.5	27 / 15	37 / 25	18.5 / 12.5
FLSC 280 S	GV / PV	55 / 41	37 / 25	45 / 30	22.5 / 15
FLSC 280 M	GV / PV	75 / 55	45 / 30	55 / 37	27.5 / 18
FLSC 315 ST	GV / PV	90 / 67	55 / 37	68 / 45	37.5 / 25
FLSC 315 M	GV / PV	-	66 / 44	83 / 55	45 / 30
FLSC 315 LA	GV / PV	-	80 / 53	110 / 75	55 / 37
FLSC 315 LB	GV / PV	-	100 / 67	136 / 90	75 / 50
FLSC 355 LA	GV / PV	-	125 / 83	166 / 110	90 / 60
FLSC 355 LB	GV / PV	-	150 / 100	200 / 132	110 / 75
FLSC 355 LD	GV / PV	-	200 / 132	240 / 160	150 / 100
FLSC 400 LA	GV / PV	-	225 / 150	-	175 / 110
FLSC 400 LB	GV / PV	-	250 / 165	300 / 200	200 / 132
FLSC 450 LA	GV / PV	-	275 / 180	375 / 250	225 / 150
FLSC 450 LB	GV / PV	-	330 / 225	475 / 315	250 / 160

1. GV: High speed
2. PV: Low speed

FLSC

totally enclosed three-phase asynchronous motors

Options

Selection table of options for FLSC totally enclosed three-phase asynchronous motors options - IP 55

2
poles
3000 min⁻¹

4
poles
1500 min⁻¹

Type	Mounting positions (drain holes at lowest point)				Fan cover with drip cover
	IM V1	IM V3	IM V5	IM V6	
	IM 3011	IM 3031	IM 1011	IM 1031	
	Code	Code	Code	Code	Code
FLSC 80	MAV 80 003	MAV 80 015	MAV 80 025	MAV 80 038	MATP 1014
FLSC 90	MAV 90 004	MAV 90 016	MAV 90 026	MAV 90 039	MATP 1015
FLSC 100	MAV 100 05	MAV 100 17	MAV 100 27	MAV 100 40	MATP 1016
FLSC 112	MAV 112 06	MAV 112 18	MAV 112 28	MAV 112 41	MATP 1017
FLSC 132	MAV 132 07	MAV 132 19	MAV 132 29	MAV 132 42	MATP 1018
FLSC 160	MAV 160 08		MAV 160 30		MATP 1019
FLSC 180	MAV 180 11		MAV 180 64		MATP 1024
FLSC 200	MAV 200 09		MAV 200 31		MATP 1020
FLSC 225			MAV 225 32		MATP 1021
FLSC 250			MAV 250 33		MATP 1022
FLSC 280			MAV 280 34		MATP 1023
FLSC 315					MATP 1025
FLSC 355					
FLSC 400					
FLSC 450					

Type	Forced ventilation
	Code
FLSC 80	MVA 00 068
FLSC 90	MVA 00 001
FLSC 100 (foot)	MVA 00 202
FLSC 100 (flange)	MVA 00 002
FLSC 112	MVA 00 002
FLSC 132	MVA 00 064
FLSC 160	
FLSC 180	
FLSC 200	
FLSC 225	
FLSC 250	
FLSC 280	
FLSC 315	
FLSC 355	
FLSC 400	
FLSC 450	

FLSC

totally enclosed three-phase asynchronous motors

Options

Selection table of options for FLSC totally three-phase asynchronous motors options - IP 55

2 poles
3000 min⁻¹

4 poles
1500 min⁻¹

Type	PTO Thermal protections opening (n/c) 	PTF Thermal protections closing (n/o) 	CTP Positive temperature coefficient thermistors probes 	Anti-condensation heaters	Aluminium fan	316 L stainless steel fan cover
FLSC 80	MAPT 1011	MAPT F 101			MA0 00 285	MA0 00 273
FLSC 90	MAPT 1011	MAPT F 101			MA0 00 286	MA0 00 274
FLSC 100	MAPT 1011	MAPT F 101	MACPT 101		MA0 00 287	MA0 00 275
FLSC 112	MAPT 1011	MAPT F 101	MACTP 101		MA0 00 288	MA0 00 278
FLSC 132	MAPT 1011	MAPT F 101	MACTP 101		MA0 00 289	MA0 00 277
FLSC 160	MAPT 1011	MAPT F 101	MACTP 101	MARE 1019		MA0 00 278
FLSC 180	MAPT 1011	MAPT F 101	MACTP 101	MARE 1023		MA0 00 279
FLSC 200	MAPT 1011	MAPT F 101	MACTP 101	MARE 1020		MA0 00 280
FLSC 225	MAPT 1011	MAPT F 101	MACTP 101	MARE 1021		MA0 00 281
FLSC 250	MAPT 1011	MAPT F 101	MACTP 101	MARE 1022		MA0 00 282
FLSC 280	MAPT 1011	MAPT F 101	MACTP 101	MARE 1016		MA0 00 283
FLSC 315	MAPT 1011	MAPT F 101	MACTP 101	MARE 1024		MA0 00 284
FLSC 355	MAPT 1011	MAPT F 101	MACTP 101	MARE 1025		MA0 00 177
FLSC 400						
FLSC 450						

Use guide:

- STEP 1: Select the required basic motor according to the selection grids of the previous pages.
- STEP 2: Select the required additional option or options and add them to the basic designation.

Codification example:

Cast iron motor Corrobloc finish FLSC tri
22 kW 3000 min⁻¹ with foot B3 230/400 V
with PTO.

Designation	Code
2P FLSC 180 MR 22 kW B3 230/400V	EA2 22 319
+	+
PTO	MAPT1011

FLSC

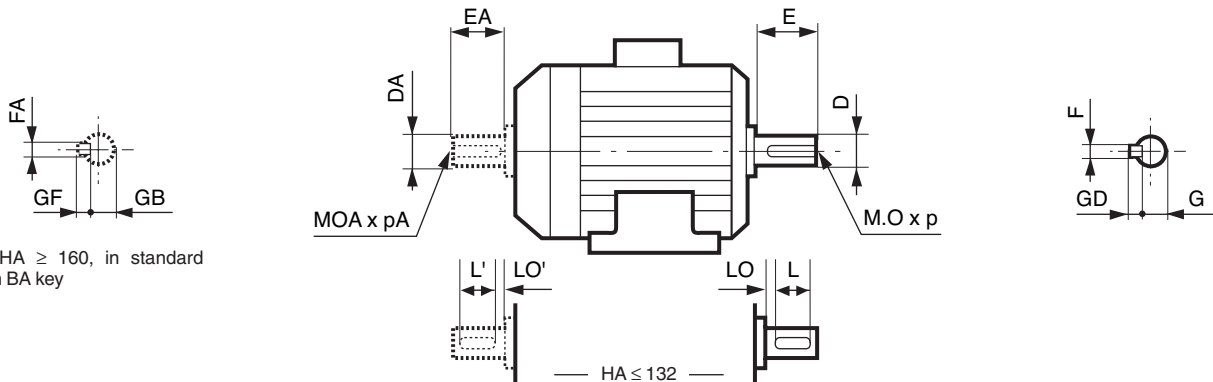
totally enclosed three-phase asynchronous motors

Dimensions

Dimensions of the FLSC totally enclosed three-phase asynchronous motors - IP 55 Cage rotor

Dimensions in millimetres

– shaft end



Main shaft end

Type	4, 6 and 8 poles									2 poles								
	F	GD	D	G	E	O	p	L	LO	F	GD	D	G	E	O	p	L	LO
FLSC 80 L	6	6	19j6	15.5	40	6	16	30	6	6	6	19j6	15.5	40	6	16	30	6
FLSC 90 S/L	8	7	24j6	20	50	8	19	40	6	8	7	24j6	20	50	8	19	40	6
FLSC 100 L/LK	8	7	28j6	24	60	10	22	50	6	8	7	28j6	24	60	10	22	50	6
FLSC 112 M/MR	8	7	28j6	24	60	10	22	50	6	8	7	28j6	24	60	10	22	50	6
FLSC 132 S/M/MR	10	8	38k6	33	80	12	28	63	10	10	8	38k6	33	80	12	28	63	10
FLSC 160 M/L	12	8	42k6	37	110	16	36	90	20	12	8	42k6	37	110	16	36	90	20
FLSC 180 MR/L	14	9	48k6	42.5	110	16	36	90	20	14	9	48k6	42.5	110	16	36	90	20
FLSC 200 L	16	10	55m6	49	110	20	42	90	20	16	10	55m6	49	110	20	42	90	20
FLSC 225 ST/MT/M	18	11	60m6	53	140	20	42	125	15	16	10	55m6	49	110	20	42	90	20
FLSC 250 M	18	11	65m6	58	140	20	42	125	15	18	11	60m6	53	140	20	42	125	15
FLSC 280 S/M	20	12	75m6	67.5	140	20	42	125	15	18	11	65m6	58	140	20	42	125	15
FLSC 315 ST/M	22	14	80m6	71	170	20	42	140	30	18	11	65m6	58	140	20	42	125	15
FLSC 315 L	25	14	90m6	81	170	24	50	140	30	20	12	70m6	62.5	140	20	42	125	15
FLSC 355 L/LK	28	16	100m6	90	210	24	50	180	30	22	14	80m6	71	170	20	42	140	30
FLSC 400 L/LK/LV	28	16	110m6	100	210	24	50	180	30	-	-	-	-	-	-	-	-	-
FLSC 450 L/LV	32	18	120m7	109	210	24	50	180	30	-	-	-	-	-	-	-	-	-

Secondary shaft end

Type	4, 6 and 8 poles									2 poles								
	FA	GF	DA	GB	EA	OA	pA	L'	LO'	FA	GF	DA	GB	EA	OA	pA	L'	LO'
FLSC 80 L	5	5	14j6	11	30	5	15	25	3.5	5	5	14j6	11	30	5	15	25	3.5
FLSC 90 S/L	6	6	19j6	15.5	40	6	16	30	6	6	6	19j6	15.5	40	6	16	30	6
FLSC 100 L/LK	8	7	24j6	20	50	8	19	40	6	8	7	24j6	20	50	8	19	40	6
FLSC 112 M/MR	8	7	24j6	20	50	8	19	40	6	8	7	24j6	20	50	8	19	40	6
FLSC 132 S/M/MR	8	7	28j6	24	60	10	22	50	6	8	7	28j6	24	60	10	22	50	6
FLSC 160 M/L	12	8	42k6	37	110	16	36	90	20	12	8	42k6	37	110	16	36	90	20
FLSC 180 MR/L	14	9	48k6	42.5	110	16	36	90	20	14	9	48k6	42.5	110	16	36	90	20
FLSC 200 L	16	10	55m6	49	110	20	42	90	20	16	10	55m6	49	110	20	42	90	20
FLSC 225 ST/MT/M	18	11	60m6	53	140	20	42	125	15	16	10	55m6	49	110	20	42	90	20
FLSC 250 M	18	11	60m6	53	140	20	42	125	15	18	11	60m6	53	140	20	42	125	15
FLSC 280 S/M	20	12	60m6	53	140	20	42	125	15	18	11	60m6	53	140	20	42	125	15
FLSC 315 ST/M	22	14	80m6	71	170	20	42	140	30	18	11	65m6	58	140	20	42	125	15
FLSC 315 L	25	14	90m6	81	170	24	50	140	30	20	12	70m6	62.5	140	20	42	125	15
FLSC 355 L/LK	28	16	100m6	90	210	24	50	180	30	22	14	80m6	71	170	20	42	140	30
FLSC 400 L/LK/LV	28	16	110m6	100	210	24	50	180	30	-	-	-	-	-	-	-	-	-
FLSC 450 L/LV	32	18	120m6	109	210	24	50	180	30	-	-	-	-	-	-	-	-	-

FLSC

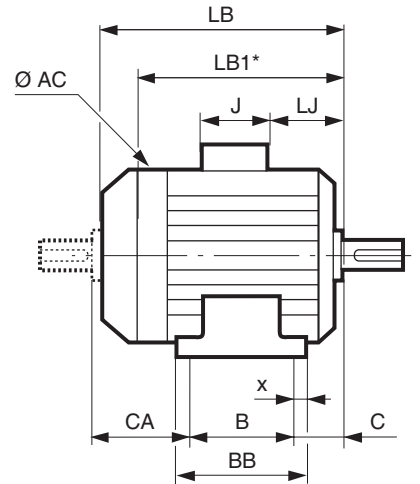
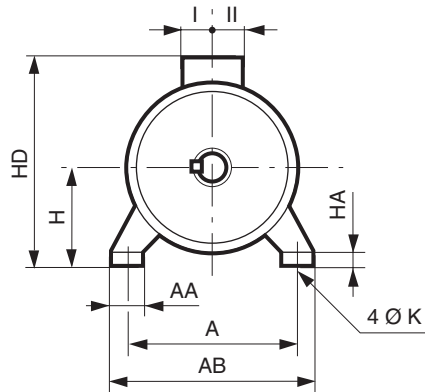
totally enclosed three-phase asynchronous motors

Dimensions

Dimensions of the FLSC totally enclosed three-phase asynchronous motors - IP 55 Cage rotor

Dimensions in millimetres

– foot mounted



Type	Main dimensions																
	A	AB	B	BB	C	x	AA	K	HA	H	AC	HD	LB	LB1*	LJ	J	I
FLSC 80 L	125	157	100	130	50	20	32	9	11	80	170	231	216	178	7	136	68
FLSC 90 S	140	170	100	162	37	27	26	9	10	90	185	251	251	225	9	136	68
FLSC 90 L	140	170	125	162	52	27	26	9	10	90	185	251	251	225	9	136	68
FLSC 100 L	160	196	140	185	63	29	40	12	12	100	204	258	300	253	8	136	68
FLSC 100 LK	160	200	140	174	63	22	42	12	12	100	226	288	323	276	55	114	57
FLSC 112 M	190	230	140	185	70	32	48	12	12	112	231	294	309	265	18	136	68
FLSC 132 S	216	255	140	240	89	50	63	12	16	132	264	347	385	330	22	136	68
FLSC 132 M	216	255	178	240	89	50	63	12	16	132	264	347	385	330	22	136	68
FLSC 132 MU	216	255	178	240	89	50	63	12	16	132	264	347	412	351	22	136	68
FLSC 160 M	254	294	210	294	108	20	65	14	20	160	310	440	495	435	30	246	126
FLSC 160 L	254	294	254	294	108	20	65	14	20	160	310	440	495	435	30	246	126
FLSC 180 MR	279	324	241	295	121	25	80	14	25	180	310	460	515	450	30	246	126
FLSC 180 L	279	330	279	335	121	28	70	14	28	180	350	481	555	480	42	246	126
FLSC 200 L	318	374	305	361	133	28	80	18	44	200	394	530	681	595	51	246	126
FLSC 225 ST	356	420	286	367	149	28	100	18	35	225	394	555	681	595	51	246	126
FLSC 225 MT	356	420	311	367	149	28	100	18	35	225	394	555	681	595	51	246	126
FLSC 225 M	356	426	311	375	149	32	80	18	27	225	540	656	780	630	70	352	173
FLSC 250 M	406	476	349	413	168	32	80	22	27	250	540	681	780	630	70	352	173
FLSC 280 S	457	527	368	432	190	32	80	22	27	280	540	711	860	710	70	352	173
FLSC 280 M	457	527	419	483	190	32	80	22	27	280	540	711	960	810	70	352	173
FLSC 315 ST	508	598	406	547	216	45	90	27	45	315	556	761	1068	910	68	352	173
FLSC 315 M	508	600	457	598	216	45	100	27	45	315	624	835	1203	1030	70	452	217
FLSC 315 L	508	600	508	598	216	45	100	27	45	315	632	835	1203	1030	70	452	217
FLSC 355 LA/LB	610	710	630	710	254	40	110	27	35	355	700	910	1305	1118	61	452	217
FLSC 355 LC/LD	610	710	630	710	254	40	110	27	35	355	700	910	1430	1242	61	452	217
FLSC 355 LK**	610	750	630	815	254	40	128	27	45	355	787	1117	1702	-	52	700	224
FLSC 400 L/LV**	686	800	710	815	280	65	128	35	45	400	787	1162	1702	-	52	700	224
FLSC 400 LKA/LKB**	686	824	800	950	280	59	140	35	45	400	877	1210	1740	-	68	700	224
FLSC 450 L/LV**	750	890	800	950	315	94	140	35	45	450	877	1260	1740	-	68	700	224

1. LB1: non ventilated motor.
** LB1: on request.

FLSC

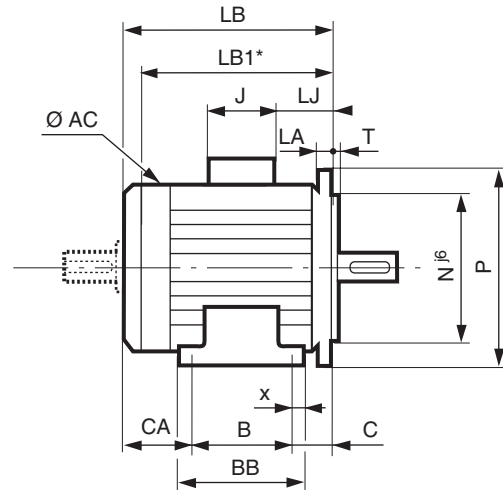
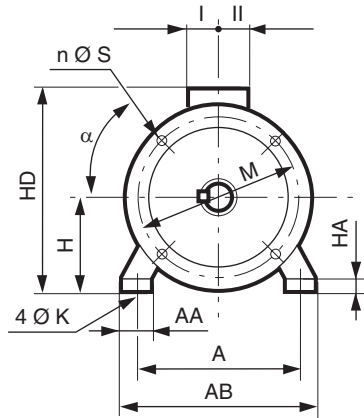
totally enclosed three-phase asynchronous motors

Dimensions

Dimensions of the FLSC totally enclosed three-phase asynchronous motors - IP 55 Cage rotor

Dimensions in millimetres

– (FF) foot and plain hole flange mounted



Type	Main dimensions																			
	A	AB	B	BB	C	x	AA	K	HA	H	AC	HD	LB	LB1*	LJ	J	I	II	CA	Sym.
FLSC 80 L	125	157	100	130	50	20	32	9	11	80	170	231	216	178	7	136	68	68	83	FF 165
FLSC 90 S	140	170	100	162	37	27	26	9	10	90	185	251	251	225	9	136	68	68	126	FF 165
FLSC 90 L	140	170	125	162	52	27	26	9	10	90	185	251	251	225	9	136	68	68	110	FF 165
FLSC 100 L	160	196	140	185	63	29	40	12	12	100	204	258	300	253	8	136	68	68	-	FF 215
FLSC 100 LK	160	200	140	174	63	22	42	12	12	100	226	288	323	276	55	114	57	57	119	FF 215
FLSC 112 M	190	230	140	185	70	32	48	12	12	112	231	294	309	265	18	136	68	68	-	FF 215
FLSC 132 S	216	255	140	240	89	50	63	12	16	132	264	347	385	330	22	136	68	68	170	FF 265
FLSC 132 M	216	255	178	240	89	50	63	12	16	132	264	347	385	330	22	136	68	68	170	FF 265
FLSC 132 MU	216	255	178	240	89	50	63	12	16	132	264	347	412	351	22	136	68	68	170	FF 265
FLSC 160 M	254	294	210	294	108	20	65	14	20	160	310	440	495	435	30	246	126	147	182	FF 300
FLSC 160 L	254	294	254	294	108	20	65	14	20	160	310	440	495	435	30	246	126	147	138	FF 300
FLSC 180 MR	279	324	241	295	121	25	80	14	25	180	310	460	515	450	30	246	126	147	158	FF 300
FLSC 180 L	279	330	279	335	121	28	70	14	28	180	350	481	555	480	42	246	126	147	160	FF 300
FLSC 200 L	318	374	305	361	133	28	80	18	44	200	394	530	681	595	51	246	126	147	248	FF 350
FLSC 225 ST	356	420	286	367	149	28	100	18	35	225	394	555	681	595	51	246	126	147	251	FF 400
FLSC 225 MT	356	420	311	367	149	28	100	18	35	225	394	555	681	595	51	246	126	147	226	FF 400
FLSC 225 M	356	426	311	375	149	32	80	18	27	225	540	656	780	630	70	352	173	210	326	FF 400
FLSC 250 M	406	476	349	413	168	32	80	22	27	250	540	681	780	630	70	352	173	210	269	FF 500
FLSC 280 S	457	527	368	432	190	32	80	22	27	280	540	711	860	710	70	352	173	210	302	FF 500
FLSC 280 M	457	527	419	483	190	32	80	22	27	280	540	711	960	810	70	352	173	210	357	FF 500
FLSC 315 ST	508	598	406	547	216	45	90	27	45	315	556	761	1068	910	68	352	173	210	452	FF 600
FLSC 315 M	508	600	457	598	216	45	100	27	45	315	624	835	1203	1030	70	452	217	269	536	FF 600
FLSC 315 L	508	600	508	598	216	45	100	27	45	315	632	835	1203	1030	70	452	217	269	485	FF 600
FLSC 355 LA/LB	610	710	630	710	254	40	110	27	35	355	700	910	1305	1118	61	452	217	269	427	FF 740
FLSC 355 LC/LD	610	710	630	710	254	40	110	27	35	355	700	910	1430	1242	61	452	217	269	552	FF 740
FLSC 355 LK**	610	750	630	815	254	40	128	27	45	355	787	1117	1702	-	52	700	224	396	818	FF 740
FLSC 400 L/LV**	686	800	710	815	280	65	128	35	45	400	787	1162	1702	-	52	700	224	396	712	FF 940
FLSC 400 LKA/LKB**	686	824	800	950	280	59	140	35	45	400	877	1210	1740	-	68	700	224	396	660	FF 940
FLSC 450 LA**	750	890	800	950	315	94	140	35	45	450	877	1260	1740	-	68	700	224	396	625	FF 1080

1. LB1: non ventilated motor.

** LB1: on request.

CA dimension and shaft ends dimensions identical to those for foot mounted motors.

FLSC

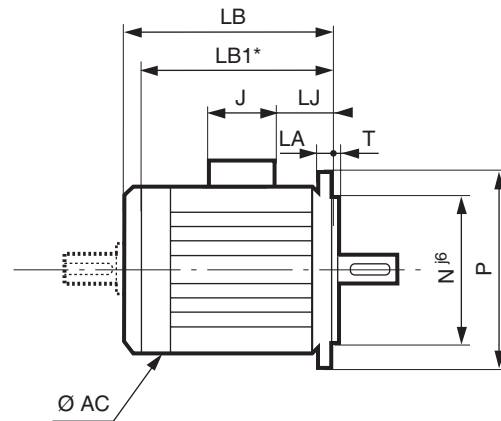
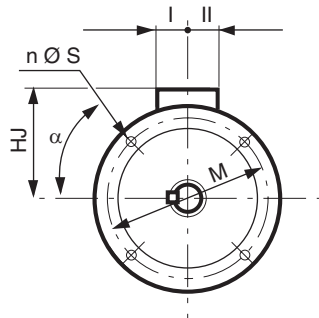
totally enclosed three-phase asynchronous motors

Dimensions

Dimensions of the FLSC totally enclosed three-phase asynchronous motors - IP 55 Cage rotor

Dimensions in millimetres

– (FF) foot and plain hole flange mounted



IEC symbol	Flange dimensions							
	M	N	P	T	n	α°	S	LA
FF 165	165	130	200	3.5	4	45	12	10
FF 165	165	130	200	3.5	4	45	12	10
FF 165	165	130	200	3.5	4	45	12	10
FF 215	215	180	250	4	4	45	15	11
FF 215	215	180	250	4	4	45	15	11
FF 215	215	180	250	4	4	45	15	11
FF 265	265	230	300	4	4	45	14.5	13
FF 265	265	230	300	4	4	45	14.5	13
FF 265	265	230	300	4	4	45	14.5	13
FF 300	300	250	350	5	4	45	18.5	13
FF 300	300	250	350	5	4	45	18.5	13
FF 300	300	250	350	5	4	45	18.5	13
FF 350	350	300	400	5	4	45	19	15
FF 400	400	350	450	5	8	22.3	19	16
FF 400	400	350	450	5	8	22.3	19	16
FF 400	400	350	450	5	8	22.3	19	16
FF 500	500	450	550	5	8	22.3	18	18
FF 500	500	450	550	5	8	22.3	18	22
FF 500	500	450	550	5	8	22.3	18	22
FF 600	600	550	660	6	8	22.3	22	25
FF 600	600	550	660	6	8	22.3	22	25
FF 600	600	550	660	6	8	22.3	22	25
FF 740	740	680	800	6	8	22.3	22	25
FF 740	740	680	800	6	8	22.3	22	25
FF 740	740	680	800	6	8	22.3	22	25
FF 940	940	880	1000	6	8	22.3	28	30
FF 940	940	880	1000	6	8	22.3	28	30
FF 1080	1080	1000	1150	6	8	22.3	28	30

Type	Main dimensions							
	AC	LB	LB1*	HJ	LJ	J	I	II
FLSC 80 L	160	216	178	152	7	136	68	68
FLSC 90 S	185	251	225	158	9	136	68	68
FLSC 90 L	185	251	225	158	9	136	68	68
FLSC 100 L	204	300	253	158	8	136	68	68
FLSC 100 LK	226	323	276	176	55	114	57	57
FLSC 112 M	231	309	265	182	18	136	68	68
FLSC 132 S	264	385	330	205	22	136	68	68
FLSC 132 M	264	385	330	205	22	136	68	68
FLSC 132 MU	264	412	351	205	22	136	68	68
FLSC 160 M	310	495	435	280	30	246	126	147
FLSC 160 L	310	495	435	280	30	246	126	147
FLSC 180 MR	310	515	450	280	30	246	126	147
FLSC 180 L	350	555	480	301	42	246	126	147
FLSC 200 L	394	681	595	330	51	246	126	147
FLSC 225 ST	394	681	595	330	51	246	126	147
FLSC 225 MT	394	681	595	330	51	246	126	147
FLSC 225 M	540	780	630	431	70	352	173	210
FLSC 250 M	540	780	630	431	70	352	173	210
FLSC 280 S	540	860	710	431	70	352	173	210
FLSC 280 M	540	960	810	431	70	352	173	210
FLSC 315 ST	556	1068	910	446	68	352	173	210
FLSC 315 M	624	1203	1030	520	70	452	217	269
FLSC 315 L	632	1203	1030	555	70	452	217	269
FLSC 355 LA/LB	700	1305	1118	555	61	452	217	269
FLSC 355 LC/LD	700	1430	1242	555	61	452	217	269
FLSC 355 LK**	787	1702	-	762	52	700	224	396
FLSC 400 L/LV**	787	1702	-	762	52	700	224	396
FLSC 400 LKA/LKB**	877	1740	-	810	68	700	224	396
FLSC 450 L/LV**	877	1740	-	810	68	700	224	396

1. LB1: non ventilated motor.

FF flange mounted motors, in position IM 3001 (IM B5), are only available up to frame size 225.

** LB1: on request.

FLSC

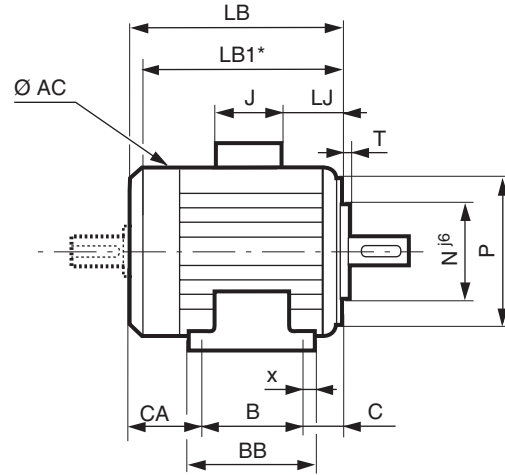
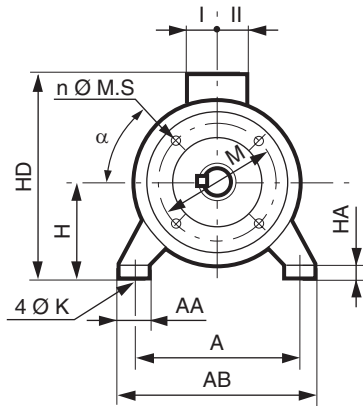
totally enclosed three-phase asynchronous motors

Dimensions

Dimensions of the FLSC totally enclosed three-phase asynchronous motors - IP 55 Cage rotor

Dimensions in millimetres

– (FT) foot and tapped hole flange mounted



Type	Main dimensions																			
	A	AB	B	BB	C	x	AA	K	HA	H	AC	HD	LB	LB1*	LJ	J	I	II	CA	Sym.
FLSC 80 L	125	157	100	130	50	20	32	9	11	80	170	231	216	178	7	136	68	68	83	FT 100
FLSC 90 S	140	170	100	162	37	27	26	9	10	90	185	251	251	225	9	136	68	68	126	FT 115
FLSC 90 L	140	170	125	162	52	27	26	9	10	90	185	251	251	225	9	136	68	68	110	FT 115
FLSC 100 L	160	196	140	185	63	29	40	12	12	100	204	258	300	253	8	136	68	68	-	FT 130
FLSC 100 LK	160	200	140	174	63	22	42	12	12	100	226	288	323	276	55	114	57	57	119	FT 130
FLSC 112 M	190	230	140	185	70	32	48	12	12	112	231	294	309	265	18	136	68	68	-	FT 130
FLSC 132 S	216	255	140	240	89	50	63	12	16	132	264	347	385	330	22	136	68	68	170	FT 215
FLSC 132 M	216	255	178	240	89	50	63	12	16	132	264	347	385	330	22	136	68	68	170	FT 215
FLSC 132 MU	216	255	178	240	89	50	63	12	16	132	264	347	412	351	22	136	68	68	170	FT 215

1. LB1: non ventilated motor.

CA dimension and shaft ends dimensions identical to those for foot mounted motors.

FLSC

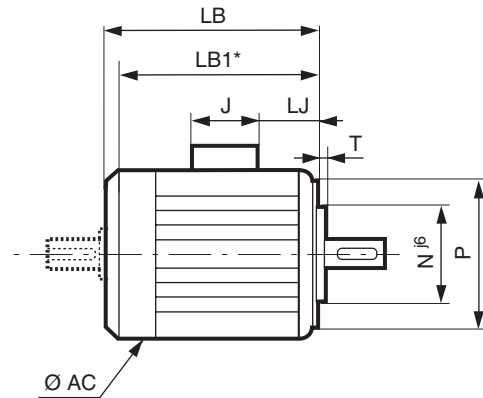
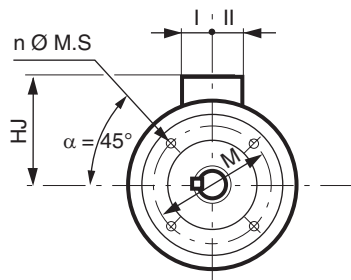
totally enclosed three-phase asynchronous motors

Dimensions

Dimensions of the FLSC totally enclosed three-phase asynchronous motors - IP 55 Cage rotor

Dimensions in millimetres

– (FT) tapped hole flange mounted



IEC symbol	Flange dimensions						
	M	N	P	T	n	α°	MS
FT 100	100	80	120	3	4	45	M6
FT 115	115	95	140	3	4	45	M8
FT 115	115	95	140	3	4	45	M8
FT 130	130	110	160	3.5	4	45	M8
FT 130	130	110	160	3.5	4	45	M8
FT 130	130	110	160	3.5	4	45	M8
FT 215	215	180	250	4	4	45	M8
FT 215	215	180	250	4	4	45	M8
FT 215	215	180	250	4	4	45	M9

1. LB1: non ventilated motor.

Type	Main dimensions							
	AC	LB	LB1*	HJ	LJ	J	I	II
FLSC 80 L	170	216	178	152	7	136	68	68
FLSC 90 S	185	251	225	158	9	136	68	68
FLSC 90 L	185	251	225	158	9	136	68	68
FLSC 100 L	204	300	253	158	8	136	68	68
FLSC 100 LK	226	323	276	159	55	114	57	57
FLSC 112 M	231	309	265	182	18	136	68	68
FLSC 132 S	264	385	330	205	22	136	68	68
FLSC 132 M	264	385	330	205	22	136	68	68
FLSC 132 MU	264	412	351	205	22	136	68	68

