



Low Voltage Alternators - 4 pole

TAL-A46 - TAL-A47 - TAL-A49

180 to 1000 kVA - 50 Hz / 225 to 1250 kVA - 60 Hz
Electrical and mechanical data

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Adapted to needs

The TAL alternator range is designed to meet the specific needs of telecommunications, commercial & industrial markets, as well as stand-by and prime power applications.

Compliant with international standards

The TAL range complies with international standards and regulations: IEC 60034 and derivative. The range is designed, manufactured and marketed in an ISO 9001 and 14001 environment. It can be integrated into a CE market generator set.



Electrical design

- Class H insulation
- Low voltage winding
- 4 - terminal plate (adapted plate for 6 wires machine)
- Possibility of star and delta connection
- Optimized performance

Robust design

- Compact and rugged assembly to withstand engine vibrations
- Steel frame
- Cast iron flanges and shields
- Single-bearing design to be suitable with most diesel engines
- Sealed for life bearing
- Direction of rotation clockwise

Excitation and regulation

- The TAL range is shunt excited
- R150 voltage regulator integrated into the terminal box
- Short-circuit capacity option

Compact terminal box

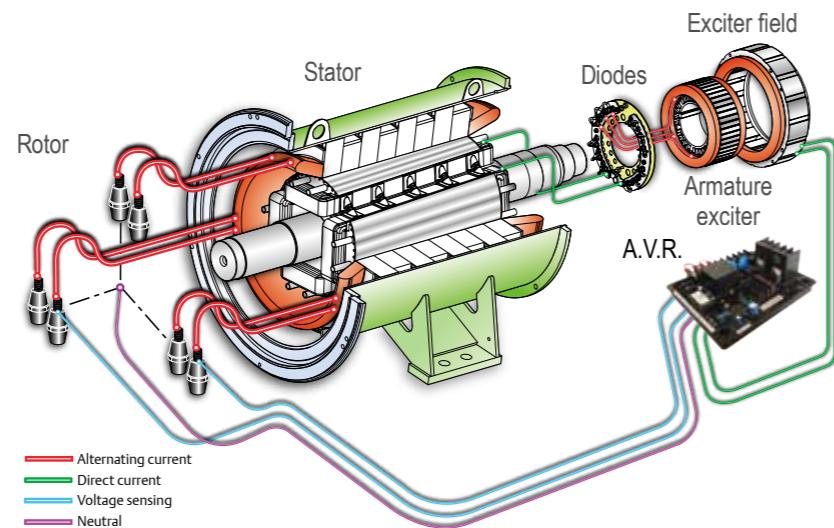
- Easy access to AVR and terminals
- Standard terminal box with possibility of mounting measurement CTs
- Possibility of current transformer for parallel operation

Environment and protection

- The alternator is IP 23
- Standard winding protection for non-harsh environments with relative humidity $\leq 95\%$

Available options

- Customized painting
- Space heaters
- Large size terminal box for measurement CTs mounting
- Current transformer for parallel operation



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General characteristics

Insulation class	H	Excitation system	SHUNT
Winding pitch	2/3 (Winding 6S)	AVR type	R150
Number of wires	6	Voltage regulation (*)	$\pm 1\%$
Protection	IP 23	Totale Harmonic distortion THD (**) in no-load	$< 3.5\%$ according to C.E.I.
Altitude	≤ 1000 m	Totale Harmonic distortion THD (**) in linear load:	$< 5\%$ according to C.E.I.
Overspeed	2250 R.P.M.	Waveform: NEMA = TIF (**)	< 50
Air flow (m ³ /s)	50Hz : TAL-A46: 0.48 - TAL-A47: 0.9 - TAL-A49: 1 60Hz : TAL-A46: 0.58 - TAL-A47: 1.1 - TAL-A49: 1.2	Waveform: I.E.C. = THF (**)	$< 2\%$

(*) Steady state. (**) Total harmonic distortion between phases, no-load or on-load (non-distorting)

Ratings / Efficiencies / Reactances

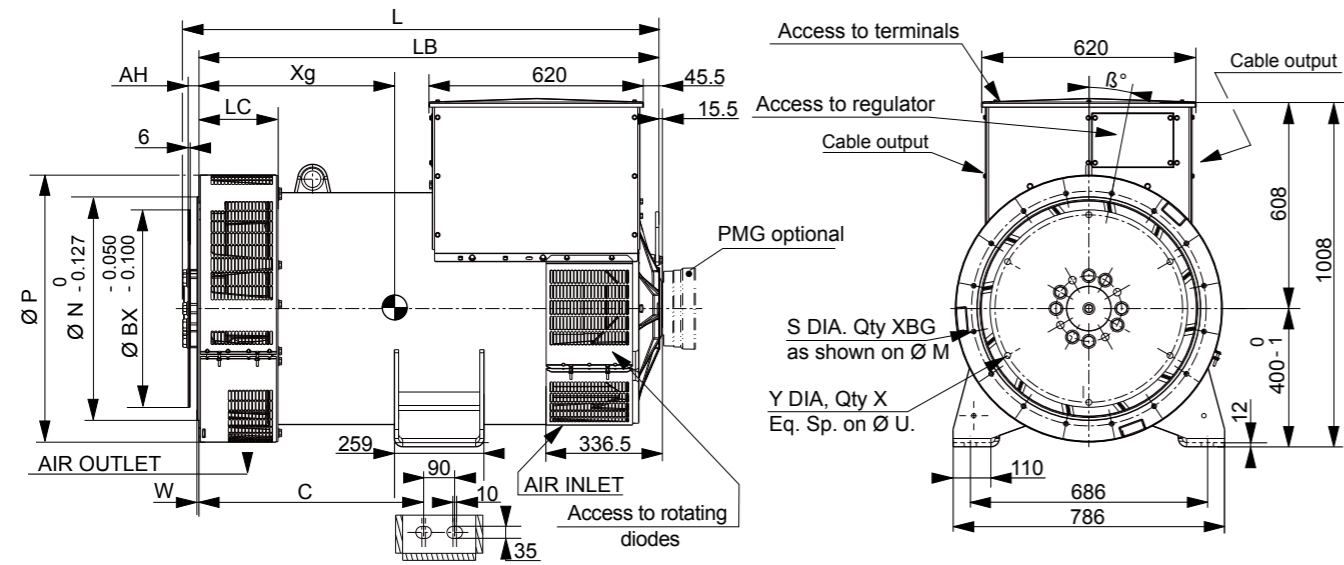
kVA / kW - P.F. = 0.8																				
Type	50 Hz - 1500 R.P.M.						60 Hz - 1800 R.P.M.													
	Continuous / 40°C			Stand-by / 27°C			Continuous / 40°C			Stand-by / 27°C										
Duty/T°C	H / 125°K						H / 163°K													
Class/T°K	Rating kVA			Rating kVA			Rating kVA			Rating kVA										
Phase	3 ph.		η %	3 ph.		η %	3 ph.		η %	3 ph.		η %								
Y	380V	400V	415V	380V	400V	415V	380V	416V	440V	480V	380V	416V	440V	480V						
Δ	220V	230V	240V	220V	230V	240V	220V	240V	254V	277V	220V	240V	254V	277V						
	x'd			x'd			x'd			x'd			x'd							
TAL-A46-A	180	180	180	91.4	200	200	200	91.2	17.1	13.0	180	195	210	225	92	200	215	230	250	91.8
TAL-A46-B	200	200	200	91.7	220	220	220	91.3	17.9	14.4	200	215	230	250	92.2	220	237	253	275	91.8
TAL-A46-C	230	230	230	91.5	253	253	253	91.1	17.2	12.7	226	250	262	288	92.2	250	275	288	316	91.7
TAL-A46-D	240	250	250	92.4	264	275	275	92.0	17.0	12.3	245	265	280	313	92.5	270	292	308	344	92.2
TAL-A46-E	275	275	275	93	303	303	305	92.6	13.6	10.7	275	300	315	344	93.5	303	330	347	378	93.2
TAL-A46-F	290	300	300	92.8	320	330	330	92.5	14.5	11.7	290	315	340	360	93.6	320	347	374	400	93.3
TAL-A46-G	325	325	325	93.5	360	360	360	93.3	12.7	10.0	315	345	365	406	94.2	347	380	402	447	94
TAL-A46-H	350	365	365	93.3	385	400	400	93	14.3	11.2	345	375	400	438	94.2	380	413	440	480	93.9
TAL-A47-A	380	410	410	92.7	420	450	450	92.2	19.7	13.8	450	480	500	510	93.1	495	530	550	580	92.8
TAL-A47-B	420	455	455	92.2	460	500	500	91.7	21.9	15.3	475	510	530	570	92.7	525	560	585	625	92.3
TAL-A47-C	465	500	500	93.2	510	550	550	92.8	19.7	13.9	520	555	590	625	93.7	570	610	650	690	93.3
TAL-A47-D	510	550	550	94.1	560	600	600	93.8	16.7	11.7	560	610	630	690	94.4	615	670	695	750	94.2
TAL-A47-E	555	600	600	93.9	610	660	660	93.5	19.3	13.6	600	660	685	750	94.3	660	725	755	825	94
TAL-A47-F	610	660	660	94.2	670	730	730	94.1	17.8	12.3	650	715	755	825	94.6	720	785	830	910	94.5
TAL-A49-B	730	730	730	94.1	805	805	805	93.8	14.2	11.3	725	795	840	915	94.4	800	875	925	1005	94.2
TAL-A49-B1	750	750	750	94.0	830	830	830	93.7	14.6	11.6	744	816	862	940	94.3	820	898	950	1030	94.1
TAL-A49-C	820	820	820	94.0	910	910	910	93.5	16.6	13.3	815	890	940	1025	94.3	895	980	1040	1130	93.9
TAL-A49-D	910	910	910	93.9	1010	1010	1010	93.5	14.1	11.3	905	990	1045	1140	94.2	1000	1090	1155	1255	93.9
TAL-A49-E	1000	1000	1000	94.4	1100	1100	1100	94.0	16.1	12.9	990	1083	1146	1250	94.6	1089	1192	1260	1375	94.4



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TAL-A49 single bearing general arrangement



Dimensions (mm) and weight						Coupling		
Type	L without PMG	LB	C	Xg	Weight (kg)	Flex plate	14	18
TAL-A49-B	1372	1331	650	629	1574	Flange S.A.E 1	X	
TAL-A49-B1	1372	1331	650	629	1574	Flange S.A.E 1/2	X	
TAL-A49-C	1372	1331	650	636	1635	Flange S.A.E 0	X	X
TAL-A49-D	1462	1421	650	673	1788	Flange S.A.E 00		X
TAL-A49-E	1462	1421	650	681	1837			

Flange (mm)							
S.A.E.	P	N	M	LC	XBG	W	β°
1	773	511.175	530.225	228.5	12	6	15°
1/2	773	584.2	619.125	228.5	12	6	15°
0	773	647.7	679.45	228.5	16	6	11° 15'
00	883	787.4	850.9	245	16	7	11° 15'

Flex plate (mm)					
S.A.E.	BX	U	X	Y	AH
14	466.7	438.15	8	14	25.4
18	571.5	542.92	6	17	15.7

NOTE : Dimensions are for information only and may be subject to modifications. Contractuel 2D drawings can be downloaded from the Leroy-Somer site, 3D drawing files are available upon request.

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WORLD-LEADING SPECIALIST IN ALTERNATORS

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