

LS



Atmospheres containing explosive dust totally enclosed three-phase asynchronous motors

CATEGORY 3
ZONE 22
Non conductive dust

General information



Motors in accordance with the European Directive 94/9/CE.

Totally enclosed three-phase asynchronous motors, LS series, according to IEC 60034, 60038, 60072 ; power 0.09 to 200 kW, frame size 56 to 315 mm.
• Single speed: 2 and 4 poles, 230/400 V or 400 V Δ , 50 Hz.

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 allow for:

- Direct on line starting on the mains supply 230 V or 400 V operating on:
 - 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 start,
 - delta connection (Δ) on 400 V duty.

Finish

Assembled with protected screws.
RAL 6000 finishing paint (green).
Protection of the flange and shaft end against atmospheric corrosion.
Individual anti-shock packaging.

Mains supply

- Standard according 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.
 - Voltagess for the powers equal or greater than 3kW:
 - 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 suitable for Y/ Δ starting.

Description of the LS aluminium three-phase motors - zone 22



II 3DT 125 °C

Component	Materials	Remarks
Finned housing	Aluminium alloy	- with bolt-on or cast foot, or without foot - pressure die-cast for frame size ≤ 180 - gravity cast for frame size ≥ 200 • 4 or 6 mounting holes for the foot housings • lifting rings for frame size ≥ 160, option in 132 and 112 - optional earth terminal
Stator	Insulated low carbon magnetic steel laminations Electrolytic copper	- the low carbon content guarantees long term stability of the characteristics - assembled laminated pack - semi-enclosed slots - insulation system class F
Rotor	Insulated low carbon magnetic steel laminations Aluminium (A5L)	- inclined slots - squirrel cage pressure die cast in aluminium (or alloy for special applications) - mounted on the shaft by heat shrinking - 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 ≥ 132: • tapped centre hole • open keyway
End shields	Aluminium alloy	- LS 56 - 63 - 71 front and rear - LS 80 - 90 rear
	Cast iron	- LS 71 optional for front and rear - LS 80 - 90 front (optional for LS 80 and 90 rear) - LS 100 to 315 front and rear
Bearings and lubrication		- 2RS type lubricated for life from 56 - 63 - 71 - ball bearings - ZZ types lubricated for life from 180 inclusive - semi-protected or open types for frame size 200 - regreasable open types from 225 upwards - rear preloaded bearings
Labyrinth seals	Technopolymer or steel	- lipseal or front jet deflector for all flange motors
Lipseals	Synthetic rubber	- lipseal, jet deflector or labyrinth seals for foot motor
Fan	Composite material or aluminium alloy	- 2 directions of rotation: straight blades - 1 direction of rotation: blades directed (for frame size ≥ 315 at 2 poles)
Fan cover	Composite material or sheet steel	- on request, fitted with a drip cover for operation in vertical position, shaft facing down
Terminal box	Composite material or aluminium alloy	- IP 55 - rotatable, mounted opposite position to the feet for frame size ≥ 80 - fitted with a 6 steel stud standard terminal board (brass as an optional extra) - terminal box delivered fitted with braked cable glands - 1 earth terminal in all terminal boxes
Paint		- system Ia

LS

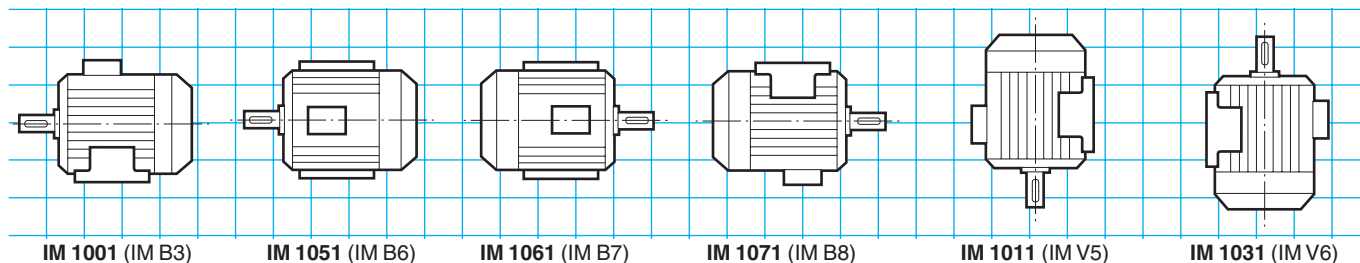


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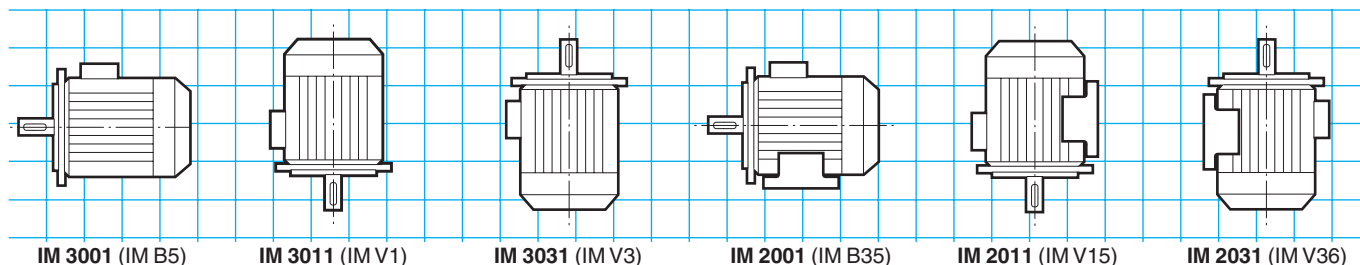
Mounting positions

Foot mounted motors



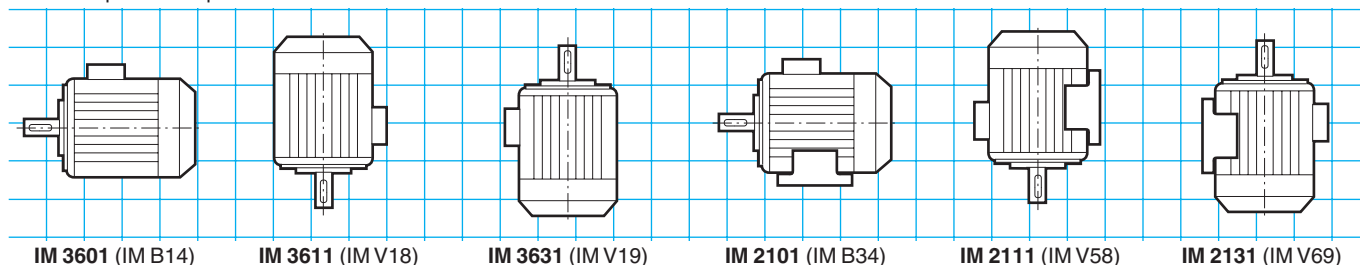
(FF) flange with plain holes mounted motors

- Possible position IM 3001 (IM B5) up to 225 frame size inclusive

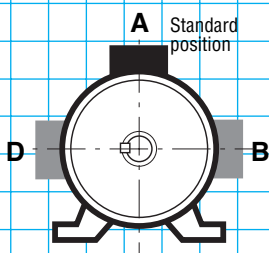


(FT) flange with tapped holes mounted motors

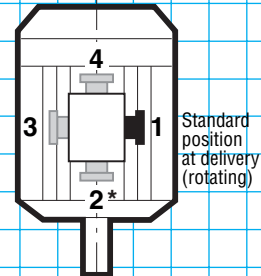
- Possible positions up to 132 frame size inclusive



Terminal box positions in relation to the motor shaft end



Cable gland positions in relation to the motor shaft end



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



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Adaptation possibilities

Leroy-Somer offers, for use with the LS totally enclosed three-phase asynchronous motors, many options which meet the needs of highly diverse applications. They are described below and in chapters relating to gearboxes and to speed variation.

For other variants or any specific adaptation, consult the technical specialists at Leroy-Somer.

The LS three-phase motors may be associated with:

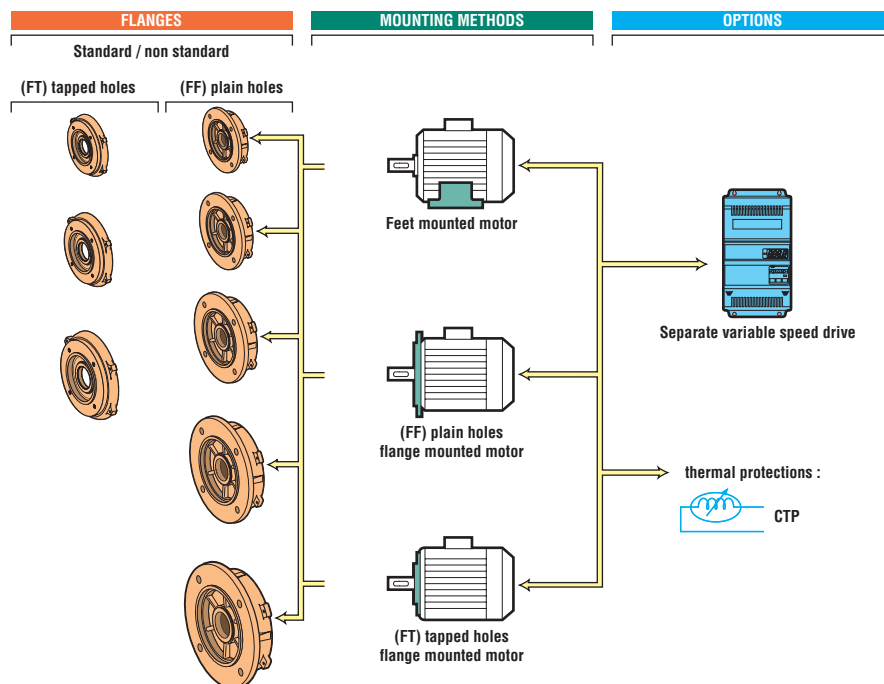
- gearboxes
- electronic variable speed drive (1)

The options (2):

- thermal protection
- non standard flanges

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

(2) Other options: consult us.



Designation / Codification

ATEX II 3D T 125°C	4P 1500 min⁻¹	LS	180	MT	18.5 kW	IM 1001 (IM B3)	400 V Δ	50 Hz	IP 55
Specific application	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:

LS three-phase asynchronous motor, 1500 min⁻¹, 18.5 kW IM 1001 (IM B3), 400 V Δ - ATEX zone 22

Designation

Code

4P LS 180 MT 18.5 kW

IM 1001 (IM B3) 400 V Δ - Zone 22 ZA4 18 302

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.

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Selection

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IP 55 - 50 Hz - Class F - Δ T 80 K - 230 V Δ / 400 V Y - S1
II - 3D - T 125 °C

2
poles
3000 min⁻¹

Type	Rated power P _N kW	Rated speed N _N min ⁻¹	Rated torque M _N Nm	Rated current I _{N (400V)} A	Power factor Cos Phi	Efficiency IEC 60034-2; 1996 η	Starting current/ Rated current Id / In	Starting torque/ Rated torque Md/Mn	Maximum torque/ Rated torque M _v /M _N	Moment of inertia J kg.m ²	Weight IM B3 kg	Noise LP db(A)
					4/4 3/4 2/4	4/4 3/4 2/4						
LS 56 M	0.09	2860	0.31	0.44	0.55 0.45 0.4	54 45 37	5.0	5.3	5.4	0.00015	4	54
LS 56 M	0.12	2820	0.41	0.5	0.6 0.55 0.45	58 54 45	4.6	4.0	4.1	0.00015	4	54
LS 63 M	0.18	2790	0.62	0.52	0.75 0.65 0.55	67 66 59	5.0	3.3	2.9	0.00019	5	57
LS 63 M	0.25	2800	0.85	0.71	0.75 0.65 0.55	68 67 59	5.4	3.2	2.9	0.00025	6	57
LS 71 L	0.37	2800	1.26	0.98	0.8 0.7 0.6	68 67 63	5.2	3.3	3.9	0.00035	6	62
LS 71 L	0.55	2800	1.88	1.32	0.8 0.7 0.55	75 75 71	6.0	3.2	3.1	0.00045	7	62
LS 71 L	0.75	2780	2.58	1.7	0.85 0.75 0.65	75 75 73	6.0	3.3	2.9	0.0006	8	62
LS 80 L	0.75	2840	2.52	1.64	0.87 0.8 0.68	76 76.5 74	5.9	2.4	2.2	0.0007	8	61
LS 80 L	1.1	2837	3.7	2.4	0.84 0.77 0.65	78 78.5 76.6	5.8	2.7	2.4	0.0009	10	61
LS 80 L	1.5	2859	5.01	3.2	0.83 0.76 0.62	80.3 80.4 78	7.0	3.2	2.8	0.0011	11	61
LS 90 S	1.5	2870	4.99	3.4	0.81 0.72 0.58	79.6 78.9 75.1	8.0	3.9	4.0	0.0014	12	64
LS 90 L	1.8	2865	6	3.6	0.86 0.8 0.69	83.1 83.4 81.7	8.0	3.6	3.6	0.0017	14	64
LS 90 L	2.2	2862	7.34	4.3	0.88 0.83 0.73	83.6 84 82.9	7.7	3.7	3.3	0.0021	16	64
LS 100 L	3	2868	9.99	6.3	0.81 0.73 0.59	83.9 83.8 80.8	7.5	3.8	3.9	0.0022	20	66
LS 112 M	4	2877	13.3	7.8	0.85 0.78 0.65	86 86.1 84.4	7.8	2.9	2.9	0.0029	24.4	66
LS 112 MG	5.5	2916	18.0	10.5	0.88 0.81 0.71	86.6 87.2 85.6	9.0	3.1	3.5	0.0076	33	66
LS 132 S	5.5	2916	18.0	10.5	0.88 0.81 0.71	86.6 87.2 85.6	9.0	3.1	3.5	0.0076	34.4	72
LS 132 S	7.5	2905	24.5	14.7	0.85 0.78 0.63	86.5 86.4 84.5	8.7	3.4	3.6	0.0088	39	72
LS 132 M	9	2910	29.5	17.3	0.85 0.8 0.71	88.1 88.4 87.5	8.6	2.5	3.5	0.016	49	72
LS 132 M	11	2944	35.7	20.7	0.86 0.81 0.69	89.4 89.4 87.7	7.5	2.7	3.4	0.018	54	72
LS 160 MP	11	2944	35.7	20.7	0.86 0.81 0.69	89.4 89.4 87.7	7.5	2.7	3.4	0.019	62	72
LS 160 MP	15	2935	48.8	28.4	0.85 0.79 0.71	90 90.1 85.1	8.1	3.0	3.5	0.023	72	72
LS 160 L	18.5	2934	60.2	33.7	0.87 0.83 0.75	91 91.2 90.4	8.0	3.0	3.3	0.044	88	72
LS 180 MT	22	2938	71.5	39.9	0.87 0.84 0.76	91.5 91.8 91.2	8.1	3.1	3.1	0.052	99	72
LS 200 LT	30	2946	97.2	52.1	0.9 0.87 0.82	92.4 92.7 92.1	8.6	2.7	3.4	0.089	154	73
LS 200 L	37	2950	120	65	0.89 0.87 0.82	92.9 93 92.2	7.4	2.6	3.0	0.12	180	73
LS 225 MT	45	2950	146	78	0.9 0.87 0.82	93.3 93.4 93.1	7.5	2.8	3.1	0.14	200	73
LS 250 MZ	55	2956	178	96	0.89 0.86 0.8	93.7 93.7 93.1	8.3	3.1	3.4	0.173	235	78
LS 280 SC	75	2968	241	129	0.9 0.87 0.82	94.4 94.4 93.8	8.5	2.6	3.4	0.39	330	79
LS 280 MC	90	2968	290	154	0.9 0.88 0.83	94.7 94.7 94.1	8.4	2.6	3.3	0.47	375	79
LS 315 SN	110	2964	354	184	0.92 0.9 0.86	95 95.2 94.7	8.6	2.7	3.4	0.55	445	80
LS 315 MP	132	2976	424	227	0.89 0.87 0.82	95 94.6 93.4	7.6	2.8	2.9	1.67	715	83
LS 315 MR	160	2976	513	271	0.9 0.88 0.84	95.1 94.8 93.6	7.6	2.9	3.1	1.97	820	83

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Selection

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IP 55 - 50 Hz - Class F - ΔT 80 K - 230 V Δ / 400 V Y - S1
II - 3D - T 125 °C

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)		IM 2101 (IM B34)	
Type	P _N kW	Code	Qty	Code	Qty	Code	Qty	Code	Qty	Code	Qty
LS 56 M	0.09	ZA2 09 107	5	ZA2 09 109	5	ZA2 09 1C9	5	ZA2 09 111	5	ZA2 09 1D1	5
LS 56 M	0.12	ZA2 12 107	5	ZA2 12 109	5	ZA2 12 1C9	5	ZA2 12 111	5	ZA2 21 1D1	5
LS 63 M	0.18	ZA2 18 113	5	ZA2 18 115	5	ZA2 18 1C5	5	ZA2 18 117	5	ZA2 18 1D7	5
LS 63 M ¹	0.18	ZA2 18 BA1	5	ZA2 18 BA2	5	ZA2 18 BA4	5	ZA2 18 BA3	5	ZA2 18 BA5	5
LS 63 M	0.25	ZA2 25 125	5	ZA2 25 127	5	ZA2 25 1C7	5	ZA2 25 129	5	ZA2 25 1D9	5
LS 63 M ¹	0.25	ZA2 25 BA1	5	ZA2 25 BA2	5	ZA2 25 BA4	5	ZA2 25 BA3	5	ZA2 25 BA5	5
LS 71 L	0.37	ZA2 37 119	5	ZA2 37 121	5	ZA2 37 1C1	5	ZA2 37 123	5	ZA2 37 1D3	5
LS 71 L	0.55	ZA2 55 119	5	ZA2 55 121	5	ZA2 55 1C1	5	ZA2 55 123	5	ZA2 55 1D3	5
LS 71 L	0.75	ZA2 75 138	5	ZA2 75 139	5	ZA2 75 1C9	5	ZA2 75 140	5	ZA2 75 1D0	5
LS 80 L	0.75	ZA2 75 133	5	ZA2 75 135	5	ZA2 75 1C5	5	ZA2 75 137	5	ZA2 75 1D7	5
LS 80 L	1.1	ZA2 11 233	5	ZA2 11 235	5	ZA2 11 2C5	5	ZA2 11 237	5	ZA2 11 2D7	5
LS 80 L	1.5	ZA0 00 001	5	ZA0 00 002	5	ZA0 00 003	5	ZA0 00 004	5	ZA0 00 005	5
LS 90 S	1.5	ZA2 15 233	5	ZA2 15 235	5	ZA2 15 2C3	5	ZA2 15 237	5	ZA2 15 2D7	5
LS 90 L	1.8	ZA2 18 213	5	ZA2 18 215	5	ZA2 18 2C5	5	ZA2 18 217	5	ZA2 18 2D7	5
LS 90 L	2.2	ZA2 22 219	5	ZA2 22 221	5	ZA2 22 2C1	5	ZA2 22 223	5	ZA2 22 2D3	5
LS 100 L	3	ZA2 30 201	5	ZA2 30 203	5	ZA2 30 2C3	5	ZA2 30 205	5	ZA2 30 2D5	5
LS 100 L	3.7	ZA2 37 201	5	ZA2 37 203	5	-	-	ZA2 37 205	5	-	-
LS 112 M	4	ZA2 40 201	5	ZA2 40 203	5	ZA2 40 2C3	5	ZA2 40 205	5	ZA2 40 2D5	5
LS 112 MG	5.5	ZA2 55 201	5	ZA2 55 203	5	ZA2 55 2C3	5	ZA2 55 205	5	ZA2 55 2D5	5
LS 132 S	5.5	ZA2 55 207	5	ZA2 55 209	5	ZA2 55 2C9	5	ZA2 55 211	5	ZA2 55 2D1	5
LS 132 S	7.5	ZA2 75 201	5	ZA2 75 203	5	ZA2 75 2C3	5	ZA2 75 205	5	ZA2 75 2D5	5
LS 132 M	9	ZA2 90 201	5	ZA2 90 203	5	ZA2 90 2C3	5	ZA2 90 205	5	ZA2 90 2D5	5
LS 132 M	11	ZA2 11 340	5	ZA2 11 342	5	ZA2 11 3C2	5	-	-	ZA2 11 3D3	5
LS 160 MP	11	ZA2 11 301	5	ZA2 11 303	2	ZA2 11 3C3	5				
LS 160 MP	15	ZA2 15 301	5	ZA2 15 303	2	ZA2 15 3C3	5				
LS 160 L	18.5	ZA2 18 301	3	ZA2 18 303	1	ZA2 18 3C3	3				
LS 180 MT	22	ZA2 22 301	3	ZA2 22 303	1	ZA2 22 3C3	3				
LS 200 LT	30	ZA2 30 301	1	ZA2 30 303	1	ZA2 30 3C3	1				
LS 200 L	37	ZA2 37 301	3	ZA2 37 303	2	ZA2 37 3C3	3				
LS 225 MT	45	ZA2 45 301	1	ZA2 45 303	1	ZA2 45 3C3	1				
LS 250 MZ	55	ZA2 55 301	2			ZA2 55 3C3	2				
LS 280 SC	75	ZA2 75 301	1			ZA2 75 3C3	1				
LS 280 MC	90		-								
LS 315 SP	110		-								
LS 315 MP	132		-								
LS 315 MR	160		-								

1. Flange or foot motor (or foot and flange) with shaft end different from the standard (D: 14 j6 - E: 30 mm).

Selection example:

Speed:	3000 min ⁻¹ - 2 poles
Power:	2.2 kW
Mounting and position:	IM 1001 (IM B3)
Mains supply voltage:	230/400 V
Application:	ATEX zone 22

Designation:

2P LS 90 L 2.2 kW IM 1001 (IM B3)
230/400 V

Code: ZA2 22 219

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



II - 3D - T 125 °C

4
poles
1500 min⁻¹

Type	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
	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 _h /M _N	J kg.m ²	IM B3 kg	LP db(A)
LS 56 M	0.06	1380	0.44	0.29	0.76	0.69	0.62	55	49.6	42.8	2.8	2.4	2.5	0.00025	4	47
LS 56 M	0.09	1400	0.61	0.39	0.6	0.52	0.42	55	49.6	42.8	3.2	2.8	2.8	0.00025	4	47
LS 63 M	0.12	1380	0.83	0.44	0.7	0.58	0.47	56	54	46.8	3.2	2.4	2.3	0.00035	4.8	49
LS 63 M	0.18	1390	1.24	0.64	0.65	0.55	0.44	62	58	51	3.7	2.6	2.6	0.00048	5	49
LS 71 M	0.25	1425	1.68	0.8	0.65	0.55	0.44	69	67	60	4.6	2.7	2.9	0.00068	6.4	49
LS 71 M	0.37	1420	2.49	1.06	0.7	0.59	0.47	72	72	66	4.9	2.4	2.8	0.00085	7.3	49
LS 71 L	0.55	1400	3.75	1.62	0.7	0.62	0.49	70	70	65	4.8	2.3	2.5	0.0011	8.3	49
LS 80 L	0.55	1410	3.72	1.42	0.76	0.68	0.55	73.4	69.3	62	4.5	2.0	2.3	0.0013	8.2	47
LS 80 L	0.75	1400	5.12	2.01	0.77	0.71	0.59	70	70	66	4.5	2.0	2.2	0.0018	9.3	47
LS 80 L	0.9	1425	6.03	2.44	0.73	0.67	0.54	73	73	70	5.8	3.0	3.0	0.0024	10.9	47
LS 90 L	1.1	1429	7.35	2.5	0.84	0.77	0.64	76.8	78.4	77.1	5.0	1.6	2.0	0.0026	11.5	48
LS 90 S	1.1	1429	7.35	2.5	0.84	0.77	0.64	76.8	78.4	77.1	4.8	1.6	2.0	0.0026	11.5	48
LS 90 L	1.5	1428	10	3.4	0.82	0.74	0.6	78.5	79.4	77.5	5.3	1.8	2.3	0.0032	13.5	48
LS 90 L	1.8	1438	12	4	0.82	0.75	0.61	80.1	80.8	79	6.0	2.1	3.2	0.0037	15.2	48
LS 100 L	2.2	1436	14.6	4.8	0.81	0.73	0.59	81	81.5	79.8	5.9	2.1	2.5	0.0043	20	48
LS 100 L	3	1437	19.9	6.5	0.81	0.72	0.59	82.6	82.6	80.8	6.0	2.5	2.8	0.0055	22.5	48
LS 112 M	4	1438	26.6	8.3	0.83	0.76	0.57	84.2	84.2	83.4	7.1	2.5	3.0	0.0067	24.9	49
LS 132 S	5.5	1447	36.7	11.1	0.83	0.79	0.67	85.7	86.4	85.8	6.3	2.4	2.8	0.014	36.5	49
LS 132 M	7.5	1451	49.4	15.2	0.82	0.74	0.61	87	86.4	84.9	7.0	2.4	2.9	0.019	54.7	62
LS 132 M	9	1455	59.1	18.1	0.82	0.74	0.62	87.7	87.6	86.2	6.9	2.2	3.1	0.023	59.9	62
LS 160 MP	11	1454	72.2	21	0.86	0.79	0.67	88.4	88.6	87.4	7.7	2.3	3.2	0.03	70	62
LS 160 LR	15	1453	98.6	29	0.84	0.78	0.69	89.4	89.8	88.4	7.5	2.9	3.6	0.036	86	62
LS 180 MT	18.5	1456	121	35	0.84	0.79	0.67	90.3	90.8	90.3	7.6	2.7	3.2	0.085	100	64
LS 180 LR	22	1456	144	42	0.84	0.79	0.68	90.7	91.2	90.9	7.9	3.0	3.3	0.096	112	64
LS 200 LT	30	1460	196	56	0.84	0.8	0.69	91.5	92	91.5	6.6	2.9	2.9	0.151	165	64
LS 225 ST	37	1468	241	69	0.84	0.8	0.7	92.5	93.1	92.9	6.3	2.7	2.6	0.24	205	64
LS 225 MR	45	1468	293	84	0.84	0.8	0.7	92.8	93.3	93	6.3	2.7	2.6	0.29	235	64
LS 250 ME	55	1478	355	102	0.84	0.8	0.71	93.6	93.8	93.2	7.0	2.7	2.8	0.63	320	66
LS 280 SC	75	1478	485	138	0.84	0.8	0.71	94.2	94.4	93.8	7.2	2.8	2.9	0.83	380	69
LS 280 MD	90	1478	581	165	0.84	0.8	0.71	94.4	94.5	93.8	7.6	3.0	3.0	1.03	450	69
LS 315 SN	110	1477	711	201	0.84	0.79	0.7	94.4	94.6	94.2	7.6	3.0	3.2	1.04	470	76
LS 315 MP	132	1484	849	238	0.85	0.82	0.74	95	95	94.1	7.6	2.9	3.0	2.79	750	70
LS 315 MR	160	1484	1030	287	0.85	0.82	0.74	95	95	94.1	7.7	2.9	3.0	3.27	845	70

LS



Atmospheres containing explosive dust totally enclosed three-phase asynchronous motors

Selection

CATEGORY 3
ZONE 22
Non conductive dust

IP 55 - 50 Hz - Class F - Δ T 80 K - 230 V Δ / 400 V Y - S1
II - 3D - T 125 °C

4
poles
1500 min⁻¹

A

	Rated power at 50 Hz	IM 1001 (IM B3)		IM 3001 (IM B5)		IM 2001 (IM B35)		IM 3601 (IM B14)		IM 2101 (IM B34)	
Type	P _N kW	Code	Qty	Code	Qty	Code	Qty	Code	Qty	Code	Qty
LS 56 M	0.09	ZA4 09 113	5	ZA4 09 115	5	ZA4 09 1A5	5	ZA4 09 117	5	ZA4 09 1B7	5
LS 63 M	0.12	ZA4 12 119	5	ZA4 12 121	5	ZA4 12 1B1	5	ZA4 12 123	5	ZA4 12 1B3	5
LS 63 M ¹	0.12	ZA4 12 BA1	5	ZA4 12 BA2	5	ZA4 12 BA4	5	ZA4 12 BA3	5	ZA4 12 BA5	5
LS 63 M	0.18	ZA4 18 107	5	ZA4 18 109	5	ZA4 18 1A9	5	ZA4 18 111	5	ZA4 18 1B1	5
LS 63 M ¹	0.18	ZA4 18 BA1	5	ZA4 18 BA2	5	ZA4 18 BA4	5	ZA4 18 BA3	5	ZA4 18 BA5	5
LS 71 M	0.18		-		-		-		-		-
LS 71 M	0.25	ZA4 25 119	5	ZA4 25 121	5	ZA4 25 1A1	5	ZA4 25 123	5	ZA4 25 1B1	5
LS 71 M	0.37	ZA4 37 119	5	ZA4 37 121	5	ZA4 37 1A1	5	ZA4 37 123	5	ZA4 37 1B3	5
LS 71 L	0.55	ZA4 55 132	5	ZA4 55 133	5	ZA4 55 1A1	5	ZA4 55 134	5	ZA4 55 1B1	5
LS 80 L	0.55	ZA4 55 113	5	ZA4 55 115	5	ZA4 55 1A5	5	ZA4 55 117	5	ZA4 55 1B7	5
LS 80 L	0.75	ZA4 75 119	5	ZA4 75 121	5	ZA4 75 1A1	5	ZA4 75 123	5	ZA4 75 1B3	5
LS 80 L	0.9	ZA4 90 107	5	ZA4 90 109	5	ZA4 90 1A9	2	ZA4 90 111	5	ZA4 90 1B1	5
LS 90 S	1.1	ZA4 11 219	5	ZA4 11 221	5	ZA4 11 2A1	5	ZA4 11 223	5	ZA4 11 2B3	5
LS 90 L	1.5	ZA4 15 207	5	ZA4 15 209	5	ZA4 15 2A9	5	ZA4 15 211	5	ZA4 15 2B1	5
LS 90 L	1.8	ZA4 18 207	5	ZA4 18 209	5	ZA4 18 2A9	5	ZA4 18 211	5	ZA4 18 2B1	5
LS 100 L	2.2	ZA4 22 207	5	ZA4 22 209	5	ZA4 22 2A9	5	ZA4 22 211	5	ZA4 22 2B1	5
LS 100 L	3	ZA4 30 207	5	ZA4 30 209	5	ZA4 30 2A9	5	ZA4 30 211	5	ZA4 30 2B1	5
LS 112 M	4	ZA4 40 201	5	ZA4 40 203	5	ZA4 40 2A3	5	ZA4 40 205	5	ZA4 40 2B5	5
LS 132 S	5.5	ZA4 55 207	5	ZA4 55 209	5	ZA4 55 2A9	5	ZA4 55 211	5	ZA4 55 2B1	5
LS 132 M	7.5	ZA4 75 207	5	ZA4 75 209	5	ZA4 75 2A9	5	ZA4 75 211	5	ZA4 75 2B1	5
LS 132 M	9	ZA4 90 201	5	ZA4 90 203	5	ZA4 90 2A3	5	ZA4 90 205	5	ZA4 90 2B6	5
LS 160 MP	11	ZA4 11 301	5	ZA4 11 303	2	ZA4 11 3A3	2				
LS 160 LR	15	ZA4 15 301	5	ZA4 15 303	2	ZA4 15 3A3	2				
LS 180 MT	18.5	ZA4 18 301	3	ZA4 18 303	2	ZA4 18 3A3	3				
LS 180 LR	22	ZA4 22 301	3	ZA4 22 303	2	ZA4 22 3A3	3				
LS 200 LT	30	ZA4 30 301	3	ZA4 30 303	2	ZA4 30 3A3	3				
LS 225 ST	37	ZA4 37 301	3	ZA4 37 303	1	ZA4 37 3A3	3				
LS 225 MR	45	ZA4 45 301	3	ZA4 45 303	1	ZA4 45 3A3	3				
LS 250 ME	55	ZA4 55 301	2			ZA4 55 3A3	2				
LS 280 SC	75	ZA4 75 301	1			ZA4 75 3A3	1				
LS 280 MD	90		-				-				
LS 315 SP	110		-				-				
LS 315 MP	132		-				-				
LS 315 MR	160		-				-				

1. Flange or foot motor (or foot and flange) with shaft end different from the standard (D: 14 j6 - E: 30 mm).

Selection example:

Speed:	1500 min ⁻¹ - 4 poles
Power:	55 kW
Mounting and position:	IM 1001 (IM B3)
Mains supply voltage:	230/400 V
Application:	ATEX zone 22

Designation:

4P LS 250 ME 55 kW IM 1001 (IM B3)
230/400 V

Code: ZA4 55 301

LS



Atmospheres containing explosive dust totally enclosed three-phase asynchronous motors

CATEGORY 3
ZONE 22
Non conductive dust

Selection

IP 55 - 50 Hz - Class F - Δ T 80 K - 230 V Δ / 400 V Y or 400 V Δ - S1
II - 3D - T 125 °C



6
poles
1000 min⁻¹

	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			Id / In	Md/Mn	M _M /M _N	J kg.m2	IM B3 kg	LP db(A)
					4/4	3/4	2/4	4/4	3/4	2/4						
LS 56 M	0.045	860	0.5	0.29	0.66	0.59	0.52	34	31	25	2	1.7	1.7	0.00025	4	54
LS 56 M	0.06	850	0.68	0.39	0.67	0.6	0.53	33	31	25	2	1.7	1.7	0.00025	4	54
LS 63 M	0.09	860	1.02	0.46	0.8	0.7	0.63	35	32	26	2.1	1.6	1.6	0.0006	5.5	48
LS 71 M	0.12	950	1.2	0.75	0.51	0.44	0.38	46	40	32	3	2.4	3.0	0.0007	6.5	52
LS 71 M	0.18	945	1.8	0.95	0.52	0.46	0.38	53	49	41	3.3	2.3	2.9	0.0011	7.6	52
LS 71 L	0.25	915	2.6	1.15	0.6	0.52	0.43	52	50	42	3.1	2.0	2.2	0.0013	7.9	52
LS 80 L	0.25	955	2.5	0.85	0.67	0.64	0.48	63.1	63	56	3.9	1.6	1.8	0.0024	8.4	41
LS 80 L	0.37	950	3.72	1.1	0.72	0.67	0.57	66	61	59	4.3	1.7	2.2	0.0032	9.7	41
LS 80 L	0.55	950	5.53	1.8	0.64	0.6	0.47	68	63	55	4.9	2.1	2.6	0.0042	11	41
LS 90 L	0.75	930	7.7	2.1	0.77	0.66	0.54	68.5	95	60	4.7	2.4	2.6	0.0039	13.5	51
LS 90 S	0.75	915	11.5	3	0.76	0.67	0.55	70	70	66	4.5	2.4	2.5	0.0048	15.2	51
LS 90 L	1.1	905	15.8	4.2	0.74	0.62	0.52	69	69	65	5.6	2.5	2.7	0.0058	20	50
LS 100 L	1.5	905	23.2	5.8	0.76	0.66	0.53	72	72	68	6	2.8	2.7	0.0087	24.2	51
LS 112 M	2.2	957	30.3	6.8	0.78	0.71	0.59	81.1	78	75	6	2.0	2.6	0.018	38.3	55
LS 132 M	4	961	39.7	9.3	0.75	0.66	0.56	83.6	83	78	5.9	2.5	2.9	0.034	53.3	55
LS 132 M	5.5	960	54.7	13.3	0.71	0.65	0.52	84.1	83.5	80	5.5	2.5	2.8	0.039	59.4	55
LS 160 M	7.5	969	73.9	16.3	0.79	0.74	0.63	85.2	84.8	82.6	4.7	1.7	2.5	0.089	77	56
LS 160 L	11	968	109	23.4	0.78	0.71	0.64	86.3	86.5	85	4.6	1.8	2.6	0.105	85	56
LS 180 LR	15	968	148	31.9	0.78	0.71	0.61	87.1	87.3	86.1	5.4	1.8	2.6	0.139	110	60
LS 200 LT	18.5	970	182	37	0.81	0.76	0.65	89	89.3	88.1	6.4	2.4	2.8	0.236	160	62
LS 200 L	22	972	216	43.6	0.81	0.76	0.65	89.9	90.1	89	6	2.0	2.7	0.295	190	62
LS 225 MR	30	968	296	59.5	0.81	0.79	0.72	89.9	90.3	89.2	6	2.2	2.5	0.39	235	63
LS 250 ME	37	978	361	71.1	0.81	0.79	0.69	92.7	93.2	92.9	6.2	2.3	2.5	0.85	305	65
LS 280 SC	45	978	439	86.5	0.81	0.79	0.69	92.7	93.2	92.9	6.2	2.3	2.5	0.99	340	65
LS 280 MC	55	978	537	106	0.81	0.79	0.72	92.6	93.3	93.1	6	2.4	2.5	1.19	385	65
LS 315 SN	75	983	729	142	0.82	0.78	0.67	93.2	93.3	92.5	6.5	2.5	2.7	1.3	438	65
LS 315 MP	90	980	877	164	0.85	0.83	0.76	93.1	93.1	92.4	7.2	2.4	2.9	3.74	760	74
LS 315 MR	110	980	1072	200	0.85	0.83	0.76	93.5	93.5	93	7.2	2.4	2.9	4.36	850	74

LS



Atmospheres containing explosive dust totally enclosed three-phase asynchronous motors

Selection

CATEGORY 3
ZONE 22
Non conductive dust

IP 55 - 50 Hz - Class F - Δ T 80 K - 230 V Δ / 400 V Y or 400 V Δ - S1
II - 3D - T 125 °C

6
poles
1000 min⁻¹

A

Type	Rated power at 50 Hz P_N kW	IM 1001 (IM B3)		IM 3001 (IM B5)		IM 2001 (IM B35)		IM 3601 (IM B14)		IM 2101 (IM B34)	
		Code	Qty	Code	Qty	Code	Qty	Code	Qty	Code	Qty
LS 63 M	0.09		-		-		-		-		-
LS 71 L	0.12		-		-		-		-		-
LS 71 M	0.12		-		-		-		-		-
LS 71 L	0.18		-		-		-		-		-
LS 71 M	0.18		-		-		-		-		-
LS 71 L	0.25		-		-		-		-		-
LS 80 L	0.25		-		-		-		-		-
LS 80 L	0.37		-		-		-		-		-
LS 80 L	0.55		-		-		-		-		-
LS 90 L	0.75		-		-		-		-		-
LS 90 S	0.75		-		-		-		-		-
LS 90 L	1.1		-		-		-		-		-
LS 100 L	1.5		-		-		-		-		-
LS 112 M	2.2		-		-		-		-		-
LS 112 MG	2.2		-		-		-		-		-
LS 132 S	3		-		-		-		-		-
LS 132 M	4		-		-		-		-		-
LS 132 M	5.5		-		-		-		-		-
LS 160 M	7.5		-		-		-		-		-
LS 160 L	11		-		-		-		-		-
LS 180 LR	15		-		-		-		-		-
LS 200 LT	18.5		-		-		-		-		-
LS 200 L	22		-		-		-		-		-
LS 225 MR	30		-		-		-		-		-
LS 250 MP	37		-		-		-		-		-
LS 280 SP	45		-		-		-		-		-
LS 280 MP	55		-		-		-		-		-
LS 315 SP	75		-		-		-		-		-
LS 315 MP	90		-		-		-		-		-
LS 315 MR	110		-		-		-		-		-

LS



Atmospheres containing explosive dust totally enclosed three-phase asynchronous motors

Selection

CATEGORY 3
ZONE 22
Non conductive dust

IP 55 - 50 Hz - Class F - Δ T 80 K - 230 V Δ / 400 V Y or 400 V Δ - S1
II - 3D - T 125 °C

8
poles
750 min⁻¹

	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			Id / In	Md/Mn	M _M /M _N	J kg.m2	IM B3 kg	LP db(A)
LS 71 L	0.09	690	1.3	0.5	0.55	0.45	0.4	44	42	36	2.8	1.3	1.5	0.0013	8	40
LS 71 L	0.12	650	1.8	0.72	0.55	0.45	0.4	44	42	36	2.1	1.3	1.4	0.0013	8	40
LS 80 L	0.18	705	2.4	0.79	0.63	0.54	0.45	52	48	43	2.9	1.5	1.9	0.0031	9.7	41
LS 80 L	0.25	700	3.4	0.98	0.68	0.6	0.51	54	52	45	2.8	1.7	1.9	0.0041	11.3	41
LS 90 L	0.37	685	5.2	1.2	0.72	0.63	0.52	62	62	56	3.8	1.7	1.8	0.0038	13.5	43
LS 90 S	0.37	685	5.2	1.2	0.72	0.63	0.52	62	62	56	3.8	1.7	1.8	0.0038	13.5	43
LS 90 L	0.55	670	7.8	1.7	0.72	0.61	0.52	63.5	62	59	3.5	1.7	1.7	0.0047	15.2	43
LS 100 L	0.75	670	10.7	2.4	0.71	0.58	0.47	63.5	61.5	55	3.5	1.8	2.2	0.0047	18	43
LS 100 L	1.1	670	15.7	3.7	0.68	0.6	0.49	63	62.5	58	3.7	2.0	2.2	0.0068	21.8	43
LS 112 MG	1.5	710	20.2	4.7	0.64	0.55	0.43	72	69	62.5	3.8	2.0	2.1	0.015	24	49
LS 132 SM	2.2	713	29.5	6.1	0.68	0.56	0.45	77.1	77.5	71	4	1.7	2.0	0.0253	45.6	54
LS 132 M	3	712	40.2	8	0.65	0.56	0.45	79.8	82.9	79	4.3	1.9	2.2	0.033	53.9	54
LS 160 M	4	718	53.2	11	0.63	0.55	0.43	83.3	83.4	81.3	3.9	1.7	2.3	0.068	84	66
LS 160 M	5.5	716	73.4	15.1	0.63	0.55	0.43	83.3	83.5	81.8	3.9	1.7	2.3	0.071	89	66
LS 160 L	7.5	714	100	20.6	0.63	0.55	0.43	83.4	84	82.6	3.9	1.9	2.3	0.09	101	66
LS 180 L	11	720	146	25.6	0.72	0.68	0.57	86	86.3	84.2	3.8	1.4	1.9	0.205	140	68
LS 200 L	15	725	198	32.9	0.75	0.7	0.57	87.7	87.9	86.3	4.4	1.6	2.1	0.27	185	65
LS 225 ST	18.5	725	244	42.4	0.72	0.66	0.54	87.5	87.7	86.2	4.2	1.6	2.1	0.33	210	65
LS 225 MR	22	725	290	51.9	0.7	0.63	0.51	87.4	87.2	85.1	4.4	1.9	2.3	0.4	240	65
LS 250 ME	30	730	392	60.3	0.79	0.73	0.63	90.9	91.2	90.1	5.8	1.9	2.7	0.99	330	65
LS 280 SC	37	730	484	74.3	0.79	0.73	0.63	91	91.4	90.7	5.6	1.8	2.6	1.19	370	65
LS 280 MC	45	728	590	91.4	0.78	0.73	0.63	91.1	91.7	91.1	5.4	1.8	2.6	1.39	430	65
LS 315 SP	55	738	712	105	0.81	0.78	0.71	93.2	93.2	92.2	5.4	1.8	2.4	3.1	660	74
LS 315 MR	75	738	971	143	0.81	0.78	0.71	93.6	93.8	93.1	5.4	1.8	2.4	4.38	815	74

LS



Atmospheres containing explosive dust totally enclosed three-phase asynchronous motors

Selection

CATEGORY 3
ZONE 22
Non conductive dust

IP 55 - 50 Hz - Class F - Δ T 80 K - 230 V Δ / 400 V Y or 400 V Δ - S1
II - 3D - T 125 °C

8
poles
750 min⁻¹

A

Type	Rated power at 50 Hz P_N kW	IM 1001 (IM B3)		IM 3001 (IM B5)		IM 2001 (IM B35)		IM 3601 (IM B14)		IM 2101 (IM B34)	
		Code	Qty	Code	Qty	Code	Qty	Code	Qty	Code	Qty
LS 71 L	0.09		-		-		-		-		-
LS 71 L	0.12		-		-		-		-		-
LS 71 M	0.12		-		-		-		-		-
LS 80 L	0.18		-		-		-		-		-
LS 80 L	0.25		-		-		-		-		-
LS 90 S	0.37		-		-		-		-		-
LS 90 L	0.55		-		-		-		-		-
LS 100 L	0.75		-		-		-		-		-
LS 100 L	1.1		-		-		-		-		-
LS 112 MG	1.5		-		-		-		-		-
LS 132 SM	2.2		-		-		-		-		-
LS 132 M	3		-		-		-		-		-
LS 160 M	4		-		-		-		-		-
LS 160 M	5.5		-		-		-		-		-
LS 160 L	7.5		-		-		-		-		-
LS 180 L	11		-		-		-		-		-
LS 200 L	15		-		-		-		-		-
LS 225 ST	18.5		-		-		-		-		-
LS 225 MR	22		-		-		-		-		-
LS 250 ME	30		-		-		-		-		-
LS 280 SC	37		-		-		-		-		-
LS 280 MD	45		-		-		-		-		-
LS 315 SP	55		-		-		-		-		-
LS 315 MR	75		-		-		-		-		-

LS



Atmospheres containing explosive dust totally enclosed three-phase asynchronous motors

Selection

CATEGORY 3
ZONE 22
Non conductive dust

IP 55 - 50 Hz - Class F - Δ T 80 K - 400 V Δ - S1
II - 3D - T 125 °C

2
poles
3000 min⁻¹

	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	N _N	M _N	I _{N (400V)}	Cos Phi			η			Id / In	Md/Mn	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.m2	kg	db(A)
LS 56 M	0.09	2860	0.31	0.44	0.55	0.45	0.4	54	45	37	5.0	5.3	5.4	0.00015	4	54
LS 56 M	0.12	2820	0.41	0.5	0.6	0.55	0.45	58	54	45	4.6	4.0	4.1	0.00015	4	54
LS 63 M	0.18	2790	0.62	0.52	0.75	0.65	0.55	67	66	59	5.0	3.3	2.9	0.00019	5	57
LS 63 M	0.25	2800	0.85	0.71	0.75	0.65	0.55	68	67	59	5.4	3.2	2.9	0.00025	6	57
LS 71 L	0.37	2800	1.26	0.98	0.8	0.7	0.6	68	67	63	5.2	3.3	3.9	0.00035	6	62
LS 71 L	0.55	2800	1.88	1.32	0.8	0.7	0.55	75	75	71	6.0	3.2	3.1	0.00045	7	62
LS 71 L	0.75	2780	2.58	1.7	0.85	0.75	0.65	75	75	73	6.0	3.3	2.9	0.0006	8	62
LS 80 L	0.75	2840	2.52	1.64	0.87	0.8	0.68	76	76.5	74	5.9	2.4	2.2	0.0007	8	61
LS 80 L	1.1	2837	3.7	2.4	0.84	0.77	0.65	78	78.5	76.6	5.8	2.7	2.4	0.0009	10	61
LS 80 L	1.5	2859	5.01	3.2	0.83	0.76	0.62	80.3	80.4	78	7.0	3.2	2.8	0.0011	11	61
LS 90 S	1.5	2870	4.99	3.4	0.81	0.72	0.58	79.6	78.9	75.1	8.0	3.9	4.0	0.0014	12	64
LS 90 L	1.8	2865	6	3.6	0.86	0.8	0.69	83.1	83.4	81.7	8.0	3.6	3.6	0.0017	14	64
LS 90 L	2.2	2862	7.34	4.3	0.88	0.83	0.73	83.6	84	82.9	7.7	3.7	3.3	0.0021	16	64
LS 100 L	3	2868	9.99	6.3	0.81	0.73	0.59	83.9	83.8	80.8	7.5	3.8	3.9	0.0022	20	66
LS 112 M	4	2877	13.3	7.8	0.85	0.78	0.65	86	86.1	84.4	7.8	2.9	2.9	0.0029	24.4	66
LS 112 MG	5.5	2916	18.0	10.5	0.88	0.81	0.71	86.6	87.2	85.6	9.0	3.1	3.5	0.0076	33	66
LS 132 S	5.5	2916	18.0	10.5	0.88	0.81	0.71	86.6	87.2	85.6	9.0	3.1	3.5	0.0076	34.4	72
LS 132 S	7.5	2905	24.5	14.7	0.85	0.78	0.63	86.5	86.4	84.5	8.7	3.4	3.6	0.0088	39	72
LS 132 M	9	2910	29.5	17.3	0.85	0.8	0.71	88.1	88.4	87.5	8.6	2.5	3.5	0.016	49	72
LS 132 M	11	2944	35.7	20.7	0.86	0.81	0.69	89.4	89.4	87.7	7.5	2.7	3.4	0.018	54	72
LS 160 MP	11	2944	35.7	20.7	0.86	0.81	0.69	89.4	89.4	87.7	7.5	2.7	3.4	0.019	62	72
LS 160 MP	15	2935	48.8	28.4	0.85	0.79	0.71	90	90.1	85.1	8.1	3.0	3.5	0.023	72	72
LS 160 L	18.5	2934	60.2	33.7	0.87	0.83	0.75	91	91.2	90.4	8.0	3.0	3.3	0.044	88	72
LS 180 MT	22	2938	71.5	39.9	0.87	0.84	0.76	91.5	91.8	91.2	8.1	3.1	3.1	0.052	99	72
LS 200 LT	30	2946	97.2	52.1	0.9	0.87	0.82	92.4	92.7	92.1	8.6	2.7	3.4	0.089	154	73
LS 200 L	37	2950	120	65	0.89	0.87	0.82	92.9	93	92.2	7.4	2.6	3.0	0.12	180	73
LS 225 MT	45	2950	146	78	0.9	0.87	0.82	93.3	93.4	93.1	7.5	2.8	3.1	0.14	200	73
LS 250 MZ	55	2956	178	96	0.89	0.86	0.8	93.7	93.7	93.1	8.3	3.1	3.4	0.173	235	78
LS 280 SC	75	2968	241	129	0.9	0.87	0.82	94.4	94.4	93.8	8.5	2.6	3.4	0.39	330	79
LS 280 MC	90	2968	290	154	0.9	0.88	0.83	94.7	94.7	94.1	8.4	2.6	3.3	0.47	375	79
LS 315 SN	110	2964	354	184	0.92	0.9	0.86	95	95.2	94.7	8.6	2.7	3.4	0.55	445	80
LS 315 MP	132	2976	424	227	0.89	0.87	0.82	95	94.6	93.4	7.6	2.8	2.9	1.67	715	83
LS 315 MR	160	2976	513	271	0.9	0.88	0.84	95.1	94.8	93.6	7.6	2.9	3.1	1.97	820	83

LS



Atmospheres containing explosive dust totally enclosed three-phase asynchronous motors

Selection

CATEGORY 3
ZONE 22
Non conductive dust

A

2
poles
3000 min⁻¹

IP 55 - 50 Hz - Class F - Δ T 80 K - 400 V Δ - S1
II - 3D - T 125 °C

	Rated power at 50 Hz	IM 1001 (IM B3)		IM 3001 (IM B5)		IM 2001 (IM B35)		IM 3601 (IM B14)		IM 2101 (IM B34)	
Type	P _N kW	Code	Qty	Code	Qty	Code	Qty	Code	Qty	Code	Qty
LS 100 L	3	ZA2 30 202	5	ZA2 30 204	2	ZA2 30 2E4	5	ZA2 30 206	5	ZA2 30 2F6	5
LS 112 M	4	ZA2 40 202	5	ZA2 40 204	2	ZA2 40 2A4	2	ZA2 40 206	5	ZA2 40 2A6	5
LS 112 MG	5.5	ZA2 55 202	5	ZA2 55 204	2	ZA2 55 2E4	2	ZA2 55 206	5	ZA2 55 2F6	5
LS 132 S	5.5	ZA2 55 208	5	ZA2 55 210	2	ZA2 55 2B0	2	ZA2 55 212	2	ZA2 55 2B2	2
LS 132 S	7.5	ZA2 75 202	5	ZA2 75 204	5	ZA2 75 2E4	2	ZA2 75 206	2	ZA2 75 2F6	2
LS 132 M	9	ZA2 90 202	2	ZA2 90 204	2	ZA2 90 2E4	2	ZA2 90 206	2	ZA2 90 2F6	2
LS 132 M	11	ZA2 11 344	2	ZA2 11 345	2	ZA2 11 3E5	2	ZA2 11 346	2	ZA2 11 3E6	2
LS 160 MP	11	ZA2 11 302	5	ZA2 11 304	1	ZA2 11 3E4	2				
LS 160 MP	15	ZA2 15 302	5	ZA2 15 304	1	ZA2 15 3E4	2				
LS 160 L	18.5	ZA2 18 302	3	ZA2 18 304	2	ZA2 18 3E4	2				
LS 180 MT	22	ZA2 22 302	3	ZA2 22 304	2	ZA2 22 3E4	3				
LS 200 LT	30	ZA2 30 302	3	ZA2 30 304	2	ZA2 30 3E4	3				
LS 200 L	37	ZA2 37 302	3	ZA2 37 304	2	ZA2 37 3E4	3				
LS 225 MT	45	ZA2 45 302	2	ZA2 45 304	2	ZA2 45 3E4	2				
LS 250 MZ	55	ZA2 55 302	2	ZA2 55 304	2	ZA2 55 3E4	2				
LS 280 SC	75	ZA2 75 302	1			ZA2 75 3E4	1				
LS 280 MC	90	ZA2 90 302	1			ZA0 00 194	1				
LS 315 SP	110	ZA2 11 402	1			ZA0 00 195	1				
LS 315 MP	132	ZA2 13 402	1			ZA0 00 196	1				
LS 315 MR	160		-				-				

Selection example:

Speed:	3000 min ⁻¹ - 2 poles
Power:	30 kW
Mounting and position:	IM 2001 (IM B35)
Mains supply voltage:	400 V
Application:	ATEX zone 22

Designation:

2P LS 200 LT 30 kW IM 2001 (IM B35)
400 V

Code: ZA2 30 3E4

LS



Atmospheres containing explosive dust totally enclosed three-phase asynchronous motors

Selection

CATEGORY 3
ZONE 22
Non conductive dust

IP 55 - 50 Hz - Class F - Δ T 80 K - 400 V Δ - S1
II - 3D - T 125 °C

4
poles
1500 min⁻¹

Type	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
	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 _h /M _N	J kg.m ²	IM B3 kg	LP db(A)
LS 56 M	0.06	1380	0.44	0.29	0.76	0.69	0.62	55	49.6	42.8	2.8	2.4	2.5	0.00025	4	47
LS 56 M	0.09	1400	0.61	0.39	0.6	0.52	0.42	55	49.6	42.8	3.2	2.8	2.8	0.00025	4	47
LS 63 M	0.12	1380	0.83	0.44	0.7	0.58	0.47	56	54	46.8	3.2	2.4	2.3	0.00035	4.8	49
LS 63 M	0.18	1390	1.24	0.64	0.65	0.55	0.44	62	58	51	3.7	2.6	2.6	0.00048	5	49
LS 71 M	0.25	1425	1.68	0.8	0.65	0.55	0.44	69	67	60	4.6	2.7	2.9	0.00068	6.4	49
LS 71 M	0.37	1420	2.49	1.06	0.7	0.59	0.47	72	72	66	4.9	2.4	2.8	0.00085	7.3	49
LS 71 L	0.55	1400	3.75	1.62	0.7	0.62	0.49	70	70	65	4.8	2.3	2.5	0.0011	8.3	49
LS 80 L	0.55	1410	3.72	1.42	0.76	0.68	0.55	73.4	69.3	62	4.5	2.0	2.3	0.0013	8.2	47
LS 80 L	0.75	1400	5.12	2.01	0.77	0.71	0.59	70	70	66	4.5	2.0	2.2	0.0018	9.3	47
LS 80 L	0.9	1425	6.03	2.44	0.73	0.67	0.54	73	73	70	5.8	3.0	3.0	0.0024	10.9	47
LS 90 L	1.1	1429	7.35	2.5	0.84	0.77	0.64	76.8	78.4	77.1	5.0	1.6	2.0	0.0026	11.5	48
LS 90 S	1.1	1429	7.35	2.5	0.84	0.77	0.64	76.8	78.4	77.1	4.8	1.6	2.0	0.0026	11.5	48
LS 90 L	1.5	1428	10	3.4	0.82	0.74	0.6	78.5	79.4	77.5	5.3	1.8	2.3	0.0032	13.5	48
LS 90 L	1.8	1438	12	4	0.82	0.75	0.61	80.1	80.8	79	6.0	2.1	3.2	0.0037	15.2	48
LS 100 L	2.2	1436	14.6	4.8	0.81	0.73	0.59	81	81.5	79.8	5.9	2.1	2.5	0.0043	20	48
LS 100 L	3	1437	19.9	6.5	0.81	0.72	0.59	82.6	82.6	80.8	6.0	2.5	2.8	0.0055	22.5	48
LS 112 M	4	1438	26.6	8.3	0.83	0.76	0.57	84.2	84.2	83.4	7.1	2.5	3.0	0.0067	24.9	49
LS 132 S	5.5	1447	36.7	11.1	0.83	0.79	0.67	85.7	86.4	85.8	6.3	2.4	2.8	0.014	36.5	49
LS 132 M	7.5	1451	49.4	15.2	0.82	0.74	0.61	87	86.4	84.9	7.0	2.4	2.9	0.019	54.7	62
LS 132 M	9	1455	59.1	18.1	0.82	0.74	0.62	87.7	87.6	86.2	6.9	2.2	3.1	0.023	59.9	62
LS 160 MP	11	1454	72.2	21	0.86	0.79	0.67	88.4	88.6	87.4	7.7	2.3	3.2	0.03	70	62
LS 160 LR	15	1453	98.6	29	0.84	0.78	0.69	89.4	89.8	88.4	7.5	2.9	3.6	0.036	86	62
LS 180 MT	18.5	1456	121	35	0.84	0.79	0.67	90.3	90.8	90.3	7.6	2.7	3.2	0.085	100	64
LS 180 LR	22	1456	144	42	0.84	0.79	0.68	90.7	91.2	90.9	7.9	3.0	3.3	0.096	112	64
LS 200 LT	30	1460	196	56	0.84	0.8	0.69	91.5	92	91.5	6.6	2.9	2.9	0.151	165	64
LS 225 ST	37	1468	241	69	0.84	0.8	0.7	92.5	93.1	92.9	6.3	2.7	2.6	0.24	205	64
LS 225 MR	45	1468	293	84	0.84	0.8	0.7	92.8	93.3	93	6.3	2.7	2.6	0.29	235	64
LS 250 ME	55	1478	355	102	0.84	0.8	0.71	93.6	93.8	93.2	7.0	2.7	2.8	0.63	320	66
LS 280 SC	75	1478	485	138	0.84	0.8	0.71	94.2	94.4	93.8	7.2	2.8	2.9	0.83	380	69
LS 280 MD	90	1478	581	165	0.84	0.8	0.71	94.4	94.5	93.8	7.6	3.0	3.0	1.03	450	69
LS 315 SN	110	1477	711	201	0.84	0.79	0.7	94.4	94.6	94.2	7.6	3.0	3.2	1.04	470	76
LS 315 MP	132	1484	849	238	0.85	0.82	0.74	95	95	94.1	7.6	2.9	3.0	2.79	750	70
LS 315 MR	160	1484	1030	287	0.85	0.82	0.74	95	95	94.1	7.7	2.9	3.0	3.27	845	70

LS



Atmospheres containing explosive dust totally enclosed three-phase asynchronous motors

Selection

CATEGORY 3
ZONE 22
Non conductive dust

IP 55 - 50 Hz - Class F - Δ T 80 K - 400 V Δ - S1
II - 3D - T 125 °C

4
poles
1500 min⁻¹

A

Type	Rated power at 50 Hz P_N kW	IM 1001 (IM B3)		IM 3001 (IM B5)		IM 2001 (IM B35)		IM 3601 (IM B14)		IM 2101 (IM B34)	
		Code	Qty	Code	Qty	Code	Qty	Code	Qty	Code	Qty
LS 100 L	3	ZA4 30 208	5	ZA4 30 210	5	ZA4 30 2G0	2	ZA4 30 212	2	ZA4 30 2H2	2
LS 112 M	4	ZA4 40 202	5	ZA4 40 204	5	ZA4 40 2G4	2	ZA4 40 206	2	ZA4 40 2H6	2
LS 132 S	5.5	ZA4 55 208	5	ZA4 55 210	5	ZA4 55 2G0	2	ZA4 55 212	2	ZA4 55 2H2	2
LS 132 M	7.5	ZA4 75 208	5	ZA4 75 210	5	ZA4 75 2G0	2	ZA4 75 212	2	ZA4 75 2H2	2
LS 132 M	9	ZA4 90 202	5	ZA4 90 204	5	ZA4 90 2G4	2	ZA4 90 206	2	ZA4 90 2H6	2
LS 160 MP	11	ZA4 11 302	5	ZA4 11 304	2	ZA4 11 3G4	2				
LS 160 LR	15	ZA4 15 302	5	ZA4 15 304	2	ZA4 15 3G4	2				
LS 180 MT	18.5	ZA4 18 302	3	ZA4 18 304	2	ZA4 18 3G4	3				
LS 180 LR	22	ZA4 22 302	3	ZA4 22 304	2	ZA4 22 3G4	3				
LS 200 LT	30	ZA4 30 302	3	ZA4 30 304	2	ZA4 30 3G4	3				
LS 225 ST	37	ZA4 37 302	3	ZA4 37 304	2	ZA4 37 3G4	3				
LS 225 MR	45	ZA4 45 302	3	ZA4 45 304	1	ZA4 45 3G4	3				
LS 250 ME	55	ZA4 55 302	2			ZA4 55 3G4	2				
LS 280 SC	75	ZA4 75 302	1			ZA4 75 3G4	1				
LS 280 MD	90	ZA4 90 302	1			ZA0 00 201	1				
LS 315 SP	110	ZA4 11 402	1			ZA0 00 202	1				
LS 315 MP	132	ZA4 13 402	1			ZA0 00 203	1				
LS 315 MR	160	ZA0 00 007	1			ZA0 00 204	1				

Selection example:

Speed:	1500 min ⁻¹ - 4 poles
Power:	4 kW
Mounting and position:	IM 2101 (IM B34)
Mains supply voltage:	400 V
Application:	ATEX zone 22

Designation:

4P LS 112 M 4 kW IM 2101 (IM B34)
400 V

Code: ZA4 40 2H6



LS

Atmospheres containing explosive dust

totally enclosed three-phase asynchronous motors

CATEGORY 3
ZONE 22
Non conductive dust

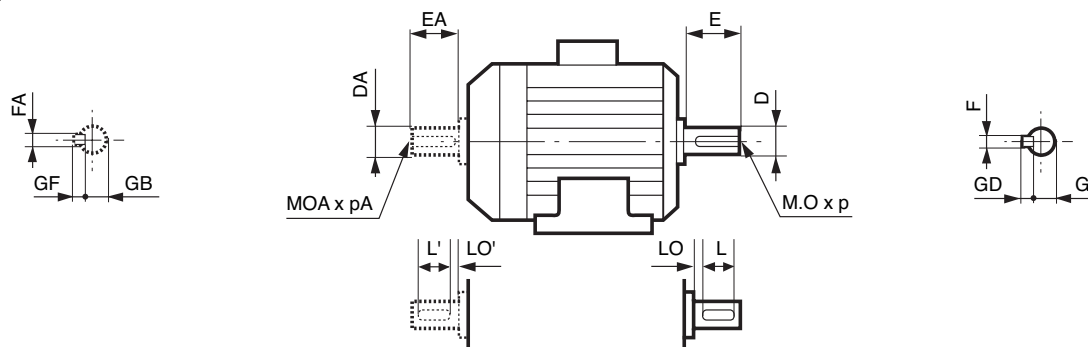
Dimensions

Dimensions of the LS totally enclosed three-phase asynchronous motors - IP 55

Cage rotor

Dimensions in millimetres

– shaft end



Type	Main shaft end																			
	4, 6 and 8 poles										2 poles									
	F	GD	D	G	E	O	p	L	LO	D	F	GD	D	G	E	O	p	L	LO	D
LS 56 M	3	3	9j6	7	20	4	10	16	3	9	3	3	9j6	7	20	4	10	16	3	9
LS 63 M	4	4	11j6	8.5	23	4	10	18	3.5	11	4	4	11j6	8.5	23	4	10	18	3.5	11
LS 71 L	5	5	14j6	11	30	5	15	25	3.5	14	5	5	14j6	11	30	5	15	25	3.5	14
LS 80 L	6	6	19j6	15.5	40	6	16	30	6	19	6	6	19j6	15.5	40	6	16	30	6	19
LS 90 S/L	8	7	24j6	20	50	8	19	40	6	24	8	7	24j6	20	50	8	19	40	6	24
LS 100 L	8	7	28j6	24	60	10	22	50	6	28	8	7	28j6	24	60	10	22	50	6	28
LS112 M/MG/MU	8	7	28j6	24	60	10	22	50	6	28	8	7	28j6	24	60	10	22	50	6	28
LS 132 S/M	10	8	38k6	33	80	12	28	63	10	38	10	8	38k6	33	80	12	28	63	10	38
LS 160 M/L/MP/LR/LU	12	8	42k6	37	110	16	36	100	6	42	12	8	42k6	37	110	16	36	100	6	42
LS 180 MT/LR/L/LU	14	9	48k6	42.5	110	16	36	97	13	48	14	9	48k6	42.5	110	16	36	97	13	48
LS 200 LT/L/LU	16	10	55m6	49	110	20	42	97	13	55	16	10	55m6	49	110	20	42	97	13	55
LS 225 ST/MR/MK/SR/MT	18	11	60m6	53	140	20	42	126	14	60	18	11	60m6	53	140	20	42	126	14	60
LS 250 MP/MZ	18	11	65m6	58	140	20	42	126	14	65	18	11	60m6	53	140	20	42	126	14	60
LS 250 MK	18	11	65m6	58	140	20	42	126	14	65	18	11	60m6	53	140	20	42	126	14	60
LS 280 SP/MP	20	12	75m6	67.5	140	20	42	125	15	75	18	11	65m6	58	140	20	42	126	14	65
LS 280 SK/MK	20	12	75m6	67.5	140	20	42	125	15	75	18	11	65m6	58	140	20	42	126	14	65
LS 315 SP/MP/MR	22	14	80m6	71	170	20	42	155	15	80	18	11	65m6	58	140	20	42	126	14	65

Type	Secondary shaft end																			
	4, 6 and 8 poles										2 poles									
	FA	GF	DA	GB	EA	OA	pA	L'	LO'	D	FA	GF	DA	GB	EA	OA	pA	L'	LO'	D
LS 56 M	3	3	9j6	7	20	4	10	16	3	9	3	3	9j6	7	20	4	10	16	3	9
LS 63 M	4	4	11j6	8.5	23	4	10	18	3.5	11	4	4	11j6	8.5	23	4	10	18	3.5	11
LS 71 L	5	5	14j6	11	30	5	15	25	3.5	14	5	5	14j6	11	30	5	15	25	3.5	14
LS 80 L	5	5	14j6	11	30	5	15	30	6	19	5	5	14j6	11	30	5	15	30	6	19
LS 90 S/L	6	6	19j6	15.5	40	6	16	40	6	24	6	6	19j6	15.5	40	6	16	40	6	24
LS 100 L	8	7	24j6	20	50	8	19	50	6	28	8	7	24j6	20	50	8	19	50	6	28
LS112 M/MG/MU	8	7	24j6	20	50	8	19	50	6	28	8	7	24j6	20	50	8	19	50	6	28
LS 132 S/M	8	7	28j6	24	60	10	22	63	10	38	8	7	28j6	24	60	10	22	63	10	38
LS 160 MP/LR	10	8	38k6	33	80	12	28	63	10	42	10	8	38k6	33	80	12	28	63	10	42
LS 160 M/L/LU	12	8	42k6	37	110	16	36	100	6	42	12	8	42k6	37	110	16	36	100	6	42
LS 180 MT/LR/L/LU	14	9	48k6	42.5	110	16	36	97	13	48	14	9	48k6	42.5	110	16	36	97	13	48
LS 200 LT/L/LU	16	10	55m6	49	110	20	42	97	13	55	16	10	55m6	49	110	20	42	97	13	55
LS 225 ST/MR/MK/SR/MT	18	11	60m6	53	140	20	42	126	14	60	16	10	55m6	49	110	20	42	97	13	55
LS 250 MP/MZ	18	11	60m6	53	140	20	42	126	14	65	18	11	60m6	53	140	20	42	126	14	60
LS 250 MK	18	11	65m6	58	140	20	42	126	14	65	18	11	60m6	53	140	20	42	126	14	60
LS 280 SP/MP	18	11	65m6	58	140	20	42	125	15	75	18	11	65m6	58	140	20	42	126	14	65
LS 280 SK/MK	20	12	75m6	67.5	140	20	42	125	15	75	18	11	65m6	58	140	20	42	126	14	65
LS 315 SP/MP/MR	22	14	80m6	71	170	20	42	155	15	80	18	11	65m6	58	140	20	42	126	14	65

LS



Atmospheres containing explosive dust totally enclosed three-phase asynchronous motors

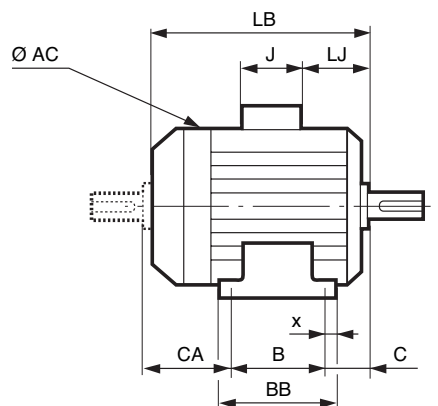
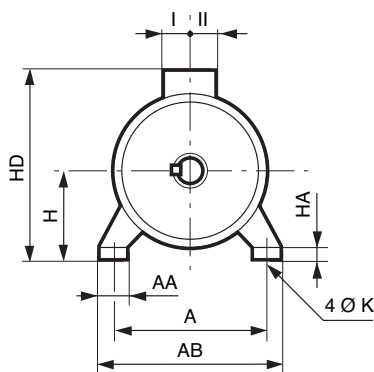
CATEGORY 3
ZONE 22
Non conductive dust

Dimensions

Dimensions of the LS 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	LJ	J	I	II	CA
LS 56 M	90	104	71	89	36	9.5	24	6	7	56	110	148	156	10	86	43	43	52
LS 63 M	100	115	80	96	40	7.5	24.5	7	8	63	124	160	172	21	86	43	43	55
LS 71 M	112	126	90	104	45	7.5	23	7	9	71	140	178	183	21	86	43	43	51
LS 80 L	125	157	100	120	50	10	29	9	10	80	170	203	215	26	86	43	43	68
LS 90 S	140	172	100	120	56	10	37	10	11	90	190	223	218	26	86	43	43	66
LS 90 L	140	172	125	162	56	28	37	10	11	90	190	223	245	26	86	43	43	68
LS 100 L	160	196	140	165	63	12	40	12	13	100	200	238	290	26	86	43	43	93
LS 112 M	190	220	140	165	70	12	45	12	14	112	200	250	290	26	86	43	43	86
LS 112 MG	190	220	140	165	70	12	52	12	14	112	235	260	315	36	86	43	43	110
LS 132 S	216	250	140	170	89	16	50	12	15	132	235	280	350	53	86	43	43	128
LS 132 SM/M	216	250	178	208	89	16	59	12	18	132	280	307	387	25	110	57	73	126
LS 160 MP	254	294	210	294	108	20	64	14.5	25	160	264	368	468	44	134	92	63	154
LS 160 M	254	294	210	294	108	20	60	14.5	25	160	310	395	495	44	134	92	63	182
LS 160 LR	254	294	254	294	108	20	64	14.5	25	160	264	368	495	44	134	92	63	138
LS 160 L	254	294	254	294	108	20	60	14.5	25	160	310	395	495	44	134	92	63	138
LS 180 MT	279	324	241	316	121	20	79	14.5	28	180	310	428	495	45	205	100	95	138
LS 180 LR	279	324	279	316	121	20	79	14.5	28	180	310	428	520	45	205	100	95	125
LS 180 L	279	339	279	329	121	25	86	14.5	25	180	350	435	552	54	205	100	95	159
LS 200 LT	318	378	305	365	133	30	108	18.5	32	200	350	455	599	60	205	100	95	167
LS 200 L	318	388	305	375	133	35	103	18.5	36	200	390	475	621	68	205	100	95	194
LS 225 ST	356	431	286	386	149	50	127	18.5	36	225	390	500	628	74	205	100	95	203
LS 225 SR	356	431	286	386	149	50	127	18.5	36	225	390	500	676	74	205	100	95	253
LS 225 MR	356	431	311	386	149	50	127	18.5	36	225	390	500	676	74	205	100	95	228
LS 250 MZ	406	470	349	449	168	70	150	24	47	250	390	550	676	68	217	103	145	172
LS 250 ME	406	470	349	420	168	35	90	24	36	250	471	654	810	68	292	148	180	293
LS 280 SC	457	520	368	478	190	35	90	24	35	280	479	684	810	68	292	148	180	252
LS 280 MC	457	520	419	478	190	35	90	24	35	280	479	684	810	68	292	148	180	201
LS 280 MD	457	520	419	478	190	35	90	24	35	280	479	684	870	68	292	148	180	261
LS 315 SP	508	594	406	537	216	40	114	28	70	315	586	780	947	125	292	148	180	341
LS 315 MP	508	594	457	537	216	40	114	28	70	315	586	780	947	125	292	148	180	290
LS 315 MR	508	594	457	537	216	40	114	28	70	315	586	780	1017	125	292	148	180	360

LS



Atmospheres containing explosive dust totally enclosed three-phase asynchronous motors

CATEGORY 3
ZONE 22
Non conductive dust

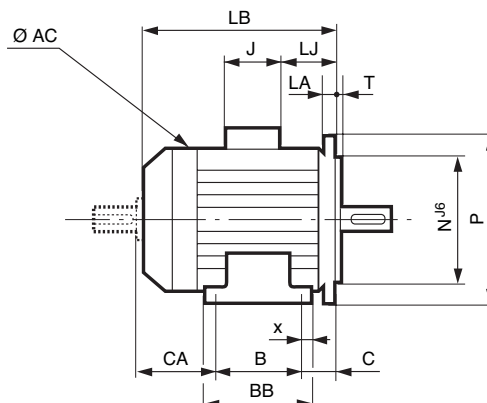
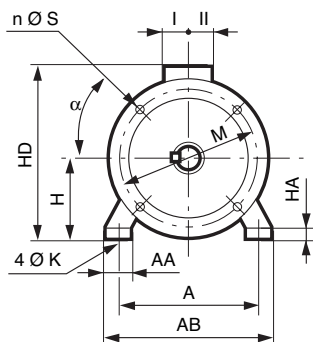
Dimensions

Dimensions of the LS totally enclosed three-phase asynchronous motors - IP 55

Cage rotor

Dimensions in millimetres

– (FF) foot and plain hole flange mounted



Type	Main dimensions																		Sym.
	A	AB	B	BB	C	x	AA	K	HA	H	AC	HD	LB	HJ	LJ	J	I	II	
LS 56 M	90	104	71	89	36	9.5	24	6	7	56	110	148	156	84	10	86	43	43	FF 100
LS 63 M	100	115	80	96	40	7.5	24.5	7	8	63	124	160	172	89	21	86	43	43	FF 115
LS 71 M	112	126	90	104	45	7.5	23	7	9	71	140	178	183	99	21	86	43	43	FF 130
LS 80 L	125	157	100	120	50	10	29	9	10	80	170	203	215	123	26	86	43	43	FF 165
LS 90 S	140	172	100	120	76	10	37	10	11	90	190	223	238	133	46	86	43	43	FF 165
LS 90 L	140	172	125	162	56	8	37	10	11	90	190	223	265	133	46	86	43	43	FF 165
LS 100 L	160	196	140	165	63	12	40	12	13	100	200	238	290	138	26	86	43	43	FF 215
LS 112 M	190	220	140	165	70	12	45	12	14	112	200	250	290	138	26	86	43	43	FF 215
LS 112 MG	190	220	140	165	70	12	52	12	14	112	235	260	315	148	36	86	43	43	FF 215
LS 132 S	216	250	140	170	89	16	50	12	15	132	235	280	350	148	53	86	43	43	FF 265
LS 132 SM/M	216	250	178	208	89	16	59	12	18	132	280	308	387	175	25	110	57	73	FF 265
LS 160 MP	254	294	210	294	108	20	64	14.5	25	160	264	375	468	208	43	135	88	64	FF 300
LS 160 M	254	294	210	294	108	20	60	14.5	25	160	310	395	495	235	44	134	92	63	FF 300
LS 160 LR	254	294	254	294	108	20	64	14.5	25	160	264	375	495	208	43	135	88	64	FF 300
LS 160 L	254	294	254	294	108	20	60	14.5	25	160	310	395	495	235	44	134	92	63	FF 300
LS 180 MT	279	324	241	316	121	20	79	14.5	28	180	310	428	495	248	45	205	100	95	FF 300
LS 180 LR	279	324	279	316	121	20	79	14.5	28	180	310	428	520	248	45	205	100	95	FF 300
LS 180 L	279	339	279	329	121	25	86	14.5	25	180	350	435	552	255	54	205	100	95	FF 300
LS 200 LT	318	378	305	365	133	30	108	18.5	32	200	350	455	599	255	60	205	100	95	FF 350
LS 200 L	318	388	305	375	133	35	103	18.5	36	200	390	475	621	275	68	205	100	95	FF 350
LS 225 ST	356	431	286	386	149	50	127	18.5	36	225	390	500	628	275	74	205	100	95	FF 400
LS 225 SR	356	431	286	386	149	50	127	18.5	36	225	390	500	676	275	74	205	100	95	FF 400
LS 225 MR	356	431	311	386	149	50	127	18.5	36	225	390	500	676	275	74	205	100	95	FF 400
LS 250 MZ	406	470	349	449	168	70	150	24	47	250	390	550	676	300	68	217	103	145	FF 500
LS 250 ME	406	470	349	420	168	35	90	24	36	250	479	654	810	405	68	292	148	180	FF 500
LS 280 SC	457	520	368	478	190	35	90	24	35	280	479	684	810	405	68	292	148	180	FF 500
LS 280 MC	457	520	419	478	190	35	90	24	35	280	479	684	810	405	68	292	148	180	FF 500
LS 280 MD	457	520	419	478	190	35	90	24	35	280	479	684	870	405	68	292	148	180	FF 500
LS 315 SP	508	594	406	537	216	40	114	28	70	315	586	780	947	466	125	292	148	180	FF 600
LS 315 MP	508	594	457	537	216	40	114	28	70	315	586	780	947	466	125	292	148	180	FF 600
LS 315 MR	508	594	457	537	216	40	114	28	70	315	586	780	1017	466	125	292	148	180	FF 600

CA dimension and shaft end dimensions identical to those of foot mounted motors.



LS

Atmospheres containing explosive dust

totally enclosed three-phase asynchronous motors

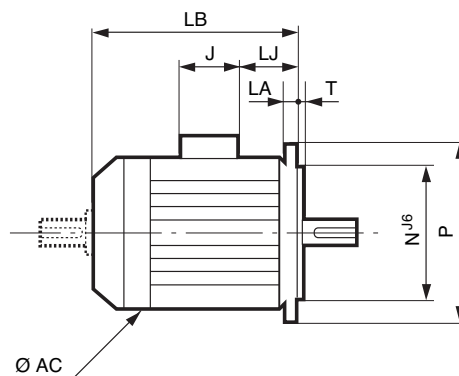
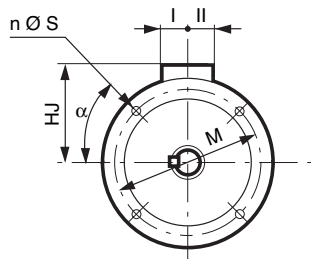
CATEGORY 3
ZONE 22
Non conductive dust

Dimensions

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

Dimensions in millimetres

– (FF) plain hole flange mounted



IEC symbol	Flange dimensions							
	M	N	P	T	n	α	S	LA
FF 100	100	80	120	2.5	4	45	7	5
FF 115	115	95	140	3	4	45	10	10
FF 130	130	110	160	3.5	4	45	10	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	14.5	12
FF 215	215	180	250	4	4	45	14.5	12
FF 215	215	180	250	4	4	45	14.5	12
FF 265	265	230	300	4	4	45	14.5	14
FF 265	265	230	300	4	4	45	14.5	14
FF 300	300	250	350	5	4	45	18.5	14
FF 300	300	250	350	5	4	45	18.5	14
FF 300	300	250	350	5	4	45	18.5	14
FF 300	300	250	350	5	4	45	18.5	14
FF 300	300	250	350	5	4	45	18.5	14
FF 300	300	250	350	5	4	45	18.5	14
FF 350	350	300	400	5	4	45	18.5	15
FF 350	350	300	400	5	4	45	18.5	15
FF 400	400	350	450	5	8	22.5	18.5	16
FF 400	400	350	450	5	8	22.5	18.5	16
FF 400	400	350	450	5	8	22.5	18.5	16
FF 500	500	450	550	5	8	22.5	18.5	18
FF 500	500	450	550	5	8	22.5	18.5	18
FF 500	500	450	550	5	8	22.5	18.5	18
FF 500	500	450	550	5	8	22.5	18.5	18
FF 600	600	550	660	6	8	22.5	24	22
FF 600	600	550	660	6	8	22.5	24	22
FF 600	600	550	660	6	8	22.5	24	22

Type	Main dimensions						
	AC	LB	HJ	LJ	J	I	II
LS 56 M	110	156	92	10	86	43	43
LS 63 M	124	172	97	21	86	43	43
LS 71 M	140	183	107	21	86	43	43
LS 80 L	170	215	123	26	86	43	43
LS 90 S	190	238	133	46	86	43	43
LS 90 L	190	265	133	46	86	43	43
LS 100 L	200	290	138	26	86	43	43
LS 112 M	200	290	138	26	86	43	43
LS 112 MG	235	315	148	36	86	43	43
LS 132 S	235	350	148	53	86	43	43
LS 132 SM/M	280	387	176	25	110	57	73
LS 160 MP	264	468	215	43	135	88	64
LS 160 M	316	495	235	44	134	92	63
LS 160 LR	264	495	215	43	135	88	64
LS 160 L	316	495	235	44	134	92	63
LS 180 MT	316	495	248	45	205	100	95
LS 180 LR	316	520	248	45	205	100	95
LS 180 L	350	552	255	54	205	100	95
LS 200 LT	350	599	255	60	205	100	95
LS 200 L	390	621	275	68	205	100	95
LS 225 ST	390	628	275	74	205	100	95
LS 225 SR	390	676	275	74	205	100	95
LS 225 MR	390	676	275	74	205	100	95
LS 250 MZ	390	676	275	68	217	103	145
LS 250 ME	479	810	300	68	292	148	180
LS 280 SC	479	810	404	68	292	148	180
LS 280 MC	479	810	404	68	292	148	180
LS 280 MD	479	870	404	68	292	148	180
LS 315 SP	586	947	465	125	292	148	180
LS 315 MP	586	947	465	125	292	148	180
LS 315 MR	586	1017	465	125	292	148	180

For IM 3001 use, for frame size ≥ 250 mm, consult us.
Shaft end dimensions identical to those of the foot mounted motors.



LS

Atmospheres containing explosive dust

totally enclosed three-phase asynchronous motors

CATEGORY 3
ZONE 22
Non conductive dust

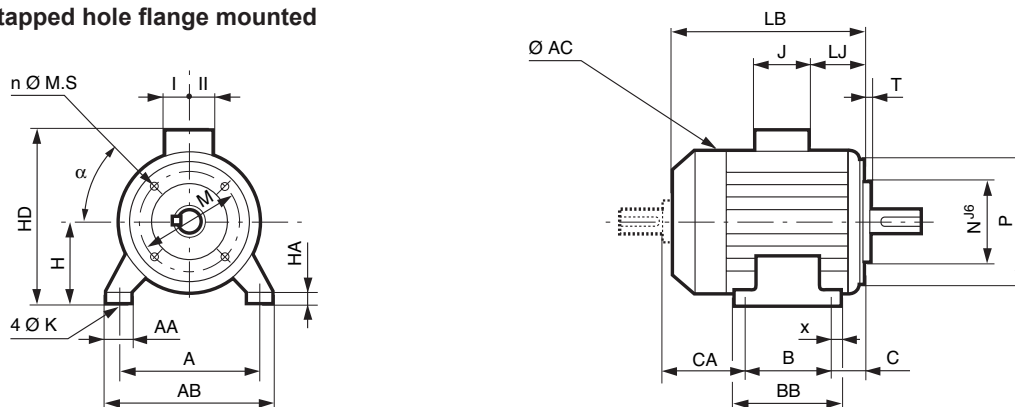
Dimensions

Dimensions of the LS 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	LJ	J	I	II	Sym.
LS 56 M	90	104	71	89	36	9	24	6	7	56	110	148	156	10	86	43	43	FT 65
LS 63 M	100	115	80	96	40	8	24.5	7	8	63	124	160	172	21	86	43	43	FT 75
LS 71 M	112	126	90	104	45	7	23	7	9	71	140	178	183	21	86	43	43	FT 85
LS 80 L	125	157	100	120	50	10	29	9	10	80	170	203	215	26	86	43	43	FT 100
LS 90 S	140	172	100	120	56	10	37	10	11	90	190	223	218	26	86	43	43	FT 115
LS 90 L	140	172	125	162	56	28	37	10	11	90	190	223	245	26	86	43	43	FT 115
LS 100 L	160	196	140	165	63	12	40	12	13	100	200	238	290	26	86	43	43	FT 130
LS 112 M	190	220	140	165	70	12	45	12	14	112	200	250	290	26	86	43	43	FT 130
LS 112 MG	190	220	140	165	70	12	52	12	14	112	235	260	315	36	86	43	43	FT 130
LS 132 S	216	250	140	170	89	16	50	12	15	132	235	280	350	53	86	43	43	FT 215
LS 132 SM/M	216	250	178	208	89	16	59	12	18	132	280	308	387	25	110	57	73	FT 215
LS 160 MP	254	294	210	250	108	20	112	14	25	160	310	375	425	43	135	88	64	FT 215
LS 160 LR	254	294	254	294	108	20	112	14	25	160	310	375	495	43	135	88	64	FT 215

CA dimension and shaft end dimensions identical to those of foot mounted motors.



LS

Atmospheres containing explosive dust

totally enclosed three-phase asynchronous motors

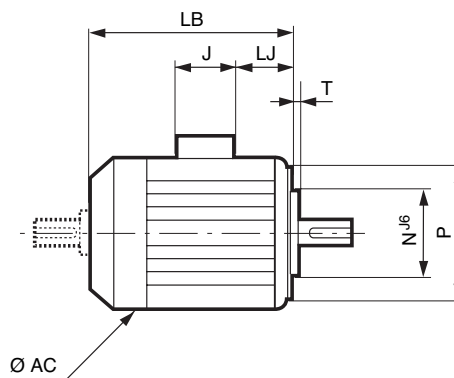
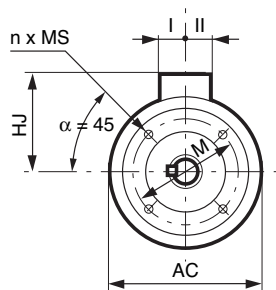
CATEGORY 3
ZONE 22
Non conductive dust

Dimensions

Dimensions of the LS 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	MS
FT 65	65	50	80	2.5	4	M5
FT 75	75	60	90	2.5	4	M5
FT 85	85	70	105	2.5	4	M6
FT 100	100	80	120	3	4	M6
FT 115	115	95	140	3	4	M8
FT 115	115	95	140	3	4	M8
FT 130	130	110	160	3.5	4	M8
FT 130	130	110	160	3.5	4	M8
FT 130	130	110	160	3.5	4	M8
FT 215	215	180	250	4	4	M12
FT 215	215	180	250	4	4	M12
FT 215	215	180	250	4	4	M12
FT 215	215	180	250	4	4	M12

Type	Main dimensions						
	AC	LB	HJ	LJ	J	I	II
LS 56 M	110	156	92	10	86	43	43
LS 63 M	124	172	97	21	86	43	43
LS 71 M	140	183	107	21	86	43	43
LS 80 L	170	215	123	26	86	43	43
LS 90 S	190	218	133	26	86	43	43
LS 90 L	190	245	133	26	86	43	43
LS 100 L	200	290	138	26	86	43	43
LS 112 M	200	290	138	26	86	43	43
LS 112 MG	235	315	148	36	86	43	43
LS 132 S	235	350	148	53	86	43	43
LS 132 SM/M	280	387	176	25	110	57	73
LSP 160 MP	310	425	215	43	135	88	64
LS 160 LR	310	495	215	43	135	88	64

Shaft end dimensions identical to those of the foot mounted motors.

