

IEC LV MOTORS

# Motor data sheet

## M3AA 180MLA 2

Definition	Data	Unit	Remarks
Product code	3GAA181410-**K		CalcId: 3GZF021018-633
Voltage code	D		
Type/Frame	M3AA 180MLA 2		
Design	CENELEC		
Efficiency class	IE3		IEC 60034-2-1:2014
Rated output $P_N$	22	kW	
Rated voltage $U_N$	415	V	± 5 % (IEC 60034-1)
Rated frequency $f_N$	50	Hz	± 2 % (IEC 60034-1)
Rated speed $n_N$	2959	r/min	
Rated current $I_N$	36.7	A	
Starting current $I_S/I_N$	8.4		
Nominal torque $T_N$	70.91	Nm	
Locked rotor torque $T_l/T_N$	3.25		
Maximum torque $T_b/T_N$	4.14		
Efficiency - full load 100%	92.7	%	IEC 60034-2-1:2014
Efficiency - 75%	93.1	%	
Efficiency - 50%	92.5	%	
Power factor - full load 100%	0.89		
Bearing DE/NDE	6310-2Z/C3 6209-2Z/C3		
Sound pressure level $L_{pA}$ dB	72.9	dB(A)	+3dB(A)
Moment of inertia $J = \frac{1}{4} GD^2$ kgm <sup>2</sup>	0.11	kg-m <sup>2</sup>	
Weight	176	kg	
Ambient temperature	40	°C	
<b>Motor losses at VSD operating points</b>	<b>losses in efficiency %</b>	<b>losses in Watt</b>	<b>losses in relative to nom. power %</b>
VSD Speed 90% Torque 100%	92.1	1698	7.7
VSD Speed 50% Torque 100%	88.9	1374	6.2
VSD Speed 25% Torque 100%	80.1	1366	6.2
VSD Speed 90% Torque 50%	91.4	932	4.2
VSD Speed 50% Torque 50%	90.2	598	2.7
VSD Speed 50% Torque 25%	87.2	404	1.8
VSD Speed 25% Torque 25%	82.5	292	1.3