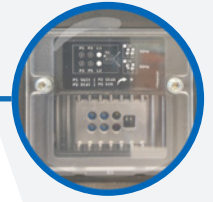


BRUSHLESS ALTERNATORS WITH AVR-d 4 Poles

ZB180



Patented Digital with 3 phase sensing



Possibility of adjusting the trimmers in absolute safety when the machine is running; operating status LEDs of the alternator are visible from the outside.

Technical characteristics	ZB180		ZB180 -1	
	Three-phase	Single-phase	Three-phase	Single-phase
Number of poles	4			
Rated power factor	0,8		1	
Voltage accuracy	±0,5%			
T.H.D.	< 3% phase to phase		< 5%	
Rated temperature	-15°C to +40°C (+60°C with derating)			
Excitation system	Self-excitation			
Execution	Brushless			
AVR model	AVR 625D- Digital with 3ph sensing			
	Right side as standard (left on request)			
Overload	110% of rated power for 1 hour in a 6 hour cycle			
Short circuit current	> 300% In			
Insulation class	H			
Protection degree	IP21 (IP23 on request)			
Rated speed	1500rpm at 50Hz; 1800rpm at 60Hz			
Overspeed	2250rpm			
Rotation direction	CW-CCW			
Air flow requirement	7,8 m³/min at 1500rpm; 9,4 m³/min at 1800rpm			
NDE bearing type	6208 2RSC3			
Stator windings	2/3 pitch with auxiliary windings		Single layer with auxiliary windings	
Rotor	With damping cage			
Number of leads	12		4	
Standards	EN IEC 60034-1; EN IEC 60034-22; ISO 8528-3			
Electromagnetic compatibility	EN IEC 61000-6-2; EN IEC 61000-6-4			
Union Harmonization Legislation	2014/35/EU (Low Voltage) - 2014/30/EU (EMC)			

3ph	50Hz -1500rpm						60Hz -1800rpm										
	S1 continuous 40/125°C cl. H			Stand-by 27/163°C			S1 continuous 40/125°C cl. H			Stand-by 27/163°C							
	3ph - 0,8 p.f.			1ph - 1/0,8 p.f.	3ph - 0,8 p.f.	1ph - 1 p.f.	3ph - 0,8 p.f.			1ph - 1/0,8 p.f.	3ph - 0,8 p.f.	1ph - 1 p.f.					
Voltage	Series-Star Y	380	400	415	---	400	---	380	416	440	460	480	---	480	---		
	Parallel Star YY	190	200	208	---	200	---	190	208	220	230	240	240	240	240		
	Series-Delta Δ	220	230	240	Eff. 4/4 load 400V 25°C	230	230	230	220	240	254	266	277	277	277	277	
	Parallel Delta ΔΔ	110	115	120		115	115	115	110	120	127	133	138	138	138	138	
	Double Delta ΔΔ 1ph	---	---	---		230/115	---	230/115	---	---	---	---	---	---	277/138	---	277/138
Model	kVA			%		kVA	kVA	kVA	kVA			%	kVA	kVA	kVA		
Power	ZB180 SA	20	20	20		82,1	12	22	13,2	22	24	25	26	27	82,6	15	29,7
	ZB180 SB	25	25	25	84,1	15	27,5	16,5	29	31	32	33	34	84,7	19	37,4	20,9
	ZB180 SC	30	30	30	86,2	18	33	19,8	35	38	40	40	41	86,5	22,5	45,1	24,8
	ZB180 MA	35	35	35	86,4	21	38,5	23,1	37	40	42	43	45	87,1	25	49,5	27,5
	ZB180 MB	40	40	40	87,1	23	44	25,3	44	47	49	50	52	87,9	27,5	57,2	30,3
	ZB180 MC	45	45	45	88,9	26	49,5	28,6	50	54	56	58	60	89,3	30	66	33
	ZB180 LA	50	50	50	89,1	28	55	30,8	57	62	64	65	66	89,8	33	72,6	36,3
	ZB180 LC	60	60	60	90,5	33	66	36,3	70	74	76	78	80	91,2	40	88	44
	ZB180 XA	72,5	72,5	72,5	91,3	37	79,8	40,7	80	84	86	88	90	92,2	44	99	48,4

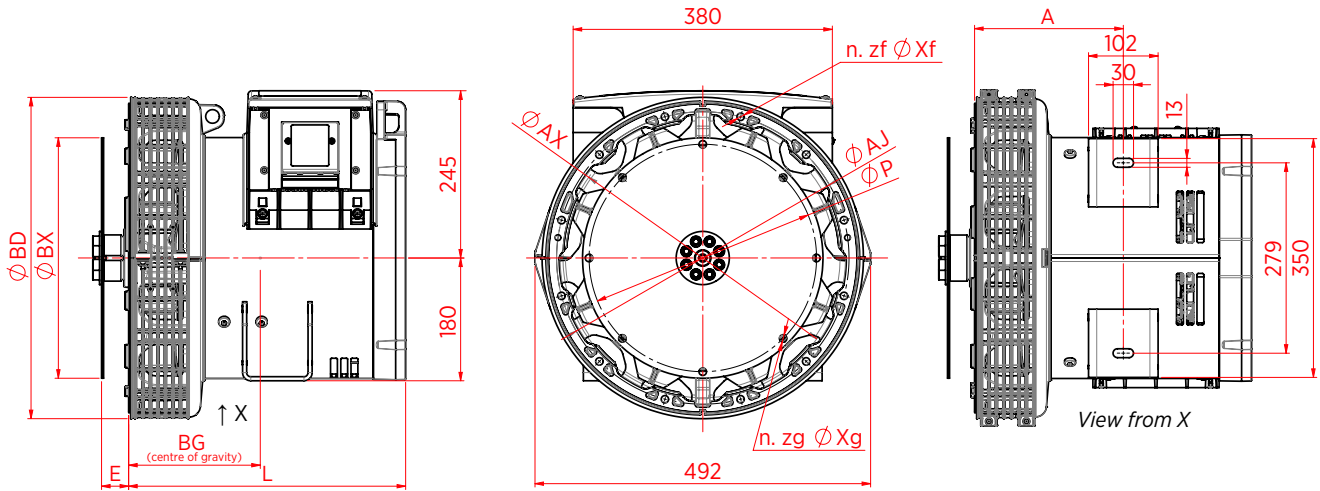
Power S1 cl.H (ΔT=125°C) - below 1000m AMSL - A.T. < 40°C

1ph Dedicated	50Hz -1500rpm						60Hz -1800rpm										
	S1 continuous 40/125°C cl. H			Stand-by 27/163°C			S1 continuous 40/125°C cl. H			Stand-by 27/163°C							
	1 p.f.			0,8 p.f.			1 p.f.	0,8 p.f.	1 - 0,8 p.f.			1 p.f.	0,8 p.f.				
Voltage	Series	220	230	240	Eff. 1,0 p.f. 4/4 load 230V 25°C	220	230	240	230			220	230	240	Eff. 1,0 p.f. 4/4 load 240V 25°C	240	
	Parallel	110	115	120		110	115	120	115			110	115	120		120	
Model	kVA			%	kVA	kVA	kVA	kVA		kVA	%	kVA	kVA	kVA			
Power	ZB180 SB-1	18	18	18	84,5	15	15	15	19,8	16,5	18	19	20	84,7	22	22	
	ZB180 SC-1	22	22	22	85,3	18	18	18	24,2	19,8	22	23	24	85,5	26,4	26,4	
	ZB180 MB-1	26	27	27	85,9	22	22	22	29,7	24,2	26	27	28	86,4	30,8	30,8	
	ZB180 MC-1	29	30	30	87,1	25	25	25	33	27,5	30	31	32	87,5	35,2	35,2	
	ZB180 LA-1	31	32	32	87,8	28	28	28	35,2	30,8	31	32	34	88,1	37,4	37,4	
	ZB180 LC-1	35	37	37	89,2	32	32	32	40,7	35,2	35	37	38	89,3	41,8	41,8	
	ZB180 XA-1	41	44	44	90,6	38	38	38	48,4	41,8	41	43	44	90,8	48,4	48,4	

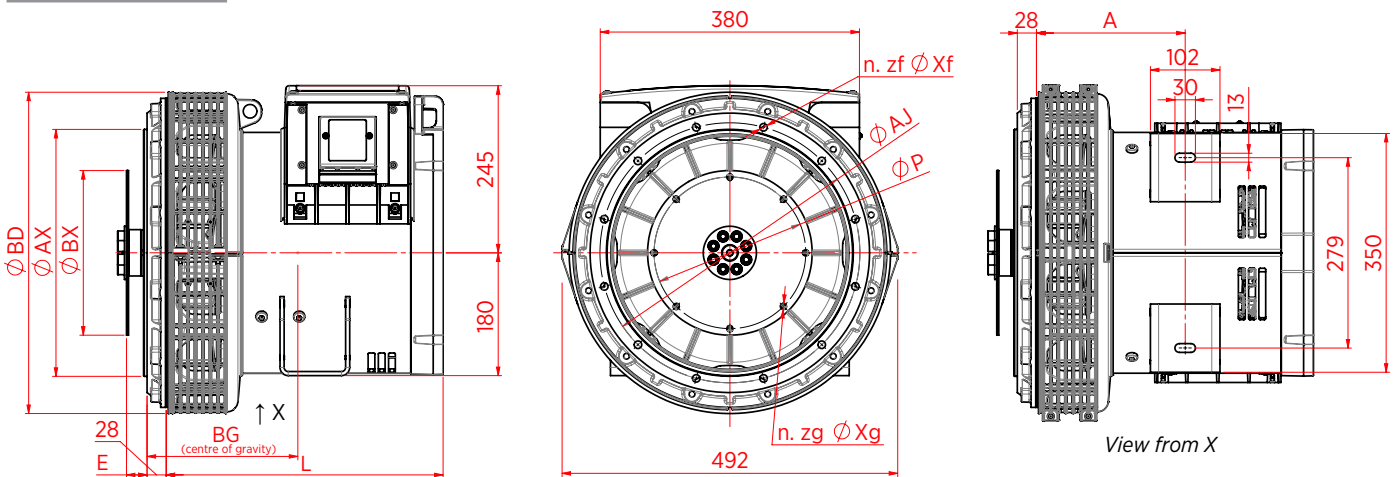
Power S1 cl.H (ΔT=125°C) - below 1000m AMSL - A.T. < 40°C

Overall Dimensions

SAE 3



SAE 4



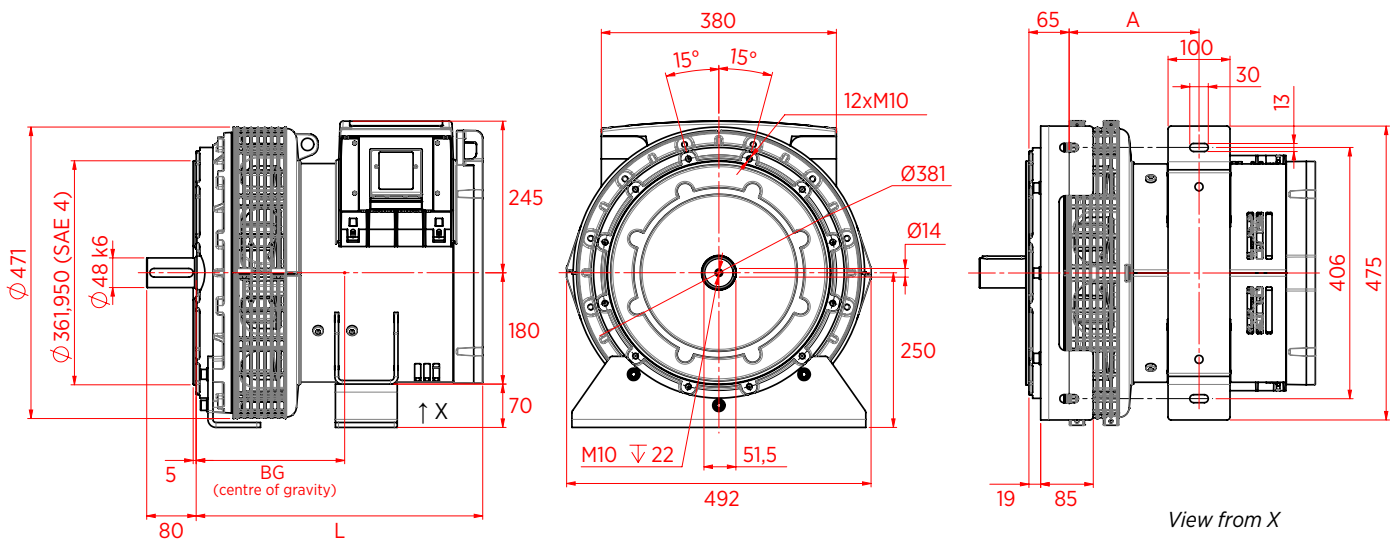
Model	L [mm]	A [mm]	BG		Weight	
			SAE 3/11,5 [mm]	SAE 4/7,5 [mm]	SAE 3 [Kg]	SAE 4 [Kg]
ZB180 SA	406	218	194	218	106	108
ZB180 SB	406	218	196	220	113	115
ZB180 SC	406	218	201	226	127	129
ZB180 MA	469	248	218	244	142	144
ZB180 MB	469	248	222	249	153	154
ZB180 MC	469	248	230	256	169	171
ZB180 LA	556	280,5	256	282	183	185
ZB180 LC	556	280,5	275	301	219	221
ZB180 XA	656	333	311	-	259	-
ZB180 SB-1	406	218	196	220	111	113
ZB180 SC-1	406	218	201	226	125	127
ZB180 MB-1	469	248	222	249	151	152
ZB180 MC-1	469	248	230	256	167	169
ZB180 LA-1	556	280,5	256	282	181	183
ZB180 LC-1	556	280,5	275	301	217	219
ZB180 XA-1	656	333	311	---	257	---

Flange	AX [mm]	BD [mm]	AJ [mm]	Xf [mm]	zf [nr]
SAE 3	409,575	471	428,625	11	12
SAE 4	361,95	471	381	11	12

Joint	E [mm]	BX [mm]	P [mm]	Xg [mm]	zg [nr]
11,5	39,6	352,425	333,375	11	8
7,5	30,2	241,3	222,25	9	8

Overall Dimensions

B34



Model	L	A	BG	Weight
	[mm]	[mm]	[mm]	[Kg]
ZB180 SA	463	210	228	121
ZB180 SB	463	210	231	128
ZB180 SC	463	210	240	142
ZB180 MA	526	240	259	156
ZB180 MB	526	240	265	166
ZB180 MC	526	240	272	183
ZB180 LA	613	272,5	298	198
ZB180 LC	613	272,5	317	233
ZB180 XA	713	325	355	273
ZB180 SB-1	463	210	231	126
ZB180 SC-1	463	210	240	140
ZB180 MB-1	526	240	265	164
ZB180 MC-1	526	240	272	181
ZB180 LA-1	613	272,5	298	196
ZB180 LC-1	613	272,5	317	231
ZB180 XA-1	713	325	355	271