

# PREMIUM EFFICIENCY THREE-PHASE MOTORS – IE3

EFFICIENCY LEVEL ACCORDING TO IEC 60034-30-1:2014  
EFFICIENCY TESTING METHOD IEC 60034-2-1;2007

NOMINAL FULL LOAD EFFICIENCY ACCORDING TO IE3 CODE @ 400 V - 50 HZ

FOR MAINS VOLTAGE  
400 V - 50 HZ

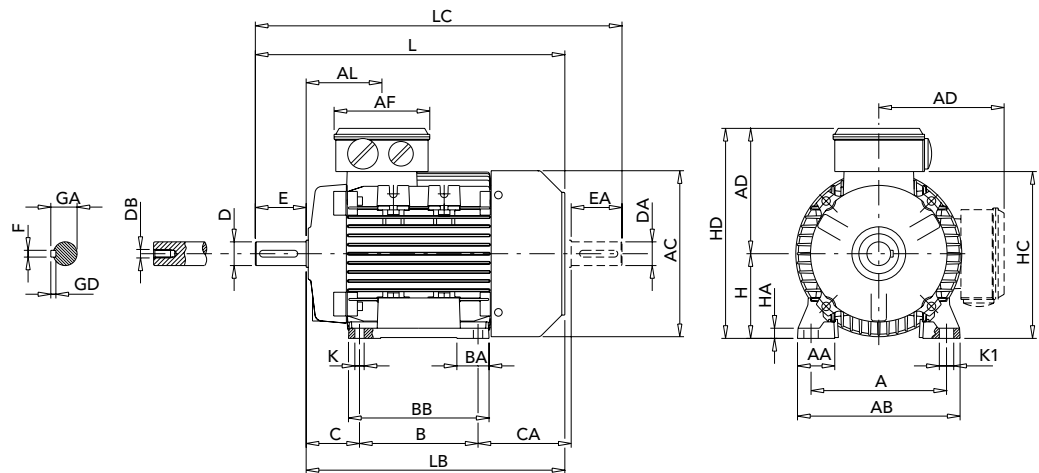


TEMPERATURE RISE TO CLASS B

Type	kW	HP	min <sup>-1</sup>	M <sub>N</sub> Nm	IE3 $\eta$			cos $\varphi$	I <sub>N</sub> 400V	I <sub>A</sub> /I <sub>N</sub>	M <sub>A</sub> /M <sub>N</sub>	M <sub>S</sub> /M <sub>N</sub>	M <sub>K</sub> /M <sub>N</sub>	J 10 <sup>-3</sup> kgm <sup>2</sup>	kg	
					50%	75%	100%									
3000 min <sup>-1</sup> (2 poles)																
ALUMINIUM DESIGN																
AMPE 80Z AA	2	0.75	1	2910	2.5	77.8	81.2	82.0	0.78	1.7	8.9	4.7	4.5	4.8	0.7	9.5
AMPE 80Z BA	2	1.1	1.5	2870	3.7	78.7	81.7	82.7	0.76	2.4	9.3	5.0	4.9	5.3	0.9	11.1
AMPE 80Z CA	2*	1.5	2	2810	5.1	78.8	82.2	84.2	0.76	3.6	7.8	4.9	3.7	4.3	1.1	13.5
AMPE 90S AA	2	1.5	2	2875	5.0	83.2	84.8	84.2	0.85	3.0	8.4	3.6	3.2	3.8	1.6	14.0
AMPE 90L BA	2	2.2	3	2880	7.3	85.0	86.2	86.5	0.82	4.6	9.2	4.0	3.8	4.2	1.8	16.0
AMPE 90L DA	2*	3	4	2865	10.0	85.2	86.3	87.1	0.80	6.3	8.7	4.5	4.0	4.6	2.0	18.0
AMPE 100L AA	2	3	4	2900	9.9	82.3	85.8	87.1	0.89	5.6	8.8	5.5	3.5	4.5	4.1	22.8
AMPE 100L BA	2*	4	5.5	2920	13.1	85.4	87.2	88.1	0.81	8.2	10.9	6.1	5.2	5.7	7.3	26.5
AMPE 112M AA	2	4	5.5	2910	13.1	86.8	87.8	88.1	0.93	7.0	9.6	3.6	3.0	4.0	6.5	27.4
AMPE 112M BA	2*	5.5	7.5	2935	17.9	85.6	88.3	89.2	0.87	10.2	11.2	4.2	3.5	4.3	8.6	33.6
AMPE 112M CA	2*	7.5	10	2930	24.5	88.0	89.7	90.1	0.84	14.4	10.4	4.5	3.5	4.6	10.5	36.0
AMPE 132S ZA	2	5.5	7.5	2920	18.0	88.0	88.5	89.2	0.90	10.0	8.9	3.0	2.5	3.6	14.0	46.0
AMPE 132S TA	2	7.5	10	2910	24.6	88.6	89.2	90.1	0.92	13.1	8.9	3.0	2.6	3.6	16.0	53.0
AMPE 132M ZA	2	9.2	12.4	2930	30.0	88.6	89.8	90.7	0.89	16.5	10.1	3.7	3.3	4.0	17.5	58.0
AMPE 132M RA	2*	11	15	2935	35.8	90.0	90.8	91.2	0.89	19.9	9.7	4.4	3.5	4.6	25.0	59.0
AMPE 132M TA	2*	15	20	2915	49.2	91.0	92.2	91.9	0.88	26.8	9.6	3.7	2.6	3.8	28.0	68.0
AMPE 160M YA	2	11	15	2950	35.6	87.4	89.8	91.2	0.89	19.7	9.1	4.0	3.0	4.2	51.7	87.8
AMPE 160M ZA	2	15	20	2940	48.7	91.0	91.3	91.9	0.89	26.7	9.7	4.7	3.5	4.8	53.4	88.9
AMPE 160L ZA	2	18.5	25	2950	59.9	91.6	92.8	92.4	0.88	33.0	10.7	4.6	3.1	4.7	64.0	104.0
AMPE 160L TA	2	22	30	2950	71.3	92.2	93.7	92.7	0.87	39.4	10.4	4.5	3.0	4.6	64.0	104.0

Type	kW	HP	min <sup>-1</sup>	M <sub>N</sub> Nm	IE3 $\eta$			cos $\varphi$	I <sub>N</sub> 400V	I <sub>A</sub> /I <sub>N</sub>	M <sub>A</sub> /M <sub>N</sub>	M <sub>K</sub> /M <sub>N</sub>	kg	
					50%	75%	100%							
3000 min <sup>-1</sup> (2 poles)														
CAST IRON DESIGN														
AMPE 180M ZG	2	22	30	2955	71.1	90.8	92.7	92.7	0.90	38.1	8.2	2.2	2.3	200
AMPE 200L PG	2	30	40	2960	96.8	91.4	93.3	93.3	0.89	52.1	7.5	2.2	2.3	255
AMPE 200L RG	2	37	50	2960	119	91.8	93.7	93.7	0.91	62.6	7.5	2.2	2.3	280
AMPE 225M PG	2	45	60	2965	145	92.1	94.0	94.0	0.88	78.4	7.6	2.2	2.3	375
AMPE 250M PG	2	55	75	2970	176.9	92.4	94.3	94.3	0.89	94.6	7.6	2.2	2.3	428
AMPE 280S G	2	75	100	2975	240.8	92.8	94.7	94.7	0.90	127	6.9	2.0	2.3	513
AMPE 280M G	2	90	125	2975	288.9	93.1	95.0	95.0	0.89	153	7.0	2.0	2.3	595
AMPE 315S G	2	110	150	2978	352.8	93.3	95.2	95.2	0.90	185	7.1	2.0	2.2	970
AMPE 315M G	2	132	180	2978	423.3	93.5	95.4	95.4	0.90	222	7.1	2.0	2.2	1110
AMPE 315L RG	2	160	200	2980	512.8	93.7	95.6	95.6	0.90	268	7.1	2.0	2.2	1185
AMPE 315L G	2	200	270	2980	640.9	93.9	95.8	95.8	0.91	331	7.1	2.0	2.2	1301

## THREE-PHASE FRAME SIZE 80 - 160 IM B3 AMPE SERIES - ALUMINIUM ALLOY FRAME



IEC	Poles	kW	HA	K1	L	LB	LC	AL	AF	BA	AA	D/DA	E/EA	F	GD	GA	DB <sup>3)</sup>
80	2 - 4	all	9.5	14	272	232	319	79	116	28.5	34.5	19	40	6	6	21.5	M6
90S 90L	2 - 4 - 6	all	11	15	317	267	372	85	116	28/53	37	24	50	8	7	27	M8
	2	2.2	11	15	317	267	372	85	116	28/53	37	24	50	8	7	27	M8
	2	3	11	15	340	290	395	85	116	28/53	37	24	50	8	7	27	M8
	4 - 6	all	11	15	317	267	372	85	116	28/53	37	24	50	8	7	27	M8
100L	2	all	12	17	366	306	433	91	116	38	44	28	60	8	7	31	M10
	4	2.2	12	17	366	306	433	91	116	38	44	28	60	8	7	31	M10
	4	3	12	17	381	321	448	91	116	38	44	28	60	8	7	31	M10
	6	1.1	12	17	366	306	433	91	116	38	44	28	60	8	7	31	M10
	6	1.5	12	17	381	321	448	91	116	38	44	28	60	8	7	31	M10
112M	2	4 - 5.5	15	19	388	328	456	92	116	46	48	28	60	8	7	31	M10
	2	7.5	15	19	410	350	478	92	116	46	48	28	60	8	7	31	M10
	4	all	15	19	388	328	456	92	116	46	48	28	60	8	7	31	M10
132S	2	5.5	17	20	445	365	523	100	133	45	59	38	80	10	8	41	M12
	2	7.5	17	20	465	385	543	100	133	45	59	38	80	10	8	41	M12
	4 - 6	all	17	20	445	365	523	100	133	45	59	38	80	10	8	41	M12
132M	2	9.2 - 11	17	20	505	425	583	120	133	45	59	38	80	10	8	41	M12
	2	15	17	20	556	476	634	120	133	45	59	38	80	10	8	41	M12
	4	7.5	17	20	505	425	583	120	133	45	59	38	80	10	8	41	M12
	4	9.2	17	20	556	476	634	120	133	45	59	38	80	10	8	41	M12
	6	4	17	20	485	405	563	120	133	45	59	38	80	10	8	41	M12
	6	5.5	17	20	505	425	583	120	133	45	59	38	80	10	8	41	M12
160M	2 - 4 - 6	all	23	18	608	498	668	146	150	65	76	42/28	110/60	12/8	8/7	45/31	M16/M10
160L	2 - 4 - 6	all	23	18	652	542	712	168	150	65	76	42/28	110/60	12/8	8/7	45/31	M16/M10

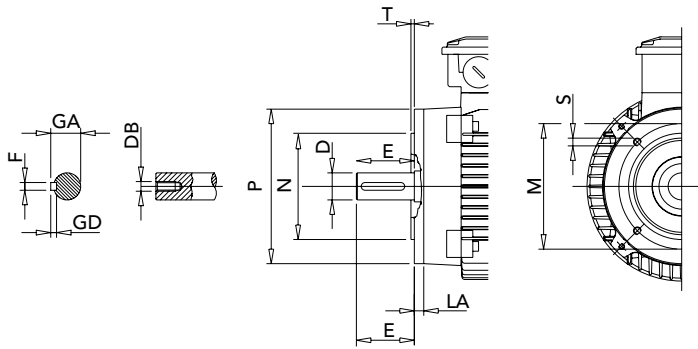
1) Clearance hole for screw

2) Maximum distance

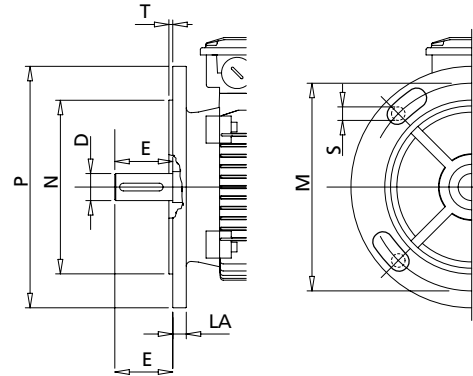
3) Centering holes in shaft extensions to DIN 332 part 2

# THREE-PHASE FRAME SIZE 56 - 160 IM B14, IM B5 AMPE-AMPH-AMHE-AMH-AMEE-AM SERIES - ALUMINIUM ALLOY FRAME

## IM B14

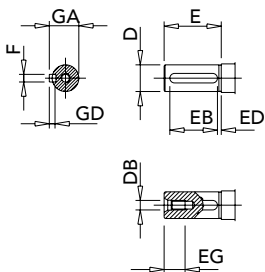


## IM B5



IEC	SMALL FLANGE B14						LARGE FLANGE B14						FLANGE B5					
	P	N	LA	M	T	S	P	N	LA	M	T	S	M	N	P	T	LA	S <sup>1)</sup>
56	80	50	8	65	2.5	M5	105	70	8	85	2.5	M6	100	80	120	2.5	7	M6
63	90	60	8	75	2.5	M5	120	80	8	100	2.5	M6	115	95	140	3	8	M8
71	105	70	8	85	2.5	M6	140	95	8	115	3	M8	130	110	160	3.5	10	M8
80	120	80	9	100	3	M6	160	110	8.5	130	3.5	M8	165	130	200	3.5	10	M10
90	140	95	9	115	3	M8	160	110	9	130	3.5	M8	165	130	200	3.5	12	M10
100	160	110	10	130	3.5	M8	200	130	12	165	3.5	M10	215	180	250	4	14	M12
112	160	110	10	130	3.5	M8	200	130	12	165	3.5	M10	215	180	250	4	14	M12
132	200	130	30	165	3.5	M10	250	180	12	215	4	M12	265	230	300	4	14	M12
160	250	180	12	215	4	M12	300	230	12	265	5	M16	300	250	350	5	15	M16

1) Clearance hole for screw. Hole as standard for 132 to 160 frame size



IEC	D	E	F h9	GD	GA	DB <sup>1)</sup>	EG	EB	ED
56	9 j6	20	3	3	10.2	M3	10	15	2.5
63	11 j6	23	4	4	12.5	M4	10	15	4
71	14 j6	30	5	5	16	M5	12.5	20	4
80	19 j6	40	6	6	21.5	M6	16	30	4
90	24 j6	50	8	7	27	M8	19	40	4
100	28 j6	60	8	7	31	M10	22	50	4
112	28 j6	60	8	7	31	M10	22	50	4
132	38 k6	80	10	8	41	M12	28	70	4
160	42 k6	110	12	8	45	M16	36	100	4

1) Centering holes in shaft extension to DIN 332 part 2